

SPSERVE V2.9A

Comments... Suggestions... Corrections...

The User Documentation Department would like to know your opinion on this manual. Your feedback helps us to optimize our documentation to suit your individual needs.

Fax forms for sending us your comments are included at the back of the manual.

There you will also find the addresses of the relevant User Documentation Department.

Certified documentation according to DIN EN ISO 9001:2000

To ensure a consistently high quality standard and user-friendliness, this documentation was created to meet the regulations of a quality management system which complies with the requirements of the standard DIN EN ISO 9001:2000.

cognitas. Gesellschaft für Technik-Dokumentation mbH
www.cognitas.de

Copyright and Trademarks

Copyright © Fujitsu Siemens Computers GmbH 2006.

All rights reserved.

Delivery subject to availability; right of technical modifications reserved.

All hardware and software names used are trademarks of their respective manufacturers.

Contents

- 1 Preface 9**

- 1.1 Brief product description 10**
- 1.2 Target group 11**
- 1.3 Summary of contents 11**
- 1.4 Overview of Spool & Print Services manuals 12**
- 1.5 Changes since the last version of the manual (SPSERVE V2.6A) 13**
- 1.6 Notational conventions 14**
- 1.7 README file 14**

- 2 The SPOOL parameter file 15**

- 2.1 The entries of the SPOOL parameter file 17**
 - 2.1.1 GEN entry 17
 - 2.1.2 Device (DVC) entries 17
 - 2.1.3 Character set (CHR) entries 18
 - 2.1.4 Form (FRM) entries 18
 - 2.1.5 Pool (POL) entries 19
 - 2.1.6 Device pool (DVP) entries 19
 - 2.1.7 Filter entries (FLT entries) 19

- 3 Dprint configuration file 21**

- 3.1 Configuration objects 22**
- 3.2 Connections between configuration objects 26**
- 3.3 Configuration manager 27**
- 3.4 Cluster administrator 28**

3.5	Initializing the configuration	28
3.6	Assigning object names in the Dprint environment	29
3.7	Configuration manager scenarios	29
3.7.1	Link references between the configuration file and the SPOOL parameter file	36
3.7.2	Modifying a cluster configuration	40
4	Statements	43
	Overview of the availability of statements (privileges)	45
	ADD-DPRINT-ACCESS-CONTROL	
	Define cluster access control	48
	ADD-DPRINT-HOST	
	Insert host	50
	ADD-DPRINT-PRINTER	
	Define printer	53
	ADD-DPRINT-PRINTER-POOL	
	Define printer pool	58
	ADD-DPRINT-REMOTE-CLUSTER	
	Make entries for remote clusters	59
	ADD-DPRINT-SERVER	
	Request server	65
	ADD-PRINTER-POOL	
	Define printer pool	67
	ADD-SPOOL-CHARACTER-SET	
	Define character sets	68
	Operands of the RSO parameter file	74
	Standard character sets	92
	ADD-SPOOL-DEVICE	
	Define printer in SPOOL parameter file	93
	Standard device entries	130
	ADD-SPOOL-FILTER	
	Define filter	224
	ADD-SPOOL-FORM	
	Define form	229
	Standard form entries	260
	COPY-SPOOL-CHARACTER-SET	
	Copy character sets	300
	COPY-SPOOL-DEVICE	
	Copy device entries	301
	COPY-SPOOL-FORM	
	Copy form entries	302

EDIT-DPRINT-HOST	
Output and modify hosts	303
EDIT-DPRINT-PRINTER	
Output and modify printer	304
EDIT-DPRINT-REMOTE-CLUSTER	
Output and modify cluster	305
EDIT-DPRINT-SERVER	
Request and modify server	306
EDIT-SPOOL-CHARACTER-SET	
Output and modify character set values	307
EDIT-SPOOL-DEVICE	
Output and modify device entry	308
EDIT-SPOOL-FILTER	
Output and modify filter definitions	311
EDIT-SPOOL-FORM	
Output and modify form entry	312
EDIT-SPOOL-PARAMETERS	
Output and modify global SPOOL default values	314
MERGE-SPOOL-PARAMETER-FILE	
Copy all entries	315
MODIFY-DPRINT-ACCESS-CONTROL	
Modify cluster access control	316
MODIFY-DPRINT-HOST	
Modify host definition	320
MODIFY-DPRINT-PRINTER	
Modify printer definitions	322
MODIFY-DPRINT-PRINTER-POOL	
Modify printer pool	323
MODIFY-DPRINT-REMOTE-CLUSTER	
Modify entries for remote clusters	325
MODIFY-DPRINT-SERVER	
Modify server definition	328
MODIFY-PRINTER-POOL	
Modify printer pool	330
MODIFY-SPOOL-CHARACTER-SET	
Modify character set attributes	332
MODIFY-SPOOL-DEVICE	
Modify device attributes	335
MODIFY-SPOOL-FILTER	
Modify filter definitions	365
MODIFY-SPOOL-FORM	
Modify form attributes	369
MODIFY-SPOOL-PARAMETERS	
Modify global SPOOL default values	380

OPEN-PARAMETER-FILE	
Open parameter file for SPSERVE	401
REMOVE-DPRINT-ACCESS-CONTROL	
Remove cluster access control	407
REMOVE-DPRINT-HOST	
Remove host definition	408
REMOVE-DPRINT-PRINTER	
Remove printer definition	409
REMOVE-DPRINT-PRINTER-POOL	
Remove printer pool definition	410
REMOVE-DPRINT-REMOTE-CLUSTER	
Remove remote cluster	411
REMOVE-DPRINT-SERVER	
Remove server	412
REMOVE-PRINTER-POOL	
Remove device pool	413
REMOVE-SPOOL-CHARACTER-SET	
Remove character set	415
REMOVE-SPOOL-DEVICE	
Remove device entry	417
REMOVE-SPOOL-FILTER	
Remove filter	420
REMOVE-SPOOL-FORM	
Remove form entry	422
SHOW-DPRINT-ACCESS-CONTROLS	
Request information about cluster access control	425
Output formats	427
SHOW-DPRINT-HOSTS	
Request information about hosts	428
Output format	430
SHOW-DPRINT-PRINTER-POOLS	
Request information about printer pools	433
Output formats	434
SHOW-DPRINT-PRINTERS	
Request information about printers	435
Output formats	440
SHOW-DPRINT-REMOTE-CLUSTERS	
Request information about remote clusters	445
Output formats	448
SHOW-DPRINT-SERVERS	
Request information about servers	451
Output format	453
SHOW-PARAMETER-FILE-STATUS	
Request information on SPOOL parameter file	455

Output format	455
SHOW-PRINTER-POOLS	
Request pool names	456
Output formats	458
SHOW-SPOOL-CHARACTER-SETS	
Request character set information	459
Output format	463
SHOW-SPOOL-DEVICES	
Request device information	465
Output formats	489
SHOW-SPOOL-FILTERS	
Request information on filter definitions	498
Output formats	502
SHOW-SPOOL-FORMS	
Request information on form entry	503
Output formats	516
SHOW-SPOOL-PARAMETERS	
Request information on global SPOOL parameters	520
Output formats	522

5 Notational symbols 531

6 Appendix 549

6.1 Installing SPERVE 549

6.2 Support of statement return codes 551

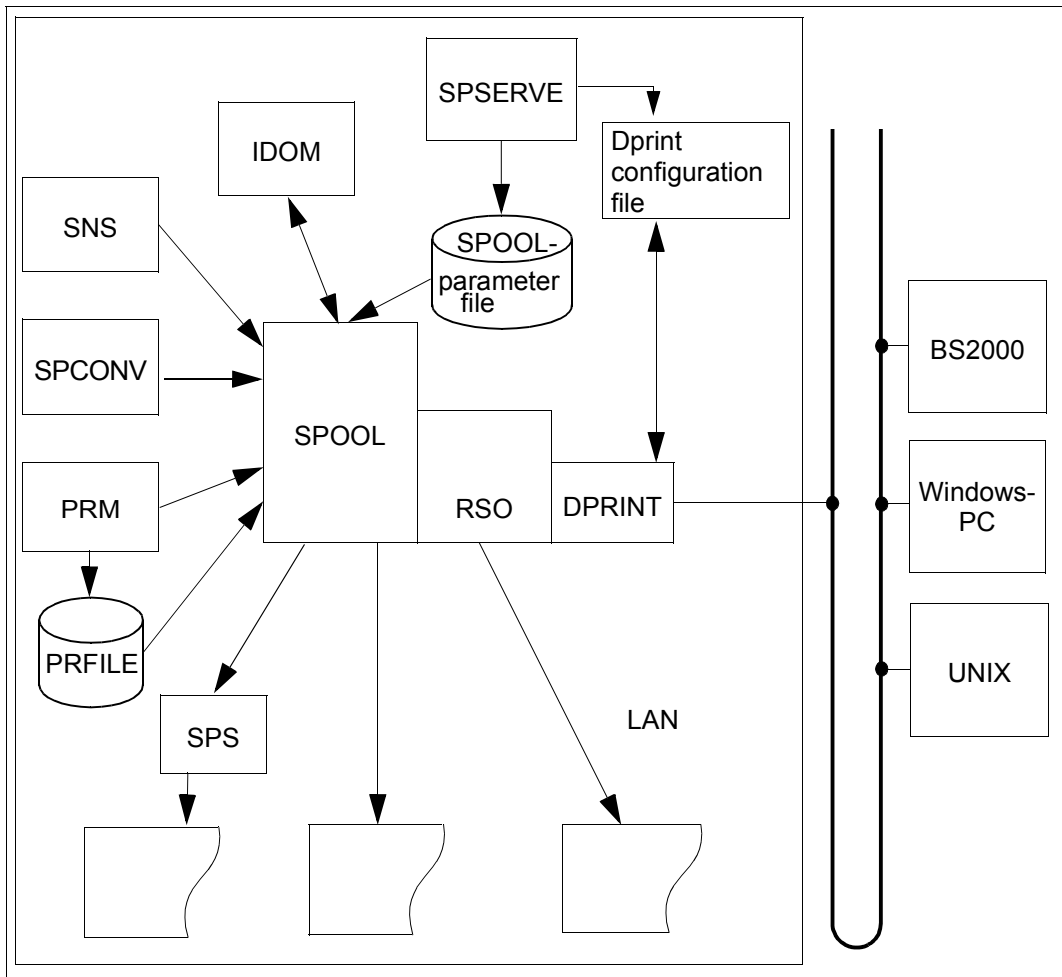
6.3 Notes for migration and compatibilities 552

Related publications 553

Index 557

1 Preface

SPSERVE is a Spool & Print Services utility routine in BS2000/OSD. Spool & Print Services organizes the use of printers, floppy disk units and in some cases magnetic tape units. The following diagram shows the components of Spool & Print Services.



1.1 Brief product description

The individual Spool & Print Services subsystems SPOOL, RSO, SPS, SPCONV and Dprint (Distributed Print Services) require a SPOOL parameter file. Using the SPSERVE utility routine, system operators (and, to a limited extent, RSO device administrators and ordinary users) can enter information in the SPOOL parameter file \$SYSSPOOL.SPOOL.PARAMETERS for a given installation or modify, delete or display existing information. It is also possible to generate a new SPOOL parameter file. Only the privilege *STD-PROCESSING is necessary in order to use the SPSERVE statements. This privilege does not suffice, however, for updating the current SPOOL parameter file or incorporating a newly generated one: to this end an extended privilege such as PRINT-SERVICE-ADMINISTRATION is required.

SPSERVE contains statements for maintaining the SPOOL parameter file and also supports the products Dprint and SPS as well as RSO (as of V2.0). SPOOL checks for the presence of the SPOOL parameter file as well as the version status of the file. Automatic updating of an older SPOOL parameter file can also be performed directly by means of SPOOL startup.

For SPOOL startup, SPOOL opens the SPOOL parameter file and reads the data into the (class 5) memory reserved for the task 'SPMG' (SPOOL parameter manager) and, for performance reasons, into the class 4 memory for GEN entries.

The introduction of Dprint represents an expansion of SPSERVE to allow control of the configuration file (default: \$SYSDPRNT.DPRINT.PARAMETERS) and the Dprint objects that it contains by means of a configuration manager. (For further information on the Dprint product refer to the "Distributed Print Services" manual.)

The configuration manager is an enhancement of the existing SPOOL-PARAMETER manager, in other words the configuration manager interface is an interface extension for the SPOOL-PARAMETER manager. Each interface, however, relates solely to its own respective objects.

The cluster administrator is responsible for the configuration manager and the configuration file. To be able to carry out these duties the cluster administrator must have the SPOOL or cluster administrator privilege PRINT-SERVICE-ADMINISTRATION or SRPM for the current master host, or this privilege must be stored for him or her on the master host.

The following actions are possible with the aid of SPSEERVE:

- access the entries of the current SPOOL parameter file during a SPOOL run
- generate and edit a new SPOOL parameter file under a different name (OPEN-PARAMETER-FILE); while SPOOL is not loaded, this file can then be copied by systems support to \$SYSSPOOL.SPOOL.PARAMETERS and used the next time SPOOL is loaded
- carry out automatic adaptation of an older SPOOL parameter file
- enable the cluster administrator to set and modify the objects of a configuration; in this case, however, the DPRINTCM subsystem must be loaded.

Notes

- The messages (message class: SPM and SRV) are contained in the “Spool & Print - Messages” manual.
- If special privileges, not held by every user, are required for the use of particular statements, these are specified explicitly in the “Statements” chapter. A table at the beginning of this chapter provides an overview of the privileges assigned.

1.2 Target group

This manual is addressed to BS2000/OSD systems support, RSO device administrators and users of SPOOL, RSO, SPS, SPCONV and Dprint.

1.3 Summary of contents

This manual describes the product SPSEERVE V2.9A. It consists of five chapters and an appendix:

“Preface”

This contains a brief description of the BS2000 product SPSEERVE V2.9A and notes on how to use the manual.

Chapter “SPOOL parameter file”

This describes the SPOOL parameter file required for SPOOL, RSO, Dprint, SPS and administered by SPSEERVE.

Chapter “Dprint configuration file”

This describes the Dprint configuration file.

Chapter “Statements”

This is a reference section containing the SPSEERVE statements.

Chapter “Notational conventions”

This describes the metasyntax valid for SPSERVE V2.9A.

Appendix

This describes the installation of SPSERVE V2.9A.

At the back of the manual you will find a list of related publications and an index.

1.4 Overview of Spool & Print Services manuals

Spool & Print Services are documented in the following manuals:

Subsystem manuals

- SPOOL
- Distributed Print Services
- RSO (Remote Spool Output)
- SPS/BS2000-APA

Utility manuals

- PRM
- SP SERVE
- SP CONV

Additional manuals

- Spool & Print - Macros & Exits (SPOOL, RSO, Dprint)
- Spool & Print - Commands (SPOOL, RSO, Dprint, SPS)
- Spool & Print - Messages (SPOOL, RSO, SP SERVE, PRM, Dprint)

The complete titles of the above manuals as well as further SPOOL environment manuals are available in the list of related publications at the back of this manual.

1.5 Changes since the last version of the manual (SPSERVE V2.6A)

This manual describes SPSERVE Version 2.9A. The minimum requirement for using SPSERVE V2.9A is SPOOL V4.3A.

Statements

Name	Modification	since version
ADD-SPOOL-DEVICE	DEVICE-INFORMATION: NOTIFICATION operand is added. ENCRYPTION operand is added. UNICODE operand is added.	2.8A 2.9A 2.9A
MODIFY-SPOOL-DEVICE	DEVICE-INFORMATION: NOTIFICATION operand is added. ENCRYPTION operand is added. UNICODE operand is added.	2.8A 2.9A 2.9A
SHOW-SPOOL-DEVICES	DEVICE-TYPE operand: The values *LOCAL and *RSO are added. NOTIFICATION operand is added. ENCRYPTION operand is added. UNICODE operand is added.	2.8A 2.8A 2.9A 2.9A
SHOW-DPRINT-PRINTERS	RASTER-PATTERN-MEM operand: *RANGE(...) option is added.	2.8A
SHOW-SPOOL-FORMS	DEVICE-TYPE operand: The values *LOCAL and *RSO are added.	2.8A

General changes and additions

- General changes to the new versions of SPOOL V4.3A, RSO V3.3A and SPS V3.8A.

Special changes and additions

- *PML format support (device entry)
- Statement return codes
- Internet address field extensions (device entry)
- Range extensions for RASTER-PATTERN-MEM (device and gen entries)
- Possible addition or removal of device administrators (MODIFY-SPOOL-DEVICE)

1.6 Notational conventions



This symbol indicates that the following indented paragraph contains vital information.

Note

The word “*Note*” before an indented paragraph indicates that the following paragraph contains important information.

[]

Square brackets in syntax representations: the characters between the brackets may be omitted.

Bold face

In explanations of syntax the lines that are currently being explained are shown in bold face. Otherwise the rules applying to syntax representations are those described in the relevant parts of the reference section at the end of the manual.

SYNTAX/Example

Syntax representations and examples of inputs and outputs are highlighted by being shown in different fonts. Syntax representations are also enclosed by a frame.

1.7 README file

Information on any functional changes and additions to the current product version described in this manual can be found in the product-specific README file (if existing). You will find the README file on your BS2000 computer under the file name SYSRME.SPSERVE.029.E. The user ID under which the README file is cataloged can be obtained from your systems support group. You can view the README file using the SHOW-FILE command or an editor, and print it out on a standard printer using the following command:

```
/PRINT-DOCUMENT FROM-FILE=SYSRME.SPSERVE.029.E, -  
/DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC-CONTROL)
```

2 The SPOOL parameter file

The SPOOL parameter file contains information on

- global SPOOL, RSO and Dprint default values for a session on a given installation (GEN entry)
- RSO devices and local SPOOL devices (device entries)
- forms and their connection to device types and loop and character set records (form entries)
- character sets which are also assigned as standard character sets to forms (mandatory)
- SPOOL/RSO pools with the devices they contain (pool entries)
- filter definitions

A MERGE procedure can be used in static and dynamic mode to incorporate all the entries of both a delta file and a complete SPOOL parameter file (with or without overwriting of existing entries with identical names) into another SPOOL parameter file. In static mode, i.e. without direct access to the SPOOL parameter file of the current SPOOL session, even as a nonprivileged user you can also copy (COPY) individual device, form and character set entries to the SPOOL parameter file assigned by means of OPEN-PARAMETER-FILE. By specifying OPEN-PARAMETER-FILE *SPOOL-PARAMETERS you can

- access the entries of the current SPOOL parameter file during a SPOOL session
- generate and subsequently edit a new file
- automatically adapt an older SPOOL parameter file.

You also define in the statement whether the assigned file is a complete SPOOL parameter file with all the entries required for a system session (at least 1 GEN entry) or a “delta file”, which contains only a few entries that are later copied to a SPOOL parameter file (or to another delta file).

A delta file may contain

- entries generated during the SP SERVE run (ADD-...) or copied from another SPOOL parameter file or delta file (COPY)
- administration entries that are automatically generated in the file by SP SERVE (GEN entries), which are then not deleted from the file if they are marked in the last two bytes of the key with the number specified in the DELTA-FILE-NUMBER operand of the OPEN-PARAMETER-FILE statement.

SPOOL checks for the presence of the SPOOL parameter file and also the version status of the file. A SPOOL parameter file from an earlier version is implicitly converted and initialized (automatic conversion). Alternatively, automatic updating of an older SPOOL parameter file can be accomplished directly using SPOOL startup.

For SPOOL startup, SPOOL opens the SPOOL parameter file and reads the data into the (class 5) memory reserved for the task "SPMG" and into the class 4 memory for the GEN entry.

Authorization to access the individual entries is indicated at the beginning of each statement description. Changes to the SPOOL parameter file come into effect at different times (see the relevant statement description).

For all of the entry types listed below (with the exception of the GEN and POOL entries) standard entries are available for generating new entries in the SPOOL parameter file. Standard entries have the same format as other entries, except that the field for the object name (device name, form name...) is empty. The GEN entry is made available automatically in the file (in a delta file, however, it is saved only if the last two bytes of the key have the value of the DELTA-FILE-NUMBER (OPEN-PARAMETER-FILE statement)).

In the SPSERVE utility routine, the standard entries are addressed by specifying *STD for the corresponding object name. You can thus generate new entries quickly and easily by modifying the default values of the standard entries as you see fit.

The SPOOL parameter file (like the Dprint configuration file) is an ISAM file (KEYLEN=20, KEYPOS=5). Each entry is identifiable via its ISAM key (depending on the entry type, 8 to 14 bytes of the 20-byte key are used, and the rest are filled with blanks).

2.1 The entries of the SPOOL parameter file

2.1.1 GEN entry

The GEN entry contains the global SPOOL default values for a given SPOOL session as well as information for the other Spool&Print subsystems. This, for example, reads in the GEN entry to see whether APA printers exist in the configuration (APA-PRINTER = *YES or *NO).

Access to the GEN entry:

Output GEN entry (to SYSOUT):	SHOW-SPOOL-PARAMETERS
Modify GEN entry:	MODIFY-SPOOL-PARAMETERS
Output (to SYSOUT) and modify GEN entry:	EDIT-SPOOL-PARAMETERS

2.1.2 Device (DVC) entries

A device (DVC) entry must be defined in the SPOOL parameter file for each SPOOL/RSO device generated. The parameter file contains a standard device entry for each device type used. This entry has a name field that is filled with blanks, while all the remaining fields contain default values. In addition to the various standard device entries, the parameter file also contains a type-independent standard device entry for new device types; to generate new device entries, you modify this standard device entry accordingly. The default values for the various device types are given under [“Standard device entries” on page 130ff.](#)

Access to device entries:

Generate DVC entry:	ADD-SPOOL-DEVICE
Modify DVC entry:	MODIFY-SPOOL-DEVICE
Delete DVC entry:	REMOVE-SPOOL-DEVICE
Output DVC entry (to SYSOUT):	SHOW-SPOOL-DEVICES
Output DVC entry (to SYSOUT), modify it and write it back as an old or new DVC entry:	EDIT-SPOOL-DEVICE
Copy DVC entry	COPY-SPOOL-DEVICE

2.1.3 Character set (CHR) entries

The SPOOL parameter file must contain a CHR entry for each character set specified explicitly in the PRINT-DOCUMENT command or implicitly in the form used. For the generation of new CHR entries, the file includes standard entries (with blanks in the name field and default values in all remaining fields). The default values for the standard CHR entries are given under [“Standard character sets” on page 92](#).

Access to character set entries:

Generate CHR entry:	ADD-SPOOL-CHARACTER-SET
Modify CHR entry:	MODIFY-SPOOL-CHARACTER-SET
Delete CHR entry:	REMOVE-SPOOL-CHARACTER-SET
Output CHR entry (to SYSOUT):	SHOW-SPOOL-CHARACTER-SETS
Output CHR entry (to SYSOUT), modify it and write it back as an old or new CHR entry:	EDIT-SPOOL-CHARACTER-SET
Copy CHR entry	COPY-SPOOL-CHARACTER-SET

2.1.4 Form (FRM) entries

The SPOOL parameter file must contain a form (FRM) entry for each form. For the generation of new form entries, the file includes a standard form entry (with blanks in the name field and default values in all remaining fields) for each device type used. The default values for the standard forms of the various printer types are given under [“Standard form entries” on page 260ff](#).

Access to form entries:

Generate FRM entry:	ADD-SPOOL-FORM
Modify FRM entry:	MODIFY-SPOOL-FORM
Delete FRM entry:	REMOVE-SPOOL-FORM
Output FRM entry (to SYSOUT):	SHOW-SPOOL-FORMS
Output FRM entry (to SYSOUT), modify it and write it back as an old or new FRM entry:	EDIT-SPOOL-FORMS
Copy FRM entry:	COPY-SPOOL-FORM

2.1.5 Pool (POL) entries

For each pool, the SPOOL parameter file must include a pool (POL) entry containing a list of the devices (RSO, Dprint and local SPOOL) belonging to that pool.

POL entries and device pool (DVP) entries are generated and managed together by means of the pool statements (see DVP entries below).

2.1.6 Device pool (DVP) entries

The SPOOL parameter file must include one or more device pool (DVP) entries for each device contained in one or more pools.

Access to POL entries and DVP entries:

Generate POL/DVP entry:	ADD-PRINTER-POOL
Modify POL/DVP entry:	MODIFY-PRINTER-POOL
Delete POL/DVP entry:	REMOVE-PRINTER-POOL
Output POL/DVP entry (to SYSOUT):	SHOW-PRINTER-POOLS

2.1.7 Filter entries (FLT entries)

The SPOOL parameter file must include one or more filter entries (FLT entries) for each FORMAT-NAME specified in the PRINT-DOCUMENT command.

Access to FLT entries:

Generate FLT entry:	ADD-SPOOL-FILTER
Modify FLT entry:	MODIFY-SPOOL-FILTER
Delete FLT entry:	REMOVE-SPOOL-FILTER
Output FLT entry (to SYSOUT):	SHOW-SPOOL-FILTERS
Output (to SYSOUT), modify and write back FLT entry as a new or old FLT entry:	EDIT-SPOOL-FILTER

3 Dprint configuration file

In the course of the introduction of Distributed Print Services (Dprint), SPSERVE has been expanded to allow control of the Dprint configuration file, and of the Dprint objects that it contains, by means of a configuration manager.

Dprint is a spooler for distributed printing. It performs distributed printing and administration functions in a network of BS2000, Windows and UNIX systems that are linked to each other by means of TCP/IP, ISO or NEA (TRANSDATA) transport protocols. Distribution on UNIX systems is supported with Xprint V1.2. Distribution on Windows systems is supported with Wprint.

Dprint is provided in the form of two separate, mutually complementary subsystems:

- DPRINTCL essentially covers the client function and the administration interface and various basic services.
- DPRINTSV mainly deals with the administration and scheduling of print jobs (server function) and contains the supervisor for controlling print output. DPRINTSV must also be installed on all BS2000 computers whose printer peripherals are to be accessed either entirely or in part via Distributed Print Services.
- DPRINTCM is responsible for accesses to the configuration file and administers the resources required. If the user enters a statement needed for DPRINT administration in SPSERVE, responsibility for execution will be passed directly to DPRINTCM where the statement will be processed.

Dprint can be used as of the following software versions:

- BS2000/OSD-BC V1.0
- DCAM V11.0, PDN V8.0C, CMX V1.0B
- FT-BS2000 V5.0A and FTAC V2.0A

Within the framework of a symmetrical client/server architecture, Dprint provides both client and server functions on a BS2000 host; they are implemented by corresponding products in essentially the same way in the Windows or UNIX world.

The possibility is thus available of combining a number of computers to form a cluster in order to define a transparent environment for printer access operations. A Dprint cluster is a number of (homogeneous) systems or hosts that are connected to each other.

Each cluster system in a Dprint (printing) environment must have knowledge of or information on the configuration of each member of the cluster and the general configuration of the cluster. This information is stored in a configuration file (default:

\$SYSDPRNT.DPRINT.PARAMETERS) in the form of objects with certain attributes. The configuration file is administered in a master host; all other hosts are given a copy of the file.

All objects are specified solely by means of SPSEVE statements. Each object is linked to one or more type records in the configuration file. The attributes of the various objects each correspond to operands of SPSEVE statements. (For further information about the Dprint product refer to the manual for "Distributed Print Services".)

The entries in the currently valid Dprint configuration file can be accessed during a Dprint session by specifying OPEN-PARAMETER-FILE *DPRINT-PARAMETERS.

On DPRINTCM startup Dprint opens the Dprint configuration file and reads the data to the memory of the "DPMG" task (class 5 memory).

The Dprint configuration file, like the SPOOL parameter file, is an ISAM file (KEY-LEN=20, KEY-POS=5); each entry is identifiable via its ISAM key (depending on the type of entry, 8 to 14 bytes of the 20-byte key are used, and the rest are filled with blanks).

3.1 Configuration objects

All configuration and Dprint objects are described below. The description of the object attributes can be taken from the descriptions of the SHOW-DPRINT-... statements in the next chapter.

Cluster (or remote cluster)

The cluster object allows interoperability between clusters. Remote clusters must be defined in this object in the configuration file.

Host

Every host that is part of a cluster must be defined in the configuration file.

Server

The Dprint object server enables the selection of servers, the deletion of SPOOL jobs, etc. Every server of a cluster (wherever it may be located in the cluster) must be defined in the object server of the configuration file.

Printer

By means of the object printer the users have an individual system overview of clusters. Every Dprint printer must be defined for the cluster in the object printer in the configuration file of each host.

Printer pool

A Dprint printer pool is an object comprising exclusively Dprint printers (exclusively local printers on different hosts).

Every Dprint printer pool (sometimes called Dprint printer group) must be defined in the object printer pool in the configuration file of each host of the cluster.

Access control

Access control is an object that contains a set of rules. Its ID is also used in other object definitions to enable those objects to control access on the basis of the same rules.

The access control object contains specifications of users or user groups which are allowed to perform actions in the other objects or not, as the case may be.

The rules for specifying these users or user groups are stored in the Dprint access control object. The object for which access is to be controlled must be defined with a suitable name for access control.

The same access conditions can be used for various actions relating to various objects, and even various types.

In Dprint the access control object is used firstly to control the job flow within the cluster (server access control), secondly to control access to the cluster (gateway access control) and thirdly to control exiting from the cluster (access control to remote clusters).

Each access control record contains the following:

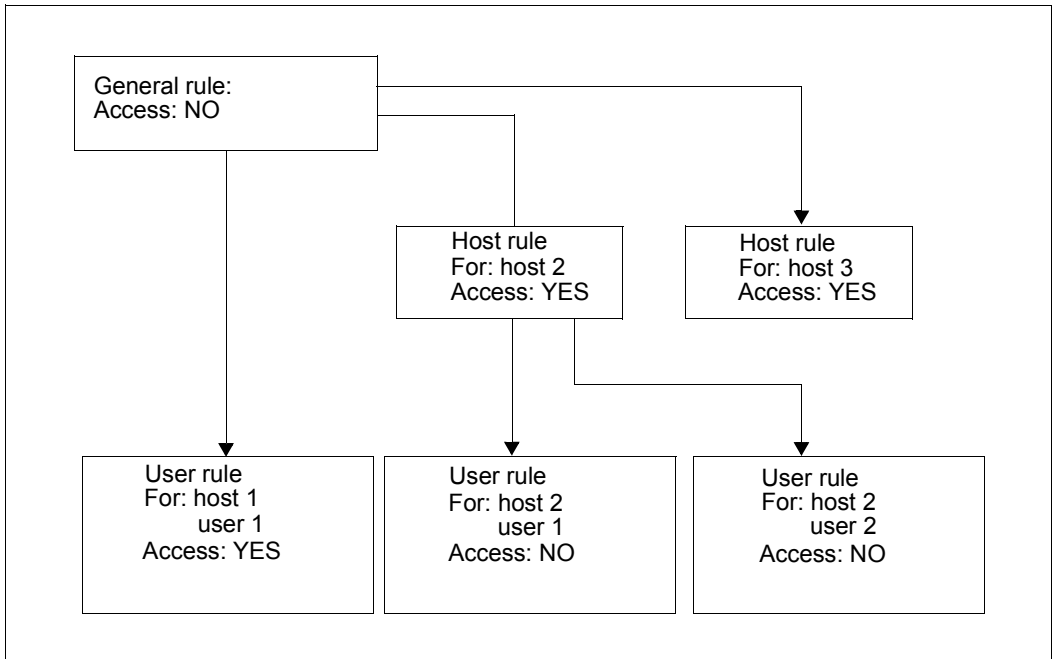
1. Access control ID
Defines the logical name of the access control object. This ID must be used in the server, gateway, host and cluster definitions in order to control access to each of these.
2. Set of access rules
A hierarchically arranged set of rules on three levels.
The first level comprises the general rule, the second level contains the host rules, and the third level the user rules. Each rule specifies whether one or more subjects (using access control) have access to the objects or not.
In more detail, this means:
The general rule specifies the default setting. This applies to every user if no other rules are specified for them.
The host rules comprise exceptions to the general rule for all users on that particular host. They control every access by every user at that host if no other rules are specified for that purpose.

The user rules constitute exceptions to the general rule and the host rules and are applicable to each individual user. It must be possible to identify each user at the host by means of the host ID and the user ID.

There is always one general rule for one access control. Host and user rules may be combined. Each new rule at a higher level triggers a simplification of the *rule tree* or of the rules at lower levels. In this way all user rules for a host are replaced or removed when a new host rule is introduced. When a new general rule is introduced, all other rules (host rules and user rules) are replaced or removed.

A new rule that does not represent an exception to a higher rule will not be stored.

Example



Rules for the hierarchy of Dprint access control

Explanation:

The general rule states that no one has access.

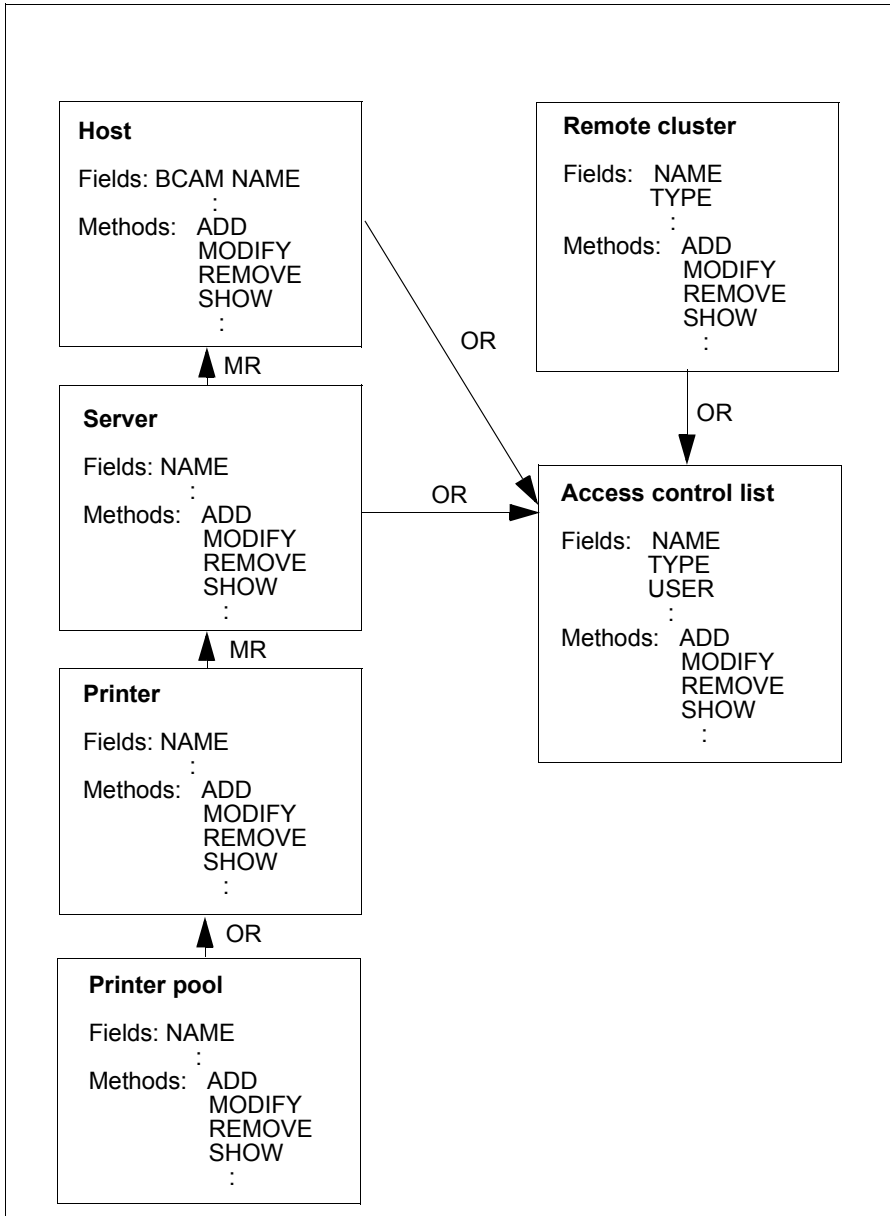
Exceptions:

1. Exception: user 1 of host 1 has access (the other users of host 1 have no access, in accordance with the general rule).
2. Exception: all users of host 2 have access.

(Sub)exceptions

1. (Sub)exception: user 1 of host 2 has no access.
2. (Sub)exception: user 2 of host 2 has no access.
3. Exception: all users of host 3 have access.

3.2 Connections between configuration objects



Connections between configuration objects

Key

MR: mandatory connection

OR: optional connection

A printer pool is made up of printers.

A printer must be connected to a server.

A server must be connected to a host.

A server can be connected to an access control list.

A remote cluster can be connected to an access control list

3.3 Configuration manager

The configuration manager is an extension of the existing SPOOL PARAMETER manager, in other words the interface of the configuration manager is an interface of the SPOOL PARAMETER manager. Each interface, however, relates solely to its own respective objects.

The configuration manager is based on a master/slave mechanism. This means that a controlling master host holds the original configuration file and transfers it to the dependent slave hosts. In turn the slave hosts receive the update transfers from the master host and possess a copy of the original configuration file at all times.

Configuration file updates are always carried out on the master host, not any other host.

Notes

- Only one master is defined in a cluster at any one time.
- The configuration manager belongs to the DPRINTCM subsystem, despite this updating and transfer of the configuration file are only carried out if the DPRINTCL subsystem or DPRINTSV subsystem is loaded.

3.4 Cluster administrator

The generation and modification of the objects of a configuration are exclusively the domain of the cluster administrator, and are performed by means of the appropriate ADD, EDIT, MODIFY and REMOVE statements. To perform these tasks, the cluster administrator (who is also responsible for performing cluster initialization) must be in possession of the SRPM privilege PRINT-SERVICE-ADMINISTRATION for the current master host, or that privilege must be defined for him or her on the master host.

If a host does not belong to a cluster, it is permissible for the SPOOL administrator to administer the configuration. This means that the administrator is allowed to define hosts that are necessary in order to create a cluster.

While it is possible for all users to view the Dprint objects in accordance with their access rights, this is not the case with the access control objects. These objects can only be viewed by the cluster administrator, who is also the only person able to perform an update of the original configuration file on the master host.

3.5 Initializing the configuration

When Dprint is loaded on a host for the first time, a default configuration is defined. This contains only the objects with the default configuration options. There is no possibility of automatic distribution of SPOOL objects. It is the responsibility of the cluster administrator to initialize the Dprint environment by means of an SPSEVE statement. It is likewise the responsibility of the cluster administrator to set up the cluster in the first place. To do that, the configuration file that was generated on the cluster administrator's host must be transferred to all hosts that are to be included in the cluster. In this way all objects that are distributed in the cluster, and all global information, will be transferred by way of the cluster organization.

Once a cluster has been set up, the cluster administrator can adapt the configuration to suit the current state of affairs at any time, and also define new objects that are to be distributed throughout the cluster.

The configuration file is retained between the Dprint sessions. It is updated, however, every time that the cluster configuration is restarted.

3.6 Assigning object names in the Dprint environment

The cluster administrator assigns names for each Dprint printer and printer group. When doing so it is essential that every new Dprint printer and every new Dprint printer group is added with a new name. (For further details refer to the descriptions of the ADD-DPRINT-PRINTER statement on [page 53](#) and the ADD-DPRINT-PRINTER-POOL statement on [page 58](#).)

Consequently, once the configuration file has been initialized and updated by the cluster administrator, the risk of naming conflicts is negligible.

3.7 Configuration manager scenarios

Problem

In the following configuration scenarios three BS2000 hosts (H1, H2 and H3) are interconnected by means of a LAN (TCP/IP protocol). The connected printers can only be used locally on the relevant host.

Dprint is to be used to create a configuration in which the printers connected to hosts H2 and H3 can be used by all hosts.

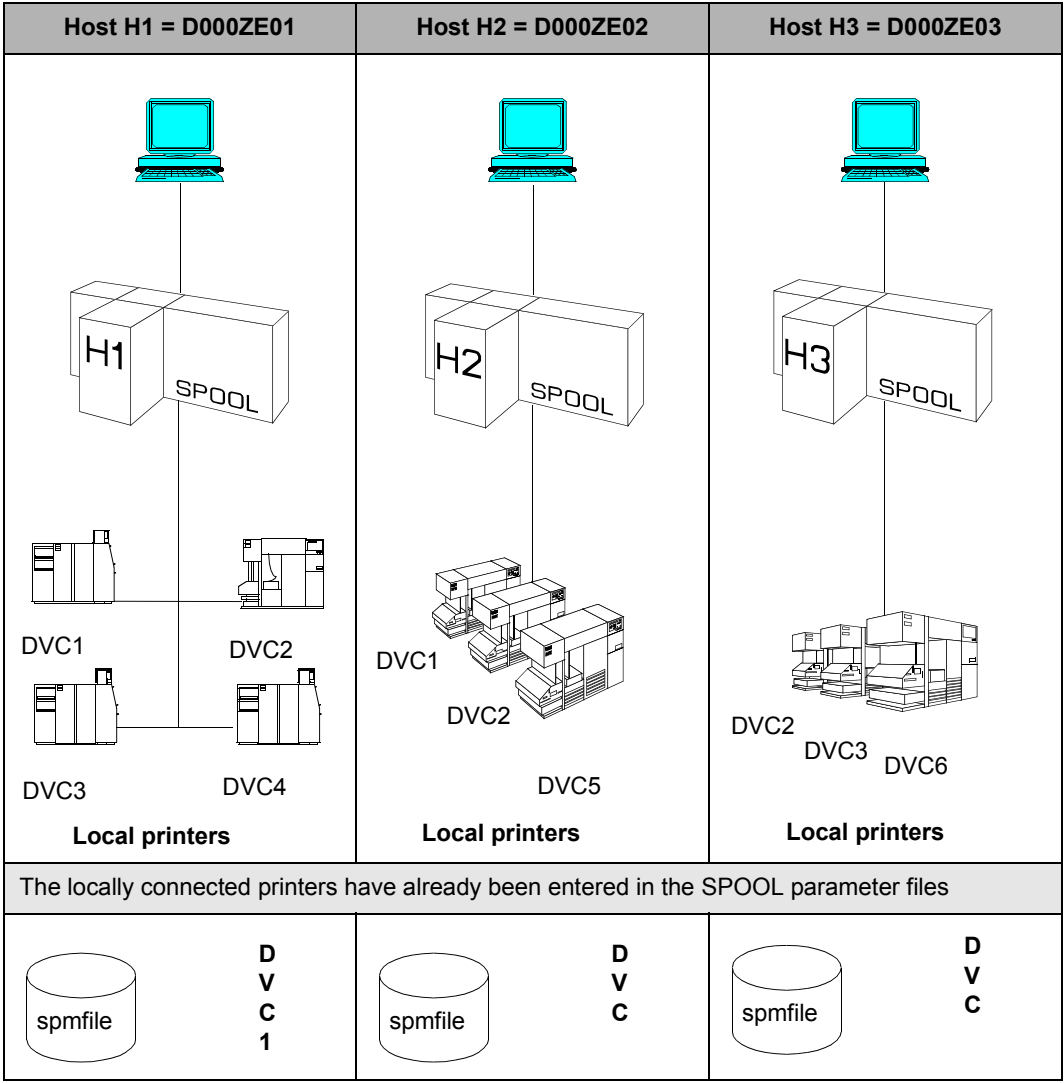
This target configuration is set up by creating a Dprint cluster to which hosts H1, H2 and H3 and the printers connected to hosts H2 and H3 are to belong. The printers connected to host H1 are to continue to be used locally.

DPRINTCL was installed on all hosts, and DPRINTSV was installed on H2 and H3. Host 1 is to be assigned the role of Dprint master in the Dprint cluster. Hosts H2 and H3 are to be used as Dprint servers. It is not necessary to define a gateway computer, as no communication with a remote cluster is planned.

Abbreviations used:

spmfile:	local SPOOL parameter file
config:	Dprint configuration file
DVC1 to	
DVC6:	printers

Initial situation


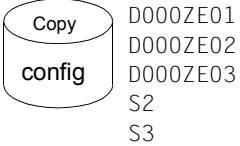
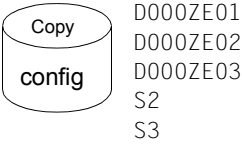


Definition of a Dprint cluster

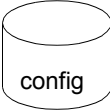
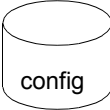
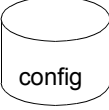
1. Call subsystems (SPOOL, DPRINTCM)
2. Define Dprint hosts (using SPSEVER: START-SPSERVE)
3. Define Dprint servers (using SPSEVER: START-SPSERVE)
4. Call subsystems (DPRINTCL, DPRINTSV)
5. Define Dprint clusters
6. Distribute printers in cluster

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
<p>On all hosts which are to create a Dprint cluster, the Dprint subsystems must be started in the following order: A) DPRINTCM B) DPRINTCL or/and DPRINTSV (see 4.)</p>		
1. /START-SU-DPRINTCM	/START-SU-DPRINTCM	/START-SU-DPRINTCM
<p>The representations below show which components are involved with which hosts when the cluster is created.</p>		
<p>Diagram of Host H1 components: DPRINTCM, SPSEVER, spmfile, config, SPOOL</p>	<p>Diagram of Host H2 components: DPRINTCM, SPSEVER, spmfile, config, SPOOL</p>	<p>Diagram of Host H3 components: DPRINTCM, SPSEVER, spmfile, config, SPOOL</p>
<p>Before a cluster is created, the SPOOL administrators must define the Dprint master (H1) and the home host name in the configuration.</p>		

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
<p>2.</p>	<pre> /START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-HOST HOST-NAME=D000ZE02 //END /START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-HOST, HOST-NAME=D000ZE01 //END </pre>	<pre> /START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-HOST, HOST-NAME=D000ZE03 //END /START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-HOST, HOST-NAME=D000ZE01 //END </pre>
<p>All computers which are to belong to the Dprint cluster must be entered on the Dprint master.</p>		
<pre> /START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-HOST, HOST-NAME=D000ZE01 //ADD-DPRINT-HOST, HOST-NAME=D000ZE02 //ADD-DPRINT-HOST, HOST-NAME=D000ZE03 </pre>		
<p>In order to allow every user of the Dprint cluster access to servers H2 and H3, the cluster administrator must enter them as servers - in this example S2 and S3 - in the master configuration file. If these entries are not made, the printers connected to H2 and H3 can only be used locally.</p>		
<p>3.</p> <pre> //ADD-DPRINT-SERVER, SERVER-NAME=S2 HOST-NAME=D000ZE02 //ADD-DPRINT-SERVER, SERVER-NAME=S3 HOST-NAME=D000ZE03 //END </pre>		
<p>4. /START-SU-DPRINTCL</p>	<pre> /START-SU-DPRINTSV /START-SU-DPRINTCL </pre>	<pre> /START-SU-DPRINTSV /START-SU-DPRINTCL </pre>

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
The command for creating the cluster is now issued on the Dprint master.		
<p>5. /CREATE-DPRINT- CLUSTER(D000ZE02, D000ZE03)</p>		
Once the cluster has been defined, the H2 and H3 configuration files are checked. If all entries are correct, the Dprint configuration file is copied from H1 to H2 and H3. Host H1 has automatically become the cluster administrator.		
		

6. Defining printers as Dprint printers

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
<p>The H1 cluster administrator can decide whether to distribute all or only a selection of the printers which are connected with the various hosts in the cluster. Only those printers which are connected with a server (i.e. a host on which DPRINTSV is loaded) may be defined in the configuration. (Printers connected with a host on which only the subsystem DPRINTCL is loaded cannot be accessed.)</p>		
<pre> /START-SPSERVE //OPEN-PARAMETER-FILE PARAMETER-FILE= *DPRINT-PARAMETERS //ADD-DPRINT-PRINTER PRINTER-NAME=D1, SERVER-NAME=S2, LOCAL-PRINTER-NAME=DVC1 //ADD-DPRINT-PRINTER PRINTER-NAME=D2, SERVER-NAME=S2, LOCAL-PRINTER-NAME=DVC2 //ADD-DPRINT-PRINTER PRINTER-NAME=D5, SERVER-NAME=S2, LOCAL-PRINTER-NAME=DVC5 //ADD-DPRINT-PRINTER PRINTER-NAME=D3, SERVER-NAME=S3, LOCAL-PRINTER-NAME=DVC3 //ADD-DPRINT-PRINTER PRINTER-NAME=D6, SERVER-NAME=S3 LOCAL-PRINTER-NAME=DVC6 </pre>		
 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1 (H2, DVC1) D2 (H2, DVC2) D5 (H2, DVC5) D3 (H3, DVC3) D6 (H3, DVC6)</p>	 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1 (H2, DVC1) D2 (H2, DVC2) D5 (H2, DVC5) D3 (H3, DVC3) D6 (H3, DVC6)</p>	 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1 (H2, DVC1) D2 (H2, DVC2) D5 (H2, DVC5) D3 (H3, DVC3) D6 (H3, DVC6)</p>

Displaying the SPOOL parameter file on the screen

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
<p>The information in the SPOOL parameter file for every server in the cluster can be output to every host in the cluster on which DPRINTCL is loaded or SPSEIVE is used. This means that, if DPRINTCL has not been loaded on a host, SPSEIVE must be used to implement output. On the other hand, if DPRINTCL has been loaded, this can be done using SHOW-.. commands.</p>		
<pre>/SHOW-SPOOL-DEV, SERVER-NAME=*HOME</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC1 DVC2 DVC3 DVC4</p> </div>	<pre>/START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //SHOW-SPOOL-DEV, SERVER-NAME=*HOME</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC1 DVC2 DVC5</p> </div>	<pre>/START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS //SHOW-SPOOL-DEV, SERVER-NAME=*HOME</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC2 DVC3 DVC6</p> </div>
<p>If a server name is specified instead of *HOME, the printers of the corresponding server are displayed.</p>		
<pre>/SHOW-SPOOL-DEV, SERVER-NAME=S2</pre>	<pre>//SHOW-SPOOL-DEV, SERVER-NAME=S3 //END</pre>	<pre>//SHOW-SPOOL-DEV, SERVER-NAME=S2 //END</pre>
<div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC1 DVC2 DVC5</p> </div>	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC2 DVC3 DVC6</p> </div>	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>DVC1 DVC2 DVC5</p> </div>
<p>The printers connected to host H1 cannot be output to hosts H2 and H3, as host H1 is not a Dprint server.</p>		

Starting the printer with START-PRINTER-OUTPUT

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
If no printer has been defined in the configuration file yet, a START-PRINTER-OUTPUT command can only be issued by the SPOOL administrator for every host that is responsible for the devices in the appropriate SPOOL parameter file.		
START-PRINTER-OUTPUT UNIT = DVC1 or UNIT = DVC2 or UNIT = DVC3 or UNIT = DVC4	START-PRINTER-OUTPUT UNIT = DVC1 or UNIT = DVC2 or UNIT = DVC5	START-PRINTER-OUTPUT UNIT = DVC2 or UNIT = DVC3 or UNIT = DVC6

3.7.1 Link references between the configuration file and the SPOOL parameter file

This section is designed to illustrate how to check whether there are any link references between the configuration file and the SPOOL parameter file.

In general, a distinction can be made between the following two cases:

Case A: The SPOOL administrator of H1 intends to start a printer.

1. DPRINTSV is not loaded on H1:
 Only those printers that are defined in the SPOOL parameter file of H1 can be started. This means, in conjunction with the following command:

```
/START-PRINTER-OUTPUT UNIT=XXX
```

that if XXX is defined in SPMFILE, the SPOOL administrator can start XXX on H1; if XXX is not defined, the following warning is issued: printer XXX does not exist.

2. DPRINTSV is loaded on H1:
 The printers that are defined in the SPOOL parameter file of H1 can be started, as can the Dprint printers that are connected to the servers of H1. This means, in conjunction with the following command:

```
/START-PRINTER-OUTPUT UNIT=XXX
```

If XXX is defined in config and it is connected to H1, the SPOOL administrator can start XXX on H1. In contrast, if XXX is defined in config but it is not connected to H1, the administrator cannot start XXX.

If XXX is not defined in config but in the SPOOL parameter file of H1, the SPOOL administrator is again able to start XXX on H1. However, if XXX is not defined in config nor in the SPOOL parameter file of H1, the following warning is issued: printer XXX does not exist.

Case B: The cluster administrator intends to start a printer and DPRINTSV is loaded on Hi.

1. XXX is defined in config:

This means, in conjunction with the following command:

```
/START-PRINTER-OUTPUT UNIT=XXX
```

that the cluster administrator may start the printer on Hi, even if the printer is not connected to H1.

2. XXX is not defined in config:

This means, in conjunction with the following command:

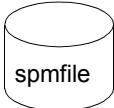
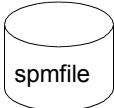
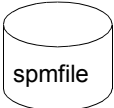
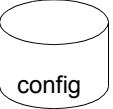
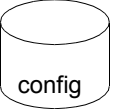
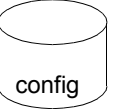
```
/START-PRINTER-OUTPUT UNIT=XXX
```




that if XXX is defined in the SPOOL parameter file of H1, the cluster administrator or SPOOL administrator can start the printer with this command. However, if XXX is not defined, the following warning is issued: printer XXX does not exist.

Every printer that is entered only in the SPOOL parameter file is able to print "local" jobs only and can only be started by the SPOOL administrator of the host to which it is connected.

The SPOOL administrator at every host can decide whether to modify or remove a device in his or her SPOOL parameter file by means of SPSEVE. If the printer is defined in the configuration file, the information is sent to all hosts in the cluster. The printer remains unchanged in the configuration file, however.

The above information is now illustrated on the next pages using the already used configuration manager scenario.

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
<p>In H2 and H3, DVC2 is to be removed from the spmfile so that only the following printers are still configured there.</p>		
<p style="text-align: center;">//REMOVE-SP-DEV DVC2 //REMOVE-SP-DEV DVC2</p>		
 <p>DVC1 DVC2 DVC3 DVC4</p>	 <p>DVC1 DVC5</p>	 <p>DVC3 DVC6</p>
<p>However, the following Dprint objects are still entered in config.</p>		
 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1(H2,DVC1) D2(H2,DVC2) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6)</p>	 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1(H2,DVC1) D2(H2,DVC2) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6)</p>	 <p>D000ZE01 D000ZE02 D000ZE03 S2 S3 D1(H2,DVC1) D2(H2,DVC2) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6)</p>
<p>The fact that printers are also defined in the configuration file means that the cluster administrator can start printers even if they are not connected to the host of the cluster administrator. However, it remains impossible to start a printer that does not have an entry in the SPOOL parameter file.</p>		
<p>START-PRINTER-OUTPUT UNIT = D1 or UNIT = D5 or UNIT = D6 or UNIT = D3</p>		
<p>The following information from the configuration file is now output by means of SHOW-DPRINT-PRINTERS or via the corresponding SPSEIVE statement.</p>		

Host H1 = D000ZE01	Host H2 = D000ZE02	Host H3 = D000ZE03
	<pre>/START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS</pre>	<pre>/START-SPSERVE //OPEN-PARAMETER-FILE, PARAMETER-FILE= *DPRINT-PARAMETERS</pre>
<pre>/SHOW-DPRINT-PRINTERS</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>D1 D2 D3 D5 D6</p> </div>	<pre>/SHOW-DPRINT-PRINTERS</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>D1 D2 D3 D5 D6</p> </div>	<pre>/SHOW-DPRINT-PRINTERS</pre> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center;"> <p>D1 D2 D3 D5 D6</p> </div>
<p>The cluster administrator can decide whether to modify or remove a device in his or her configuration file by means of SPSEVERE. The action that is taken is then transferred from the configuration file of the master host to the slave hosts. For example, after devices have been removed from DVC2, the configuration file contains the following entries.</p>		
<pre>//REMOVE-DPRINT- PRINTER DVC2</pre>		
<div style="border: 1px solid black; border-radius: 50%; width: 87px; height: 66px; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <pre>D000ZE01 D000ZE02 D000ZE03 D1(H2,DVC1) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6) S2 S3</pre>	<div style="border: 1px solid black; border-radius: 50%; width: 87px; height: 66px; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <pre>D000ZE01 D000ZE02 D000ZE03 D1(H2,DVC1) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6) S2 S3</pre>	<div style="border: 1px solid black; border-radius: 50%; width: 87px; height: 66px; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <pre>D000ZE01 D000ZE02 D000ZE03 D1(H2,DVC1) D5(H2,DVC5) D3(H3,DVC3) D6(H3,DVC6) S2 S3</pre>

3.7.2 Modifying a cluster configuration

The modification of a cluster configuration means either adding a new host to the cluster or removing a host from the cluster.

Adding a host to an existing cluster configuration

1. The hosts H1, H2 and H3 are defined in a cluster configuration:
2. If host H4 is to be included in the cluster, H4 must first start Dprint and define itself and host H1 (=cluster administrator) in its configuration:

```
//ADD-DPRINT-HOST HOST-NAME=D000ZE01
//ADD-DPRINT-HOST HOST-NAME=D000ZE04

/START-SUBSYSTEM DPRINTSV
```

The host of the cluster administrator must similarly define H4 in its configuration using SPSEERVE.

```
//ADD-DPRINT-HOST HOST-NAME=H4
//ADD-DPRINT-SERVER SERVER-NAME=S4,HOST-NAME=D000ZE04
```

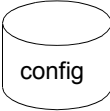
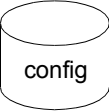
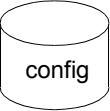
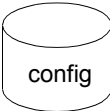
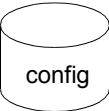

3. The host H4 can now be included in the cluster. This request can be made only by the cluster administrator, i.e. on host H1.

```
/MODIFY-DPRINT-CLUSTER HOST-NAME=D000ZE04,ACTION=*ADD
```

The configuration objects of H1, H2 and H3 are now transferred to H4 and are available for the entire cluster. The configuration files of H2, H3 and H4 are overwritten.

4. The cluster comprises the hosts H1, H2, H3 and H4. The cluster administrator is defined on H1. The configuration contains objects of H1, H2, H3 and H4.

Removing a host from a cluster configuration

<p>The cluster administrator can decide whether to remove or delete a host from the cluster: for example, the cluster administrator can remove all objects of H3 from the configuration of the master host, and of the other hosts in the cluster. All objects which do not belong to H3 are then removed from the configuration of H3.</p>		
<pre>/MOD-DPRINT-CLUSTER D000ZE03,*DELETE</pre>		
 <p>D000ZE01 D000ZE02 S2 D1(H2,DVC1) D5(H2,DVC5)</p>	 <p>D000ZE01 D000ZE02 S2 D1(H2,DVC1) D5(H2,DVC5)</p>	 <p>D000ZE03 S3 D3(H3,DVC3) D6(H3,DVC6)</p>
<p>The SPOOL administrator can finally decide to stop Dprint on a host. This does not make any changes to the entries in the configuration file, however.</p>		
<pre>/STOP-SU DPRINTSV</pre>		
 <p>D000ZE01 D000ZE02 S2 D1(H2,DVC1) D5(H2,DVC5)</p>	 <p>D000ZE01 D000ZE02 S2 D1(H2,DVC1) D5(H2,DVC5)</p>	 <p>D000ZE03 S3 D3(H3,DVC3) D6(H3,DVC6)</p>

Notes

- There are two possible ways in which the SPOOL administrator of a host which is defined in a cluster configuration can be made unavailable for Dprint.
 1. Temporary disconnection:
If the SPOOL administrator simply unloads the Dprint subsystems on his/her host, the host remains part of the cluster configuration. The configuration file remains unchanged between two Dprint sessions. The next time Dprint is loaded, the host is automatically restored to the cluster configuration.
 2. Permanent disconnection:
If a SPOOL administrator no longer wishes to remain in a cluster configuration, (s)he must instruct the cluster administrator to remove his/her host from the cluster. Just as SPOOL administrators cannot include themselves in a cluster, they also cannot remove themselves from a cluster.

When the host has been disconnected from the cluster, the configuration file of the host is cleaned up (if DPRINTCM is loaded or when DPRINTCM is next loaded). The objects of the removed host are no longer available for the cluster.

A temporary disconnection requires no modification of the cluster configuration. A permanent disconnection, however, does not require Dprint to be unloaded.

- The removal of a host from a cluster configuration, i.e. permanent disconnection, is only advisable if no further jobs of the following types are available:
 1. Jobs which have been issued from the host in question and are directed at a different host in the cluster.
 2. Jobs which have been issued from a different host in the cluster and are directed at the host in question.

In this situation the cluster administrator has the facility to stop Dprint jobs which are coming from, or going to, the host that is to be removed. This is done by specifying the operand ACTION=*DETACH in the command /MODIFY-DPRINT-CLUSTER.

When a host is removed from a cluster without this command having previously been issued, the Dprint jobs will be continued. However, no further updating will be performed between client and server.

4 Statements

The utility routine **SPSERVE** can be started in two different ways:

either by means of the command **START-PROGRAM FROM-FILE=\$SPSERVE** (for further details refer to the “User Commands (SDF Format)” manual) or using the **START-SPSERVE** command, which has the following main operands:

Operands

START-SPSERVE
VERSION = *STD / <text 4..7> , MONJV = *NONE / <filename 1..54 without-gen-vers> , CPU-LIMIT = *JOB-REST / <integer 1..32767>

VERSION =

This specifies the element version. It is only permissible for a program library (element type R or L).

VERSION = *STD

The default value for the highest element version in program libraries is used (see the “LMS” manual).

VERSION = <text 4..7>

Explicit specification of the element version.

MONJV = *NONE / <filename 1..54 without-gen-vers>

Name of the JV that is to monitor the program.

During the program run the system then sets the JV to appropriate values:

\$R Program running
\$T Program normally terminated
\$A Program abnormally terminated

This operand is available only to users with the software product JV (see the “Job Variables” manual).

CPU-LIMIT = *JOB-REST / <integer 1..32767 seconds>

Maximum CPU time, in seconds, which the program is allowed to take during execution. If the job was started without a time limit (CPU-LIMIT=*NO), the program will *likewise run without* a time limit (this specification will be ignored).

If the program exceeds the specified time during execution, the program is interrupted in a dialog and the message EXC0075 is output. The user can request a dump and either abort or resume the program. If an STXIT routine for reaching the CPU limit is defined in the program, the routine is executed and the program is terminated.

In batch mode the program is terminated.

CPU-LIMIT = *JOB-REST

Default setting:

If the job was started with a time limit, the value specified as the time limit at the time of system generation is used for the program. Otherwise the program runs without a time limit.

The first thing to be done after startup is to enter the OPEN-PARAMETER-FILE statement. This statement specifies whether the SPOOL parameter file for the current session is to be used, or a new SPOOL parameter file is to be generated, or the Dprint configuration file is to be assigned to the SP SERVE run.

SPSERVE has an SDF interface. On entering a question mark you are shown on the screen all the input options for the corresponding level. SDF is described in the manual "Introductory Guide to the SDF Dialog Interface".

The SP SERVE program is terminated by entering **END**.

Overview of the availability of statements (privileges)

Statement	Assigned parameter file			
	None	SPOOL parameters		Dprint configuration
		User	System	
OPEN-PARAMETER-FILE	US	US	US	US
HELP-MESSAGE-INFORMATION	US	US	US	US
END	US	US	US	US
ADD-SPOOL-DEVICE	-	US	SA	-
EDIT-SPOOL-DEVICE	-	US	DA	-
MODIFY-SPOOL-DEVICE	-	US	DA	-
REMOVE-SPOOL-DEVICE	-	US	DA	-
SHOW-SPOOL-DEVICES	-	US	US	US
ADD-SPOOL-FORM local devices	-	US	SA	-
ADD-SPOOL-FORM RSO devices	-	US	DA	-
EDIT-SPOOL-FORM	-	US	DA	-
MODIFY-SPOOL-FORM	-	US	DA	-
REMOVE-SPOOL-FORM	-	US	DA	-
SHOW-SPOOL-FORMS	-	US	US	US
ADD-SPOOL-CHARACTER-SET	-	US	DA	-
EDIT-SPOOL-CHARACTER-SET	-	US	DA	-
MODIFY-SPOOL-CHARACTER-SET	-	US	DA	-
REMOVE-SPOOL-CHARACTER-SET	-	US	DA	-
SHOW-SPOOL-CHARACTER-SETS	-	US	US	US
EDIT-SPOOL-PARAMETERS	-	US	SA	-
MODIFY-SPOOL-PARAMETERS	-	US	SA	-
SHOW-SPOOL-PARAMETERS	-	US	US	US
ADD-PRINTER-POOL	-	US	SA	-
MODIFY-PRINTER-POOL	-	US	SA	-
REMOVE-PRINTER-POOL	-	US	SA	-
SHOW-PRINTER-POOLS	-	US	US	US
SHOW-PARAMETER-FILE-STATUS	-	US	US	-
MERGE-SPOOL-PARAMETER-FILE	-	US	SA	-
COPY-SPOOL-CHARACTER-SET	-	US	-	-
COPY-SPOOL-DEVICE	-	US	-	-
COPY-SPOOL-FORM	-	US	-	-

Statement	Assigned parameter file			
	None	SPOOL parameters		Dprint configuration
		User	System	
ADD-SPOOL-FILTER	-	US	SA	-
EDIT-SPOOL-FILTER	-	US	SA	-
MODIFY-SPOOL-FILTER	-	US	SA	-
REMOVE-SPOOL-FILTER	-	US	SA	-
SHOW-SPOOL-FILTERS	-	US	US	US
ADD-DPRINT-REMOTE-CLUSTER	-	-	-	CA
EDIT-DPRINT-REMOTE-CLUSTER	-	-	-	CA
MODIFY-DPRINT-REMOTE-CLUSTER	-	-	-	CA
REMOVE-DPRINT-REMOTE-CLUSTER	-	-	-	CA
SHOW-DPRINT-REMOTE-CLUSTERS	-	-	-	US
ADD-DPRINT-HOST	-	-	-	CA
EDIT-DPRINT-HOST	-	-	-	CA
MODIFY-DPRINT-HOST	-	-	-	CA
REMOVE-DPRINT-HOST	-	-	-	CA
SHOW-DPRINT-HOSTS	-	-	-	SA
ADD-DPRINT-SERVER	-	-	-	CA
EDIT-DPRINT-SERVER	-	-	-	CA
MODIFY-DPRINT-SERVER	-	-	-	CA
REMOVE-DPRINT-SERVER	-	-	-	CA
SHOW-DPRINT-SERVERS	-	-	-	US
ADD-DPRINT-PRINTER	-	-	-	CA
EDIT-DPRINT-PRINTER	-	-	-	CA
MODIFY-DPRINT-PRINTER	-	-	-	CA
REMOVE-DPRINT-PRINTER	-	-	-	CA
SHOW-DPRINT-PRINTERS	-	-	-	US
ADD-DPRINT-PRINTER-POOL	-	-	-	CA
MODIFY-DPRINT-PRINTER-POOL	-	-	-	CA
REMOVE-DPRINT-PRINTER-POOL	-	-	-	CA
SHOW-DPRINT-PRINTER-POOLS	-	-	-	US
ADD-DPRINT-ACCESS-CONTROL	-	-	-	CA
MODIFY-DPRINT-ACCESS-CONTROL	-	-	-	CA
REMOVE-DPRINT-ACCESS-CONTROL	-	-	-	CA
SHOW-DPRINT-ACCESS-CONTROLS	-	-	-	CA

Key

- : None

US: Any user

DA: Any device administrator

SA: SPOOL administrator

CA: cluster administrator

The level of authorization ascends from US to CA. This means that US has the lowest level of authorization, DA the second lowest, then SA and finally CA.

A further differentiation is made for the DA as to whether the administrator is allowed to modify character sets and form objects. If this is allowed, the administrator is referred to as the owner, ranking between DA and SA in the authorization scale.

The authorization range up to owner relates to RSO only.

ADD-DPRINT-ACCESS-CONTROL

Define cluster access control

Domain: DPRINT

User group: Cluster administrators

Privileges: PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the ADD-DPRINT-ACCESS-CONTROL statement to define a formal access control record in the configuration file. Extensions for individual hosts and users must be made by means of the MODIFY-DPRINT-ACCESS-CONTROL statement.

This statement is a configuration statement.

ADD-DPRINT-ACCESS-CONTROL

ACCESS-CONTROL-NAME = <alphanum-name 1..8>

,SUBJECTS = *ALL-USERS (...)

*ALL-USERS(...)

| ADMISSION = *NO / *YES

Operands

ACCESS-CONTROL-NAME = <alphanum-name 1..8>

Specifies the access control ID, or the name for the access control. This name is identical to the name specified in the other statements (such as ADD-DPRINT-REMOTE-CLUSTER) under the ACCESS-CONTROL-NAME operand.

SUBJECTS = *ALL-USERS(...)

Specifies that the access controls are to be selected for all users. This can also be modified by means of MODIFY-DPRINT-ACCESS-CONTROL.

ADMISSION = *NO / *YES

Specifies whether all users are to be accepted (*YES) or rejected by the access control.

Example

See the description of the MODIFY-DPRINT-ACCESS-CONTROL statement on [page 316ff.](#)

Notes

- Access control can be used to control access to remote clusters, servers and/or gateways (see the ACCESS-CONTROL-NAME operands in the ADD-DPRINT-REMOTE-CLUSTER, ADD-DPRINT-SERVER and ADD-DPRINT-HOST statements).
- Access control accepts or rejects jobs for Dprint users. The users are identified by their host names and their user IDs.
- The same access control can be used to control various different servers, remote clusters or gateways at the same time.
- The ACCESS-CONTROL-NAME operand that relates to the remote cluster, to servers and hosts, allows the cluster administrator to specify which access control is relevant.
- Access controls also have consequences on the selection of remote cluster objects, server objects, printer objects and printer group objects: Dprint users are only allowed to see those objects to which they are able to send jobs.
- Only the cluster administrator does not have to be expressly defined for access control because the cluster administrator is allowed to access any configuration object. The SPOOL administrator, on the other hand, must be implicitly or explicitly authorized by the cluster administrator in order to have access to the configuration objects; this does not include those objects that are connected to the server to which the SPOOL administrator has free access (i.e. printers, printer groups and the server itself).

ADD-DPRINT-HOST

Insert host

Domain:	DPRINT
User group:	Cluster administrators, SPOOL administrators
Privileges:	PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the ADD-DPRINT-HOST statement to insert hosts into a cluster in the configuration.

However, the entire host record in the configuration file can only be created in conjunction with the Dprint commands MODIFY-DPRINT-CLUSTER and MODIFY-DPRINT-CONFIGURATION.

This statement is a configuration statement.

ADD-DPRINT-HOST
<pre> HOST-NAME = <alphanum-name 1..8> ,INTERNET-ADDRESS = *STD / *NONE / <composed-name 7..15> ,PORT-NAME = *STD / *NONE / <integer 1..32767> ,ACCESS-FROM-CLUSTERS = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...) *BY-ACCESS-CONTROL(...) ACCESS-CONTROL-NAME = <alphanum-name 1..8> </pre>

Operands

HOST-NAME = <alphanum-name 1..8>

Specifies the logical host address (BCAM address).

INTERNET-ADDRESS = *STD / *NONE / <composed-name 7..15>

Specifies the Internet address of the host. This operand is only relevant if the TCP/IP protocol is used with a UNIX cluster. The Internet address must be specified when access is from a remote gateway. The IP address contains 4 fields, each separated by a dot (e.g. 123.45.67.9).

INTERNET-ADDRESS = *STD

The default value *STD indicates that the value is taken from the default host entry.

PORT-NAME = *STD / *NONE / <integer 1..32767>

Specifies the port name. This operand is only relevant if the TCP/IP protocol is used with a UNIX cluster. The port name is used by the partner to enter into a dialog with the local application. TCP/IP port names generally lie in the range 0 to 32767. The value 0 means that no

port name is specified. For Dprint also, the port names should only lie in the range between PRIVPORT# and FREEPORT#. It is therefore necessary to contact the network administrator to avoid selecting a name that has already been used.

PORT-NAME = *STD

The default value *STD indicates that the value is taken from the default host entry.

ACCESS-FROM-CLUSTERS = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)

Specifies which users are allowed to have access to the local cluster. This means that the cluster administrator defines here which external users (of remote clusters) are permitted to access the local cluster. In this case the host is seen as the collecting point for remote queries to the local cluster.

ACCESS-FROM-CLUSTERS = *STD

The value is taken from the standard host.

ACCESS-FROM-CLUSTERS = *NO

No external users are allowed to access the local cluster. The host is not a collecting point for remote queries.

ACCESS-FROM-CLUSTERS = *ALL-USERS

All external users are allowed to access the local cluster.

ACCESS-FROM-CLUSTERS = *BY-ACCESS-CONTROL(...)

Whether or not an external user is allowed to access the local cluster is stipulated in a specific list.

ACCESS-CONTROL-NAME = <alphanum-name 1..8>

Specifies the name of the access control ID. The corresponding list is then compared with the values entered under ADD-DPRINT-ACCESS-CONTROL

The following default HOST entry is present in the Dprint configuration file; it assigns certain default values to particular operands:

HOST-NAME	(<alphanum-name 1..8>)
INTERNET-ADDRESS	(*NONE)
PORT-NAME	(0)
ACCESS-FROM-CLUSTERS	(*NO)

Notes

- The logical address of a host is its BCAM address (for example, D000ZE01). This address must differ from that specified in NETWORK-ADDRESS in the ADD-DPRINT-REMOTE-CLUSTER statement.
- In order to allow the creation of a cluster configuration, the cluster administrator must first incorporate the various hosts in the configuration file (including the administrator's own hosts). The cluster administrator (or, if there is only one host, the SPOOL administrator) must also define hosts in the configuration file even if it is still questionable whether they are to be included in the cluster, as well as his or her own host and the hosts of potential cluster administrators.
- There is a naming convention within each cluster. This stipulates that within the cluster a physical host has the same logical BCAM name at every host that belongs to the cluster (this is the administrator's responsibility).

ADD-DPRINT-PRINTER

Define printer

Domain: DPRINT
User group: Cluster administrators
Privileges: PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the ADD-DPRINT-PRINTER statement to define a local printer as Dprint printer in its configuration file.

This statement is a configuration statement.

ADD-DPRINT-PRINTER
PRINTER-NAME = <alphanum-name 1..8> ,SERVER-NAME = <alphanum-name 1..8> ,LOCAL-PRINTER-NAME = <alphanum-name 1..8>

Operands

PRINTER-NAME = <alphanum-name 1..8>

Logical name for the entry as a Dprint printer.

SERVER-NAME = <alphanum-name 1..8>

Specifies the logical name of the server that controls the printer.

LOCAL-PRINTER-NAME = <alphanum-name 1..8>

Specifies the logical name of the local printer as it is defined in the SPOOL parameter file of the server host.

Notes

- In order to provide the users of a cluster with an individual overview of the system, the Dprint printers that are connected to the hosts in the cluster must be defined in the configuration. It must also be specified which server controls these printers and which host they are connected to.
In this way the users have an individual system overview within the cluster as soon as they are allowed to access a printer in the cluster, wherever the printer is linked.
- No name of a printer is allowed to occur twice on any one host: it is also mandatory that it is defined in the SPOOL parameter file.
In order to access these printers in a Dprint environment, they must be defined in the configuration file. In exceptional cases some printers may be defined with the same logical name in the SPOOL parameter file for their respective host. However, the operand LOCAL-PRINTER-NAME must be used in this case. The printer name in the configuration file then appears as an alias name of the device name from the SPOOL parameter file.

Example

The following settings apply:

H1 = D000ZE01

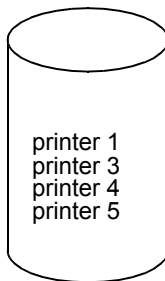
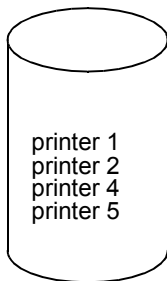
Server: S1

SPOOL parameter file:

H2 = D000ZE02

Server: S2

SPOOL parameter file:



The cluster administrator distributes the printers to the server hosts:

```
//ADD-DPRINT-PRINTER PRINTER-NAME=printer1
SERVER-NAME=S1
LOCAL-PRINTER-NAME=printer1

//ADD-DPRINT-PRINTER PRINTER-NAME=printer2
SERVER-NAME=S1
LOCAL-PRINTER-NAME=printer2
```

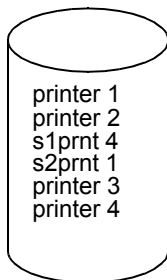
```
//ADD-DPRINT-PRINTER PRINTER-NAME=s1prnt1
SERVER-NAME=S1
LOCAL-PRINTER-NAME=printer4

//ADD-DPRINT-PRINTER PRINTER-NAME=s2prnt1
SERVER-NAME=S2
LOCAL-PRINTER-NAME=printer1

//ADD-DPRINT-PRINTER PRINTER-NAME=printer3
SERVER-NAME=S2
LOCAL-PRINTER-NAME=printer3

//ADD-DPRINT-PRINTER PRINTER-NAME=printer4
SERVER-NAME=S2
LOCAL-PRINTER-NAME=printer4
```

The configuration file subsequently contains the following Dprint printers:



printer1 for H1
 printer2 for H1
 printer4 for H1
 printer1 for H2
 printer3 for H2
 printer4 for H2

Additional features

- When the cluster administrator defines a new printer in the configuration file, a check is carried out on the SPOOL parameter device name (which was declared as the local SPOOL name).
- The server that is responsible for the printers must be defined.
- The cluster administrator must take account of the following rules when defining the printers and printer groups in the configuration:
 - if Dprint is loaded, the system searches for the object (printer or printer group) in the configuration file
 - if the object is found, it will be used
 - if it is not found, the system searches for it in the SPOOL parameter file

Example

The sample scenario explained below is intended to show how important it is to proceed carefully:

The following settings apply:

H1 = D000ZE01	H2 = D000ZE02
SPOOL parameter file	SPOOL parameter file
printer1	printer1
printer2	printer2
printer3	printer4
pool1	pool2
Configuration file:	Configuration file:
printer1=H1.printer1	printer1=H1.printer1
printer2=H2.printer2	printer2=H2.printer2
pool1	pool2

(1) START-PRINTER-OUTPUT

- SPOOL loaded
Dprint not loaded
/START-PRINTER-OUTPUT printer2
Printer2 belonging to H1 is started (there is access to the SPOOL parameter file)
 - Dprint loaded
/STOP-PRINTER-OUTPUT printer2
Printer2 belonging to H2 is stopped (there is access to the configuration file)
- Printer2 belonging to H1 cannot be stopped while Dprint is loaded.

(2) PRINT-DOCUMENT DEVICE-NAME= / DESTINATION =:

- SPOOL loaded
Dprint not loaded

/PRINT-DOCUMENT DESTINATION=pool

The printer query is checked in the SPOOL parameter file.

- Dprint loaded

/PRINT-DOCUMENT DESTINATION=pool

The printer query is checked in the configuration file.

The result of the check of the printer query may be different when Dprint is loaded because the configuration file then has precedence.

ADD-DPRINT-PRINTER-POOL

Define printer pool

Domain: DPRINT

User group: Cluster administrators

Privileges: PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the ADD-DPRINT-PRINTER-POOL statement to define a printer pool or a printer group in his or her configuration.

This statement is a configuration statement.

ADD-DPRINT-PRINTER-POOL
POOL-NAME = <alphanum-name 1..8> ,PRINTER-NAME = list-poss(16): <alphanum-name 1..8>

Operands

POOL-NAME = <alphanum-name 1..8>

Specifies the logical name of the printer pool.

PRINTER-NAME = list-poss(16): <alphanum-name 1..8>

Specifies the logical names of the printers belonging to the printer pool.

Notes

- Dprint printer groups consist of printers that are defined in the configuration file. Although they will also be created if one or more printers are not defined in the configuration, the non-defined printer(s) are not associated with the printer group and do not appear on any displays referring to the pool, i.e. in this case an empty display is shown.
- Dprint printer groups are permitted to contain Dprint printers which are connected to various hosts and which are controlled by various servers.
- It is important to know that it cannot be guaranteed that a name is unique between Dprint and non-Dprint printer groups; in fact it is possible to define a Dprint printer group in the configuration file with the same name as an (RSO) printer group in the SPOOL parameter file of a host. Certain consequences for the destination of a job result from this situation (for further details refer to the “Spool & Print Commands” manual under PRINT-DOCUMENT). To prevent such occurrences it is better to assign different names for Dprint printers and local printers from the outset.
- See also the last note about the ADD-DPRINT-PRINTER statement.

ADD-DPRINT-REMOTE-CLUSTER

Make entries for remote clusters

Domain: DPRINT

User group: Cluster administrators

Privileges: PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the ADD-DPRINT-REMOTE-CLUSTER statement to make entries for remote clusters in his or her configuration.

This statement is a configuration statement.

ADD-DPRINT-REMOTE-CLUSTER

```

CLUSTER-NAME = <alphanum-name 1..8>
,TYPE = *BS2000 / *UNIX-ISO (...)/ *UNIX-TCP(...)
  *UNIX-ISO(...)
    | GATEWAY-NAME = <c-string 1..255 with-low>
    | ,HOST-NAME = <c-string 1..255 with-low>
    | ,HOME-GATEWAY-ADDRESS = *STD / *NONE / <alphanum-name 1..8>
  *UNIX-TCP(...)
    | INTERNET-ADDRESS = <composed-name 7..15>
    | ,PORT-NAME = *NONE / <integer 1..32767>
    | ,GATEWAY-NAME = <c-string 1..255 with-low>
    | ,HOST-NAME = <c-string 1..255 with-low>
    | ,HOME-GATEWAY-ADDRESS = *STD / *NONE / <alphanum-name 1..8>
,NETWORK-ADDRESS = <alphanum-name 1..8>
,ACCESS-TO-CLUSTER = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
  *BY-ACCESS-CONTROL(...)
    | ACCESS-CONTROL-NAME = <alphanum-name 1..8>

```

Operands

CLUSTER-NAME = <alphanum-name 1..8>

Name of the (remote) cluster to which access can be made from the local cluster.

TYPE = *BS2000 / *UNIX-ISO / *UNIX-TCP(...)

Specifies the communications service protocol that is to be used with the remote cluster.

TYPE = *BS2000

The remote cluster is a BS2000 cluster. An ISO protocol (with NEA addressing mode) is used.

TYPE = *UNIX-ISO (...)

The cluster is a UNIX cluster and uses the ISO protocol.

GATEWAY-NAME = <c-string 1..255 with-low>

Logical gateway name in the remote UNIX cluster.

HOST-NAME = <c-string 1..255 with-low>

Logical gateway host name in the remote UNIX cluster.

HOME-GATEWAY-ADDRESS = *STD / *NONE / <alphanum-name 1..8>

Specifies the output address of the local gateway host, i.e. the logical address of the gateway host in the local cluster that receives the queries from the UNIX cluster.

HOME-GATEWAY-ADDRESS = *STD

Only for BS2000 clusters.

The value is taken from the default REMOTE CLUSTER entry.

TYPE = *UNIX-TCP(...)

The remote cluster is a UNIX cluster and uses the TCP/IP protocol.

INTERNET-ADDRESS = <composed-name 7..15>

Internet address of the gateway host in the remote cluster.

The IP address contains 4 fields, each separated by a dot (e.g. 123.45.67.9).

PORT-NAME = <integer 1..32767>

Port address of the gateway host in the UNIX cluster.

GATEWAY-NAME = <c-string 1..255 with-low>

Logical name of the gateway host in the UNIX cluster.

HOST-NAME = <c-string 1..255 with-low>

Logical gateway host name in the UNIX cluster.

HOME-GATEWAY-ADDRESS = *STD / *NONE / <alphanum-name 1..8>

Address of the local gateway host, i.e. the logical address of the host in the local cluster that receives the queries from the UNIX cluster.

HOME-GATEWAY-ADDRESS = *STD

For BS2000 clusters only.

The value is taken from the default REMOTE CLUSTER entry.

NETWORK-ADDRESS = <alphanum-name 1..8>

Network address of the (remote) cluster, i.e. the logical address of the host that sends the queries of an external host.

ACCESS-TO-CLUSTER = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)

This is where the cluster administrator specifies who is to be allowed to access the remote cluster from the local cluster.

ACCESS-TO-CLUSTER = *STD

The default value is taken from the remote cluster.

ACCESS-TO-CLUSTER = *ALL-USERS

All users are allowed access.

ACCESS-TO-CLUSTER = *NO

No users are allowed access.

ACCESS-TO-CLUSTER = *BY-ACCESS-CONTROL(...)

Whether a user is allowed to access the remote cluster or not is specified in a specific list. Only the cluster administrator is allowed to specify this operand.

ACCESS-CONTROL-NAME = <alphanumeric 1..8>

Specifies the name of the access list. The corresponding list is then compared with the values entered under ADD-DPRINT-ACCESS-CONTROL.

REMOTE-CLUSTER entry in the Dprint configuration file

The following default REMOTE-CLUSTER entry is present in the Dprint configuration file. It assigns certain default values to particular operands:

CLUSTER-NAME	<name 1..8>
TYPE	(*BS2000)
INTERNET-ADDRESS	(' ')
PORT-NAME	(0) ¹⁾
HOME-GATEWAY-ADDRESS	(*NONE)
NETWORK-ADDRESS	(' ' (mandatory))
ACCESS-TO-CLUSTER	(*NO)

¹⁾ The default value "0" means that no value was specified.

Notes

- In order to allow users of the cluster access to external clusters, the cluster administrator must define those external clusters in the configuration, i.e. the cluster administrator must specify at least the external cluster address and the types.
- The network address of the (remote) cluster must differ from all addresses specified via HOST-NAME in the ADD-DPRINT-HOST statement.
- In the case of interoperability with a UNIX host that is linked to a TCP/IP-LAN, nothing has to be defined using BCMAP commands. SOCKETS applications are addressed by way of their SOCKETS port name. In the case of interoperability with a UNIX host that is linked to an ISO-LAN, BCAM specifications (using BCMAP commands) are required in order to define remote UNIX applications. Depending on whether the BS2000 host is a client, server or gateway, the definitions are as follows:

(1) BS2000 as client host

Each UNIX gateway application must be defined with the following BCMAP command:

```
/BCMAP FUNCT=DEFINE, SUBFUNCT=GLOBAL, -
NAME=(OSI, X'com_srv'), -
ES=remote_hostname, -
PTSEL-I=(appl_len, C'appl')
```

com_srv: OSI name of the application, corresponding to:
t5 t4 t3 t2
<appl>.<remote_hostname>.GW.SPOOL

remote_hostname: BCAM name of the partner system. This must also be entered in the NETWORK-ADDRESS field.

appl: Transport selector for the gateway application. This must also be entered in the GATEWAY-NAME field. It is limited to the first 30 characters.

appl_len: Length of application name (maximum 30 characters).

(2) BS2000 as server host

No BCMAP command is required in this case.

(3) *BS2000 as gateway host*

- To allow receipt of requests from the UNIX cluster, the Dprint server application must be defined with the following BCPMAP commands:

```
/BCMAP FUNCT=DEFINE, SUBFUNCT=LOCAL, -
APPL=(OSI, X'<dp_srv>'), -
TSEL-I=(8,C'SDBSISO ')
```

dp_srv: OSI name of the Dprint-Server application used with BCPMAP corresponding to:
t5 t4 t3 t2
SDBSISO.<local_hostname>.SV.SPOOL

local_hostname: BCAM name of the BS2000 gateway host. This must also be entered in the HOME-GATEWAY-ADDRESS field.

- Each UNIX gateway application must be defined with the following BCPMAP commands:

```
/BCMAP FUNCT=DEFINE, SUBFUNCT=GLOBAL, -
NAME=(OSI, X'<com_srv>'), -
ES=<remote_hostname>, -
PTSEL-I=(<appl_len>,C'<appl>')
```

com_srv: OSI name of the application, corresponding to:
t5 t4 t3 t2
<appl>.<remote_hostname>.GW.SPOOL

remote_hostname: BCAM name of the partner system. This must also be entered in the NETWORK-ADDRESS field.

appl: Transport selector for the gateway application. This must also be entered in the GATEWAY-NAME field. It is limited to the first 30 characters.

appl_len: Length of the application name (maximum 30 characters).

Notes

1. For BCMAP commands, each part of the OSI name must be separated by the value x'00'.
2. BCMAP commands can only be used by systems support and network administration.
3. The functions for BCAM specification must be initiated with FUNCT=INIT and terminated with FUNCT=TERM.
4. BCMAP commands are permitted in the SOF (Start Option File).

For further information, refer to the manual "Generating a data communication system" (up to BCAM V11.0) or to the BCAM manuals (as of BCAM V12.0).

*Examples***(1) BCAM specification for the UNIX cluster:**

```
/BCMAP FUNCT=DEFINE, SUBFUNCT=GLOBAL, NAME= -
(OSI,X'A2A38189A29693968300E2E7F100C7E600E297969693'),-
ES=SX1,PTSEL-I=(8,'GTWISO  ')
```

(2) BCAM specification for BS2000 gateway:

```
/BCMAP FUNCT=DEFINE, SUBFUNCT=LOCAL, APPL= -
(OSI,X'E2C4C2E2C9E2D600C2E2F200E2E500E297969693'), -
TSEL-I=(8,'SDBSISO  ')
```


ADD-DPRINT-SERVER

Request server

Domain: DPRINT

User group: Cluster administrators

Privileges: PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the ADD-DPRINT-SERVER statement to define a server that exists in the cluster in his or her configuration.

This statement is a configuration statement.

ADD-DPRINT-SERVER

```
SERVER-NAME = <alphanum-name 1..8>
,HOST-NAME = <alphanum-name 1..8>
,PRINT-JOB-CLASS = *STD / *ANY / list-poss(16): <integer 1..255>
,ACCESS = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
  *BY-ACCESS-CONTROL(...)
    | ACCESS-CONTROL-NAME = <alphanum-name 1..8>
```

Operands

SERVER-NAME = <alphanum-name 1..8>

Specifies the logical name of the server.

HOST-NAME = <alphanum-name 1..8>

Specifies the logical address of the host where the server is defined.

PRINT-JOB-CLASS = *STD / *ANY / list-poss(16): <integer 1..255>

Specifies which print job class is applicable to the server object. As a result print jobs are automatically controlled in such a way that they select servers.

PRINT-JOB-CLASS = *STD

The default value is taken from the server.

PRINT-JOB-CLASS = *ANY

No selection can be made according to print job class.

ACCESS = *STD / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)

This is where the cluster administrator specifies who is allowed to access the specified server.

ACCESS = *STD

The default value is taken from the server.

ACCESS = *ALL-USERS

All users are allowed access.

ACCESS = *NO

No user is allowed access.

ACCESS = *BY-ACCESS-CONTROL(...)

Whether a user is allowed to access the specified server or not is stipulated in a specific list. Only the cluster administrator is allowed to specify this operand.

ACCESS-CONTROL-NAME = <alphanum-name 1..8>

Specifies the name of the access list. The corresponding list is then compared with the values entered under ADD-DPRINT-ACCESS-CONTROL.

Notes

- In order to allow printing on Dprint printers in the cluster configuration, the cluster administrator must define these printers in the configuration file. These printers cannot be used, however, if there is no server for them.
- Only one server may be defined for each host.
- The print job class that is related to the server object is not dependent on the print job class that is dynamically related to the printer (i.e. those during processing of the START-PRINTER-OUTPUT command). In order to send print jobs to a server so that they can be processed there, it is most appropriate to start the printers with the print job class which are each related to a particular server.
- The server object must be defined before the DPRINTSV subsystem is started.

ADD-PRINTER-POOL

Define printer pool

User group: systems support

This statement defines a pool for local and RSO printers. Up to 16 devices (RSO or local SPOOL) can be specified in one statement. If more devices are to be added to the pool later, this is done by means of the MODIFY-PRINTER-POOL statement (see [page 330](#)).

ADD-PRINTER-POOL

```
POOL-NAME = <name 1..8>
,DEVICE-NAME = list-poss(16) : <alphanum-name 1..8>
,POOL-TYPE = *REMOTE / *LOCAL
```

Operands

POOL-NAME = <name 1..8>

Name of the new pool to be generated.

The pool name must not be identical to the name of a local or RSO device.

DEVICE-NAME = list-poss(16): <alphanum-name 1..8>

Up to 16 device names (RSO or local SPOOL) which are defined as belonging to this pool. SPSEIVE checks whether the SPOOL parameter file contains device entries for all the devices specified here.

POOL-TYPE = *REMOTE / *LOCAL

Specifies whether the pool contains local or RSO printers; it is not possible for both types of printer to be included in the device pool at the same time. A check is made to verify that the specified devices are of the specified type (local or RSO).

Note

Printer pools linked to IDOM servers may only contain virtual printers.

ADD-SPOOL-CHARACTER-SET

Define character sets

User group: systems support and RSO device administrators

This statement defines character sets that have to be entered in the SPOOL parameter file. These are standard character sets for forms and character sets for laser printers, which are used for printing header and trailer pages. All other character sets are generated using the PRM utility routine and entered in the PRFILE or SPSLIB (see the manuals "SPOOL", "SPS/BS2000-APA" and "PRM").

For local printers, the form and character set definitions are used to determine the number of lines and columns to be printed on the header and trailer pages. For this, only the CHARACTER-SET-NAME, CHARACTERS-PER-INCH and LINES-PER-INCH operands are interpreted. All other operands are only relevant for RSO.

For RSO printers of all types it is additionally possible to link the character set to a font, a language table or a string, or to link a character set to a font (see the RSOSERVE utility routine in the "RSOSERVE" manual).

The default value (*STD) is taken from the standard character set.

ADD-SPOOL-CHARACTER-SET

```

CHARACTER-SET-NAME = <alphanum-name 1..3> / *STD
,COLOUR = *STD / *IGNORE / *BLACK / *BLUE / *CYAN / *GREEN / *MAGENTA / *NEUTRAL / *RED /
          *YELLOW
,WEIGHT = *STD / *IGNORE / *NORMAL / *LIGHT / *BOLD
,CHARACTER-TYPE = *STD / *IGNORE / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA /
                  *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
                  *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13
                  *FONT-14 / *FONT-15 / *FONT-16
,CHARACTER-STYLE = *STD / *IGNORE / *STRAIGHT / *ITALICS
,UNDERSCORE = *STD / *IGNORE / *NO / *YES
,CHARACTERS-PER-INCH = *STD / *IGNORE / <integer 1..100>
,LINES-PER-INCH = *STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24
,LANGUAGE = *STD / *IGNORE / *INTERNATIONAL / *ENGLISH / *USA / *BELGIAN / *FRENCH / *DUTCH /
             *GERMAN / *NORWEGIAN / *SWEDISH / *DANISH / *SPANISH / *SWISS / *ITALIAN /
             *ARABIC / *FARSI / *NONE / *ISO-8859-1 / *ISO-8859-2 / *ISO-8859-3 / *ISO-8859-4 /
             *ISO-8859-5 / *ISO-8859-6 / *ISO-8859-7 / *ISO-8859-8 / *ISO-8859-9
,NEAR-LETTER-QUALITY = STD / IGNORE / *YES / *NO

```

Operands

CHARACTER-SET-NAME = *STD / <alphanum-name 1..3>

Specifies a character set.

CHARACTER-SET-NAME = *STD

*STD provides a dummy standard character set with preset values which you can modify as desired in order to produce a new character set.

CHARACTER-SET-NAME = <alphanum-name 1..3>

Name of the character set that is to be defined in the SPOOL parameter file.

COLOUR = *STD / *BLACK / *RED / *GREEN / *YELLOW / *BLUE / *MAGENTA / *CYAN / *NEUTRAL / *IGNORE

Color in which the character set is to be printed.

For the values and device types supported please refer to [page 74](#). Specification of the *IGNORE value is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

WEIGHT = *STD / *NORMAL / *LIGHT / *BOLD / *IGNORE

Intensity with which the character set is to be printed: normal / light / bold. Specification of the *IGNORE value is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

CHARACTER-TYPE = *STD / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA / *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 / *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 / *FONT-14 / *FONT-15 / *FONT-16 / *IGNORE

Font in which the character set is to be printed.

*NONE means that the last font stored in the printer is to be used for printing with the specified character set.

For the values and device types supported please refer to [page 89](#). Specification of the *IGNORE value is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

CHARACTER-STYLE = *STD / *STRAIGHT / *ITALICS / *IGNORE

Character style in which the character set is to be printed:

*STRAIGHT = standard / *ITALICS = italics.

Specification of the *IGNORE value is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

UNDERSCORE = *STD / *YES / *NO / *IGNORE

Specifies whether or not the printed characters are to be underlined.

Specification of the *IGNORE value is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

CHARACTERS-PER-INCH = *STD / *IGNORE / <integer 1..100>

Density (number of characters per inch) at which characters are to be printed when this character set is used. The default value is taken from the character set that is in the form which is being used for printing. Specification of the *IGNORE value (or 0) is only of relevance for RSO and signifies that any value set earlier at the printer remains unchanged.

The following values are supported by the different printer types:

Printer types	CPI values, checked at PRINT-DOCUMENT and start of spoolout (1)	CPI values which are converted by RSO and sent to the printer (2)
2030-PCL	1..100	1..100
4011	10/12/15/17/20	10/12/15/17/20
4812	1/2/3/4/5/6/8/10/12/ 15/20/24/30/40/60	1/2/3/4/5/6/8/10/12/15/20/ 24/30/40/60
4813	10/12/15/17/20	10/12/15/17/20
4818-PCL	1..100	1..100
4821-PCL	1..100	1..100
4822-PCL	1..100	1..100
4824-PCL	1..100	1..100
4825-PCL	1..100	1..100
4830-PCL	1..100	1..100
4850-PCL	1..100	1..100
8121	10	-
9000-EPFX	10/12/17/20	10/12/17/20
9000-EPLQ	10/12/15/17/20	10/12/15/17/20
9000-EPSQ	10/12/15/17/20	10/12/15/17/20
9000-PCL	1..100	1..100
9000-PRO	10/12/17	10/12/17
9000-PS	1..100	1..100
9000	1..100	-
9001	10/12/17	10/12/17
9001-31	10/12/15/17	10/12/15/17
9002	10	-
9003	10/12/15	10/12/15
9004	1/2/3/4/5/6/8/10/12/ 15/20/24/30/40/60	1/2/3/4/5/6/8/10/12/15/20/ 24/30/40/60
9011	10/12/15/17	10/12/15/17

Printer types	CPI values, checked at PRINT-DOCUMENT and start of spoolout (1)	CPI values which are converted by RSO and sent to the printer (2)
9012	10/12/15/17	10/12/15/17
9013	10/12/15/18	10/12/15/18
9014	10/12/15/17/18/20	10/12/15/17/18/20
9015	10/12/15/17/18/20	10/12/15/17/18/20
9021	1..100	1..100
9022	1/2/3/4/5/6/8/10/12/ 15/20/24/30/40/60	1/2/3/4/5/6/8/10/12/15/20/ 24/30/40/60
9022-200	1..100	1..100
9025	1..100	-
9026-RENO	1..100	-
9026-PCL	1..100	1..100
9045-ANSI	10/12/15/17	10/12/15/17
9046	10/12/13/15/17	10/12/13/15/17
9097	10/12/15/17/20	10/12/15/17/20
9645	10	-
DJET	1..100	1..100

- For each printer type, the table lists the character set's CPI operand values which are supported by RSO V2.3A and higher. The checks are made upon validation of the PRINT-DOCUMENT command and at the time of print job scheduling. Specifying any other values leads to the following reactions.
 - In the PRINT-DOCUMENT command:
the command is rejected.
 - At the start of spoolout:
the print job is placed in the KEEP queue and the printer is set to status "S".
- Some printer types support no printer commands which set the character density ("- " in the table). This means that the specified character density is not set by RSO, irrespective of the CPI operand value of the character set.

On printer types 9000, 9025 and 9026-RENO the user can nevertheless set character spacings by linking a 256-character string to a character set using the RSOSERVE product.

Notes

- If a CPI value of 15 is specified for an RSO printer of type 9001, the file will be printed with a density of 16.5 cpi.
- The following should be observed for printer types 2030-PCL, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200, 9026-PCL and DJET. Since the CHARACTERS-PER-INCH values refer to the spacing between the characters (HMI) and not the pitch, which is font-dependent, special character sets must be defined with RSOSERVE when different pitches are used. The C-P-I attribute of a character set is independent of the pitch. The supported values for the printer C-P-I lie between 1 and 100. If font attributes are changed for one of these printers, the current print font is changed. Each time the current font is changed, the printer sets the HMI value to the same as the pitch value of the newly loaded font. RSO corrects this by setting the previous HMI value after each font change detected. A font change is detected by RSO when it is effected either by the user via a VTSU code or by another character set. Any other type of font modification, e.g. print control characters in a user file, are not recognized as such by RSO; i.e. the HMI values remains the same as the pitch value of the newly loaded font.
- RSO cannot send control characters to 9000, 9025 or 9026-RENO Printers to set the character spacing. The character spacing can, however, be set using a 256-character string linked to the character set with the aid of RSOSERVE. RSO nevertheless permits several CPI values for these printer types. These values are not set by RSO, however; rather, they are used to calculate the line size, i.e. for the maximum number of characters per line used for header and trailer pages, and to detect any truncated lines.
- The following applies to the 9014 Printer: the values 17 cpi and 18 cpi are mutually exclusive; the value 17 can be used only if it has been set in the menu of the 9014 Printer. Otherwise, the value 18 cpi is used when 17 cpi is specified. RSO does not check the setting in the menu of the 9014 Printer.
The fonts DATA, COURIER, GOTHIC, FONT-1 (MICRO) and FONT-2 (ORATOR) support the CPI values 10, 12, 15, 17 (or 18) and 20; OCR-A and OCR-B only support the CPI value 10.

LINES-PER-INCH = *STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24

Number of lines per inch.

Line density at which characters are to be printed. For RSO jobs, the LPI value to be used for printing the file is determined via the VERTICAL-CONTROL operand (LOOP or SPACING) in ADD-SPOOL-FORM (i.e. the LINES-PER-INCH operand is ignored).

Notes

- For the formula used to calculate the number of characters per line, see the description of the suboperand LINES-PER-INCH = *DENSITY(...) under the ADD-SPOOL-FORM statement on [page 248](#).
- The following applies to LP-PRINTERS:
The character set loaded into the PRFILE via the form entry (BAND-ID) should have the same CPI and LPI values as the character set assigned to the form in the SPOOL parameter file.

LANGUAGE = *STD / *NONE / *FRENCH / *ENGLISH / *USA / *BELGIAN / *DUTCH / *GERMAN / *NORWEGIAN / *SWEDISH / *DANISH / *SPANISH / *SWISS / *ITALIAN / *INTERNATIONAL / *ARABIC / *FARSI / *IGNORE / *ISO-8859-1 / *ISO-8859-2 / *ISO-8859-3 / *ISO-8859-4 / *ISO-8859-5 / *ISO-8859-6 / *ISO-8859-7 / *ISO-8859-8 / *ISO-8859-9

Language in which the character set is to be used. If *IGNORE is specified, the printout is made using the language setting for the previous print job. If *NONE is specified, nothing is sent to the printer.

The *ARABIC and *FARSI settings are only evaluated in conjunction with DSEM V3.0.

The characters of the ISO language family are 8-bit codes.

NEAR-LETTER-QUALITY = *STD / *YES / *NO / *IGNORE

Specifies whether the printed output is to be of NLQ quality. The default value is *NO. This function is not supported by all printer types. If the value *IGNORE is specified, this operand will not be evaluated by RSO; any value set earlier at the printer remains unchanged.

Operands of the RSO parameter file

In the following table of the file SYSPAR.RSO.<RSO-VERSION>.SYSTEM, only those VTSU codes are evaluated which the printer actually supports. Functions that are not supported by a printer type are no longer converted into alternative functions (e.g. color red into underscore for a 9001-type printer).

The abbreviations and footnotes contained in the table are explained on [page 89ff.](#)

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	2030-PCL	4011	4812	4813	4818-PCL
COLOUR	*BLACK	x	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	n.s.	n.s.	n.s.
	*NORMAL	x	x	x	x	x
	*BOLD	bold	bold	n.s.	bold	bold
	*IGNORE	x	x	x	x	x
CHARACTER-TYPE (4)	*OCR-A	-	x	-	x	-
	*OCR-B	-	x	-	x	-
	*GOTHIC	-	-	-	-	-
	*GRAPHIC	-	-	-	-	-
	*NONE	-	-	-	-	-
	*DATA	-	-	-	-	-
	*COURIER	-	-	-	-	-
	*FONT-1	-	x	-	x	-
	*FONT-2	-	x	-	x	-
	*FONT-3	-	-	-	-	-
	:	:	:	:	:	
	:	:	:	:	:	
	*FONT-16	-	-	-	-	-
CHARACTER-STYLE	*STRAIGHT	x	x	x	x	x
	*ITALICS	italic	italic	italic	italic	italic
	*IGNORE	x	x	x	x	x
UNDERScore	*YES	u'score	u'score	u'score	u'score	u'score
	*NO	x	x	x	x	x
	*IGNORE	x	x	x	x	x
NEAR-LETTER-QUALITY	*YES	n.s.	x	n.s.	x	n.s.
	*NO	x	x	x	x	x

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	2030-PCL	4011	4812	4813	4818-PCL
LANGUAGE	*INTERNAT	-	X	X	X	X
	*BELGIAN	-	X	-	X	-
	*DANISH	-	X	-	X	-
	*DUTCH	-	-	-	-	-
	*ENGLISH	X	X	X	X	X
	*FRENCH	X	X	-	X	X
	*GERMAN	X	X	X	X	X
	*ITALIAN	X	X	X	X	X
	*NORWEGIAN	X	X	X	X	X
	*SPANISH	X	X	X	X	X
	*SWEDISH	X	X	X	X	X
	*SWISS	-	X	-	X	-
	*USA	X	X	X	X	X
	*NONE	X	X	X	X	X
	*ISO-8859-1	X	X	X	X	X
	*ISO-8859-2	-	X	-	X	-
	*ISO-8859-3	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-
	*ISO-8859-5	-	X	-	X	-
	*ISO-8859-6	-	-	-	-	-
	*ISO-8859-7	-	X	-	X	-
	*ISO-8859-8	-	-	-	-	-
	*ISO-8859-9	-	X	-	X	-
	*IGNORE	X	X	X	X	X

ADD-SPOOL-CHARACTER-SET		Printer type			
Operand	Operand value	4821-PCL	4822-PCL	4824-PCL	4825-PCL
COLOUR	*BLACK	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	x	n.s.	x	n.s.
	*NORMAL	x	x	x	x
	*BOLD	n.s.	bold	n.s.	bold
	*IGNORE	x	x	x	x
CHARACTER-TYPE (4)	*OCR-A	-	-	-	-
	*OCR-B	-	-	-	-
	*GOTHIC	-	-	-	-
	*GRAPHIC	-	-	-	-
	*NONE	-	-	-	-
	*DATA	-	-	-	-
	*COURIER	-	-	-	-
	*FONT-1	-	-	-	-
	*FONT-2	-	-	-	-
	*FONT-3	-	-	-	-
	:	:	:	:	:
	:	:	:	:	:
	*FONT-16	-	-	-	-
CHARACTER-STYLE	*STRAIGHT	x	x	x	x
	*ITALICS	italic	italic	italic	italic
	*IGNORE	x	x	x	x
UNDERSCORE	*YES	u'score	u'score	u'score	u'score
	*NO	x	x	x	x
	*IGNORE	x	x	x	x
NEAR-LETTER-QUALITY	*YES	n.s.	n.s.	n.s.	n.s.
	*NO	x	x	x	x

ADD-SPOOL-CHARACTER-SET		Printer type			
Operand	Operand value	4821-PCL	4822-PCL	4824-PCL	4825-PCL
LANGUAGE	*INTERNAT	-	X	-	X
	*BELGIAN	-	-	-	-
	*DANISH	-	-	-	-
	*DUTCH	-	-	-	-
	*ENGLISH	X	X	X	X
	*FRENCH	X	X	X	X
	*GERMAN	X	X	X	X
	*ITALIAN	X	X	X	X
	*NORWEGIAN	X	X	X	X
	*SPANISH	X	X	X	X
	*SWEDISH	X	X	X	X
	*SWISS	-	-	-	-
	*USA	X	X	X	X
	*NONE	X	X	X	X
	*ISO-8859-1	X	X	X	X
	*ISO-8859-2	-	-	-	-
	*ISO-8859-3	-	-	-	-
	*ISO-8859-4	-	-	-	-
	*ISO-8859-5	-	-	-	-
	*ISO-8859-6	-	-	-	-
	*ISO-8859-7	-	-	-	-
	*ISO-8859-8	-	-	-	-
*ISO-8859-9	-	-	-	-	
*IGNORE	X	X	X	X	

ADD-SPOOL-CHARACTER-SET		Printer type			
Operand	Operand value	4830-PCL	4850-PCL	8121	9000-EPFX
COLOUR	*BLACK	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	n.s.	n.s.
	*NORMAL	x	x	x	x
	*BOLD	bold	bold	n.s.	bold
	*IGNORE	x	x	x	x
CHARACTER-TYPE (4)	*OCR-A	-	-	-	-
	*OCR-B	-	-	-	-
	*GOTHIC	-	-	-	-
	*GRAPHIC	-	-	-	-
	*NONE	-	-	-	-
	*DATA	-	-	-	-
	*COURIER	-	-	-	-
	*FONT-1	-	-	-	-
	*FONT-2	-	-	-	-
	*FONT-3	-	-	-	-
	:	:	:	:	:
	:	:	:	:	:
	*FONT-16	-	-	-	-
	CHARACTER-STYLE	*STRAIGHT	x	x	x
*ITALICS		italic	italic	italic(2)	italic
*IGNORE		x	x	x	x
UNDERScore	*YES	u'score	u'score	n.s.	u'score
	*NO	x	x	x	x
	*IGNORE	x	x		x
NEAR-LETTER-QUALITY	*YES	n.s.	n.s.	n.s.	x
	*NO	x	x	x	x
	*IGNORE	n.s.	n.s.	n.s.	x

ADD-SPOOL-CHARACTER-SET		Printer type			
Operand	Operand value	4830-PCL	4850-PCL	8121	9000-EPFX
LANGUAGE	*INTERNAT	X	X	-	X
	*BELGIAN	-	-	-	-
	*DANISH	-	-	-	-
	*DUTCH	-	-	-	-
	*ENGLISH	X	X	-	X
	*FRENCH	X	X	-	X
	*GERMAN	X	X	-	X
	*ITALIAN	X	X	-	X
	*NORWEGIAN	X	X	-	X
	*SPANISH	X	X	-	X
	*SWEDISH	X	X	-	X
	*SWISS	-	-	-	-
	*USA	X	X	-	X
	*NONE	X	X	-	X
	*ISO-8859-1	X	X	-	X
	*ISO-8859-2	-	-	-	-
	*ISO-8859-3	-	-	-	-
	*ISO-8859-4	-	-	-	-
	*ISO-8859-5	-	-	-	-
	*ISO-8859-6	-	-	-	-
*ISO-8859-7	-	-	-	-	
*ISO-8859-8	-	-	-	-	
*ISO-8859-9	-	-	-	-	
*IGNORE	X	X	-	X	

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9000-EPLQ	9000-EP SQ	9000-PCL	9000-PRO	9000-PS
COLOUR	*BLACK	X	X	X	X	X
	*RED	n.s.	n.s.	n.s.	red	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	thin	thin	n.s.
	*NORMAL	X	X	X	X	X
	*BOLD	bold	bold	bold	bold	n.s.
	*IGNORE	X	X	X	X	X

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9000-EPLQ	9000-EPSQ	9000-PCL	9000-PRO	9000-PS
CHARACTER-TYPE (4)	*OCR-A	-	-	-	-	-
	*OCR-B	-	-	-	-	-
	*GOTHIC	-	-	-	-	-
	*GRAPHIC	-	-	-	-	-
	*NONE	-	-	-	-	-
	*DATA	-	-	-	-	-
	*COURIER	-	-	-	-	-
	*FONT-1	-	-	-	-	-
	*FONT-2	-	-	-	-	-
	*FONT-3	-	-	-	-	-
	:	:	:	:	:	:
	:	:	:	:	:	:
	*FONT-16	-	-	-	-	-
CHARACTER-STYLE	*STRAIGHT	x	x	x	n.s.	n.s.
	*ITALICS	italic	italic	italic	n.s.	n.s.
	*IGNORE	x	x	x	n.s.	n.s.
UNDERScore	*YES	u'score	u'score	u'score	u'score	n.s.
	*NO	x	x	x	x	x
	*IGNORE	x	x	x	x	n.s.
NEAR-LETTER-QUALITY	*YES	x	x	n.s.	x	n.s.
	*NO	x	x	x	x	x
	*IGNORE	x	x	n.s.	x	n.s.

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9000- EPLQ	9000- EPSQ	9000- PCL	9000- PRO	9000- PS
LANGUAGE	*INTERNAT	X	X	X	-	-
	*BELGIAN	-	-	-	-	-
	*DANISH	-	-	-	-	-
	*DUTCH	-	-	-	-	-
	*ENGLISH	X	X	X	-	-
	*FRENCH	X	X	X	-	-
	*GERMAN	X	X	X	-	-
	*ITALIAN	X	X	X	-	-
	*NORWEGIAN	X	X	X	-	-
	*SPANISH	X	X	X	-	-
	*SWEDISH	X	X	X	-	-
	*SWISS	-	-	-	-	-
	*USA	X	X	X	-	-
	*NONE	X	X	X	-	-
	*ISO-8859-1	X	X	X	-	-
	*ISO-8859-2	-	-	-	-	-
	*ISO-8859-3	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-
	*ISO-8859-5	-	-	-	-	-
	*ISO-8859-6	-	-	-	-	-
	*ISO-8859-7	-	-	-	-	-
*ISO-8859-8	-	-	-	-	-	
*ISO-8859-9	-	-	-	-	-	
*IGNORE	X	X	X	-	-	

ADD-SPOOL-CHARACTER-SET		Printer type					
Operand	Operand value	9000	9001	9001-31	9002	9003	9004
COLOUR	*BLACK	x	x	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.	rot	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*NORMAL	x	x	x	x	x	x
	*BOLD	n.s.	n.s.	bold	n.s.	n.s.	bold
	*IGNORE	n.s.	n.s.	x	n.s.	n.s.	x
CHARACTER-TYPE (4)	*OCR-A	-	-	-	-	-	-
	*OCR-B	-	-	-	-	-	-
	*GOTHIC	-	-	-	-	-	-
	*GRAPHIC	-	-	-	-	-	-
	*NONE	-	-	-	-	-	-
	*DATA	-	-	-	-	-	-
	*COURIER	-	-	-	-	-	-
	*FONT-1	-	-	FONT-1	-	-	-
	*FONT-2	-	-	FONT-2	-	-	-
	*FONT-3	-	-	-	-	-	-
	:	:	:	:	:	:	:
	:	:	:	:	:	:	:
	*FONT-16	-	-	-	-	-	-
CHARACTER-STYLE	*STRAIGHT	x	x	x	x	x	x
	*ITALICS	n.s.	n.s.	italic	italic	italic	n.s.
	*IGNORE	n.s.	n.s.	x	x	x	n.s.
UNDERSCORE	*YES	n.s.	u'score	u'score	u'score	n.s.	u'score
	*NO	x	x	x	x	x	x
	*IGNORE	n.s.	x	x	x	n.s.	x
NEAR-LETTER-QUALITY	*YES	n.s..	n.s.	x	n.s.	n.s.	n.s..
	*NO	x	x	x	x	x	x
	*IGNORE	n.s.	n.s.	x	n.s.	n.s.	n.s.

ADD-SPOOL-CHARACTER-SET		Printer type					
Operand	Operand value	9000	9001	9001-31	9002	9003	9004
LANGUAGE	*INTERNAT	-	x	x	-	-	-
	*BELGIAN	-	-	x	-	-	-
	*DANISH	-	x(5)	x(5)	-	-	-
	*DUTCH	-	-	-	-	-	-
	*ENGLISH	-	x(5)	x(5)	-	-	-
	*FRENCH	-	x(5)	x(5)	-	-	-
	*GERMAN	-	x	x	-	-	-
	*ITALIAN	-	-	x	-	-	-
	*NORWEGIAN	-	x(5)	x(5)	-	-	-
	*SPANISH	-	x(5)	x(5)	-	-	-
	*SWEDISH	-	x(5)	x(5)	-	-	-
	*SWISS	-	-	x	-	-	-
	*USA	-	x	x	-	-	-
	*NONE	-	x	x	-	-	-
	*ISO-8859-1	-	x	x	-	-	-
	*ISO-8859-2	-	-	-	-	-	-
	*ISO-8859-3	-	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-	-
	*ISO-8859-5	-	-	-	-	-	-
	*ISO-8859-6	-	-	-	-	-	-
	*ISO-8859-7	-	-	-	-	-	-
	*ISO-8859-8	-	-	-	-	-	-
	*ISO-8859-9	-	-	-	-	-	-
	*IGNORE	-	x	x	-	-	-

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9011	9012	9013	9014	9015
COLOUR(11)	*BLACK	x	x	x	x	x
	*RED	red	n.s.	n.s.	x	n.s.
	*GREEN	green	n.s.	n.s.	x	n.s.
	*YELLOW	yellow	n.s.	n.s.	x	n.s.
	*BLUE	blue	n.s.	n.s.	x	n.s.
	*MAGENTA	magenta	n.s.	n.s.	x	n.s.
	*CYAN	cyan	n.s.	n.s.	x	n.s.
	*NEUTRAL	neutral	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	n.s.	n.s.	n.s.
	*NORMAL	x	x	x	x	x
	*BOLD	n.s.	bold	bold	bold	bold
	*IGNORE	n.s.	x	x	x	x
CHARACTER-TYPE (4)	*OCR-A	-	-	OCR-A	OCR-A(11)	OCR-A
	*OCR-B	-	-	OCR-B	OCR-B(11)	OCR-B
	*GOTHIC	-	-	-	GOTHIC	-
	*GRAPHIC	-	-	-	GRAPHIC	-
	*NONE	-	-	-	NONE	-
	*DATA	-	-	DATA	DATA	DATA
	*COURIER	-	-	COURIER	COURIER	COURIER
	*FONT-1	*FONT-1	*FONT-1	FONT-1	FONT-1 (9)	FONT-1
	*FONT-2	*FONT-2	*FONT-2	FONT-2	FONT-2 (9)	FONT-2
	*FONT-3	-	*FONT-3	FONT-3	(10)	FONT-3
	*FONT-4	-	*FONT-4	FONT-4	(10)	FONT-4
	*FONT-5	-	*FONT-5	FONT-5	(10)	FONT-5
	*FONT-6	-	*FONT-6	FONT-6	(10)	FONT-6
	*FONT-7	-	*FONT-7	FONT-7	(10)	FONT-7
	*FONT-8	-	*FONT-8	FONT-8	(10)	FONT-8
	*FONT-9	-	-	FONT-9	(10)	FONT-9
	*FONT-10	-	-	FONT-10	(10)	FONT-10
	*FONT-11	-	-	FONT-11	(10)	FONT-11
	*FONT-12	-	-	FONT-12	(10)	FONT-12
	*FONT-13	-	-	FONT-13	(10)	FONT-13
*FONT-14	-	-	FONT-14	(10)	FONT-14	
*FONT-15	-	-	-	(10)	-	
*FONT-16	-	-	-	-	-	
*IGNORE	x	x	x	x	x	
*STD	*STD	*STD	*STD	*STD	*STD	
CHARACTER-STYLE	*STRAIGHT	x	x	x	x	x
	*ITALICS	italic	n.s.	n.s.	italic	italic
	*IGNORE	x	n.s.	n.s.	n.s.	x

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9011	9012	9013	9014	9015
UNDERSCORE	*YES	u'score	u'score	u'score	u'score	u'score
	*NO	x	x	x	x	x
	*IGNORE	x	x	x	x	x
NEAR- LETTER- QUALITY	*YES	x	n.s.	n.s.	x(11)	x
	*NO	x	x	x	x(11)	x
	*IGNORE	x	n.s.	n.s.	x(11)	x
LANGUAGE	*INTERNAT	x	x	x	x	x
	*BELGIAN	x	x	x	x	x
	*DANISH	x	x	x	x	x
	*DUTCH	-	-	-	-	-
	*ENGLISH	x	x	x	x	x
	*FRENCH	x	x	x	x	x
	*GERMAN	x	x	x	x(12)	x
	*ITALIAN	x	x	x	x	x
	*NORWEGIAN	x	x	x	x	x
	*SPANISH	x	x	x	x(12)	x
	*SWEDISH	x	x	x	x	x
	*SWISS	x	x	x	x	x
	*USA	x	x	x	x	x
	*NONE	x	x	x	x	x
	*ISO-8859-1	x	x	x	x	x
	*ISO-8859-2	-	-	-	x	x
	*ISO-8859-3	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-
	*ISO-8859-5	-	-	-	x	x
	*ISO-8859-6	-	-	-	-	-
*ISO-8859-7	-	-	-	x	x	
*ISO-8859-8	-	-	-	-	-	
*ISO-8859-9	-	-	-	x	x	
*IGNORE	x	x	x	x	x	

ADD-SPOOL-CHARACTER-SET		Printer type					
Operand	Operand value	9021	9022	9022-200	9025	9026-PCL	9026-RENO
COLOUR	*BLACK	x	x	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	x	n.s.	x	light(3)	n.s.	light
	*NORMAL	x	x	x	norm.(3)	x	normal
	*BOLD	bold	bold	bold	bold(3)	n.s.	bold
	*IGNORE	x	x	x	x	n.s.	x
CHARACTER-TYPE (4)	*OCR-A	-	-	-	-	-	-
	*OCR-B	-	-	-	-	-	-
	*GOTHIC	-	-	-	-	-	-
	*GRAPHIC	-	-	-	-	-	-
	*NONE	-	-	-	-	-	-
	*DATA	-	-	-	-	-	-
	*COURIER	-	-	-	-	-	-
	*FONT-1	-	-	-	-	-	-
	:	:	:	:	:	:	:
	:	:	:	:	:	:	:
*FONT-16	-	-	-	-	-	-	
CHARACTER-STYLE	*STRAIGHT	x	x	x	x	x	x
	*ITALICS	italic	n.s.	n.s.	italic	italic	italic
	*IGNORE	x	n.s.	n.s.	x	x	x
UNDERScore	*YES	u'score	u'score	u'score	u'score	u'score	u'score
	*NO	x	x	x	x	x	x
	*IGNORE	x	x	x	x	x	x
NEAR-LETTER QUALITY	*YES	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	*NO	x	x	x	x	x	x
	*IGNORE	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

ADD-SPOOL-CHARACTER-SET		Printer type					
Operand	Operand value	9021	9022	9022-200	9025	9026-PCL	9026-RENO
LANGUAGE(6)	*INTERNAT	X	X	-	-	X	-
	*BELGIAN	-	X	-	-	-	-
	*DANISH	-	X	-	-	-	-
	*DUTCH	-	X	-	-	-	-
	*ENGLISH	X	X	X	-	X	-
	*FRENCH	X	X	X	-	X	-
	*GERMAN	X	X	X	-	X	-
	*ITALIAN	X	X	X	-	X	-
	*NORWEGIAN	X	X	X	-	X	-
	*SPANISH	X	X	X	-	X	-
	*SWEDISH	X	X	X	-	X	-
	*SWISS	-	X	-	-	-	-
	*USA	X	X	X	-	X	-
	*NONE	X	X	X	-	X	-
	*ISO-8859-1	X	X	X	-	X	-
	*ISO-8859-2	-	-	-	-	-	-
	*ISO-8859-3	-	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-	-
	*ISO-8859-5	-	-	-	-	-	-
	*ISO-8859-6	-	-	-	-	-	-
	*ISO-8859-7	-	-	-	-	-	-
	*ISO-8859-8	-	-	-	-	-	-
	*ISO-8859-9	-	-	-	-	-	-
	*IGNORE	X	X	X	-	X	-

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9045-ANSI	9046	9097	9645	DJET
COLOUR	*BLACK	x	x	x	x	x
	*RED	n.s.	n.s.	n.s.	n.s.	n.s.
	*GREEN	n.s.	n.s.	n.s.	n.s.	n.s.
	*YELLOW	n.s.	n.s.	n.s.	n.s.	n.s.
	*BLUE	n.s.	n.s.	n.s.	n.s.	n.s.
	*MAGENTA	n.s.	n.s.	n.s.	n.s.	n.s.
	*CYAN	n.s.	n.s.	n.s.	n.s.	n.s.
	*NEUTRAL	n.s.	n.s.	n.s.	n.s.	n.s.
WEIGHT	*LIGHT	n.s.	n.s.	n.s.	n.s.	n.s.
	*NORMAL	x	norm.	x	x	x
	*BOLD	bold	bold	bold	n.s.	bold
	*IGNORE	x	x	x	x	x
CHARACTER-TYPE (4)	*OCR-A	-	-	x	-	-
	*OCR-B	-	-	x	-	-
	*GOTHIC	-	-	-	-	-
	*GRAPHIC	-	-	-	-	-
	*NONE	-	-	-	-	-
	*DATA	-	-	-	-	-
	*COURIER	-	-	-	-	-
	*FONT-1	-	-	x	-	-
	*FONT-2	-	-	x	-	-
	*FONT-3	-	-	-	-	-
	:	:	:	:	:	:
	:	:	:	:	:	:
	*FONT-16	-	-	-	-	-
	CHARACTER-STYLE	*STRAIGHT	x	x	x	x
*ITALICS		n.s.	n.s.	italic	n.s.	x
*IGNORE		n.s.	n.s.	x	n.s.	x
UNDERSCORE	*YES	u'score	u'score	u'score	n.s.	u'score
	*NO	x	x	x	x	x
	*IGNORE	x	x	x	x	x
NEAR-LETTER QUALITY	*YES	n.s.	n.s.	x	n.s.	x
	*NO	x	x	x	x	x
	*IGNORE	n.s.	n.s.	x	n.s.	x

ADD-SPOOL-CHARACTER-SET		Printer type				
Operand	Operand value	9045-ANSI	9046	9097	9645	DJET
LANGUAGE	*INTERNAT	-	-	X	-	X
	*BELGIAN	-	-	X	-	-
	*DANISH	-	-	X	-	-
	*DUTCH	-	-	-	-	-
	*ENGLISH	X	X	X	-	X
	*FRENCH	X	X	X	-	-
	*GERMAN	X	X	X	-	X
	*ITALIAN	X	X	X	-	X
	*NORWEGIAN	X	X	X	-	X
	*SPANISH	-	-	X	-	X
	*SWEDISH	X	X	X	-	X
	*SWISS	-	-	X	-	-
	*USA	X	X	X	-	X
	*NONE	X	X	X	-	X
	*ISO-8859-1	-	-	X	-	X
	*ISO-8859-2	-	-	X	-	-
	*ISO-8859-3	-	-	-	-	-
	*ISO-8859-4	-	-	-	-	-
	*ISO-8859-5	-	-	X	-	-
	*ISO-8859-6	-	-	-	-	-
	*ISO-8859-7	-	-	X	-	-
*ISO-8859-8	-	-	-	-	-	
*ISO-8859-9	-	-	X	-	-	
*IGNORE	X	X	X	-	X	

Key to the abbreviations

- x = supported by RSO for this printer type
- = not supported by RSO for this printer type
- n.s. = not supported by this printer
- u'score = underscore
- Fren. = French
- bold = bold print
- shadow = shadow print
- FONT-# = FONT number

(1) and (2):

Printer codes are indeed sent to the printer but they are not interpreted by the printer.

(3) Implemented via RENO commands:

```
LIGHT: \B00;  
MEDIUM: \B01;  
BOLD: \B02;
```

(4) The CHARACTER-TYPE operand has special effects with printer types 9001-31, 9011, 9012, 9013 and 9014. The exact result depends on the printer type: printer types 9013-100 and 9013-150 are normally furnished with DATA and COURIER, while printer types 9013-200 and 9013-250 also have OCR-A and OCR-B.

As the hardware position of these character sets in the printer memory may vary, systems support or the RSO device administrator can redefine the respective positions in character memory by means of ADD-SPOOL-DEVICE or MODIFY-SPOOL-DEVICE.

Printer types 9013-100/150/200/250 support the selection of up to 9 character sets (FONT-1 through FONT-9). Printer types 9013-300/350 support the selection of up to 14 character sets (FONT-1 through FONT-14).

It is also possible to specify FONT-n (where n=<integer 1..16>), in which case it is assumed that the name of the character set is of no significance. The only point of specifying a font in this way is to link a control character sequence that has to be sent to the printer with the hardware position of the character set in the printer's character memory.

Two fonts are available for printer types 9001-31 and 9011; eight for the 9012 printer. With these three printer types, the name "FONT-x" is used for the standard hardware position.

(5) Cannot be used if the 9001(-31) printer is connected locally to a 9749 or 975x terminal.

(6) On the 9025 Printer, the font (character set) and language table are independent. In principle, 9025 fonts contain the same characters at the same positions in the matrix. The language table maps the code to the corresponding position in the font. LANGUAGE is supported only via this interface, which links the character set to a font and to a language table; RSO does not evaluate the LANGUAGE operand in the definition of the character set for the 9025.

(7) On the 9645 Printer, the character set and language depend on the selected type band.

- (8) On the 9000 (dummy printer type), it is only possible to issue PRINT-DOCUMENT commands in which one of the operand values CONTROL-MODE=*LINE-MODE is specified.
No character density or line density is specified for header page and trailer page. Only CR, LF, FF and ESC (X'27' and X'3C') are supported as VTSU codes; all others are not interpreted.
- (9) The character types MICRO and ORATOR supported by the printer can be defined as FONT-1 and FONT-2.
- (10) The values FONT-3 through FONT-15 are supported by RSO but not by the printer.
- (11) For 9014 Printers:
The functionality is supported as appropriate to the device configuration (RSO does not check this).
OCR-A and OCR-B are not supported for the 9014-12 Printer.
The value YES causes a switchover to 'LETTER-QUALITY', the value NO resets the printer to 'NEAR-LETTER-QUALITY'. The fonts OCR-A and OCR-B support only 'LETTER-QUALITY'. The font DATA is printed in 'DATA-QUALITY' (RSO-independent). Specifying 'NEAR-LETTER-QUALITY' for OCR-A, OCR-B and DATA has no effect on this type of printer.
- (12) The 9022-200 Printer does not support the standard character sets (fonts) for Spanish and German: ISO17 Spanish and ISO21 German. Instead, the fonts HP Spanish and HP German are used. The latter are not based on the ISO standard; for this reason, the following positions of the code matrix are assigned different characters.

	4A	4F	5B	6A	7B	7C	BB	BC	BD	FB	FD	FF
HP German	`	ö	\$	^	£	§	Ä	Ö	Ü	ä	ü	ß
ISO21 German	`	ö	\$	^	#	§	Ä	Ö	Ü	ä	ü	ß
HP Spain	`	ñ	\$	°	#	@	;	Ñ	¿	{	}	~
ISO17 Spanish	`	ñ	\$	^	£	§	;	Ñ	¿	°	Ç	~

Standard character sets

Character set : *STD

CHARACTER-SET-NAME	*STD
COLOUR	BLACK
WEIGHT	NORMAL
CHARACTER-TYPE	NONE
CHARACTER-STYLE	STRAIGHT
UNDERSCORE	NO
CHARACTERS-PER-INCH	10
LINES-PER-INCH	6
LANGUAGE	NONE
NEAR-LETTER-QUALITY	NO

Character set : 101

CHARACTER-SET-NAME	101
COLOUR	BLACK
WEIGHT	NORMAL
CHARACTER-TYPE	NONE
CHARACTER-STYLE	STRAIGHT
UNDERSCORE	NO
CHARACTERS-PER-INCH	10
LINES-PER-INCH	6
LANGUAGE	NONE
NEAR-LETTER-QUALITY	NO

Character set : 199

CHARACTER-SET-NAME	199
COLOUR	BLACK
WEIGHT	NORMAL
CHARACTER-TYPE	FONT-1
CHARACTER-STYLE	STRAIGHT
UNDERSCORE	NO
CHARACTERS-PER-INCH	10
LINES-PER-INCH	6
LANGUAGE	NONE
NEAR-LETTER-QUALITY	NO

Character set : 208

CHARACTER-SET-NAME	208
COLOUR	BLACK
WEIGHT	NORMAL
CHARACTER-TYPE	DATA
CHARACTER-STYLE	STRAIGHT
UNDERSCORE	NO
CHARACTERS-PER-INCH	12
LINES-PER-INCH	6
LANGUAGE	NONE
NEAR-LETTER-QUALITY	NO

Character set : 224

CHARACTER-SET-NAME	224
COLOUR	BLACK
WEIGHT	NORMAL
CHARACTER-TYPE	COURIER
CHARACTER-STYLE	STRAIGHT
UNDERSCORE	NO
CHARACTERS-PER-INCH	10
LINES-PER-INCH	6
LANGUAGE	NONE
NEAR-LETTER-QUALITY	NO

ADD-SPOOL-DEVICE

Define printer in SPOOL parameter file

User group: systems support

This statement defines an RSO device or local SPOOL device in the SPOOL parameter file, i.e. a device entry is generated.

Every RSO or SPOOL device must be defined in the SPOOL parameter file.

The ADMINISTRATOR operand allows systems support to define RSO device administrators for the device.

(part 1 of 5)

ADD-SPOOL-DEVICE

```

DEVICE-NAME = <alphanum-name 1..8> / *STD
,DEVICE-TYPE = <filename 1..16 without-cat-user-gen-vers> / *ALL-LOCAL-PRINTERS /
    *ALL-REMOTE-PRINTERS / *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
    *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
    *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
    *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
    *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
    *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
    *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
    *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
    *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
    *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
    *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
    *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
    *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
    *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
    *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
    *9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
    *9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
    *9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER /
    *9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
    *9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
    *9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
    *9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
    *9645-REMOTE-PRINTER
,DEVICE-ACCESS = *STD / *NEA-ACCESS(...) / *TCP-ACCESS(...) / *LOCAL-ACCESS(...) /
    *SCSI-ACCESS(...)

```

continued ➔

(part 2 of 5)

```

*NEA-ACCESS(...)
  |
  | ACCESS-TYPE = *STD / *DIRECT / *HARDCOPY / *APPLICATION / *HDLC / *PC /
  |               *HARDCOPY-9751
  | ,PROCESSOR-NAME = *STD / <alphanum-name 1..8>
  | ,STATION-NAME = *STD / <alphanum-name 1..8>
*TCP-ACCESS(...)
  |
  | ACCESS-TYPE = *STD / *TACLAN / *LPD(...) / *IPP
  |   *LPD(...)
  |     |
  |     | LPD-PRINTER-NAME = <c-string 1..32>
  |     | ,FROM-PORT-NUMBER = *STD / <integer 0..1024>
  |     | ,TO-PORT-NUMBER = *STD / <integer 0..1024>
  |     | ,INTERNET-ADDRESS = *STD / <alphanum-name 1..32> / <composed-name 7..32>
  |     | ,PORT-NAME = *STD / <alphanum-name 1..8>
*LOCAL-ACCESS(...)
  |
  | ACCESS-TYPE = *STD / *CHANNEL-TYPE-1 / *CHANNEL-TYPE-2 / *BUS-TYPE-1
  | ,MNEMONIC-NAME = *STD / *V / <alphanum-name 2..2>
  | ,PROGRAM-NAME = *NONE / <filename>
*SCSI-ACCESS(...)
  |
  | ACCESS-TYPE = *STD / *EMULATED-CHANNEL-TYPE-2
  | ,MNEMONIC-NAME = *STD / <alphanum-name 2..2>
,TWIN-DEVICE-DEF = *STD / *NONE / *PARAMETERS(...)
  *PARAMETERS(...)
  |
  | SLAVE-MNEMONIC-NAME = *STD / <alphanum-name 2..2>
  | ,ESD-SIZE = *STD / <integer 1..128>
,REDIRECTION-DEVICE = *STD / *NONE / <alphanum-name 1..8>
,LANGUAGE-EXT-TYPE = *STD / *SYSTEM / <alphanum-name 1..8>
,DEVICE-INFORMATION = *STD / *NONE / *PARAMETERS(...)
  *PARAMETERS(...)
  |
  | FORMS-OVERLAY-BUFFER = *STD / *NO / <integer 1..32767>
  | ,CHARACTER-SET-NUMBER = *STD / 1 / 4 / 6 / 23 / 36 / 46 / 64
  | ,ROTATION = *STD / *YES / *NO

```

continued ➔

```

,DUPLEX-PROCESSING = *STD / *NO / *YES
,FORMS-OVERLAY = STD / *YES / *NO
,RASTER-PATTERN-MEM = *STD / *NONE / <integer 4096..65535>
,TRANSMISSION = *STD / *IGNORE / *7BIT / *8BIT
,FONT-TYPE = *STD / *IGNORE / *7BIT / *8BIT
,FACE-PROCESSING = *STD / *YES / *NO
,MAXIMUM-INPUT-TRAY = *STD / <integer 1..99>
,SUPP-FORMAT-NAMES = *DEFAULT / list-poss(8): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PML /
                    *EXCCW / <c-string 1..63 with-low>
,MONJV = *STD / *YES / *NO
,NOTIFICATION = *STD / *YES / *NO
,ENCRYPTION = *STD / *YES / *NO
,UNICODE = *STD / *YES / *NO
,LINE-SIZE = *STD / *IGNORE / <integer 3..255>
,CHARACTER-IMAGE = *STD / *NONE / list-poss(2): <alphanum-name 1..3>
,ADMINISTRATOR = *STD / *NONE / *ADMINISTRATOR(...)
  *ADMINISTRATOR(...)
    USER-IDENTIFICATION = *STD / *NONE / list-poss(8): <name 1..8>
  ,IDENTIFICATION = *NONE / <c-string 1..16>
  ,TERMINAL = *ANY / *TERMINAL(...)
    *TERMINAL(...)
      PROCESSOR-NAME = *ANY / <alphanum-name 1..8>
    ,STATION-NAME = *ANY / <alphanum-name 1..8>
SPOOL-CONTROL = *PARAMETERS(...)
  *PARAMETERS(...)
    SHIFT = *STD / <integer 0..31>
  ,LINE-FEED-COMPRESS = *STD / *YES / *NO
  ,BLANK-COMPRESS = *STD / *YES / *NO
  ,START-FORM-FEED = *STD / *YES / *NO
  ,FORM-FEED = *STD / *LISTING(...) / *SINGLE-SHEET(...)

```

continued ➔

(part 4 of 5)

```

*LISTING(...)
  |
  |   DEFAULT-TRAY-NUMBER = *STD / *IGNORE / <integer 1..99>
  |   ,OUTPUT-TRAY-NUMBER = *STD / *IGNORE / <integer 0..99>
*SINGLE-SHEET(...)
  |
  |   DEFAULT-TRAY-NUMBER = *STD / *IGNORE / <integer 1..99>
  |   ,OUTPUT-TRAY-NUMBER = *STD / *IGNORE / <integer 0..99>
,SKIP-TO-CHANNEL = *STD / *NORMAL / *OPTIMIZED
,SKIP-TO-NEXT-PAGE = *STD / *BY-LINES / *BY-FORM-FEED
,ESCAPE-VALUE = *STD / *NONE / <x-string 1..2>
,PROCESSING-CONTROL = *PARAMETERS (...)
*PARAMETERS(...)
  |
  |   CONTROLLER-RESERVED = *STD / *NO / *YES
  |   ,FORM-NAME = *STD / list-poss(16): <alphanum-name 1..6>
  |   ,DISCONNECTION = *STD / *YES / *NO / *FORCE
  |   ,BUFFER-SIZE = *STD / <integer 256..32767>
  |   ,RESET = *STD / *YES / *NO
  |   ,REPEAT-MESSAGE = *STD / *NO / *PARAMETERS(...)
  |   *PARAMETERS(...)
  |   |
  |   |   TYPE = *STD / *SYSTEM / *DUMMY
  |   |   ,LIMIT = *STD / *NO / <integer 1..255>
  |   |   ,RETRY-TIME = *STD / *GLOBAL / <integer 1..600>
  |   ,RESTART-ACTION = *STD / *NO / *PARAMETERS(...)
  |   *PARAMETERS(...)
  |   |
  |   |   LIMIT = *STD / *NO / <integer 1..255>
  |   |   ,RETRY-TIME = *STD / *GLOBAL / <integer 1..600>
  |   ,SYNCHRONIZATION = *STD / *PRINTER / *NETWORK
  |   ,TIMEOUT-MAX = *STD / <integer 2..30>
  |   ,PAGES-EJECT-TIMEOUT = *STD / *NO / <integer 1..255>
  |   ,BAND-IDENTIFICATION = *STD / *NONE / <alphanum-name 4..4>
  |   ,LOAD = *STD / *YES / *NO
  |   ,MODULO2 = *STD / *NO / *YES

```

continued →


```

,RECOVERY-RULES = *STD / *SYSTEM / <composed-name 1..16>
,POLLING = *STD / *YES / *NO
,PRINTER-PARAM-FILE = *STD / *SYSTEM / <composed-name 1..16>
,RESOURCE-FILE-PREFIX = *STD / *SYSTEM / <composed-name 1..8>
,CONTROLLER-START = *STD / *AT-PRINTER-START / *AT-JOB-START
,CHARACTER-SET-POS = *STD / *NONE / *PARAMETERS(...)
*PARAMETERS(...)
    POSITION-1 = *STD / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA /
        *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
        *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 /
        *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE
    POSITION-16 = *STD / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA /
        *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
        *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 /
        *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE

```

Note on Dprint

Once SPOOL administrators become owners of Dprint objects they are allowed to define devices in their SPOOL parameter file. It may be the case, however, that a device is already defined in the configuration file, e.g. if a printer has been linked to the configuration file. Whatever the case, a device record of a linked Dprint printer is added in the SPOOL parameter file, and information about it is sent to all hosts in the cluster.

Operands

DEVICE-NAME = *STD / <alphanum-name 1..8>

Defines a device name.

DEVICE-NAME = *STD

A dummy device entry with default values for the corresponding device type is made available.

DEVICE-NAME = <alphanum-name 1..8>

Symbolic name of the device.

The name must not be identical with

- the name CENTRAL, REMOTE, T9P, T9N or T9G
- an already existing pool name.

DEVICE-TYPE= ...

Defines the device type; for the permitted device types, see the SDF format on [page 93](#). The LP-EMULATED-PRINTER device type refers to printers that are emulated as 3337 using the appropriate UNIX software and which are addressed via the bus. This is possible only on mainframes with bus peripherals.

DEVICE-TYPE = <filename 1..16 without-cat-user-gen-vers>

Permits the specification of device types that are not in the list.

DEVICE-TYPE = *VIRTUAL

Permits the specification of a virtual device type.

Notes

- A 9001-31/8931 should be entered as 9001-31. The different line length should be defined in the form definition (ADD-SPOOL-FORM statement) with the LINE-SIZE operand, see [page 236](#).
- The abbreviation 9001 is interpreted as 9001-REMOTE-PRINTER, the abbreviation 9022 as 9022-REMOTE-PRINTER.
- The following point should be borne in mind when an RSO printer of type 9013 is attached to a 9755 Data Display Terminal:
A negative print acknowledgment is always returned as: "PRINTER ERROR". The hardware of the 9755 terminal does not support any other interpretation.
- A printer of type 3337 or 3348 must be entered in the SPOOL parameter file as LP-PRINTER or LP48-PRINTER if a type band (BAND-ID) is not defined for each form that they use.

DEVICE-ACCESS = *STD / *NEA-ACCESS(...) / *TCP-ACCESS(...) / *LOCAL-ACCESS(...) / *SCSI-ACCESS(...)

Determines the type of access to the various local printers and RSO printers as well as the way they are to be addressed (see also the "RSO" manual). The old DEVICE-ADDRESS operand continues to be supported; however, its use instead of the new operand DEVICE-ACCESS is restricted to procedures and to batch mode.

DEVICE-ACCESS = *NEA-ACCESS(...)

The RSO printer is accessed via the TRANSDATA-NEA network (NEA stands for Network Architecture).

ACCESS-TYPE = *STD / *DIRECT / *HARDCOPY / *APPLICATION / *HDLC / *PC / *HARDCOPY-9751

Determines the type of connection to be used with this printer. The default value is defined in the standard device entry (see [page 130ff](#)).

ACCESS-TYPE = *DIRECT

The printer is addressed directly via the station and processor name defined at generation time. The printer has its own physical connection to a cluster controller or local line controller of the front-end processor.

ACCESS-TYPE = *HARDCOPY

The printer is attached to a data display terminal via which it is connected to PDN. The names of the printer defined in the generation must be specified for the station name and processor name (bypass).

ACCESS-TYPE = *APPLICATION

Enables the 9645 Printer to be supported by RSO. The existence of a PDN application is a prerequisite.

ACCESS-TYPE = *HDLC

The RSO device (e.g. 9025) is connected to the TRANSDATA network via an HDLC connection.

ACCESS-TYPE = *PC

The RSO device is connected to the TRANSDATA network via an EMDS emulation (under UNIX only).

Note

With MS-DOS (PC-D) the printer must be defined as ACCESS-TYPE=*DIRECT (name of the printer type = name of the emulation).

ACCESS-TYPE = *HARDCOPY-9751

The RSO device is connected as a hardcopy printer to a 9751 Data Display Terminal. Only the value *NO is permitted for the LINE-FEED and BLANK-COMPRESSION operands.

Note

The terminal must be operated in PVC (Permanent Virtual Call) mode in Datex-P (X25 port).

PROCESSOR-NAME = *STD / <alphanum-name 1..8>

Logical processor name defined at PDN generation. The default value is defined in the standard device entry (see [page 130ff](#)).

STATION-NAME = *STD / <alphanum-name 1..8>

Logical station name of the RSO printer defined at PDN generation. The default value is defined in the standard device entry (see [page 130ff](#)).

Note

The processor name (PROCESSOR-NAME operand) and station name (STATION-NAME operand) must always be specified together.

DEVICE-ACCESS = *TCP-ACCESS(...)

The printer is accessed directly via TCP/IP-LAN using the TCP/IP protocol.

ACCESS-TYPE = *STD / *TACLAN / *LPD(...) / *IPP

Determines the type of connection to be used with this printer.

ACCESS-TYPE = *TACLAN

The value *TACLAN should be specified if the printer is to be connected to TCP/IP-LAN either via a TACLAN (91863-R or 91863-O model), a DOS-PC running with a SPOOL-PC server (SPPCS V1.0), or a LAN controller card (see also the "RSO" manual).

ACCESS-TYPE = *LPD(...)

Printer is accessed via a BSD-LPD.

Note

For details of how to use this access mode, see the "RSO" manual.

LPD-PRINTER-NAME = <c-string 1..32>

Specifies the printer name as defined in the BSD-LPD environment of the host running the BSD-LPD (e.g. in the file `/etc/printcap`).

Note

The SPOOL administrator is responsible for ensuring that the printer name is valid. This name must not contain any blanks or tabs. Although there is no restriction on name length for an LPD printer (e.g. in the file `/etc/printcap`), RSO supports only printers with names no longer than 32 characters.

FROM-PORT-NUMBER = *STD / <integer 0..1024>

Minimum value for the LOCAL-PORT-NUMBER where the printer is connected.

TO-PORT-NUMBER = *STD / <integer 0..1024>

Maximum value for the LOCAL-PORT-NUMBER where the printer is connected.

ACCESS-TYPE = *IPP

Printer is accessed across the Internet via the IPP protocol (see also the "RSO" manual). This value is only relevant to RSO printers.

INTERNET-ADDRESS = *STD / <alphanum-name 1..32> / <composed-name 7..32>

Specifies the Internet address for the TACLAN (or for the DOS PC running with SPPCS V1.0, or for the LAN controller card or host running BSD-LPD or the IPP printer) to which the printer is connected.

This address must be specified either as the physical IP address (nnn.nnn.nnn.nnn) or as the socket host name, as generated via BCAM. See also the "RSO" manual.

PORT-NAME = *STD / <alphanum-name 1..8>

Specifies the port name for the TACLAN (or for the DOS PC running with SPPCS V1.0, or for the LAN controller card, or BSD-LPD when ACCESS-TYPE=*LPD is specified, or for the IPP printer when ACCESS-TYPE=*IPP) to which the printer is connected. For BSD-LPD, the port name is usually 515. For IPP, the port name is usually 631. For further details see the "RSO" manual.

DEVICE-ACCESS = *LOCAL-ACCESS(...)

A local printer with the appropriate format is used.

ACCESS-TYPE = *STD / *CHANNEL-TYPE-1 / *CHANNEL-TYPE-2 / *BUS-TYPE-1

Specifies the type of connection to be used with the local printer.

ACCESS-TYPE = *CHANNEL-TYPE-1

The local printer is connected via channel type 1.

ACCESS-TYPE = *CHANNEL-TYPE-2

The local printer is connected via channel type 2.

ACCESS-TYPE = *BUS-TYPE-1

The printer emulated as 3337 by means of UNIX software is connected via a bus. BUS-TYPE-1 is supported on CPUs with BUS peripherals only.

Note

For a list of the types of connection permissible for the various types of printer (local SPOOL and RSO operation) see the table following the description of operands on [page 124f](#).

MNEMONIC-NAME = *STD / *V / <alphanum-name 2..2>

Device mnemonic for a local printer or for the "master" twin printer at the local host.

MNEMONIC-NAME = *V

Used for virtual printers.

PROGRAM-NAME =

Name of the LOGON procedure called via the virtual control task.

PROGRAM-NAME = *NONE

The default is *NONE, i.e. no control task is in dialog with an application. Every job is set as active to type 5, and the instruction is given to allocate MNEMONIC-NAME = *V to this device record.

PROGRAM-NAME = <filename>

Name of the LOGON procedure called by the control task when the device is started up. MNEMONIC-NAME is freely selectable in this case.

DEVICE-ACCESS = *SCSI-ACCESS(...)

A SCSI printer with the appropriate format is used.

ACCESS-TYPE = *STD / *EMULATED-CHANNEL-TYPE-2

Specifies the type of connection to be used with the SCSI printer.

ACCESS-TYPE = *EMULATED-CHANNEL-TYPE-2

The SCSI printer is connected via an emulation of channel type 2.

MNEMONIC-NAME = *STD / <alphanum-name 2..2>

Device mnemonic for a local printer at the SCSI host.

TWIN-DEVICE-DEF = *STD / *NONE / *PARAMETERS(...)

Serves to define selection criteria for a twin printer (2090-TWIN-PRINTER). The operand is preset to *NONE.

TWIN-DEVICE-DEF = *NONE

Must be specified for all printer types other than 2090-TWIN-PRINTER.

TWIN-DEVICE-DEF = *PARAMETERS(...)

Must be specified for 2090-TWIN-PRINTER.

SLAVE-MNEMONIC-NAME = *STD / <alphanum-name 2..2>

Device mnemonic for the "slave" twin printer at the local host; must not be identical with the device mnemonic specified for the "master". The "slave" is always the second printer along the paper path.

(The device mnemonic for the "master" is specified in the operand DEVICE-ACCESS = *LOCAL-ACCESS (MNEMONIC-NAME).)

Note

The statement is rejected if the device specified with TWIN-DEVICE-DEF is not a 2090-APA printer.

ESD-SIZE = *STD / <integer 1..128>

Size (in Mbytes) of the external storage for the twin printer. SPS uses this storage for data and resources to be sent to the "slave". The operand value is preset to *STD = 10.

REDIRECTION-DEVICE = *STD / *NONE / <alphanum-name 1..8>

For RSO only.

Specifies whether automatic redirection of RSO jobs to the destination specified in DEVICE-NAME is to be initiated or not (on execution of PRINT-DOCUMENT).

REDIRECTION-DEVICE = *NONE

No redirection of jobs takes place.

REDIRECTION-DEVICE = <alphanum-name 1..8>

The RSO jobs will be sent automatically to the specified location.

LANGUAGE-EXT-TYPE = *STD / *SYSTEM / <alphanum-name 1..8>

Identifies a device type for exceptional print output in conjunction with the product DSEM V3.0.

LANGUAGE-EXT-TYPE = *SYSTEM

Specifies that the current value of DSEM is selected. This is the default value for every device type.

DEVICE-INFORMATION = *STD / *NONE / *PARAMETERS(...)

Device attributes specified for the device entry.

This information is output to SYSOUT via the SHOW statements (depending on the output type) but is not checked or interpreted by SPOOL. The default value for HP, HP90, 2030-PCL, 2050-APA, 2090-APA, 2090-TWIN, LP65, 9026-PCL, 9026-RENO, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, PCL, 9000-EFPX, 9000-EPLQ, 9000-EPSQ, 9000-PRO, 9000-PS, 9015, 9045-ANSI, 9046 and 9097 appears under DEVICE-INFORMATION = *PARAMETERS(...), otherwise it is *NONE.

DEVICE-INFORMATION = *PARAMETERS(...)

Device attributes.

FORMS-OVERLAY-BUFFER = *STD / <integer 1..32767>

For HP, LP65 and HP90 printers only.

Size of the FOB data overlay that can be processed on the specified device. The default value is 0 except for the HP90 printer, where it is 1344.

CHARACTER-SET-NUMBER = *STD / 1 / 4 / 6 / 23 / 36 / 46 / 64

For HP and HP90 printers only.

Number of character sets that can be loaded in the specified device (4, 36 or 64 for HP; 6, 23, 46 or 64 for HP90). The default value for the HP printer is 4, for the HP90 printer it is 64.

ROTATION = *STD / *YES / *NO

Only for HP, HP90, PCL printers and RSO printer types.

DUPLEX-PROCESSING = *STD / *YES /*NO

Specifies whether both the front and the reverse side can be printed on (in the case of spoolout jobs to an LP65 printers, PCL printers, 2050-APA or RSO printers). SPOOL does not check the specification.

FORMS-OVERLAY = *STD / *YES / *NO

Specifies whether film overlays can be processed on the device. The default value is *YES for HP90 and PCL printers, otherwise *NO.

RASTER-PATTERN-MEM = *STD / *NONE / <integer 4096..65535>

For HP90 printers, 2050-APA printers, 2090-APA printers and 2090-TWIN printers only. Specifies the size of the RPM (in kilobytes), which contains FOB data overlays and character sets. The default value is 4096 for printer types HP90, 2050-APA, 2090-APA and 2090-TWIN, otherwise *NONE.

TRANSMISSION = *STD / *7BIT / *8BIT / *IGNORE

Specifies whether the transmission protocol (front-end processor see printer) has 7-bit or 8-bit format. The default value is defined in the standard device entry. If the value *IGNORE is specified, the last TRANSMISSION setting used by RSO is used.

FONT-TYPE = *STD / *7BIT / *8BIT / *IGNORE

Specifies whether fonts with 7-bit or 8-bit format are to be used. The default value is defined in the standard device entry. If the value *IGNORE is specified, the last FONT-TYPE setting used by RSO is used.

FACE-PROCESSING = *STD / *YES / *NO

Specifies whether the printer is able to lay the pages “print image up” or “print image down”, as desired. The default value is defined in the standard device entry.

MAXIMUM-INPUT-TRAY = *STD / <integer 1..99>

(Maximum) number of input trays for the type of device specified. The default value is defined in the standard device entry.

SUPP-FORMAT-NAMES = *DEFAULT / list(8):*TEXT / *HP / *SPDS / *PML / *PLAIN-TEXT / *EXCCW / <c-string 1..63 with-low>

Specifies which document format the printer can print. This specification is mandatory.

Note

The SUPP-FORMAT-NAMES operand allows a format other than the one preset by the printer to be specified. The value *DEFAULT therefore means that no value is specified for this operand and the text will be printed with the preset format.

MONJV = *STD / *YES / *NO

Specifies whether a monitor job variable must be created to trace and, if necessary, control the asynchronous part of the START-PRINTER-OUTPUT command. The default for *STD is *NO.

Note

To use this function you require the JV subsystem.

MONJV = *NO

No job variable is created for the RSO device.

MONJV = *YES

A monitor job variable is created by the RSO system task during the asynchronous part of the START-PRINTER-OUTPUT command. If the device is running, this job variable also controls the printer status as it appears in SHOW-SYSTEM-STATUS. In accordance with the conventions, the monitor job is created under the \$SYSSPOOL user ID with the predefined name PRT.RSO.<device-name>. This job variable is shared and cannot be protected by a password.

NOTIFICATION = *STD / *YES / *NO

Specifies whether notifications may be generated for the events that occur on the device. The default value for *STD is *NO.

To use this function the SNS component is required.

NOTIFICATION = *NO

The device administrator will not be notified on the events that occur on the device.

NOTIFICATION = *YES

The device administrator may be notified on the events that occur on the device, provided an appropriate subscription has been defined.

ENCRYPTION = *STD / *YES / *NO

Specifies whether the printer supports the encryption. The default value for *STD is *NO.

To use this function the RSO >= V3.5 is required.

ENCRYPTION = *NO

The printer does not support the encryption.

ENCRYPTION = *YES

The printer supports the encryption.

UNICODE = *STD / *YES / *NO

Specifies whether the printer supports the unicode option. The default value for *STD is *NO.

To use this function the RSO >= V3.5 is required.

UNICODE = *NO

The printer does not support the unicode option.

UNICODE = *YES

The printer supports the unicode option.

LINE-SIZE = *STD / *IGNORE / <integer 3..255>

Maximum number of characters that can be printed on the printer in one line. The default value is defined in the standard device entry (see [page 130ff](#)).

The lowest possible value is determined in a comparison with the LINE-SIZE operand of ADD-SPOOL-FORM and the lowest CPI value.

For more information refer to the ADD-SPOOL-FORM statement.

Note

The value to be specified here should be based on the width of the form and the smallest character set to be used, e.g.

width of the paper: 8 inches

smallest character set: 15 CPI

LINE-SIZE = 120

CHARACTER-IMAGE = *STD / *NONE / list-poss(2): <alphanum-name 1..3>

Specifies the names of the printer conversion tables which are to be effective for each spoolout on this printer. The conversion tables for RSO printers must be present in the relevant RSOFILE (how CHARACTER-IMAGE tables function is described in the "RSO" manual), for local printers in the PRFILE. The default value is defined in the standard device entry (see [page 130ff](#)).

Notes

- Only one conversion table can be specified for local printers.
- Only *NONE can be specified for the 2050-APA- and 2090-APA-PRINTER types.

CHARACTER-IMAGE = *NONE

No conversion table is used.

ADMINISTRATOR = *STD / *NONE / *ADMINISTRATOR(...)

Specifies the RSO device administrators. The default value is defined in the standard device entry (see [page 130ff](#)).

ADMINISTRATOR = *NONE

The device is to be operated as a public device.

ADMINISTRATOR = *ADMINISTRATOR(...)

Specifies the user ID, processor name and station name of the designated RSO device administrator.

Note

Just like the SPOOL administrator, the RSO device administrator is also owner of the objects to be administered and can modify the definitions of the SPOOL parameters for any device for which he or she is responsible. It may happen that one or more of these devices is already defined in the Dprint configuration file, with the result that a printer in the Dprint configuration file has a link to this device. If so, it is added to the SPOOL parameter file and this information passed to all hosts in the cluster.

USER-IDENTIFICATION = *STD / *NONE / list-poss(8): <name 1..8>

User IDs of the RSO device administrators. The default value is defined in the standard device entry (see [page 130ff](#)). *NONE must be specified here for local SPOOL.

USER-IDENTIFICATION = *NONE

For local SPOOL:

Only this operand value is permitted.

For RSO:

The RSO device is to be operated as a public device, i.e. certain error conditions are reported to the operator terminal (no RSO device administrator).

USER-IDENTIFICATION = list-poss(8): <name 1..8>

User IDs of the RSO device administrators for the specified device. The first RSO device administrator is privileged in that his/her ID is searched for prolog and epilog files; administrators specified subsequently in the list do not have this privilege. The specified user IDs are checked for validity (by comparison with the entries in the user catalog).

IDENTIFICATION = *NONE / <c-string 1..16>

Contents of the ADMINISTRATOR field in the SHOW-SPOOL-DEVICES statement (see [page 465ff](#)).

This field could, for example, be used for the name and telephone number of the RSO device administrator for this printer. For local printers, only the default value *NONE is stored.

TERMINAL = *ANY / *TERMINAL(...)

Specifies whether the RSO device administrators can work from any terminal or only from a particular terminal specified here.

TERMINAL = *TERMINAL(...)

The RSO device administrators can exercise their functions only from a certain terminal.

PROCESSOR-NAME = *ANY / <alphanum-name 1..8>

Processor name (defined by systems support in the PDN generation macros).

STATION-NAME = *ANY / <alphanum-name 1..8>

Station name (defined by systems support in the PDN generation macros).

Note

The processor name (PROCESSOR-NAME operand) and station name (STATION-NAME operand) must always be specified together.

SPOOL-CONTROL = *PARAMETERS(...)

Specifies spoolout control parameters for the specified device.

SHIFT = *STD / <integer 0..31>

Specifies the default value for the operand of the same name in PRINT-DOCUMENT. The default value is defined in the standard device entry (see [page 130ff](#)). The LEFT-MARGIN designation for SHIFT continues to be supported for compatibility reasons. The global SPOOL default value from the GEN entry is ignored for RSO devices. (When updating an older SPOOL parameter file, this value must be defined separately for each RSO device.)

LINE-FEED-COMPRESS = *STD / *YES / *NO

Determines whether line feed compression is to be activated or deactivated. The default value is defined in the standard device entry (see [page 130ff](#)). The conversion is dependent on the type of printer, data display terminal or PC.

BLANK-COMPRESSION = *STD / *YES / *NO

Determines whether the compression of blanks is to be activated or deactivated. The default value is defined in the standard device entry (see [page 130ff](#)). The conversion is dependent on the type of printer, data display terminal or PC.

START-FORM-FEED = *STD / *YES / *NO

Determines whether a form feed is to be performed automatically at the start of a spoolout. The default value is defined in the standard device entry (see [page 130ff](#)). For single-sheet printers, the value *NO must be set in order to ensure that no empty page is printed at the start of a spoolout job. Control is positioned automatically to the start of the page at the start of each spoolout.

FORM-FEED = *STD / *LISTING(...) / *SINGLE-SHEET(...)

Defines the output type of the printer (continuous paper or single-sheet printer). The default value is defined in the standard device entry (see [page 130ff](#)).

Local SPOOL:

- For LP65 printers the value *SINGLE-SHEET must be specified for 2050-LIP printers and the value *LISTING for 2090-LIP printers.
- The value *SINGLE-SHEET is mandatory for a printer of type 2050-APA.
- The value *LISTING is mandatory for a printer of type 2090-APA.

RSO:

- For a printer of type 9021, 9022, 9022-200, 9025 or DJET, the value *LISTING (continuous paper) is rejected.

FORM-FEED = *LISTING

Specifies a default feed tray and output tray for continuous paper for 2090-LIP, 2090-APA and RSO printers (like the 4850-PCL).

DEFAULT-TRAY-NUMBER = *STD / *IGNORE / <integer 1..99>

Specifies the number of the feed tray (for output to 2090-LIP, 2090-APA or RSO printers) from which the paper is to be loaded by default. The default value is defined in the standard device entry (see [page 130ff](#)). If the value *IGNORE is specified, the DEFAULT-TRAY-NUMBER operand will not be interpreted, i.e. no feed tray is defined as the default tray.

The value can be overwritten by a different entry in the default or user PCL file or an entry in the INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

With the 4850-PCL printer this setting can be used to select both available feeders (two continuous-paper containers for fast, easy paper loading).

OUTPUT-TRAY-NUMBER = *STD / *IGNORE / <integer 0..99>

Specifies the number of the output tray to be used by default for RSO printers. The value can be overwritten by a different entry in the default or user PCL file or an entry in the OUTPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

With the 4850-PCL printer, support for the cutting machine is linked to the selection mechanism of the paper output. In accordance with the number set for the output tray, the following cases are handled in the same way as for the 9015 printer:

OUTPUT-TRAY-NUMBER	Executed action
2	Low or lowest number of the output tray.
3	Low or lowest number of the output tray including cutting machine activity for each sheet.
1	High or highest number of the output tray including cutting machine activity for each sheet.
*STD	Default value for the device definition (*IGNORE).
*IGNORE	RSO does not make a selection. The last selection of the output tray or the printer default value remain unchanged.

FORM-FEED = *SINGLE-SHEET(...)

Specifies a default feed tray and output tray for LP65, PCL, 2050-APA and RSO printers (a description of specific LP65 attributes for spoolout control can be found in the "SPOOL" manual.)

DEFAULT-TRAY-NUMBER = *STD / *IGNORE / <integer 1..99>

Specifies the number of the feed tray (for output to LP65, PCL, 2050-APA or RSO printers) from which the paper is to be loaded by default. The default value is defined in the standard device entry (see [page 130ff](#)). If the value *IGNORE is specified, the DEFAULT-TRAY-NUMBER operand will not be interpreted, i.e. no feed tray is defined as the default tray.

The value can be overwritten by a different entry in the default or user PCL file or an entry in the INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

OUTPUT-TRAY-NUMBER = *STD / *IGNORE / <integer 0..99>

Specifies the number of the output tray to be used by default on RSO, PCL or LP65 printers. The value can be overwritten by a different entry in the default or user PCL file or an entry in the OUTPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

OUTPUT-TRAY-NUMBER = *STD

The default value corresponds to the default device entry.

OUTPUT-TRAY-NUMBER = *IGNORE

RSO permits no selection in this case. Either the last value selected or the default value is taken.

SKIP-TO-CHANNEL = *STD / *NORMAL / *OPTIMIZED

Specifies the procedure to be followed by the printer if a skip to the “channel 1” vertical tabulator (form feed) is specified when it is already on “channel 1” (i.e. immediately after executing a form feed). The default value for all device types is STD = *NORMAL.

SKIP-TO-CHANNEL = *NORMAL

The hardware reaction is to be retained.

ND-PRINTER: the skip to vertical tabulator “channel 1” is not executed twice in succession.

SKIP-TO-CHANNEL = *OPTIMIZED

The skip to vertical tabulator “channel 1” is not executed twice in succession for any printer type.

SKIP-TO-NEXT-PAGE = STD / *BY-LINES / *BY-FORM-FEED

Specifies whether a page feed will be triggered by the appropriate control character or by counting the number of line feeds.

SKIP-TO-NEXT-PAGE = *STD

The default value is defined in the standard device entry.

SKIP-TO-NEXT-PAGE = *BY-LINES

The page feed will be triggered by counting the number of line feeds.

SKIP-TO-NEXT-PAGE = *BY-FORM-FEED

The page feed will be triggered by the appropriate control character.

ESCAPE-VALUE = *STD / *NONE / <x-string 2..2>

Defines an escape character for marking the printer commands contained in a print file. The character specified must be set at the printer control panel as a “primary escape character”. The operand will be interpreted only for the printer types 9025-REMOTE-PRINTER and 9026-RENO-REMOTE-PRINTER.

ESCAPE-VALUE = *STD

The default value is defined in the standard device entry.

ESCAPE-VALUE = *NONE

No ESCAPE character is defined for the printer type. Any control characters present in the file will not be interpreted.

ESCAPE-VALUE = <x-string 2..2>

The ESCAPE character is specified as an X string (1 byte); permissible range of values: X'00' ... X'FF'. The entry X'00' will be interpreted as *NONE.

PROCESSING-CONTROL = *PARAMETERS(...)

Specifies the processing attributes for spoolout on the specified device.

CONTROLLER-RESERVED = *STD / *YES / *NO

Defines whether an RSO controller has to be reserved exclusively for the specified RSO device (useful for very fast RSO printers, such as the 9645). The default value is defined in the standard device entry (see [page 130ff](#)).

FORM-NAME = *STD / list-poss(16): <alphanum-name 1..6>

Standard forms for the printer.

FORM-NAME = *STD

The default value is defined in the standard device entry (see [page 130ff](#)).

FORM-NAME = list-poss(16): <alphanum-name 1..6>

Defines between one and 16 equivalent forms to be available to the specified device as standard forms if the device was assigned with START-PRINTER-OUTPUT without the FORM operand being specified. Only forms suitable for the specified printer type and defined in the SPOOL parameter file (ADD-SPOOL-FORM/MODIFY-SPOOL-FORM statement) may be specified.

DISCONNECTION = *STD / *YES / *NO / *FORCE

Specifies whether the connection between RSO and the printer may be interrupted. The default value is defined in the standard device entry (see [page 130ff](#)).

DISCONNECTION = *STD

The connection between RSO and the printer is interrupted if no more RSO jobs are waiting. This frees the device for access by other applications on either the same processor or other processors.

DISCONNECTION = *YES

Same meaning as DISCONNECTION=*STD.

DISCONNECTION = *NO

The connection between RSO and the printer will be maintained from the start of processing of the first job on this printer to the end of the RSO session or until STOP-PRINTER-OUTPUT is issued.

The value *NO means that during this period the specified device is available neither for a product other than RSO nor for an RSO request from another processor.

Note

The value *NO is not permitted for 9645 Printers.

DISCONNECTION = *FORCE

The connection between RSO and the printer is interrupted after each print job (even if there are still other print jobs pending on the printer).

BUFFER-SIZE = *STD / <integer 256..32767>

Defines the maximum buffer size (in bytes) of the data blocks that are sent to the printer by means of DCAM. The specified value has an effect on the line speed, space requirements in the PDN message pool, and the printing speed. The default value is defined in the standard device entry (see [page 130ff](#)).

The maximum permissible buffer size varies depending on the printer type:

1 Kbyte is the maximum buffer size for printer types 8121, 8122, 9001-31, 9002, 9003, 9004.

2 Kbytes is the maximum buffer size for 9025, 9022-200 Printers.

4 Kbytes is the maximum buffer size for 9001, 9045 Printers.

7 Kbytes is the maximum buffer size for 9013 Printers.

10 Kbytes is the maximum buffer size for 9012 Printers.

12 Kbytes is the maximum buffer size for 9011 Printers.

32 Kbytes is the maximum buffer size for all other printer types.

RSO calculates the maximum buffer size by comparing the following three values and selecting the smallest:

- the value specified for BUFFER-SIZE in the ADD-SPOOL-DEVICE statement
- the maximum permissible value for the relevant printer type (see above)
- the value specified during PDN generation or the internal value for SOCKETS (up to 32 Kbytes).

RESET = *STD / *YES / *NO

Defines whether the printer switches are to be reset before and after each spoolout job. The default value is defined in the standard device entry (see [page 130ff](#)).

Printer control characters that are sent to the different RSO device types in order to reset the printer switches:

Printer type	Length	Control string	
		HEXA	EBCDIC
2030-PCL	2	27C5	ESC E
4011	3	27D90F	ESC R SI
4812	2	27C5	ESC E
4813	3	27D90F	ESC R SI
4818-PCL	2	27C5	ESC E
4821-PCL	2	27C5	ESC E
4822-PCL	2	27C5	ESC E
4824-PCL	2	27C5	ESC E
4825-PCL	2	27C5	ESC E
4830-PCL	2	27C5	ESC E
4850-PCL	2	27C5	ESC E
8121	0	-	-
9000-EPFX	2	277C	ESC @
9000-EPLQ	2	277C	ESC @
9000-EPSQ	2	277C	ESC @
9000-PCL	2	27C5	ESC E
9000-PRO	0	-	-
9000-PS	0	-	-
9000	0	-	-
9001	3	0D2783	CR ESC c
9001-31	2	2783	ESC c
9002	0	-	-
9003	0	-	-
9004	9	270DD72761	ESC CR P ESC /
9011	2	27D9	ESC R
9012	2	27D9	ESC R
9013	2	27D9	ESC R
9014	2	27D9	ESC R
9015	2	27D9	ESC R
9021	2	27C5	ESC E
9022	3	273FC9	ESC SUB I
9022-200	2	27C5	ESC E
9025	0	-	-
9026-PCL	2	27C5	ESC E
9026-RENO	0	-	-
9045-ANSI	-	-	-
9046	-	2783	ESC c
9097	3	27D90F	ESC R SI
9645	0	-	-
DJET	2	27C5	ESC E

- : No effect

REPEAT-MESSAGE = *STD / *NO / *PARAMETERS(...)

Defines whether or not a message is to be printed out and printing repeated in the event of an error (printer fault, end of paper, ...).

REPEAT-MESSAGE = *STD

The default values for TYPE=..., LIMIT=... and RETRY-TIME=... are defined in the standard device entry (see [page 130ff](#)).

REPEAT-MESSAGE = *NO

No message will be printed out in the event of an error. The print job is placed in TYPE 7.

REPEAT-MESSAGE = *PARAMETERS(...)

Specifies the mode of error response (type, frequency, time limit).

TYPE = *STD / *SYSTEM / *DUMMY

Defines an error response. The default value is defined in the standard device entry.

TYPE = *SYSTEM

A form feed is performed and message SRO1001 is printed (i.e. the next page may have been printed already). Printer output is continued with a further form feed.

TYPE = *DUMMY

A form feed is performed, possibly with the last page being repeated.

LIMIT = *STD / *NO / <integer 1..255>

Defines whether or how often the error response will be performed. The default value is defined in the standard device entry.

LIMIT = *NO

No limit is specified.

RETRY-TIME = *STD / *GLOBAL / <integer 1..600>

Specifies the waiting time (in seconds) between two attempts to print the file. The default value is defined in the standard device entry.

RETRY-TIME = *GLOBAL

The RETRY-TIME value from the global entry in the SPOOL parameter file is used.

RESTART-ACTION = *STD / *NO / *PARAMETERS(...)

Defines the type of response in the event of faults during connection setup and/or printer faults. In the event of failure during connection setup to the printer, the response is an automatic retry. In the event of failure during printing, the response is as follows:

- the connection to the printer is cleared down
- a new connection is set up
- the print job is resumed, starting with the page at which printing was interrupted.

The old operand REPEAT-OPEN-CONNECT continues to be supported; however, its use instead of the new operand RESTART-ACTION is restricted to procedures and to batch mode.

RESTART-ACTION = *STD

The default values for LIMIT=... and RETRY-TIME=... are defined in the standard device entry (see [page 130ff](#)).

RESTART-ACTION = *NO

No limit is specified for the number of repeats and the waiting (retry) time.

RESTART-ACTION = *PARAMETERS(...)

Specifies the mode of error response (frequency, time limit).

LIMIT = *STD / *NO / <integer 1..255>

Defines whether and how often attempts are made to set up the connection.

*STD: The default value is defined in the standard device entry.

*NO: No limit is specified.

RETRY-TIME = *STD / *GLOBAL / <integer 1..600>

Specifies the waiting time (in seconds) between two attempts to set up the connection.

*STD: The default value is defined in the standard device entry.

*GLOBAL: The RETRY-TIME value from the global entry in the SPOOL parameter file is used.

SYNCHRONIZATION = *STD / *PRINTER / *NETWORK

Defines whether printing is to be synchronized using the printer acknowledgment (*PRINTER) or the network acknowledgment (*NETWORK) each time a buffer has been transferred. The default value is *PRINTER.

Note

For further information see the "RSO" manual.

SYNCHRONIZATION = *PRINTER

Defines that acknowledgments received from the printer can be used for synchronization between messages sent (within a print job) and/or between print jobs (i.e. acknowledgments direct from the printer, which, depending on the printer type, indicate whether the message was output successfully or stored in the printer memory).

For printers connected to TACLAN, i.e. defined with DEVICE-ACCESS = *TCP-ACCESS (ACCESS-TYPE=*TACLAN), this operand value specifies that the printer supports at least one of the methods below, that it is activated and that it can be used by the printer to ensure synchronization within a print job and between print jobs:

ETX/ACK protocol (not defined for 4850-PCL printers):

RSO adds the control character ETX to the end of each message and waits for the acknowledgment ACK from the printer before sending the next message to the printer. This method of synchronization ensures that the print output can be continued correctly should problems occur.

With the preset value, RSO supports the ETX/ACK protocol only for certain printers.

Provided that your printer supports the ETX/ACK protocol (4830-PCL printers), you can enter this protocol as supported in the printer parameter file for your printer. This allows the ETX/ACK protocol to be used even by printers not included in the preset parameters.

PCL ECHO command:

The printers 2030-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL and 9000-PCL all support the PCL5e printer language and provide a printer command that allows a value to be sent to the printer, which is then sent back after it has been received. RSO uses this printer command to synchronize the transmission of each message. This method of synchronization ensures that the print output can be continued correctly should problems occur.

RSO uses the PCL ECHO command only for 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL and 9000-PCL printers. RSO does not permit use of this PCL command with other printer types.

PJL language:

The PJL language is supported by the printers 2030-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL and 4850-PCL. RSO uses several PJL commands to synchronize the start and end of the print job. This method of synchronization only ensures that the printer is ready to start a print job and that it has successfully received the complete job. It does not guarantee that the print job can restart correctly should problems occur.

With the preset value, RSO supports the PJL language only for certain printers.

Provided that your printer supports the full set of PJL commands, you can enter the PJL language as supported in the printer parameter file for your printer.

RENO 'close document' command:

For 9025 and 9026-RENO printers, which are the only ones that support the RENO printer language, RSO sends the RENO command 'close document' at the end of each print job and waits until the printer responds before finally completing the print job. This method of synchronization only ensures that the printer is ready to start a print job and that it has successfully received the complete job. It does not guarantee that the print job can restart correctly should problems occur.

Specification of SYNCHRONIZATION=*PRINTER is reserved for systems support and RSO device administrators, who have to observe the following:

- Specification of SYNCHRONIZATION=*PRINTER for printer types connected via TACLAN, on which the ETX/ACK protocol is supported but currently deactivated, results in a timeout for all print jobs as RSO will wait in vain for an acknowledgment from the printer ("ACK" character).
- Specification of SYNCHRONIZATION=*PRINTER for printer types connected via the Centronics interface results in a timeout for all print jobs as RSO will wait in vain for an acknowledgment from the printer ("ACK" character or "close document").

SYNCHRONIZATION = *NETWORK

Defines that the synchronization between the transmission of two messages (within a print job) and/or between two print jobs can be carried out independently of the printer acknowledgments received (e.g. in cases where one printer is unable to send back acknowledgments).

For printers connected via TACLAN, i.e. defined with DEVICE-ACCESS = *TCP-ACCESS(ACCESS-TYPE=*TACLAN), this value specifies that none of the methods listed under SYNCHRONIZATION=*PRINTER is supported or activated, or that the printer is connected via a Centronics interface, which cannot send back data.

As no synchronization is possible between the transmission of two messages (within a print job), RSO calculates an estimated print time, based on several parameters, for each message sent. This estimated print time is used as wait time before sending the next message. This print time can be influenced by way of the 'speed' setting in the printer parameter file.

If POLLING=*YES is specified (and supported) with SYNCHRONIZATION=*NETWORK, this mechanism attempts a more or less accurate recovery (given that no synchronization is possible) in the case of a printer malfunction.

If POLLING=*NO was specified with SYNCHRONIZATION=*NETWORK, it should be noted that there can be no guarantee of correct error handling in the case of a printer malfunction. Thus, for example, the print job may be deemed successful on the RSO side although no pages have been printed. Moreover, it is essential to realize that print jobs may be lost with certain printer types, especially for print jobs defined with DELETE-AFTER-PRINT=*YES/*DESTROY when the printer is switched off. A print job can be sent to the printer, deemed completed by RSO and no error detected, although the printer is switched off. See the manual "RSO" for further information.

TIMEOUT-MAX = *STD / <integer 2..30>

Specifies the maximum printing time in minutes for each buffer transferred.

The value specified here must take into account the buffer size, the transmission rate and the printing speed.

Default value for all printer types: 2 minutes; see standard device entry on [page 130ff.](#)

The CHECK-PRINTER-TIME operand of the MODIFY-SPOOL-PARAMETERS statement specifies for all RSO printers at what intervals all active RSO devices are to be checked for the TIMEOUT error condition.

PAGES-EJECT-TIMEOUT = *STD / *NO / <integer 1..255>

Specifies the maximum waiting time (in minutes) in the case of an inactive printer before the pages still remaining in the printer are automatically ejected into the stacker.

The value NO means that these pages are not ejected.

BAND-IDENTIFICATION = *STD / *NONE / <alphanum-name 4..4>

Local SPOOL: for LP (3337) and LP48 (3348) only.

RSO: 9645 only.

Name of the type band (BAND-ID) to be used for printing.

In the case of local LP and LP48 printers the type band specified here is used for output with forms to which no type band was assigned in the form entry. For local printers, BAND-IDs are stored in the PRFILE.

A type band definition in the form entry replaces the type band definition in the device entry. In this case the operator is requested by means of an appropriate console message to change the type band.

For LP printers the default value 1090 is assumed, for LP48 printers the value 9202.

For 9645 Printers a type band can be specified only in the device entry, not in the form entry (thus there is no message to the console).

For printers of types 2050-APA-, 2090-APA- and 2090-TWIN-PRINTER only the entry *NONE is permitted.

The following standard definitions of the BAND-ID are supplied in the RSOFILE:

BAND-ID: Name of the type band in A-S-D(*)	Font	Identifier	Number of characters on the type band
1080/108B	OCR-B-GERMAN	065	64
1090/109B	OCR-B-INTERNATIONAL	066	64
1100/110B	OCR-B-GERMAN	097	96
1110/111B	OCR-B-INTERNATIONAL	098	94
1120/112B	OCR-B/OCR-A-GERMAN	071	64
1130	OCR-B-GERMAN	033	48
1150/115B	OCR-B-SWEDISH	067	62
1160/116B	OCR-B-FRENCH	068	64
1170/117B	OCR-B-DANISH	069	64
1180/118B	OCR-B-SPANISH	070	64
1190	OCR-B-BELGIAN	099	95
2000	OCR-B-SWISS	100	95

The type band specification is not checked by SPOOL.

(*) The alternative values specified in this column, i.e. "108B" etc. should only be specified when defining a 9645-75 printer as a 9645-REMOTE-PRINTER.

LOAD = *STD / *YES / *NO

for 9645 only.

Specifies whether an RSO printer which can be loaded with a LOOP entry has to be operated using this function. The default value is defined in the standard device entry (see [page 130ff](#)).

MODULO2 = *STD / *YES / *NO

Specifies whether a second buffer is to be transferred to the printer while the first is being printed. If DEVICE-ACCESS=*TCP-ACCESS(ACCESS-TYPE=*TACLAN) is specified, MODULO2=NO is always assumed, irrespective of the value specified here.

Default value:

*YES if DIRECT, APPLICATION or HDLC is specified as the connection type.

*NO if HARDCOPY, HARDCOPY-9751 or PC is specified as the connection type.

RECOVERY-RULES = *STD / *SYSTEM / <composed-name 1..16>

Specifies the suffix of the name of the file containing the recovery rules for the selected device. The value *STD means that the default value from the SPOOL parameter file is used.

RECOVERY-RULES = *SYSTEM

*SYSTEM is a reserved name for the internally coded RSO recovery rules.

POLLING = *STD / *YES / *NO

Determines whether RSO queries the printer status in order to obtain information about printer malfunctions. This operand is applicable only to printers for which DEVICE-ACCESS=*TCP-ACCESS(ACCESS-TYPE=*TACLAN) has been specified.

Note

For further information see the "RSO" manual.

POLLING = *YES

Specifies that RSO can query the printer status to obtain information about printer malfunctions.

At the beginning of each print job, RSO sends a printer status inquiry to check whether the printer is online, and does not start the actual print job until receipt of a positive acknowledgment. If the acknowledgment is not received within the defined period of time (TIMEOUT-MAX operand of the device definition and CHECK-PRINTER-TIME parameter in the global SPOOL parameter file), TIMEOUT is detected and message SRO0987 is output. For performance reasons (in order to avoid START/STOP), RSO does not wait for any further printer status messages once it has received a positive acknowledgment. No printer status inquiry is possible while sending data in TRANSPARENT mode. This is the case when printing PROLOG or EPILOG files or user files with DOCUMENT-FORMAT=*SPECIAL-FORMAT.

For printers connected via TACLAN and defined with DEVICE-ACCESS = *TCP-ACCESS(ACCESS-TYPE=*TACLAN), RSO uses one of the following methods to query the printer status:

Status command dependent on the printer language:

RSO adds a status command, that may vary with the printer language, to the end of each message sent. Such status commands are supported by RSO only for the following printers: 4011, 4812, 4813, 4818-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PS, 9001-31, 9011, 9013, 9014, 9015, 9022, 9046, 9097 and DJET.

PJL language:

The PJL language is supported by the newest PCL printers. RSO uses several PJL commands to query the printer status.

With the preset value, RSO supports the PJL language only for certain printers.

Provided that your printer supports the full set of PJL commands, you can enter this language as supported in the printer parameter file for your printer.

If the operand is specified for printers that do not support the function (e.g. 9000, 9001), the command is not rejected; rather, RSO automatically assumes POLLING=*NO.

Specification of POLLING=*YES is reserved for systems support and RSO device administrators, who should bear in mind that it may result in unpredictable behavior if the function is supported by the printer but is currently deactivated (e.g. printing of the escape sequence "printer status inquiry").

POLLING = *NO

This operand value specifies that RSO cannot query the printer status. There can be several reasons for specifying this operand:

- the printer does not support this function (e.g. 9000, 9001 Printers)
- the printer supports the function but the function is deactivated (e.g. for 4011, 4813, 9001-31, 9011, 9012, 9097 Printers)
- although the printer supports the function, systems support and RSO device administrators do not wish to be informed about printer malfunctions
- although the printer supports the function, it is connected to a TACLAN via a Centronics interface, and therefore cannot send back data.

Note

It must be observed that the POLLING operand of RSO is not used for synchronization between the transmission of two messages and/or between two print jobs. An exception to this is the start of a print job. Here, RSO waits for confirmation of the printer status before sending the print job. The synchronization between messages and/or between print jobs must be specified using the SYNCHRONIZATION operand.

PRINTER-PARAM-FILE = *STD / *SYSTEM / <composed 1..16>

Defines the printer parameter file used for the printer, whereby the suffix of the file name is stated explicitly. The prefix is defined in the PRINTER-PARAM-PREFIX operand in the MODIFY-SPOOL-PARAMETER statement.

Note

A parameter print file can be created for each logical device. This file contains several parameters that do not appear directly or completely in the interface of ADD-SPOOL-DEVICE: e.g. because the value is too long. For this reason, the RSO controller reads this file when executing the START-PRINTER-OUTPUT command, checks the file contents and sets up a table with the complete information from this file in the part of the RSO memory responsible for the printer pool. While the suffix is defined via the PRINTER-PARAM-FILE operand, the prefix of all printer parameter file names is defined by means of the MODIFY-SPOOL-PARAMETER statement. The default value is '\$SYSSPOOL.SYSPAR.PRINTER-PARAM.'. If a special value, i.e. a <composed-name 1..16>, is given for the suffix in the device definition, the corresponding file is read when executing the START-PRINTER-OUTPUT command. If a problem is encountered when accessing the requested file, an appropriate message is sent to the console. If a problem is encountered when checking the contents of the requested file, an appropriate message is also sent to the console. In both cases, the contents of the printer parameter file are ignored by RSO.

RESOURCE-FILE-PREFIX = *STD / *SYSTEM / <composed 1..8>

Defines the file prefix for PROLOG/EPILOG/DIA/MEMBER files used by the printer.

RESOURCE-FILE-PREFIX = *SYSTEM

Specifies that the prefix for PROLOG/EPILOG/DIA/MEMBER files is formed with the aid of the RSO device type of the logical printer name (e.g. 'RP<devicetype>').

RESOURCE-FILE-PREFIX = <composed 1..8>

The specified value is the prefix of the file name for PROLOG/EPILOG/DIA/MEMBER files and not 'RP<Devicename>'.

Note

RESOURCE-FILE-PREFIX allows definition of the general PROLOG/EPILOG/DIA/MEMBER files used on several RSO device types that support the same printer language. A prefix other than the 'RP<devicetype>' name normally used can be defined freely for each logical printer by the device administrator or system operator.

CONTROLLER-START = *STD / *AT-PRINTER-START / *AT-JOB-START

Specifies when and how the RSO controller is to be started.

CONTROLLER-START = *AT-PRINTER-START

Specifies that the RSO controller must be started by means of the START-PRINTER-OUTPUT command.

CONTROLLER-START = *AT-JOB-START

Specifies that the RSO controller must be started by means of the PRINT-DOCUMENT command.

CHARACTER-SET-POS = *STD / *NONE / *PARAMETERS(...)

Specifies whether and which character sets can be selected for the specified printer type.

CHARACTER-SET-POS = *STD

The default value is defined in the standard device entry (see [page 130ff](#)).

The operand defines the hardware position of character sets in the printer. The character sets can be selected via a control character sequence which addresses the position in the character set memory of the printer (as opposed to selection via the name, such as, for example, "BASKERVILLE.N.12.P" for a 9025 Printer).

CHARACTER-SET-POS = *NONE

For the specified printer type, it is not possible to select a character set via its position in the character set memory. The setting *NONE means that the operands POSITION-1 through POSITION-16 are assigned the value *NONE.



*NONE can be specified only if it is possible to assign the value *NONE to POSITION-1 through POSITION-2. See also the operand description for POSITION-1. If the standard device entry needs changing for this purpose, you must contact systems support.

CHARACTER-SET-POS = *PARAMETERS(...)

Specifies selection of a character set via its position in the character set memory.

POSITION-1 = *STD / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE /*DATA / *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 / *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 / *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE

Up to 16 hardware positions can be specified.

For device types supported please refer to section [“Operands of the RSO parameter file” on page 74ff.](#)

The description of the POSITION-1 operand applies analogously to operands POSITION-2 through POSITION-16.

The operand value *NOT-USABLE is possible for all hardware positions from 1 to 16. NOT-USABLE means that the corresponding position does not physically exist on the specified printer type. The hardware positions permitted for each printer type are specified in the standard device entry *STD.

When generating or modifying a user device entry, the specified hardware positions are compared with the corresponding standard device entry *STD:

For any hardware position defined as NOT-USABLE in the standard device entry, no other value can be specified in the user device entry either. The hardware positions in the standard device entry *STD can be assigned and modified by systems support. Subsequently, users can define the hardware positions of their own device entries in accordance with the presettings in the standard device entry.

Possible types of connection for the various printer types (local SPOOL and RSO operation):

Printer type	Connection type										
	DIR	HARD	APPL	HDLC	PC	9751	CH-T-1	CH-T-2	EM-CH-T-2	BUS	TACL
2030-PCL											x
4011	x	x			x						x
4812	x	x			x						x
4813	x	x			x						x
4818-PCL	x	x			x						x
4821-PCL	x	x			x						x
4822-PCL	x	x			x						x
4824-PCL	x	x			x						x
4825-PCL	x	x			x						x
4830-PCL	x	x			x						x
4850-PCL											x
8121	x	x									
9000-EPFX											x
9000-EPLQ											x
9000-EPSQ											x
9000-PCL	x	x			x						x
9000-PRO											x
9000-PS											x
9000	x	x	x	x	x	x					x
9001	x	x			x	x					x
9001-31	x	x			x	x					x
9002	x	x									
9003	x	x			x						
9004		x			x	x					
9011	x	x			x						x
9012	x	x			x						x
9013	x	x			x						x
9014	x	x			x						x
9015	x	x			x						x

Printer type	Connection type										
	DIR	HARD	APPL	HDLC	PC	9751	CH-T-1	CH-T-2	EM-CH-T-2	BUS	TACL
9021	x	x 1)			x						x
9022	x	x 1)			x 2)						x
9022-200	x	x 1)			x						x
9025	x			x	x						x
9026-PCL	x			x	x						x
9026-RENO	x			x	x						x
9045-ANSI											x
9046											x
9097	x	x			x						x
9645			x								
DJET	x	x			x						x
HP-P							x	x			
LP65							x	x			
LP							x	x			
LP48							x	x			
LP-EMUL									x	x	
HP90							x	x			
PCL									x		
2050-APA								x			
2090-APA								x			

Key

- 1) The HARDCOPY connection is supported only on a 9763 terminal with a driver for
 - DIABLO emulation (9022) or
 - LASERJET emulation (4821-PCL, 4824-PCL, 9021, 9022-200, DJET, 9000-PCL).
- 2) The PC connection of the 9022 requires a special filter program in the product EMDS (UNIX).

For local SPOOL devices defined via ACCESS-TYPE = CHANNEL-TYPE-1/CHANNEL-TYPE-2/BUS-TYPE-1/EMULATED-CHANNEL-TYPE-2, the following operand values can be specified for ADD-SPOOL-DEVICE:

Operand	Valid operand values
DEVICE-NAME	*STD, <alphanum-name 1..8>
DEVICE-TYPE	LP-PRINTER, HP-PRINTER, LP48-PRINTER, LP65-PRINTER, HP90-PRINTER, PCL-PRINTER, LP-EMULATED-PRINTER, 2050-APA-PRINTER, 2090-APA-PRINTER, 2090-TWIN-PRINTER
DEVICE-ACCESS ACCESS-TYPE MNEMONIC-NAME	*LOCAL, *SCSI *CHANNEL-TYPE-1, *CHANNEL-TYPE-2, *EMULATED-CHANNEL-TYPE-2, *BUS-TYPE-1, *NONE, <alphanum-name 2..2> (symp. device name)
DEVICE-INFORMATION FORMS-OVERLAY-BUFFER CHARACTER-SET-NUMBER ROTATION DUPLEX-PROCESSING FORMS-OVERLAY RASTER-PATTERN-MEM MAXIMUM-INPUT-TRAY	*PARAMETERS(...) integer 1..65535, *NO 1, 4, 6, 23, 36, 46, 64 *YES, *NO *YES, *NO *YES, *NO *NONE, integer 4096 ..65535 *STD, integer 1..99
CHARACTER-IMAGE	*STD, <alphanum-name 1..3>
ADMINISTRATOR USER-IDENTIFICATION IDENTIFICATION TERMINAL	*NONE, *ADMINISTRATOR(...) *NONE *NONE, <c-string 1..16> *ANY
SPOOL-OUT-CONTROL SHIFT FORM-FEED SKIP-TO-CHANNEL	*PARAMETERS(...) <integer 0..31> *LISTING, *SINGLE-SHEET *NORMAL, *OPTIMIZED
PROCESSING-CONTROL FORM-NAME BAND-IDENTIFICATION PAGES-EJECT-TIMEOUT	*PARAMETERS(...) list-poss(16): <alphanum-name 1..6> *NONE, <alphanum-name 4..4> *NO, <integer 1..255>

The following tables contain important operands which can be specified when defining RSO devices in the SPOOL parameter file for the respective device types:

Operand	Printer types								
	2030-PCL	4011	4812	4813	4818-PCL	4821-PCL	4822-PCL	4824-PCL	4825-PCL
LINE-FEED-COMPRESS	x	x	x	x	x	x	x	x	x
FORM-FEED	x	x	x	x	x	x	x	x	x
DEFAULT- (2) TRAY-NUMBER	2	2	2	2	2	2	2	2	2
BAND-IDENTIFICATION	-	-	-	-	-	-	-	-	-
LOAD	-	-	-	-	-	-	-	-	-
MODULO2 (3)	x	x	x	x	x	x	x	x	x
CHARACTER-SET-POS	-	x	-	x	-	-	-	-	-

Operand	Printer types								
	4830-PCL	4850-PCL	8121	9000-EPFX	9000-EPLQ	9000-EPSQ	9000-PCL	9000-PRO	
LINE-FEED-COMPRESS	x	x	x	x	x	x	x	x	
FORM-FEED	x	x	x	x	x	x	x	x	
DEFAULT- (2) TRAY-NUMBER	2	2	-	2	1	1	1	2	
BAND-IDENTIFICATION	-	-	-	-	-	-	-	-	
LOAD	-	-	-	-	-	-	-	-	
MODULO2 (3)	x	x	x	x	x	x	x	x	
CHARACTER-SET-POS	-	-	-	-	-	-	-	-	

Operand	Printer types							
	9000-PS	9000	9001	9001-31	9002	9003	9004	9011
LINE-FEED-COMPRESS	x	-	(1)	(1)	x	x	(1)	x
FORM-FEED	x	x	(1)	(1)	x	x	(1)	x
DEFAULT- (2) TRAY-NUMBER	2	-	-	-	-	-	3	2
BAND-IDENTIFICATION	-	-	-	-	-	-	-	-
LOAD	-	-	-	-	-	-	-	-
MODULO2 (3)	x	x	x	x	x	x	x	x
CHARACTER-SET-POS	-	-	-	x	-	-	-	x

Operand	Printer types							
	9012	9013	9014	9015	9021	9022	9022-200	9025
LINE-FEED-COMPRESS	x	x	x	x	x	x	x	x
FORM-FEED	x	x	x	x	x	x	x	x
DEFAULT- (2) TRAY-NUMBER	2	3	3	2	2	2	2	2
BAND-IDENTIFICATION	-	-	-	-	-	-	-	-
LOAD	-	-	-	-	-	-	-	-
MODULO2 (3)	x	x	x	x	x	x	x	x
CHARACTER-SET-POS	x	x	x	x	-	-	-	-

Operand	Printer types						
	9026-PCL	9026-RENO	9045-ANSI	9046	9097	9645	DJET
LINE-FEED-COMPRESS	x	x	x	x	x	x	x
FORM-FEED	x	x	x	x	x	x	x
DEFAULT- (2) TRAY-NUMBER	4	4	2	2	2	-	1
BAND-IDENTIFICATION	-	-	-	-	-	x	-
LOAD	-	-	-	-	-	x	-
MODULO2 (3)	x	x	x	x	x	x	x
CHARACTER-SET-POS	-	-	-	-	x	-	-

Key

x: Supported by the listed printer type.

-: Not supported by the listed printer type.

- (1) The printer must be defined with ACCESS-TYPE=*HARDCOPY. An incorrect declaration causes the control character sequence to be printed out.
- (2) Number of feed trays.
- (3) Only one buffer is supported if the printer is defined with ACCESS-TYPE=*HARDCOPY/*HARDCOPY-9751 or if it is connected to a remote cluster controller of type 9155. An incorrect declaration leads to loss of the connection (LOSCON). If ACCESS-TYPE=*TACLAN and MODULO2=*NO are specified, the value of MODULO2 is always taken.

Standard device entries

Standard device entries in the SPOOL parameter file with the preset operand values for the various device types:

Note

Values which are supported are identified by “*”, values which are not supported are identified by “n.s.”, and values which are not relevant are identified by “n.r.”.

Device type: ALL-LOCAL-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	ALL-LOCAL-PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
– ACCESS-TYPE	*	(*CHANNEL-TYPE-1)
– MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
– PROCESSOR-NAME	*	*HOST
TWIN-DEVICE-DEV		
– SLAVE-MNEMONIC-NAME	*	(*NONE)
– ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	n.s.	(*NONE)
MAXIMUM-INPUT-TRAY	n.s.	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
– DEFAULT-TRAY-NUMBER	*	(1)
– OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: ALL-REMOTE-PRINTER

DEVICE-NAME		Device name	(*STD)
DEVICE-TYPE		ALL-REMOTE- PRINTER	
DEVICE-ACCESS			(*NEA-ACCESS)
NEA-ACCESS			
- ACCESS-TYPE	*		(*DIRECT)
- PROCESSOR-NAME	*		(*NONE)
- STATION-NAME	*		(*NONE)
TCP-ACCESS			
- INTERNET-ADDRESS	*		(*NONE)
REDIRECTION-DEVICE	*		(*NONE)
LANGUAGE-EXT-TYPE	*		(*SYSTEM)
DEVICE-INFORMATION			
ROTATION	n.s.		(*NO)
TRANSMISSION	*		(*IGNORE)
FONT-TYPE	*		(*IGNORE)
FACE-PROCESSING	n.s.		(*NO)
MAXIMUM-INPUT-TRAY	*		(1)
SUPP-FORMAT-NAMES	*		(*TEXT, *PLAIN-TEXT)
MONJV	*		(*NO)
LINE-SIZE	*		(136)
CHARACTER-IMAGE	*		(*NONE)
ADMINISTRATOR	*		(*NONE)
USER-IDENTIFICATION	*		(*NONE)
IDENTIFICATION	*		(*NONE)
TERMINAL	*		(*ANY)
- PROCESSOR-NAME	*		(*ANY)
- STATION-NAME	*		(*ANY)
SPOOLOUT-CONTROL			
SHIFT	*		(0)
LINE-FEED-COMPRESS	*		(*YES)
BLANK-COMPRESS	*		(*YES)
START-FORM-FEED	*		(*YES)
FORM-FEED	*		(*LISTING)
- DEFAULT-TRAY-NUMBER	*		(1)
- OUTPUT-TRAY-NUMBER	n.s.		(0)
SKIP-TO-CHANNEL	*		(*NORMAL)
SKIP-TO-NEXT-PAGE	*		(*BY-LINES)
ESCAPE-VALUE	*		(*NONE)
PROCESSING-CONTROL			
CONTROLLER-RESERVED	*		(*NO)
FORM-NAME	*		(*STD)
DISCONNECTION	*		(*YES)
BUFFER-SIZE	*		(*1024)
RESET	*		(*YES)
REPEAT-MESSAGE	*		(*PARAMETERS)
- TYPE	*		(*SYSTEM)
- LIMIT	*		(*NO)
- RETRY-TIME	*		(*GLOBAL)
RESTART-ACTION	*		(*PARAMETERS)
- LIMIT	*		(*NO)
- RETRY-TIME	*		(*GLOBAL)
SYNCHRONIZATION	*		(*PRINTER)
TIMEOUT-MAX	*		(2)
BAND-IDENTIFICATION	n.s.		(*NONE)
LOAD	n.s.		(*NO)

MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.u	(*NOT-USABLE)
POSITION-2	n.u	(*NOT-USABLE)
POSITION-3	n.u	(*NOT-USABLE)
POSITION-4	n.u	(*NOT-USABLE)
POSITION-5	n.u	(*NOT-USABLE)
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: LP-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	LP-PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-1)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	n.s.	(*NONE)
MAXIMUM-INPUT-TRAY	n.s.	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	*	(1090)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: LP-EMULATED-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	LP-EMULATED- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
– ACCESS-TYPE	*	(*BUS-TYPE-1)
– MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
– PROCESSOR-NAME	*	(*HOST)
TCP-ACCESS		
– INTERNET-ADDRESS	*	(*NONE)
TWIN-DEVICE-DEV		
– SLAVE-MNEMONIC-NAME	*	(*NONE)
– ESD-SIZE	*	(0)
REDIRECTION-DEVICE	n.s.	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	n.s.	(*NONE)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	(*NO)
MAXIMUM-INPUT-TRAY	n.s.	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
– PROCESSOR-NAME	*	(*ANY)
– STATION-NAME	*	(*ANY)
SPOOLOUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*NO)
BLANK-COMPRESSION	*	(*NO)
START-FORM-FEED	*	(*NO)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(1)
– OUTPUT-TRAY-NUMBER	n.s.	(0)

	SKIP-TO-CHANNEL	*	(*NORMAL)
	SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
	ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL			
	CONTROLLER-RESERVED	*	(*NO)
	FORM-NAME	*	(*STD)
	DISCONNECTION	*	(*NO)
	BUFFER-SIZE	*	(256)
	RESET	*	(*NO)
	REPEAT-MESSAGE	*	(*PARAMETERS)
	– TYPE	*	(*NO)
	– LIMIT	*	(*NO)
	– RETRY-TIME	*	(*GLOBAL)
	RESTART-ACTION	*	(*PARAMETERS)
	– LIMIT	*	(*NO)
	– RETRY-TIME	*	(*GLOBAL)
	SYNCHRONIZATION	*	(*PRINTER)
	TIMEOUT-MAX	*	(2)
	BAND-IDENTIFICATION	n.s.	(*NONE)
	PAGES-EJECT-TIMEOUT	*	(*NO)
	LOAD	n.s.	(*NO)
	MODULO2	*	(*NO)
	RECOVERY-RULES	*	(*SYSTEM)
	POLLING	*	(*NO)
	PRINTER-PARAM-FILE	*	(*SYSTEM)
	RESOURCE-FILE-PREFIX	*	(*SYSTEM)
	CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS			
	POSITION-1	n.u	(*NOT-USABLE)
	POSITION-2	n.u	(*NOT-USABLE)
	POSITION-3	n.u	(*NOT-USABLE)
	POSITION-4	n.u	(*NOT-USABLE)
	POSITION-5	n.u	(*NOT-USABLE)
	.		
	.		
	POSITION-16	n.s.	(*NOT-USABLE)

Device type: LP48-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	LP48- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-2)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	n.s.	(*NONE)
MAXIMUM-INPUT-TRAY	n.s.	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	*	(9202)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: LP65-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	LP65- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-1)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*YES)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	(*NONE)
MAXIMUM-INPUT-TRAY	n.s.	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	*	(1)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: HP-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	HP-PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-1)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(4)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	n.s.	(*NONE)
SUPP-FORMAT-NAMES	*	(*HP, *TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: HP90-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	HP90- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-2)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	*	(1344)
CHARACTER-SET-NUMBER	*	(64)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*YES)
RASTER-PATTERN-MEM	*	(4096)
SUPP-FORMAT-NAMES	*	(*HP, *TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: 2030-PCL-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	2030-PCL- PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
– ACCESS-TYPE	n.s.	
– PROCESSOR-NAME	n.s.	
– STATION-NAME	n.s.	
TCP-ACCESS		
– ACCESS-TYPE	*TACLAN	(*TACLAN)
– INTERNET-ADDRESS	*	
– PORT-NAME	*	
LOCAL-ACCESS	n.s.	
– ACCESS-TYPE	n.s.	
– MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
– SLAVE-MNEMONIC-NAME	n.s.	
– ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*YES)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
– PROCESSOR-NAME	*	(*ANY)
– STATION-NAME	*	(*ANY)
SPOOL-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

START-FORM-FEED	*	(*YES)
FORM-FEED	*SINGLE-SHEET	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(*4096)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: PCL-PRINTER

DEVICE-NAME		Device name	
DEVICE-TYPE		PCL-PRINTER	
DEVICE-ACCESS			(*SCSI-ACCESS)
SCSI-ACCESS			
- ACCESS-TYPE	*		(*EMULATED-CHANNEL- TYPE-2)
- MNEMONIC-NAME	*		(*NONE)
TWIN-DEVICE-DEV			
- SLAVE-MNEMONIC-NAME	n.s.		(*NONE)
- ESD-SIZE	n.s.		(0)
LANGUAGE-EXT-TYPE	*		(*SYSTEM)
DEVICE-INFORMATION			
FORMS-OVERLAY-BUFFER	n.s.		
CHARACTER-SET-NUMBER	n.s.		
ROTATION	n.s.		
DUPLEX-PROCESSING	n.s.		
FORMS-OVERLAY	n.s.		
RASTER-PATTERN-MEM	n.s.		
MAXIMUM-INPUT-TRAY	n.s.		(99)
SUPP-FORMAT-NAMES	*		(*PCL, *TEXT, *PLAIN-TEXT)
MONJV	n.s.		(*NO)
CHARACTER-IMAGE	*		(*NONE)
ADMINISTRATOR	*		
IDENTIFICATION	*		(*NONE)
SPOOL-OUT-CONTROL			
SHIFT	*		(0)
FORM-FEED	*		(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER			(1)
- OUTPUT-TRAY-NUMBER	*		(0)
SKIP-TO-CHANNEL	*		(*NORMAL)
PROCESSING-CONTROL			
FORM-NAME	*		
BAND-IDENTIFICATION	n.s.		
PAGES-EJECT-TIMEOUT	n.s.		

Device type: 2050-APA-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	2050-APA- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-2)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	*	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*YES)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	*	(4096)
SUPP-FORMAT-NAMES	*	(*SPDS, *TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: 2090-APA-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	2090-APA- PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-2)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(0)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*NO)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	*	(4096)
SUPP-FORMAT-NAMES	*	(*SPDS, *TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)
PAGES-EJECT-TIMEOUT	*	(*NO)

Device type: 2090-TWIN-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	2090-TWIN-PRINTER	
DEVICE-ACCESS		(*LOCAL-ACCESS)
LOCAL-ACCESS		
- ACCESS-TYPE	*	(*CHANNEL-TYPE-2)
- MNEMONIC-NAME	*	(*NONE)
NEA-ACCESS		
- PROCESSOR-NAME	*	(*HOST)
TWIN-DEVICE-DEV		
- SLAVE-MNEMONIC-NAME	*	(*NONE)
- ESD-SIZE	*	(10)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
FORMS-OVERLAY-BUFFER	n.s.	(0)
CHARACTER-SET-NUMBER	n.s.	(1)
ROTATION	n.s.	(*NO)
DUPLEX-PROCESSING	n.s.	(*YES)
FORMS-OVERLAY	n.s.	(*NO)
RASTER-PATTERN-MEM	*	(4096)
SUPP-FORMAT-NAMES	*	(*SPDS, *TEXT, *PLAIN-TEXT)
MONJV	n.s.	(*NO)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
IDENTIFICATION	*	(*NONE)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
PROCESSING-CONTROL		
FORM-NAME	*	(*STD)
BAND-IDENTIFICATION	n.s.	(*NONE)

Device type: 4011-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4011-REMOTE- PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
– ACCESS-TYPE	*	(*HARDCOPY)
– PROCESSOR-NAME	*	(*NONE)
– STATION-NAME	*	(*NONE)
TCP-ACCESS		
– ACCESS-TYPE	*	
– INTERNET-ADDRESS	*	(*NONE)
– PORT-NAME	*	
REDIRECTION-DEVICE		(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	n.s.	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
– PROCESSOR-NAME	*	(*ANY)
– STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
– DEFAULT-TRAY-NUMBER	* (2 available)	(*IGNORE)
– OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*FONT-1)
POSITION-2	*	(*FONT-2)
POSITION-3	*	(*OCR-A)
POSITION-4	*	(*OCR-B)
POSITION-5	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 4812-REMOTE-PRINTER

DEVICE-NAME		Device name	(*STD)
DEVICE-TYPE		4812- REMOTE- PRINTER	
DEVICE-ACCESS			(*NEA-ACCESS)
NEA-ACCESS			
- ACCESS-TYPE	*		(*DIRECT)
- PROCESSOR-NAME	*		(*NONE)
- STATION-NAME	*		(*NONE)
TCP-ACCESS			
- ACCESS-TYPE	*		
- INTERNET-ADDRESS	*		
- PORT-NAME	*		
REDIRECTION-DEVICE	*		(*NONE)
LANGUAGE-EXT-TYPE	*		(*SYSTEM)
DEVICE-INFORMATION			
ROTATION	*		(*YES)
TRANSMISSION	*		(*IGNORE)
FONT-TYPE	*		(*IGNORE)
FACE-PROCESSING	*		(*NO)
MAXIMUM-INPUT-TRAY	*		(1)
SUPP-FORMAT-NAMES	*		(*TEXT, *PLAIN-TEXT)
MONJV	*		(*NO)
LINE-SIZE	*		(*IGNORE)
CHARACTER-IMAGE	*		(*NONE)
ADMINISTRATOR	*		(*NONE)
USER-IDENTIFICATION	*		(*NONE)
IDENTIFICATION	*		(*NONE)
TERMINAL	*		(*ANY)
- PROCESSOR-NAME	*		(*ANY)
- STATION-NAME	*		(*ANY)
SPOOL-OUT-CONTROL			
SHIFT	*		(0)
LINE-FEED-COMPRESS	*		(*YES)
BLANK-COMPRESS	*		(*YES)
START-FORM-FEED	*		(*YES)
FORM-FEED	*		(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*		(*IGNORE)
- OUTPUT-TRAY-NUMBER	n.s.		(0)
SKIP-TO-CHANNEL	*		(*NORMAL)
SKIP-TO-NEXT-PAGE	*		(*BY-FORM-FEED)
ESCAPE-VALUE	*		(*NONE)
PROCESSING-CONTROL			
CONTROLLER-RESERVED	*		(*NO)
FORM-NAME	*		(*STD)

DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 4813-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4813-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	n.s.	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*(2 available)	(*IGNORE)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*NONE)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*FONT-1)
POSITION-2	*	(*FONT-2)
POSITION-3	*	(*OCR-A)
POSITION-4	*	(*OCR-B)
POSITION-5	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 4818-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4818-PCL- REMOTE- PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*DIRECT *HARDCOPY *PC	(*DIRECT)
- PROCESSOR-NAME	*	
- STATION-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		

SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*SINGLE-SHEET	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 4821-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4821-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE		(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	n.s.	(*YES)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	* (2 available)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	n.s.	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 4822-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4822-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*DIRECT *HARDCOPY *PC	(*DIRECT)
- PROCESSOR-NAME	*	
- STATION-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*YES)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(3)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)

LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*SINGLE-SHEET	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 4824-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4824-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
– ACCESS-TYPE	*	(*DIRECT)
– PROCESSOR-NAME	*	(*NONE)
– STATION-NAME	*	(*NONE)
TCP-ACCESS		
– ACCESS-TYPE	*	
– INTERNET-ADDRESS	*	
– PORT-NAME	*	
REDIRECTION-DEVICE		(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	n.s.	(*YES)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
– PROCESSOR-NAME	*	(*ANY)
– STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	* (2 available)	(1)
– OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	n.s.	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 4825-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4825-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*DIRECT *HARDCOPY *PC	(*DIRECT)
- PROCESSOR-NAME	*	
- STATION-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*YES)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(3)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)

LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*SINGLE-SHEET	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 4830-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4830-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*DIRECT *HARDCOPY *PC	(*DIRECT)
- PROCESSOR-NAME	*	
- STATION-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	n.r.	
DUPLEX-PROCESSING	n.r.	
FORMS-OVERLAY	n.r.	
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(3)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)

LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*SINGLE-SHEET	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 4850-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	4850-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.*	
- STATION-NAME	n.s.*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	n.r.	
DUPLEX-PROCESSING	n.r.	
FORMS-OVERLAY	n.r.	
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(3)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 8121-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	8121-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	n.s.	(*NO)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)

- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	n.s.	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9000-EPFX-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-EPFX- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	u.u.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(4096)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9000-EPLQ-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-EPLQ- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(1)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(4096)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9000-EPSQ-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-EPSQ- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

	START-FORM-FEED	*	(*YES)
	FORM-FEED	*	(*SINGLE-SHEET)
	– DEFAULT-TRAY-NUMBER	*	(1)
	– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
	SKIP-TO-CHANNEL	*	(*NORMAL)
	SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
	ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL			
	CONTROLLER-RESERVED	*	(*NO)
	FORM-NAME	*	(STD)
	DISCONNECTION	*	(*YES)
	BUFFER-SIZE	*	(4096)
	RESET	*	(*YES)
	REPEAT-MESSAGE	*	(*PARAMETERS)
	– TYPE	*	(*SYSTEM)
	– LIMIT	*	(*NO)
	– RETRY-TIME	*	(*GLOBAL)
	RESTART-ACTION	*	(*PARAMETERS)
	– LIMIT	*	(*NO)
	– RETRY-TIME	*	(*GLOBAL)
	SYNCHRONIZATION	*	(*NETWORK)
	TIMEOUT-MAX	*	(2)
	PAGE-EJECT-TIMEOUT	*	(*NO)
	BAND-IDENTIFICATION	n.s.	
	LOAD	n.s.	
	MODULO2	*	(*YES)
	RECOVERY-RULES	*	(*SYSTEM)
	POLLING	*	(*NO)
	PRINTER-PARAM-FILE	*	(*SYSTEM)
	RESOURCE-FILE-PREFIX	*	(*SYSTEM)
	CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION		*	(*PARAMETERS)
	POSITION-1	*	(*NOT-USABLE)
	.		
	.		
	POSITION-16	*	(*NOT-USABLE)

Device type: 9000-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*YES)
DUPLEX-PROCESSING	*	(*YES)
FORMS-OVERLAY	*	(*YES)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESS	*	(*YES)

START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(1)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9000-PRO-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-PRO- REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)

SPOOLOUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION		
POSITION-1	*	(*PARAMETERS)
.	*	(*NOT-USABLE)
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9000-PS-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-PS-REMOTE-PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*NO)
BLANK-COMPRESS	*	(*NO)

START-FORM-FEED	*	(*NO)
FORM-FEED	*	(*SINGLE-SHEET)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9000-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9000-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	n.s.	(*NO)
BLANK-COMPRESSION	n.s.	(*NO)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	n.s.	(*NO)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9001-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9001-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9001-31-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9001-31-REMOTE- PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9002-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9002-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(80)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	n.s.	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)

- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	n.s.	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9003-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9003-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(204)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)

- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	n.s.	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9004-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9004-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(120)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	* (1-3)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)

- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	n.s.	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9011-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9011-REMOTE- PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*(1-2)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*FONT-1)
POSITION-2	*	(*FONT-2)
POSITION-3	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9012-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9012-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(221)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*(1-2)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*FONT-1)
POSITION-2	*	(*FONT-2)
POSITION-3	*	(*FONT-3)
POSITION-4	*	(*FONT-4)
POSITION-5	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9013-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9013-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*(1-3)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*DATA)
POSITION-2	*	(*COURIER)
POSITION-3	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9014-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9014-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	* (3 available)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*DATA)
POSITION-2	*	(*COURIER)
POSITION-3	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9015-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9015-REMOTE- PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	DIRECT HARDCOPY PC	(*DIRECT)
- PROCESSOR-NAME	*	
- STATION-NAME	*	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(2)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)

LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*DATA)
POSITION-2	*	(*COURIER)
POSITION-3	*	(*OCR-A)
POSITION-4	*	(*OCR-B)
POSITION-5	*	(*FONT-1)
POSITION-6	*	(*FONT-2)
POSITION-7	*	(*GOTHIC)
POSITION-8	*	(*NOT-USABLE)
.	.	
POSITION-16	*	(*NOT-USABLE)

Device type: 9021-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9021-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(94)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR		(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL		(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESSION	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	* (2 available)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9022-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9022-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(94)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*(1-2)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(*2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9022-200-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9022-200- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(92)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR		(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	(*ANY)	
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	* (2 available)	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9025-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9025-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HDLC)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(180)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*NO)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(X'BC')
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9026-PCL-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9026-PCL- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*YES)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(*IGNORE)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9026-RENO-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9026-RENO- REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HDLC)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*YES)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(*IGNORE)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(X'BC')
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(2048)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9045-ANSI-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9045-ANSI- REMOTE- PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- PROCESSOR-NAME	n.s.	
- STATION-NAME	n.s.	
TCP-ACCESS		
- ACCESS-TYPE	*TACLAN	(*TACLAN)
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
LOCAL-ACCESS	n.s.	
- ACCESS-TYPE	n.s.	
- MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
- SLAVE-MNEMONIC-NAME	n.s.	
- ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)

BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*LISTING	(*LISTING)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(4096)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.		
.		
POSITION-16	*	(*NOT-USABLE)

Device type: 9046-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9046- REMOTE- PRINTER	
DEVICE-ACCESS		(*TCP-ACCESS)
NEA-ACCESS	n.s.	
– ACCESS-TYPE	n.s.	
– PROCESSOR-NAME	n.s.	
– STATION-NAME	n.s.	
TCP-ACCESS		
– ACCESS-TYPE	*TACLAN	(*TACLAN)
– INTERNET-ADDRESS	*	
– PORT-NAME	*	
LOCAL-ACCESS	n.s.	
– ACCESS-TYPE	n.s.	
– MNEMONIC-NAME	n.s.	
TWIN-DEVICE-DEF	n.s.	
– SLAVE-MNEMONIC-NAME	n.s.	
– ESD-SIZE	n.s.	
REDIRECTION-DEVICE	*	(*STD)
LANGUAGE-EXT-TYPE	*	(*STD)
DEVICE-INFORMATION		
FORM-OVERLAY-BUFFER	n.s.	
CHARACTER-SET-NUMBER	n.s.	
ROTATION	*	(*NO)
DUPLEX-PROCESSING	*	(*NO)
FORMS-OVERLAY	*	(*NO)
RASTER-PATTERN-MEM	n.s.	
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	n.s.	
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
– PROCESSOR-NAME	*	(*ANY)
– STATION-NAME	*	(*ANY)
SPOOL-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)

BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*LISTING	(*LISTING)
– DEFAULT-TRAY-NUMBER	*	(*IGNORE)
– OUTPUT-TRAY-NUMBER	*	(*IGNORE)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VARIABLE	n.s.	
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(STD)
DISCONNECTION	*	(*YES)
BUFFER-SIZE	*	(4096)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
– TYPE	*	(*SYSTEM)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
– LIMIT	*	(*NO)
– RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*NETWORK)
TIMEOUT-MAX	*	(2)
PAGE-EJECT-TIMEOUT	*	(*NO)
BAND-IDENTIFICATION	n.s.	
LOAD	n.s.	
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POSITION	*	(*PARAMETERS)
POSITION-1	*	(*NOT-USABLE)
.	.	
.	.	
POSITION-16	*	(*NOT-USABLE)

Device type: 9097-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9097-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*HARDCOPY)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(*IGNORE)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	*	(*IGNORE)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE	*	(*PARAMETERS)
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION	*	(*PARAMETERS)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*NO)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	*	(*FONT-1)
POSITION-2	*	(*FONT-2)
POSITION-3	*	(*OCR-A)
POSITION-4	*	(*OCR-B)
POSITION-5	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: 9645-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	9645-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS	*	(*APPLICATION)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(136)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR	*	(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL	*	(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*LISTING)
- DEFAULT-TRAY-NUMBER	n.s.	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-LINES)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	n.s.	(*YES)
BUFFER-SIZE	*	(1024)
RESET	n.s.	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)

- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	*	(*NONE)
LOAD	*	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	n.s.	(*NO)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

Device type: DJET-REMOTE-PRINTER

DEVICE-NAME	Device name	(*STD)
DEVICE-TYPE	DJET-REMOTE-PRINTER	
DEVICE-ACCESS		(*NEA-ACCESS)
NEA-ACCESS		
- ACCESS-TYPE	*	(*DIRECT)
- PROCESSOR-NAME	*	(*NONE)
- STATION-NAME	*	(*NONE)
TCP-ACCESS		
- ACCESS-TYPE	*	
- INTERNET-ADDRESS	*	
- PORT-NAME	*	
REDIRECTION-DEVICE	*	(*NONE)
LANGUAGE-EXT-TYPE	*	(*SYSTEM)
DEVICE-INFORMATION		
ROTATION	*	(*NO)
TRANSMISSION	*	(*IGNORE)
FONT-TYPE	*	(*IGNORE)
FACE-PROCESSING	*	(*NO)
MAXIMUM-INPUT-TRAY	*	(1)
SUPP-FORMAT-NAMES	*	(*TEXT, *PLAIN-TEXT)
MONJV	*	(*NO)
LINE-SIZE	*	(94)
CHARACTER-IMAGE	*	(*NONE)
ADMINISTRATOR		(*NONE)
USER-IDENTIFICATION	*	(*NONE)
IDENTIFICATION	*	(*NONE)
TERMINAL		(*ANY)
- PROCESSOR-NAME	*	(*ANY)
- STATION-NAME	*	(*ANY)
SPOOL-OUT-CONTROL		
SHIFT	*	(0)
LINE-FEED-COMPRESS	*	(*YES)
BLANK-COMPRESSION	*	(*YES)
START-FORM-FEED	*	(*YES)
FORM-FEED	*	(*SINGLE-SHEET)
- DEFAULT-TRAY-NUMBER	*	(1)
- OUTPUT-TRAY-NUMBER	n.s.	(0)
SKIP-TO-CHANNEL	*	(*NORMAL)
SKIP-TO-NEXT-PAGE	*	(*BY-FORM-FEED)
ESCAPE-VALUE	*	(*NONE)
PROCESSING-CONTROL		
CONTROLLER-RESERVED	*	(*NO)
FORM-NAME	*	(*STD)
DISCONNECTION	*	(*YES)

BUFFER-SIZE	*	(1024)
RESET	*	(*YES)
REPEAT-MESSAGE		
- TYPE	*	(*SYSTEM)
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
RESTART-ACTION		
- LIMIT	*	(*NO)
- RETRY-TIME	*	(*GLOBAL)
SYNCHRONIZATION	*	(*PRINTER)
TIMEOUT-MAX	*	(2)
BAND-IDENTIFICATION	n.s.	(*NONE)
LOAD	n.s.	(*NO)
MODULO2	*	(*YES)
RECOVERY-RULES	*	(*SYSTEM)
POLLING	*	(*YES)
PRINTER-PARAM-FILE	*	(*SYSTEM)
RESOURCE-FILE-PREFIX	*	(*SYSTEM)
CONTROLLER-START	*	(*AT-PRINTER-START)
CHARACTER-SET-POS		
POSITION-1	n.s.	(*NOT-USABLE)
.		
.		
POSITION-16	n.s.	(*NOT-USABLE)

ADD-SPOOL-FILTER

Define filter

User group: systems support

This statement allows systems support to define a filter in the SPOOL parameter file.

ADD-SPOOL-FILTER
<pre> FILTER-NAME = <alphanum-name 1..8> / *STD ,FILTER-LOCATION = *SYSTEM / <composed-name 1..50> ,INPUT-FORMAT-NAME = list-poss (8): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL / *EXCCW / <c-string 1..63 with-low> ,OUTPUT-FORMAT-NAME = *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL / *EXCCW / <c-string 1..63 with-low> ,REDIRECTION = *STD / *NO / *REMOTE () *REMOTE(...) DEVICE-NAME = <alphanum-name 1..8> ,OBJECT-NAME = *SAME / <alphanum-name 1..8> </pre>

Operands

FILTER-NAME = <alphanum-name 1..8> / *STD

Symbolic name of the filter.

FILTER-LOCATION =

Specifies how the filter object module can be loaded. It can be loaded either from a standard library or to a user library.

FILTER-LOCATION = *SYSTEM

The filter object module permits loading. It is stored in the standard system library, i.e. on /390 hosts in the library SYSLIB.SPCONV.010 (type L) and on SR2000 hosts in the library SRMLIB.SPCONV.010 (type L).

FILTER-LOCATION = <composed-name 1..50>

The filter object module is located in a user library. The name of the user library takes the format <composed-name 1..50>.

INPUT-FORMAT-NAME = list-poss(8): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL / *EXCCW / <c-string 1..63 with-low>

Specifies the input format(s), i.e. which document formats can be converted by the filter. The input formats are those contained in the specified list.

INPUT-FORMAT-NAME = *TEXT

The input format is TEXT.

In this case, the file does not have any special print control characters, but it does have feed control characters.

INPUT-FORMAT-NAME = *HP

The input format is HP.

In this case, the file has special laser printer control characters and possibly also feed control characters.

INPUT-FORMAT-NAME = *SPDS

The input format is SPDS.

In this case, the file has special APA printer control characters and possibly also feed control characters.

INPUT-FORMAT-NAME = *PLAIN-TEXT

The input format is PLAIN-TEXT.

In this case, the file has special PLAIN-TEXT printer control characters and possibly also feed control characters.

INPUT-FORMAT-NAME = *PCL

The input format is PCL.

In this case, the file has special PCL printer control characters and possibly also feed control characters.

INPUT-FORMAT-NAME = *EXCCW

The input format is EXCCW.

In this case the file has special EXCCW printer control characters and possibly also feed control characters.

INPUT-FORMAT-NAME = <c-string 1..63 with-low>

The input format is a free format which is identified via the specified name.

The print jobs concerned must be called as follows:

```
/PRINT-DOCUMENT <file_name>, DOCUMENT-FORMAT= -
/                               *PAGE-FORMAT(FORMAT-NAME=<c-string 1..63 with-low>)
```

where FORMAT-NAME must be identical to the name of the input format in the filter definition.

OUTPUT-FORMAT-NAME = *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL / *EXCCW / <c-string 1..63 with-low>

Specifies the output format, i.e. the document format into which the filter converts the text.

OUTPUT-FORMAT-NAME = *TEXT

The output format is TEXT.

This means that the output file does not contain any special printer control characters, but it does contain feed control characters.

OUTPUT-FORMAT-NAME = *HP

The output format is HP.

This means that the output file contains special laser printer control characters and possibly also feed control characters.

OUTPUT-FORMAT-NAME = *SPDS

The output format is SPDS.

This means that the output file contains special APA printer control characters and possibly also feed control characters.

OUTPUT-FORMAT-NAME = *PLAIN-TEXT

The output format is PLAIN-TEXT.

This means that the output file contains special PLAIN-TEXT printer control characters and possibly also feed control characters.

OUTPUT-FORMAT-NAME = *PCL

The output format is PCL.

This means that the output file contains special PCL printer control characters and possibly also feed control characters.

OUTPUT-FORMAT-NAME = *EXCCW

The output format is EXCCW.

This means that the output file has special EXCCW printer control characters and possibly also feed control characters.

OUTPUT-FORMAT-NAME = <c-string 1..63 with-low>

The output format is defined via the specified name <alphanum-name 1..63>.

REDIRECTION = *STD / *NO / *REMOTE()

Specifies whether or not the spoolout jobs which use the filter must be redirected to a remote printer.

REDIRECTION = *STD

The default value is taken from the account record, i.e. redirection is not permitted.

REDIRECTION = *NO

Redirection is not permitted.

REDIRECTION = *REMOTE()

The spoolout jobs which use the filter are redirected to a remote printer.

DEVICE-NAME = <alphanum-name 1..8>

Name of the printer. This name must be specified in the SPOOL parameter file and must not be deleted if the filter is still accessing this printer.

OBJECT-NAME =

Specifies the name of the filter object module (library element of type L).

OBJECT-NAME = *SAME

The object module name is the same as the filter name.

OBJECT-NAME =<alphanum-name 1..8>

The object module name is the same as that of the library element (of type L).

Notes

- The name selected to identify the filter must be unique.
- The printer specified in DEVICE-NAME must be supported by the name(s) specified in OUTPUT-FORMAT-NAME.
- As soon as the appropriate definitions have been made, initialization of the new filter is complete, and the filter is known within Spool & Print. It is not necessary to stop SPOOL in order to make the filter accessible.

*Examples***(1) Defining and using the filter HP2PCL**

```
//START-SPSERVE
//OPEN-PARAMETER-FILE PARAMETER-FILE=*SPOOL-PARAMETERS
//ADD-SPOOL-FILTER FILTER-NAME=HP2PCL -
//          ,FILTER-LOCATION=*SYSTEM -
//          ,INPUT-FORMAT-NAME=( *TEXT , *HP ) -
//          ,OUTPUT-FORMAT-NAME='PCL5'
//END
```

The components of the filter HP2PCL are located in the library SYSLIB.SPCONV.010 (type L) or SRMLIB.SPCONV.010 (type L). Documents in TEXT or HP format are accepted as input documents and converted to PCL5 format.

Examples of print jobs that can be executed with this filter:

- ```
a) /PRINT-DOCUMENT FROM-FILE=myfile
b) /PRINT-DOCUMENT FROM-FILE=myfile, -
 / DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC)
c) /PRINT-DOCUMENT FROM-FILE=myfile, -
 / DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*PAGE-MODE)
```

To print the converted jobs, you must correctly define a PCL printer:

```
//ADD-SPOOL-DEVICE DEVPCLE,DEVICE-TYPE=2030-PCL-PRINTER,...-
// SUPP-FORMAT-NAMES=(*TEXT , 'PCL5')
```

For more details, see the description of the ADD-SPOOL-DEVICE statement on [page 93ff](#). Notes on how to start a print job can be found in the “Spool & Print Commands” manual under the description of the PRINT-DOCUMENT command.

**(2) Defining and using the user filter XXX2YYY**

```

/START-SPSERVE
//OPEN-PARAMETER-FILE PARAMETER-FILE=*SPOOL-PARAMETERS
//ADD-SPOOL-FILTER FILTER-NAME=XXX2YYY -
// ,FILTER-LOCATION=$UID.myfilterlib -
// ,INPUT-FORMAT-NAME='XXX' -
// ,OUTPUT-FORMAT-NAME='YYY'
//END

```

The components of the filter XXX2YYY are located in the user library \$UID.myfilterlib. Documents in format XXX are accepted as input documents and converted to format YYY.

The only print job that can be executed with this filter must be called as follows:

```

/PRINT-DOCUMENT FROM-FILE=myfile, -
/ DOCUMENT-FORMAT=*PAGE-FORMAT(FORMAT-NAME='XXX')

```

To print the converted jobs, you must correctly define a printer that supports the format YYY:

```

//ADD-SPOOL-DEVICE DEVICE-NAME=DEVYYY,...-
// SUPP-FORMAT-NAMES='YYY'

```

For more details, see the description of the ADD-SPOOL-DEVICE statement on [page 93ff](#). Notes on how to start a print job can be found in the “Spool & Print Commands” manual under the description of the PRINT-DOCUMENT command.

## ADD-SPOOL-FORM

### Define form

**User group:** systems support and RSO device administrators

This statement defines a form in the SPOOL parameter file, i.e. a form entry is generated. No header page or trailer page is printed in the case of forms that can accommodate less than 70 characters per line.

The default value for the operands is taken from the standard FORM entry (see [page 260ff](#)) unless otherwise specified in the operand description.

(part 1 of 3)

#### ADD-SPOOL-FORM

```
FORM-NAME = <alphanum-name 1..6> / *STD
,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> /
 list-poss(53): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
 *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
 *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
 *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
 *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
 *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
 *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
 *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
 *9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
 *9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
 *9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER /
 *9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
 *9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
 *9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
 *9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
 *9645-REMOTE-PRINTER
```

continued →

(part 2 of 3)

```

,FORM-SIZE = *PARAMETERS (...)
 *PARAMETERS(...)
 | LINE-SIZE = *STD / <integer 30..180>
 | ,PAGE-SIZE = *STD / <integer 1..250>
,HEADER-PAGE = *STD / *YES / *NO / *RESPOOL / *ONE
,TRAILER-PAGE = *STD / *YES / *NO / *INFO
,VERTICAL-CONTROL = *STD / *NONE / *LOOP(...) / *SPACING(...)
 *LOOP(...)
 | LOOP-NAME = *STD / <alphanum-name 1..3>
 *SPACING(...)
 | LINES-PER-INCH = *STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / *DENSITY(...)
 *DENSITY(...)
 | LINES = *STD / <integer 1..999>
 | ,INCHES = *STD / <integer 1..999>
 | ,CHANNEL1-POSITION = *STD / <integer 1..255>
,ROTATION-CONTROL = *STD / *NONE / *LOOP(...) / *SPACING(...)
 *LOOP(...)
 | LOOP-NAME = *STD / <alphanum-name 1..3>
 *SPACING(...)
 | LINES-PER-INCH = *STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / *DENSITY(...)
 *DENSITY(...)
 | LINES = *STD / <integer 1..999>
 | ,INCHES = *STD / <integer 1..999>
 | ,CHANNEL1-POSITION = *STD / <integer 1..255>
,CHARACTER-SET = *STD / *NONE / <alphanum-name 1..3>
,ROTATION-CHARACT-SET = *STD / *NONE / <alphanum-name 1..3>
,BAND-IDENTIFICATION = *STD / *NONE / <alphanum-name 4..4>
,PREFORM = *STD / *NONE / <alphanum-name 1..4>

```

continued ➔

```

,CHARACTER-IMAGE = *STD / *NONE / <alphanum-name 1..3>
,TWO-UP-PROCESSING = *STD / *NO / *MODE-1 / *MODE-2
,DIA-PROCESSING = *STD / *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 | FORMS-OVERLAY = *STD / *NONE / <alphanum-name 2..2>
 | ,FORMS-OVERLAY-BUFFER = *STD / *NONE / <alphanum-name 1..4>
,PRINTER-RESOURCES = STD / *NONE / *LP65(...) / *APA(...)
 *LP65(...)
 | PAGE-DEFINITION = *STD / <integer 1..50000>
 | ,STACKER-OFFSET = *STD / *YES / *NO
 | ,SEPARATOR-PAGE-TRAY = *STD / *NONE / <integer 1..3>
 *APA(...)
 | FORM-DEFINITION = *STD / <alphanum-name 1..8>
 | ,PAGE-DEFINITION = *STD / <alphanum-name 1..8>

```

### Note on Dprint

Once a SPOOL administrator is the owner of Dprint objects, he or she is allowed to define forms in the SPOOL parameter file. However, a form that has been defined in the SPOOL parameter file can also be used from a remote server. When a form is defined in the SPOOL parameter file, the information about it is sent to all hosts in the cluster.

### Printing header page and trailer page

When printing a header page and trailer page, the maximum number of characters that can be printed per line is determined in consideration of the value of LINE-SIZE in ADD-SPOOL-DEVICE, the value of LINE-SIZE in ADD-SPOOL-FORM, and the value of CPI for the specified character set in ADD-SPOOL-FORM.

First the following is m the last two values:

$$\text{No. of chars} = \frac{\text{LINE-SIZE (A-S-F)} * \text{CPI-value of the character set of the form}}{10}$$

(If CPI=\*IGNORE it is assumed that CPI=10 (cases 4 and 5 in the example below))

The calculated number is then compared with the value for the LINE-SIZE operand in the ADD-SPOOL-DEVICE statement:

- If this value is \*IGNORE or equal to or greater than the calculated value, it will remain as the value for the maximum number of characters (see cases 1 and 2 in the example below).
- If this value is less than the calculated value, the LINE-SIZE value of ADD-SPOOL-DEVICE is the value for the maximum number of characters (see case 3 in the example below).

### Example

|   | A-S-F |     | A-S-D | Maximum number of characters per line =<br>minimum [FrmLS * CPI/10, DevLS] |
|---|-------|-----|-------|----------------------------------------------------------------------------|
|   | FrmLS | CPI | DevLS |                                                                            |
| 1 | 136   | 12  | 160   | Min[136 * 12 / 10, IGN] = 163                                              |
| 2 | 136   | 10  | 160   | Min[136 * 10 / 10, 160] = 136                                              |
| 3 | 136   | 15  | 160   | Min[136 * 15 / 10, 160] = 160                                              |
| 4 | 136   | IGN | 160   | Min[136 * 10 / 10, 160] = 136                                              |
| 5 | 136   | IGN | IGN   | Min[136 * 10 / 10, IGN] = 136                                              |

### Key

FrmLS: operand value of LINE-SIZE in ADD-SPOOL-FORM

DevLS: operand value of LINE-SIZE in ADD-SPOOL-DEVICE

CPI : CPI operand value of the character set in ADD-SPOOL-FORM

### Printing a file

When printing files, the maximum number of characters that can be printed per line is calculated in consideration of the value of LINE-SIZE in ADD-SPOOL-DEVICE, the value of LINE-SIZE in ADD-SPOOL-FORM, and of the lowest value of CPI for the character set specified during printing (this is the character set in the CHARS operand in the case of PRINT-DOCUMENT, or, if nothing is specified there, the character set in the form definition).

In contrast to printing header and trailer pages, the maximum number of characters per line for printing files is only used if CONTROL-CHARS=\*NO or EBCDIC or IBM or ASA is set in order to detect line overflows.

The maximum number of characters per line is initially calculated from the form definition and the lowest CPI value of the character set that is used for file printing. If there is no CPI value other than \*IGNORE among these character sets (see case 5 in the example below), the maximum number of characters per line is 32767 (which is the highest possible value).



In other cases the number is calculated as follows:

$$\text{No. of chars} = \frac{\text{LINE-SIZE (A-S-F)} * \text{lowest CPI value of the character set}}{10}$$

The calculated number is then compared with the value in the LINE-SIZE operand in the ADD-SPOOL-DEVICE statement:

- If this value is \*IGNORE, the value for the maximum number of characters is 32767, the purpose being to prevent line overflow (see cases 1 and 6 in the example below).
- If this value is equal to or greater than the calculated value, it will remain as the value for the maximum number of characters (see cases 2 and 3 in the example below).
- If this value is less than the calculated value, the LINE-SIZE value of ADD-SPOOL-DEVICE is the value for the maximum number of characters (see case 4 in the example below).

*Example*

|   | A-S-F |     | A-S-D | PRINT-DOCUMENT |       | Maximum number of characters per line = minimum [FrmLS * lowest CPI/10, DevLS] |
|---|-------|-----|-------|----------------|-------|--------------------------------------------------------------------------------|
|   | L-S   | CPI | DevLS | CPI 1          | CPI 2 |                                                                                |
| 1 | 136   | 10  | IGN   | 10             | 15    | DevLS = IGNORE ----> 32767                                                     |
| 2 | 136   | 10  | 255   | 15             | 12    | Min[136 * 12 / 10, 255] = 163                                                  |
| 3 | 136   | 15  | 160   | -              | -     | Min[136 * 10 / 10, 160] = 136                                                  |
| 4 | 136   | 10  | 160   | 15             | 12    | Min[136 * 12 / 10, 160] = 160                                                  |
| 5 | 136   | 12  | 160   | IGN            | IGN   | Min[32676, 160] = 160                                                          |
| 6 | 136   | 10  | 160   | IGN            | IGN   | DevLS = IGNORE ----> 32767                                                     |

*Key*

FrmLS: operand value of LINE-SIZE in ADD-SPOOL-FORM

DevLS: operand value of LINE-SIZE in ADD-SPOOL-DEVICE

CPI : CPI operand value of the character set in ADD-SPOOL-FORM

CPI 1 : CPI operand value of the first character set

CPI 2 : CPI operand value of the character set

- : no character set specified in PRINT-DOCUMENT

## Operands

### **FORM-NAME = \*STD / <alphanum-name 1..6>**

Name of the form.

A form name can be defined for different device types with different attributes, i.e. forms with the same name and different attributes can be assigned to different device types.

### **FORM-NAME = \*STD**

A dummy FORM entry is generated containing default values which you as the user can modify.

### **FORM-NAME = <alphanum-name 1..6>**

Name of the form.

### **DEVICE-TYPE = ....**

Device types to be assigned to the specified form; see SDF format on page [page 229](#). Explained below are a number of special attributes.

### **DEVICE-TYPE = \*ALL**

The specified form is assigned to all printer types. This makes it possible to define the default values for all forms in one step.

### **DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

### **DEVICE-TYPE = \*ALL-LOCAL-PRINTERS**

With FORM-NAME=\*STD only.

Defines a standard form for local SPOOL devices.

This general standard form is used whenever there is no standard form defined in the SPOOL parameter file for the specified local printer type.

### **DEVICE-TYPE = \*ALL-REMOTE-PRINTERS**

With FORM-NAME=\*STD only.

Defines a standard form for RSO devices.

This general standard form is used whenever no standard form is defined in the SPOOL parameter file for the specified RSO printer type.

### **DEVICE-TYPE = \*LP-EMULATED-PRINTER**

Printers that are emulated as a 3337 using the appropriate UNIX software and are addressed via a bus. This is possible only on mainframes with bus peripherals.

### **DEVICE-TYPE = <filename 1..16 without-cat-user-gen-vers>**

Printer type (which is not in the list).

*Notes on certain device types*

- LP-PRINTER: 3337, 3338, 3339  
 HP-PRINTER: 3351, 3353  
 LP48-PRINTER: 3348, 3349  
 HP90-PRINTER: 2090, 2140  
 LP65-PRINTER: 3365, 2050-LIP, 2090-LIP, 2140-LIP  
 LP-EMULATED-PRINTER: Printers that emulate a 3337 using the appropriate UNIX software and are addressed via a bus.
- The abbreviation “9001” is interpreted as “9001-REMOTE-PRINTER”; the abbreviation “9022” is interpreted as “9022-REMOTE-PRINTER”.

**FORM-SIZE = \*PARAMETERS(...)**

Specification of the form size.

## Presettings:

|                              |                              |
|------------------------------|------------------------------|
| ALL-LOCAL-PR printer:        | LINE-SIZE=136, PAGE-SIZE=120 |
| ALL-REMOTE-PR printer:       | LINE-SIZE=136, PAGE-SIZE=120 |
| HP-PRINT printer:            | LINE-SIZE=136, PAGE-SIZE=120 |
| HP90-PR printer:             | LINE-SIZE=136, PAGE-SIZE=120 |
| LP48-PR printer:             | LINE-SIZE=136, PAGE-SIZE=120 |
| LP65-PR printer:             | LINE-SIZE=136, PAGE-SIZE=120 |
| LP-EMUL printer:             | LINE-SIZE=136, PAGE-SIZE=120 |
| LP-PRINT printer:            | LINE-SIZE=136, PAGE-SIZE=120 |
| PCL-PRINT printer            | LINE-SIZE=136, PAGE-SIZE=120 |
| 2030-PCL-PRINT printer       | LINE-SIZE= 78, PAGE-SIZE=108 |
| 2050-APA / 2090-APA printer: | LINE-SIZE=136, PAGE-SIZE=120 |
| 2090-TWIN printer:           | LINE-SIZE=136, PAGE-SIZE=120 |
| 4011 printer:                | LINE-SIZE= 80, PAGE-SIZE=120 |
| 4812 printer:                | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4813 printer:                | LINE-SIZE= 80, PAGE-SIZE=120 |
| 4818-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4821-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4822-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4824-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4825-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4830-PCL printer:            | LINE-SIZE= 78, PAGE-SIZE=108 |
| 4850-PCL printer:            | LINE-SIZE=136, PAGE-SIZE=120 |

|                      |                               |
|----------------------|-------------------------------|
| 9000-EPFX printer:   | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9000-EPLQ printer:   | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9000-EPSQ printer:   | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9000-PCL printer:    | LINE-SIZE= 78, PAGE-SIZE=108  |
| 9000-PRO printer:    | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9000-PS printer:     | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9000 printer:        | LINE-SIZE=136, PAGE-SIZE=120  |
| 9001 printer:        | LINE-SIZE= 80, PAGE-SIZE=120  |
| 9001-31 printer:     | LINE-SIZE= 80, PAGE-SIZE=120  |
| 9002 printer:        | LINE-SIZE= 80, PAGE-SIZE=120  |
| 9004 printer:        | LINE-SIZE= 80, PAGE-SIZE=115  |
| 9011 printer:        | LINE-SIZE= 80, PAGE-SIZE=120  |
| 9012 printer:        | LINE-SIZE=132, PAGE-SIZE=120  |
| 9013 / 9014 printer: | LINE-SIZE=136, PAGE-SIZE=120  |
| 9015 printer:        | LINE-SIZE=136, PAGE-SIZE=120  |
| 9021 printer:        | LINE-SIZE= 78, PAGE-SIZE=108  |
| 9022 printer:        | LINE-SIZE= 78, PAGE-SIZE=113  |
| 9022-200 printer:    | LINE-SIZE= 77, PAGE-SIZE=108  |
| 9025 printer:        | LINE-SIZE= 75, PAGE-SIZE=115  |
| 9026-PCL printer:    | LINE-SIZE= 78, PAGE-SIZE=108  |
| 9026-RENO printer:   | LINE-SIZE= 75, PAGE-SIZE=115  |
| 9045-ANSI printer:   | LINE-SIZE= 136, PAGE-SIZE=120 |
| 9046 printer:        | LINE-SIZE= 136, PAGE-SIZE=120 |
| 9097 printer:        | LINE-SIZE= 80, PAGE-SIZE=120  |
| DJET printer:        | LINE-SIZE= 78, PAGE-SIZE=108  |

**LINE-SIZE = \*STD / <integer 30..180>**

Maximum form width. The default value is defined in the standard FORM entry (see [page 260](#)).

Entries possible in 1/10-inch increments: 136, for example, is equivalent to 13.6 inches.

A smaller value for LINE-SIZE in the ADD-SPOOL-DEVICE statement (device entry) takes precedence over the value specified here and vice versa, i.e. the smaller LINE-SIZE value (printer or form entry) denotes the maximum number of characters that can be printed on one line.

The SPOOL-global LINE-SIZE is ignored (see the MODIFY-SPOOL-PARAMETERS statement on [page 380ff](#)).

**PAGE-SIZE = \*STD / <integer 1..250>**

Form height. The default value is defined in the standard FORM entry (see [page 260ff](#)). Entries possible in 1/10-inch increments: 120, for example, is equivalent to 12 inches.

*Note*

When a spoolout job is processed, the loop length (LENGTH operand of the LOOP statement in the PRM utility routine; specified in increments of one sixth of an inch) is checked against the form length (PAGE-SIZE operand in the ADD-SPOOL-FORM or MODIFY-SPOOL-FORM statement; specified in increments of one tenth of an inch).

The loop length should match the form length or be not more than one sixth of an inch shorter than it. If the spoolout job can also be handled on an HP laser printer, the check is based on the following algorithm:

$$\text{LOOP length} * 10 < \text{PAGE-SIZE} * 6 < (\text{LOOP length} * 10) + 1.$$
**HEADER-PAGE = \*STD / \*YES / \*NO / \*ONE / \*RESPOOL**

Specifies whether a header page is to be printed.

The header page function is supported only if

- the form contains at least 70 characters per line (calculated from the line length of the form and the CPI value of the character set assigned).
- at least 24 lines are available after the form definition (exception: HEADER-PAGE = \*RESPOOL)

The size of the header page is dependent on the line length of the form used:

| Line length of the form     | Size of the header page        |
|-----------------------------|--------------------------------|
| < 70 characters             | No header page                 |
| $70 \leq x < 80$ characters | Header page with 70 characters |
| $\geq 80$ characters        | Header page with 80 characters |

The use of a ROTATION loop entry has no effect on the output of header pages.

The priority sequence of the header-page fields depends on the value specified for the TEXT operand in PRINT-DOCUMENT:

Case 1: TEXT operand specified:

- |                    |                          |
|--------------------|--------------------------|
| 1. Mailing Box:    | 12 lines + 2 blank lines |
| 2. User text:      | 10 lines + 2 blank lines |
| 3. Job name:       | 10 lines + 2 blank lines |
| 4. User ID:        | 10 lines + 2 blank lines |
| 5. Account number: | 10 lines + 2 blank lines |

Case 2: TEXT operand not specified:

- 1. Mailing Box: 12 lines + 2 blank lines
- 2. Job name: 10 lines + 2 blank lines
- 3. User ID: 10 lines + 2 blank lines
- 4. Account number: 10 lines + 2 blank lines

Depending on the number of lines available on the page, the system attempts to print the information in the order given above.

**Layout of the mailing box**

Mailing box of a header page for forms with a line length greater than or equal to 80 characters for printing a BS2000 file:

```


**
** USER IDENTITY - SPOOL TASK NUMBER - #### **
** REQUESTING TASK NUMBER - #### **
** FILENAME: **
** ELEMENT : **
** MAILING ADDRESS: **
**
** SPOOL DATE - ####-##-## PRINT STARTED AT - ##:##:## **


```

Mailing box of a header page for forms with a line length greater than or equal to 80 characters for printing a PLAM library element:

```


**
** USER IDENTITY - SPOOL TASK NUMBER - #### **
** REQUESTING TASK NUMBER - #### **
** FILENAME: **
** ELEMENT : **
** MAILING ADDRESS: **
**
** SPOOL DATE - ####-##-## PRINT STARTED AT - ##:##:## **


```

Mailing box of a header page for forms with a line length in the range  
 70 characters ≤ length ≤ 80 characters for printing a BS2000 file in RSO mode:

```


**
** IDENTITY- SPOOL TASK NUMBER - ####
** REQUESTING TASK NUMBER - ####
** FILENAME:
** ELEMENT
** MAILING ADDRESS:
**
** SPOOL DATE - ####-##-## PRINT STARTED AT - ##:##:##


```

Mailing box of a header page for forms with a line length in the range  
 70 characters ≤ length ≤ 80 characters for printing PLAM library elements in RSO mode:

```


**
** IDENTITY- SPOOL TASK NUMBER - ####
** REQUESTING TASK NUMBER - ####
** FILENAME:
** ELEMENT
** MAILING ADDRESS:
**
** SPOOL DATE - ####-##-## PRINT STARTED AT - ##:##:##


```

**HEADER-PAGE = \*STD**

Default values for header pages:

- \*ONE for LP-EMULATED, LP65, 9004, 9022, 9025, 9026-PCL and 9026-RENO printers,
- \*YES for all other printer types.

**HEADER-PAGE = \*YES**

Two header pages will be produced on printers using continuous forms, one header page on single-sheet printers.

*Note*

If HEADER-PAGE=\*YES is specified for an LP65 or an LP-EMULATED printer, only one header page is printed.

**HEADER-PAGE = \*NO**

No header page is printed.

A page feed is performed between copies only if the operand SPACE-AFTER-HEADER=\*YES was specified in MODIFY-SPOOL-PARAMETERS.

**HEADER-PAGE = \*RESPOOL**

When printing is resumed after an interrupt, printers which use continuous forms print two header pages, single-sheet printers output one, just as if HEADER-PAGE = YES was set. Printing is started with the message **\*\*\*RESTART OF AN INTERRUPTED JOB\*\*\***.

For form definitions of less than 24 lines: Only one header page of 50 characters per line is printed. It appears as follows:

```

***** RESTART OF AN INTERRUPTED JOB *****
U:xxxxxxxx T:xxxx RT:xxxx D:xxxx-xx-xx S: xx:xx:xx
F: :catid:$userid.filename/library-name
E:[element-name]

```

*Key*

U: User ID  
T: SPOOL-TSN  
RT: Calling TSN  
D: Date  
S: Starting time  
F: Path name  
E: Element name

If the path name or the element name is longer than 47 characters, the characters at the end will be cut off.

*Note*

Only if the ICLTYP field in the system exit parameter list for the header page (system exit 91) contains X'08' does the program support the special header page for form definitions of less than 24 lines (for further details see the "System Exits" manual).



**HEADER-PAGE = \*ONE**

Only one header page is printed, even on printers which use continuous forms.

**TRAILER-PAGE = \*STD / \*YES / \*NO / \*INFO**

Specifies whether, and if so with what information, a trailer page is to be printed, provided that the form to be used for printing meets the following conditions:

- number of characters per line:  $\geq 70$
- number of lines per page:  $> 10$ .

A trailer page always begins on line 3 of the form.

The amount of information given on the trailer page depends on the operand value specified here. The trailer page may contain basic information on the spoolout and possibly messages (part 1) or additional information on the operand values specified in PRINT-DOCUMENT etc. (part 2).



**Trailer page for RSO:**

(1) Standard version

*Note*

When filters are used, the user's input is not necessarily reproduced on the trailer page; instead any modifications made by the filter are displayed.

```

MAIL: @@@
FILE: @@@
ELEM: @@@
 TYPE : @@@@@@@@@@ VERS : @@@
SPOOL DATE : ####-##-## HOST : @@@@@@@@@@ SPOOL TSN : ####
START TIME : ####:##:## U-ID : @@@@@@@@@@ REQ. TSN : ####
END TIME : ####:##:## DEV. : @@@@@@@@@@ DEV. TYPE : @@@@@@@@@@

DIA :@@ (@@) FAMILY:@@@ LOOP :@@@ FORM :@@@@@
STARTNO :##### ENDNO :##### FROM :##### TO :#####
SHIFT :### SPACE :@ BINARY:@@@ CONTR:@@@@@@@@@
DEL-FILE:@@@@@@@ LINES :##### COPIES:(###,###) PRIOR:@@
HEADER :(@,@,@) HDRNUM:##### TRLNUM:#####CCPOS:#####
PNAME :@@@@@@@@@ TEXT :@@
LOCK :@@@ DEST. :@@@@@@@@@@@@@ TRUNCATION:@@@@@@@@@
IMAGE :@@
MONJV :@@
TRAY : (IN: @@@@@@, OUT: @@@@@@) CHECKPOINT:@@@@@@@@
OFFSET : (LEFT: @@@, TOP: @@@) DUPLEX: @@@ ROTATION: @@@
SECT : C'@@'
FIRST : C'@@'
 NUMBER:##### POSITION :###
LAST : C'@@'
 NUMBER:##### POSITION :###
TR-TABLE:(@@@@@@@@@,@@)
LAN-EXT :@@@@@@@@@(@@@@@@@@@@@@@@@@@@)
CHAR-MOD:@@@ CCSNAME:@@@@@@@@@ REDIRECTION : @@@
CHARS :(@@@)(@@@)(@@@)(@@@)(@@@)(@@@)(@@@)(@@@)
 (@@@)(@@@)(@@@)(@@@)(@@@)(@@@)(@@@)(@@@)
STATION :@@@@@@@@@ PROC. :@@@@@@@@@
PROLOG:(@@) EPILOG:(@@)

CLIENT-H:@@@@@@@@@ CLUSTER : @@@@@@
FILE :SIZE=##### FCBTYP=@@@@@ RECFORM=@ RECSIZE=#####.BLKSIZE=#####
PRNT :#LINES=##### COPY#=#### SPOOLUT CLASS=@@@

```



(3) With printers for which ACCESS-TYPE=TACLAN was specified, the fields STATION-NAME and PROCESSOR-NAME are replaced by PORT-NAME and INTERNET-ADDRESS (which correspond to the fields PORT and INT-AD below).

```

MAIL: @@@
FILE: @@@
ELEM: @@@
 TYPE : @@@@@@@@@@ VERS : @@@
SPOOL DATE : ####-##-## HOST : @@@@@@@@@@ SPOOL TSN : ####
START TIME : ####:##:## U-ID : @@@@@@@@@@ REQ. TSN : ####
END TIME : ####:##:## DEV. : @@@@@@@@@@ DEV. TYPE : @@@@@@@@@@

DIA :@@ (@@) FAMILY:@@@ LOOP :@@@ FORM :@@@@@
STARTNO :#### ENDNO :#### FROM :##### TO :#####
SHIFT :### SPACE :@ BINARY:@@@ CONTR:@@@@@@@@@
DEL-FILE:@@@@@@@ LINES :#### COPIES:(###,###) PRIOR:@@@
HEADER :(@,@,@) HDRNUM:##### TRLNUM:#####CCPOS:####
PNAME :@@@@@@@@@ TEXT :@@@
LOCK :@@@ DEST. :@@@@@@@@@@@@@ TRUNCATION:@@@@@@@@@
IMAGE :@@
MONJV :@@
TRAY : (##### ,###) CHECKPOINT:@@@@@@@@@
SECT : C'@@'
 POSITION : ###
FIRST: C'@@'
 NUMBER:#### POSITION : ###
LAST : C'@@'
 NUMBER:#### POSITION : ###
TR-TABLE:(@@@@@@@@@,@@)
CHAR-MOD:@@@ CCSNAME:@@@@@@@@@ REDIRECTION : @@@
CHARS : (@@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@, @@@)
STATION :@@@@@@@@@ PROC. :@@@@@@@@@
PROLOG:(@@) EPILOG:(@@)

FILE :SIZE=##### FCBTYPE=@@@@ RECFORM=@ RECSIZE=#####,BLKSIZE=#####
PRNT :#LINES=##### COPY#=#### SPOOLOUT CLASS=@@@

```

**TRAILER-PAGE = \*STD**

Default value is \*YES.

**TRAILER-PAGE = \*YES**

The first part of the trailer page is printed.

**TRAILER-PAGE = \*NO**

No trailer page is printed.

**TRAILER-PAGE = \*INFO**

Both parts of the trailer page are printed.

*Note*

If an older SPOOL parameter file is used, the same value is assumed for TRAILER-PAGE as for the HEADER-PAGE operand.

**VERTICAL-CONTROL = \*STD / \*NONE / \*LOOP(...) / \*SPACING(...)**

Defines the type of form feed control for the specified form: either by loop entry (LOOP) or by a line feed specification (SPACING).

**VERTICAL-CONTROL = \*STD**

The default value preset in the SPOOL parameter file is used.

Default value for local printers: LOOP (LOOP-NAME=C1).

Default value for APA printers: NONE

Default value for RSO printers: SPACING(L-P-I=6).

**VERTICAL-CONTROL = \*NONE**

\*NONE can only be specified for APA printers. This setting means that no output equivalent to the HP/HP90 printer can be expected.

**VERTICAL-CONTROL = \*LOOP(...)**

Defines the form feed control by using a loop entry (for further information see the "RSO" manual).

**LOOP-NAME = \*STD / <alphanum-name 1..3>**

Name of the loop entry defined as the standard loop entry for the specified form.

The loop entry must be defined in PRFILE or RSOFIL, depending on the printer type for which the form is defined.

For APA printers the name of the loop entry refers - in accordance with the naming conventions - to the page definition and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the loop entry C12 refers to the name of the page definition P10C12, which is located in SPSLIB.

**VERTICAL-CONTROL = \*SPACING(...)**

For RSO only.

Defines the form feed control by specifying a line feed (for further information see the "RSO" manual).

**LINES-PER-INCH = \*STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / \*DENSITY(...)**

Number of lines per inch.

The value specified here is the inverse of the line spacing in inches (e.g. 10 means 1/10-inch spacing or 10 lines per inch). The line spacing is measured from the top of a character in one line to the top of the same character in the same position on the following line.

**LINES-PER-INCH = \*DENSITY(...)**

The number of lines per inch (line density) can be calculated by means of the following formula:

**LINES-PER-INCH = LINES / INCHES**

Example: LINES = 72, INCHES = 9 see  $72/9 = 8$  lpi

**LINES = \*STD / <integer 1..999>**

**INCHES = \*STD / <integer 1..999>**

The number of lines and the length must be chosen in such a way that the resulting density value is less than or equal to the defined form size. The statement is otherwise rejected.

**CHANNEL1-POSITION = \*STD / <integer 1..255>**

Line on which the vertical tabulator character "channel 1" is to be located in the simulated loop. "Channel 1" is located on line 3 by default (corresponds to the standard form entry on page [page 260ff](#)). However, channel 1 can be freely defined taking into account the number of lines and excluding the last line of the simulated loop. The last line of a loop is always reserved for "channel 12".

**ROTATION-CONTROL = \*STD / \*NONE / \*LOOP(...) / \*SPACING(...)**

Only for HP, HP90, 2050-APA, 2090-APA and 2090-TWIN printers and RSO printers of types 2030-PCL, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-PCL, DJET, 9000-EPSQ, 9000-EPLQ, 9000-EPFX, 9000-PRO and 9000-PS. The default value is taken from the standard form entry (see [page 260ff](#)). The operand defines a loop entry or an additional means of line feed control to be used by the form for controlling output of pages which are to be rotated (90°, 270°).

**ROTATION-CONTROL = \*NONE**

No special feed control for pages to be rotated (landscape format). This is the default for 2050-APA, 2090-APA, 2090-TWIN, 4830-PCL and 4850-PCL printers.

**ROTATION-CONTROL = \*LOOP(...)**

Output in landscape format is to be controlled by a special loop record.

**LOOP-NAME = \*STD / <alphanum-name 1..3>**

Name of the ROTATION loop entry by means of which output in landscape format is to be controlled. The default value is taken from the standard form entry (see [page 260ff](#)). A ROTATION loop must be contained in the RSOFILE (RSO device) or in the PRFILE (HP, HP90, PCL printers).

For APA printers the name of the loop entry refers - in accordance with the naming conventions - to the page definition and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the loop entry C12 refers to the name of the page definition P10C12, which is located in SPSLIB.

### **LOOP-NAME = \*STD**

The name of the ROTATION loop record is taken from the standard form entry of the desired device type.

Default values:

|                           |       |
|---------------------------|-------|
| HP-PRINTER:               | R06   |
| HP90-PRINTER:             | R06   |
| PCL-PRINTER:              | R06   |
| 2030-PCL-REMOTE-PRINTER:  | *NONE |
| 4812-REMOTE-PRINTER:      | *NONE |
| 4818-PCL-REMOTE-PRINTER:  | *NONE |
| 4821-PCL-REMOTE-PRINTER:  | *NONE |
| 4822-PCL-REMOTE-PRINTER:  | *NONE |
| 4824-PCL-REMOTE-PRINTER:  | *NONE |
| 4825-PCL-REMOTE-PRINTER:  | *NONE |
| 9000-PCL-REMOTE-PRINTER:  | *NONE |
| 9021-REMOTE-PRINTER:      | *NONE |
| 9022-REMOTE-PRINTER:      | *NONE |
| 9022-200-REMOTE-PRINTER:  | *NONE |
| 9025-REMOTE-PRINTER:      | *NONE |
| 9026-RENO-REMOTE-PRINTER: | *NONE |
| 9026-PCL-REMOTE-PRINTER:  | *NONE |
| DJET-REMOTE-PRINTER:      | *NONE |

### **LOOP-NAME = <alphanum-name 1..3>**

Name of the loop entry assigned to the form for controlling output in landscape format.

### **ROTATION-CONTROL = \*SPACING(..)**

Defines an additional means of line feed control.

### **LINES-PER-INCH = \*STD / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / \*DENSITY(...)**

The default value is taken from the standard form entry (see [page 260ff](#)).

To find the values which are allowed for the various printers, please refer to the table on [page 256](#).

### **LINES-PER-INCH = \*DENSITY(...)**

The number of lines per inch (line density) can be calculated by means of the following formula:

$$\text{LINES-PER-INCH} = \text{LINES} / \text{INCHES}$$

Example: LINES = 72, INCHES = 9 see  $72/9 = 8$  lpi.



**LINES = \*STD / <integer 1..999>, INCHES = \*STD / <integer 1..999>**

The number of lines and the length must be chosen in such a way that the resulting density value is less than or equal to the defined form size. The statement is otherwise rejected.

**CHANNEL1-POSITION = \*STD / <integer 1..255>**

Line number of the simulated loop on which the vertical tabulator character “channel 1” is defined.

**CHARACTER-SET = \*STD / \*NONE / <alphanum-name 1..3>**

Specifies a character set. \*NONE is the default for APA printers.

**CHARACTER-SET = \*STD**

Standard character set to be used for printing the header and trailer pages when this form is used.

If no character set is specified for CHARS in the PRINT-DOCUMENT command, then this character set is also be used for printing the file. The character set must previously have been entered in the SPOOL parameter file by means of the ADD-SPOOL-CHARACTER-SET statement (see [page 68ff](#)).

**CHARACTER-SET = <alphanum-name 1..3>**

Name of the character set.

For APA printers the name of the character set refers - in accordance with the naming conventions - to the name of the coded font and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the character set 101 refers to the names of the font resources coded font X00101, code page T10101 and font character set C00101, which are located in SPSLIB.

#### *Note*

The character sets for HP/HP90 printers must be defined in the PRFILE too. The PRM utility routine is provided for this purpose (see the “PRM” manual). The same applies to printers in APA mode, where the character sets must be defined in SPSLIB. The software product TRANSLIB must be used for importing.

**ROTATION-CHARACT-SET = \*STD / \*NONE / <alphanum-name 1..3>**

For RSO printer types 2030-PCL, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-PCL, DJET, 9000-EPSQ, 9000-EPLQ, 9000-EPFX, 9000-PRO and 9000-PS.

**ROTATION-CHARACT-SET = \*STD**

The default value is \*NONE. See also standard form entry on [page 260ff](#).

**ROTATION-CHARACT-SET = \*NONE**

The standard character set to be used for printing rotated pages corresponds to the character set defined in the standard form record (CHARACTER-SET operand) or is specified in the PRINT-DOCUMENT command. If the operand value \*NONE is specified, either ROTATION-CONTROL= \*NONE must be specified for this printer type in the standard form or ROTATION-CONTROL=\*NONE must additionally be specified in this statement.

**ROTATION-CHARACT-SET = <alphanum-name 1..3>**

Name of the character set.

**BAND-IDENTIFICATION = \*STD / \*NONE / <alphanum-name 4..4>**

For LP-PRINTER and LP48-PRINTER only.

BAND-ID of the type band to be used with this form for spoolout processing. The default value is taken from the standard form entry (see [page 260ff](#)). A type band specified here takes precedence over a type band specified in the device entry (ADD-SPOOL-DEVICE statement, see [page 93](#)).

**PREFORM = \*STD / \*NONE / <alphanum-name 1..4>**

For LP-EMULATED-PRINTER only.

Identifies the printer control string that must be sent to an LP-EMULATED-PRINTER at the start of a job. The default value is taken from the standard form entry (see [page 260ff](#)).

**CHARACTER-IMAGE = \*STD / \*NONE / <alphanum-name 1..3>**

Designates for local printers the name of the conversion table which must be defined in SYSTEM-PRFILE. The default value is taken from the standard form entry (see [page 260ff](#)).

**TWO-UP-PROCESSING = \*STD / \*NO / \*MODE-1 / \*MODE-2**

For HP90 and 2050/2090-APA printers only (for all other device types only the value \*STD or \*NO can be specified). Specifies whether and, if yes, in which TWO-UP mode this form is to be used for printing (see the description of the HP90 printer in the "SPOOL" manual). The default value is taken from the standard form entry (see [page 260ff](#)).

In TWO-UP mode the value specified for LINE-SIZE must not exceed 85. With APA printers this is not checked.

**DIA-PROCESSING = \*STD / \*NONE / \*PARAMETERS(...)**

Specifies the default settings for forms when using overlays. The default value is \*NONE or is taken from the standard form entry (see [page 260ff](#)).

**DIA-PROCESSING = \*PARAMETERS(...)**

Designates various possible settings.

**FORMS-OVERLAY = \*STD / \*NONE / <alphanum-name 2..2>**

For HP, 9025 and 9026-RENO printers only.

Specifies the description of the EFO data overlay.

**FORMS-OVERLAY-BUFFER = \*STD / \*NONE / <alphanum-name 1..4>**

For HP, APA and PCL printers only.

Specifies the description of the FOB data overlay.

For APA printers the description of the FOB data overlay refers - in accordance with the naming conventions - to an APA overlay and is needed for printing a user document (not relevant for the header and trailer pages). Example: the description of the FOB data overlay abcd refers to the overlay name O1abcd01, which is located in SPSLIB.

**PRINTER-RESOURCES = \*STD / \*NONE / \*LP65(...) / \*APA(...)**

Specifies which printer functions are to be used with the specified form for output on an LP65 or APA printer. The default value is taken from the standard form entry (see [page 260ff](#)).

**PRINTER-RESOURCES = \*LP65(...)**

LP65 printer attributes.

**PAGE-DEFINITION = \*STD / <integer 1..50000>**

Number of the standard PCL file (1..50000) by means of which output of the print file is to be controlled.

Output of header and trailer pages is always controlled by means of the PCL file specified here, irrespective of which PCL file is specified in the PAGE-DEFINITION operand of the PRINT-DOCUMENT command.

If the standard PCL file switches the LP65 printer into EXCCW mode, neither a header page nor a trailer page is printed.

**STACKER-OFFSET = \*STD / \*YES / \*NO**

Specifies whether the individual spoolout jobs are to be separated by offset output on the output tray. If the operand value YES is specified, the individual files of a PRINT family are also separated. Copies are separated only if a header page is requested for each copy.

**SEPARATOR-PAGE-TRAY = \*STD / \*NONE / <integer 1..3>**

Specifies whether the individual spoolout jobs are to be separated by an additional (blank) page between each job. A blank page is inserted on request between the copies of the same spoolout job if a header page was also requested for each.

*Note*

When printing on 2090-LIP or 2140-LIP printers (the SPOOL device type of both is LP65) the STACKER-OFFSET and SEPARATOR-PAGE-TRAY operands have no meaning and will be ignored.

**PRINTER-RESOURCES = \*APA(...)**

APA printer characteristics. (For FORMDEF and PAGEDEF, see the “SPS/BS2000-APA” manual.)

**FORM-DEFINITION = \*STD / <alphanum-name 1..8>**

Name of the FORMDEF for printing the header, message and trailer pages. FORMDEF is also used for printing out a file if no (other) FORMDEF has been specified in the PRINT-DOCUMENT command or no compatible HP/HP90 output has been requested via FORMDEF or specified in the PRINT-DOCUMENT command.

**PAGE-DEFINITION = \*STD / <alphanum-name 1..8>**

Name of the PAGEDEF for printing the header, message and trailer pages. PAGEDEF is also used for printing out a file if no (other) PAGEDEF has been specified in the PRINT-DOCUMENT command or no compatible HP/HP90 output has been requested via FORMDEF or specified in the PRINT-DOCUMENT command.

*Notes*

- Header and trailer pages are always printed using the character set defined by means of the CHARACTER-SET operand as the standard character set for the form used. An exception to this is APA printers.
- For APA printers the following applies: for the following operands in connection with these printers, only NONE or \*NONE may be specified: ROTATION-CHARACTER-SET, BAND-ID, PREFORM, PRINTER-RESSOURCE=LP65()/NONE, CHARACTER-IMAGE.
- Feed control specifications for rotated pages given for ROTATION-CONTROL in the form entry are effective only for the file itself and take precedence over the first loop specified for VERTICAL-CONTROL in the form entry. If a ROTATION loop is specified, RSO always assumes that the file is to be output in landscape format (rotated through 90° or 270°).
- If a loop is specified explicitly in the PRINT-DOCUMENT command, it is used solely for feed control for the file (not, however, for the header and trailer pages). It overrides the standard loop for the form entry specified in VERTICAL-CONTROL or ROTATION-CONTROL.

- For RSO, a separate character set must be specified for ROTATION-CONTROL only if ROTATION-CONTROL is also specified.
- Specifying the line number for CHANNEL1-POSITION is significant only if feed control is implemented via SPACING (line feed) instead of via LOOP.
- For APA printers.  
In conjunction with APA printers, only NONE or \*NONE may be specified for the following operands:
  - VERTICAL-CONTROL
  - CHARACTER-SET
  - ROTATION-CHARACTER-SET
  - ROTATION-CONTROL
  - BAND-ID
  - PREFORM
  - TWO-UP-PROCESSING
  - PRINTER-RESSOURCE=LP65( )/NONE
  - CHARACTER-IMAGE

*Values supported*

| Printer type                                                                                                                             | Densities and supported values                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9000-EPFX                                                                                                                                | x/72" (x = 1 - 85)<br>x/216" (x = 1 - 255)                                                                                                              |
| 9000-EPLQ, 9000-<br>EPSQ                                                                                                                 | x/360" (x = 1 - 255)                                                                                                                                    |
| 9000-PRO                                                                                                                                 | x/72" (x = 1 - 85)<br>x/180" (x = 1 - 255)                                                                                                              |
| 9000-PS                                                                                                                                  | x/72" (x = 1 - 999)                                                                                                                                     |
| 9000                                                                                                                                     | x/1" - x/999" (x = 1 - 999)                                                                                                                             |
| 9001, 9001-31                                                                                                                            | x/72" (x = 1 - 99)                                                                                                                                      |
| 8121, 9002                                                                                                                               | 1/6"                                                                                                                                                    |
| 9003                                                                                                                                     | x/96" (x = 1, 2, 4, 8, 12, 16)                                                                                                                          |
| 9004                                                                                                                                     | x/48" (x = 1 - 125)                                                                                                                                     |
| 9011                                                                                                                                     | x/72" (x = 1 - 99)                                                                                                                                      |
| 9012                                                                                                                                     | x/120" (x = 1 - 99)                                                                                                                                     |
| 9013                                                                                                                                     | x/48" (x = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48)                                                                                                            |
| 4011, 4813, 9014, 9015,<br>9097                                                                                                          | in units of 1/48":<br>x/48" (x = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48)<br>in LPI units:<br>1, 2, 3, 4, 6, 8, 12, 16, 24, 48, 60, 72, 90, 120, 144, 180, 360 |
| 9022                                                                                                                                     | x/48" (x = 1 - 125)<br>x/300" (x = 1 - 255) (NEC function)                                                                                              |
| 2030-PCL, 4818-PCL,<br>4821-PCL, 4822-PCL,<br>4824-PCL, 4825-PCL,<br>4830-PCL, 4850-PCL,<br>9000-PCL, 9021, 9022-<br>200, 9026-PCL, DJET | x/1" (x = 1 - 682)<br>x/2" - x/999" (x = 1 - 999)                                                                                                       |
| 9025                                                                                                                                     | x/406" (x = 1 - 999)                                                                                                                                    |
| 9026-RENO                                                                                                                                | x/406" (x = 1 - 999)                                                                                                                                    |
| 9045-ANSI, 9046                                                                                                                          | 3 LPI, 4LPI, 6 LPI, 8 LPI                                                                                                                               |
| 9645                                                                                                                                     | 6 LPI, 8 LPI                                                                                                                                            |
| 4812                                                                                                                                     | x/48" (x = 1 - 126)                                                                                                                                     |

As can be seen from the table, different printer types use different units. Also, some printers offer a number of values while others work with a single one only.

The line density is now determined by the number of lines per number of inches.

*Example*

|         |    |    |     |    |     |                                       |
|---------|----|----|-----|----|-----|---------------------------------------|
| LINES=  | 6  | or | 300 | or | 90  | } corresponds to a density of 6 lpi   |
| INCHES= | 1  | or | 50  | or | 15  |                                       |
| LINES=  | 48 | or | 96  | or | 480 | } corresponds to a density of 4.8 lpi |
| INCHES= | 10 | or | 20  | or | 100 |                                       |

*Notes*

1. The values for INCHES must be in the range 1 through 999.
2. The values for LINES must be integers in the range 1 through 999, not resulting in a density value above the maximum permissible page size of 25 inches.

The new density can be specified in the SPSEIVE statements ADD-SPOOL-FORM and MODIFY-SPOOL-FORM.

*Validation of LPI values*

Since SPSEIVE cannot access the RSO tables, the values used for the definition or modification of forms are not checked. Validation of these values is effected by RSO in the PRINT-DOCUMENT command and on activation of spoolout.

Previously, the specified LPI values were not checked. An invalid LPI value was ignored and the last correct line spacing was used during printout. This situation was unsatisfactory and became even worse upon introduction of the extended LPI concept. For this reason, validation of the LPI values has now been introduced.

The PRINT-DOCUMENT command is rejected if the specified line density is not currently supported by the printer. The line density is specified either directly in the LOOP operand of the PRINT-DOCUMENT command or in the ADD-SPOOL-FORM statement (in the SPACING or LOOP operand).

A few line spacing values were accepted in previous RSO versions although they were not then supported by printers. As of RSO V2.2A, such values are rejected.

*Exceptions to this regulation*

1. 8121 and 9002 Printers do not have control character strings that set the line spacing (the only hardware value is 6 lpi). RSO therefore accepts only 6 lpi as a value for these printer types.
2. The 9000 Printer may be regarded as an "open" printer type as it can be used to define several types of printer. RSO cannot therefore send any control characters which set the line spacing, because the control characters may vary from printer to printer.

Nevertheless, RSO must know the line spacing for printout so that it can calculate the number of lines to be printed per page and control the form feed accordingly. RSO therefore accepts certain line spacing values on this printer type, even though it does not send any control characters which would set the line spacing on a 9000-type printer.

3. On 9025 and 9026-RENO Printers, RSO supports line spacings of approximately 6, 8, 10, 12, 15 and 20 lpi. The values are approximate because they are transformed into the units for the 9025 Printer (1/406") and rounded off to the nearest integer. The value used for the line spacing is thus not the exact value requested, but an approximation.

For reasons of compatibility, these line spacings are still supported (rounded off), but only if they were specified in a LOOP record or as an "lpi" value in the SPACING operand of the ADD-SPOOL-FORM statement. If they were specified with DENSITY in the SPACING operand of the ADD-SPOOL-FORM statement they would be rejected.

The following table comprises all the line spacing values permitted by RSO for the various printer types.

| Printer types                                                | LOOP or SPACING values (3/4/6/8/10/12/15/20) | Values for calculation (SPACING=DENSITY...)                                                                                                                                                                                                           |
|--------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2030-PCL,<br>4818-PCL,<br>4822-PCL,<br>4825-PCL,<br>9000-PCL | 3/4/6/8/10/12/15/20 lpi                      | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999                                                                                                                                                                                     |
| 4011                                                         | 3/4/6/8/12 lpi                               | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48<br>or INCHES=1 and LINES=60<br>or INCHES=1 and LINES=72<br>or INCHES=1 and LINES=90<br>or INCHES=1 and LINES=120<br>or INCHES=1 and LINES=144<br>or INCHES=1 and LINES=180<br>or INCHES=1 and LINES=360 |
| 4812                                                         | 3/4/6/8/12 lpi                               | INCHES= 1..126<br>LINES = 48                                                                                                                                                                                                                          |
| 4813                                                         | 3/4/6/8/12 lpi                               | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48<br>or INCHES=1 and LINES=60<br>or INCHES=1 and LINES=72<br>or INCHES=1 and LINES=90<br>or INCHES=1 and LINES=120<br>or INCHES=1 and LINES=144<br>or INCHES=1 and LINES=180<br>or INCHES=1 and LINES=360 |



| Printer types           | LOOP or SPACING values<br>(3/4/6/8/10/12/15/20) | Values for calculation<br>(SPACING=DENSITY...)                    |
|-------------------------|-------------------------------------------------|-------------------------------------------------------------------|
| 4821-PCL                | 6/8/10/12/15/20 lpi (2)                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999 |
| 4824-PCL                | 6/8/10/12/15/20 lpi (2)                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999 |
| 4830-PCL,<br>4850-PCL   | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999 |
| 8121                    | 6 lpi                                           | INCHES= 1<br>LINES = 6                                            |
| 9000                    | 3/4/6/8/10/12/15/20 lpi (1)                     | INCHES= 1..999<br>LINES = 1..999                                  |
| 9000-EPFX               | 3/4/6/8/10/12/15/20 lpi                         | INCHES= 1..85 and LINES = 72 or<br>INCHES= 1..255 and LINES = 180 |
| 9000-EPLQ,<br>9000-EPSQ | 3/4/6/8/10/12/15/20 lpi                         | INCHES= 1..255<br>LINES = 360                                     |
| 9000-PRO                | 3/4/6/8/12 lpi                                  | INCHES= 1..85 and LINES = 72 or<br>INCHES= 1..255 and LINES = 216 |
| 9000-PS                 | 3/4/6/8/12 lpi                                  | INCHES= 1..999<br>LINES = 72                                      |
| 9001                    | 3/4/6/8/12 lpi                                  | INCHES= 1..99<br>LINES = 72                                       |
| 9001-31                 | 3/4/6/8/12 lpi                                  | INCHES= 1..99<br>LINES = 72                                       |
| 9002                    | 6 lpi                                           | INCHES= 1<br>LINES = 6                                            |
| 9003                    | 6/8/12 lpi                                      | INCHES= 1/2/4/8/12/16<br>LINES = 96                               |
| 9004                    | 3/4/6/8/12 lpi                                  | INCHES= 1..125<br>LINES = 48                                      |
| 9011                    | 3/4/6/8/12 lpi                                  | INCHES= 1..99<br>LINES = 72                                       |
| 9012                    | 3/4/6/8/10/12/15/20 lpi                         | INCHES= 1..99<br>LINES = 120                                      |
| 9013                    | 3/4/6/8/12 lpi                                  | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48                     |

| Printer types | LOOP or SPACING values<br>(3/4/6/8/10/12/15/20) | Values for calculation<br>(SPACING=DENSITY...)                                                                                                                                                                                                        |
|---------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9014          | 3/4/6/8/12 lpi                                  | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48<br>or INCHES=1 and LINES=60<br>or INCHES=1 and LINES=72<br>or INCHES=1 and LINES=90<br>or INCHES=1 and LINES=120<br>or INCHES=1 and LINES=144<br>or INCHES=1 and LINES=180<br>or INCHES=1 and LINES=360 |
| 9015          | 3/4/6/8/12 lpi                                  | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48<br>or INCHES=1 and LINES=60<br>or INCHES=1 and LINES=72<br>or INCHES=1 and LINES=90<br>or INCHES=1 and LINES=120<br>or INCHES=1 and LINES=144<br>or INCHES=1 and LINES=180<br>or INCHES=1 and LINES=360 |
| 9021          | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999                                                                                                                                                                                     |
| 9022          | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..125 and LINES=48<br>or<br>INCHES=1..255 and LINES=300                                                                                                                                                                                       |
| 9022-200      | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999                                                                                                                                                                                     |
| 9025          | 6/8/10/12/15/20 lpi (2)                         | INCHES= 1..999<br>LINES = 406                                                                                                                                                                                                                         |
| 9026-PCL      | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999                                                                                                                                                                                     |
| 9026-RENO     | 6/8/10/12/15/20 lpi (2)                         | INCHES= 1..999<br>LINES = 406                                                                                                                                                                                                                         |
| 9045-ANSI     | 3/4/6/8 lpi                                     | INCHES=240 and LINES=720<br>or<br>INCHES=180 and LINES=720<br>or<br>INCHES=120 and LINES=720<br>or<br>INCHES=90 and LINES=720                                                                                                                         |

| Printer types | LOOP or SPACING values<br>(3/4/6/8/10/12/15/20) | Values for calculation<br>(SPACING=DENSITY...)                                                                                                                                                                                                        |
|---------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9046          | 6/8 lpi                                         | INCHES=120 and LINES=720<br>or<br>INCHES=90 and LINES=720                                                                                                                                                                                             |
| 9097          | 3/4/6/8/12 lpi                                  | INCHES= 1/2/3/4/6/8/12/16/24/48<br>LINES = 48<br>or INCHES=1 and LINES=60<br>or INCHES=1 and LINES=72<br>or INCHES=1 and LINES=90<br>or INCHES=1 and LINES=120<br>or INCHES=1 and LINES=144<br>or INCHES=1 and LINES=180<br>or INCHES=1 and LINES=360 |
| 9645          | 6/8 lpi                                         | INCHES= 1<br>LINES = 6 or 8                                                                                                                                                                                                                           |
| DJET          | 3/4/6/8/10/12/15/20 lpi                         | INCHES=1..682 and LINES=1<br>or<br>INCHES=1..999 and LINES=2..999                                                                                                                                                                                     |

- (1) Although RSO does not send any control characters which would set the line spacing on the 9000 Printer, a few line spacing values are permitted.
- (2) The line spacings 6, 8, 10, 12, 15 and 20 lpi are not correctly supported (the values are rounded off), but are still permitted for reasons of compatibility.

If the page size is not compatible with the specified LPI value (i.e. the page cannot be covered with an integer number of lines of the specified density) a rounding error will occur at the end of the page. This error may extend to a maximum size of one line.

## Standard form entries

### Notes

- Supported values are identified by “\*”. Values which are not supported are identified by “n.s.”.
- Notes on the individual device types (indicated in the second column) are given at the end of the section.

### Device type: ALL-LOCAL-PRINTER

|                        |                       |         |
|------------------------|-----------------------|---------|
| FORM-NAME              | Form name             | (*STD)  |
| DEVICE-TYPE            | ALL-LOCAL-<br>PRINTER |         |
| FORM-SIZE              |                       |         |
| LINE-SIZE              | *                     | (136)   |
| PAGE-SIZE              | *                     | (120)   |
| HEADER-PAGE            | *                     | (*YES)  |
| TRAILER-PAGE           | *                     | (*YES)  |
| VERTICAL-CONTROL       | *                     |         |
| LOOP-NAME              | *                     | (C1)    |
| ROTATION-CONTROL       | n.s.                  | (*NONE) |
| CHARACTER-SET          | *                     | (101)   |
| ROTATION-CHARACTER-SET | n.s.                  | (*NONE) |
| BAND-IDENTIFICATION    | n.s.                  | (*NONE) |
| PREFORM                | n.s.                  | (*NONE) |
| CHARACTER-IMAGE        | n.s.                  | (*NONE) |
| TWO-UP-PROCESSING      | n.s.                  | (*NO)   |
| DIA-PROCESSING         |                       |         |
| FORMS-OVERLAY          | n.s.                  | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.                  | (*NONE) |
| PRINTER-RESOURCES      | n.s.                  | (*NONE) |

**Device type: ALL-REMOTE-PRINTER**

|                        |                        |         |
|------------------------|------------------------|---------|
| FORM-NAME              | Form name              | (*STD)  |
| DEVICE-TYPE            | ALL-REMOTE-<br>PRINTER |         |
| FORM-SIZE              |                        |         |
| LINE-SIZE              | *                      | (136)   |
| PAGE-SIZE              | *                      | (120)   |
| HEADER-PAGE            | *                      | (*YES)  |
| TRAILER-PAGE           | *                      | (*YES)  |
| VERTICAL-CONTROL       | *                      |         |
| LINES-PER-INCH         | *                      | (6)     |
| CHANNEL1-POSITION      |                        | (3)     |
| ROTATION-CONTROL       | n.s.                   | (*NONE) |
| CHARACTER-SET          | *                      | (101)   |
| ROTATION-CHARACTER-SET | n.s.                   | (*NONE) |
| BAND-IDENTIFICATION    | n.s.                   | (*NONE) |
| PREFORM                | n.s.                   | (*NONE) |
| CHARACTER-IMAGE        | n.s.                   | (*NONE) |
| TWO-UP-PROCESSING      | n.s.                   | (*NO)   |
| DIA-PROCESSING         |                        |         |
| FORMS-OVERLAY          | n.s.                   | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.                   | (*NONE) |
| PRINTER-RESOURCES      | n.s.                   | (*NONE) |

**Device type: LP-PRINTER**

|                        |            |         |
|------------------------|------------|---------|
| FORM-NAME              | Form name  | (*STD)  |
| DEVICE-TYPE            | LP-PRINTER |         |
| FORM-SIZE              |            |         |
| LINE-SIZE              | *          | (136)   |
| PAGE-SIZE              | *          | (120)   |
| HEADER-PAGE            | *          | (*YES)  |
| TRAILER-PAGE           | *          | (*YES)  |
| VERTICAL-CONTROL       | *          |         |
| LOOP-NAME              | *          | (C1)    |
| ROTATION-CONTROL       | n.s.       | (*NONE) |
| CHARACTER-SET          | *          | (101)   |
| ROTATION-CHARACTER-SET | n.s.       | (*NONE) |
| BAND-IDENTIFICATION    | n.s.       | (*NONE) |
| PREFORM                | n.s.       | (*NONE) |
| CHARACTER-IMAGE        | n.s.       | (*NONE) |
| TWO-UP-PROCESSING      | n.s.       | (*NO)   |
| DIA-PROCESSING         |            |         |
| FORMS-OVERLAY          | n.s.       | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.       | (*NONE) |
| PRINTER-RESOURCES      | n.s.       | (*NONE) |

**Device type: LP-EMUL-PRINTER**

|                        |                     |         |
|------------------------|---------------------|---------|
| FORM-NAME              | Form name           | (*STD)  |
| DEVICE-TYPE            | LP-EMUL-<br>PRINTER |         |
| FORM-SIZE              |                     |         |
| LINE-SIZE              | *                   | (136)   |
| PAGE-SIZE              | *                   | (120)   |
| HEADER-PAGE            | *                   | (*ONE)  |
| TRAILER-PAGE           | *                   | (*YES)  |
| VERTICAL-CONTROL       | *                   |         |
| LOOP-NAME              | *                   | (C1)    |
| ROTATION-CONTROL       | n.s.                | (*NONE) |
| CHARACTER-SET          | *                   | (101)   |
| ROTATION-CHARACTER-SET | n.s.                | (*NONE) |
| BAND-IDENTIFICATION    | n.s.                | (*NONE) |
| PREFORM                | n.s.                | (*NONE) |
| CHARACTER-IMAGE        | n.s.                | (*NONE) |
| TWO-UP-PROCESSING      | n.s.                | (*NO)   |
| DIA-PROCESSING         |                     |         |
| FORMS-OVERLAY          | n.s.                | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.                | (*NONE) |
| PRINTER-RESOURCES      | n.s.                | (*NONE) |

**Device type: LP48-PRINTER**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | LP48-PRINTER |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (132)   |
| PAGE-SIZE              | *            | (120)   |
| HEADER-PAGE            | *            | (*YES)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LOOP-NAME              | *            | (C1)    |
| ROTATION-CONTROL       | n.s.         | (*NONE) |
| CHARACTER-SET          | *            | (101)   |
| ROTATION-CHARACTER-SET | n.s.         | (*NONE) |
| BAND-IDENTIFICATION    | *            | (9202)  |
| PREFORM                | n.s.         | (*NONE) |
| CHARACTER-IMAGE        | n.s.         | (*NONE) |
| TWO-UP-PROCESSING      | n.s.         | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | n.s.         | (*NONE) |

**Device type: LP65-PRINTER**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | LP65-PRINTER |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (136)   |
| PAGE-SIZE              | *            | (120)   |
| HEADER-PAGE            | *            | (*ONE)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LOOP-NAME              | *            | (C1)    |
| ROTATION-CONTROL       | n.s.         | (*NONE) |
| CHARACTER-SET          | *            | (101)   |
| ROTATION-CHARACTER-SET | n.s.         | (*NONE) |
| BAND-IDENTIFICATION    | n.s.         | (*NONE) |
| PREFORM                | n.s.         | (*NONE) |
| CHARACTER-IMAGE        | n.s.         | (*NONE) |
| TWO-UP-PROCESSING      | n.s.         | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | n.s.         | (*NONE) |
| PAGE-DEFINITION        | *            | (21)    |
| STACKER-OFFSET         | *            | (*YES)  |
| SEPARATOR-PAGE-TRAY    | *            | (*NONE) |

**Device type: HP-PRINTER**

|                        |            |         |
|------------------------|------------|---------|
| FORM-NAME              | Form name  | (*STD)  |
| DEVICE-TYPE            | HP-PRINTER |         |
| FORM-SIZE              |            |         |
| LINE-SIZE              | *          | (136)   |
| PAGE-SIZE              | *          | (120)   |
| HEADER-PAGE            | *          | (*YES)  |
| TRAILER-PAGE           | *          | (*YES)  |
| VERTICAL-CONTROL       | *          |         |
| LOOP-NAME              | *          | (C1)    |
| ROTATION-CONTROL       | *          |         |
| LOOP-NAME              | *          | (R06)   |
| CHARACTER-SET          | *          | (101)   |
| ROTATION-CHARACTER-SET | n.s.       | (*NONE) |
| BAND-IDENTIFICATION    | n.s.       | (*NONE) |
| PREFORM                | n.s.       | (*NONE) |
| CHARACTER-IMAGE        | n.s.       | (*NONE) |
| TWO-UP-PROCESSING      | n.s.       | (*NO)   |
| DIA-PROCESSING         |            |         |
| FORMS-OVERLAY          | *          | (*NONE) |
| FORMS-OVERLAY-BUFFER   | *          | (*NONE) |
| PRINTER-RESOURCES      | n.s.       | (*NONE) |

**Device type: HP90-PRINTER**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | HP90-PRINTER |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (136)   |
| PAGE-SIZE              | *            | (120)   |
| HEADER-PAGE            | *            | (*YES)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LOOP-NAME              | *            | (C1)    |
| ROTATION-CONTROL       | *            |         |
| LOOP-NAME              | *            | (R06)   |
| CHARACTER-SET          | *            | (101)   |
| ROTATION-CHARACTER-SET | n.s.         | (*NONE) |
| BAND-IDENTIFICATION    | n.s.         | (*NONE) |
| PREFORM                | n.s.         | (*NONE) |
| CHARACTER-IMAGE        | n.s.         | (*NONE) |
| TWO-UP-PROCESSING      | n.s.         | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | n.s.         | (*NONE) |



**Device type: PCL-PRINTER**

|                        |             |         |
|------------------------|-------------|---------|
| FORM-NAME              | Form name   | (*STD)  |
| DEVICE-TYPE            | PCL-PRINTER |         |
| FORM-SIZE              |             |         |
| LINE-SIZE              | *           | (136)   |
| PAGE-SIZE              | *           | (120)   |
| HEADER-PAGE            | *           | (*YES)  |
| TRAILER-PAGE           | *           | (*YES)  |
| VERTICAL-CONTROL       | *           |         |
| LOOP-NAME              | *           | (C1)    |
| ROTATION-CONTROL       | *           |         |
| LOOP-NAME              | *           | (R06)   |
| CHARACTER-SET          | *           | (101)   |
| ROTATION-CHARACTER-SET | n.s.        | (*NONE) |
| BAND-IDENTIFICATION    | n.s.        | (*NONE) |
| PREFORM                | n.s.        | (*NONE) |
| CHARACTER-IMAGE        | n.s.        | (*NONE) |
| TWO-UP-PROCESSING      | n.s.        | (*NO)   |
| DIA-PROCESSING         |             |         |
| FORMS-OVERLAY          | n.s.        | (*NONE) |
| FORMS-OVERLAY-BUFFER   | *           | (*NONE) |
| PRINTER-RESOURCES      | n.s.        | (*NONE) |

**Device type: 2030-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 2030-PCL R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | * (1)        | (224)      |
| ROTATION-CHARACTER-SET | * (2)        | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 2050-APA-PRINTER**

|                        |                  |         |
|------------------------|------------------|---------|
| FORM-NAME              | Form name        | (*STD)  |
| DEVICE-TYPE            | 2050-APA-PRINTER |         |
| FORM-SIZE              |                  |         |
| LINE-SIZE              | *                | (136)   |
| PAGE-SIZE              | *                | (120)   |
| HEADER-PAGE            | *                | (*YES)  |
| TRAILER-PAGE           | *                | (*YES)  |
| VERTICAL-CONTROL       | *                | (*NONE) |
| LOOP-NAME              | *                | (*NONE) |
| ROTATION-CONTROL       | *                | (*NONE) |
| LOOP-NAME              | *                | (*NONE) |
| CHARACTER-SET          | *                | (*NONE) |
| ROTATION-CHARACTER-SET | n.s.             | (*NONE) |
| BAND-IDENTIFICATION    | n.s.             | (*NONE) |
| PREFORM                | n.s.             | (*NONE) |
| CHARACTER-IMAGE        | n.s.             | (*NONE) |
| TWO-UP-PROCESSING      | *                | (*NO)   |
| DIA-PROCESSING         |                  |         |
| FORMS-OVERLAY          | n.s.             | (*NONE) |
| FORMS-OVERLAY-BUFFER   | *                | (*NONE) |
| PRINTER-RESOURCES      | *                | (*APA)  |
| FORM-DEFINITION        | *                | (F1STD) |
| PAGE-DEFINITION        | *                | (P1STD) |

**Device type: 2090-APA-PRINTER**

|                        |                  |         |
|------------------------|------------------|---------|
| FORM-NAME              | Form name        | (*STD)  |
| DEVICE-TYPE            | 2090-APA-PRINTER |         |
| FORM-SIZE              |                  |         |
| LINE-SIZE              | *                | (136)   |
| PAGE-SIZE              | *                | (120)   |
| HEADER-PAGE            | *                | (*YES)  |
| TRAILER-PAGE           | *                | (*YES)  |
| VERTICAL-CONTROL       | *                | (*NONE) |
| LOOP-NAME              | *                | (*NONE) |
| ROTATION-CONTROL       | *                | (*NONE) |
| LOOP-NAME              | *                | (*NONE) |
| CHARACTER-SET          | n.s.             | (*NONE) |
| ROTATION-CHARACTER-SET | n.s.             | (*NONE) |
| BAND-IDENTIFICATION    | n.s.             | (*NONE) |
| PREFORM                | n.s.             | (*NONE) |
| CHARACTER-IMAGE        | n.s.             | (*NONE) |
| TWO-UP-PROCESSING      | *                | (*NO)   |
| DIA-PROCESSING         |                  |         |
| FORMS-OVERLAY          | n.s.             | (*NONE) |
| FORMS-OVERLAY-BUFFER   | *                | (*NONE) |
| PRINTER-RESOURCES      | *                | (*APA)  |
| FORM-DEFINITION        | *                | (F1STD) |
| PAGE-DEFINITION        | *                | (P1STD) |

**Device type: 2090-TWIN-PRINTER**

|                        |                   |         |
|------------------------|-------------------|---------|
| FORM-NAME              | Form name         | (*STD)  |
| DEVICE-TYPE            | 2090-TWIN-PRINTER |         |
| FORM-SIZE              |                   |         |
| LINE-SIZE              | *                 | (136)   |
| PAGE-SIZE              | *                 | (120)   |
| HEADER-PAGE            | *                 | (*YES)  |
| TRAILER-PAGE           | *                 | (*YES)  |
| VERTICAL-CONTROL       | n.s.              | (*NONE) |
| ROTATION-CONTROL       | n.s.              | (*NONE) |
| CHARACTER-SET          | n.s.              | (*NONE) |
| ROTATION-CHARACTER-SET | n.s.              | (*NONE) |
| BAND-IDENTIFICATION    | n.s.              | (*NONE) |
| PREFORM                | n.s.              | (*NONE) |
| CHARACTER-IMAGE        | n.s.              | (*NONE) |
| TWO-UP-PROCESSING      | n.s.              | (*NO)   |
| DIA-PROCESSING         |                   |         |
| FORMS-OVERLAY          | n.s.              | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.              | (*NONE) |
| PRINTER-RESOURCES      | *                 | (*APA)  |
| FORM-DEFINITION        | *                 | (F1STD) |
| PAGE-DEFINITION        | *                 | (P1STD) |

**Device type: 4011-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 4011-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *(1)      | (199)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 4812-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 4812-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (78)    |
| PAGE-SIZE              | *         | (108)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | *         | (*NONE) |
| CHARACTER-SET          | *(1)      | (224)   |
| ROTATION-CHARACTER-SET | *(2)      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 4813-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 4813-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | * (1)     | (199)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 4818-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 4818-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | * (1)        | (224)      |
| ROTATION-CHARACTER-SET | * (2)        | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |



**Device type: 4821-PCL-R-P**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | 4821-PCL-R-P |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (78)    |
| PAGE-SIZE              | *            | (108)   |
| HEADER-PAGE            | *            | (*ONE)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LINES-PER-INCH         | *            | (6)     |
| CHANNEL1-POSITION      | *            | (3)     |
| ROTATION-CONTROL       | *            | (*NONE) |
| CHARACTER-SET          | *(1)         | (224)   |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE) |
| BAND-IDENTIFICATION    | *            | (*NONE) |
| PREFORM                | *            | (*NONE) |
| CHARACTER-IMAGE        | *            | (*NONE) |
| TWO-UP-PROCESSING      | *            | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | *            | (*NONE) |

**Device type: 4822-PCL-RE-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 4822-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | * (1)        | (224)      |
| ROTATION-CHARACTER-SET | * (2)        | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 4824-PCL-R-P**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | 4824-PCL-R-P |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (78)    |
| PAGE-SIZE              | *            | (108)   |
| HEADER-PAGE            | *            | (*ONE)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LINES-PER-INCH         | *            | (6)     |
| CHANNEL1-POSITION      | *            | (3)     |
| ROTATION-CONTROL       | *            | (*NONE) |
| CHARACTER-SET          | * (1)        | (224)   |
| ROTATION-CHARACTER-SET | * (2)        | (*NONE) |
| BAND-IDENTIFICATION    | *            | (*NONE) |
| PREFORM                | *            | (*NONE) |
| CHARACTER-IMAGE        | *            | (*NONE) |
| TWO-UP-PROCESSING      | *            | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | *            | (*NONE) |

**Device type: 4825-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 4825-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | *(1)         | (224)      |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 4830-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 4830-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCH         | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCH         | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | *(1)         | (224)      |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | n.s.         | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE)    |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 4850-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 4850-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (136)      |
| PAGE-SIZE              | *            | (120)      |
| HEADER-PAGE            | *            | (*YES)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | *(1)         | (224)      |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | n.s.         | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE)    |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 8121-R-P**

|                      |           |         |
|----------------------|-----------|---------|
| FORM-NAME            | Form name | (*STD)  |
| DEVICE-TYPE          | 8121-R-P  |         |
| FORM-SIZE            |           |         |
| LINE-SIZE            | *         | (136)   |
| PAGE-SIZE            | *         | (120)   |
| HEADER-PAGE          | *         | (*YES)  |
| TRAILER-PAGE         | *         | (*YES)  |
| VERTICAL-CONTROL     | *         |         |
| LINES-PER-INCH       | *         | (6)     |
| CHANNEL1-POSITION    | *         | (3)     |
| ROTATION-CONTROL     | n.s.      | (*NONE) |
| CHARACTER-SET        | *         | (101)   |
| ROTATION-CHARACT-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION  | n.s.      | (*NONE) |
| PREFORM              | n.s.      | (*NONE) |
| CHARACTER-IMAGE      | n.s.      | (*NONE) |
| TWO-UP-PROCESSING    | n.s.      | (*NO)   |
| DIA-PROCESSING       |           |         |
| FORMS-OVERLAY        | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER | n.s.      | (*NONE) |
| PRINTER-RESOURCES    | n.s.      | (*NONE) |

**Device type: 9000-EPFX-R-P**

|                        |               |            |
|------------------------|---------------|------------|
| FORM-NAME              | Form name     | (*STD)     |
| DEVICE-TYPE            | 9000-EPFX-R-P |            |
| FORM-SIZE              |               |            |
| LINE-SIZE              | *             | (78)       |
| PAGE-SIZE              | *             | (113)      |
| HEADER-PAGE            | *             | (*ONE)     |
| TRAILER-PAGE           | *             | (*YES)     |
| VERTICAL-CONTROL       | *             | (*SPACING) |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| ROTATION-CONTROL       | *             | (*NONE)    |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| CHARACTER-SET          | *             | (224)      |
| ROTATION-CHARACTER-SET | *             | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.          |            |
| PREFORM                | n.s.          |            |
| CHARACTER-IMAGE        | *             | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.          |            |
| DIA-PROCESSING         | *             | (*NONE)    |
| FORM-OVERLAY           | *             | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.          |            |
| PRINTER-RESOURCES      | n.s.          |            |
| LP65                   | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |
| STACKER-OFFSET         | n.s.          |            |
| SEPARATOR-PAGE-TRAY    | n.s.          |            |
| APA                    | n.s.          |            |
| FORM-DEFINITION        | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |



**Device type: 9000-EPLQ-R-P**

|                        |               |            |
|------------------------|---------------|------------|
| FORM-NAME              | Form name     | (*STD)     |
| DEVICE-TYPE            | 9000-EPLQ-R-P |            |
| FORM-SIZE              |               |            |
| LINE-SIZE              | *             | (78)       |
| PAGE-SIZE              | *             | (113)      |
| HEADER-PAGE            | *             | (*ONE)     |
| TRAILER-PAGE           | *             | (*YES)     |
| VERTICAL-CONTROL       | *             | (*SPACING) |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCH         | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| ROTATION-CONTROL       | *             | (*NONE)    |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCH         | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| CHARACTER-SET          | *             | (224)      |
| ROTATION-CHARACTER-SET | *             | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.          |            |
| PREFORM                | n.s.          |            |
| CHARACTER-IMAGE        | *             | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.          |            |
| DIA-PROCESSING         | *             | (*NONE)    |
| FORM-OVERLAY           | *             | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.          |            |
| PRINTER-RESOURCES      | n.s.          |            |
| LP65                   | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |
| STACKER-OFFSET         | n.s.          |            |
| SEPARATOR-PAGE-TRAY    | n.s.          |            |
| APA                    | n.s.          |            |
| FORM-DEFINITION        | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |

**Device type: 9000-EPSQ-R-P**

|                        |               |            |
|------------------------|---------------|------------|
| FORM-NAME              | Form name     | (*STD)     |
| DEVICE-TYPE            | 9000-EPSQ-R-P |            |
| FORM-SIZE              |               |            |
| LINE-SIZE              | *             | (78)       |
| PAGE-SIZE              | *             | (113)      |
| HEADER-PAGE            | *             | (*ONE)     |
| TRAILER-PAGE           | *             | (*YES)     |
| VERTICAL-CONTROL       | *             | (*SPACING) |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| ROTATION-CONTROL       | *             | (*NONE)    |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| CHARACTER-SET          | *             | (224)      |
| ROTATION-CHARACTER-SET | *             | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.          |            |
| PREFORM                | n.s.          |            |
| CHARACTER-IMAGE        | *             | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.          |            |
| DIA-PROCESSING         | *             | (*NONE)    |
| FORM-OVERLAY           | *             | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.          |            |
| PRINTER-RESOURCES      | n.s.          |            |
| LP65                   | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |
| STACKER-OFFSET         | n.s.          |            |
| SEPARATOR-PAGE-TRAY    | n.s.          |            |
| APA                    | n.s.          |            |
| FORM-DEFINITION        | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |

**Device type: 9000-PCL-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 9000-PCL-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *(3)         | (78)       |
| PAGE-SIZE              | *(3)         | (108)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCH         | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCH         | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | *(1)         | (224)      |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 9000-PRO-R-P**

|                        |              |            |
|------------------------|--------------|------------|
| FORM-NAME              | Form name    | (*STD)     |
| DEVICE-TYPE            | 9000-PRO-R-P |            |
| FORM-SIZE              |              |            |
| LINE-SIZE              | *            | (78)       |
| PAGE-SIZE              | *            | (113)      |
| HEADER-PAGE            | *            | (*ONE)     |
| TRAILER-PAGE           | *            | (*YES)     |
| VERTICAL-CONTROL       | *            | (*SPACING) |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| ROTATION-CONTROL       | *            | (*NONE)    |
| LOOP                   |              |            |
| LOOP-NAME              | *            | (C1)       |
| SPACING                |              |            |
| LINES-PER-INCHE        | *            | (6)        |
| DENSITY                |              |            |
| LINES                  | *            | 6          |
| INCHES                 | *            | 1          |
| CHANNEL1-POSITION      | *            | (3)        |
| CHARACTER-SET          | *            | (224)      |
| ROTATION-CHARACTER-SET | *            | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.         |            |
| PREFORM                | n.s.         |            |
| CHARACTER-IMAGE        | *            | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.         |            |
| DIA-PROCESSING         | *            | (*NONE)    |
| FORM-OVERLAY           | *            | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.         |            |
| PRINTER-RESOURCES      | n.s.         |            |
| LP65                   | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |
| STACKER-OFFSET         | n.s.         |            |
| SEPARATOR-PAGE-TRAY    | n.s.         |            |
| APA                    | n.s.         |            |
| FORM-DEFINITION        | n.s.         |            |
| PAGE-DEFINITION        | n.s.         |            |

**Device type: 9000-PS-R-P**

|                        |      |             |
|------------------------|------|-------------|
| FORM-NAME              | *    |             |
| DEVICE-TYPE            |      | 9000-PS-R-P |
| FORM-SIZE              |      |             |
| LINE-SIZE              | *    | (78)        |
| PAGE-SIZE              | *    | (113)       |
| HEADER-PAGE            | *    | (*ONE)      |
| TRAILER-PAGE           | *    | (*YES)      |
| VERTICAL-CONTROL       | *    | (*SPACING)  |
| LOOP                   |      |             |
| LOOP-NAME              | *    | (C1)        |
| SPACING                |      |             |
| LINES-PER-INCHE        | *    | (6)         |
| DENSITY                |      |             |
| LINES                  | *    | 6           |
| INCHES                 | *    | 1           |
| CHANNEL1-POSITION      | *    | (3)         |
| ROTATION-CONTROL       | *    | (*NONE)     |
| LOOP                   |      |             |
| LOOP-NAME              | *    | (C1)        |
| SPACING                |      |             |
| LINES-PER-INCHE        | *    | (6)         |
| DENSITY                |      |             |
| LINES                  | *    | 6           |
| INCHES                 | *    | 1           |
| CHANNEL1-POSITION      | *    | (3)         |
| CHARACTER-SET          | *    | (224)       |
| ROTATION-CHARACTER-SET | *    | (*NONE)     |
| BAND-IDENTIFICATION    | n.s. |             |
| PREFORM                | n.s. |             |
| CHARACTER-IMAGE        | *    | (*NONE)     |
| TWO-UP-PROCESSING      | n.s. |             |
| DIA-PROCESSING         | *    | (*NONE)     |
| FORM-OVERLAY           | *    | (*NONE)     |
| FORMS-OVERLAY-BUFFER   | n.s. |             |
| PRINTER-RESOURCES      | n.s. |             |
| LP65                   | n.s. |             |
| PAGE-DEFINITION        | n.s. |             |
| STACKER-OFFSET         | n.s. |             |
| SEPARATOR-PAGE-TRAY    | n.s. |             |
| APA                    | n.s. |             |
| FORM-DEFINITION        | n.s. |             |
| PAGE-DEFINITION        | n.s. |             |

**Device type: 9000-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9000-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (136)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9001-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9001-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9001-31**

|                        |             |         |
|------------------------|-------------|---------|
| FORM-NAME              | Form name   | (*STD)  |
| DEVICE-TYPE            | 9001-31-R-P |         |
| FORM-SIZE              |             |         |
| LINE-SIZE              | *           | (80)    |
| PAGE-SIZE              | *           | (120)   |
| HEADER-PAGE            | *           | (*YES)  |
| TRAILER-PAGE           | *           | (*YES)  |
| VERTICAL-CONTROL       | *           |         |
| LINES-PER-INCH         | *           | (6)     |
| CHANNEL1-POSITION      | *           | (3)     |
| ROTATION-CONTROL       | n.s.        | (*NONE) |
| CHARACTER-SET          | *           | (101)   |
| ROTATION-CHARACTER-SET | n.s.        | (*NONE) |
| BAND-IDENTIFICATION    | n.s.        | (*NONE) |
| PREFORM                | n.s.        | (*NONE) |
| CHARACTER-IMAGE        | n.s.        | (*NONE) |
| TWO-UP-PROCESSING      | n.s.        | (*NO)   |
| DIA-PROCESSING         |             |         |
| FORMS-OVERLAY          | n.s.        | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.        | (*NONE) |
| PRINTER-RESOURCES      | n.s.        | (*NONE) |

**Device type: 9002-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9002-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9003-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9003-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (136)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9004-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9004-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (115)   |
| HEADER-PAGE            | *         | (*ONE)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (NONE)  |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |



**Device type: 9011-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9011-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (199)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9012-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9012-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (132)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (199)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.u       | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9013-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9013-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (136)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (224)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9014-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9014-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (136)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (224)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9015**

|                        |           |            |
|------------------------|-----------|------------|
| FORM-NAME              | Form name | (*STD)     |
| DEVICE-TYPE            | 9015      |            |
| FORM-SIZE              |           |            |
| LINE-SIZE              | *         | (136)      |
| PAGE-SIZE              | *         | (120)      |
| HEADER-PAGE            | *         | (*YES)     |
| TRAILER-PAGE           | *         | (*YES)     |
| VERTICAL-CONTROL       | *         | (*SPACING) |
| LOOP                   |           |            |
| LOOP-NAME              | *         |            |
| SPACING                |           |            |
| LINES-PER-INCH         | *         | (6)        |
| DENSITY                |           |            |
| LINES                  | *         | 6          |
| INCHES                 | *         | 1          |
| CHANNEL1-POSITION      | *         | (3)        |
| ROTATION-CONTROL       | *         | (*NONE)    |
| LOOP                   |           |            |
| LOOP-NAME              | *         |            |
| SPACING                |           |            |
| LINES-PER-INCH         | *         | (6)        |
| DENSITY                |           |            |
| LINES                  | *         | 6          |
| INCHES                 | *         | 1          |
| CHANNEL1-POSITION      | *         | (3)        |
| CHARACTER-SET          | *         | (224)      |
| ROTATION-CHARACTER-SET | *         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.      |            |
| PREFORM                | n.s.      |            |
| CHARACTER-IMAGE        | *         | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.      |            |
| DIA-PROCESSING         | *         | (*NONE)    |
| FORM-OVERLAY           | *         | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.      |            |
| PRINTER-RESOURCES      | n.s.      |            |
| LP65                   | n.s.      |            |
| PAGE-DEFINITION        | n.s.      |            |
| STACKER-OFFSET         | n.s.      |            |
| SEPARATOR-PAGE-TRAY    | n.s.      |            |
| APA                    | n.s.      |            |
| FORM-DEFINITION        | n.s.      |            |
| PAGE-DEFINITION        | n.s.      |            |

**Device type: 9021-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9021-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | * (3)     | (78)    |
| PAGE-SIZE              | * (3)     | (108)   |
| HEADER-PAGE            | *         | (*ONE)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | *         | (*NONE) |
| CHARACTER-SET          | *(1)      | (224)   |
| ROTATION-CHARACTER-SET | *(2)      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9022-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9022-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (78)    |
| PAGE-SIZE              | *         | (113)   |
| HEADER-PAGE            | *         | (*ONE)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | *         | (*NONE) |
| CHARACTER-SET          | *         | (224)   |
| ROTATION-CHARACTER-SET | *         | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9022-200-R-P**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | 9022-200-R-P |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | * (3)        | (77)    |
| PAGE-SIZE              | * (3)        | (108)   |
| HEADER-PAGE            | *            | (*ONE)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LINES-PER-INCH         | *            | (6)     |
| CHANNEL1-POSITION      | *            | (3)     |
| ROTATION-CONTROL       | *            | (*NONE) |
| CHARACTER-SET          | *(1)         | (224)   |
| ROTATION-CHARACTER-SET | *(2)         | (*NONE) |
| BAND-IDENTIFICATION    | n.s.         | (*NONE) |
| PREFORM                | n.s.         | (*NONE) |
| CHARACTER-IMAGE        | n.s.         | (*NONE) |
| TWO-UP-PROCESSING      | n.s.         | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | n.s.         | (*NONE) |

**Device type: 9025-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9025-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (75)    |
| PAGE-SIZE              | *         | (115)   |
| HEADER-PAGE            | *         | (*ONE)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | *         | (*NONE) |
| CHARACTER-SET          | *(1)      | (208)   |
| ROTATION-CHARACTER-SET | *(2)      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | *         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9026-PCL-R-P**

|                        |              |         |
|------------------------|--------------|---------|
| FORM-NAME              | Form name    | (*STD)  |
| DEVICE-TYPE            | 9026-PCL-R-P |         |
| FORM-SIZE              |              |         |
| LINE-SIZE              | *            | (78)    |
| PAGE-SIZE              | *            | (108)   |
| HEADER-PAGE            | *            | (*ONE)  |
| TRAILER-PAGE           | *            | (*YES)  |
| VERTICAL-CONTROL       | *            |         |
| LINES-PER-INCH         | *            | (6)     |
| CHANNEL1-POSITION      | *            | (3)     |
| ROTATION-CONTROL       | *            | (*NONE) |
| CHARACTER-SET          | * (1)        | (224)   |
| ROTATION-CHARACTER-SET | * (2)        | (*NONE) |
| BAND-IDENTIFICATION    | n.s.         | (*NONE) |
| PREFORM                | n.s.         | (*NONE) |
| CHARACTER-IMAGE        | n.s.         | (*NONE) |
| TWO-UP-PROCESSING      | n.s.         | (*NO)   |
| DIA-PROCESSING         |              |         |
| FORMS-OVERLAY          | n.s.         | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.         | (*NONE) |
| PRINTER-RESOURCES      | n.s.         | (*NONE) |

**Device type: 9026-RENO-R-P**

|                        |               |         |
|------------------------|---------------|---------|
| FORM-NAME              | Form name     | (*STD)  |
| DEVICE-TYPE            | 9026-RENO-R-P |         |
| FORM-SIZE              |               |         |
| LINE-SIZE              | *             | (75)    |
| PAGE-SIZE              | *             | (115)   |
| HEADER-PAGE            | *             | (*ONE)  |
| TRAILER-PAGE           | *             | (*YES)  |
| VERTICAL-CONTROL       | *             |         |
| LINES-PER-INCH         | *             | (6)     |
| CHANNEL1-POSITION      | *             | (3)     |
| ROTATION-CONTROL       | *             | (*NONE) |
| CHARACTER-SET          | * (1)         | (208)   |
| ROTATION-CHARACTER-SET | * (2)         | (*NONE) |
| BAND-IDENTIFICATION    | n.s.          | (*NONE) |
| PREFORM                | n.s.          | (*NONE) |
| CHARACTER-IMAGE        | n.s.          | (*NONE) |
| TWO-UP-PROCESSING      | n.s.          | (*NO)   |
| DIA-PROCESSING         |               |         |
| FORMS-OVERLAY          | *             | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.          | (*NONE) |
| PRINTER-RESOURCES      | n.s.          | (*NONE) |

**Device type: 9045-ANSI-R-P**

|                        |               |            |
|------------------------|---------------|------------|
| FORM-NAME              | Form name     | (*STD)     |
| DEVICE-TYPE            | 9045-ANSI-R-P |            |
| FORM-SIZE              |               |            |
| LINE-SIZE              | *             | (136)      |
| PAGE-SIZE              | *             | (120)      |
| HEADER-PAGE            | *             | (*YES)     |
| TRAILER-PAGE           | *             | (*YES)     |
| VERTICAL-CONTROL       | *             | (*SPACING) |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| ROTATION-CONTROL       | *             | (*NONE)    |
| LOOP                   |               |            |
| LOOP-NAME              | *             | (C1)       |
| SPACING                |               |            |
| LINES-PER-INCHE        | *             | (6)        |
| DENSITY                |               |            |
| LINES                  | *             | 6          |
| INCHES                 | *             | 1          |
| CHANNEL1-POSITION      | *             | (3)        |
| CHARACTER-SET          | *             | (224)      |
| ROTATION-CHARACTER-SET | *             | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.          |            |
| PREFORM                | n.s.          |            |
| CHARACTER-IMAGE        | *             | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.          |            |
| DIA-PROCESSING         | *             | (*NONE)    |
| FORM-OVERLAY           | *             | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.          |            |
| PRINTER-RESOURCES      | n.s.          |            |
| LP65                   | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |
| STACKER-OFFSET         | n.s.          |            |
| SEPARATOR-PAGE-TRAY    | n.s.          |            |
| APA                    | n.s.          |            |
| FORM-DEFINITION        | n.s.          |            |
| PAGE-DEFINITION        | n.s.          |            |

**Device type: 9046-R-P**

|                        |           |            |
|------------------------|-----------|------------|
| FORM-NAME              | Form name | (*STD)     |
| DEVICE-TYPE            | 9046-R-P  |            |
| FORM-SIZE              |           |            |
| LINE-SIZE              | *         | (136)      |
| PAGE-SIZE              | *         | (120)      |
| HEADER-PAGE            | *         | (*YES)     |
| TRAILER-PAGE           | *         | (*YES)     |
| VERTICAL-CONTROL       | *         | (*SPACING) |
| LOOP                   |           |            |
| LOOP-NAME              | *         | (C1)       |
| SPACING                |           |            |
| LINES-PER-INCH         | *         | (6)        |
| DENSITY                |           |            |
| LINES                  | *         | 6          |
| INCHES                 | *         | 1          |
| CHANNEL1-POSITION      | *         | (3)        |
| ROTATION-CONTROL       | *         | (*NONE)    |
| LOOP                   |           |            |
| LOOP-NAME              | *         | (C1)       |
| SPACING                |           |            |
| LINES-PER-INCH         | *         | (6)        |
| DENSITY                |           |            |
| LINES                  | *         | 6          |
| INCHES                 | *         | 1          |
| CHANNEL1-POSITION      | *         | (3)        |
| CHARACTER-SET          | *         | (224)      |
| ROTATION-CHARACTER-SET | *         | (*NONE)    |
| BAND-IDENTIFICATION    | n.s.      |            |
| PREFORM                | n.s.      |            |
| CHARACTER-IMAGE        | *         | (*NONE)    |
| TWO-UP-PROCESSING      | n.s.      |            |
| DIA-PROCESSING         | *         | (*NONE)    |
| FORM-OVERLAY           | *         | (*NONE)    |
| FORMS-OVERLAY-BUFFER   | n.s.      |            |
| PRINTER-RESOURCES      | n.s.      |            |
| LP65                   | n.s.      |            |
| PAGE-DEFINITION        | n.s.      |            |
| STACKER-OFFSET         | n.s.      |            |
| SEPARATOR-PAGE-TRAY    | n.s.      |            |
| APA                    | n.s.      |            |
| FORM-DEFINITION        | n.s.      |            |
| PAGE-DEFINITION        | n.s.      |            |



**Device type: 9097-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9097-R-P  |         |
| FORM-SIZE              | *         |         |
| LINE-SIZE              | *         | (80)    |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | * (1)     | (199)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: 9645-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | 9645-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | *         | (136)   |
| PAGE-SIZE              | *         | (120)   |
| HEADER-PAGE            | *         | (*YES)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | *         | (101)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

**Device type: DJET-R-P**

|                        |           |         |
|------------------------|-----------|---------|
| FORM-NAME              | Form name | (*STD)  |
| DEVICE-TYPE            | DJET-R-P  |         |
| FORM-SIZE              |           |         |
| LINE-SIZE              | * (3)     | (78)    |
| PAGE-SIZE              | * (3)     | (108)   |
| HEADER-PAGE            | *         | (*ONE)  |
| TRAILER-PAGE           | *         | (*YES)  |
| VERTICAL-CONTROL       | *         |         |
| LINES-PER-INCH         | *         | (6)     |
| CHANNEL1-POSITION      | *         | (3)     |
| ROTATION-CONTROL       | n.s.      | (*NONE) |
| CHARACTER-SET          | * (1)     | (224)   |
| ROTATION-CHARACTER-SET | n.s.      | (*NONE) |
| BAND-IDENTIFICATION    | n.s.      | (*NONE) |
| PREFORM                | n.s.      | (*NONE) |
| CHARACTER-IMAGE        | n.s.      | (*NONE) |
| TWO-UP-PROCESSING      | n.s.      | (*NO)   |
| DIA-PROCESSING         |           |         |
| FORMS-OVERLAY          | n.s.      | (*NONE) |
| FORMS-OVERLAY-BUFFER   | n.s.      | (*NONE) |
| PRINTER-RESOURCES      | n.s.      | (*NONE) |

- (1) The standard character set of the form is used to print the file, header page and trailer page. RSO no longer checks whether the character set used to print the file, header page and trailer page is linked to a font. The RSO device administrator is responsible for this.
- (2) The standard character set of the form for output in landscape format, i.e. when the ROTATION-CONTROL operand is specified, should be linked to the font of the particular printer (for LANDSCAPE MODE) by means of RSOSERVE, in order to ensure that at least one matching (LANDSCAPE) font is loaded to the printer at the start of spoolout. If this is not done, the internal default font or the font for printing the header page is used.

In principle, RSO does not change the current value for format orientation. The user may switch from PORTRAIT MODE to LANDSCAPE MODE and back as desired.

Switchover from PORTRAIT MODE to LANDSCAPE MODE, for example, can be effected with the aid of a prolog file or by specifying the printer control characters that define the logical font of the particular printer which is finally linked to the ROTATION character set of the form.

The procedure for switching back from LANDSCAPE MODE to PORTRAIT MODE is similar. Either an epilog file containing the desired printer control characters is called, or the corresponding printer control characters for defining the logical 2030 font are added to the file. The font is then linked to the standard character set (for PORTRAIT MODE) of the form.

- (3) When defining the page size for this printer type, bear in mind that the physical page cannot be fully printed (top and bottom margins are 1/2 inch each).

## COPY-SPOOL-CHARACTER-SET

### Copy character sets

Only in static mode, i.e. no modification of SPOOL parameters during the current SPOOL session.

The COPY-SPOOL-CHARACTER-SET statement copies character sets from one SPOOL parameter file to another (except entries of the same name when OVERWRITE=\*NO).

#### COPY-SPOOL-CHARACTER-SET

```
NAME = *ALL / *STD / <alphanum-name 1..3 with-wild(24)> / list-poss(255):
 <alphanum-name 1..3>
,FROM-FILE = <filename 1..54>
,OVERWRITE = *YES / *NO
```

#### Operands

**NAME = \*ALL / \*STD / <alphanum-name 1..3 with wild(24)> / list-poss(255): <alphanum-name 1..3>**

Names of the character sets to be copied to the current SPOOL parameter file. Default value: all character sets are copied to the current SPOOL parameter file.

**FROM-FILE = <-filename 1..54>**

Name of the delta file or SPOOL parameter file from which the character sets are to be copied.

**OVERWRITE = \*YES / \*NO**

Specifies whether character sets of the same name are to be overwritten or not. If OVERWRITE=\*NO, character sets are not copied if character sets with the same name are present in the specified SPOOL parameter file. A message is output to SYSOUT instead.

## COPY-SPOOL-DEVICE

### Copy device entries

Only in static mode, i.e. no modification of SPOOL parameters during the current SPOOL session.

The COPY-SPOOL-DEVICE statement copies device entries from one SPOOL parameter file to another (except entries of the same name when OVERWRITE=\*NO).

#### COPY-SPOOL-DEVICE

```
NAME = *ALL / *STD / <alphanum-name 1..8 with-wild(24)> / list-poss(255): <alphanum-name 1..8>
, FROM-FILE = <filename 1..54>
, OVERWRITE = *YES / *NO
```

#### Operands

**NAME = \*ALL / \*STD / <alphanum-name 1..8 with wild(24)> / list-poss(255): <alphanum-name 1..8>**

Names of the device entries to be copied to the current SPOOL parameter file. Default value: all entries are copied to the current SPOOL parameter file.

**FROM-FILE = <filename 1..54>**

Name of the delta file or SPOOL parameter file from which the device entries are to be copied.

**OVERWRITE = \*YES / \*NO**

Specifies whether device entries of the same name are to be overwritten or not. If OVERWRITE=\*NO, entries are not copied if device entries of the same name are present in the specified SPOOL parameter file. A message is output to SYSOUT instead.

## COPY-SPOOL-FORM

### Copy form entries

Only in static mode, i.e. no modification of SPOOL parameters during the current SPOOL session.

The COPY-SPOOL-FORM statement copies form entries from one SPOOL parameter file to another (except entries of the same name when OVERWRITE=\*NO).

#### COPY-SPOOL-FORM

```
NAME = *ALL / *STD / <alphanum-name 1..6 with-wild(24)> / list-poss(255): <alphanum-name 1..6>
,FROM-FILE = <filename 1..54>
,OVERWRITE = *YES / *NO
```

#### Operands

**NAME = \*ALL / \*STD / <alphanum-name 1..6 with wild(24)> / list-poss(255): <alphanum-name 1..6>**

Names of the form entries to be copied to the current SPOOL parameter file. Default value: all entries are copied to the current SPOOL parameter file.

**FROM-FILE = <filename 1..54>**

Name of the delta file or SPOOL parameter file from which the form entries are to be copied.

**OVERWRITE = \*YES / \*NO**

Specifies whether form entries of the same name are to be overwritten or not. If OVERWRITE=\*NO, entries are not copied if form entries of the same name are present in the specified SPOOL parameter file. A message is output to SYSOUT instead.

## EDIT-DPRINT-HOST

### Output and modify hosts

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The EDIT-DPRINT-HOST statement enables a cluster administrator to output the current host records on an SDF screen, modify them, and send them back.

This statement is a configuration statement.

|                                         |
|-----------------------------------------|
| <b>EDIT-DPRINT-HOST</b>                 |
| HOST-NAME = *STD / <alphanum-name 1..8> |

### Operands

**HOST-NAME = \*STD / <alphanum-name 1..8>**

Specifies which host record is to be edited.

#### *Note*

The main difference between EDIT-DPRINT-HOST and MODIFY-DPRINT-HOST is that in EDIT-DPRINT-HOST the values that are output in the guided dialog are not default values but the effective values of the record.

## EDIT-DPRINT-PRINTER

### Output and modify printer

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The EDIT-DPRINT-PRINTER statement enables a cluster administrator to output the current printer records on an SDF screen, modify them, and send them back.

This statement is a configuration statement.

|                                     |
|-------------------------------------|
| <b>EDIT-DPRINT-PRINTER</b>          |
| PRINTER-NAME = <alphanum-name 1..8> |

### Operands

**PRINTER-NAME = <alphanum-name 1..8>**

Specifies which printer record is to be edited.

#### *Note*

The main difference between EDIT-DPRINT-PRINTER and MODIFY-DPRINT-PRINTER is that in EDIT-DPRINT-PRINTER the values that are output in the guided dialog are not default values but the effective values of the record.



## EDIT-DPRINT-REMOTE-CLUSTER

### Output and modify cluster

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The EDIT-DPRINT-REMOTE-CLUSTER statement enables a cluster administrator to output the current cluster records on an SDF screen, modify them, and send them back.

This statement is a configuration statement.

|                                            |
|--------------------------------------------|
| <b>EDIT-DPRINT-REMOTE-CLUSTER</b>          |
| CLUSTER-NAME = *STD / <alphanum-name 1..8> |

### Operands

**CLUSTER-NAME = \*STD / <alphanum-name 1..8>**

Specifies which record of a remote cluster is to be edited.

#### *Note*

The main difference between EDIT-DPRINT-REMOTE-CLUSTER and MODIFY-DPRINT-REMOTE-CLUSTER is that in EDIT-DPRINT-REMOTE-CLUSTER the values that are output in the guided dialog are not default values but the effective values of the record.

## EDIT-DPRINT-SERVER

### Request and modify server

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The EDIT-DPRINT-SERVER statement enables a cluster administrator to output the current server records on an SDF screen, modify them, and send them back.

This statement is a configuration statement.

|                                           |
|-------------------------------------------|
| <b>EDIT-DPRINT-SERVER</b>                 |
| SERVER-NAME = *STD / <alphanum-name 1..8> |

### Operands

**SERVER-NAME = \*STD / <alphanum-name 1..8>**

Specifies which server record is to be edited.

#### *Note*

The main difference between EDIT-DPRINT-SERVER and MODIFY-DPRINT-SERVER is that in EDIT-DPRINT-SERVER the values that are output in the guided dialog are not default values but the effective values of the record.

## EDIT-SPOOL-CHARACTER-SET

### Output and modify character set values

**User group:** systems support and RSO device administrators

With the aid of the EDIT-SPOOL-CHARACTER-SET statement you can display a character set entry from the SPOOL parameter file on the screen and modify the values.

The EDIT-SPOOL-CHARACTER-SET statement initially merely makes the character set you have specified into the current character set. If you do not specify a character set name, SPSEIVE uses the preset character set name. In both cases, “//” is displayed on the screen as an acknowledgment. You now have to enter “?” to display the values of the current character set on the screen (requesting guided dialog in SDF).

The values output can be modified, and written back to the SPOOL parameter file by pressing the **[DUE]** key.

The statement is rejected in batch mode and procedure mode.

|                                                          |
|----------------------------------------------------------|
| <b>EDIT-SPOOL-CHARACTER-SET</b>                          |
| CHARACTER-SET-NAME = * <u>STD</u> / <alphanum-name 1..3> |

#### Operands

**CHARACTER-SET-NAME = \*STD / <alphanum-name 1..3>**

Name of the character set whose values are to be output.

**CHARACTER-SET-NAME = \*STD**

Information is requested on the standard character set \*STD.

## EDIT-SPOOL-DEVICE

### Output and modify device entry

**User group:** systems support and RSO device administrators

With the aid of the EDIT-SPOOL-DEVICE statement, you can output a device entry from the SPOOL parameter file to SYSOUT and modify the values.

The EDIT-SPOOL-DEVICE statement initially merely makes the device entry you have specified into the current device entry. If you do not specify a device entry, SPSERVE uses the preset values. In both cases, “//” is displayed on the screen as an acknowledgment. You now have to enter “?” to display the device entry on the screen (requesting SDF guided dialog).

The values output can be modified, and written back to the SPOOL parameter file by pressing the **[DUE]** key.

The statement is rejected in batch mode and procedure mode.

#### *General notes*

- If a new RSO device administrator is to be specified for a public device (i.e. the operand value is to be changed from NONE to ADMINISTRATOR), a mask is displayed with the operand value USER-IDENTIFICATION=\*UNCHANGED, which the privileged user (\$TSOS) can overwrite with a new valid value. This converts the public device into a private device.
- If an EDIT-SPOOL-DEVICE statement is followed by a corresponding MODIFY-SPOOL-DEVICE statement, it may happen that the latter is rejected with message SPM0492: Illegal value for CHARACTER-SET-POS operand in the MODIFY-SPOOL-DEVICE statement. Statement not processed.  
This happens whenever a character set has been specified in the CHARACTER-SET-POS operand for a hardware position that is assigned the value NOT-USABLE in the standard device entry for this type (meanwhile modified in the standard device entry). This is not allowed. During validation of the MODIFY-SPOOL-DEVICE statement, the specifications for CHARACTER-SET-POS are compared with the default values of the corresponding standard device entry \*STD. For each hardware position for which the value \*NOT-USABLE is specified in the standard device entry of the relevant device type, only the value \*NOT-USABLE can be specified for this position in a user device entry. If the default settings for hardware positions are modified in the standard device entry, all user device entries for this device type are affected.

**EDIT-SPOOL-DEVICE**

```
DEVICE-NAME = *STD / <alphanum-name 1..8> /
,DEVICE-TYPE = *ALL-REMOTE-PRINTERS / *ALL-LOCAL-PRINTERS /
*HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
*LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
*VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
*2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
*4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
*4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
*4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
*4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
*4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
*9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
*9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
*9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
*9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
*9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
*9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
*9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
*9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
*9645-REMOTE-PRINTER / <filename 1..16 without-cat-user-gen-vers>
```

## Operands

**DEVICE-NAME = \*STD / <alphanum-name 1..8>**

Name of the device whose current values are to be displayed and, if necessary, modified.

**DEVICE-NAME = \*STD**

A dummy device entry with default values for the corresponding device type is made available.

**DEVICE-NAME = <alphanum-name 1..8>**

Name of the device whose device entry is to be output.

**DEVICE-TYPE = ....**

Device type whose device entry is to be output; for type specifications, see the SDF format.

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

## Notes

- The abbreviation “9001” is interpreted as “9001-REMOTE-PRINTER”; the abbreviation “9022” is interpreted as “9022-REMOTE-PRINTER”.
- The main difference between EDIT-SPOOL-DEVICE and MODIFY-SPOOL-DEVICE is that in EDIT-SPOOL-DEVICE the values that are output in the guided dialog are not default values but the effective values of the record.

## EDIT-SPOOL-FILTER

### Output and modify filter definitions

**User group:** systems support

This statement enables systems support to display the current settings of a filter record on an SDF screen, modify them, and send them back.

The statement is rejected in batch mode and procedure mode.

|                                                              |
|--------------------------------------------------------------|
| <b>EDIT-SPOOL-FILTER</b>                                     |
| <code>FILTER-NAME = &lt;alphanum-name 1..8&gt; / *STD</code> |

### Operands

**FILTER-NAME = <alphanum-name 1..8> / \*STD**

Symbolic name of the filter that is defined as the current object.

### *Notes*

The main difference between EDIT-SPOOL-FILTER and MODIFY-SPOOL-FILTER is that with the former the values that are output in guided dialog are not default values but the actual values of the record.

## EDIT-SPOOL-FORM

### Output and modify form entry

**User group:** systems support and RSO device administrators

With the aid of the EDIT-SPOOL-FORM statement, you can output a form entry from the SPOOL parameter file to SYSOUT and modify the values.

The EDIT-SPOOL-FORM statement initially merely makes the form entry you have specified into the current form entry. If you do not specify a form entry, SPSERVE uses the preset values. In both cases, “//” is displayed on the screen as an acknowledgment. You now have to enter “?” to display the form entry on the screen (requesting SDF guided dialog).

The values output can be modified, and written back to the SPOOL parameter file by pressing the **[DUE]** key.

The statement is rejected in batch mode and procedure mode.

#### EDIT-SPOOL-FORM

```
FORM-NAME = *STD / <alphanum-name 1..6>
,DEVICE-TYPE = *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
 *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
 *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
 *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
 *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
 *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
 *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
 *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
 *9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
 *9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
 *9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
 *9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
 *9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
 *9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
 *9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
 *9645-REMOTE-PRINTER / <filename 1..16 without-cat-user-gen-vers>
```



## Operands

**FORM-NAME = \*STD / <alphanum-name 1..6>**

Form whose currently valid attributes are to be output to SYSOUT and, if necessary, modified.

**FORM-NAME = \*STD**

Attributes of the standard form of the specified device type are to be output to SYSOUT and, if necessary, modified.

**FORM-NAME = <alphanum-name 1..6>**

Name of the form whose current attributes are to be output to SYSOUT and, if necessary, modified.

**DEVICE-TYPE = ....**

The standard form entry of the device type specified is to be output; for type specifications, see the SDF format.

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

### *Notes*

- The abbreviation “9001” is interpreted as “9001-REMOTE-PRINTER”; the abbreviation “9022” is interpreted as “9022-REMOTE-PRINTER”.
- The main difference between EDIT-SPOOL-FORM and MODIFY-SPOOL-FORM is that in EDIT-SPOOL-FORM the values that are output in the guided dialog are not default values but the effective values of the record.

## EDIT-SPOOL-PARAMETERS

### Output and modify global SPOOL default values

**User group:** systems support

With the aid of the EDIT-SPOOL-PARAMETERS statement, you can output the GEN entry from the SPOOL parameter file to SYSOUT and modify the values.

The EDIT-SPOOL-PARAMETERS statement initially merely makes the GEN entry the current entry. “//” is displayed on the screen as an acknowledgment. You now have to enter “?” to display the GEN entry on the screen (requesting SDF guided dialog).

The values output can be modified, and written back to the SPOOL parameter file by pressing the **[DUE]** key.

The statement is rejected in batch mode.

|                              |
|------------------------------|
| <b>EDIT-SPOOL-PARAMETERS</b> |
|                              |

## MERGE-SPOOL-PARAMETER-FILE

### Copy all entries

**User group:**                systems support (in dynamic mode)  
                                 all users (in static mode)

This statement copies all the entries of the input file to the SPOOL parameter file assigned to the SPSEIVE session (except entries of the same name when `OVERWRITE=*NO`).

During a MERGE operation in dynamic mode (i.e. when systems support accesses the SPOOL parameter file of the current SPOOL session), the file is locked: it therefore cannot be accessed. Modification of SPOOL parameters is not possible during this time. SPSEIVE first executes the copy operation in a working file. SPOOL then copies the new values to memory. The SPOOL parameter file with the modified values is then accessible again to other users.

Pool entries cannot be copied. An interruption of the MERGE operation may lead to undefined results.

| MERGE-SPOOL-PARAMETER-FILE                                                                   |
|----------------------------------------------------------------------------------------------|
| INPUT-FILE = <filename 1..54><br>,OVERWRITE = *YES / *NO<br>OWNER = *UNCHANGED / <name 1..8> |

### Operands

#### **INPUT-FILE = <filename 1..54>**

Name of the delta file or SPOOL parameter file whose contents are to be copied to the current SPOOL parameter file (i.e. to the file specified in OPEN-PARAMETER-FILE). Any number that may be present in entries of a delta file (DELTA-FILE-NUMBER) is not modified by this operation.

#### **OVERWRITE = \*YES / \*NO**

Specifies whether entries of the same name are to be overwritten or not. In the latter case a message is output to SYSOUT if entries of the same name are present in the SPOOL parameter file.

#### **OWNER = \*UNCHANGED / <name 1..8>**

Specifies whether the owners of the form entries and character sets remain the owners (\*UNCHANGED) or are replaced by the name specified here.

## MODIFY-DPRINT-ACCESS-CONTROL

### Modify cluster access control

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

With the aid of the MODIFY-DPRINT-ACCESS-CONTROL statement the cluster administrator can modify or extend a formal access control record in the configuration file.

This statement is a configuration statement.

#### MODIFY-DPRINT-ACCESS-CONTROL

```
ACCESS-CONTROL-NAME = <alphanum-name 1..8>
,SUBJECTS = *UNCHANGED / list-poss(16): *ALL-USERS (...) / *HOST(...) / *USER(...)
 *ALL-USERS(...)
 | ADMISSION = *NO / *YES
 *HOST(...)
 | HOST-NAME = list-poss(16): <alphanum-name 1..8>
 | ,ADMISSION = *NO / *YES
 *USER(...)
 | HOST-NAME = list-poss(16): <alphanum-name 1..8>
 | ,USER-IDENTIFICATION = list-poss(16): <alphanum-name 1..8>
 | ,ADMISSION = *NO / *YES
```

#### Operands

##### **ACCESS-CONTROL-NAME = <alphanum-name 1..8>**

Changes the access control ID or the name for access control. This name is identical to the name specified in the other statements (e.g. ADD/MODIFY-DPRINT-REMOTE-CLUSTER) in the ACCESS-CONTROL-NAME operand.

##### **SUBJECTS = \*UNCHANGED / \*ALL-USERS(...) / \*HOST(...) / \*USER(...)**

Changes access control.

**SUBJECTS = \*ALL-USER(...)**

Changes access control for all users.

**ADMISSION = \*NO / \*YES**

Specifies whether all users are admitted (\*YES) or rejected (\*NO) by access control.

**SUBJECTS = \*HOST(...)**

Modifies access control for the host.

**HOST-NAME = list-poss(16): <alphanum-name 1..8>**

Specifies the logical name of the host.

**ADMISSION = \*NO / \*YES**

Specifies whether all users for the host are admitted (\*YES) or rejected (\*NO) by access control.

**SUBJECTS = \*USER(...)**

Changes access control for certain users.

**HOST-NAME = list-poss(16): <alphanum-name 1..8>**

Specifies the logical name of the host.

**USER-IDENTIFICATION = list-poss(16): <alphanum-name 1..8>**

Specifies the user ID.

**ADMISSION = \*NO / \*YES**

Specifies whether certain users for the host are admitted (\*YES) or rejected (\*NO) by access control.

*Note*

Access control can be used to control access to remote clusters, servers and/or gateways.

*Example*

```
//ADD-DPRINT-ACCESS-CONTROL ABC,SUBJECTS=*ALL-USERS(ADMISSION=*YES)
//MODIFY-DPRINT-ACCESS-CONTROL ABC, -
// SUBJECTS=(*HOST(HOST-NAME=H1,ADMISSION=*NO), -
// *HOST(HOST-NAME=H2,ADMISSION=*YES))
//SHOW-DPRINT-ACCESS-CONTROL ABC,INFORMATION=*ALL
```

**ACCESS-CONTROL-NAME :** ABC

**SUBJECT(S) :**

| HOST-NAME | USER-ID | ADMISSION |     |
|-----------|---------|-----------|-----|
| *ALL      | *ALL    | *YES      |     |
| H1        | *ALL    | *NO       | (1) |

```
//MODIFY-DPRINT-ACCESS-CONTROL ABC, -
// SUBJECTS=(*USER(HOST-NAME=H1,USER-ID=U1,ADMISSION=*YES), -
// *USER(HOST-NAME=H1,USER-ID=U2,ADMISSION=*NO), -
// *USER(HOST-NAME=H2,USER-ID=U1,ADMISSION=*YES), -
// *USER(HOST-NAME=H2,USER-ID=U2,ADMISSION=*NO))
//SHOW-DPRINT-ACCESS-CONTROL ABC,INFORMATION=*ALL
```

**ACCESS-CONTROL-NAME:** ABC

**SUBJECT(S) :**

| HOST-NAME | USER-ID | ADMISSION |         |
|-----------|---------|-----------|---------|
| *ALL      | *ALL    | *YES      |         |
| H1        | *ALL    | *NO       |         |
| H1        | U1      | *YES      |         |
| H2        | U2      | *NO       | (2) (3) |

```
//MODIFY-DPRINT-ACCESS-CONTROL ABC,-
// SUBJECTS=*USER(HOST-NAME=H2,ADMISSION=*YES)
//SHOW-DPRINT-ACCESS-CONTROL ABC,INFORMATION=*ALL
```

**ACCESS-CONTROL-NAME:** ABC

**SUBJECT(S) :**

| HOST-NAME | USER-ID | ADMISSION |         |
|-----------|---------|-----------|---------|
| *ALL      | *ALL    | *YES      |         |
| H1        | *ALL    | *NO       |         |
| H1        | U1      | *YES      | (4) (5) |

*Comments*

1. Host rule H2 will not be saved because it allows the same access authorization as the general rule.
2. User rule H1.U2 will not be saved because it allows the same access authorization as the host rule.
3. User rule H2.U1 will not be saved because it allows the same access authorization as the general rule and there is no host rule for U2.
4. The user rules for the users of H2 will be deleted.
5. The new host rule H2 will not be saved because it allows the same access authorization as the general rule.

*Note*

The order in which the subjects are specified is important. This is because every time that a new subject is added, it is compared with the previous one, and simplifications are carried out. The next subject is then analyzed.

## MODIFY-DPRINT-HOST

### Modify host definition

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The MODIFY-DPRINT-HOST statement enables the cluster administrator to modify host definitions in his or her configuration.

This statement is a configuration statement.

#### MODIFY-DPRINT-HOST

```
HOST-NAME = *STD / <alphanum-name 1..8>
,INTERNET-ADDRESS = *UNCHANGED / *NONE / <composed-name 7..15>
,PORT-NAME = *UNCHANGED / *NONE / <integer 1..65535>
,ACCESS-FROM-CLUSTERS = *UNCHANGED / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 *BY-ACCESS-CONTROL(...)
 | ACCESS-CONTROL-NAME = *UNCHANGED / <alphanum-name 1..8>
```

#### Operands

**HOST-NAME = \*STD / <alphanum-name 1..8>**

Changes the logical host address (BCAM address).

**INTERNET-ADDRESS = \*UNCHANGED / \*NONE / <composed-name 7..15>**

Modifies the Internet address of the host. This operand is only relevant if the TCP/IP protocol is used and access is from a remote cluster. The IP address contains 4 fields, each separated by a dot (e.g., 123.45.67.9).

**PORT-NAME = \*UNCHANGED / \*NONE / <integer 1..65535>**

Modifies the port name. This operand is only relevant if the TCP/IP protocol is used with a UNIX cluster. The port name is used by the partner to enter into a dialog with the local application. TCP/IP port names generally lie in the range 0 to 65535. The value 0 means that no port name is specified. For Dprint also, the port names should only lie in the range between PRIVPORT# and FREEPORT#. It is therefore necessary to contact the network administrator to avoid selecting a name that has already been used.



**ACCESS-FROM-CLUSTERS = \*UNCHANGED / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

Changes the settings determining which users are allowed to have access to the local cluster. This means that the cluster administrator defines here which external users (of remote clusters) are allowed access to the local cluster. In this case the host is considered the central point for receiving remote queries to the local cluster.

**ACCESS-FROM-CLUSTERS = \*NO**

No external users are allowed to access the local cluster. The host is not a collecting point for remote queries.

**ACCESS-FROM-CLUSTERS = \*ALL-USERS**

All external users are allowed to access the local cluster.

**ACCESS-FROM-CLUSTERS = \*BY-ACCESS-CONTROL(...)**

Whether or not an external user is allowed to access the local cluster is stipulated in a specific list.

**ACCESS-CONTROL-NAME = <alphanum-name 1..8>**

Specifies the name of the access control ID. The corresponding list is then compared with the values entered under ADD/MODIFY-DPRINT-ACCESS-CONTROL.

## MODIFY-DPRINT-PRINTER

### Modify printer definitions

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The MODIFY-DPRINT-PRINTER statement enables the cluster administrator to choose whether or not to include a local printer as a Dprint printer in his or her configuration.

This statement is a configuration statement.

| MODIFY-DPRINT-PRINTER                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRINTER-NAME = *STD / <alphanum-name 1..8><br>,SERVER-NAME = * <u>UNCHANGED</u> / <alphanum-name 1..8><br>,LOCAL-PRINTER-NAME = * <u>UNCHANGED</u> / <alphanum-name 1..8> |

#### Operands

**PRINTER-NAME = \*STD / <alphanum-name 1..8>**

Logical name for the entry as a Dprint printer.

**SERVER-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Changes the logical name of the server that controls the printer.

**LOCAL-PRINTER-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Changes the logical name of the local printer as it is defined in the SPOOL parameter file of the server host.

# MODIFY-DPRINT-PRINTER-POOL

## Modify printer pool

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the MODIFY-DPRINT-PRINTER-POOL statement to modify a printer pool entry in his or her configuration.

This statement is a configuration statement.

### MODIFY-DPRINT-PRINTER-POOL

```
POOL-NAME = <alphanum-name 1..8>
,PRINTER-NAME = *ADD(...) / *REMOVE(...)
 *ADD(...)
 | LIST = list-poss(16): <alphanum-name 1..8>
 *REMOVE(...)
 | LIST = list-poss(16): <alphanum-name 1..8>
```

### Operands

**POOL-NAME = <alphanum-name 1..8>**

Specifies the logical name of the printer pool in which changes are to be made.

**PRINTER-NAME = \*ADD(...) / \*REMOVE(...)**

Modifies the printer pool by changing the printers that it contains.

**PRINTER-NAME = \*ADD(...)**

Printers are added to the printer pool.

**LIST = list-poss(16): <alphanum-name 1..8>**

Specifies the logical names of the printers that are to be added to the printer pool.

**PRINTER-NAME = \*REMOVE(...)**

Printers are deleted from the printer pool.

**LIST = list-poss(16): <alphanum-name 1..8>**

Specifies the logical names of the printers that are to be removed from the printer pool.

*Notes*

- Empty printer pools or printer groups are permitted. For example, if all printers in a pool are deleted, the pool is retained and is available to accommodate new printers at a later stage.
- Empty printer pools are only visible for the cluster administrator.

## MODIFY-DPRINT-REMOTE-CLUSTER

### Modify entries for remote clusters

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the MODIFY-DPRINT-REMOTE-CLUSTER statement to modify entries for remote clusters in his or her configuration.

This statement is a configuration statement

#### MODIFY-DPRINT-REMOTE-CLUSTER

```

CLUSTER-NAME = *STD / <alphanum-name 1..8>
,TYPE = *UNCHANGED / *BS2000 / *UNIX-ISO (...) / *UNIX-TCP(...)
 *UNIX-ISO(...)
 | GATEWAY-NAME = *UNCHANGED / <c-string 1..255 with-low>
 | ,HOST-NAME = *UNCHANGED / <c-string 1..255 with-low>
 | ,HOME-GATEWAY-ADDRESS = *UNCHANGED / *NONE / <alphanum-name 1..8>
 *UNIX-TCP(...)
 | INTERNET-ADDRESS = *UNCHANGED / <composed-name 7..15>
 | ,PORT-NAME = *UNCHANGED / <integer 1..32767>
 | ,GATEWAY-NAME = *UNCHANGED / <c-string 1..255 with-low>
 | ,HOST-NAME = *UNCHANGED / <c-string 1..255 with-low>
 | ,HOME-GATEWAY-ADDRESS = *UNCHANGED / *NONE / <alphanum-name 1..8>
,NETWORK-ADDRESS = *UNCHANGED / <alphanum-name 1..8>
,ACCESS-TO-CLUSTER = *UNCHANGED / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 *BY-ACCESS-CONTROL(...)
 | ACCESS-CONTROL-NAME = *UNCHANGED / <alphanum-name 1..8>

```

**Operands****CLUSTER-NAME = \*STD / <alphanum-name 1..8>**

Name of the (remote) cluster to which access can be made from the local cluster.

**TYPE = \*UNCHANGED / \*BS2000 / \*UNIX-ISO / \*UNIX-TCP(...)**

Changes the communication service protocol that is to be used with the remote cluster.

**TYPE = \*BS2000**

The remote cluster is a BS2000 cluster. An ISO protocol (NEA addressing mode) is used.

**TYPE = \*UNIX-ISO(...)**

The cluster is a UNIX cluster and uses the ISO protocol.

**GATEWAY-NAME = \*UNCHANGED / <c-string 1..255 with-low>**

Logical gateway name in the remote UNIX cluster.

**HOST-NAME = \*UNCHANGED / <c-string 1..255 with-low>**

Logical gateway host name in the remote UNIX cluster.

**HOME-GATEWAY-ADDRESS = \*UNCHANGED / \*NONE / <alphanum-name 1..8>**

Changes the output address of the local gateway host, i.e. the logical address of the gateway host in the local cluster that receives the queries from the UNIX cluster.

**TYPE = \*UNIX-TCP(...)**

The remote cluster is a UNIX cluster and uses the TCP/IP protocol.

**INTERNET-ADDRESS = \*UNCHANGED / <composed-name 7..15>**

Internet address of the gateway host in the remote cluster.

The IP address contains 4 fields, each separated by a dot (e.g. 123.45.67.9).

**PORT-NAME = \*UNCHANGED / <integer 1..32767>**

Port address of the gateway host in the UNIX cluster.

**GATEWAY-NAME = \*UNCHANGED / <c-string 1..255 with-low>**

Logical name of the gateway host in the UNIX cluster.

**HOST-NAME = \*UNCHANGED / <c-string 1..255 with-low>**

Logical gateway host name in the UNIX cluster.

**HOME-GATEWAY-ADDRESS = \*UNCHANGED / \*NONE / <alphanum-name 1..8>**

Address of the local gateway host, i.e. the logical address of the host in the local cluster that receives the queries from the UNIX cluster.

**NETWORK-ADDRESS = \*UNCHANGED / <alphanum-name 1..8>**

Network address of the (remote) cluster, i.e. the logical address of the host that sends the queries of an external host.

**ACCESS-TO-CLUSTER = \*UNCHANGED / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

This is where the cluster administrator changes the details of who is to be allowed to access the remote cluster from the local cluster.

**ACCESS-TO-CLUSTER = \*ALL-USERS**

All users are allowed access.

**ACCESS-TO-CLUSTER = \*NO**

No user access is permitted.

**ACCESS-TO-CLUSTER=\*BY-ACCESS-CONTROL(...)**

Whether a user is allowed to access the remote cluster or not is specified in a specific list. Only the cluster administrator is allowed to specify this operand.

**ACCESS-CONTROL-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Specifies the name of the access list. The corresponding list is then compared with the values entered under ADD/MODIFY-DPRINT-ACCESS-CONTROL.

## MODIFY-DPRINT-SERVER

### Modify server definition

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator can use the MODIFY-DPRINT-SERVER statement to redefine a server that exists in the cluster in his or her configuration or to modify the definitions.

This statement is a configuration statement.

#### MODIFY-DPRINT-SERVER

```
SERVER-NAME = *STD / <alphanum-name 1..8>
,PRINT-JOB-CLASS = *UNCHANGED / *ANY / list-poss(16): <integer 1..255>
,ACCESS = *UNCHANGED / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 *BY-ACCESS-CONTROL(...)
 | ACCESS-CONTROL-NAME = *UNCHANGED / <alphanum-name 1..8>
```



## Operands

**SERVER-NAME = \*STD / <alphanum-name 1..8>**

Changes the logical name of the server.

**PRINT-JOB-CLASS = \*UNCHANGED / \*ANY / list-poss(16): <integer 1..255>**

Specifies which print job class is applicable to the server object. This allows automatic control of print jobs.

**ACCESS = \*UNCHANGED / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

This is where the cluster administrator changes the details of who is allowed to access the specified server.

**ACCESS = \*ALL-USERS**

All users are allowed access.

**ACCESS = \*NO**

No user is allowed access.

**ACCESS = \*BY-ACCESS-CONTROL(...)**

Whether a user is allowed to have access to the specified server or not is stipulated in a specific list.

Only the cluster administrator is allowed to specify this operand.

**ACCESS-CONTROL-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Specifies the name of the access list. The corresponding list is then compared with the values entered under ADD/MODIFY-DPRINT-ACCESS-CONTROL.

## MODIFY-PRINTER-POOL

### Modify printer pool

**User group:** systems support

This statement modifies a pool for local SPOOL or RSO devices (i.e. adds new devices to or removes existing devices from the pool). Up to 16 printers can be specified in one statement.

The pool type (local or RSO) was specified during generation (ADD-PRINTER-POOL) and cannot be modified by this statement. A device pool can contain either local or RSO printers but not both at the same time. If devices are to be added to the pool (ADD), a check is made as to whether the device types correspond to the pool type.

#### MODIFY-PRINTER-POOL

```
POOL-NAME = <name 1..8>
,DEVICE-NAME = *ADD(...) / *REMOVE(...)
 *ADD(...)
 | LIST = list-poss(16): <alphanum-name 1..8>
 *REMOVE(...)
 | LIST = list-poss(16): <alphanum-name 1..8>
```

## Operands

**POOL-NAME = <name 1..8>**

Name of the device pool to be modified.

**DEVICE-NAME = \*ADD(...) / \*REMOVE(...)**

Printers to be added to or removed from the pool.

**DEVICE-NAME = \*ADD(...)**

Printers are to be added.

**LIST = list-poss(16): <alphanum-name 1..8>**

Up to 16 devices which are also to be defined for the specified pool.

Only local SPOOL devices can be added to a local pool and only RSO devices to an RSO pool. SPSERVE checks whether the corresponding device entries are present in the SPOOL parameter file. If a device entry is not present, a message is output to SYSOUT but the operation itself is not aborted.

**DEVICE-NAME = \*REMOVE(...)**

Printers are to be deleted from the pool.

**LIST = list-poss(16): <alphanum-name 1..8>**

Up to 16 RSO devices which are to be deleted from the specified pool. SPSERVE checks whether the specified printers are present in the pool. If a device is not present, a message is output to SYSOUT but the operation itself is not aborted.

*Note*

Printer pools linked to IDOM servers may only contain virtual printers.

## MODIFY-SPOOL-CHARACTER-SET

### Modify character set attributes

**User group:** systems support and RSO device administrators (for character sets defined by RSO device administrators themselves)

This statement modifies attributes of an RSO character set or the standard character set of a form that can be processed on local SPOOL devices. The operand value `*UNCHANGED` (default value) means that existing values are not changed.

#### MODIFY-SPOOL-CHARACTER-SET

```

CHARACTER-SET-NAME = *STD / <alphanum-name 1..3> /
,COLOUR = *UNCHANGED / *IGNORE / *BLACK / *BLUE / *CYAN / *GREEN / *MAGENTA / *NEUTRAL /
 *RED / *YELLOW
,WEIGHT = *UNCHANGED / *IGNORE / *NORMAL / *LIGHT / *BOLD
,CHARACTER-TYPE = *UNCHANGED / *IGNORE / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE /
 *DATA / *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
 *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 /
 *FONT-14 / *FONT-15 / *FONT-16
,CHARACTER-STYLE = *UNCHANGED / *IGNORE / *STRAIGHT / *ITALICS
,UNDERSCORE = *UNCHANGED / *IGNORE / *YES / *NO
,CHARACTERS-PER-INCH = *UNCHANGED / *IGNORE / <integer 1..100>
,LINES-PER-INCH = *UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24
,LANGUAGE = *UNCHANGED / *IGNORE / *INTERNATIONAL / *ENGLISH / *USA / *BELGIAN / *FRENCH /
 *DUTCH / *GERMAN / *NORWEGIAN / *SWEDISH / *DANISH / *SPANISH / *SWISS /
 *ITALIAN / *NONE / *ARABIC / *FARSI / *ISO-8859-1 / *ISO-8859-2 / *ISO-8859-3 /
 *ISO-8859-4 / *ISO-8859-5 / *ISO-8859-6 / *ISO-8859-7 / *ISO-8859-8 / *ISO-8859-9
,NEAR-LETTER-QUALITY = *UNCHANGED / *IGNORE / *YES / *NO

```

#### Operands

**CHARACTER-SET-NAME = \*STD / <alphanum-name 1..3>**

Name of the character set to be modified in the SPOOL parameter file.

**CHARACTER-SET-NAME = \*STD**

The standard character set \*STD is to be modified.

**COLOUR = \*UNCHANGED / \*BLACK / \*RED / \*GREEN / \*YELLOW / \*BLUE / \*MAGENTA / \*CYAN / \*NEUTRAL / \*IGNORE**

Color in which the character set is to be printed. For the values and device types supported please refer to [“Operands of the RSO parameter file” on page 74ff.](#) \*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**WEIGHT = \*UNCHANGED / \*NORMAL / \*LIGHT / \*BOLD / \*IGNORE**

Intensity with which the character set is to be printed:

normal / light / bold.

\*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**CHARACTER-TYPE = \*UNCHANGED / \*OCR-A / \*OCR-B / \*GOTHIC / \*GRAPHIC / \*NONE / \*DATA / \*COURIER / \*FONT-1 / \*FONT-2 / \*FONT-3 / \*FONT-4 / \*FONT-5 / \*FONT-6 / \*FONT-7 / \*FONT-8 / \*FONT-9 / \*FONT-10 / \*FONT-11 / \*FONT-12 / \*FONT-13 / \*FONT-14 / \*FONT-15 / \*FONT-16 / \*IGNORE**

Font in which the character set is to be printed.

\*NONE means that the last font stored in the printer is to be used for printing with the specified character set.

For the values and device types supported please refer to [“Operands of the RSO parameter file” on page 74ff.](#) \*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**CHARACTER-STYLE = \*UNCHANGED / \*STRAIGHT / \*ITALICS / \*IGNORE**

Character style in which the character set is to be printed: plain / italic.

\*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**UNDERScore = \*UNCHANGED / \*YES / \*NO / \*IGNORE**

Specifies whether or not the printed characters are to be underscored.

\*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**CHARACTERS-PER-INCH = \*UNCHANGED / \*IGNORE / <integer 1..100>**

Number of characters per inch.

Character density with which characters are to be printed. (For permissible values for the different printer types see [“Operands of the RSO parameter file” on page 74ff.](#))

\*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

**LINES-PER-INCH = \*UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24**

Number of lines per inch.

Line spacing with which characters are to be printed. For RSO jobs, the LPI value to be used for printing the file is determined via the VERTICAL-CONTROL operand (LOOP or SPACING) in ADD-SPOOL-FORM (and is only included here for compatibility reasons).

*Note for the LP-PRINTER type LP-PRINTER (3337/3338/3339)*

The character set that is loaded into the PRFILE via the form entry (BAND-ID) should have the same CPI and LPI values as the character set assigned to the form in the SPOOL parameter file.

**LANGUAGE = \*UNCHANGED / \*NONE / \*ENGLISH / \*USA / \*BELGIAN / \*FRENCH / \*DUTCH / \*GERMAN / \*NORWEGIAN / \*SWEDISH / \*DANISH / \*SPANISH / \*SWISS / \*ITALIAN / \*INTERNATIONAL / \*IGNORE / \*ARABIC / \*FARSI / \*ISO-8859-1 / \*ISO-8859-2 / \*ISO-8859-3 / \*ISO-8859-4 / \*ISO-8859-5 / \*ISO-8859-6 / \*ISO-8859-7 / \*ISO-8859-8 / \*ISO-8859-9**

Language in which the character set is to be used. \*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

The \*ARABIC and \*FARSI settings are only evaluated in conjunction with DSEM V3.0.

The characters of the ISO language family are 8-bit codes.

**NEAR-LETTER-QUALITY = \*UNCHANGED / \*YES / \*NO / \*IGNORE**

Specifies whether the printed output is to be of NLQ quality. The default value is \*NO. This function is not supported by all printer types.

\*IGNORE means that this operand is not evaluated by RSO; any value set earlier at the printer remains unchanged.

# MODIFY-SPOOL-DEVICE

## Modify device attributes

**User group:** systems support and RSO device administrators

This statement modifies the attributes of an RSO device or local SPOOL device.

The following entries for RSO devices can only be modified by systems support:

- list of RSO device administrators (user IDs)
- processor name and station name which define the terminal to be used by RSO device administrators for RSO device management. The remaining operand values for the device can also be modified by authorized RSO device administrators. Changes become active when the next START-PRINTER-OUTPUT command is issued.

### General notes

- The operand value (default value) \*UNCHANGED means that existing values are not changed.
- The PROCESSOR-NAME and STATION-NAME operands can only have the value \*NONE if both have it at the same time.
- If user IDs of RSO device administrators are changed, any forms and character sets generated and administered under the old IDs cannot be accessed by new RSO device administrator IDs. Such entries can henceforth only be modified or deleted under the system administration ID TSOS.
- The same applies to the LOCK-USER command if the user ID of the device administrator has been locked.

(part 1 of 5)

### MODIFY-SPOOL-DEVICE

```

DEVICE-NAME = *STD / <alphanum-name 1..8> / *STD
,DEVICE-TYPE = *UNCHANGED / <filename 1..16 without-cat-user-gen-vers> /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
 *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
 *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /

```

continued ➔

(part 2 of 5)

```

*9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
*9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
*9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
*9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
*9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
*9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
*9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
*9645-REMOTE-PRINTER
,DEVICE-ACCESS = *UNCHANGED / *UNDEFINED / *NEA-ACCESS(...) / *TCP-ACCESS(...) /
 *LOCAL-ACCESS(...) / *SCSI-ACCESS(...)
*NEA-ACCESS(...)
 ACCESS-TYPE = *UNCHANGED / *UNDEFINED / *DIRECT / *HARDCOPY / *APPLICATION /
 *HDLC / *PC / *HARDCOPY-9751
 ,PROCESSOR-NAME = *UNCHANGED / *NONE / <alphanum-name 1..8>
 ,STATION-NAME = *UNCHANGED / *NONE / <alphanum-name 1..8>
*TCP-ACCESS(...)
 ACCESS-TYPE = *UNCHANGED / *TACLAN / *LPD(...) / *IPP
 *LPD(...)
 LPD-PRINTER-NAME = *UNCHANGED / <c-string 1..32>
 ,FROM-PORT-NUMBER = *UNCHANGED / *STD / <integer 0..1024>
 ,TO-PORT-NUMBER = *UNCHANGED / *STD / <integer 0..1024>
 ,INTERNET-ADDRESS = *UNCHANGED / *NONE / <alphanum-name 1..32> /
 <composed-name 7..32>
 ,PORT-NAME = *UNCHANGED / *NONE / <alphanum-name 1..8>
*LOCAL-ACCESS(...)
 ACCESS-TYPE = *UNCHANGED / *UNDEFINED / *CHANNEL-TYPE-1 / *CHANNEL-TYPE-2 /
 *BUS-TYPE-1
 ,MNEMONIC-NAME = *UNCHANGED / *NONE / *V / <alphanum-name 2..2>
 ,PROGRAM-NAME = *UNCHANGED / *NONE / <filename>
*SCSI-ACCESS(...)
 ACCESS-TYPE = *UNCHANGED / *STD / *EMULATED-CHANNEL-TYPE-2
 ,MNEMONIC-NAME = *UNCHANGED / *STD / <alphanum-name 2..2>

```

continued ➡



```

,TWIN-DEVICE-DEF = *UNCHANGED / *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 | SLAVE-MNEMONIC-NAME = *UNCHANGED / *NONE / <alphanum-name 2..2>
 | ,ESD-SIZE = *UNCHANGED / <integer 1..128>
,REDIRECTION-DEVICE = *UNCHANGED / *NONE / <alphanum-name 1..8>
,LANGUAGE-EXT-TYPE = *UNCHANGED / *SYSTEM / <alphanum-name 1..8>
,DEVICE-INFORMATION = *UNCHANGED / *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 | FORMS-OVERLAY-BUFFER = *UNCHANGED / *NO / <integer 1..32767>
 | ,CHARACTER-SET-NUMBER = *UNCHANGED / 1 / 4 / 6 / 23 / 36 / 46 / 64
 | ,ROTATION = *UNCHANGED / *YES / *NO
 | ,DUPLEX-PROCESSING = *UNCHANGED / *NO / *YES
 | ,FORMS-OVERLAY = *UNCHANGED / *YES / *NO
 | ,RASTER-PATTERN-MEM = *UNCHANGED / *NONE / <integer 4096..65535>
 | ,TRANSMISSION = *UNCHANGED / *IGNORE / *7BIT / *8BIT
 | ,FONT-TYPE = *UNCHANGED / *IGNORE / *7BIT / *8BIT
 | ,FACE-PROCESSING = *UNCHANGED / *YES / *NO
 | ,MAXIMUM-INPUT-TRAY = *UNCHANGED / <integer 1..99>
 | ,SUPP-FORMAT-NAMES = *UNCHANGED / *DEFAULT / list-poss(8): *TEXT / *HP / *SPDS /
 | *PLAIN-TEXT / *PML / *EXCCW / <c-string 1..63 with-low>
 | ,MONJV = *UNCHANGED / *YES / *NO
 | ,NOTIFICATION = *UNCHANGED / *YES / *NO
 | ,ENCRYPTION = *UNCHANGED / *YES / *NO
 | ,UNICODE *UNCHANGED / *YES / *NO
,LINE-SIZE = *UNCHANGED / *IGNORE / <integer 3..255>
,CHARACTER-IMAGE = *UNCHANGED / *NONE / list-poss(2): <alphanum-name 1..3>
,ADMINISTRATOR = *UNCHANGED / *NONE / *ADMINISTRATOR(...)
 *ADMINISTRATOR(...)
 | USER-IDENTIFICATION = *UNCHANGED / *ADD(...) / *REMOVE(...) / *NONE /
 | list-poss(8): <name 1..8>

```

continued ➡

(part 4 of 5)

```

,IDENTIFICATION = *UNCHANGED / *NONE / <c-string 1..16>
,TERMINAL = *UNCHANGED / *ANY / *TERMINAL(...)
 *TERMINAL(...)
 PROCESSOR-NAME = *UNCHANGED / *ANY / <alphanum-name 1..8> / *NONE
 ,STATION-NAME = *UNCHANGED / *ANY / <alphanum-name 1..8> / *NONE
,SPOOL-CONTROL = *PARAMETERS (...)

*PARAMETERS(...)
 SHIFT = *UNCHANGED / <integer 0..31>
,LINE-FEED-COMPRESS = *UNCHANGED / *YES / *NO
,BLANK-COMPRESS = *UNCHANGED / *YES / *NO
,START-FORM-FEED = *UNCHANGED / *YES / *NO
,FORM-FEED = *UNCHANGED / *LISTING(...) / *SINGLE-SHEET(...)
 *LISTING(...)
 DEFAULT-TRAY-NUMBER = *UNCHANGED / *IGNORE / <integer 1..99>
 ,OUTPUT-TRAY-NUMBER = *UNCHANGED / *IGNORE / <integer 0..99>
 *SINGLE-SHEET(...)
 DEFAULT-TRAY-NUMBER = *UNCHANGED / *IGNORE / <integer 1..99>
 ,OUTPUT-TRAY-NUMBER = *UNCHANGED / *IGNORE / <integer 0..99>
,SKIP-TO-CHANNEL = *UNCHANGED / *NORMAL / *OPTIMIZED
,SKIP-TO-NEXT-PAGE = *UNCHANGED / *BY-LINES / *BY-FORM-FEED
,ESCAPE-VALUE = *UNCHANGED / *NONE / <x-string 2..2>
,PROCESSING-CONTROL = *PARAMETERS (...)

*PARAMETERS(...)
 CONTROLLER-RESERVED = *UNCHANGED / *NO / *YES
,FORM-NAME = *UNCHANGED / list-poss(16): <alphanum-name 1..6>
,DISCONNECTION = *UNCHANGED / *YES / *NO / *FORCE
,BUFFER-SIZE = *UNCHANGED / <integer 256..32767>
,RESET = *UNCHANGED / *YES / *NO
,REPEAT-MESSAGE = *UNCHANGED / *NO / *PARAMETERS(...)

```

continued →

```

*PARAMETERS(...)
 TYPE = *UNCHANGED / *SYSTEM / *DUMMY
 ,LIMIT = *UNCHANGED / *NO / <integer 1..255>
 ,RETRY-TIME = *UNCHANGED / *GLOBAL / <integer 1..600>
,RESTART-ACTION = *UNCHANGED / *NO / *PARAMETERS(...)
*PARAMETERS(...)
 LIMIT = *UNCHANGED / *NO / <integer 1..255>
 ,RETRY-TIME = *UNCHANGED / *GLOBAL / <integer 1..600>
,SYNCHRONIZATION = *UNCHANGED / *PRINTER / *NETWORK
,TIMEOUT-MAX = *UNCHANGED / <integer 2..30>
,PAGES-EJECT-TIMEOUT = *UNCHANGED / *NO / <integer 1..255>
,BAND-IDENTIFICATION = *UNCHANGED / *NONE / <alphanum-name 4..4>
,LOAD = *UNCHANGED / *YES / *NO
,MODULO2 = *UNCHANGED / *NO / *YES
,RECOVERY-RULES = *UNCHANGED / *SYSTEM / <composed-name 1..16>
,POLLING = *UNCHANGED / *YES / *NO
,PRINTER-PARAM-FILE = *UNCHANGED / *SYSTEM / <composed-name 1..16>
,RESOURCE-FILE-PREFIX = *UNCHANGED / *SYSTEM / <composed-name 1..8>
,CONTROLLER-START = *UNCHANGED / *AT-PRINTER-START / *AT-JOB-START
,CHARACTER-SET-POS = *UNCHANGED / *NONE / *PARAMETERS(...)
*PARAMETERS(...)
 POSITION-1 = *UNCHANGED / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA /
 *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
 *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 /
 *FONT-13 / *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE
 .
 .
,POSITION-16 = *UNCHANGED / *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC / *NONE / *DATA /
 *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 /
 *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 /
 *FONT-13 / *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE

```

*Note on Dprint*

Once a SPOOL administrator is the owner of Dprint objects, he or she is allowed to modify devices in the SPOOL parameter file. However, a device may already be defined in the configuration file, for example if a printer has been linked with the configuration file. Whatever the case, a device record of a linked Dprint printer is added in the SPOOL parameter file and information about it is sent to all hosts in the cluster.

**Operands****DEVICE-NAME = \*STD / <alphanum-name 1..8>**

Symbolic name of the device.

If \*STD is specified, a dummy device entry with default settings for the appropriate device type is made available.

**DEVICE-TYPE = ....**

Defines the device type; for type specifications, see the SDF format. Specifying <filename> permits additional device types to be specified (for permissible values see the data type "filename" and suffixes in the appendix).

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

*Note*

The abbreviation "9001" is interpreted as "9001-REMOTE-PRINTER"; the abbreviation "9022" is interpreted as "9022-REMOTE-PRINTER".

**DEVICE-ACCESS = \*UNCHANGED / \*NEA-ACCESS(...) / \*TCP-ACCESS(...) / \*LOCAL-ACCESS(...) / \*SCSI-ACCESS(...)**

Modifies the type of access to the various local printers and RSO printers as well as the way they are addressed (see also the "RSO" manual). The old DEVICE-ADDRESS operand continues to be supported; however, its use instead of the new operand DEVICE-ACCESS is restricted to procedures and to batch mode.

**DEVICE-ACCESS = \*NEA-ACCESS(...)**

The RSO printer is accessed via the TRANSDATA-NEA network (NEA stands for Network Architecture).

**ACCESS-TYPE = \*UNCHANGED / \*DIRECT / \*HARDCOPY / \*APPLICATION / \*HDLC / \*PC / \*HARDCOPY-9751 / \*UNDEFINED**

Modifies the type of connection used with this printer and the way it is addressed.

**ACCESS-TYPE = \*DIRECT**

The printer is addressed directly via the station and processor name defined at generation time. The printer has its own physical connection to a cluster controller or local line controller of the front-end processor.

**ACCESS-TYPE = \*HARDCOPY**

The printer is attached to a data display terminal via which it is connected to PDN. The names of the printer defined in the generation must be specified for the station name and processor name (bypass).

**ACCESS-TYPE = \*APPLICATION**

Enables the 9645 Printer to be supported by RSO. The existence of a PDN application is a prerequisite.

**ACCESS-TYPE = \*HDLC**

The RSO device (e.g. 9025) is connected to the TRANSDATA network via an HDLC connection.

**ACCESS-TYPE = \*PC**

The RSO device is connected to the TRANSDATA network via an EMDS emulation (under UNIX only).

*Note*

With MS-DOS (PC-D) the printer must be defined as ACCESS-TYPE=\*DIRECT (name of the printer type = name of the emulation).

**ACCESS-TYPE = \*HARDCOPY-9751**

The RSO device is connected as a hardcopy printer to a 9751 Data Display Terminal. Only the value \*NO is permitted for the LINE-FEED and BLANK-COMPRESSION operands.

*Note*

The terminal must be operated in PVC (Permanent Virtual Call) mode in Datex-P (X25 port).

**ACCESS-TYPE = \*UNDEFINED**

The type of connection is not defined.

**PROCESSOR-NAME = \*UNCHANGED / <alphanum-name 1..8> / \*NONE**

Logical processor name defined at PDN generation.

**STATION-NAME = \*UNCHANGED / <alphanum-name 1..8> / \*NONE**

Logical station name of the RSO printer defined at PDN generation.

*Note*

Processor name (PROCESSOR-NAME operand) and station name (STATION-NAME operand) must always be specified together.

**DEVICE-ACCESS = \*TCP-ACCESS(...)**

The RSO printer is accessed directly via TCP/IP-LAN using the TCP/IP protocol.

**ACCESS-TYPE = \*UNCHANGED / \*TACLAN / \*LPD(...) / \*IPP**

Modifies the type of connection used with this printer.

**ACCESS-TYPE = \*TACLAN**

The value \*TACLAN should be specified if the printer is to be connected to TCP/IP-LAN either via a TACLAN (91863-R or 91863-O model), a DOS-PC running with SPPCS V1.0, or a LAN controller card (see also the "RSO" manual).

**ACCESS-TYPE = \*UNDEFINED**

The type of connection is not defined.

**ACCESS-TYPE = \*LPD(...)**

The printer is accessed via a BSD-LPD.

*Note*

For details of how to use this access mode, see the "RSO" manual.

**LPD-PRINTER-NAME = \*UNCHANGED / <c-string 1..32>**

Modifies the printer name as defined in the BSD-LPD environment of the host running BSD-LPD (e.g. in the file '/etc/printcap').

*Note*

The SPOOL administrator is responsible for ensuring that the printer name is valid. This name must not contain any blanks or tabs. Although there is no restriction on name length for an LPD printer (e.g. in the file '/etc/printcap'), RSO supports only LPD printers with names no longer than 32 characters.

**FROM-PORT-NUMBER = \*UNCHANGED / \*STD / <integer 0..1024>**

Minimum value for the LOCAL-PORT-NUMBER where the printer is connected.

**TO-PORT-NUMBER = \*UNCHANGED / <integer 0..1024>**

Maximum value for the LOCAL-PORT-NUMBER where the printer is connected.

**ACCESS-TYPE = \*IPP**

Printer is accessed across the Internet via the IPP protocol (see also "RSO" manual). This value is only relevant to RSO printers.

**INTERNET-ADDRESS = \*UNCHANGED / \*NONE / <alphanumeric-name 1..32> / <composed-name 7..32>**

Modifies the Internet address for the TACLAN (or for the DOS PC running with SPPCS V1.0, or for the LAN controller card or the host running BSD-LPD or the IPP printer) to which the printer is connected.

This address must be specified either as the physical IP address (nnn.nnn.nnn.nnn) or as the socket host name, as generated via BCAM. See also the "RSO" manual.

**PORT-NAME = \*UNCHANGED / <alphanum-name 1..8> / \*NONE**

Modifies the port name for the TACLAN (or for the DOS PC running with SPPCS V1.0, the LAN controller card, or BSD-LPD when ACCESS-TYPE=\*LPD is specified, or the IPP printer when ACCESS-TYPE=\*IPP) to which the printer is connected. For BSD-LPD, the port name is usually 515. For IPP, the port name is usually 631.

For further details see also the "RSO" manual.

**DEVICE-ACCESS = \*LOCAL-ACCESS(...)**

A local printer with the appropriate format is used.

**ACCESS-TYPE = \*UNCHANGED / \*CHANNEL-TYPE-1 / \*CHANNEL-TYPE-2 / \*BUS-TYPE-1 / \*UNDEFINED**

Modifies the type of connection used with the local printer.

**ACCESS-TYPE = \*CHANNEL-TYPE-1**

The local printer is connected via channel type 1.

**ACCESS-TYPE = \*CHANNEL-TYPE-2**

The local printer is connected via channel type 2.

**ACCESS-TYPE = \*BUS-TYPE-1**

The printer emulated as 3337 by means of UNIX software is connected via a bus. BUS-TYPE-1 is supported on CPUs with BUS peripherals only.

**ACCESS-TYPE = \*UNDEFINED**

The type of connection is not defined.

*Note*

For a list of the types of connection permissible for the various types of printer (local SPOOL and RSO operation) see the table following the description of operands.

**MNEMONIC-NAME = \*UNCHANGED / <alphanum-name 2..2> / \*NONE / \*V**

Device mnemonic for a local printer or for the "master" of the twin printer at the local host.

**MNEMONIC-NAME = \*V**

Used for the virtual printer.

**PROGRAM-NAME = \*UNCHANGED / \*NONE / <filename>**

Name of the LOGON procedure that is called via the virtual control task.

**PROGRAM-NAME = \*NONE**

If \*NONE is specified, no control task is in dialog with an application. Every job is set as active to type 5, and the instruction is given that MNEMONIC-NAME = \*V is allocated to this device record.

**PROGRAM-NAME = <filename>**

Name of the LOGON procedure that is called by the control task when the device is started up. MNEMONIC-NAME is freely selectable in this case.

**DEVICE-ACCESS = \*SCSI-ACCESS(...)**

A SCSI printer with an appropriate format is used.

**ACCESS-TYPE = \*UNCHANGED / \*STD / \*EMULATED-CHANNEL-TYPE-2**

Changes the connection type of the SCSI printer.

**MNEMONIC-NAME = \*UNCHANGED / \*STD / <alphanum-name 2..2>**

Changes the device mnemonic for a local printer at the SCSI host.

**TWIN-DEVICE-DEF = \*UNCHANGED / \*NONE / \*PARAMETERS(...)**

Selection criterion when specifying a twin printer.

**TWIN-DEVICE-DEF = \*NONE**

Must be specified for all printer types other than 2090-TWIN-PRINTER.

**TWIN-DEVICE-DEF = \*PARAMETERS(...)**

Must be specified for 2090-TWIN-PRINTER.

**SLAVE-MNEMONIC-NAME = \*UNCHANGED / <alphanum-name 2..2> / \*NONE**

Device mnemonic for the “slave” twin printer at the local host; must not be identical with the device mnemonic specified for the “master”. The “slave” is always the second printer along the paper path.

The device mnemonic for the “master” is specified with DEVICE-ACCESS = LOCAL-ACCESS (MNEMONIC-NAME).

**ESD-SIZE = \*UNCHANGED / <integer 1..128>**

Size (in Mbytes) of the external storage for the twin printer. This storage contains data and resources which uses SPS in order to send them later to the “slave”.

**REDIRECTION-DEVICE = \*STD / \*NONE / <alphanum-name 1..8>**

For RSO only.

Specifies whether or not there is automatic redirection of RSO jobs to the destination specified in DEVICE-NAME (on execution of the PRINT-DOCUMENT command).

**REDIRECTION-DEVICE = \*NONE**

There is no redirection.

**REDIRECTION-DEVICE = <alphanum-name 1..8>**

The RSO jobs are automatically sent to the specified location.

**LANGUAGE-EXT-TYPE = \*UNCHANGED / \*SYSTEM / <alphanum-name 1..8>**

Identifies a device type for unusual print output in conjunction with the DSEM V3.0 product.

**DEVICE-INFORMATION = \*UNCHANGED / \*NONE / \*PARAMETERS(...)**

Device attributes specified for the device entry. This information is output to SYSOUT via the SHOW statements (depending on the output type) but is not checked or evaluated by SPOOL.

**DEVICE-INFORMATION = \*PARAMETERS(...)**

Device attributes.



**FORMS-OVERLAY-BUFFER = \*UNCHANGED / <integer 1..32767> / \*NO**

For HP-PRINTER, HP90-PRINTER and LP65-PRINTER only.

Size of the FOB data overlay that can be processed on the specified device.

**CHARACTER-SET-NUMBER = \*UNCHANGED / 1 / 4 / 6 / 23 / 36 / 46 / 64**

For HP and HP90 printers only.

Number of character sets that can be loaded in the specified device (4, 36 or 64 for HP; 6, 23, 46 or 64 for HP90).

**ROTATION = \*UNCHANGED / \*YES / \*NO**

For HP,HP90 and PCL printers in local SPOOL and RSO printer types only.

**DUPLEX-PROCESSING = \*UNCHANGED / \*YES / \*NO**

Specifies whether the front and reverse side can be printed in spoolout jobs (to an LP65, 2050-APA, PCL or RSO PRINTER). SPOOL does not check the entry.

**FORMS-OVERLAY = \*UNCHANGED / \*YES / \*NO**

Specifies whether film overlays can be processed on the device. The specified value is used for scheduling purposes.

**RASTER-PATTERN-MEM = \*UNCHANGED / \*NONE / <integer 4096..65535>**

For HP90, 2050-APA and 2090-APA printers only. Specifies the size of the RPM memory of the printer (in kilobytes) which contains fonts and character sets.

**TRANSMISSION = \*UNCHANGED / \*7BIT / \*8BIT / \*IGNORE**

Specifies whether the transmission protocol (front-end processor → printer) has a 7-bit or 8-bit format. If the value \*IGNORE is specified, the last TRANSMISSION setting used by RSO is used.

**FONT-TYPE = \*UNCHANGED / \*7BIT / \*8BIT / \*IGNORE**

Specifies whether fonts with 7-bit or 8-bit format are to be used. If the value \*IGNORE is specified, the last FONT-TYPE setting used by RSO is used.

**FACE-PROCESSING = \*UNCHANGED / \*YES / \*NO**

Specifies whether the printer is able to lay the pages “print image up” or “print image down”, as desired.

**MAXIMUM-INPUT-TRAY = \*UNCHANGED / <integer 1..99>**

(Maximum) number of input trays for the device type specified.

**SUPP-FORMAT-NAMES = \*UNCHANGED / \*DEFAULT / list-poss(8): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PML / \*EXCCW / <c-string 1..63 with-low>**

Modifies which document format the printer can print. This specification is mandatory.

#### *Note*

The SUPP-FORMAT-NAMES operand allows a different format from the one preset by the printer to be specified. The value \*DEFAULT therefore means that no value is specified for this operand; instead, the text will be printed with the preset format.

**MONJV = \*UNCHANGED / \*YES / \*NO**

Changes the setting as to whether a monitor job variable must be created to trace and, if necessary, control the asynchronous part of the START-PRINTER-OUTPUT command.

*Note*

To use this function you require the JV subsystem.

**MONJV = \*NO**

No job variable is created for the RSO device.

**MONJV = \*YES**

A monitoring job variable is created by the RSO system task during the asynchronous part of the START-PRINTER-OUTPUT command. If the device is running, this job variable also controls the printer status as it appears in SHOW-SYSTEM-STATUS. In accordance with the conventions, the monitoring job variable is created under the \$SYSSPOOL user ID with the predefined name PRT.RSO.<device-name>. This job variable is shared and cannot be protected by a password.

**NOTIFICATION = \*UNCHANGED / \*YES / \*NO**

Specifies whether notifications may be generated for the events that occur on the device.

To use this function the SNS component is required.

**NOTIFICATION = \*NO**

The device administrator will not be notified on the events that occur on the device.

**NOTIFICATION = \*YES**

The device administrator may be notified on the events that occur on the device, provided an appropriate subscription has been defined.

**ENCRYPTION = \*UNCHANGED / \*YES / \*NO**

Specifies whether the printer supports the encryption.

To use this function the RSO >= V3.5 is required.

**ENCRYPTION = \*NO**

The printer does not support the encryption.

**ENCRYPTION = \*YES**

The printer supports the encryption.

**UNICODE = \*UNCHANGED / \*YES / \*NO**

Specifies whether the printer supports the unicode option.

To use this function the RSO >= V3.5 is required.

**UNICODE = \*NO**

The printer does not support the unicode option.

**UNICODE = \*YES**

The printer supports the unicode option.

**LINE-SIZE = \*UNCHANGED / <integer 3..255> / \*IGNORE**

Maximum number of characters that can be printed in one line on the printer. If the value IGNORE is specified, the last LINE-SIZE setting used by RSO is used.

In the event of the LINE-SIZE value in the ADD-SPOOL-FORM statement differing from the value specified here, the smaller LINE-SIZE value (printer or form) is always taken as the maximum.

**CHARACTER-IMAGE = \*UNCHANGED / \*NONE /****list-poss(2): <alphanum-name 1..3>**

Specifies whether each spoolout on the specified printer is to be performed using one or two conversion tables and, if yes, which tables.

**CHARACTER-IMAGE = \*NONE**

Specifies that the first or only character set is to be used. No conversion table is defined for the printer. It is assumed that the character set is based on the ISO 7-bit code.

**CHARACTER-IMAGE = list-poss(2): <alphanum-name 1..3>**

The specified conversion tables are assigned or reassigned to the RSO device.

**ADMINISTRATOR = \*UNCHANGED / \*NONE / \*ADMINISTRATOR(...)**

Modifies the RSO device administrator definitions.

**ADMINISTRATOR = \*NONE**

The specified RSO device is to be operated as a public device.

**ADMINISTRATOR = \*ADMINISTRATOR(...)**

Modification of the device administrator definition by specifying the user ID, data display terminal and processor name.

**USER-IDENTIFICATION = \*UNCHANGED / \*ADD(...) / \*REMOVE(...) / \*NONE /****list-poss(8): <name 1..8>**

User IDs of the RSO device administrators.

**USER-IDENTIFICATION = \*ADD(...)**

Adds a list of up to 8 user IDs to the existing administrators' user ID list, provided that the total number of user IDs does not exceed 8.

*Notes*

The existence of the specified user IDs in the system is not checked.

If a user ID to be added already exists in the administrators' user ID list, it is not added. Instead, a warning is sent and processing will continue.

**USER-IDENTIFICATION = \*REMOVE(...)**

Suppresses a list of up to 8 user IDs from the existing administrators' user ID list.

*Notes*

The existence of the specified user IDs in the system is not checked.

If a user ID to be removed does not belong to the administrators' user ID list, a warning is sent and processing will continue.

**USER-IDENTIFICATION = \*NONE**

No RSO device administrator.

The RSO device is operated as a public device.

**USER-IDENTIFICATION = list-poss(8): <name 1..8>**

User IDs of the RSO device administrators for the specified device.

**IDENTIFICATION = \*UNCHANGED / \*NONE / <c-string 1..16>**

Specifies the contents of the ADMINISTRATOR field in the SHOW-SPOOL-DEVICES statement that are to be output.

**TERMINAL = \*UNCHANGED / \*ANY / \*TERMINAL(...)**

Allows specification of another data display terminal from which RSO device administrators can manage the RSO device.

**TERMINAL = \*TERMINAL(...)**

Specification of the terminal's processor and station names.

**PROCESSOR-NAME = \*UNCHANGED / \*ANY / <alphanum-name 1..8>**

Processor name (defined by systems support in the PDN generation macros).

**STATION-NAME = \*UNCHANGED / \*ANY / <alphanum-name 1..8>**

Station name (defined by systems support in the PDN generation macros).

*Note*

The processor name (PROCESSOR-NAME operand) and station name (STATION-NAME operand) must always be specified together.

**SPOOL-CONTROL = \*PARAMETERS(...)**

Operands for controlling spoolout jobs.

**SHIFT = \*UNCHANGED / <integer 0..31>**

Modifies the default value for the operand of the same name in the PRINT-DOCUMENT command for the printer specified. The global SPOOL default value from the GEN entry is ignored for RSO devices. The LEFT-MARGIN designation for SHIFT continues to be supported for reasons of compatibility.

**LINE-FEED-COMPRESS = \*UNCHANGED / \*YES / \*NO**

Determines whether line feed compression is to be activated or deactivated. The conversion is dependent on the type of printer, display terminal and PC.

**BLANK-COMPRESSSION = \*UNCHANGED / \*YES / \*NO**

Determines whether the compression of blanks is to be activated or deactivated. The conversion is dependent on the type of printer, display terminal and PC.

**START-FORM-FEED = \*UNCHANGED / \*YES / \*NO**

Determines whether a form feed is to be performed automatically at the start of a spoolout.

For single-sheet printers, the value \*NO must be set in order to ensure that no empty page is printed at the start of a spoolout job. Control is positioned automatically at the beginning of the page at the start of each spoolout.

**FORM-FEED = \*UNCHANGED / \*LISTING(...) / \*SINGLE-SHEET(...)**

Modifies the output type of the printer (continuous paper or single-sheet printers).

Local SPOOL:

In the case of an LP65 printer the value \*SINGLE-SHEET must be specified for the 2050-LIP printer and the value \*LISTING for the 2090-LIP and 2140-LIP printers. The value \*LISTING must also be specified for the 2090-APA printer.

RSO:

The value LISTING (continuous paper) is rejected for printers of the 9021, 9022, 9022-200, 9025, 9000-PCL and DJET type.

**FORM-FEED = \*LISTING(...)**

Modifies the specification of a default input tray and output tray in the case of continuous paper for 2090-LIP, 2050-APA and RSO printers (like 4850-PCL).

**DEFAULT-TRAY-NUMBER = \*UNCHANGED / \*IGNORE / <integer 1..99>**

Changes the number of the feed tray (for output to 2090-LIP, 2090-APA or RSO printers) from which the paper is to be loaded by default. If the value \*IGNORE is specified, the DEFAULT-TRAY-NUMBER operand will not be interpreted, i.e. no feed tray is defined as the default tray.

The value can be overwritten by a different entry in the default or user PCL file or an entry in the INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

With the 4850-PCL printer, this setting can be used to select both available feeders (two continuous-paper containers) for fast, easy paper loading).

**OUTPUT-TRAY-NUMBER = \*UNCHANGED / \*IGNORE / <integer 0..99>**

Changes the number of the output tray to be used by default for RSO printers. The value can be overwritten by a different entry in the default or user PCL file or an entry in the OUTPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

With the 4850-PCL printer, support for the cutting machine is linked to the selection mechanism of the paper output. In accordance with the number set for the output tray, the following cases are handled in the same way as for the 9015 printer:

**OUTPUT-TRAY-NUMBER Executed action**

|         |                                                                                                                     |
|---------|---------------------------------------------------------------------------------------------------------------------|
| 2       | Low or lowest number of the output tray.                                                                            |
| 3       | Low or lowest number of the output tray including cutting machine activity for each sheet.                          |
| 1       | High or highest number of the output tray including cutting machine activity for each sheet.                        |
| *STD    | Default value for the device definition (*IGNORE).                                                                  |
| *IGNORE | RSO does not make a selection. The last selection of the output tray or the printer default value remain unchanged. |

**FORM-FEED = \*SINGLE-SHEET(...)**

Modifies the specification of a default input tray and output tray for LP65 and 2050-APA printers (a description of specific LP65 attributes for controlling spoolout is given in the "SPOOL" manual).

**DEFAULT-TRAY-NUMBER = \*UNCHANGED / <integer 1..99> / \*IGNORE**

Modifies the number of the feed tray (for output on LP65 and 2050-APA printers) from which the paper is to be loaded by default.

The value can be overwritten using a different entry in the standard or user PCL file or an entry in the INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command. If the value \*IGNORE is specified, the last setting for DEFAULT-TRAY-NUMBER used by RSO is taken.

**OUTPUT-TRAY-NUMBER = \*UNCHANGED / <integer 0..99> / \*IGNORE**

Modifies the number of the output tray to be used by default on an LP65 printer. The value can be overwritten using a different entry in the standard or user PCL file or an entry in the OUTPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command.

**OUTPUT-TRAY-NUMBER = \*IGNORE**

RSO permits no selection in this case. Either the last value selected or the default value is taken.

**SKIP-TO-CHANNEL = \*UNCHANGED / \*NORMAL / \*OPTIMIZED**

Specifies the procedure to be followed by the printer if a skip to vertical tabulator "channel 1" (page feed) is specified when it already switched to "channel 1" (i.e. immediately after executing a page feed).

**SKIP-TO-CHANNEL = \*NORMAL**

The hardware reaction is to be retained.

ND printer: The skip to vertical tabulator “channel 1” is not executed twice in succession.

**SKIP-TO-CHANNEL = \*OPTIMIZED**

The skip to vertical tabulator “channel 1” is not executed twice in succession on any printer type.

**SKIP-TO-NEXT-PAGE = \*UNCHANGED / \*BY-LINES / \*BY-FORM-FEED**

Specifies whether a form feed will be triggered by the appropriate control character or by counting the number of line feeds.

**SKIP-TO-NEXT-PAGE = \*UNCHANGED**

The entry for SKIP-TO-NEXT-PAGE in the standard device entry is not modified.

**SKIP-TO-NEXT-PAGE = \*BY-LINES**

The page feed will be triggered by counting the number of line feeds.

**SKIP-TO-NEXT-PAGE = \*BY-FORM-FEED**

The page feed will be triggered by the appropriate control character.

**ESCAPE-VALUE = \*UNCHANGED / \*NONE / <x-string 2..2>**

Defines an escape character for marking the printer commands contained in a print file. The character specified must be set at the printer control panel as a “primary escape character”. The operand will be evaluated only for the printer types 9025-REMOTE-PRINTER and 9026-RENO-REMOTE-PRINTER.

**ESCAPE-VALUE = \*UNCHANGED**

The value given in the standard device entry is not changed.

**ESCAPE-VALUE = \*NONE**

No escape character is defined for the printer type. Any control characters present in the file will not be evaluated.

**ESCAPE-VALUE = <x-string 2..2>**

The escape character is specified as an X string (1 byte); permissible range of values: X'00' ... X'FF'. The entry X'00' will be interpreted as \*NONE.

**PROCESSING-CONTROL = \*PARAMETERS(...)**

Operands for controlling the output devices.

**CONTROLLER-RESERVED = \*UNCHANGED / \*YES / \*NO**

Specifies whether an RSO controller has to be reserved exclusively for the specified RSO device.

**FORM-NAME = \*UNCHANGED / list-poss(16): <alphanum-name 1..6>**

Defines up to 16 equivalent forms to be available to the specified device as standard forms if the device is started by means of START-PRINTER-OUTPUT without the FORM operand being specified.

Only forms suitable for the specified printer type and defined in the SPOOL parameter file (ADD-SPOOL-FORM/MODIFY-SPOOL-FORM statements) can be specified.

**DISCONNECTION = \*UNCHANGED / \*YES / \*NO / \*FORCE**

Specifies whether the connection between RSO and the printer may be interrupted.

**DISCONNECTION = \*YES**

The connection between RSO and the printer is interrupted if no more RSO jobs are waiting.

**DISCONNECTION = \*NO**

The connection between RSO and the printer will be maintained from the start of processing of the first job on this printer to the end of the RSO session or until STOP-PRINTER-OUTPUT is issued.

Until it is deactivated, the specified device is available neither for a product other than RSO nor for an RSO request from another processor.

*Note*

The value \*NO is not permitted for 9645 Printers.

**DISCONNECTION = \*FORCE**

The connection between RSO and printer is interrupted after each print job (even if there are still other print jobs waiting).



**BUFFER-SIZE = \*UNCHANGED / <integer 256..32767>**

Modifies the maximum buffer size (in bytes) of the data blocks that are sent by means of DCAM to the printer. The specified value has an effect on the line speed, space requirements in the PDN message pool and the printing speed and should represent a reasonable compromise for these parameters.

The maximum permissible buffer size varies depending on the printer type:

1 Kbyte is the maximum buffer size for 8121, 8122, 9001-31, 9002, 9003, 9004 printers.

2 Kbytes is the maximum buffer size for 9025, 9022-200 printers.

4 Kbytes is the maximum buffer size for 9001, 9045 printers.

7 Kbytes is the maximum buffer size for 9013 printers.

10 Kbytes is the maximum buffer size for 9012 printers.

12 Kbytes is the maximum buffer size for 9011 printers.

32 Kbytes is the maximum buffer size for all other printer types.

RSO calculates the maximum buffer size by comparing the following three values and selecting the smallest one:

- the value specified for BUFFER-SIZE in the ADD-SPOOL-DEVICE statement
- the maximum permissible value for the relevant printer type (see above)
- the value specified during PDN generation.

**RESET = \*UNCHANGED / \*YES / \*NO**

Specifies whether the printer switches are to be reset before and after each spoolout job.

Printer control characters that are sent to the different RSO device types in order to reset the printer switches:

| Printer type | Length | Control string |                |
|--------------|--------|----------------|----------------|
|              |        | HEXA           | EBCDIC         |
| 2030-PCL     | 2      | 27C5           | ESC E          |
| 4011         | 3      | 27D90F         | ESC R SI       |
| 4812         | 2      | 27C5           | ESC E          |
| 4813         | 3      | 27D90F         | ESC R SI       |
| 4818-PCL     | 2      | 27C5           | ESC E          |
| 4821-PCL     | 2      | 27C5           | ESC E          |
| 4822-PCL     | 2      | 27C5           | ESC E          |
| 4824-PCL     | 2      | 27C5           | ESC E          |
| 4825-PCL     | 2      | 27C5           | ESC E          |
| 4830-PCL     | 2      | 27C5           | ESC E          |
| 4850-PCL     | 2      | 27C5           | ESC E          |
| 8121         | 0      | -              | -              |
| 9000-EPFX    | 2      | 277C           | ESC @          |
| 9000-EPLQ    | 2      | 277C           | ESC @          |
| 9000-EPSQ    | 2      | 277C           | ESC @          |
| 9000-PCL     | 2      | 27C5           | ESC E          |
| 9000-PRO     | 0      | -              | -              |
| 9000-PS      | 0      | -              | -              |
| 9000         | 0      | -              | -              |
| 9001         | 3      | 0D2783         | CR ESC c       |
| 9001-31      | 2      | 2783           | ESC c          |
| 9002         | 0      | -              | -              |
| 9003         | 0      | -              | -              |
| 9004         | 9      | 270DD72761     | ESC CR P ESC / |
| 9011         | 2      | 27D9           | ESC R          |
| 9012         | 2      | 27D9           | ESC R          |
| 9013         | 2      | 27D9           | ESC R          |
| 9014         | 2      | 27D9           | ESC R          |
| 9015         | 2      | 27D9           | ESC R          |
| 9021         | 2      | 27C5           | ESC E          |
| 9022         | 3      | 273FC9         | ESC SUB I      |
| 9022-200     | 2      | 27C5           | ESC E          |
| 9025         | 0      | -              | -              |
| 9026-PCL     | 2      | 27C5           | ESC E          |
| 9026-RENO    | 0      | -              | -              |
| 9045-ANSI    | -      | -              | -              |
| 9046         | -      | 2783           | ESC c          |
| 9097         | 3      | 27D90F         | ESC R SI       |
| 9645         | 0      | -              | -              |
| DJET         | 2      | 27C5           | ESC E          |

- : No effect

**REPEAT-MESSAGE = \*UNCHANGED / \*NO / \*PARAMETERS(...)**

Specifies whether a message is to be printed out and the printout is to be repeated in the event of an error (printer error, end of paper,...).

**REPEAT-MESSAGE = \*UNCHANGED**

The value in the standard device entry is not modified.

**REPEAT-MESSAGE = \*NO**

No message will be printed out in the event of a fault. The print job is placed in TYPE 7.

**REPEAT-MESSAGES = \*PARAMETERS(...)**

Specifies the mode of error response (type, frequency, time limit).

**TYPE = \*UNCHANGED / \*SYSTEM / \*DUMMY**

Defines an error response.

**TYPE = \*SYSTEM**

A form feed is performed and the message SRO1001 is printed (this means that the following page can already be printed out). Printer output is continued with a further form feed.

**TYPE = \*DUMMY**

A form feed is performed, possibly with the last page being repeated.

**LIMIT = \*UNCHANGED / \*NO / <integer 1..255>**

Defines whether and how often the error response will be performed.

**RETRY-TIME = \*UNCHANGED / \*GLOBAL / <integer 1..600>**

Specifies the waiting time (in seconds) between two attempts to print out the file.

**RETRY-TIME = \*GLOBAL**

The RETRY-TIME value from the global entry in the SPOOL parameter file is used.

**RESTART-ACTION = \*UNCHANGED / \*NO / \*PARAMETERS(...)**

Defines the type of response in the event of faults during connection setup and/or printer faults. In the event of failure during an attempt at setting up a connection to the printer, the response is an automatic retry. In the event of failure during printing, the response is as follows:

- the connection to the printer is cleared down
- a new connection is set up
- the print job is resumed, starting with the page at which printing was interrupted.

The old operand REPEAT-OPEN-CONNECT continues to be supported; however, its use instead of the new operand RESTART-ACTION is restricted to procedures and to batch mode.

**RESTART-ACTION = \*UNCHANGED**

The default values for LIMIT=... and RETRY-TIME=... defined in the standard device entry are not modified.

**RESTART-ACTION = \*NO**

No limit is specified for the number of repeats and the waiting (retry) time.

**RESTART-ACTION = \*PARAMETERS(...)**

Specifies the mode of error response (frequency, time limit).

**LIMIT = \*UNCHANGED / \*NO / <integer 1..255>**

Defines whether and how often attempts are made to set up the connection.

**LIMIT = \*NO**

No limit is specified.

**RETRY-TIME = \*UNCHANGED / \*GLOBAL / <integer 1..600>**

Specifies the waiting time (in seconds) between two attempts to set up the connection.

**RETRY-TIME = \*GLOBAL**

The RETRY-TIME value from the global entry in the SPOOL parameter file is used.

**SYNCHRONIZATION = \*UNCHANGED / \*PRINTER / \*NETWORK**

Defines whether printing is to be synchronized using the printer acknowledgment (PRINTER) or the network acknowledgment (NETWORK) each time a buffer has been transferred.

*Note*

See the "RSO" manual for further information.

**SYNCHRONIZATION = \*PRINTER**

Defines that acknowledgments received from the printer can be used for synchronization between messages sent (within a print job) and/or between print jobs (i.e. acknowledgments direct from the printer, which, depending on the printer type, indicate whether the message was output successfully or stored in the printer memory). For printers connected to TACLAN, i.e. defined with DEVICE-ACCESS = \*TCP-ACCESS (ACCESS-TYPE=\*TACLAN), this operand value specifies that the printer supports at least one of the methods below, that it is activated and that it can be used by the printer to ensure synchronization within a print job and between print jobs:

ETX/ACK protocol (not defined for 4850-PCL printers):

RSO adds the control character ETX at the end of each message and waits for the acknowledgement ACK from the printer before RSO sends the next message to the printer. This method of synchronization ensures that the print output can be continued correctly should problems occur.

With the preset value, RSO supports the ETX/ACK protocol only for certain printers. Provided that your printer supports the ETX/ACK protocol (4830-PCL printers), you can enter this protocol as supported in the printer parameter file for your printer. This allows the ETX/ACK protocol to be used even by printers not included in the preset parameters.

PCL ECHO command:

The printers 2030-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL and 9000-PCL support the PCL5e printer language and provide a printer command that allows a value to be sent to the printer, which is then sent back when it has been received. RSO uses this printer command to synchronize the transmission of each message. This method of synchronization ensures that the print output can be continued correctly should problems occur.

RSO uses the PCL ECHO command only for 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL and 9000-PCL printers. RSO does not permit use of this PCL command with other printer types.

PJL language:

The PJL language is supported by the printers 2030-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL and 4850-PCL. RSO uses several PJL commands to synchronize the start and end of the print job. This method of synchronization only ensures that the printer is ready to start a print job and that it has successfully received the complete job. It does not guarantee that the print job can restart correctly should problems occur.

With the preset value, RSO supports the PJL language only for certain printers. Provided that your printer supports the full set of PJL commands, you can enter this language as supported in the printer parameter file for your printer.

RENO 'close document' command:

For 9025 and 9026-RENO printers, which are the only ones that support the RENO printer language, RSO sends the RENO command 'close document' at the end of each print job and waits until the printer responds before finally completing the print job. This method of synchronization only ensures that the printer is ready to start a print job and that it has successfully received the complete job. It does not guarantee that the print job can restart correctly should problems occur.

Specification of SYNCHRONIZATION=\*PRINTER is reserved for systems support and RSO device administrators, who have to observe the following:

- Specification of SYNCHRONIZATION=\*PRINTER for printer types connected via TACLAN, on which the ETX/ACK protocol is supported but currently deactivated, results in a timeout for all print jobs as RSO will wait in vain for an acknowledgment from the printer ("ACK" character).
- Specification of SYNCHRONIZATION=\*PRINTER for printer types connected via the Centronics interface results in a timeout for all print jobs as RSO will wait in vain for an acknowledgment from the printer ("ACK" character or "close document").

**SYNCHRONIZATION = \*NETWORK**

Defines that the synchronization between the transmission of two messages (within a print job) and/or between two print jobs can be carried out independently of the printer acknowledgments received (e.g. in cases where one printer is unable to send back acknowledgments).

For printers connected via TACLAN, i.e. defined with DEVICE-ACCESS = \*TCP-ACCESS(Access-Type=\*TACLAN), this value specifies that none of the methods listed under SYNCHRONIZATION=\*PRINTER is supported or activated, or that the printer is connected via a Centronics interface, which cannot send back data.

As no synchronization is possible between the transmission of two messages (within a print job), RSO calculates an estimated print time, based on several parameters, for each message sent. This estimated print time is used as wait time before sending the next message. This print time can be influenced by way of the 'speed' setting in the printer parameter file.

If POLLING=\*YES is specified (and supported) with SYNCHRONIZATION = \*NETWORK, this mechanism attempts a more or less accurate recovery (given that no synchronization is possible) in the case of a printer malfunction.

If POLLING=\*NO was specified with SYNCHRONIZATION=\*NETWORK, it should be noted that there can be no guarantee of correct error handling in the case of a printer malfunction. Thus, for example, the print job may be deemed successful on the RSO side although no pages have been printed. Moreover, it is essential to realize that print jobs may be lost with certain printer types, especially for print jobs defined with DELETE-AFTER-PRINT=\*YES/\*DESTROY when the printer is switched off. A print job can be sent to the printer, deemed completed by RSO and no error detected, although the printer is switched off. See the "RSO" manual for further information.

**TIMEOUT-MAX = \*UNCHANGED / <integer 2..30>**

Modifies the maximum printing time in minutes for each buffer transferred.

The value specified here must take into account the buffer size, the transmission rate and the printing speed.

Default value: 2 minutes.

**PAGES-EJECT-TIMEOUT = \*UNCHANGED / \*NO / <integer 1..255>**

Specifies the maximum waiting time (in minutes) in the case of an inactive printer before the pages still remaining in the printer are automatically ejected into the stacker.

The value \*NO means that these pages are not ejected.

**BAND-IDENTIFICATION = \*UNCHANGED / \*NONE / <name 4..4>**

Local SPOOL: for LP (3337) and LP48 (3348) only.

RSO: 9645 only.

Name of the type band (BAND-ID) to be used for printing.

In the case of local LP and LP48 printers, the type band specified here is used for output with forms to which no type band is specified in the form entry. A type band definition in the form entry replaces the type band definition in the device entry. In this case, a message is displayed prompting the operator to change the type band (BAND-ID). For LP printers the default value BAND-ID 1090 is assumed, and for LP48 printers the default value is 9202.

For 9645 printers, a type band can be specified only in the device entry but not in the form entry (thus there is no message to the console).

**LOAD = \*UNCHANGED / \*YES / \*NO**

For 9645 only.

Defines whether an RSO printer which can be loaded with a LOOP entry has to be operated using this function.

**MODULO2 = \*UNCHANGED / \*YES / \*NO**

Specifies whether a second buffer is to be transferred to the printer while the first is being printed. If DEVICE-ACCESS=\*TCP-ACCESS(Access-Type=\*TACLAN) is specified, MODULO2=\*NO is always assumed, irrespective of the value specified here.

Default value:

\*YES if DIRECT, APPLICATION or HDLC is specified as the connection type.

\*NO if HARDCOPY, HARDCOPY-9751 or PC is specified as the connection type.

**RECOVERY-RULES = \*UNCHANGED / \*SYSTEM / <composed-name 1..16>**

Specifies the suffix of the name of the file containing the recovery rules for the selected device.

**RECOVERY-RULES = \*SYSTEM**

\*SYSTEM is a reserved name for the internally coded RSO recovery rules.

**POLLING = \*UNCHANGED / \*YES / \*NO**

Determines whether RSO queries the printer status in order to obtain information about printer malfunctions. The operand is applicable to printers for which DEVICE-ACCESS=\*TCP-ACCESS(Access-Type=\*TACLAN) has been specified.

*Note*

For further information, see the "RSO" manual.

**POLLING = \*YES**

Specifies that RSO can query the printer status to obtain information about printer malfunctions.

At the beginning of each print job, RSO sends a printer status inquiry to check whether the printer is online, and does not start the actual print job until receipt of a positive acknowledgment. If the acknowledgment is not received within the defined period of time (TIMEOUT-MAX operand of the device definition and CHECK-PRINTER-TIME parameter in the global SPOOL parameter file), TIMEOUT is detected and message SRO0987 is output. For performance reasons (in order to avoid START/STOP), RSO does not wait for any further printer status messages once it has received a positive acknowledgment. No printer status inquiry is possible while sending data in TRANS-PARENT mode. This is the case when printing PROLOG or EPILOG files or user files with DOCUMENT-FORMAT=\*SPECIAL-FORMAT.

Specification of POLLING=\*YES is reserved for system administration and RSO device administrators, who have to bear in mind that it may result in unpredictable behavior if the function is supported by the printer but is currently deactivated (e.g. printing of the escape sequence "printer status inquiry").

For printers connected via TACLAN and defined with DEVICE-ACCESS = \*TCP-ACCESS(Access-Type=\*TACLAN), RSO uses one of the following methods to query the printer status:

Status command dependent on the printer language:

RSO adds a status command, that may vary with the printer language, to the end of each message sent. Such status commands are supported by RSO only for the following printers: 4011, 4812, 4813, 4818-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PS, 9001-31, 9011, 9013, 9014, 9015, 9022, 9046, 9097 and DJET.

PJL language:

The PJL language is supported by the newest PCL printers. RSO uses several PJL commands to query the printer status.

With the preset value, RSO supports the PJL language only for certain printers. Provided that your printer supports the full set of PJL commands, you can enter this language as supported in the printer parameter file for your printer.

If the operand is specified for printers that do not support the function (e.g. 9000, 9001), the command is not rejected; rather, RSO automatically assumes POLLING=\*NO.

Specification of POLLING=\*YES is reserved for systems support and RSO device administrators, who should bear in mind that unpredictable behavior may result if the function is supported by the printer but is currently deactivated (e.g. printing of the escape sequence "printer status inquiry").



**POLLING = \*NO**

This operand value specifies that RSO cannot query the printer status. There can be several reasons for specifying this operand:

- the printer does not support this function (e.g. 9000, 9001 Printers)
- the printer supports the function but the function is deactivated (e.g. for 4011, 4813, 9001-31, 9011, 9012, 9097 Printers)
- although the printer supports the function, systems support and RSO device administrators do not wish to be informed about printer malfunctions
- although the printer supports the function, it is connected to a TACLAN via a Centronics interface, and therefore cannot send back data.

*Note*

It must be observed that the POLLING operand of RSO is not used for synchronization between the transmission of two messages and/or between two print jobs. An exception to this is the start of a print job. Here, RSO waits for confirmation of the printer status before sending the print job. The synchronization between messages and/or between print jobs must be specified using the SYNCHRONIZATION operand.

**PRINTER-PARAM-FILE = \*UNCHANGED / \*SYSTEM / <composed 1..16>**

Defines the printer parameter file used for the printer, whereby the suffix of the file name is stated explicitly. The prefix is defined in the PRINTER-PARAM-PREFIX operand in the MODIFY-SPOOL-PARAMETER statement.

**RESOURCE-FILE-PREFIX = \*UNCHANGED / \*SYSTEM / <composed 1..8>**

Defines the file prefix for PROLOG/EPILOG/DIA/MEMBER files used by the printer.

**RESOURCE-FILE-PREFIX = \*SYSTEM**

Specifies that the prefix for PROLOG/EPILOG/DIA/MEMBER file is formed with the aid of the RSO device type of the logical printer name (e.g. 'RP<devicetype>').

**RESOURCE-FILE-PREFIX = <composed 1..8>**

The specified value is the prefix of the file name for PROLOG/EPILOG/DIA/MEMBER files and not 'RP<devicename>'.

**CONTROLLER-START = \*UNCHANGED / \*AT-PRINTER-START / \*AT-JOB-START**

Specifies when and how the RSO controller is to be started.

**CONTROLLER-START = \*AT-PRINTER-START**

Specifies that the RSO controller must be started by means of the START-PRINTER-OUTPUT command.

**CONTROLLER-START = \*AT-JOB-START**

Specifies that the RSO controller must be started by means of the PRINT-DOCUMENT command.

**CHARACTER-SET-POS = \*UNCHANGED / \*NONE / \*PARAMETERS(...)**

Defines the hardware position of character sets in the printer. The character sets can be selected via a control character sequence which addresses the position in the character set memory of the printer (as opposed to selection via the name, such as, for example, "BASKERVILLE.N.12.P" for a 9025 Printer).

**CHARACTER-SET-POS = \*PARAMETERS(...)**

Specifies the hardware positions of character sets.

**POSITION-1 = \*UNCHANGED / \*OCR-A / \*OCR-B / \*GOTHIC / \*GRAPHIC / \*NONE / \*DATA / \*COURIER / \*FONT-1 / \*FONT-2 / \*FONT-3 / \*FONT-4 / \*FONT-5 / \*FONT-6 / \*FONT-7 / \*FONT-8 / \*FONT-9 / \*FONT-10 / \*FONT-11 / \*FONT-12 / \*FONT-13 / \*FONT-14 / \*FONT-15 / \*FONT-16 / \*NOT-USABLE**

Up to 16 hardware positions can be specified.

For the device types supported please refer to "[Operands of the RSO parameter file](#)" on page 74ff. The value NOT-USABLE means that the corresponding hardware position is not available for the specified printer type. The hardware positions permitted for each printer type are laid down in the standard device entry \*STD of that type. When generating or modifying a user device entry, a hardware position can only be assigned a character set if this is also the case in the standard device entry \*STD. For example, if \*NOT-USABLE is defined for POSITION-11 in the standard device entry of a particular printer type, this hardware position cannot be assigned a character set in any device entry for this printer type, unless systems support has modified the value for POSITION-11 in the standard device entry. Subsequently, any value can be specified for POSITION-11 when generating a device entry for this type.

Possible types of connection for the various printer types (local SPOOL and RSO operation):

| Printer type | Connection type |      |      |      |    |      |        |           |        |     |      |
|--------------|-----------------|------|------|------|----|------|--------|-----------|--------|-----|------|
|              | DIR             | HARD | APPL | HDLC | PC | 9751 | CH-T-1 | EM-CH-T-2 | CH-T-2 | BUS | TACL |
| 2030-PCL     |                 |      |      |      |    |      |        |           |        |     | x    |
| 4011         | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4812         | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4813         | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4818-PCL     | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4821-PCL     | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4822-PCL     | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4824-PCL     | x               | x    |      |      | x  |      |        |           |        |     | x    |
| 4825-PCL     | x               | x    |      |      | x  |      |        |           |        |     | x    |

| Printer type | Connection type |      |      |      |      |      |        |           |        |     |      |
|--------------|-----------------|------|------|------|------|------|--------|-----------|--------|-----|------|
|              | DIR             | HARD | APPL | HDLC | PC   | 9751 | CH-T-1 | EM-CH-T-2 | CH-T-2 | BUS | TACL |
| 4830-PCL     | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 4850-PCL     |                 |      |      |      |      |      |        |           |        |     | x    |
| 8121         | x               | x    |      |      |      |      |        |           |        |     |      |
| 9000-EPFX    |                 |      |      |      |      |      |        |           |        |     | x    |
| 9000-EPLQ    |                 |      |      |      |      |      |        |           |        |     | x    |
| 9000-EPSQ    |                 |      |      |      |      |      |        |           |        |     | x    |
| 9000-PCL     | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9000-PRO     |                 |      |      |      |      |      |        |           |        |     | x    |
| 9000-PS      |                 |      |      |      |      |      |        |           |        |     | x    |
| 9000         | x               | x    | x    | x    | x    | x    |        |           |        |     | x    |
| 9001         | x               | x    |      |      | x    | x    |        |           |        |     | x    |
| 9001-31      | x               | x    |      |      | x    | x    |        |           |        |     | x    |
| 9002         | x               | x    |      |      |      |      |        |           |        |     |      |
| 9003         | x               | x    |      |      | x    |      |        |           |        |     |      |
| 9004         |                 | x    |      |      | x    | x    |        |           |        |     |      |
| 9011         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9012         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9013         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9014         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9015         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9021         | x               | x 1) |      |      | x    |      |        |           |        |     | x    |
| 9022         | x               | x 1) |      |      | x 2) |      |        |           |        |     | x    |
| 9022-200     | x               | x 1) |      |      | x    |      |        |           |        |     | x    |
| 9025         | x               |      |      | x    | x    |      |        |           |        |     | x    |
| 9026-PCL     | x               |      |      | x    | x    |      |        |           |        |     | x    |
| 9026-RENO    | x               |      |      | x    | x    |      |        |           |        |     | x    |
| 9045-ANSI    |                 |      |      |      |      |      |        |           |        |     | x    |
| 9046         |                 |      |      |      |      |      |        |           |        |     | x    |
| 9097         | x               | x    |      |      | x    |      |        |           |        |     | x    |
| 9645         |                 |      | x    |      |      |      |        |           |        |     |      |
| DJET         | x               | x    |      |      | x    |      |        |           |        |     | x    |

| Printer type | Connection type |      |      |      |    |      |        |           |        |     |      |
|--------------|-----------------|------|------|------|----|------|--------|-----------|--------|-----|------|
|              | DIR             | HARD | APPL | HDLC | PC | 9751 | CH-T-1 | EM-CH-T-2 | CH-T-2 | BUS | TACL |
| HP-P         |                 |      |      |      |    |      | x      |           | x      |     |      |
| LP65         |                 |      |      |      |    |      | x      |           | x      |     |      |
| LP           |                 |      |      |      |    |      | x      |           | x      |     |      |
| LP48         |                 |      |      |      |    |      | x      |           | x      |     |      |
| LP-EMUL      |                 |      |      |      |    |      |        | x         |        | x   |      |
| HP90         |                 |      |      |      |    |      | x      |           |        |     |      |
| PCL          |                 |      |      |      |    |      |        | x         | x      |     |      |
| 2050-APA     |                 |      |      |      |    |      |        |           | x      |     |      |
| 2090-APA     |                 |      |      |      |    |      |        |           | x      |     |      |

*Key*

- 1) The HARDCOPY connection is supported only on a 9763 terminal with a driver for
  - DIABLO emulation (9022) or
  - LASERJET emulation (4821-PCL, 4824-PCL, 9021, 9022-200, DJET, 9000-PCL).
- 2) The PC connection of the 9022 requires a special filter program in the product EMDS (UNIX).

# MODIFY-SPOOL-FILTER

## Modify filter definitions

**User group:** systems support

This statement allows systems support to modify a filter in the SPOOL parameter file.

The operand value (default value) **\*UNCHANGED** means that existing values are not changed.

| MODIFY-SPOOL-FILTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> FILTER-NAME = &lt;alphanum-name 1..8&gt; / *STD , FILTER-LOCATION = *UNCHANGED / *SYSTEM / &lt;composed-name 1..50&gt; , INPUT-FORMAT-NAME = *UNCHANGED / list-poss (8): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL /     *EXCCW / &lt;c-string 1..63 with-low&gt; , OUTPUT-FORMAT-NAME = *UNCHANGED / *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL /     *EXCCW / &lt;c-string 1..63 with-low&gt; , REDIRECTION = *UNCHANGED / *NO / *REMOTE ( )     *REMOTE(...)         DEVICE-NAME = *UNCHANGED / &lt;alphanum-name 1..8&gt; , OBJECT-NAME = *UNCHANGED / *SAME / &lt;alphanum-name 1..8&gt; </pre> |

### Operands

**FILTER-NAME = <alphanum-name 1..8> / \*STD**

Symbolic name of the filter.

**FILTER-LOCATION = \*UNCHANGED / \*SYSTEM / <composed-name 1..50>**

Changes how the filter object module can be loaded. It can be loaded either from a standard library or to a user library.

**FILTER-LOCATION = \*SYSTEM**

The filter object module permits loading. It is stored in the standard system library, i.e. in SYSLIB.SPCONV.010 (type L) on /390 hosts and in SRMLIB.SPCONV.010 (type L) on SR2000 hosts.

**FILTER-LOCATION = <composed-name 1..50>**

The filter object module is located in a user library. The name of the user library takes the format <composed-name 1..50>.

**INPUT-FORMAT-NAME = \*UNCHANGED / list-poss(8): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

Modifies the input format(s), i.e. which document formats can be converted by the filter. The input formats are those contained in the specified list.

**INPUT-FORMAT-NAME = \*TEXT**

The input format is TEXT.

In this case, the file does not have any special printer control characters, but it does have feed control characters.

**INPUT-FORMAT-NAME = \*HP**

The input format is HP.

In this case, the file has special laser printer control characters and possibly also feed control characters.

**INPUT-FORMAT-NAME = \*SPDS**

The input format is SPDS.

In this case, the file has special APA printer control characters and possibly also feed control characters.

**INPUT-FORMAT-NAME = \*PLAIN-TEXT**

The input format is PLAIN-TEXT.

In this case, the file has special PLAIN-TEXT printer control characters and possibly also feed control characters.

**INPUT-FORMAT-NAME = \*PCL**

The input format is PCL.

In this case, the file has special PCL printer control characters and possibly also feed control characters.

**INPUT-FORMAT-NAME = \*EXCCW**

The input format is EXCCW.

In this case, the file has special EXCCW printer control characters and possibly also feed control characters.

**INPUT-FORMAT-NAME = <c-string 1..63 with-low>**

The input format is a free format which is identified via the specified name.

The print jobs concerned must be called as follows:

```
/PRINT-DOCUMENT <file_name>, DOCUMENT-FORMAT= -
/ *PAGE-FORMAT(FORMAT-NAME=<c-string 1..63 with-low>)
```

where FORMAT-NAME must be identical to the name of the input format in the filter definition.

**OUTPUT-FORMAT-NAME = \*UNCHANGED / \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

Modifies the output format, i.e. the document format into which the filter converts the text.

**OUTPUT-FORMAT-NAME = \*TEXT**

The output format is TEXT.

This means that the output file does not contain any special printer control characters, but it does contain feed control characters.

**OUTPUT-FORMAT-NAME = \*HP**

The output format is HP.

This means that the output file contains special laser printer control characters and possibly also feed control characters.

**OUTPUT-FORMAT-NAME = \*SPDS**

The output format is SPDS.

This means that the output file contains special APA printer control characters and possibly also feed control characters.

**OUTPUT-FORMAT-NAME = \*PLAIN-TEXT**

The output format is PLAIN-TEXT.

This means that the output file contains special PLAIN-TEXT printer control characters and possibly also feed control characters.

**OUTPUT-FORMAT-NAME = \*PCL**

The output format is PCL.

This means that the output file contains special PCL printer control characters and possibly also feed control characters.

**OUTPUT-FORMAT-NAME = \*EXCCW**

The output format is EXCCW.

This means that the output file contains special EXCCW printer control characters and possibly also feed control characters.

**OUTPUT-FORMAT-NAME = <c-string 1..63 with-low>**

The output format is specified via <c-string 1..63 with-low>.

**REDIRECTION = \*UNCHANGED / \*NO / \*REMOTE( )**

Modifies whether or not the spoolout jobs which use the filter must be redirected to a remote printer.

**REDIRECTION = \*UNCHANGED**

The default is that the value remains unchanged.

**REDIRECTION = \*NO**

Redirection is not permitted.

**REDIRECTION = \*REMOTE( )**

The spoolout jobs which use the filter are redirected to a remote printer.

**DEVICE-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Name of the printer. This name must be specified in the SPOOL parameter file and must not be deleted if the filter is still accessing this printer.

**OBJECT-NAME = \*UNCHANGED / \*SAME / <alphanum-name 1..8>**

Modifies the filter object module name (library element of type L).

**OBJECT-NAME = \*SAME**

The object module name is the same as the filter name.

**OBJECT-NAME = <alphanum-name 1..8>**

The object module name is the same as that of the library element (of type L).

*Notes*

- The name selected to identify the filter must be unique.
- The printer specified in DEVICE-NAME must be supported by the name(s) specified in OUTPUT-FORMAT-NAME.
- As soon as the appropriate definitions have been made, initialization of the new filter is complete, and the filter is known within Spool & Print. It is not necessary to stop SPOOL in order to make the filter accessible.



# MODIFY-SPOOL-FORM

## Modify form attributes

**User group:** systems support and RSO device administrators (for forms defined by RSO device administrators themselves).

This statement modifies the attributes of forms.

If one or more device types are specified, the changes made here affect just the forms with the specified name which are assigned to these device types. If no device type is specified, all forms with the specified name are affected by the changes.

The operand value (default value) or \*UNCHANGED means that existing values are not modified.

(part 1 of 3)

### MODIFY-SPOOL-FORM

```
FORM-NAME = *STD / <alphanumeric-name 1..6>
,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> /
list-poss(51): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
*HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
*LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
*VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
*2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
*4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
*4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
*4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
*4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
*4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
*9000-EFPX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
*9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
*9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
*9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
*9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
*9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
*9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
*9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
*9645-REMOTE-PRINTER
```

continued →

(part 2 of 3)

```

,FORM-SIZE = *PARAMETERS (...)
 *PARAMETERS(...)
 |
 | LINE-SIZE = *UNCHANGED / <integer 30..180>
 | ,PAGE-SIZE = *UNCHANGED / <integer 1..250>
,HEADER-PAGE = *UNCHANGED / *YES / *NO / *RESPOOL / *ONE
,TRAILER-PAGE = *UNCHANGED / *YES / *NO / *INFO
,VERTICAL-CONTROL = *UNCHANGED / *NONE / *LOOP(...) / *SPACING(...)
 *LOOP(...)
 |
 | LOOP-NAME = *UNCHANGED / <alphanum-name 1..3>
 *SPACING(...)
 |
 | LINES-PER-INCH = *UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / *DENSITY(...)
 | *DENSITY(...)
 | |
 | | LINES = *UNCHANGED / <integer 1..999>
 | | ,INCHES = *UNCHANGED / <integer 1..999>
 | | ,CHANNEL1-POSITION = *UNCHANGED / <integer 1..255>
,ROTATION-CONTROL = *UNCHANGED / *NONE / *LOOP(...) / *SPACING(...)
 *LOOP(...)
 |
 | LOOP-NAME = *UNCHANGED / <alphanum-name 1..3>
 *SPACING(...)
 |
 | LINES-PER-INCH = *UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / *DENSITY(...)
 | *DENSITY(...)
 | |
 | | LINES = *UNCHANGED / <integer 1..999>
 | | ,INCHES = *UNCHANGED / <integer 1..999>
 | | ,CHANNEL1-POSITION = *UNCHANGED / <integer 1..255>
,CHARACTER-SET = *UNCHANGED / *NONE / <alphanum-name 1..3>
,ROTATION-CHARACT-SET = *UNCHANGED / *NONE / <alphanum-name 1..3>
,BAND-IDENTIFICATION = *UNCHANGED / *NONE / <alphanum-name 4..4>
,PREFORM = *UNCHANGED / *NONE / <alphanum-name 1..4>
,CHARACTER-IMAGE = *UNCHANGED / *NONE / <alphanum-name 1..3>
,TWO-UP-PROCESSING = *UNCHANGED / *NO / *MODE-1 / *MODE-2

```

continued ➡

```

,DIA-PROCESSING = *UNCHANGED / *NONE / *PARAMETERS(...)
*PARAMETERS(...)
 |
 | FORMS-OVERLAY = *UNCHANGED / *NONE / <alphanum-name 2..2>
 | ,FORMS-OVERLAY-BUFFER = *UNCHANGED / *NONE / <alphanum-name 1..4>
,DPRINTER-RESOURCES = *UNCHANGED / *NONE / *LP65(...) / *APA(...)
*LP65(...)
 |
 | PAGE-DEFINITION = *UNCHANGED / <integer 1..50000>
 | ,STACKER-OFFSET = *UNCHANGED / *YES / *NO
 | ,SEPARATOR-PAGE-TRAY = *UNCHANGED / *NONE / <integer 1..3>
*APA(...)
 |
 | FORM-DEFINITION = *UNCHANGED / <alphanum-name 1..8>
 | ,PAGE-DEFINITION = *UNCHANGED / <alphanum-name 1..8>

```

*Note on Dprint*

Once a SPOOL administrator is the owner of Dprint objects, he or she is allowed to modify forms in the SPOOL parameter file. However, a form that has been defined in the SPOOL parameter file can also be used from a remote server. When a form is modified in the SPOOL parameter file, the information about it is sent to all hosts in the cluster.

**Operands****FORM-NAME = \*STD / <alphanum-name 1..6>**

Name of the form entry to be modified.

A standard form entry \*STD with different values for each device type is entered in the SPOOL parameter file. The SPOOL parameter file may also contain form entries with the same name but with different values for different device types (ADD-SPOOL-FORM).

**DEVICE-TYPE = ....**

Device types to be assigned to the specified form; for type specifications, see the SDF format. Explained below are a number of special attributes.

**DEVICE-TYPE = \*ALL**

All form entries with the specified name that are entered in the SPOOL parameter file are to be modified in a single operation.

**DEVICE-TYPE = \*ALL-LOCAL-PRINTERS**

With FORM-NAME=\*STD only.

Permits modification of the standard form \*STD for local SPOOL devices, which is used whenever the specified local printer type does not have its own standard form in the SPOOL parameter file.

**DEVICE-TYPE = \*ALL-REMOTE-PRINTERS**

With FORM-NAME=\*STD only.

Permits modification of the standard form \*STD for RSO devices, which is used whenever the specified RSO printer type does not have its own standard form in the SPOOL parameter file.

**DEVICE-TYPE = \*LP-EMULATED-PRINTER**

Printers emulated as 3337 using the appropriate UNIX software and addressed via a bus. This is possible only on mainframes with bus peripherals.

**DEVICE-TYPE = <filename 1..16 without-cat-user-gen-vers>**

Printer type (not included in the list).

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

*Note*

The abbreviation "9001" is interpreted as "9001-REMOTE-PRINTER"; the abbreviation "9022" is interpreted as "9022-REMOTE-PRINTER".

**FORM-SIZE = \*PARAMETERS(...)**

Form size specifications.

**LINE-SIZE = \*UNCHANGED / <integer 30..180>**

Form width.

Entries possible in 1/10-inch increments:

136, for example, is equivalent to 13.6 inches

30 is equivalent to 3 inches

**PAGE-SIZE = \*UNCHANGED / <integer 1..250>**

Form length.

Entries possible in 1/10-inch increments: 120, for example, is equivalent to 12 inches.

*Note*

When a spoolout job is processed, the loop length (LENGTH operand of the LOOP statement in the PRM utility routine; specified in increments of one sixth of an inch) is checked against the form length (PAGE-SIZE operand in the ADD-SPOOL-FORM or MODIFY-SPOOL-FORM statement; specified in increments of one tenth of an inch).

The loop length should correspond to the form length or be not more than one sixth of an inch shorter than it. If the spoolout job can also be handled on an HP laser printer, the check is based on the following algorithm:

$$\text{LOOP length} * 10 < \text{PAGE-SIZE} * 6 < (\text{LOOP length} + 1) * 10.$$

**HEADER-PAGE = \*UNCHANGED / \*YES / \*NO / \*ONE / \*RESPOOL**

Specifies whether a header page is to be printed.

The header page function is only supported if the form contains at least 70 characters per line (calculated from the line length of the form and the CPI value of the associated character set). The size of the header page is dependent on the line length of the form used (see the description of this operand in the ADD-SPOOL-FORM statement, [page 229](#)).

**HEADER-PAGE = \*UNCHANGED**

The value selected in the SPOOL parameter file is retained.

**HEADER-PAGE = \*YES**

Two header pages will be produced on printers using continuous forms, one header page on single-sheet printers.

*Note*

On the 3365 printer (LP65) and on the LP-EMULATED printer only one header page is printed if HEADER-PAGE=\*YES.

**HEADER-PAGE = \*NO**

No header page is printed.

**HEADER-PAGE = \*ONE**

For RSO only.

Only one header page is printed, even on printers that use continuous forms.

**HEADER-PAGE = \*RESPOOL**

When printing is resumed after an interrupt, printers which use continuous forms print two header pages, single-sheet printers output one, just as if HEADER-PAGE = \*YES was set. Printing is started with the message \*\*\*RESTART OF AN INTERRUPTED JOB\*\*\*. (For special cases please refer to ADD-SPOOL-FORM on [page 240f.](#))

**TRAILER-PAGE = \*UNCHANGED / \*YES / \*NO / \*INFO**

Specifies whether, and if so, with what information, a trailer page is to be printed, provided that the form to be used for printing meets the following conditions:

- number of characters per line:  $\geq 70$
- number of lines per page:  $> 10$ .

A trailer page always begins on line 3 of the form.

The amount of information given on the trailer page is dependent on the operand value specified here.

The layout for the various operand values is presented in the description of operands for ADD-SPOOL-FORM on [page 229ff](#)).



If an older SPOOL parameter file is used, the same value is used for TRAILER-PAGE as for the HEADER-PAGE operand.

**VERTICAL-CONTROL = \*UNCHANGED / \*LOOP(...) / \*SPACING(...) / \*NONE**

Modifies the type of form feed control for the specified form:  
either by loop entry (LOOP) or by a line feed specification (SPACING).

**VERTICAL-CONTROL = \*UNCHANGED**

The value preset in the SPOOL parameter file is to be retained.

Default value for local printers: LOOP (LOOP-NAME=C1)

Default value for APA printers: NONE

Default value for RSO printers: SPACING (L-P-I=6).

**VERTICAL-CONTROL = \*LOOP(...)**

Modifies the form feed control by using a loop entry (for further information, see the "RSO" manual).

**LOOP-NAME = \*UNCHANGED / <alphanum-name 1..3>**

Name of the loop entry to be entered as the standard loop entry for the specified form. The loop must be defined in the PRFILE or the RSOFIL, according to the printer type for which the form is defined.

For APA printers the name of the loop entry refers - in accordance with the naming conventions - to the page definition and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the loop entry C12 refers to the name of the page definition P10C12, which is located in SPSLIB.

**VERTICAL-CONTROL = \*SPACING(...)**

Modifies the form feed control by specifying a line feed (for further information, see the "RSO" manual).

**LINES-PER-INCH = \*UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / \*DENSITY(...)**

For RSO only.

Specifies the number of lines per inch.

The value specified here is the inverse of the line spacing in inches (e.g. 10 means 1/10-inch spacing or 10 lines per inch).

**LINES-PER-INCH = \*DENSITY(...)**

The number of lines per inch (line density) can be calculated by means of the following formula:  $LINES-PER-INCH = LINES / INCHES$

Example:  $LINES = 72, INCHES = 9 \rightarrow 72/9 = 8 \text{ lpi}$

**LINES = \*UNCHANGED / <integer 1..999>**

**INCHES = \*UNCHANGED / <integer 1..999>**

The number of lines and the length must be chosen in such a way that the resulting density value is less than or equal to the defined form size. The statement is otherwise rejected.

**CHANNEL1-POSITION = \*UNCHANGED / <integer 1..255>**

Line on which the vertical tabulator character "channel 1" is to be located in the simulated loop. "Channel 1" is located on line 3 by default, but can be freely defined, taking into account the number of lines and excluding the last line of the simulated loop. The last line of a loop is always reserved for the vertical tabulator character "channel 12".

**VERTICAL-CONTROL = \*NONE**

\*NONE can only be specified for APA printers. This setting means that no output equivalent to the HP/HP90 printer can be expected.

**ROTATION-CONTROL = \*UNCHANGED / \*LOOP(...) / \*SPACING(...) / \*NONE**

Only for HP, HP90, 2050-APA, 2090-APA, 2090-TWIN printers and RSO printer types 2030-PCL, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-PCL, DJET, 9000-EPSQ, 9000-EPLQ, 9000-EPFX, 9000-PRO and 9000-PS.

This specifies a loop entry or an additional means of line feed control to be used by the form for controlling pages which are to be rotated for output (90°, 270°).

**ROTATION-CONTROL = \*NONE**

No special feed control for pages to be rotated (landscape format). This is the default for 2050-APA, 2090-APA, 2090-TWIN, 4830-PCL and 4850-PCL printers.

**ROTATION-CONTROL = \*LOOP(...)**

Output in landscape format is to be controlled by a special loop entry.

**LOOP-NAME = \*UNCHANGED / <alphanum-name 1..3>**

Name of the ROTATION loop entry for controlling output in landscape format. A ROTATION loop must be included in RSOFIL (RSO device) or in PRFILE (HP, HP90 and PCL printers).

For APA printers the name of the loop entry refers - in accordance with the naming conventions - to the page definition and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the loop entry C12 refers to the name of the page definition P10C12, which is located in SPSLIB.

**LOOP-NAME = \*UNCHANGED**

The preset ROTATION loop entry remains unchanged. Default value in the standard form entry.

**LOOP-NAME = <alphanum-name 1..3>**

Name of the new loop entry assigned to the form for controlling the output of rotated pages.

**ROTATION-CONTROL = \*SPACING(...)**

Output in landscape format is to be executed using an additional means of line feed control.

**LINES-PER-INCH = \*UNCHANGED / 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / \*DENSITY(...)**

For RSO only.

Specifies the number of lines per inch.

The value specified here should be the inverse of the desired line spacing in inches (e.g. a value of 10 to designate 1/10-inch line spacing i.e. 10 lines per inch). Line spacing is measured from the top of a character in one line to the top of the same character in the same position on the following line.

**LINES-PER-INCH = \*DENSITY(...)**

The number of lines per inch (line density) can be calculated by means of the following formula: LINES-PER-INCH = LINES / INCHES

Example: LINES = 72, INCHES = 9 → 72/9 = 8 lpi

**LINES = \*UNCHANGED / <integer 1..999>**

**INCHES = \*UNCHANGED / <integer 1..999>**

The number of lines and the length must be chosen in such a way that the resulting density value is less than or equal to the defined form size. The statement is otherwise rejected.

**CHANNEL1-POSITION = \*UNCHANGED / <integer 1..255>**

Line number of the simulated loop on which the vertical tabulator character "channel 1" is defined.

**ROTATION-CONTROL = \*NONE**

There is no separate means of feed control for pages which are to be rotated on output.

**CHARACTER-SET = \*UNCHANGED / <alphanum-name 1..3> / \*NONE**

Standard character set to be used for printing the header and trailer pages when this form is used. \*NONE is mandatory for APA printers; if any other operand value is specified, the statement is rejected. If no character set is specified for CHARS in the PRINT-DOCUMENT command, then this character set is also used for printing the file when the specified form is used.

(The character set must previously have been entered in the SPOOL parameter file by means of the ADD-SPOOL-CHARACTER-SET statement.)

**CHARACTER-SET = <alphanum-name 1..3>**

Name of the character set.

For APA printers the name of the character set refers - in accordance with the naming conventions - to the name of the coded font and is needed for printing a user document (not relevant for the header and trailer pages). Example: the name of the character set 101 refers to the names of the font resources coded font X00101, code page T10101 and font character set C00101, which are located in SPSLIB.



*Note*

The character sets for laser printers must also be defined in the PRFILE by means of the PRM utility routine (see the "PRM" manual). The same applies to printers in APA mode, where the character sets must be defined in SPSLIB. The software product TRANSLIB must be used for importing.

**ROTATION-CHARACT-SET = \*UNCHANGED / \*NONE / <alphanum-name 1..3>**

Only for RSO printer types 2030-PCL, 4812, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-PCL, DJET, 9000-EPSQ, 9000-EPLQ, 9000-EPFX, 9000-PRO and 9000-PS.

Name of a character set for pages to be rotated for output (landscape format).

A character set can be specified only if ROTATION-CONTROL was specified.

For RSO devices, a character set must be specified if ROTATION--CONTROL is specified.

If the operand value \*NONE is specified, either ROTATION-CONTROL= \*NONE must be entered for this printer type in the standard form or ROTATION-CONTROL=\*NONE must additionally be specified in this statement.

**BAND-IDENTIFICATION = \*UNCHANGED / \*NONE / <alphanum-name 4..4>**

For LP-PRINTER and LP48-PRINTER only.

The BAND-ID of the type band to be used with this form for spoolout processing. A type band specified here takes precedence over a type band specified in the device entry (ADD-SPOOL-DEVICE).

**PREFORM = \*UNCHANGED / \*NONE / <alphanum-name 1..4>**

For LP-EMULATED-PRINTER only.

Identifies the printer control string that must be sent to an LP-EMULATED-PRINTER at the start of a job.

**CHARACTER-IMAGE = \*UNCHANGED / <alphanum-name 1..3> / \*NONE**

Designates for local printers the name of a character set which must be defined in the system's PRFILE.

**TWO-UP-PROCESSING = \*UNCHANGED / \*NO / \*MODE-1 / \*MODE-2**

For HP90-PRINTER only (for all other device types only the value NO can be specified).

Specifies whether and, if yes, in which TWO-UP mode this form is to be used for printing (see the description of the HP90-PRINTER in the "SPOOL" manual).

In TWO-UP mode the value specified for LINE-SIZE must not exceed 85. With APA printers this is not checked.

**DIA-PROCESSING = \*UNCHANGED / \*NONE / \*PARAMETERS(...)**

Modifies the default settings for forms when using overlays.

**DIA-PROCESSING = \*PARAMETERS(...)**

Designates various possible settings.

**FORMS-OVERLAY = \*UNCHANGED / \*NONE / <alphanum-name 2..2>**

For HP, 9025 and 9026-RENO printers only.

Modifies the description of the EFO data overlay.

**FORMS-OVERLAY-BUFFER = \*UNCHANGED / \*NONE / <alphanum-name 1..4>**

For HP, APA and PCL printers only.

Modifies the description of the FOB data overlay.

For APA printers the description of the FOB data overlay refers - in accordance with the naming conventions - to an APA overlay and is needed for printing a user document (not relevant for the header and trailer pages). Example: the description of the FOB data overlay abcd refers to the overlay name O1abcd01, which is located in SPSLIB.

**PRINTER-RESOURCES = \*UNCHANGED / \*NONE / \*LP65(...) / \*APA(...)**

Specifies which printer functions are to be used with the specified form for output on an LP65 or APA printer.

**PRINTER-RESOURCES = \*LP65(...)**

LP65 printer attributes.

**PAGE-DEFINITION = \*UNCHANGED / <integer 1..50000>**

Number of the standard PCL file (1..50000) by means of which output of the file for printing is to be controlled.

Output of header and trailer pages is always controlled by means of the PCL file specified here, irrespective of which PCL file is specified in the PAGE-DEFINITION operand of the PRINT-DOCUMENT command.

If the standard PCL file switches the LP65 printer to EXCCW mode, neither a header page nor a trailer page is printed.

**STACKER-OFFSET = \*UNCHANGED / \*YES / \*NO**

Specifies whether the individual spoolout jobs are to be separated by offset output on the output tray. If the operand value \*YES is specified, the individual files of a PRINT family are also separated. Copies are separated only if a header page is requested for each copy.

**SEPARATOR-PAGE-TRAY = \*UNCHANGED / \*NONE / <integer 1..3>**

Specifies whether the individual spoolout jobs are to be separated by an additional (blank) page between them. A blank page is inserted on request between the copies of the same spoolout job if a header page was also requested for each.

*Note*

When printing on 2090-LIP or 2140-LIP printers (both are of the same SPOOL device type: LP65) the STACKER-OFFSET and SEPARATOR-PAGE-TRAY operands have no meaning and are ignored.

**PRINTER-RESOURCES = \*APA(...)**

APA printer attributes. (For FORMDEF and PAGEDEF, see the "SPS/BS2000-APA" manual).

**FORM-DEFINITION = \*UNCHANGED / <alphanum-name 1..8>**

Name of the FORMDEF that is used for printing the header, message, and trailer pages. The FORMDEF is also used for printing a file if no (other) FORMDEF is specified in the PRINT-DOCUMENT command or no compatible HP/HP90 output is requested via FORMDEF or specified in the PRINT-DOCUMENT command.

**PAGE-DEFINITION = \*UNCHANGED / <alphanum-name 1..8>**

Name of the PAGEDEF that is used for printing the header, message, and trailer pages. The PAGEDEF is also used for printing a file if no (other) PAGEDEF is specified in the PRINT-DOCUMENT command or no compatible HP/HP90 output is requested via FORMDEF or specified in the PRINT-DOCUMENT command.

# MODIFY-SPOOL-PARAMETERS

## Modify global SPOOL default values

**User group:** systems support

This statement modifies global SPOOL default values and scheduling criteria for local SPOOL and/or RSO in the SPOOL parameter file. Default values are defined for all SPOOL parameters, either at SPOOL startup or during the course of an SPSERVE session.

The operand value (default value) \*UNCHANGED means that existing values are not modified.

(part 1 of 5)

### MODIFY-SPOOL-PARAMETERS

HEADER-PAGE = \*PARAMETERS (...)

\*PARAMETERS(...)

SPACE-AFTER-HEADER = \*UNCHANGED / \*YES / \*NO

,FAMILY-MEMBER-HEADER = \*UNCHANGED / \*YES / \*NO

,COPY-HEADER = \*UNCHANGED / \*NO / \*YES

,CHARACTER-SET = \*UNCHANGED / \*DEFAULT / \*FILE

,PRINT-ACCOUNT-NUMBER = \*UNCHANGED / \*YES / \*NO

,PRINT-CMD-DEFAULTS = \*PARAMETERS (...)

\*PARAMETERS(...)

LINE-SIZE = \*UNCHANGED / 132 / 136

,LOCK-FILE = \*UNCHANGED / \*YES / \*NO

,LEFT-MARGIN = \*UNCHANGED / <integer 0..31>

,DESTINATION = \*UNCHANGED / \*CENTRAL / \*REMOTE(...) / \*POOL(...)

\*REMOTE(...)

DEVICE-NAME = \*UNCHANGED / <alphanum-name 1..8>

\*POOL(...)

POOL-NAME = \*UNCHANGED / <name 1..8>

continued ➔

```

, DPRINT-DESTINATION = *UNCHANGED / *CENTRAL / *DESTINATION / *POOL(...)
 *POOL(...)
 | POOL-NAME = *UNCHANGED / <alphanum-name 1..8> / *NONE
,FAMILY-PROCESSING = *UNCHANGED / *PARAMETERS(...)
 *PARAMETERS(...)
 | LOCAL = *UNCHANGED / *YES / *NO
 | ,REMOTE = *UNCHANGED / *YES / *NO
,ACCEPT-EMPTY-FILE = *UNCHANGED / *YES / *NO
,ERROR-PROCESSING = *UNCHANGED / *PARAMETERS(...)
 *PARAMETERS(...)
 | TRUNCATION = *UNCHANGED / *IGNORE / *KEEP-FILE
,RESOURCES-LOCATION = *UNCHANGED / *HOME / *SERVER
,SPOOL-OUT-OPTIONS = *PARAMETERS (...)
 *PARAMETERS(...)
 REMOTE-BUFFER-SIZE = *UNCHANGED / 4 / 8 / 16 / 32
 ,REMOTE-DEVICE-LIMIT = *UNCHANGED / <integer 0..9999>
 ,MAX-MSG-TASK-NUMBER = *UNCHANGED / <integer 0..200>
 ,START-SPOOL-LOW-VAL = *UNCHANGED / <integer 1..32767>
 ,FORM-NAME-LENGTH = *UNCHANGED / <integer 1..6>
 ,SECTION-TASK-LIMIT = *UNCHANGED / <integer 1..255>
 ,DEFAULT-SYSLST-FORM = *UNCHANGED / <alphanum-name 1..6>
 ,DEFAULT-SYSOUT-FORM = *UNCHANGED / <alphanum-name 1..6>
 ,PRIORITY = *PARAMETERS (...)
 *PARAMETERS(...)
 | REPLAY-SESSION = *UNCHANGED / <integer 60..200>
 | ,FROM-POSITIONING = *UNCHANGED / <integer 60..200>
 | ,SECTION-POSITIONING = *UNCHANGED / <integer 60..200>

```

continued ➔

(part 3 of 5)

```

,CHECKPOINT-INTERVAL = *PARAMETERS (...)
 *PARAMETERS(...)
 |
 | LINE-PRINTERS = *UNCHANGED / <integer 1..32767>
 | ,PAGE-PRINTERS = *UNCHANGED / <integer 1..32767>
 | ,REMOTE-PRINTERS = *UNCHANGED / <integer 1..32767>
,DEVICE-TYPE = *PARAMETERS (...)
 *PARAMETERS(...)
 |
 | ,LP-PRINTER = *UNCHANGED / *YES / *NO
 | ,HP-PRINTER = *UNCHANGED / *NO / *YES(...)
 | *YES(...)
 | |
 | | FORMS-OVERLAY-BUFFER = *UNCHANGED / 0 / 672 / 1344
 | | ,CHARACTER-SET-NUMBER = *UNCHANGED / 4 / 36 / 64
 | | ,ROTATION = *UNCHANGED / *YES / *NO
 | ,LP65-PRINTER = *UNCHANGED / *YES / *NO
 | ,HP90-PRINTER = *UNCHANGED / *YES(...) / *NO
 | *YES(...)
 | |
 | | FORMS-OVERLAY-BUFFER = *UNCHANGED / <integer 1..32767>
 | | ,CHARACTER-SET-NUMBER = *UNCHANGED / <integer 1..64>
 | | ,FORMS-OVERLAY = *UNCHANGED / *YES / *NO
 | | ,RASTER-PATTERN-MEM = *UNCHANGED / <integer 4096 ..65535>
 | | ,ROTATION = *UNCHANGED / *YES / *NO
 | ,APA-PRINTER = *UNCHANGED / *YES / *NO
 | ,TWIN-PRINTER = *UNCHANGED / *YES / *NO
 | ,VIRTUAL-PRINTER = *UNCHANGED / *ALLOWED / *NOT-ALLOWED
 | ,PCL-PRINTER = *UNCHANGED / *YES / *NO
,REC-RULES-PREFIX = *UNCHANGED / <partial-filename 2..38>
,PRINTER-PARAM-PREFIX = *UNCHANGED / <partial-filename 2..38>
,FILTER-TASK-LIMIT = *UNCHANGED / <integer 1..32>
,SPOOLOUT-SIZE = *UNCHANGED / *PAM-PAGES / *LINES(...)

```

continued ➔

```

*LINES(...)
 | LINES-FACTOR = *UNCHANGED / <integer 8..100>
,MIN-LINES-PER-PAGE = *UNCHANGED / *STD / <integer 1..255>
,RSO-OPTIONS = *PARAMETERS (...)

*PARAMETERS(...)
 | CONTROLLER-LIMIT = *UNCHANGED / <integer 1..200>
 | ,CONTROLLER-DEV-LIMIT = *UNCHANGED / <integer 1..1024>
 | ,JOB-CONTROLLER-LIMIT = *UNCHANGED / <integer 1..200>
 | ,CHECK-PRINTER-TIME = *UNCHANGED / <integer 2..10>
 | ,RETRY-TIME = *UNCHANGED / <integer 1..600>
 | ,RELEASE-MEMORY = *UNCHANGED / *YES / *NO
,OLTP-OPTIONS = *PARAMETERS (...)

*PARAMETERS(...)
 | TASK-LIMIT = *UNCHANGED / <integer 1..200>
 | ,TASK-DEVICE-LIMIT = *UNCHANGED / <integer 1..1024>
,DPRINT-OPTIONS = *PARAMETERS (...)

*PARAMETERS(...)
 | SERVER-TASK-LIMIT = *UNCHANGED / <integer 1..255>
 | ,RESOURCES-TASK-LIMIT = *UNCHANGED / <integer 1..32>
 | ,REMOTE-JOB-PRIORITY = *UNCHANGED / <integer 30..255>
 | ,CONNECTION-TIMEOUT = *UNCHANGED / <integer 1..32767>
 | ,TRANSFER-ADMISSION = *UNCHANGED / <alphanum-name 8..32> /
 | <c-string 8..32 with-low> / <x-string 15..64>
 | ,DFTM-WAITING-TIME = *UNCHANGED / <integer 20..1800>
,CENTRAL-SCHEDULING = *PARAMETERS (...)

```

continued ➔

```

*PARAMETERS(...)
 ACCOUNT = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,CHARACTER-SET-NUMBER = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,CLASS = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,FOB-SIZE = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,FORM = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,FORMS-OVERLAY = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,PRIORITY = UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,ROTATION = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,SPOOLOUT-NAME = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,USER-IDENTIFICATION = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
,JOB-SEQUENCE = *UNCHANGED / *NONE / list-poss(8): *ACCOUNT / *CLASS /
 *CHARACTER-SET / *FOB-NAME / *FORM / *FORMS-OVERLAY /
 *SPOOLOUT-NAME
,JOB-PRIORITY = *UNCHANGED / list-poss(2): *AGE / *PRIORITY
,RSO-SCHEDULING = *PARAMETERS (...)
*PARAMETERS(...)
 DEVICE-WEIGHT = *PARAMETERS (...)
 *PARAMETERS(...)
 ACCOUNT = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,CLASS = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,FORM = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,PRIORITY = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,SPOOLOUT-NAME = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
 ,USER-IDENTIFICATION = *UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128
,JOB-SEQUENCE = *UNCHANGED / *NONE / list-poss(5): *ACCOUNT / *CLASS / *FORM /
 *SPOOLOUT-NAME / *USER-IDENTIFICATION
,JOB-PRIORITY = *UNCHANGED / list-poss(2): *AGE / *PRIORITY

```

*Note for compatibility reasons*

The old ERASE-DISKETTE parameter and SPOOLIN-OPTIONS structure are still accepted in batch and procedure mode.



## Operands

### **HEADER-PAGE = \*PARAMETERS(...)**

Specifies how and with what character set header pages are to be printed.

#### **SPACE-AFTER-HEADER = \*UNCHANGED / \*YES / \*NO**

Specifies whether the printer is to skip to vertical tabulator character “channel 1” following output of the header page.

#### **FAMILY-MEMBER-HEADER = \*UNCHANGED / \*YES / \*NO**

Specifies whether a header page is to be output for each spoolout job of the spoolout group, or just one header page for the entire spoolout group.

#### **COPY-HEADER = \*UNCHANGED / \*YES / \*NO**

Specifies whether a header page is to be output for each copy or just one header page for all copies.

#### **CHARACTER-SET = \*UNCHANGED / \*DEFAULT / \*FILE**

Determines the character set to be used for printing the header pages.

#### **CHARACTER-SET = \*DEFAULT**

Specifies that the standard character set from the form definition is to be used for the header pages (see the ADD-SPOOL-FORM statement, page [page 229](#)).

#### **CHARACTER-SET = \*FILE**

For local SPOOL jobs, the same character set is to be used for the header pages as for the file to be printed. If more than one character set is specified in PRINT-DOCUMENT, the header page is printed using the first character set specified in the CHARS operand. For RSO this value is ignored, i.e. the header page is always printed using the standard character set.

#### **PRINT-ACCOUNT-NUMBER = \*UNCHANGED / \*NO / \*YES**

Specifies whether the account number is to be printed on the header page. When a new SPOOL parameter file is created, the operand is given the default value \*YES. If the value \*NO is specified, the account number is not printed on the header page but part of the mailing address (the first 8 of the last 9 characters) instead.

### **PRINT-CMD-DEFAULTS = \*PARAMETERS(...)**

Specifies the default values for the PRINT-DOCUMENT command.

#### **LINE-SIZE = \*UNCHANGED / 132 / 136**

The entry is not interpreted by SPOOL.

#### **LOCK-FILE = \*UNCHANGED / \*YES / \*NO**

Determines whether the file to be printed is to be locked until printing is completed. Tape files and PLAM library elements are not locked.

**LEFT-MARGIN = \*UNCHANGED / <integer 0..31>**

For local SPOOL only.

Specifies the default value for the LEFT-MARGIN or SHIFT operand in the PRINT-DOCUMENT command.

The default value for RSO jobs is defined in ADD-SPOOL-DEVICE/MODIFY-SPOOL-DEVICE/EDIT-SPOOL-DEVICE.

**DESTINATION = \*UNCHANGED / \*CENTRAL / \*REMOTE(...) / \*POOL(...)**

Defines the destination of spoolout jobs.

A local spoolout job (i.e. neither an RSO device nor an RSO device pool is specified in PRINT-DOCUMENT) is processed using the default values given here. The job is sent either to a freely selectable local printer (\*CENTRAL), to the specified RSO printer (REMOTE(DEVICE-NAME..)) or to the specified (local or RSO) device pool.

This setting does not affect RSO jobs, i.e. spoolout jobs for which an RSO device or an RSO device pool was specified in the PRINT-DOCUMENT command.

The \*CENTRAL value replaces the old \*LOCAL value. \*LOCAL will continue to be supported for old procedures for reasons of compatibility.

**DESTINATION = \*REMOTE(...)**

Output on an RSO printer.

**DEVICE-NAME = \*UNCHANGED / <alphanum-name 1..8>**

Name of the remote printer on which the spoolout job is to be printed.

**DESTINATION = \*POOL(...)**

Output is directed to a device pool.

**POOL-NAME = \*UNCHANGED / <name 1..8>**

Name of the device pool containing the printer on which the spoolout job is to be printed.

#### *Note*

If DEVICE-NAME=\*ANY-LOCAL-PRINTER(DEVICE-TYPE=\*ANY) is specified in the PRINT-DOCUMENT command, it should be noted that the default value entered in the SPOOL globals (PRINT-CMD-DEFAULTS) takes precedence over the default value specified in PRINT-DOCUMENT.

**DPRINT-DESTINATION = \*UNCHANGED / \*DESTINATION / \*CENTRAL /\*POOL(...)**

Only if Dprint is loaded, otherwise this operand is ignored.

Designates the destination of print jobs for the PRINT-DOCUMENT command. The default value is \*DESTINATION (for the default generation or migration of the SPOOL parameter file).

**DPRINT-DESTINATION = \*DESTINATION**

There is no particular Dprint destination, in other words the destination that is specified by the DESTINATION operand is used.

**DPRINT-DESTINATION = \*CENTRAL**

The destination is within the local cluster; this means all Dprint and non-Dprint printers that are connected to the local host.

**DPRINT-DESTINATION = \*POOL(...)**

The destination is a Dprint printer pool.

**POOL-NAME = \*UNCHANGED / <alphanum-name 1..8> / \*NONE**

Name of the printer pool.

As the PRINT-DOCUMENT command is mapped to the configuration file when it is executed, the printer pool defined here must be included in the configuration file.

*Notes*

- Once the DPRINT-DESTINATION operand has been stored in the SPOOL parameter file, it is the responsibility of the SPOOL administrator to modify the operand.
- Checking of the DESTINATION operand from the global SPOOL parameter record is always performed in the SPOOL parameter file, i.e. the device name or pool name must be defined in the SPOOL parameter file. In contrast, there is no check of the DPRINT-DESTINATION operand on execution of the SPOOL parameters. This operand could also be set, therefore, when Dprint is not loaded and the configuration file is not accessible. During checking of the PRINT-DOCUMENT command, however, a check is carried out as to whether there is a connection to printers or printer pools.
- The check of the destination of a print job when DESTINATION is specified in the PRINT-DOCUMENT command is performed as follows:
  1. If Dprint is not loaded, the check applies solely to the SPOOL parameters.
  2. If Dprint is loaded, the check is performed first by the configuration file. If the printer or printer group is not defined in the configuration, it will then be checked in terms of the SPOOL parameters.
- Refer also to the description of the PRINT-DOCUMENT command in the “Spool & Print - Commands” manual.

**FAMILY-PROCESSING = \*UNCHANGED / \*PARAMETERS(...)**

Specifies whether several files or library elements specified together in a PRINT-DOCUMENT command are to be treated as a PRINT family (common TSN). This is the default value for the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command. An entry in PRINT-DOCUMENT overwrites this value.

**FAMILY-PROCESSING = \*PARAMETERS(...)**

Default value for the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command, separated into local SPOOL and RSO jobs.

**LOCAL = \*UNCHANGED / \*YES / \*NO**

Default value for the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command for local spoolout jobs.

**REMOTE = \*UNCHANGED / \*YES / \*NO**

Default value for the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command for RSO jobs.

**ACCEPT-EMPTY-FILE = \*UNCHANGED / \*YES / \*NO**

Behavior of PRINT-DOCUMENT if empty SAM files were specified in the command.

**ACCEPT-EMPTY-FILES = \*YES**

The command is accepted; a header page and a trailer page are printed.

**ACCEPT-EMPTY-FILES = \*NO**

The command is rejected.

**ERROR-PROCESSING = \*UNCHANGED / \*PARAMETERS(...)**

Specifies whether a file for which DELETE-FILE=\*YES was specified in the PRINT-DOCUMENT command is really to be deleted if the specified error occurs during execution of the command.

**ERROR-PROCESSING = \*PARAMETERS(...)**

The parameters for file processing are redefined.

**TRUNCATION = \*UNCHANGED / \*IGNORE / \*KEEP-FILE**

If lines are truncated while a job is being processed (LINE TRUNCATION), the file is either to be deleted (\*IGNORE) or not deleted (KEEP-FILE) after processing.

**RESOURCES-LOCATION = \*UNCHANGED / \*HOME / \*SERVER**

Designates the source that is necessary for execution of the PRINT-DOCUMENT command and the print job. The default value is \*HOME.

**RESOURCES-LOCATION = \*HOME**

The source is the client host.

**RESOURCES-LOCATION = \*SERVER**

The source is the server host.

**SPOOLOUT-OPTIONS = \*PARAMETERS(...)**

Defines the criteria for spoolout control.

**REMOTE-BUFFER-SIZE = \*UNCHANGED / 4 / 8 / 16 / 32**

RSO only.

Buffer size (in Kbytes) that is available to an RSO printer for data exchange between RSO controller and SRAM.

*Note*

The larger the buffer, the faster the printing speed, but also the fewer printers that can be served simultaneously by one controller.

**REMOTE-DEVICE-LIMIT = \*UNCHANGED / <integer 0..9999>**

RSO only.

Maximum number of concurrently active RSO printers, i.e. RSO devices activated with START-PRINTER-OUTPUT.

**MAX-MSG-TASK-NUMBER = \*UNCHANGED / <integer 0..200>**

RSO only.

Maximum number of message tasks that can be active concurrently for public devices (in the event of an error a message to which a response can be made is issued at the console).

**START-SPOOL-LOW-VAL = \*UNCHANGED / <integer 1..32767>**

Smallest value that can be specified for the START-SPOOL operand of the PRINT-DOCUMENT command.

**FORM-NAME-LENGTH = \*UNCHANGED / <integer 1..6>**

Specifies the number of characters to be taken into account in form names for scheduling.

When a new SPOOL parameter file is created, the operand is given the default value 6.

*Example*

FORM-NAME-LENGTH=3 is specified and a printer was assigned with FORM=(STDA,FRM,FORM01). All SPOOL jobs that use the forms STDB, FRM, FRM01 and FORZZZ can also be processed on the device. In this case SPOOL interprets everything beyond the first three characters of the form name as a comment.

**SECTION-TASK-LIMIT = \*UNCHANGED / <integer 1..255>**

Specifies how many SECTION controller tasks can be active simultaneously. The initial value is 1.

**DEFAULT-SYSLST-FORM = \*UNCHANGED / <alphanum-name 1..6>**

Specifies the form with which the standard SYSLST files are to be printed if no form has been specified in the PRINT-DOCUMENT command. The default value is STD. The entry is not checked. If the SYSLST file cannot be printed, LOGOFF processing will, where appropriate, issue the message SCP0872 to SYSOUT.

**DEFAULT-SYSOUT-FORM = \*UNCHANGED / <alphanum-name 1..6>**

Specifies the form with which the standard SYSOUT files are to be printed if no form has been specified in the PRINT-DOCUMENT command. The default value is \*STD.

**PRIORITY = \*PARAMETERS(...)**

Local SPOOL only.

Defines the priority of the respective spoolout task for a given processing operation.

**REPLAY-SESSION = \*UNCHANGED / <integer 60..200>**

Priority of the spoolout task for replay tape processing.

**FROM-POSITIONING = \*UNCHANGED / <integer 60..200>**

Priority of the spoolout task which is to print a file as of a given page/line (FROM or TO operand of the PRINT-DOCUMENT command; e.g. PRINT-DOCUMENT file, TO=-3 prints the last three lines of the file)

**SECTION-POSITIONING = \*UNCHANGED / <integer 60..200>**

Priority of the spoolout task which is to print a file as of a given section (SECTION operand of the PRINT-DOCUMENT command).

**CHECKPOINT-INTERVAL = \*PARAMETERS(...)**

Defines the number of print pages after which a checkpoint (restart point after a system crash) is to be set.

**LINE-PRINTERS = \*UNCHANGED / <integer 1..32767>**

Checkpoint interval for line printers.

**PAGE-PRINTERS = \*UNCHANGED / <integer 1..32767>**

Checkpoint interval for page printers.

**REMOTE-PRINTERS = \*UNCHANGED / <integer 1..32767>**

Checkpoint interval for RSO printers.

*Note*

If the values defined are too small (especially for laser printers), this will adversely affect the performance of the spoolout tasks.

**DEVICE-TYPE = \*PARAMETERS(...)**

Specifies for which printer types SPOOL jobs can be generated.

(The printers need not be present if the printouts are made using replay tapes.)

**LP-PRINTER = \*UNCHANGED / \*YES / \*NO**

SPOOL jobs for printer types LP, LP48 and LP65 can be generated.

**HP-PRINTER = \*UNCHANGED / \*NO / \*YES(...)**

SPOOL jobs for HP printers can be generated.

**HP-PRINTER = \*YES(...)**

Specifications for HP-PRINTER.

**FORMS-OVERLAY-BUFFER = \*UNCHANGED / 0 / 672 / 1344**

SPOOL jobs for HP printers with or without a graphics buffer of the specified maximum size can be generated.

**CHARACTER-SET-NUMBER = \*UNCHANGED / 4 / 36 / 64**

Maximum number of character sets that can be used for output on HP printers.

**ROTATION = \*UNCHANGED / \*YES / \*NO**

Specifies whether the page rotation module can be used for output on HP printers.

**LP65-PRINTER = \*UNCHANGED / \*YES / \*NO**

Specifies whether a validation of spoolout jobs is to be performed on LP65-PRINTER.

**HP90-PRINTER = \*UNCHANGED / \*NO / \*YES(...)**

Specifies whether a validation of spoolout jobs is to be performed on HP90-PRINTER.

**HP90-PRINTER = \*YES(...)**

A validation of spoolout jobs is to be performed on HP90-PRINTER. The permissible attributes for HP90-PRINTER are defined in the following substructure.

**FORMS-OVERLAY-BUFFER = \*UNCHANGED / <integer 1..32767>**

Maximum size of an FOB data overlay that can be loaded into each of the available HP90-PRINTERS during the current system session (672 or 1344).

**CHARACTER-SET-NUMBER = \*UNCHANGED / <integer 1..64>**

Maximum number of character sets that can be loaded into each of the available HP90-PRINTERS during the current system session (23 or 46).

**FORMS-OVERLAY = \*UNCHANGED / \*YES / \*NO**

Specifies whether EFO data overlays (FORMS-OVERLAY operand of the PRINT-DOCUMENT command) can be loaded into HP90-PRINTER during the current system session instead of film overlays.

**RASTER-PATTERN-MEM = \*UNCHANGED / <integer 4096 ..65535>**

Specifies the size of the RPM available to each HP90-PRINTER (for FOB data overlays and character sets) for the duration of the system session.

**ROTATION = \*UNCHANGED / \*YES / \*NO**

Specifies whether or not a page rotation module is available.

**APA-PRINTER = \*UNCHANGED / \*YES / \*NO**

Specifies whether a validation of spoolout jobs is to be performed on APA-PRINTER.

**TWIN-PRINTER = \*UNCHANGED / \*YES / \*NO**

Specifies whether a validation of spoolout jobs is to be performed on TWIN-PRINTER.

**VIRTUAL-PRINTER = \*UNCHANGED / \*ALLOWED / \*NOT-ALLOWED**

Specifies whether a spoolout job can be processed on a virtual printer.

**PCL-PRINTER = \*UNCHANGED / \*YES / \*NO**

Allows systems support to specify whether spoolout job can be processed on a PCL printer.

**REC-RULES-PREFIX = \*UNCHANGED / <partial-filename 2..38>**

Only for RSO. This defines the prefix for the name of the file containing the recovery rules; it may include the catalog ID and the user ID. The preset value is: \$SYSSPOOL.SYSPAR.REC-RULES... .

**PRINTER-PARAM-PREFIX = \*UNCHANGED / <partial-filename 2..38>**

Specifies the prefix for each printer parameter file. The preset value is: \$SYSSPOOL.SYSPAR.PRINTER-PARAM.' .

*Note*

Printer parameter source files must at least be cataloged under the same catalog and user IDs. The suffix of each printer parameter file is defined and modified in the PRINTER-PARAM-FILE operand of the ADD/MODIFY-SPOOL-DEVICE statement.

**FILTER-TASK-LIMIT = \*UNCHANGED / <integer 1..32>**

Specifies how many filter tasks can be active simultaneously. Default: 16.

**SPOOLOUT-SIZE = \*UNCHANGED / \*PAM-PAGES / \*LINES(...)**

Specifies whether the size of the file to be output is to be indicated in PAM pages or in lines in the SHOW-USER-STATUS command.

**SPOOLOUT-SIZE = \*PAM-PAGES**

Output is in PAM pages.

**SPOOLOUT-SIZE = \*LINES(...)**

Output is in lines.

**LINES-FACTOR = \*UNCHANGED / <integer 8..100>**

Specifies the average number of data records in a PAM block.

*Note*

For inactive spoolouts, only this estimated value is output by means of the SHOW-USER-STATUS command. For active spoolouts, the current number of printed lines is also output.

**MIN-LINES-PER-PAGE = \*UNCHANGED / \*STD / <integer 1..255>**

Minimum number of lines that can be printed on one page of a standard form (\*STD).

**MIN-LINES-PER-PAGE = \*STD**

The value is determined by the system, which selects the smallest value from all STD forms with a line spacing of 6 lpi. Whenever an STD form is added, modified or deleted, or MODIFY-SPOOL-PARAMETERS is entered, this value is recalculated using the operand value MIN-LINES-PER-PAGE=\*STD.



**MIN-LINES-PER-PAGE = <integer>**

Value specifying the least possible number of lines per page. An existing value can only be modified by specifying a new value in another MODIFY-SPOOL-PARAMETERS statement.

*Note*

The number of lines that can be printed on a page depends on the size of the page and on the loop used.

The loop cannot be used for calculating the value of MIN-LINES-PER-PAGE because

- on the one hand, the loop is freely selectable in PRINT-DOCUMENT
- on the other hand, the characteristics of the loops, stored in the PRFILE and maintained using P1 programs, are not subject to SPOOL control. The latter is also the reason why SPOOL assumes a default value for line spacing (6 lpi). Although systems support can change this value, SPOOL cannot calculate a value for MIN-LINES-PER-PAGE until STD (6 lpi) once more applies.

**RSO-OPTIONS = \*PARAMETERS(...)**

Defines attributes for RSO operation.

**CONTROLLER-LIMIT = \*UNCHANGED / <integer 1..200>**

Maximum number of RSO controllers permitted during an RSO session.

**CONTROLLER-DEV-LIMIT = \*UNCHANGED / <integer 1..1024>**

Maximum number of printers that can be served by an RSO controller.

*Notes*

- In the ADD-SPOOL-DEVICE statement it is possible to specify that an RSO device is to be served by one RSO controller only.
- If more RSO devices are activated than are defined here, depending on the CONTROLLER-LIMIT the system automatically generates a new controller task (and a new SRAM task).
- If all devices of a controller task are deactivated, the task automatically terminates itself together with the associated SRAM task.

**JOB-CONTROLLER-LIMIT = \*UNCHANGED / <integer 1..200>**

Maximum number of JOB-RSO controllers permitted during an RSO run.  
The default value is 10.

**CHECK-PRINTER-TIME = \*UNCHANGED / <integer 2..10>**

Intervals (in minutes) at which printers are checked for the TIMEOUT error condition.

*Note*

In the worst case, this time is added to the TIME-OUT-VALUE for a printer if no print acknowledgment is sent.

**RETRY-TIME = \*UNCHANGED / <integer 1..600>**

Interval (in seconds) between two attempts to send a REPEAT-MESSAGE to the printer following certain error conditions. After elimination of the error, printing is resumed automatically.

**RELEASE-MEMORY = \*UNCHANGED / \*YES / \*NO**

Specifies whether DMS I/O areas are to be released if there are no more spoolout jobs pending for a given printer.

*Note*

In this way (by releasing these memory areas) the use of address space by an RSO controller can be dynamically reduced, thus enabling more devices to be supported. Performance is, however, adversely affected due to the fact that these memory areas have to be requested and released again as needs dictate.

**OLTP-OPTIONS = \*PARAMETERS(...)**

Defines the characteristics for OLTP operation.

**TASK-LIMIT = \*UNCHANGED / <integer 1..200>**

Maximum number of OLTP tasks permitted during a run.  
The default value is 10.

**TASK-DEVICE-LIMIT = \*UNCHANGED / <integer 1..1024>**

Maximum number of printers that can be operated in an OLTP task.  
The default value is 50.

*Note*

OLTP management is dynamic. Each OLTP task manages the a given number of printers, by means of which the size of the memory pool required by the OLTP task is determined.

**DPRINT-OPTIONS = \*PARAMETERS (...)**

The SPOOL administrator makes certain settings here that are used by Dprint.

**SERVER-TASK-LIMIT = \*UNCHANGED / <integer 1..255>**

Maximum number of tasks that can be generated at the same time to control remote queries. The default setting is 16.

**RESOURCES-TASK-LIMIT = \*UNCHANGED / <integer 1..32>**

Maximum number of tasks that can be generated at the same time to control remote queries and file containers. The default setting is 8.

**REMOTE-JOB-PRIORITY = \*UNCHANGED / <integer 30..255>**

Priority for jobs from remote hosts. The default setting is 255.

**CONNECTION-TIMEOUT = \*UNCHANGED / <integer 1..32767>**

Maximum time (in minutes) after which an attempt to reach a partner host during opening of a connection is rejected. The default setting is 2.

**TRANSFER-ADMISSION = \*UNCHANGED / <alphanum-name 8..32> / <c-string 8..32 with-low> / <x-string 15..64>**

Transfer access authorization for file transfer by Dprint. This must be identical to that assigned by the administrator in CREATE-FT-PROFILE-NAME=..., TRANSFER-ADMISSION. This is not displayed, however, for security reasons. The initialized value is "FTDPRINT".

**DFTM-WAITING-TIME = \*UNCHANGED / <integer 20..1800>**

Specifies the waiting time in seconds for the DFTM task to check the loops. This is the minimum time between WFT and FT status

**CENTRAL-SCHEDULING = \*PARAMETERS(...)**

Scheduling criteria for local SPOOL.

*Note*

Changes do not come into effect until the following SPOOL session.

**DEVICE-WEIGHT = \*PARAMETERS(...)**

Determines the weight of scheduling criteria defined for certain devices by means of START-PRINTER-OUTPUT. Local SPOOL jobs which can be processed on any of a number of free devices are output on the device with the highest "weight".

**ACCOUNT = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the ACCOUNT parameter.

**CHARACTER-SET-NUMBER = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the CHARACTER-SET-NUMBER parameter.

**CLASS = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the CLASS parameter.

**FOB-SIZE = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the FOB-SIZE parameter.

**FORM = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the FORM parameter.

**FORMS-OVERLAY = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the FORMS-OVERLAY parameter.

This concerns film overlays for HP laser printers.

**PRIORITY = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the PRIORITY parameter.

**ROTATION = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

For HP laser printers only.

Weight for the ROTATION parameter.

**SPOOLOUT-NAME = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the SPOOLOUT-NAME parameter.

**USER-IDENTIFICATION = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the USER-IDENTIFICATION parameter.

**JOB-SEQUENCE = \*UNCHANGED / \*NONE / list-poss(8): \*ACCOUNT / \*CLASS / \*CHARACTER-SET / \*FORMS-OVERLAY / \*FORM / \*JOB-NAME / \*USER-IDENTIFICATION / \*SPOOLOUT-NAME**

Determines the sequence in which spoolout jobs are to be processed.

### *Example*

JOB-SEQUENCE=(FORM,FORMS-OVERLAY), i.e. all jobs are processed sequentially using the same form, starting with those jobs which additionally use the same film overlay or EFO data overlay.

If there are a number of jobs with the specified scheduling criteria, the processing sequence of these equivalent jobs is controlled via the JOB-PRIORITY operand. The same applies if none (no more) of the waiting jobs match the criteria specified in the JOB-SEQUENCE operand.

Default value for local SPOOL: JOB-SEQUENCE=(FORM,FORMS-OVERLAY)

**JOB-PRIORITY = \*UNCHANGED / \*NONE / list-poss(2): \*AGE / \*PRIORITY**

The SPOOL jobs are to be processed according to priority first, then, given the same priority, according to age.

**JOB-PRIORITY = \*AGE**

All SPOOL jobs are to be processed exclusively in chronological order. This means also that there are no equivalent jobs.

**JOB-PRIORITY = list-poss(2): \*AGE / \*PRIORITY**

Specifies that the SPOOL jobs are to be processed according to priority first, then, if they have the same priority, in chronological order (time at which PRINT-DOCUMENT was issued).

Default value: list-poss(2): \*AGE / \*PRIORITY

**RSO-SCHEDULING = \*PARAMETERS(...)**

Scheduling criteria for RSO jobs.

### *Note*

Changes do not become effective until the following RSO session.

**DEVICE-WEIGHT = \*PARAMETERS(...)**

Determines the weight of scheduling criteria defined for certain devices by means of START-PRINTER-OUTPUT. RSO jobs which can be processed on a number of devices are output on the device with the highest "weight".

**ACCOUNT = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the ACCOUNT parameter.

**CLASS = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the CLASS parameter.

**FORM = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the FORM parameter.

**PRIORITY = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the PRIORITY parameter.

**SPOOLOUT-NAME = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the SPOOLOUT-NAME parameter.

**USER-IDENTIFICATION = \*UNCHANGED / 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128**

Weight for the USER-IDENTIFICATION parameter.

Default value for RSO: always 0 (i.e. the first suitable device to become free is accepted).

**JOB-SEQUENCE = \*UNCHANGED / \*NONE / list-poss(5): \*ACCOUNT / \*CLASS / \*FORM / \*SPOOLOUT-NAME / \*USER-IDENTIFICATION**

Determines the sequence in which RSO jobs are to be processed.

*Example*

JOB-SEQUENCE=(\*CLASS,\*FORM). This means that all jobs of the same spoolout class are processed sequentially, starting with those which additionally use the same form.

If there are a number of equivalent jobs, the processing sequence is controlled via the JOB-PRIORITY operand. The same applies if none (no more) of the waiting jobs match the criteria specified in the JOB-SEQUENCE operand.

Default value: NONE (i.e. only JOB-PRIORITY is used).

**JOB-PRIORITY = \*UNCHANGED / list-poss(2): \*AGE / \*PRIORITY**

The RSO jobs are to be processed according to priority first, then, given the same priority, according to age.

**JOB-PRIORITY = \*AGE**

All RSO jobs are to be processed exclusively in chronological order. This means also that there are no equivalent jobs.

**JOB-PRIORITY = list-poss(2): \*AGE / \*PRIORITY**

Specifies that the RSO jobs are to be processed according to priority first, then, if they have the same priority, in chronological order (based on the time at which the PRINT-DOCUMENT command was issued.

Default value: list-poss(2): \*AGE / \*PRIORITY

The operands in the table below can be specified as scheduling criteria in the higher-ranking operands:

- DEVICE-WEIGHT (W)
- JOB-SEQUENCE (S)
- JOB-PRIORITY (P)

| Operands      | Valid for:  |   |   |     |   |   | Meaning                                                     |
|---------------|-------------|---|---|-----|---|---|-------------------------------------------------------------|
|               | local SPOOL |   |   | RSO |   |   |                                                             |
| Name          | W           | S | P | W   | S | P |                                                             |
| CLASS         | x           | x |   | x   | x |   | Spoolout class of the job                                   |
| FORM          | x           | x |   | x   | x |   | Form used                                                   |
| USER-IDENTIF  | x           | x |   | x   | x |   | User ID to which the job belongs                            |
| FORMS-OVERLAY | x           | x |   |     |   |   | Film overlay                                                |
| SPOOLOUT-NAME | x           | x |   | x   | x |   | Job name                                                    |
| ACCOUNT       | x           | x |   | x   | x |   | Job account number                                          |
| FOB-NAME      |             | x |   |     |   |   | Name of the FOB data overlay called up by the job           |
| CHARACTER-SET |             | x |   |     |   |   | Character set or character set pool used (HP printers only) |
| PRIORITY      | x           |   | x | x   |   | x | Job priority                                                |
| AGE           |             |   | x |     |   | x | Time the job spends waiting in the queue                    |
| ROTATION      | x           |   |   |     |   |   | Page rotation (HP printers only)                            |
| FOB-SIZE      | x           |   |   |     |   |   | Size of the FOB used                                        |
| CH-S-NUMBER   | x           |   |   |     |   |   | Number of character sets used                               |

The operand value \*UNCHANGED signifies that the default values predefined in the SPOOL parameter file remain valid.

The following values are defined at the first SPOOL startup (the values can be modified subsequently by means of the MODIFY-SPOOL-PARAMETERS statement, in which case they take effect either immediately or after the next SPOOL startup):

```

HEADER-PAGE:
 SPACE-AFTER-HEADER = YES
 FAMILY-MEMBER-HEADER = YES
 COPY-HEADER = NO
 CHARACTER-SET = DEFAULT
 PRINT-ACCOUNT-NUMBER = YES
PRINT-CMD-DEFAULTS:
 LINE-SIZE = 136
 LOCK-SIZE = NO
 LEFT-MARGIN = 0
 DESTINATION = CENTRAL
 DPRINT-DESTINATION = *DESTINATION
 FAMILY-PROCESSING = YES
 ACCEPT-EMPTY-FILES = NO
 ERROR-PROCESSING = (TRUNC=IGNORE)
 RESOURCES-LOCATION = CLIENT
SPOOL-OUT-OPTIONS:
 ERASE-DISKETTE = NO
 REMOTE-BUFFER-SIZE = 4
 REMOTE-DEVICE-LIMIT = 0
 MAX-MSG-TASK-NUMBER = 20
 START-SPOOL-LOW-VAL = 50
 FORM-NAME-LENGTH = 6
 SECTION-TASK-LIMIT = 1
 DEFAULT-SYSLST-FORM = STD
 DEFAULT-SYSOUT-FORM = STD
 PRIORITY(REPLAY-SESSION)= 200
 PRIORITY(FROM-POSITIONING) = 200
 PRIORITY(SECTION-POSITIONING)=200
CHECKPOINT-INTERVAL:
 LINE-PRINTERS = 10
 PAGE-PRINTERS = 100
 REMOTE-PRINTERS = 10
DEVICE-TYPE:
 LP = NO
 HP = YES
 FORMS-OVERLAY-BUFFER = 0
 CHARACTER-SET-NUMBER = 4
 ROTATION = NO
 LP65 = NO
 HP90 = NO
 FORMS-OVERLAY-BUFFER=1344
 CHARACTER-SET-NUMBER = 64
 FORMS-OVERLAY = YES
 RASTER-PATTERN-MEM = 4096
 ROTATION = NO
 APA = NO
 TWIN = NO
 VIRTUAL-PRINTER = NOT-ALLOWED
REC-RULES-PREFIX = $SYSSPOOL.SYSPAR.REC-RULES.
 PRINTER-PARAM-PREFIX = $SYSSPOOL.SYSPAR.PRINTER-PARAM.
 FILTER-TASK-LIMIT = 16
SPOOL-OUT-SIZE :
 LINES-FACTOR = 14 (if SP-SIZE=LINES; 0 if PAM
 MIN-LINES-PER-PAGE = 66 =(110 * 6/10); see note)
SPOOLIN-OPTIONS:
 LOGGING-DISKETTE = YES
RSO-OPTIONS:
 CONTROLLER-LIMIT = 10
 CONTROLLER-DEV-LIMIT = 50

```

```

JOB-CONTROLLER-LIMIT = 10
CHECK-PRINTER-TIME = 2
RETRY-TIME = 120
RELEASE-MEMORY = YES
OLTP-OPTIONS:
TASK-LIMIT = 10
TASK-DEVICE-LIMIT = 50
DPRINT-OPTIONS:
SERVER-TASK-LIMIT = 16
RESOURCES-TASK-LIMIT = 8
REMOTE-JOB-PRIORITY = 240
CONNECTION-TIMEOUT = 32
DFTM-WAITING-TIME = 65
CENTRAL-SCHEDULING:
DEVICE-WEIGHT = (PRIO=128,FORM=16,USERID=16,F-0=16,CLASS=16)
JOB-SEQUENCE = (FORM,F-0)
JOB-PRIORITY = (PRIO,AGE)
RSO-SCHEDULING:
DEVICE-WEIGHT = ()
JOB-SEQUENCE = ()
JOB-PRIORITY = (PRIO,AGE)
NEXT-CENTRAL-SCHEDULING:
DEVICE-WEIGHT = (PRIO=128,FORM=16,USERID=16,F-0=16,CLASS=16)
JOB-SEQUENCE = (FORM,F-0)
JOB-PRIORITY = (PRIO,AGE)

NEXT-RSO-SCHEDULING:
DEVICE-WEIGHT = ()
JOB-SEQUENCE = ()
JOB-PRIORITY = (PRIO,AGE)

```

*Note*

The value given for MIN-LINES-PER-PAGE is dependent on the SPOOL/RSO configuration and is calculated on the basis of the smallest PAGE-SIZE value of the standard forms defined for the different printer types in the SPOOL parameter file, multiplied by 6/10. SPOOL calculates the value at startup time.



## OPEN-PARAMETER-FILE

### Open parameter file for SPSEVE

**User group:** all users.

If the SPOOL parameter file of the current session is to be edited, certain statements may be issued only by systems support or by RSO device administrators.

If the Dprint configuration file is to be edited, only the cluster administrator is allowed to issue the necessary statements (with the exception of SHOW statements).

This statement replaces the earlier ASSIGN-PARAMETER-FILE statement. ASSIGN-PARAMETER-FILE will continue to be supported for reasons of compatibility with earlier programs.

Two parameters can be opened by means of OPEN-PARAMETER-FILE.

Firstly it is possible to open the file in which SPOOL parameters are to be defined, modified or deleted, or from which SPOOL parameter values are to be output to SYSOUT. This statement is used to assign a file to an SPSEVE session. The file may already exist or it can be generated. It can be either a complete SPOOL parameter file, or a delta file that contains only a subset of the entries needed for SPOOL operation. As a record of changes, a delta file can be used to write new entries to the SPOOL parameter file or to edit existing entries. This is done by means of the MERGE statement. Individual entries can be copied to the current SPOOL parameter file in static mode by means of COPY statements. A number (DELTA-FILE-NUMBER) and an identifier (DELTA-FILE-IDENT) can be specified for a delta file.

Secondly it is possible to open the Dprint configuration file. In order to be able to define Dprint objects the mandatory first step is to open this file. The hosts, servers and printers etc. in a Dprint environment cannot be initialized until this is done. Dprint objects can only be used in dynamic mode. There is no user configuration file. DPRINTCM must be loaded before it is possible to access the configuration file at all.

#### *Note*

The SPOOL administrator remains the owner of all SPOOL parameter objects of his or her host and is allowed to modify (or otherwise edit) these objects, even if the objects are also part of the Dprint environment.

**OPEN-PARAMETER-FILE**

```

PARAMETER-FILE = *SPOOL-PARAMETERS / *DPRINT-PARAMETERS /
 <filename 1..54 without-gen-vers>(…)
<filename 1..54 without-gen-vers>(…)
 DELTA-FILE = NO / *YES(...)
 *YES(...)
 DELTA-FILE-NUMBER = <integer 1..65535> / *NONE
 ,DELTA-FILE-IDENT = <c-string 1..8> / *NONE

```

**Operands****PARAMETER-FILE = \*SPOOL-PARAMETERS / \*DPRINT-PARAMETERS / <filename 1..54 without-gen-vers>(…)**

File in which SPOOL parameters are to be defined, modified or deleted, or from which default values or currently applicable values are to be output to SYSOUT or to which individual entries or the entire contents of another delta or SPOOL parameter file are to be copied.

If the specified file does not exist, it is generated and initialized. In the case of a delta file, the administration entries with default values are stored only under certain conditions (see the DELTA-FILE operand) once the delta file is closed (by means of END or another OPEN-PARAMETER-FILE statement).

**PARAMETER-FILE = \*SPOOL-PARAMETERS**

The SPOOL parameter file of the current SPOOL session, i.e. the file \$SYSSPOOL.SPOOL.PARAMETERS, is assigned to the SPSEIVE session. During the current SPOOL session, systems support can make modifications to the active “official” SPOOL parameter file in dynamic mode. The descriptions of the different statements indicate what can be done in the SPOOL parameter file of the current session (dynamic mode).

In guided dialog it is only possible to use statements that relate to the SPOOL parameter file if OPEN-PARAMETER-FILE PARAMETER-FILE = \*SPOOL-PARAMETERS has been selected. The only exception to this are SHOW statements, which can also be used if OPEN-PARAMETER-FILE PARAMETER-FILE = \*DPRINT-PARAMETERS has been selected.

**PARAMETER-FILE = \*DPRINT-PARAMETERS**

The Dprint configuration file, i.e. the file \$SYSDPRNT.DPRINT.PARAMETERS, is assigned to the SPSEIVE session. In order to be able to modify, remove or add new configuration objects the cluster administrator must specify this setting before having access to the configuration file at all. Normal users must also do the same if they want to use SHOW statements to view information about the configuration file.

In guided dialog it is only possible to use statements that relate to the configuration file if OPEN-PARAMETER-FILE PARAMETER-FILE = \*DPRINT-PARAMETERS has been selected.

**PARAMETER-FILE = <filename 1..54 without-gen-vers>(…)**

Name of the SPOOL parameter or delta file to be generated or, if it already exists, to which changes are to be made or to which individual entries (COPY) or a complete file (MERGE) are to be copied.

**DELTA-FILE = \*NO / \*YES(…)**

The assigned file may contain a complete SPOOL parameter file (\*NO) or only some of the entries required, i.e. a delta file. A complete SPOOL parameter file must contain at least one GEN entry. Otherwise the statement is rejected.

**DELTA-FILE = \*YES(…)**

The specified file (whether it exists or not) is a delta file:

- By means of ADD statements, new device, form and character records can be generated in the file.
- By means of COPY statements, device, form and character records can be copied to the file from other delta or SPOOL parameter files.
- If the operand value \*NONE is specified for DELTA-FILE-NUMBER, all new and copied device, form and character records are stored when the file is closed; however, only those administration entries (GEN entries) that were copied from another delta file during the current or an earlier SPSEIVE session (and which are designated by a number in the last two bytes of the code) are stored.
- If a value (1..65535) is specified for DELTA-FILE-NUMBER, all device, form and character records, whether new or copied from other delta or SPOOL parameter files, as well as all administration entries, the last two bytes of whose key have this value, are stored when the file is closed.

Administration entries that were not generated during the SPSEIVE session (ADD…), and which are not to be deleted, must be explicitly modified by means of a MODIFY statement.

Otherwise the last two bytes will not contain the required value and the corresponding entries will be deleted when the file is closed. If entries with this value exist from earlier SPSERVE sessions, they are also stored.

**DELTA-FILE-NUMBER = \*NONE / <integer 1..65535>**

The specified delta file is either assigned or not assigned a number.

**DELTA-FILE-NUMBER = \*NONE**

No number is assigned to the delta file.

**DELTA-FILE-NUMBER = <integer 1..65535>**

Number assigned to the specified delta file.

**DELTA-FILE-IDENT = \*NONE / <c-string 1..8>**

Contents of the HEADER entry generated in the delta file. In the last two bytes of the key, the entry contains the version number of the delta file. If \*NONE is specified, no HEADER entry is generated.

*Example 1*

Generating a user delta file

Each user can generate a complete SPOOL parameter file (with all the administration and default entries) or a delta file which contains only entries generated by that user. Then systems support can copy the entries of the file to the official SPOOL parameter file.

```

/BEGIN-PROCEDURE A
/ASSIGN-SYSDTA TO-FILE=*SYSCMD
/START-SPSERVE
% BLS0523 ELEMENT 'SPSERVE',VERSION 'V02.3' FROM LIBRARY' ' IN PROCESSING
% BLS0990 PROCESSING OF REP FILE ' ' STARTED
% BLS0524 LLM'SPSERVE' VERSION 'V02.3 OF (XXXX-XX-XX:XX:XX:XX' LOADED
ENTER OPEN-PARAMETER-FILE STATEMENT
//OPEN-PARAMETER-FILE ANWENDER.DELTA(DELTA=YES(DELTA-FILE-NUMBER=1234, -
 DELTA-FILE-IDENT='BEISPIEL')) _____ (1)
//ADD-SPOOL-DEVICE DEVICE-NAME=ANWXXXXX,DEV-TYPE=9001-REMOTE-PRINTER _____ (2)
//ADD-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=101 }
//ADD-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=199 } _____ (3)
//ADD-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=208 }
//ADD-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=224 }
//ADD-SPOOL-FORM FORM-NAME=ANWXXX, DEVICE-TYPE=9001 _____ (4)
//COPY-SPOOL-FORM FROM-FILE=FREMDDATEI,NAME=YYYYYY _____ (5)
//END
/ASSIGN-SYSDTA TO-FILE=*PRIMARY
/END-PROCEDUREE

```

*Key*

- (1) generates the delta file USER.DELTA.
- (2) generates a device entry.
- (3) generates a character set entry.
- (4) generates a form entry.
- (5) copies the form entry YYYYYYY to the delta file from the file SOURCEFILE.

*Example 2*

By means of the MERGE statement, systems support can copy all the entries of this delta file to the official SPOOL parameter file - both in static and in dynamic mode.

```
/BEGIN-PROCEDURE A
/ASSIGN-SYSDTA TO-FILE=*SYSCMD
/START-SPSERVE
% BLS0523 ELEMENT 'SPSERVE',VERSION 'V02.3' FROM LIBRARY' ' IN PROCESSING
% BLS0990 PROCESSING OF REP FILE ' ' STARTED
% BLS0524 LLM'SPSERVE' VERSION 'V02.3 OF (XXXX-XX-XX:XX:XX:XX' LOADED
ENTER OPEN-PARAMETER-FILE STATEMENT
//OPEN-PARAMETER-FILE *SPOOL-PARAMETERS
//MERGE-SPOOL-PARAMETER-FILE INPUT=ANWENDER.DELTA
//END
/ASSIGN-SYSDTA TO-FILE=*PRIMARY
/END-PROCEDURE
```

*Example 3*

In static mode, entries can also be copied to the user parameter file by means of COPY statements.

```
/BEGIN-PROCEDURE A
/ASSIGN-SYSDTA TO-FILE=*SYSCMD
/START-SPSERVE
% BLS0523 ELEMENT 'SPSERVE',VERSION 'V02.3' FROM LIBRARY' ' IN PROCESSING
% BLS0990 PROCESSING OF REP FILE ' ' STARTED
% BLS0524 LLM'SPSERVE' VERSION 'V02.3 OF (XXXX-XX-XX:XX:XX:XX' LOADED
ENTER OPEN-PARAMETER-FILE STATEMENT
//OPEN-PARAMETER-FILE ANWENDER.PARAM
//COPY-SPOOL-DEVICE INPUT=ANWENDER.DELTA,NAME=anwxxxxx
//COPY-SPOOL-CHARACTER-SET INPUT=ANWENDER.DELTA,NAME=anw
//COPY-SPOOL-FORM INPUT=ANWENDER.DELTA,NAME=anwxxx
//COPY-SPOOL-FORM INPUT=ANWENDER.DELTA,NAME=yyyyyy
//END
/ASSIGN-SYSDTA TO-FILE=*PRIMARY
/END-PROCEDURE
```

## REMOVE-DPRINT-ACCESS-CONTROL

### Remove cluster access control

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-ACCESS-CONTROL statement to delete an existing access control ID for a cluster in his or her configuration.

This statement is a configuration statement.

|                                            |
|--------------------------------------------|
| <b>REMOVE-DPRINT-ACCESS-CONTROL</b>        |
| ACCESS-CONTROL-NAME = <alphanum-name 1..8> |

### Operands

**ACCESS-CONTROL-NAME = <alphanum-name 1..8>**

Specifies which access control ID is to be removed.

### Notes

- Access control can be used by the cluster administrator in order to control access to remote clusters, servers and/or gateways. The values \*NO and \*ALL-USERS do not correspond to real access control, i.e. they cannot be used for the ACCESS-CONTROL-NAME operand in the ADD-/MODIFY-/REMOVE-DPRINT-ACCESS-CONTROL statements.
- Access control cannot be removed while it is linked to other configuration objects.

## REMOVE-DPRINT-HOST

### Remove host definition

**Domain:** DPRINT

**User group:** cluster administrators, SPOOL administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-HOST statement to remove an existing host definition from his or her configuration.

This statement is a configuration statement.

|                                  |
|----------------------------------|
| <b>REMOVE-DPRINT-HOST</b>        |
| HOST-NAME = <alphanum-name 1..8> |

### Operands

**HOST-NAME = <alphanum-name 1..8>**

Specifies which host definition is to be removed.

#### *Note*

Only the host that is connected to the local cluster is removed.



## REMOVE-DPRINT-PRINTER

### Remove printer definition

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-PRINTER statement to remove an existing printer definition from his or her configuration.

This statement is a configuration statement.

|                                     |
|-------------------------------------|
| <b>REMOVE-DPRINT-PRINTER</b>        |
| PRINTER-NAME = <alphanum-name 1..8> |

### Operands

**PRINTER-NAME = <alphanum-name 1..8>**

Specifies which printer definition is to be removed.

### Notes

- A Dprint printer cannot be removed if it is not in service.
- A Dprint printer can only be deleted if it is defined in a Dprint printer group.

## REMOVE-DPRINT-PRINTER-POOL

### Remove printer pool definition

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-PRINTER-POOL statement to remove an existing printer pool definition from his or her configuration.

This statement is a configuration statement.

|                                   |
|-----------------------------------|
| <b>REMOVE-DPRINT-PRINTER-POOL</b> |
| POOL-NAME = <alphanum-name 1..8>  |

### Operands

**POOL-NAME = <alphanum-name 1..8>**

Specifies which printer pool definition is to be removed.

#### *Note*

It is also possible to remove a Dprint printer pool if print jobs that are in “KEEP” or “WAIT” status are to be printed on it.

It is therefore recommended that the cluster administrator should first issue the command SHOW-PRINT-JOB-STATUS DESTINATION=<POOL> to check how many jobs are output in the printer pool before actually removing the pool.

## REMOVE-DPRINT-REMOTE-CLUSTER

### Remove remote cluster

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-REMOTE-CLUSTER statement to remove clusters from his or her configuration.

This statement is a configuration statement.

|                                     |
|-------------------------------------|
| <b>REMOVE-DPRINT-REMOTE-CLUSTER</b> |
| CLUSTER-NAME = <alphanum-name 1..8> |

### Operands

**CLUSTER-NAME = <alphanum-name 1..8>**

Specifies which cluster is to be removed.

#### *Note*

After this statement has been specified, the external cluster is no longer accessible from the local cluster.

## REMOVE-DPRINT-SERVER

### Remove server

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the REMOVE-DPRINT-SERVER statement to remove an existing server definition from his or her configuration.

This statement is a configuration statement.

|                                    |
|------------------------------------|
| <b>REMOVE-DPRINT-SERVER</b>        |
| SERVER-NAME = <alphanum-name 1..8> |

### Operands

**SERVER-NAME = <alphanum-name 1..8>**

Specifies which server definition is to be removed.

#### *Note*

It is not possible to remove a server while it is still controlling a Dprint printer; in other words a server can only be deleted if all Dprint printers that it controls or has controlled have also been removed.

# REMOVE-PRINTER-POOL

## Remove device pool

**User group:** systems support

This statement deletes a device pool of local printers or RSO devices.

| REMOVE-PRINTER-POOL                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> POOL-NAME = *ALL / &lt;name 1..8&gt; / list-poss(16): &lt;name 1..8&gt; ,ACCESS-DATE = *<u>ANY</u> / *TODAY / *INTERVAL(...)     *INTERVAL(...)           FROM = <u>1950-01-01</u> / &lt;date 8..10&gt;           ,TO = *<u>TODAY</u> / &lt;date 8..10&gt; </pre> |

### Operands

**POOL-NAME = \*ALL / <name 1..8> / list-poss(16): <name 1..8>**

Name of the pool to be deleted.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the deletion of the device pool. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

### Note

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a device pool to be deleted.

**ACCESS-DATE = \*TODAY**

This specification allows the device pool created or modified or used on today's date to be deleted.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for deletion of a device pool.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

*Note*

A device pool cannot be deleted as long as a job is accessing it.

*Examples of the use of timestamps*

1. All device pools which have not been used for a month are deleted. Today's date is: 1999-02-10.

```
REMOVE-PRINTER-POOL POOL-NAME=*ALL,ACCESS-DATE=*INTERVAL(FROM=1999-01-10)
```

2. The device pools with the names XXXX, YYY and ZZZZ, which were created today, are deleted.

```
REMOVE-PRINTER-POOL POOL-NAME=(XXXX,YYY,ZZZZ),ACCESS-DATE=*TODAY
```

3. All device pools which have not been used since 1997-08-10 are deleted.

```
REMOVE-PRINTER-POOL POOL-NAME=*ALL,ACCESS-DATE=*INTERVAL(FROM=1997-08-10)
```

## REMOVE-SPOOL-CHARACTER-SET

### Remove character set

**User group:** systems support and RSO device administrators (for character sets defined by the RSO device administrators themselves)

This statement deletes an RSO character set or a character set assigned to a form as the standard character set from the SPOOL parameter file.

#### REMOVE-SPOOL-CHARACTER-SET

```
CHARACTER-SET-NAME = *ALL / <alphanum-name 1..3> / list-poss(16): <alphanum-name 1..3> / *STD
,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>
```

#### Operands

**CHARACTER-SET-NAME = \*ALL/ <alphanum-name 1..3> / list-poss(16): <alphanum-name 1..3> / \*STD**

Name of the character set to be deleted from the SPOOL parameter file.

**CHARACTER-SET-NAME = \*STD**

The standard character set is to be deleted from the SPOOL parameter file.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the deletion of the character set. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

#### Note

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a character set to be deleted.

**ACCESS-DATE = \*TODAY**

This specification allows the character set created or modified or used on today's date to be deleted.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for deletion of a character set.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

*Examples of the use of timestamps*

1. All character sets which have not been used for a month are deleted. Today's date is: 1999-02-10.

```
REMOVE-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1999-01-10)
```

2. The character sets with the names XXXX, YYY and ZZZZ, which were created today, are deleted.

```
REMOVE-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=(XXXX,YYY,ZZZZ),-
ACCESS-DATE=*TODAY
```

3. All character sets which have not been used since 1997-08-10 are deleted.

```
REMOVE-SPOOL-CHARACTER-SET CHARACTER-SET-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1997-08-10)
```



## REMOVE-SPOOL-DEVICE

### Remove device entry

**User group:** systems support and RSO device administrators

This statement removes a device entry from the SPOOL parameter file. The statement is rejected if a spoolout is currently taking place on the specified device. The RSO device administrators can delete only device entries of devices that they are permitted to administer.

A device belonging to a pool must first be deleted from the pool (MODIFY-PRINTER-POOL statement, see [page 330ff](#)) before the device entry can be deleted from the SPOOL parameter file. If the device specified here is the only one of its type in the pool, it should be ensured that pending spoolout jobs intended for the pool are not executable solely on this device type. Otherwise it would not be possible to process them once the device entry had been deleted from the pool.

(part 1 of 2)

#### REMOVE-SPOOL-DEVICE

```

DEVICE-NAME = *ALL / <alphanum-name 1..8> / list-poss(16): <alphanum-name 1..8> / *STD
,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> / *ALL-LOCAL-PRINTERS /
*ALL-REMOTE-PRINTERS / *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
*LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
*VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
*2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
*4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
*4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
*4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
*4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
*4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
*9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
*9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
*9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
*9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
*9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
*9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
*9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
*9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /

```

continued ➔

(part 2 of 2)

```

*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
*9645-REMOTE-PRINTER
,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
*INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>

```

## Operands

**DEVICE-NAME = \*ALL / <alphanum-name 1..8> /**

**list-poss(16): <alphanum-name 1..8> / \*STD**

Name of the device entry for the device type specified under TYPE=... . The operand value \*STD designates the standard device entry for the device type.

**DEVICE-TYPE = ....**

Device type of the device whose standard device entry is to be deleted from the SPOOL parameter file. If the value DEVICE-TYPE=\*ALL is specified, all standard device entries present in the SPOOL parameter file are deleted; for type specifications, see the SDF format.

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the deletion of the device entry. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

### Note

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a device entry to be deleted.

**ACCESS-DATE = \*TODAY**

This specification allows the device entry created or modified or used on today's date to be deleted.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for deletion of a device entry.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

*Examples of the use of timestamps*

1. All device entries which have not been used for a month are deleted. Today's date is: 1999-02-10.

```
REMOVE-SPOOL-DEVICE DEVICE-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1999-01-10)
```

2. The device entries with the names XXXX, YYY and ZZZZ, which were created today, are deleted.

```
REMOVE-SPOOL-DEVICE DEVICE-NAME=(XXXX,YYY,ZZZZ),ACCESS-DATE=*TODAY
```

3. All device entries which have not been used since 1997-08-10 are deleted.

```
REMOVE-SPOOL-DEVICE DEVICE-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1997-08-10)
```

*Notes*

- In conjunction with DEVICE-NAME = \*STD, the device type defined in the standard device entry must be specified for DEVICE-TYPE.
- Once SPOOL administrators are owners of Dprint objects they are permitted to delete devices from their respective SPOOL parameter files. However, a device may additionally be defined in the configuration file and is therefore a Dprint device, for example if a printer has been linked to the configuration file. If a device record of a linked Dprint printer is deleted in the SPOOL parameter file, information about it is sent to all hosts in the cluster, but the printer is retained in the configuration file. This means:
  1. Access to the printer is not possible until the printer has been defined again in the SPOOL parameter file by the SPOOL administrator.
  2. The cluster administrator does not have to redefine the printer every time if the SPOOL administrator defines it (again) in the SPOOL parameter file.
  3. A device cannot be deleted from the SPOOL parameter file if certain jobs are to be printed exclusively on that device.

## REMOVE-SPOOL-FILTER

### Remove filter

**User group:** systems support

This statement allows systems support to remove a filter record.

#### REMOVE-SPOOL-FILTER

```
FILTER-NAME = *ALL / <alphanum-name 1..8> / list-poss(16): <alphanum-name 1..8> / *STD
,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>
```

#### Operands

**FILTER-NAME = \*ALL / <alphanum-name 1..8> / list-poss(16):  
<alphanum-name 1..8> / \*STD**

Symbolic name of the filter which is to be removed.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the deletion of the filter. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

#### Note

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a filter to be deleted.

**ACCESS-DATE = \*TODAY**

This specification allows the filter created or modified or used on today's date to be deleted.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for deletion of a filter.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

*Examples of the use of timestamps*

1. All filters which have not been used for a month are deleted. Today's date is: 1999-02-10.

```
REMOVE-SPOOL-FILTER FILTER-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1999-01-10)
```

2. The filters with the names XXXX, YYY and ZZZZ, which were created today, are deleted.

```
REMOVE-SPOOL-FILTER FILTER-NAME=(XXXX,YYY,ZZZZ),ACCESS-DATE=*TODAY
```

3. All filters which have not been used since 1997-08-10 are deleted.

```
REMOVE-SPOOL-FILTER FILTER-NAME=*ALL,-
ACCESS-DATE=*INTERVAL(FROM=1997-08-10)
```

*Note*

As soon as the SPOOL administrator is the owner of his/her administration objects, he/she is allowed to remove a filter that is defined in the SPOOL parameter file.

## REMOVE-SPOOL-FORM

### Remove form entry

**User group:** systems support and RSO device administrators (for forms defined by the RSO device administrators themselves)

This statement removes a form entry from the SPOOL parameter file.

#### REMOVE-SPOOL-FORM

```

FORM-NAME = *ALL / <alphanum-name 1..6> / list-poss(16): <alphanum-name 1..6> / *STD
,DEVICE-TYPE = ALL / <filename 1..16 without-cat-user-gen-vers> /
 list-poss(53): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
 *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER /
 *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
 *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
 *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
 *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
 *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
 *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
 *9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
 *9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
 *9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
 *9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
 *9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
 *9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
 *9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
 *9645-REMOTE-PRINTER
,ACCESS-DATE = ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 | FROM = 1950-01-01 / <date 8..10>
 | ,TO = TODAY / <date 8..10>

```

## Operands

**FORM-NAME = \*ALL / \*STD / <alphanum-name 1..6> /**

**list-poss(16): <alphanum-name 1..6>**

Name of the form entry to be deleted. The operand value \*STD designates the standard form entry.

**DEVICE-TYPE = ....**

Device type or list of device types whose form entry is to be deleted from the SPOOL parameter file; for type specifications, see SDF format. Explained below are a number of special attributes.

**DEVICE-TYPE = \*ALL**

Standard form entries or the form entries with the specified name are to be deleted for all device types in a single operation.

FORM-NAME=\*STD in conjunction with DEVICE-TYPE=\*ALL results in the deletion of the forms for all device types, including ALL-LOCAL-PRINTERS and ALL-REMOTE-PRINTERS.

**DEVICE-TYPE = ALL-LOCAL-PRINTERS**

With FORM-NAME=\*STD only. The general standard form \*STD for local SPOOL devices is to be deleted.

**DEVICE-TYPE = ALL-REMOTE-PRINTERS**

With FORM-NAME=\*STD only. The general standard form \*STD for RSO devices is to be deleted.

**DEVICE-TYPE = \*VIRTUAL**

Permits specification of a virtual device type.

### *Note*

The abbreviation "9001" is interpreted as "9001-REMOTE-PRINTER"; the abbreviation "9022" is interpreted as "9022-REMOTE-PRINTER".

**DEVICE-TYPE = <filename 1..16 without-cat-user-gen-vers>**

Forms assigned to this printer type (not included in the list) are to be deleted.

**DEVICE-TYPE = LP-EMULATED-PRINTER**

Forms of the specified name for this printer type are to be deleted. This concerns printers emulated as 3337 using the appropriate UNIX software and addressed via a bus. This is possible only on mainframes with bus peripherals.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the deletion of the form entry. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a form entry to be deleted.

**ACCESS-DATE = \*TODAY**

This specification allows the form entry created or modified or used on today's date to be deleted.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for deletion of a form entry.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

*Examples of the use of timestamps*

1. All form entries which have not been used for a month are deleted. Today's date is: 1999-02-10.

```
REMOVE-SPOOL-FORM FORM-NAME=*ALL, ACCESS-DATE=*INTERVAL(FROM=1999-01-10)
```

2. The form entries with the names XXXX, YYY and ZZZZ, which were created today, are deleted.

```
REMOVE-SPOOL-FORM FORM-NAME=(XXXX, YYY, ZZZZ), ACCESS-DATE=*TODAY
```

3. All form entries which have not been used since 1997-08-10 are deleted.

```
REMOVE-SPOOL-FORM FORM-NAME=*ALL, ACCESS-DATE=*INTERVAL(FROM=1997-08-10)
```



## SHOW-DPRINT-ACCESS-CONTROLS

### Request information about cluster access control

**Domain:** DPRINT

**User group:** cluster administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The cluster administrator uses the SHOW-DPRINT-ACCESS-CONTROLS statement to request information about access control relating to a certain cluster.

#### SHOW-DPRINT-ACCESS-CONTROLS

```

ACCESS-CONTROL-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
 *BY-ATTRIBUTES(...)
 SUBJECTS = *ALL / *ALL-USERS(...) / *HOST(...) / *USER(...)
 *ALL-USERS(...)
 | ADMISSION = *ALL / *YES / *NO
 *HOST(...)
 | HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 | list-poss(16): <alphanum-name 1..8>
 | ,ADMISSION = *ALL / *YES / *NO
 *USER(...)
 | HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 | list-poss(16): <alphanum-name 1..8>
 | ,USER-IDENTIFICATION = *ALL / <alphanum-name 1..8 with-wild(24)> /
 | list-poss(16): <alphanum-name 1..8>
 | ,ADMISSION = *ALL / *YES / *NO
,INFORMATION = *SUMMARY / *ALL

```

## Operands

**ACCESS-CONTROL-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Specifies the access controls for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**

Specifies the criteria according to which the access controls are to be selected for output.

**SELECT = \*ALL**

The default option is that all access controls are selected.

**SELECT = \*BY-ATTRIBUTES(...)**

Specifications for selection of the access controls.

**SUBJECTS = \*ALL / \*ALL-USER(...) / \*HOST(...) / \*USER(...)**

Specifies that the access controls are to be selected according to subject.

**SUBJECTS = \*ALL**

The default option is that all subjects are selected.

**SUBJECTS = \*ALL-USER(...)**

Information is to be provided about all users.

**ADMISSION = \*ALL / YES / NO**

Restricts output to the specifications that were defined during creation or modification of access control for \*ALL-USER.

**SUBJECTS = \*HOST(...)**

Specifies that the access controls are to be selected according to host.

**HOST-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Information is to be provided about the specified hosts.

**ADMISSION = \*ALL / \*YES / \*NO**

Restricts output to the specifications that were defined during creation or modification of access control for subjects of the \*HOST type.

**SUBJECTS = \*USER(...)**

Specifies that the access control objects are to be selected according to user ID.

**HOST-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..8>**

Information is to be provided about user IDs on the specified hosts.

**USER-IDENTIFICATION = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..8>**

Information is to be provided about the specified user IDs.

**ADMISSION = \*ALL / \*YES / \*NO**

Restricts output to the specifications that were defined during creation or modification of access control for subjects of the \*USER type.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies whether information output is restricted solely to the names of the Dprint access control (\*SUMMARY) or whether information about the assigned user IDs and their access rights is also to be output for Dprint access control (\*ALL).

**Output formats****Output of the contents of an access control (INFORMATION=\*ALL)**

ACCESS-CONTROL-NAME: @@@@@@@@

SUBJECT(S):

| HOST-NAM | USER-ID  | ADMISSION |
|----------|----------|-----------|
| @@@@@@@@ | @@@@@@@@ | @@@       |
| @@@@@@@@ | @@@@@@@@ | @@@       |
| @@@@@@@@ | @@@@@@@@ | @@@       |

The \*ALL-USERS subject is always shown first; its entry for the host name and user ID is \*ALL.

The \*HOST subject has the entry \*ALL under user ID.

**Output of a list of access controls (INFORMATION=\*SUMMARY)**

ACCESS-CONTROL-NAME(S):

@@@@@@@@ @@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@

@@@@@@@@ @@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@

## SHOW-DPRINT-HOSTS

### Request information about hosts

**Domain:** DPRINT

**User group:** cluster administrators, SPOOL administrators

**Privileges:** PRINT-SERVICE-ADMINISTRATION

The SHOW-DPRINT-HOSTS statement can be used by the cluster administrator or SPOOL administrator to request information about hosts.

#### SHOW-DPRINT-HOSTS

```

HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *STD /
 <alphanum-name 1..8>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
 *BY-ATTRIBUTES(...)
 INTERNET-ADDRESS = *ALL / <composed-name 1..15 with-wild(24)> / list-poss(16): *NONE /
 <composed-name 7..15>
 ,PORT-NAME = *ALL / *NONE / <integer 1..32767> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..32767>
 ,HIGH = <integer 1..32767>
 ,ACCESS-FROM-CLUSTERS = *ALL / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 *BY-ACCESS-CONTROL(...)
 ACCESS-CONTROL-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL

```

#### Operands

**HOST-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): \*STD / <alphanum-name 1..8>**

Specifies the hosts for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**

Specifies the criteria according to which the hosts are to be selected for output.

**SELECT = \*ALL**

The default option is to select all hosts.

**SELECT = \*BY-ATTRIBUTES(...)**

Specifications for selection of the hosts.

**INTERNET-ADDRESS = \*ALL / <composed-name 1..15 with-wild(24)> / list-poss(16): \*NONE / <composed-name 7..15>**

Specifies that the hosts are to be selected according to Internet address. The IP address contains 4 fields, each separated by a dot (e.g. 123.45.67.9).

**PORT-NAME = \*ALL / \*NONE / <integer 1..32767> / \*RANGE(...)**

Specifies that the hosts are to be selected according to port name.

**PORT-NAME = \*RANGE(...)**

Specifies a range of port names for the selection of the hosts.

**LOW = <integer 1..32767>**

Lower limit of the range.

**HIGH = <integer 1..32767>**

Upper limit of the range.

**ACCESS-FROM-CLUSTERS = \*ALL / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

Specifies that the hosts are to be selected according to the way that they are accessed. Only the cluster administrator is allowed to specify this operand.

**ACCESS-FROM-CLUSTERS = \*BY-ACCESS-CONTROL(...)**

Hosts with access controls are selected.

**ACCESS-CONTROL-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Information is to be provided about the hosts with the specified access control names.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies whether information output is restricted solely to the first line of the output format shown below (\*SUMMARY) or whether all information is to be output for every element (\*ALL).

*Notes*

- Nonprivileged users and SPOOL administrators only obtain information about remote printers for which they have access authorization.
- The name of the access control is output for the cluster administrator only. In all other cases only blanks are output under the name.

## Output format

```

HOST-NAME ADM ACCESS INTERNET-ADDRESS PORT-NAME
@@@@@@@@ @@@@ @@@@@@@@ @@@@@@@@@@@@@@@@@@@@@@ #####
HOST-STATE CONN-STATE COMM-ERR FT-STATE
@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

```

## Meanings of the fields

| Output field  | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HOST-NAME     | Logical name of the host (BCAM address)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ADM           | *YES: cluster administrator is defined on this host (master of the cluster)<br>*NO: cluster administrator is not defined on this host                                                                                                                                                                                                                                                                                                                                                                                                    |
| ACCESS        | Specifies whether users of remote clusters are allowed to access the host.<br>*NO: users are not allowed to access the host from remote clusters (the host is not the gateway host of the local cluster).<br>*ALL: all users are allowed to access the host from remote clusters (the host is therefore a gateway host of the local cluster).<br><alphanum-name>: users who are allowed and not allowed to access the host are entered in the specified access control list (the host is therefore a gateway host of the local cluster). |
| INTERNET-ADDR | Internet address of the host                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| PORT-NAME     | Identification of the application on the host                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| HOST-STATE    | *ATT: MODIFY-DPRINT-CLUSTER ACTION=*ATTACH was specified for the host, i.e. jobs can be sent to remote hosts and remote jobs can be processed on this host.<br>*DET: MODIFY-DPRINT-CLUSTER ACTION=*DETACH was specified for the host, i.e. jobs cannot be sent to remote hosts and remote jobs cannot be processed on this host.                                                                                                                                                                                                         |
| CONN-STATE    | *UNDEF: the host is only defined in the configuration or is not yet connected to the cluster (neither DPRINTSV nor DPRINTCL are loaded).<br>*ACC: the host can be accessed via CMX.<br>*NOT-ACC: the host cannot be accessed via CMX.                                                                                                                                                                                                                                                                                                    |

| Output field | Meaning                                                                                                                                                                                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMM-ERROR   | SRV-SAT: server saturation, i.e. there are no other free server tasks.<br><CMX return code>: 8 characters (only if CONN-STATE=*NOT-ACC)<br>DR<disconnect reason>: 8 characters<br>TIMEOUT: a timeout has been detected for this partner (only if CONN-STATE=*NOT-ACC) |
| FT-STATE     | *NORMAL: FT and FTAC are loaded and usable.<br>*ERROR: subsystem FT or FTAC has been unloaded.<br>*SAT: the host is saturated, i.e. the user ID SYSDPRNT has reached a certain saturation state.                                                                      |

### Examples

Output for a single host where INFORMATION=\*ALL with no further selections:

```
HOST-NAME ADM ACCESS INTERNET-ADDR PORT-NAME
D000ZE01 *YES ACCESS1 AAA.BBB.CCC.DDD 32
HOST-STATE CONN-STATE COMM-ERR FT-STATE
*ATT *ACC *NORMAL
```

### Key

- Host D000ZE01 is the master host of the cluster.
- The access control list ACCESS1 specifies which users are allowed to access the local cluster or not, i.e. the host is a gateway host for remote clusters.
- The Internet address of the host is AAA.BBB.CCC.DDD and the communication application is identified via 32.
- The host is not detached from the local cluster, it is in the “ATTACHED” state.
- The host can be accessed via CMX and neither an FT nor FTAC error nor a saturation condition has occurred.

Output of a list of hosts where INFORMATION=\*SUMMARY with no further selections:

```
HOST-NAME ADM ACCESS INTERNET-ADDR PORT-NAME
1. D000ZE01 *YES ACCESS1 111.222.333.444 12
2. D000ZE02 *NO *NO *NONE
3. D000ZE03 *NO ACCESS3 *NONE
4. D000ZE04 *NO *ALL *NONE
```

*Key*

1. Host D000ZE01 is the master of the cluster. The access control list ACCESS1 specifies which users are allowed to access the local cluster or not, i.e. the host is a gateway host for remote clusters.
2. Host D000ZE02 is a slave host. No users are allowed to access it from remote clusters, i.e. the host is not a gateway host for remote clusters.
3. Host D000ZE03 is a slave host. The access control list ACCESS3 specifies which users are allowed to access the local cluster or not, i.e. the host is a gateway host for remote clusters.
4. Host D000ZE04 is a slave host. All users are allowed to access it from remote clusters, i.e. the host is a gateway host for remote clusters.



## SHOW-DPRINT-PRINTER-POOLS

### Request information about printer pools

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Domain:</b>     | DPRINT                                                                                                                |
| <b>User group:</b> | nonprivileged users                                                                                                   |
| <b>Privileges:</b> | PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION,<br>SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,<br>STD-PROCESSING |

The SHOW-DPRINT-PRINTER-POOLS statement can be used to request information about printer pools.

#### SHOW-DPRINT-PRINTER-POOLS

```
POOL-NAME = *ALL / <alphanum-name 1..8> / <alphanum-name 1..8 with-wild(24)>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
 *BY-ATTRIBUTES(...)
 | PRINTER-NAME = *ALL / <alphanum-name 1..8> / <alphanum-name 1..8 with-wild(24)>
,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL
```

#### Operands

**POOL-NAME = \*ALL / <alphanum-name 1..8> / <alphanum-name 1..8 with-wild(24)>**  
Specifies the printer pools for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**  
Specifies the criteria according to which the printer pools are to be selected for output.

**SELECT = \*ALL**  
The default option is that all printer pools are selected.

**SELECT = \*BY-ATTRIBUTES(...)**

Specifications for selection of the printer pools.

**PRINTER-NAME = \*ALL / <alphanum-name 1..8> /  
<alphanum-name 1..8 with-wild(24)>**

Specifies that the printer pools are to be selected according to the printers that belong to them.

**CLUSTER-NAME = \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies whether the printer pools are within the local cluster or within a specified cluster.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies whether information output is to be restricted solely to the names of the printer pools (\*SUMMARY) or whether information is also to be output about the associated printers (\*ALL).

**Output formats****Output if INFORMATION = \*SUMMARY**

POOL-NAME(S) :

```
@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
...
```

**Output if INFORMATION = \*ALL**

POOL-NAME : @@@@@@@@

PRINTER-NAME(S) :

```
@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
...
```

## SHOW-DPRINT-PRINTERS

### Request information about printers

**Domain:** DPRINT

**User group:** nonprivileged users

**Privileges:** PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

The SHOW-DPRINT-PRINTERS statement can be used to request information about printers.

(part 1 of 2)

#### SHOW-DPRINT-PRINTERS

```

PRINTER-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / *STD /
 <c-string 1..8 with-low>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
 *BY-ATTRIBUTES(...)
 SERVER-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8>
 ,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> /
 list-poss(13): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER / *LP-EMULATED-PRINTER /
 *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER / *VIRTUAL-PRINTER /
 *2050-APA-PRINTER / *2090-APA-PRINTER / *2090-TWIN-PRINTER
 ,FORM-OVERLAY-BUFFER = *ALL / *NO / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..32767>
 ,HIGH = <integer 1..32767>
 ,CHARACTER-SET-NUMBER = *ALL / list-poss(7): 1 / 4 / 6 / 23 / 36 / 46 / 64
 ,ROTATION = *ALL / *YES / *NO
 ,DUPLEX-PROCESSING = *ALL / *NO / *YES
 ,FORMS-OVERLAY = *ALL / *YES / *NO
 ,RASTER-PATTERN-MEM = *ALL / *NONE / *RANGE(...)
 *RANGE(...)
 LOW = <integer_4096..65535>
 ,HIGH = <integer_4096..65535>

```

continued ➔

(part 2 of 2)

```

,MAXIMUM-INPUT-TRAY = *ALL / <integer 1..99> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..99>
 | ,HIGH = <integer 1..99>
,CHARACTER-IMAGE = *ALL / *NONE / <alphanum-name 1..3 with-wild(24)> /
 list-poss(16): <alphanum-name 1..3>
,FORM-FEED = *ALL / *LISTING / *SINGLE-SHEET(...)
 *SINGLE-SHEET(...)
 |
 | DEFAULT-TRAY-NUMBER = *ALL / *IGNORE / <integer 1..99> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 1..99>
 | | ,HIGH = <integer 1..99>
 | ,OUTPUT-TRAY-NUMBER = *ALL / <integer 0..99> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 0..99>
 | | ,HIGH = <integer 0..99>
,FORM-NAME = *ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(16):
 <alphanum-name 1..6>
,BAND-IDENTIFICATION = *ALL / <alphanum-name 1..4 with-wild(24)> /
 list-poss(16): *NONE / <alphanum-name 4..4>
,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL / list-possible(5): *DEVICE-ACCESS / *TWIN-DEVICE-DEF /
 *DEVICE-INFORMATION / *SPOOL-OUT-CONTROL / *PROCESSING-CONTROL

```

## Operands

**PRINTER-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / \*STD / <c-string 1..8 with-low>**  
 Specifies the printers for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**  
 Specifies the criteria according to which the printers are to be selected for output.

**SELECT = \*ALL**  
 The default option is that all printers are selected.

**SELECT = \*BY-ATTRIBUTES(...)**  
 Specifications for selection of the printers.

**SERVER-NAME = \*ALL / <alphanum-name 1..8> / list-poss(16): <alphanum-name 1..8 with-wild(24)> /**

Specifies that the printers are to be selected according to the server to which they belong.

**DEVICE-TYPE = ....**

The selection criterion is the device type. For possible specifications, see the SDF format.

**FORMS-OVERLAY-BUFFER = \*ALL / \*NO / \*RANGE(...)**

The selection criterion is the size of the buffer for FOB data overlays.

**FORM-OVERLAY-BUFFER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..32767>**

Lower limit of the range.

**HIGH = <integer 1..32767>**

Upper limit of the range.

**CHARACTER-SET-NUMBER = \*ALL / list-poss(7): 1 / 4 / 6 / 23 / 36 / 46 / 64**

The selection criterion is the number of character sets that can be loaded.

**ROTATION = \*ALL / \*YES / \*NO**

The selection criterion is the existence of a rotation module.

**DUPLEX-PROCESSING = \*ALL / \*YES / \*NO**

The capability for printing on both the front and the back of a page serves as a selection criterion.

**FORMS-OVERLAY = \*ALL / \*YES / \*NO**

The capability for processing film overlays serves as a selection criterion.

**RASTER-PATTERN-MEM = \*ALL / \*NONE / \*RANGE(...)**

All printers with a raster pattern memory of the specified size are selected.

*Note for compatibility reasons*

The old syntax of the RASTER-PATTERN-MEM is still accepted.

**RASTER-PATTERN-MEM = \*RANGE(...)**

All printers with a raster pattern memory in the specified range of values are selected.

**LOW = <integer\_4096..65535>**

Lower limit of the range.

**HIGH = <integer\_4096..65535>**

Upper limit of the range.

**MAXIMUM-INPUT-TRAY = \*ALL / <integer 1..99> / \*RANGE(...)**

The selection criteria is the number of trays on the device.

**MAXIMUM-INPUT-TRAY = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..99>**

Lower limit of the range.

**HIGH = <integer 1..99>**

Upper limit of the range.

**CHARACTER-IMAGE = \*ALL / \*NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16): <alphanum-name 1..3>**

The selection criterion is the name of the conversion table.

**FORM-FEED = \*ALL / \*LISTING / \*SINGLE-SHEET(...)**

The selection criterion is whether the printout is produced on single-sheet or continuous paper and which input tray is used.

**DEFAULT-TRAY-NUMBER = \*ALL / \*IGNORE / <integer 1..99> / \*RANGE(...)**

The selection criterion is the number of the input tray.

**DEFAULT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..99>**

Lower limit of the range.

**HIGH = <integer 1..99>**

Upper limit of the range.

**OUTPUT-TRAY-NUMBER = \*ALL / <integer 0..99> / \*RANGE(...)**

The selection criterion is the number of the output tray.

**OUTPUT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 0..99>**

Lower limit of the range.

**HIGH = <integer 0..99>**

Upper limit of the range.

**FORM-NAME = \*ALL / <alphanum-name 1..6 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..6>**

The selection criterion is the name of the standard form.

**BAND-IDENTIFICATION = \*ALL / <alphanum-name 1..4 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 4..4>**

The selection criterion is the name of the type band that is to be used for printing.

**CLUSTER-NAME = \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies whether the printers are within the local cluster or within a specified cluster.

**INFORMATION = \*SUMMARY / \*ALL / list-possible(5): \*DEVICE-ACCESS / \*TWIN-DEVICE-DEF / \*DEVICE-INFORMATION / \*SPOOL-CONTROL / \*PROCESSING-CONTROL**

This operand allows you to select which information is to be output. Refer to the SHOW-SPOOL-DEVICES statement for the slicing aspects.

The fields PRINTER-NAME, SERVER-NAME, LOCAL-PRINTER-NAME and DEVICE-TYPE are displayed with any INFORMATION value.



. Please note that this functionality will be available when running with Dprint from 1.1A.

#### *Notes*

- Depending on the access control that has been defined for the server object, it is not possible for all users to access all printers that are controlled from this server.  
After verification of authorization, users are able to access those Dprint printers in whose ACCEPT list they appear or in whose EXCEPT list they do not appear.  
Similarly, nonprivileged users and SPOOL administrators also obtain information only about printers to which they are allowed access.
- If Dprint printers are to be selected according to certain physical characteristics, it is possible to specify selection criteria relating to the records of the SPOOL parameter file.  
If SPOOL records are defined in the configuration file only, those fields will also be the only ones to be output for the devices. Likewise, only the corresponding selection criteria can be specified.
- Attributes of the local SPOOL (other than PRINTER-NAME, SERVER-NAME, or LOCAL-PRINTER-NAME) can only be specified as selection criteria for devices which belong to hosts on which the DPRINTSV subsystem is loaded.

## Output formats

Different kinds of layout are provided, depending on the INFORMATION value.

### Output with INFORMATION = \*SUMMARY

```
PRINTER-NAME SERVER-NAME LOCAL-PRINTER-NAME
@@@@@@@@@@ @@@@@@@@@ @@@@@@@@@
```

In the case of access to UNIX, the name of the UNIX-Xprint domain is displayed under the „SERVER-NAME“ title.

The Xprint PCL name (Printer Capabilities List name) corresponding to each Xprint printer will be displayed (truncated to 8 characters) under the „LOCAL-PRINTER-NAME“ title.

### Output with INFORMATION = \*DEVICE-ACCESS

```
PRINTER-NAME : @@@@@@@@@
SERVER-NAME : @@@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@
----- DEVICE-ACCESS -----
DEVICE-ACCESS : @@@@@@@@@@@@@@@
ACCESS-TYPE : @@@@@@@@@@@@@@@
PROCESSOR-NAME : @@@@@@@@@
MNEMONIC-NAME : @@
INTERNET-ADDRESS : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
PORT-NAME : @@@@@@@@@
PROGRAM-NAME : @@@
```

### Output with INFORMATION = \*TWIN-DEVICE-DEF

```
PRINTER-NAME : @@@@@@@@@
SERVER-NAME : @@@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@
----- TWIN-DEVICE-DEF -----
SLAVE-MNEMONIC-NAME : @@
ESD-SIZE : ###
```



**Output with INFORMATION = \*DEVICE-INFORMATION**

```

PRINTER-NAME : @@@@@@@@
SERVER-NAME : @@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
----- DEVICE-INFORMATION -----
FORMS-OVERLAY-BUFFER: #####
CHARACTER-SET-NUMBER: ##
ROTATION : @@@
DUPLEX-PROCESSING : @@@
FORMS-OVERLAY : @@@
RASTER-PATTERN-MEM : @@@@
MAXIMUM-INPUT-TRAY : ##
SUPP-FORMAT-NAMES :
@@
@@
@@
@@
@@
@@
@@
@@

```

**Output with INFORMATION = \*SPOOLOUT-CONTROL**

```

PRINTER-NAME : @@@@@@@@
SERVER-NAME : @@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
----- SPOOLOUT-CONTROL -----
SHIFT : ##
FORM-FEED : @@@@@@@@@@@@@@@@@@
 DEFAULT-TRAY-NUMBER : @@@
 OUTPUT-TRAY-NUMBER : @@@
SKIP-TO-CHANNEL : @@@@@@

```

**Output with INFORMATION = \*PROCESSING-CONTROL**

```

PRINTER-NAME : @@@@@@@@@@
SERVER-NAME : @@@@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
----- PROCESSING-CONTROL -----
FORM-NAME : @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@
 @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@
PAGE-EJECT-TIMEOUT : @@@
BAND-IDENTIFICATION : @@@@

```

**Output with INFORMATION = \*ALL**

The concatenation of all preceding INFORMATION types is displayed, after the following fields:

```

PRINTER-NAME : @@@@@@@@@@
SERVER-NAME : @@@@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
----- MISCELLANEOUS -----
LANGUAGE-EXT-TYPE : @@@@@@@@@@
CHARACTER-IMAGE : @@@@ @@@

```

### Meanings of the fields

| Output field         | Contents                                                                                                                                                                                                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESS-TYPE          | Printer connection:<br>– With DEVICE-ACCESS = *TCP-ACCESS(...): Printer connection:<br>*STD/*TACLAN<br>– With DEVICE-ACCESS = *LOCAL-ACCESS(...): Printer connection:<br>*STD/*CHANNEL-TYPE-1/*CHANNEL-TYPE-2 |
| BAND-IDENTIFICATION  | Identification for a type band of an LP or LP48 printer                                                                                                                                                       |
| CHARACTER-IMAGE      | Character conversion tables                                                                                                                                                                                   |
| CHARACTER-SET-NUMBER | Number of character sets                                                                                                                                                                                      |
| DEFAULT-TRAY-NUMBER  | Number of the input tray from which paper must be taken on single-sheet printers                                                                                                                              |
| DEVICE-ACCESS        | Access type to printers                                                                                                                                                                                       |
| DEVICE-TYPE          | Device type                                                                                                                                                                                                   |
| DUPLEX-PROCESSING    | Specifies whether printing is on both sides                                                                                                                                                                   |
| ESD-SIZE             | Size of the external data record memory of the twin printer                                                                                                                                                   |
| FORMS-OVERLAY-BUFFER | Size of the graphics memory                                                                                                                                                                                   |
| FORM-FEED            | Paper feed: continuous forms or single-sheet feed                                                                                                                                                             |
| FORM-NAME            | Forms which are assigned to the printer by FORM-NAME = *STD                                                                                                                                                   |
| FORMS-OVERLAY        | Specifies whether form overlays can be processed on the device                                                                                                                                                |
| INTERNET-ADDRESS     | Internet address of the LAN controller card                                                                                                                                                                   |
| LANGUAGE-EXT-TYPE    | Identifies the device type for “exotic” output with the DSEM V3.0 product                                                                                                                                     |
| LOCAL-PRINTER-NAME   | Logical name of the printer as defined in the SPOOL parameter file of the server                                                                                                                              |
| MAXIMUM-INPUT-TRAY   | Maximum number of input trays                                                                                                                                                                                 |
| MNEMONIC-NAME        | Device mnemonic for the twin printer or “master” twin printer                                                                                                                                                 |
| OUTPUT-TRAY-NUMBER   | Number of the paper output tray                                                                                                                                                                               |
| PORT-NAME            | Port name of the LAN controller card                                                                                                                                                                          |
| PAGE-EJECT-TIMEOUT   | Determines the maximum time (in minutes) during which the printer is inactive before the pages remaining in the printer are automatically ejected into the stacker by the fixing facility.                    |
| PRINTER-NAME         | Logical name of the Dprint printer as defined in the configuration file of the cluster                                                                                                                        |
| PROCESSOR-NAME       | Processor name as part of the device address                                                                                                                                                                  |

| <b>Output field</b> | <b>Contents</b>                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------|
| PROGRAM-NAME        | Name of the supervisor LOGON procedure                                                                     |
| ROTATION            | Page rotation module                                                                                       |
| RASTER-PATTERN-MEM  | Specifies the size of the RPM that contains the FOB overlays and character sets                            |
| SERVER-NAME         | Logical name of the server that controls the printer<br>(*HOME = home server)                              |
| SHIFT               | Default value for SHIFT if the LEFT-MARGIN operand is not specified in the PRINT-DOCUMENT command (0...31) |
| SKIP-TO-CHANNEL     | Behavior in the case of two skips to the vertical tabulator character "channel 1"                          |
| SLAVE-MNEMONIC-NAME | Device mnemonic for the "slave" device printer                                                             |
| SUPP-FORMAT-NAMES   | Document format supported by the printer                                                                   |

## SHOW-DPRINT-REMOTE-CLUSTERS

### Request information about remote clusters

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Domain:</b>     | DPRINT                                                                                                                |
| <b>User group:</b> | nonprivileged users                                                                                                   |
| <b>Privileges:</b> | PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION,<br>SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,<br>STD-PROCESSING |

The SHOW-DPRINT-REMOTE-CLUSTERS statement can be used to request information about remote clusters.

(part 1 of 2)

| SHOW-DPRINT-REMOTE-CLUSTERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> CLUSTER-NAME = *ALL / &lt;alphanum-name 1..24 with-wild&gt; / list-poss(16): *STD / &lt;alphanum-name 1..8&gt; ,SELECT = *ALL / *BY-ATTRIBUTES(...)   *BY-ATTRIBUTES(...)     TYPE = *ALL / *BS2000 / *UNIX-ISO(...) / *UNIX-TCP(...)       *UNIX-ISO(...)         GATEWAY-NAME = *ALL / list-poss(16): &lt;c-string 1..255 with-low&gt;         ,HOST-NAME = *ALL / list-poss(16): &lt;c-string 1..255 with-low&gt;         ,HOME-GATEWAY-ADDRESS = *ALL / &lt;alphanum-name 1..8 with-wild(24)&gt; /           list-poss(16): &lt;alphanum-name 1..8&gt; / *NONE       *UNIX-TCP(...)         INTERNET-ADDRESS = *ALL / &lt;composed-name 1..15 with-wild(24)&gt; /           list-poss(16): &lt;composed-name 7..15&gt;         ,PORT-NAME = *ALL / &lt;integer 1..32767&gt; / *RANGE(...)           *RANGE(...)             LOW = &lt;integer 1..32767&gt;             ,HIGH = &lt;integer 1..32767&gt; </pre> |

continued →

(part 2 of 2)

```

,GATEWAY-NAME = *ALL / list-poss(16): <c-string 1..255 with-low>
,HOST-NAME = *ALL / list-poss(16): <c-string 1..255 with-low>
,HOME-GATEWAY-ADDRESS = *ALL / <alphanum-name 1..8 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8> / *NONE
,NETWORK-ADDRESS = *ALL / <alphanum-name 1..15 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8>
,ACCESS-TO-CLUSTER = *ALL / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 *BY-ACCESS-CONTROL(...)
 ACCESS-CONTROL-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 list-poss(16): <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL

```

## Operands

**CLUSTER-NAME = \*ALL / <alphanum-name 1..24 with-wild> / list-poss(16): \*STD / <alphanum-name 1..8>**

Specifies the clusters for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**

Specifies the criteria according to which the clusters are to be selected for output.

**SELECT = \*ALL**

The default option is that all clusters are selected.

**SELECT = \*BY-ATTRIBUTES(...)**

Specifications for selection of the clusters.

**TYPE = \*ALL / \*BS2000 / \*UNIX-ISO(...) / \*UNIX-TCP(...)**

Specifies that the clusters are to be selected according to cluster type.

**TYPE = \*UNIX-ISO(...)**

Clusters of the UNIX type to which access is made via ISO are selected.

**GATEWAY-NAME = \*ALL / list-poss(16): <c-string 1..255 with-low>**

Logical names of the gateways in the remote UNIX clusters about which information is required.

**HOST-NAME = \*ALL / list-poss(16): <c-string 1..255 with-low>**

Logical host names of the gateways in the remote UNIX clusters about which information is required.

**HOME-GATEWAY-ADDRESS = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / \*NONE**

Specifies that the clusters are to be selected according to the address of the gateway host of the local cluster.

**TYPE = \*UNIX-TCP(...)**

Clusters of the UNIX type to which access is made via TCP/IP are selected.

**INTERNET-ADDRESS = \*ALL / <composed-name 1..15 with-wild(24)> / list-poss(16): <composed-name 7..15>**

Internet addresses of the UNIX clusters about which information is required. The IP address contains 4 fields, each separated by a dot (e.g. 123.45.67.9).

**PORT-NAME = \*ALL / <integer 1..32767> / \*RANGE(...)**

Port names of the UNIX clusters about which information is required.

**PORT-NAME = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..32767>**

Lower limit of the range.

**HIGH = <integer 1..32767>**

Upper limit of the range.

**GATEWAY-NAME = \*ALL / list-poss(16): <c-string 1..255 with-low>**

Logical names of the gateways in the remote UNIX clusters about which information is required.

**HOST-NAME = \*ALL / list-poss(16): <c-string 1..255 with-low>**

Logical host names of the gateways in the remote UNIX clusters about which information is required.

**HOME-GATEWAY-ADDRESS = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / \*NONE**

Specifies that the clusters are to be selected according to the address of the gateway host of the local cluster.

**NETWORK-ADDRESS = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Specifies that the clusters are to be selected according to network address.

**ACCESS-TO-CLUSTER = \*ALL / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

Specifies that the clusters are to be selected according to the way that they are accessed. Only the cluster administrator is allowed to specify this operand.

**ACCESS = \*BY-ACCESS-CONTROL(...)**

Clusters are selected with access controls.

**ACCESS-CONTROL-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Information is to be provided about the clusters with the specified access control names.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies whether the information output is to be restricted solely to the first line of the output format shown below (\*SUMMARY) or whether all information is to be output for every element (\*ALL).

*Notes*

- Nonprivileged users and SPOOL administrators receive information only about clusters to which they are allowed access.
- The name of the access control list is output to the cluster administrator only. The field is filled with blanks for other users.

**Output formats**

**Output with INFORMATION = \*SUMMARY**

```
CL-NAME NETW-ADDR TYPE INTERNET-ADDR PORT-NAME HOME-G-ADDR
@@@@@@@@ @@@@@@@@ @@@@@@ @@@@@@@@@@@@@@@@@@@@ ##### @@@@@@@@
```

**Output with INFORMATION = \*ALL**

```
CL-NAME NETW-ADDR TYPE INTERNET-ADDR PORT-NAME HOME-G-ADDR
@@@@@@@@ @@@@@@@@ @@@@@@ @@@@@@@@@@@@@@@@@@@@ ##### @@@@@@@@
```

```
ACCESS CONN-STATE COMM-ERR
@@@@@@@@ @@@@@@@@ @@@@@@@@
```

GATEWAY-NAME :

```
@@
@@
@@
@@
```

HOST-NAME :

```
@@
@@
@@
@@
```



### Meanings of the fields

| Output field  | Meaning                                                                                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CL-NAME       | Logical name of the remote cluster                                                                                                                                                                                                                                                                                            |
| NETW-ADDR     | BCAM address of the host that is the gateway on the remote cluster                                                                                                                                                                                                                                                            |
| TYPE          | Type of the remote cluster.<br>*BS2: BS2000 cluster (NEA protocol)<br>*U-ISO: UNIX cluster (ISO communication protocol)<br>*U-TCP: UNIX cluster (TCP/IP communication protocol)                                                                                                                                               |
| INTERNET-ADDR | Internet address of the gateway host on the remote cluster                                                                                                                                                                                                                                                                    |
| PORT-NAME     | Port name of the gateway host on the remote cluster                                                                                                                                                                                                                                                                           |
| HOME-G-ADDR   | BCAM address of the host that is the gateway on the local cluster                                                                                                                                                                                                                                                             |
| ACCESS        | Specifies whether users are allowed to access the remote cluster.<br>*NO: no users are allowed to access the remote cluster.<br>*ALL: all users are allowed to access the remote cluster.<br><alphanum-name>: users who are or are not allowed to access the remote cluster are entered in the specified access control list. |
| CONN-STATE    | *ACC: the cluster is accessible, i.e. access is possible to the gateway host via CMX.<br>*NOT-ACC: the cluster is not accessible, i.e. access to the gateway host via CMX is not possible.                                                                                                                                    |
| COMM-ERROR    | SRV-SAT: server saturation, i.e. there are no other free server tasks.<br><CMX return code>: 8 characters (only if CONN-STATE=*NOT-ACC)<br>DR<disconnect reason>: 8 characters<br>TIMEOUT: a timeout has been detected for this partner (only if CONN-STATE=*NOT-ACC)                                                         |
| GATEWAY-NAME  | Logical name of the gateway as known in the remote UNIX cluster                                                                                                                                                                                                                                                               |
| HOST-NAME     | Logical host name of the gateway as known in the remote UNIX cluster                                                                                                                                                                                                                                                          |

### Examples

Output for a remote single cluster where INFORMATION=\*ALL with no further selections:

```
CL-NAME NETW-ADDR TYPE INTERNET-ADDRESS PORT-NAME HOME-G-ADDR
C1 D000ZE01 *U-TCP AAA.BBB.CCC.DDD 25 D000ZE02
ACCESS CONN-STATE COMM-ERR
*ALL *ACC
GATEWAY-NAME : G2
HOST-NAME : H1
```

*Key*

- Cluster C1 is a UNIX cluster whose gateway is the host with the BCAM address D000ZE01.
- The TCP/IP protocol must be used for communication with the gateway.
- The Internet address of the gateway is AAA.BBB.CCC.DDD, the port name is 25.
- Host D000ZE02 is the gateway host of the local cluster at which the UNIX requests return.
- All users of the local cluster are allowed access to cluster C1.
- Access to the cluster is possible via CMX.
- In the UNIX environment the gateway is known as G2, which is set up on host H1.

*Output for a list of remote clusters where INFORMATION=\*SUMMARY with no further selections:*

|    | CL-NAME | NETW-ADDR | TYPE   | INTERNET-ADDRESS | PORT-NAME | HOME-G-ADDR |
|----|---------|-----------|--------|------------------|-----------|-------------|
| 1. | C1      | D000ZE01  | *BS2   |                  | *NONE     |             |
| 2. | C2      | D000ZE02  | *U-ISO |                  | *NONE     | D000ZE10    |
| 3. | C3      | D000ZE03  | *U-TCP | AAA.BBB.CCC.DDD  | 273       | D000ZE11    |

*Key*

1. Cluster C1 is a BS2000 cluster whose gateway is the host with the BCAM address D000ZE01. The NEA protocol is used for communication with the gateway.
2. Cluster C2 is a UNIX cluster whose gateway is the host with the BCAM address D000ZE02. The ISO protocol must be used for communication with the gateway. The local gateway host for the return messages from UNIX is the BS2000 host D000ZE10.
3. Cluster C3 is a UNIX cluster whose gateway is the host with the BCAM address D000ZE03. The TCP/IP protocol must be used for communication with the gateway. The Internet address of the gateway is AAA.BBB.CCC.DDD, the port name is 273. The local gateway host for the return messages from UNIX is the BS2000 host D000ZE11.

## SHOW-DPRINT-SERVERS

### Request information about servers

**Domain:** DPRINT

**User group:** nonprivileged users

**Privileges:** PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

The SHOW-DPRINT-SERVERS statement can be used to request information about servers.

#### SHOW-DPRINT-SERVERS

```
SERVER-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *STD / <alphanum-name 1..8>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
 *BY-ATTRIBUTES(...)
 |
 | HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 | <alphanum-name 1..8>
 |
 | ,PRINT-JOB-CLASS = *ALL / *ANY / *RANGE(...) / list-poss(16): <integer 1..255>
 |
 | *RANGE(...)
 | |
 | | LOW = <integer 1..255>
 | | ,HIGH = <integer 1..255>
 | |
 | | ,ACCESS = *ALL / *NO / *ALL-USERS / *BY-ACCESS-CONTROL(...)
 | |
 | | *BY-ACCESS-CONTROL(...)
 | | |
 | | | ACCESS-CONTROL-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /
 | | | list-poss(16): <alphanum-name 1..8>
 | | |
 | | | ,CLUSTER-NAME = *STD / *LOCAL-CLUSTER / <alphanum-name 1..8>
 | | |
 | | | ,INFORMATION = *SUMMARY / *ALL
```

#### Operands

**SERVER-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): / \*STD / <alphanum-name 1..8>**

Specifies the servers for which information is to be output.

**SELECT = \*ALL / \*BY-ATTRIBUTES(...)**

Specifies the criteria according to which the servers are to be selected for output.

**SELECT = \*ALL**

The default option is that all servers are selected.

**SELECT = \*BY-ATTRIBUTES(...)**

Specifications for selection of the servers.

**HOST-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..8>**

Specifies that the servers are to be selected according to host name.

**PRINT-JOB-CLASS = \*ALL / \*ANY / \*RANGE(...) / list-poss (16): <integer 1..255>**

Job classes that are connected to the server objects about which information is required.

**PRINT-JOB-CLASS = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**ACCESS = \*ALL / \*NO / \*ALL-USERS / \*BY-ACCESS-CONTROL(...)**

Specifies that the servers are to be selected according to the way that they are accessed. Only the cluster administrator is allowed to specify this operand.

**ACCESS = \*BY-ACCESS-CONTROL(...)**

Servers are selected with access controls.

**ACCESS-CONTROL-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..8>**

Information is to be provided about the servers with the specified access control names.

**CLUSTER-NAME = \*STD / \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies whether the servers are to be selected from within the local cluster or from a specified cluster. In the case of \*LOCAL-CLUSTER the selected server must be within the user's cluster.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies whether the information output is restricted solely to the first line of the output format shown below (\*SUMMARY) or whether all information is to be output for every element (\*ALL).

*Notes*

- Nonprivileged users and SPOOL administrators receive information only about clusters to which they are allowed access.
- The name of the access control list is output to the cluster administrator only. The field is filled with blanks for other users.

**Output format**

```
SERVER-NAME HOST-NAME ACCESS
@@@@@@@@ @@@@@@@@ @@@@@@@@
PRINT-JOB-CLASS
@@@ @@@ @@@ ...
SERVER-STATE CONN-STATE COMM-ERR
@@@@ @@@@@@@@ @@@@@@@@
```

**Meanings of the fields**

| Output field    | Meaning                                                                                                                                                                                                                                                                                                                                         |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SERVER-NAME     | Logical name of the server                                                                                                                                                                                                                                                                                                                      |
| HOST-NAME       | Logical name of the host (BCAM address) where the server is defined                                                                                                                                                                                                                                                                             |
| ACCESS          | Specifies whether users are allowed to access the server.<br>*NO: no users are allowed to access the server.<br>*ALL: all users are allowed to access the server.<br><alphanumeric-name>: users who are or are not allowed to access the server are entered in the specified access control list.                                               |
| PRINT-JOB-CLASS | Job classes that are assigned to the server object.                                                                                                                                                                                                                                                                                             |
| SERVER-STATE    | *ATT: MODIFY-DPRINT-CLUSTER ACTION=*ATTACH was specified for the host to which the server is connected, i.e. jobs from remote hosts can be processed on this server.<br>*DET: MODIFY-DPRINT-CLUSTER ACTION=*DETACH was specified for the host to which the server is connected, i.e. jobs from remote hosts cannot be processed on this server. |
| CONN-STATE      | *UNDEF: the host is only defined in the configuration or is not yet connected to the cluster ( DPRINTSV not loaded).<br>*ACC: access to the host is possible via CMX.<br>*NOT-ACC: access to the host via CMX is not possible.                                                                                                                  |
| COMM-ERROR      | SRV-SAT: server saturation, i.e. there are no more free server tasks.<br><CMX return code>: 8 characters (only if CONN-STATE=*NOT-ACC)<br>DR<disconnect reason>: 8 characters<br>TIMEOUT: a timeout has been detected for this partner (only if CONN-STATE=*NOT-ACC)                                                                            |

*Examples*

*Output for a single server where INFORMATION=\*ALL with no further selections:*

```
SERVER-NAME HOST-NAME ACCESS
S1 D000ZE01 ACCESS1
PRINT-JOB-CLASS
115 120 208
SERVER-STATE CONN-STATE COMM-ERR
*ATT NOT-*ACC <cmx rc>
```

*Key*

- Server S1 is connected to host D000ZE01.
- Access control list ACCESS1 specifies which users are or are not allowed to access the server.
- Print jobs with a job class of 115, 120 or 208 can be processed from server S1.
- The host to which the server is connected is not detached from the local cluster, it is in the “ATTACHED” condition.
- The host to which the server is connected cannot be accessed via CMX (error <cmx rc> has been reported from CMX).

*Output for a list of server objects where INFORMATION=\*SUMMARY with no further selections:*

```
SERVER-NAME HOST-NAME ACCESS
1. S1 D000ZE01 ACCESS1
2. S2 D000ZE02 *NO
3. S3 D000ZE03 *ALL
```

*Key*

1. Server S1 is connected to host D000ZE01. Access control list ACCESS1 specifies which users are or are not allowed to access server S1.
2. Server S2 is connected to host D000ZE02. No user is allowed to access S2.
3. Server S3 is connected to host D000ZE03. All users are allowed to access S3.

## SHOW-PARAMETER-FILE-STATUS

### Request information on SPOOL parameter file

**User group:** all users except the operator.

This statement displays the modification status of the assigned SPOOL parameter file.

|                                   |
|-----------------------------------|
| <b>SHOW-PARAMETER-FILE-STATUS</b> |
| OUTPUT = <u>*SYSOUT</u> / *SYSLST |

### Operands

**OUTPUT = \*SYSOUT / \*SYSLST**

Output is to SYSOUT or SYSLST, respectively.

### Output format

|         |                  |         |
|---------|------------------|---------|
| REC-TYP | INTERNAL-VERSION | VERSION |
| GEN     | ##               | #####   |

|         |                |         |
|---------|----------------|---------|
| REC-TYP | IDENTIFICATION | VERSION |
| HDR     | @@@@@@@@       | #####   |

|         |           |       |   |         |
|---------|-----------|-------|---|---------|
| REC-TYP | INFO-TYPE | REC-# | T | VERSION |
| RCT     | @@@       | ##    | @ | #####   |

|         |          |         |         |
|---------|----------|---------|---------|
| REC-TYP | TBL-TYPE | TBL-IND | VERSION |
| TBL     | @@@      | ##      | #####   |

## SHOW-PRINTER-POOLS

### Request pool names

**User group:** all users except the operator

This statement outputs printer pool information to SYSOUT, comprising either one or more pools and the device names they contain (BY-POOL) or all pools to which the specified device or devices belong (BY-DEVICE).

#### SHOW-PRINTER-POOLS

```

SELECT = BY-POOL (...) / *BY-DEVICE(...)
 *BY-POOL(...)
 POOL-NAME = *ALL / <name 1..8> / <alphanum-name 1..8 with-wild(24)>
 ,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>
 *BY-DEVICE(...)
 DEVICE-NAME = *ALL / <alphanum-name 1..8> / <alphanum-name 1..8 with-wild(24)>
 SERVER-NAME = *STD / HOME / <alphanum-name 1..8>

```

#### Operands

##### **SELECT = \*BY-POOL(...) / \*BY-DEVICE(...)**

Specifies whether the output is to comprise the devices belonging to a named pool or a list of pools (BY-POOL) or the pools to which a specific device or a list of devices belongs (BY-DEVICE).

##### **SELECT = \*BY-POOL(...)**

###### **POOL-NAME = \*ALL / <name 1..8> / <alphanum-name 1..8 with-wild(24)>**

All devices (RSO or local) belonging to the specified pool (RSO or local) or to a list of pools are to be output to SYSOUT.

###### *Note*

When POOL-NAME=\*ALL is specified, the list of all printer pools is displayed.

###### **ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the output of the printer pool. Either a specific date or a date interval may be specified.



The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a printer pool to be output.

**ACCESS-DATE = \*TODAY**

This specification allows the printer pool created or modified or used on today's date to be output.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for output of a printer pool.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

**SELECT = \*BY-DEVICE(...)**

**DEVICE-NAME = \*ALL / <alphanumeric-name 1..8> /**

**<alphanumeric-name 1..8 with-wild(24)>**

All pools to which the specified device (RSO or local) or the list of devices (RSO or local) belongs are to be output to SYSOUT.

*Note*

When DEVICE-NAME=\*ALL is specified, the list of all devices belonging to a printer pool is displayed.

**SERVER-NAME = \*STD / \*HOME / <alphanumeric-name 1..8>**

Specifies the server for which the information is to be output.

*Note*

If a specification is made under SERVER-NAME, the information for this is provided from the corresponding system SPOOL parameter file for the server. Otherwise this information comes from the SPOOL parameter file (if it is open) or from the home system SPOOL parameter file (if the Dprint configuration file is open).

## Output formats

### Output for an individual pool

```
POOL-NAME: @@@@@@@@ POOL-TYPE: @@@@@@
ACCESS-DATE: @@@@-@@-@@
DEVICE-NAME(S):
 @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ ...
...
```

### Output for an individual device

```
DEVICE-NAME: @@@@@@@@
POOL-NAME(S):
 @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ ...
...
```

### Output for a pool list

```
POOL-NAME(S):
 @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ ...
...
```

### Output for a device list

```
DEVICE-NAME(S):
 @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ ...
...
```

# SHOW-SPOOL-CHARACTER-SETS

## Request character set information

**User group:** all users except the operator

The SHOW-SPOOL-CHARACTER-SETS statement outputs information on data from the specified character set. The number of character sets listed can be restricted arbitrarily by specifying selection criteria. All those character sets are selected whose entry contains the values specified with the relevant operand (ANDing).

The operands of SHOW-SPOOL-CHARACTER-SETS correspond to those of the ADD-SPOOL-CHARACTER-SET statement with regard to their names and meanings. The operand value **\*ALL** (usually the default value) means the relevant operand is not used as a selection criterion.

(part 1 of 2)

### SHOW-SPOOL-CHARACTER-SETS

```
,SELECT = *ALL / *PARAMETERS(...)
```

```
 *PARAMETERS(...)
```

```
 CHARACTER-SET-NAME = *ALL / <alphanum-name 1..3 with-wild(24)> / list-poss(255): *STD /
 <alphanum-name 1..3>
```

```
 ,OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / *NONE / <name 1..8>
```

```
 ,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
```

```
 *INTERVAL(...)
```

```
 FROM = 1950-01-01 / <date 8..10>
```

```
 ,TO = *TODAY / <date 8..10>
```

```
 ,COLOUR = *ALL / list-poss(9): *BLACK / *MAGENTA / *BLUE / *GREEN / *YELLOW /
 *CYAN / *NEUTRAL / *RED / *IGNORE
```

```
 ,WEIGHT = *ALL / list-poss(4): *LIGHT / *NORMAL / *BOLD / *IGNORE
```

```
 ,CHARACTER-TYPE *ALL / list-poss(16): *OCR-A / *OCR-B / *GOTHIC / *GRAPHIC /
 *NONE / *DATA / *COURIER / *FONT-1 / *FONT-2 / *FONT-3 / *FONT-4 /
 *FONT-5 / *FONT-6 / *FONT-7 / *FONT-8 / *FONT-9 / *FONT-10 / *FONT-11
 *FONT-12 / *FONT-13 / *FONT-14 / *FONT-15 / *FONT-16 / *IGNORE
```

```
 ,CHARACTER-STYLE = *ALL / list-poss(3): *STRAIGHT / *ITALICS / *IGNORE
```

```
 ,UNDERScore = *ALL / list-poss(3): *YES / *NO / *IGNORE
```

continued ➔

(part 2 of 2)

```

,CHARACTERS-PER-INCH = *ALL / *IGNORE / <integer 1..100> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..100>
 | ,HIGH = <integer 1..100>
,
,LINES-PER-INCH = *ALL / list-poss(9): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24
,
,LANGUAGE = *ALL / list-poss(16): *INTERNATIONAL / *ENGLISH / *USA / *BELGIAN /
 *FRENCH / *DUTCH / *GERMAN / *NORWEGIAN / *SWEDISH / *DANISH /
 *SPANISH / *SWISS / *ITALIAN / *ARABIC / *FARSI /*NONE / *ISO-8859-1 /
 *ISO-8859-2 /*ISO-8859-3 / *ISO-8859-4 / *ISO-8859-5 / *ISO-8859-6 / *ISO-8859-7 /
 *ISO-8859-8 / *ISO-8859-9 / *IGNORE
,
,NEAR-LETTER-QUALITY = *ALL / list-poss(3): *YES / *NO / *IGNORE
,EXCEPT = *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | CHARACTER-SET-NAME = *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16): *STD /
 | <alphanum-name 1..3>
 |
 | ,OWNER = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <name 1..8>
,SERVER-NAME = *STD / *HOME / <alphanum-name 1..8>
,CLUSTER-NAME = *STD / *LOCAL-CLUSTER / <alphanum-name 1..8>

```

## Operands

### **SELECT =\*ALL / \*PARAMETERS(...)**

Specifies the character sets from which information is to be output.

### **SELECT = \*PARAMETERS(...)**

Initiates a list of selection criteria.

#### **CHARACTER-SET-NAME = \*ALL / <alphanum-name 1..3 with-wild(24)> / list-poss(255): \*STD / <alphanum-name 1..3>**

The character set name serves as a selection criterion. The \*STD value designates the default character set with this name.

#### **OWNER = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): \*NONE / \*OWN / <name 1..8>**

The user ID of the user who created the character set serves as a selection criterion.



Nonprivileged users may only specify \*ALL or \*OWN.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the output of the character set. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a character set to be output.

**ACCESS-DATE = \*TODAY**

This specification allows the character set created or modified or used on today's date to be output.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for output of a character set.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

**COLOUR = \*ALL / list-poss(9): \*BLACK / \*MAGENTA / \*BLUE / \*GREEN / \*YELLOW / \*CYAN / \*RED / \*NEUTRAL / \*IGNORE**

The color designation serves as a selection criterion.

**WEIGHT = \*ALL / list-poss(4): \*LIGHT / \*NORMAL / \*BOLD / \*IGNORE**

The stroke weight serves as a selection criterion.

**CHARACTER-TYPE = \*ALL / list-poss(16): \*OCR-A / \*OCR-B / \*GOTHIC / \*GRAPHIC / \*NONE / \*DATA / \*COURIER / \*FONT-1 / \*FONT-2 / \*FONT-3 / \*FONT-4 / \*FONT-5 / \*FONT-6 / \*FONT-7 / \*FONT-8 / \*FONT-9 / \*FONT-10 / \*FONT-11 / \*FONT-12 / \*FONT-13 / \*FONT-14 / \*FONT-15 / \*FONT-16 / \*IGNORE**

The character type serves as a selection criterion.

**CHARACTER-STYLE = \*ALL / list-poss(3): \*STRAIGHT / \*ITALICS / \*IGNORE**

The character style defined for the character set serves as a selection criterion.

**UNDERSCORE = \*ALL / list-poss(3): \*YES / \*NO / \*IGNORE**

Whether or not underscoring was specified for the character set serves as a selection criterion.

**CHARACTERS-PER-INCH = \*ALL / <integer 1..100> / \*IGNORE / \*RANGE(...)**

The character density serves as a selection criterion.

**CHARACTERS-PER-INCH = \*RANGE(...)**

A range of values is specified. All those character sets are output whose character density is within the specified range.

**LOW = <integer 1..100>**

Lower limit of the range.

**HIGH = <integer 1..100>**

Upper limit of the range.

**LINES-PER-INCH = \*ALL / list-poss(9): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24**

The line density serves as a selection criterion.

**LANGUAGE = \*ALL / list-poss(16): \*INTERNATIONAL / \*ENGLISH / \*USA / \*BELGIAN / \*FRENCH / \*DUTCH / \*GERMAN / \*NORWEGIAN / \*SWEDISH / \*DANISH / \*SPANISH / \*SWISS / \*ITALIAN / \*IGNORE / \*ARABIC / \*FARSI / \*ISO-8859-1 / \*ISO-8859-2 / \*ISO-8859-3 / \*ISO-8859-4 / \*ISO-8859-5 / \*ISO-8859-6 / \*ISO-8859-7 / \*ISO-8859-8 / \*ISO-8859-9**

The language defined for the character set serves as a selection criterion.

**NEAR-LETTER-QUALITY = \*ALL / list-poss(3): \*YES / \*NO / \*IGNORE**

The NLQ specification for the character set serves as a selection criterion.

**EXCEPT = \*NONE /\*PARAMETERS(...)**

Specifies the character sets that are to be excluded (not taken into account) from the selection criteria. If the value \*NONE (default value) is specified, the operand is not used as a selection criterion.

**EXCEPT = \*PARAMETERS(...)**

Initiates a list of selection criteria.

**CHARACTER-SET-NAME = \*NONE / <alphanum-name 1..3 with-wild>(24) / list-poss(16): \*STD / <alphanum-name 1..3>**

The character sets that contain the specified attributes are not to be taken into account. If the value NONE (default value) is specified, the operand is not used as a selection criterion.

**OWNER = \*NONE / alphanum-name 1..8 with-wild(24)> /  
list-poss(16): \*OWN / <name 1..8>**

The character sets that contain the specified attributes are not to be taken into account. If the value \*NONE (default value) is specified, the operand is not used as a selection criterion.



Nonprivileged users may only specify values other than \*NONE for OWNER if they have specified SELECT=\*PARAMETERS(OWNER=\*OWN) above.

**SERVER-NAME = \*STD / \*HOME / <alphanum-name 1..8>**

Specifies the servers for which information is to be output.

**CLUSTER-NAME = \*STD / \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies the cluster for which the information is to be output. The specified cluster must be a BS2000 cluster.

#### Note

If a specification has been made under SERVER-NAME or CLUSTER-NAME (i.e. not \*STD), the information for this is provided from the corresponding system SPOOL parameter file for the server. Otherwise this information comes from the (user or system) SPOOL parameter file (if it is open) or from the home system SPOOL parameter file for the HOST (if the Dprint configuration file is open).

## Output format

```
C-S-NAME COLOUR WEIGHT CH-TYPE CH-STYLE UND CPI LPI LANGUAGE NLQ OWNER
@@@@@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@ ### ## @@@@@ @@@ @@@@@
ACCESS-DATE: @@@-@@-@@
```

#### Note

The value IGN (\*IGNORE) in the COLOUR, WEIGHT, CH-TYPE, CH-STYLE, UND, LANGUAGE, NLQ and CPI fields indicates that the corresponding operand is not evaluated by RSO.

## Meanings of the fields

(The name in parentheses is the corresponding operand of the ADD-SPOOL-CHARACTER-SET statement.)

| <b>Output field</b>              | <b>Contents</b>                                                                                                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESS-DATE                      | Date of the last modification or use                                                                                                                                                           |
| C-S-NAME<br>(CHARACTER-SET-NAME) | Name of the character set                                                                                                                                                                      |
| COLOUR<br>(COLOUR)               | Color in which the character set is to be printed                                                                                                                                              |
| WEIGHT<br>(WEIGHT)               | Printing weight                                                                                                                                                                                |
| CH-TYPE<br>(CHARACTER-TYPE)      | Font (OCR-A, OCR-B, ...)                                                                                                                                                                       |
| CH-STYLE<br>(CHARACTER-STYLE)    | Character style (STRAIGHT, ITALICS)                                                                                                                                                            |
| UND<br>(UNDERSCORE)              | Underscore                                                                                                                                                                                     |
| CPI<br>(CHARACTERS-PER-INCH)     | Character density                                                                                                                                                                              |
| LPI<br>(LINES-PER-INCH)          | Line density (in lines per inch)                                                                                                                                                               |
| LANGUAGE<br>(LANGUAGE)           | Language in which the character set is to be used<br>(INTERNAT, ENGLISH, ...)                                                                                                                  |
| NLQ<br>(NEAR-LETTER-QUALITY)     | Near-letter quality is to be used for printing the characters: YES/<br>NO                                                                                                                      |
| OWNER                            | Under TSOS:<br>user ID of the character set owner who produced it, i.e. the RSO<br>device administrator or systems support.<br>Nonprivileged users:<br>the output field always contains blanks |



## SHOW-SPOOL-DEVICES

### Request device information

**User group:** all users except the operator

The SHOW-SPOOL-DEVICES statement provides information on specifications (data) from the device entry of the printer or printer type specified. If a printer type is specified without a printer name being specified, only a selection of important data is output, sorted according to printer name. The number of devices listed can be restricted to any quantity by means of specifying selection criteria. The printers selected are those whose device entry contains the values specified under the respective operands (AND operation). The designation and meaning of the operands of the SHOW-SPOOL-DEVICES statement correspond to the operands of the ADD-SPOOL-DEVICE statement. The operand value \*ALL (usually the default value) means that the respective operand is not used as a selection criterion.

(part 1 of 8)

#### SHOW-SPOOL-DEVICES

```
,SELECT = *ALL / *PARAMETERS(...)
```

```
*PARAMETERS(...)
```

```
 DEVICE-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(255): *STD /
 <alphanum-name 1..8>
```

```
,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> / *LOCAL / *RSO
 list-poss(52): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER / *LP-EMULATED-PRINTER /
 *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER / *VIRTUAL / *2030-PCL-PRINTER /
 *2090-APA-PRINTER / *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
 *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
 *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
 *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
 *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
 *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
 *9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
 *9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
```

continued →

(part 2 of 8)

```

*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER / *9645-REMOTE-PRINTER

,OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN /
 *NONE / <name 1..8>

,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>

,DEVICE-ACCESS = *ALL / *NEA-ACCESS(...) / *TCP-ACCESS(...) / *LOCAL-ACCESS(...) /
 *SCSI-ACCESS(...)

 *NEA-ACCESS(...)
 ACCESS-TYPE = *ALL / list-poss(6): *DIRECT / *HARDCOPY / *APPLICATION / *HDLC /
 *PC / *HARDCOPY-9751
 ,PROCESSOR-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *NONE / <alphanum-name 1..8>
 ,STATION-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *NONE / <alphanum-name 1..8>

 *TCP-ACCESS(...)
 ACCESS-TYPE = *ALL / *TACLAN / *LPD(...) / *IPP
 *LPD(...)
 LPD-PRINTER-NAME = *ALL / <c-string 1..32>
 ,FROM-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..1024>
 ,HIGH = <integer 1..1024>
 ,TO-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..1024>
 ,HIGH = <integer 1..1024>
 ,INTERNET-ADDRESS = *ALL / <alphanum-name 1..24 with-wild> /
 <composed-name 1..15 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..32> / <composed-name 7..32>
 ,PORT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *NONE / <alphanum-name 1..8>

```

continued =&gt;

```

*LOCAL-ACCESS(...)
 ACCESS-TYPE = *ALL / list-poss(3): *CHANNEL-TYPE-1 / *CHANNEL-TYPE-2 /
 *BUS-TYPE-1
 ,MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 <alphanum-name 2..2>/ *NONE / *V
 ,PROGRAM-NAME = *ALL / *NONE / <filename>

*SCSI-ACCESS(...)
 ACCESS-TYPE = *ALL / *STD / *EMULATED-CHANNEL-TYPE-2
 ,MNEMONIC-NAME = *ALL / *STD / <alphanum-name 2..2>
 ,SLAVE-MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 <alphanum-name 2..2>/ *NONE
 ,ESD-SIZE = *ALL / <integer 1..128> / *RANGE(...)
 *RANGE(...)
 LOW = 1 / <integer 1..128>
 ,HIGH = 128 / <integer 1..128>
 ,REDIRECTION-DEVICE = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..8>
 ,LANGUAGE-EXT-TYPE = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *SYSTEM /
 <alphanum-name 1..8>
 ,FORMS-OVERLAY-BUFFER = *ALL / *NO / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..32767>
 ,HIGH = <integer 1..32767>
 ,CHARACTER-SET-NUMBER = *ALL / list-poss(7): 1 / 4 / 6 / 23 / 36 / 46 / 64
 ,ROTATION = *ALL / *YES / *NO
 ,DUPLEX-PROCESSING = *ALL / *NO / *YES
 ,FORMS-OVERLAY = *ALL / *YES / *NO
 ,RASTER-PATTERN-MEM = *ALL / *NONE / *RANGE(...)
 *RANGE(...)
 LOW = <integer 4096..65535>
 ,HIGH = <integer 4096..65535>
 ,TRANSMISSION = *ALL / list-poss(3): *IGNORE / *7BIT / *8BIT
 ,FONT-TYPE = *ALL / list-poss(3): *IGNORE / *7BIT / *8BIT
 ,FACE-PROCESSING = *ALL / *YES / *NO

```

continued ⇒

```

,MAXIMUM-INPUT-TRAY = *ALL / <integer 1..99> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..99>
 | ,HIGH = <integer 1..99>
,SUPP-FORMAT-NAMES = *ALL / *DEFAULT / list-poss(8): *TEXT / *HP / *SPDS / *PLAIN-TEXT /
 *EXCCW / *PML / <c-string 1..63 with-low>
,MONJV = *ALL / *YES / *NO
,NOTIFICATION = *ALL / *YES / *NO
,ENCRYPTION = *ALL / *YES / *NO
,UNICODE = *ALL / *YES / *NO
,LINE-SIZE = *ALL / *IGNORE / <integer 3..255> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 3..255>
 | ,HIGH = <integer 3..255>
,CHARACTER-IMAGE = *ALL / *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
,USER-IDENTIFICATION = *ALL / *NONE / list-poss(16): *OWN / <name 1..8>
,IDENTIFICATION = *ALL / list-poss(16): *NONE / <c-string 1..16>
,TERMINAL = *ALL / *NONE / *OWN / *ANY / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | PROCESSOR-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 | *ANY / *OWN / <alphanum-name 1..8>
 | ,STATION-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 | *ANY / *OWN / <alphanum-name 1..8>
,LEFT-MARGIN = *ALL / <integer 0..31> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 0..31>
 | ,HIGH = <integer 0..31>
,LINE-FEED-COMPRESS = *ALL / *YES / *NO
,BLANK-COMPRESSSION = *ALL / *YES / *NO
,START-FORM-FEED = *ALL / *YES / *NO
,FORM-FEED = *ALL / *LISTING(...) / *SINGLE-SHEET(...)
 *LISTING(...)
 |
 | DEFAULT-TRAY-NUMBER = *ALL / *IGNORE / <integer 1..99> / *RANGE(...)

```

continued ➔

```

 *RANGE(...)
 |
 | LOW = <integer 1..99>
 | ,HIGH = <integer 1..99>
 ,OUTPUT-TRAY-NUMBER = *ALL / *IGNORE / <integer 0..99> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 0..99>
 | ,HIGH = <integer 0..99>
 *SINGLE-SHEET(...)
 DEFAULT-TRAY-NUMBER = *ALL / *IGNORE / <integer 1..99> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..99>
 | ,HIGH = <integer 1..99>
 ,OUTPUT-TRAY-NUMBER = *ALL / *IGNORE / <integer 0..99> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 0..99>
 | ,HIGH = <integer 0..99>
 SKIP-TO-CHANNEL-ONE = *ALL / *NORMAL / *OPTIMIZED
 ,SKIP-TO-NEXT-PAGE = *ALL / *BY-LINES / *BY-FORM-FEED
 ,ESCAPE-VALUE = *ALL / list-poss(16): *NONE / <x-string 1..2>
 ,CONTROLLER-RESERVED = *ALL / *YES / *NO
 ,FORM-NAME = *ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>
 ,DISCONNECTION = *ALL / list-poss(2): *YES / *NO / *FORCE
 ,BUFFER-SIZE = *ALL / <integer 256..32767> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 256..32767>
 | ,HIGH = <integer 256..32767>
 ,RESET = *ALL / *YES / *NO
 ,REPEAT-MESSAGE = *ALL / *NO / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | TYPE = *ALL / *SYSTEM / *DUMMY
 | ,LIMIT = *ALL / *NO / <integer 1..255> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 1..255>
 | | ,HIGH = <integer 1..255>

```

continued →

```

,RETRY-TIME = *ALL / *GLOBAL / <integer 1..600> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..600>
 | ,HIGH = <integer 1..600>
RESTART-ACTION= *ALL / *NO / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | LIMIT = *ALL / *NO / <integer 1..255> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 1..255>
 | | ,HIGH = <integer 1..255>
 | ,RETRY-TIME = *ALL / *GLOBAL / <integer 1..600> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 1..600>
 | | ,HIGH = <integer 1..600>.
,SYNCHRONIZATION = *ALL / *PRINTER / *NETWORK
,TIMEOUT-MAX = *ALL / <integer 2..30> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 2..30>
 | ,HIGH = <integer 2..30>
,PAGES-EJECT-TIMEOUT = *ALL / *NO / <integer 1..255> / *RANGE(...)
 *RANGE(...)
 |
 | LOW = <integer 1..255>
 | ,HIGH = <integer 1..255>
,BAND-IDENTIFICATION = *ALL / <alphanum-name 1..4 with-wild(24)>/ list-poss(16): *NONE /
 <alphanum-name 4..4>
,LOAD = *ALL / *YES / *NO
,MODULO2 = *ALL / *YES / *NO
,RECOVERY-RULES = *ALL / <composed-name 1..16 with-wild(24)> / list-poss(16): *STD /
 <composed-name 1..16>
,POLLING = *ALL / *YES / *NO
,PRINTER-PARAM-FILE = *ALL / <composed-name 1..16 with-wild(24)> / list-poss(16): *SYSTEM /
 <composed-name 1..16>
,RESOURCE-FILE-PREFIX = *ALL / <composed-name 1..8 with-wild(16)>/ list-poss(16): *STD /
 <composed-name 1..8>

```

continued →

```

,CONTROLLER-START = *ALL / *AT-PRINTER-START / *AT-JOB-START
,CHARACTER-SET-POS = *ALL / *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 POSITION-1 = *ALL / list-poss(16): *OCR-A / *OCR-B / *GOTHIC /
 *GRAPHIC / *NONE / *DATA / *COURIER / *FONT-1 / *FONT-2 /
 *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 / *FONT-7 / *FONT-8 /
 *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 /
 *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE
 ,POSITION-16 = *ALL / list-poss(16): *OCR-A / *OCR-B / *GOTHIC /
 *GRAPHIC / *NONE / *DATA / *COURIER / *FONT-1 / *FONT-2 /
 *FONT-3 / *FONT-4 / *FONT-5 / *FONT-6 / *FONT-7 / *FONT-8 /
 *FONT-9 / *FONT-10 / *FONT-11 / *FONT-12 / *FONT-13 /
 *FONT-14 / *FONT-15 / *FONT-16 / *NOT-USABLE
,EXCEPT = *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 DEVICE-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *STD /
 <alphanum-name 1..8>
 ,OWNER = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <name 1..8>
 ,SLAVE-MNEMONIC-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 <alphanum-name 2..2>
 ,REDIRECTION-DEVICE = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *CENTRAL / <alphanum-name 1..8>
 ,CHARACTER-IMAGE = *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
 ,USER-IDENTIFICATION = *NONE / list-poss(16): *OWN / <name 1..8>
 ,TERMINAL = *NONE / *OWN / *PARAMETERS(...)
 *PARAMETERS(...)
 PROCESSOR-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *OWN / <alphanum-name 1..8>
 ,STATION-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 *OWN / <alphanum-name 1..8>
 ,FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> / list-poss(16):
 <alphanum-name 1..6>

```

continued →

```

,BAND-IDENTIFICATION = *NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16):
 <alphanum-name 4..4>
,RECOVERY-RULES = *NONE / <composed-name 1.16 with-wild(24)> / list-poss(16):
 <composed-name 1..16>
,PRINTER-PARAM-FILE = *NONE / <composed-name 1.16 with-wild(24)> / list-poss(16):
 <composed-name 1..16>
,RESOURCE-FILE-PREFIX = *NONE / <composed-name 1.8 with-wild(16)> / list-poss(16):
 <composed-name 1..8>
,SERVER-NAME = *STD / *HOME / <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL / list-poss(7):
 *DEVICE-ACCESS / *TWIN-DEVICE-DEF / *DEVICE-INFORMATION / *ADMINISTRATOR /
 *SPOOL-OUT-CONTROL / *PROCESSING-CONTROL / *CHARACTER-SET-POS

```

## Operands

### **SELECT = \*ALL / PARAMETERS(...)**

Specifies the criteria according to which the printers about which information is to be output are to be selected. If the value \*ALL (default value) is specified, information is output about all of the printers entered.

### **SELECT = \*PARAMETERS(...)**

The selection criteria are cited in a list.

#### **DEVICE-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(255): \*STD / <alphanum-name 1..8>**

The device name serves as a selection criterion. \*STD designates the device with this name.

#### **DEVICE-TYPE = ....**

The device type serves as a selection criterion.

The value \*LOCAL allows to select all local devices; the value \*RSO allows to select all RSO devices.

#### **OWNER = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <name 1..8> / \*OWN / \*NONE**

The user ID of the user who created the device entry serves as a selection criterion.



The user access rights determine which specifications are allowed here. See also “Access rights” on page [page 488](#).



**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the output of the device entry. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a device entry to be output.

**ACCESS-DATE = \*TODAY**

This specification allows the device entry created or modified or used on today's date to be output.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for output of a device entry.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

**DEVICE-ACCESS = \*ALL / \*NEA-ACCESS(...) / \*TCP-ACCESS(...) / \*LOCAL-ACCESS(...) / \*SCSI-ACCESS(...)**

The type of access to the various local printers and RSO printers serves as a selection criterion, as well as the way they are addressed (see also the "RSO" manual). The old operands ACCESS, PROCESSOR-NAME and STATION-NAME continue to be supported; however, their use instead of the new operand DEVICE-ACCESS is restricted to procedures and to batch mode.

**DEVICE-ACCESS = \*NEA-ACCESS(...)**

The RSO printer is accessed via the TRANSDATA-NEA network (NEA stands for **n**etwork **a**rchitecture).

**ACCESS-TYPE = \*ALL / list-poss(9): \*DIRECT / \*HARDCOPY / \*APPLICATION / \*HDLC / \*PC / \*HARDCOPY-9751**

The type of connection used with this printer serves as a selection criterion.

**PROCESSOR-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..8>**

The logical processor name (PDN generation) serves as a selection criterion.

**STATION-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..8>**

The logical station name of the RSO printer serves as a selection criterion.

**DEVICE-ACCESS = \*TCP-ACCESS(...)**

The RSO printer is accessed directly via the TCP/IP LAN using the TCP/IP protocol.

**ACCESS-TYPE = \*ALL / \*TACLAN / \*LPD / \*IPP**

The type of connection used with this printer serves as a selection criterion.

**ACCESS-TYPE = \*TACLAN**

The value TACLAN should be specified if the printer is to be connected to the TCP/IP LAN either via a TACLAN (91863-R or 91863-O model), a DOS PC running with SPPCS V1.0, or a LAN controller card (see also the "RSO" manual).

**ACCESS-TYPE = \*LPD(...)**

The printer accessed via a BSD-LPD serves as the selection criterion.

**LPD-PRINTER-NAME = \*ALL / <c-string 1..32>**

The printer name as defined in the BSD-LPD environment of the host running BSD-LPD serves as the selection criterion (e.g. in the file `'/etc/printcap'`).

**FROM-PORT-NUMBER = \*ALL / \*STD / <integer 0..1024> / \*RANGE(...)**

Minimum value for the LOCAL-PORT-NUMBER, where the printer is connected.

**FROM-PORT-NUMBER = \*RANGE(...)**

The minimum value for the LOCAL-PORT-NUMBER lies in the following range.

**LOW = <integer 0..1024>**

Lower limit of range.

**HIGH = <integer 0..1024>**

Upper limit of range.

**TO-PORT-NUMBER = \*ALL / \*STD / <integer 0..1024> / \*RANGE(...)**

Maximum value for the LOCAL-PORT-NUMBER, where the printer is connected.

**TO-PORT-NUMBER = \*RANGE(...)**

The minimum value for the LOCAL-PORT-NUMBER lies in the following range.

**LOW = <integer 0..1024>**

Lower limit of range.

**HIGH = <integer 0..1024>**

Upper limit of range.

**ACCESS-TYPE = \*IPP**

Printer is accessed across the Internet via the IPP protocol (see also the "RSO" manual). This value is only relevant to RSO printers.

**INTERNET-ADDRESS = \*ALL / <alphanum-name 1..24 with-wild> / <composed-name 1..15 with-wild(24)> / list-poss(16): \*NONE / <alphanum-name 1..32> / <composed-name 7..32>**

The selection criterion is the Internet address for the TACLAN (or for the DOS PC running with SPPCS V1.0, or for the LAN controller card or host running BSD-LPD) to which the printer is connected.

This address must be specified either as the physical IP address (nnn.nnn.nnn.nnn) or as the socket host name, as generated via BCAM. See also the "RSO" manual.

**PORT-NAME = \*UNCHANGED / <alphanum-name 1..24> / list-poss(16): <alphanum-name 1..8> / \*NONE**

The selection criterion is the port name for the TACLAN (or for the DOS PC running with SPPCS V1.0, the LAN controller card, or BSD-LPD when ACCESS-TYPE=\*LPD) to which the printer is connected. For BSD-LPD, the port name is usually 515. See also the "RSO" manual.

**DEVICE-ACCESS = \*LOCAL-ACCESS(...)**

A local printer with the appropriate format is used.

**ACCESS-TYPE = \*ALL / list-poss(3): \*CHANNEL-TYPE-1 / \*CHANNEL-TYPE-2 / \*BUS-TYPE-1**

The type of connection used with this printer serves as the selection criterion.

**MNEMONIC-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2> / \*NONE / \*V**

The device mnemonic for the "master" of the twin printer at the local host serves as the selection criterion.

**MNEMONIC-NAME = \*V**

The device mnemonic for a local printer or for the "master" of the twin printer at the local host serves as the selection criterion.

**PROGRAM-NAME = \*ALL / \*NONE / <filename>**

Name of the LOGON procedure which is called via the virtual control task.

**DEVICE-ACCESS = \*SCSI-ACCESS(...)**

A SCSI printer with the appropriate format is used.

**ACCESS-TYPE = \*ALL / \*STD / \*EMULATED-CHANNEL-TYPE-2**

The type of connection used with the SCSI printer serves as the selection criterion.

**MNEMONIC-NAME = \*ALL / \*STD / <alphanum-name 2..2>**

The device mnemonic for a local printer at the SCSI host serves as the selection criterion.

**SLAVE-MNEMONIC-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2> / \*NONE**

The device mnemonic for the “slave” twin printer at the local host serves as selection criterion. The name specified here must not be identical with the device mnemonic specified for the “master”. The “slave” is always the second printer along the paper path.

**ESD-SIZE = \*ALL / <integer 1..128> / \*RANGE(...)**

The size (in Mbytes) of the external storage for the twin printer serves as a selection criterion.

**ESD-SIZE = \*RANGE(...)**

Specification of a range of values.

**LOW = 1 <integer 1..128>**

Lower limit of the range.

**HIGH = 128 <integer 1..128>**

Upper limit of the range.

**REDIRECTION-DEVICE = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): \*NONE / <alphanum-name 1..8>**

Redirected RSO jobs serve as a selection criterion.

**LANGUAGE-EXT-TYPE = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): \*SYSTEM / <alphanum-name 1..8>**

The device type for exceptional print output in conjunction with the DSEM V3.0 product serves as a selection criterion.

**FORMS-OVERLAY-BUFFER = \*ALL / \*NO / \*RANGE(...)**

The size of the buffer for FOB data overlays serves as a selection criterion.

**FORMS-OVERLAY-BUFFER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..32767>**

Lower limit of the range.

**HIGH = <integer 1..32767>**

Upper limit of the range.

**CHARACTER-SET-NUMBER = \*ALL / list-poss(7): 1 / 4 / 6 / 23 / 36 / 46 / 64**

The number of character sets that can be loaded serves as a selection criterion.

**ROTATION = \*ALL / \*YES / \*NO**

The existence of a page rotation module serves as a selection criterion.

**DUPLEX-PROCESSING = \*ALL / \*YES / \*NO**

The capability for printing on both the front and the back of a page serves as a selection criterion.

**FORMS-OVERLAY = \*ALL / \*YES / \*NO**

The capability for processing film overlays serves as a selection criterion.

**RASTER-PATTERN-MEM = \*ALL / \*NONE / \*RANGE(...)**

All printers with a raster pattern memory of the specified size are selected.

**RASTER-PATTERN-MEM = \*RANGE(...)**

All printers with a raster pattern memory in the specified range of values are selected.

**LOW = <integer 4096..65535>**

Lower limit of range.

**HIGH = <integer 4096..65535>**

Upper limit of range.

*Note*

For compatibility reasons, the old syntax of the RASTER-PATTERN-MEM operand is still accepted.

**TRANSMISSION = \*ALL / list-poss(3): \*7BIT / \*8BIT / \*IGNORE**

The selection criterion is the format of the transmission protocol (front-end processor → printer).

**FONT-TYPE = \*ALL / list-poss(3): \*7BIT / \*8BIT / \*IGNORE**

The selection criterion is the bit format of the printer font.

**FACE-PROCESSING = \*ALL / \*YES / \*NO**

The selection criterion is the positioning of the printed pages on the output tray.

**MAXIMUM-INPUT-TRAY = \*ALL / <integer 1..99> / \*RANGE(...)**

The selection criterion is the maximum number of input trays; it is possible to specify a range of values.

**MAXIMUM-INPUT-TRAY = RANGE(...)**

Specification of a range of values that contains the value for the maximum number of input trays.

**LOW = <integer 1..99>**

Lower limit of the range.

**HIGH = <integer 1..99>**

Upper limit of the range.

**SUPP-FORMAT-NAMES = \*ALL / list-poss(8): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*EXCCW / \*PML / <c-string 1..63 with-low>**

The selection criterion is the document format that the printer can print.

**MONJV = \*ALL / \*YES / \*NO**

The selection criterion is whether a monitor job variable was created to trace and, if necessary, control the asynchronous part of the START-PRINTER-OUTPUT command.

*Note*

To use this function you require the JV subsystem.

**NOTIFICATION = \*ALL / \*YES / \*NO**

The selection criterion is whether notifications may be generated or not for the events that occur on the device.

**ENCRYPTION = \*ALL / \*YES / \*NO**

The selection criterion is whether encryption is supported or not by the device.

**UNICODE = \*ALL / \*YES / \*NO**

The selection criterion is whether unicode option is supported or not by the device.

**LINE-SIZE = \*ALL / \*RANGE(...) / \*IGNORE / <integer 3..255>**

The selection criterion is the maximum number of characters that can be printed on one line; it is possible to specify a range of values.

**LINE-SIZE = \*RANGE(...)**

Specification of a range of values that contains the maximum number of lines.

**LOW = <integer 3..255>**

Lower limit of the range.

**HIGH = <integer 3..255>**

Upper limit of the range.

**CHARACTER-IMAGE = \*ALL / \*NONE / <alphanum-name 1..3 with-wild(24)> /****list-poss(16): <alphanum-name 1..3>**

The selection criterion is the name of the conversion table.

**USER-IDENTIFICATION = \*ALL / \*NONE / <alphanum-name 1..8 with-wild(24)> /****list-poss(16): <name 1..8> / \*OWN**

The selection criterion is the user ID of the RSO device administrator.



The user access rights determine which specifications are allowed here.

See also "Access rights" on page [page 488](#).

**IDENTIFICATION = \*ALL / list-poss(16): \*NONE / <c-string 1..16>**

The selection criterion consists of specifications for the RSO device administrator (name, telephone number,...) as they are given in the device entry.

**TERMINAL = \*ALL / \*OWN / \*NONE / \*ANY / \*PARAMETERS(...)**

The selection criterion is the data display terminal defined for the RSO device administrator.

**PROCESSOR-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*OWN / \*ANY / <alphanum-name 1..8> /**

The logical processor name serves as a selection criterion.



The user access rights determine which specifications are allowed here.  
See also "Access rights" on [page 488](#).

**STATION-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*OWN / \*ANY / <alphanum-name 1..8>**

The station name serves as a selection criterion.



The user access rights determine which specifications are allowed here.  
See also "Access rights" on [page 488](#).

**LEFT-MARGIN = \*ALL / <integer 0..31> / \*RANGE(...)**

The indentation value for printing out the output text serves as a selection criterion.

**LEFT-MARGIN = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 0..31>**

Lower limit of the range.

**HIGH = <integer 0..31>**

Upper limit of the range.

**LINE-FEED-COMPRESS = \*ALL / \*NO / \*YES**

Whether or not line feed compression is switched on serves as a selection criterion.

**BLANK-COMPRESSSION = \*ALL / \*NO / \*YES**

Whether or not blank compression is switched on serves as a selection criterion.

**START-FORM-FEED = \*ALL / \*NO / \*YES**

Whether or not an automatic form feed takes place at the beginning of spoolout serves as a selection criterion.

**FORM-FEED = \*ALL / \*LISTING / \*SINGLE-SHEET(...)**

Whether printout occurs on single-sheet or continuous paper and which input tray is used serve as selection criteria.

**FORM-FEED = \*LISTING(...)**

Selection criterion: printout using continuous paper.

**DEFAULT-TRAY-NUMBER = \*ALL / \*IGNORE / <integer 1..99> / \*RANGE(...)**

The input tray number serves as a selection criterion.

**DEFAULT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..99>**

Lower limit of the range.

**HIGH = <integer 1..99>**

Upper limit of the range.

**OUTPUT-TRAY-NUMBER = \*ALL / \*IGNORE / <integer 0..99> / \*RANGE(...)**

The output tray number serves as a selection criterion.

**OUTPUT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 0..99>**

Lower limit of the range.

**HIGH = <integer 0..99>**

Upper limit of the range.

**FORM-FEED = \*SINGLE-SHEET(...)**

Selection criterion: printout using single sheets.

**DEFAULT-TRAY-NUMBER = \*ALL / \*IGNORE / <integer 1..99> / \*RANGE(...)**

The input tray number serves as a selection criterion.

**DEFAULT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..99>**

Lower limit of the range.

**HIGH = <integer 1..99>**

Upper limit of the range.

**OUTPUT-TRAY-NUMBER = \*ALL / \*IGNORE / <integer 0..99> / \*RANGE(...)**

The output tray number serves as a selection criterion.

**OUTPUT-TRAY-NUMBER = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 0..99>**

Lower limit of the range.

**HIGH = <integer 0..99>**

Upper limit of the range.

**SKIP-TO-CHANNEL-ONE = \*ALL / \*NORMAL / \*OPTIMIZED**

The selection criterion is the reaction of the printer if skip to the "channel" vertical tabulator is specified twice in succession.

**SKIP-TO-NEXT-PAGE = \*ALL / \*BY-LINES / \*BY-FORM-FEED**

The selection criterion is the definition of how the page feed is to be triggered (by counting the number of lines or by the appropriate control character).



**ESCAPE-VALUE = \*ALL / list-poss(16): \*NONE / <x-string 1..2>**

The selection criterion is the ESCAPE character that has been defined for identifying the printer commands.

**CONTROLLER-RESERVED = \*ALL / \*NO / \*YES**

The selection criterion is whether an exclusive RSO controller is available to the RSO device.

**FORM-NAME = \*ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>**

The selection criterion is the name of the standard form.

**DISCONNECTION = \*ALL / list-poss(2): \*YES / \*NO / \*FORCE**

The selection criterion is the definition of whether the connection between RSO and the printer may be cleared down.

**BUFFER-SIZE = \*ALL / <integer 256..32767> / \*RANGE(...)**

The selection criterion is the maximum buffer size for data transfer.

**BUFFER-SIZE = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 256..32767>**

Lower limit of the range.

**HIGH = <integer 256..32767>**

Upper limit of the range.

**RESET = \*ALL / \*YES / \*NO**

The selection criterion is the definition of whether the printer switches are to be reset before and after each spoolout job.

**REPEAT-MESSAGE = \*ALL / \*NO / \*PARAMETERS(...)**

The selection criterion is the definition of the procedure that is to be followed in the event of an error (printer error, end of paper,...).

**REPEAT-MESSAGE = \*NO**

No message is to be output in the event of an error.

**REPEAT-MESSAGE = \*PARAMETERS(...)**

Specifies the mode of error response (type, frequency, time limit).

**TYPE = \*ALL / \*SYSTEM / \*DUMMY**

Defines an error response.

**TYPE = \*SYSTEM**

A form feed is performed and the message SRO1001 is printed (this means that the following page can already be printed out). Printer output is continued with a further form feed.

**TYPE = \*DUMMY**

A form feed is performed, possibly with the last page being repeated.

**LIMIT = \*ALL / \*NO / <integer 1..255> / \*RANGE(...)**

Specifies whether or how often the error response will be performed.

**LIMIT = \*NO**

A limit was not specified.

**LIMIT = \*RANGE(...)**

Specification of a range of values that contains the value specified for LIMIT.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**RETRY-TIME = \*ALL / \*GLOBAL / <integer 1..600> / \*RANGE(...)**

The selection criterion is the waiting time (specified in seconds) between two attempts to print out the file; it is possible to specify a range.

**RETRY-TIME = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..600>**

Lower limit of the range.

**HIGH = <integer 1..600>**

Upper limit of the range.

**RESTART-ACTION = \*ALL / \*NO / \*PARAMETERS(...)**

The selection criterion is the type of response in the event of faults during connection setup and/or printer faults. The old operand REPEAT-OPEN-CONNECT continues to be supported; however, its use instead of the new operand RESTART-ACTION is restricted to procedures and to batch mode.

**RESTART-ACTION = \*NO**

No limit has been defined for the number of repeats and the waiting (retry) time.

**RESTART-ACTION = \*PARAMETERS(...)**

Specifies the mode of error response (frequency, time limit).

**LIMIT = \*ALL / \*NO / <integer 1..255> / \*RANGE(...)**

Specifies the number of attempts made to set up the connection.

**LIMIT = \*NO**

No limit has been specified.

**LIMIT = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**RETRY-TIME = \*ALL / \*GLOBAL / <integer 1..600> / \*RANGE(...)**

The selection criterion is the waiting time (specified in seconds) between two attempts to set up the connection.

**RETRY-TIME = \*RANGE(...)**

Specification of a range of values for the waiting time.

**LOW = <integer 1..600>**

Lower limit of the range.

**HIGH = <integer 1..600>**

Upper limit of the range.

**SYNCHRONIZATION = \*ALL / \*PRINTER / \*NETWORK**

The selection criterion is the definition as to whether printing out is to be synchronized with the printer acknowledgment (\*PRINTER) or the network acknowledgment (\*NETWORK).

**TIMEOUT-MAX = \*ALL / <integer 2..30> / \*RANGE(...)**

The selection criterion is the maximum printing time in minutes for each buffer transferred.

**TIMEOUT-MAX = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 2..30>**

Lower limit of the range.

**HIGH = <integer 2..30>**

Upper limit of the range.

**PAGES-EJECT-TIMEOUT = \*ALL / \*NO / \*<integer 1..255> / \*RANGE(...)**

The selection criterion is the maximum waiting time (in the case of an inactive printer), specified in minutes, before the pages still remaining in the printer are automatically ejected into the stacker. The value NO means that these pages are not ejected.

**PAGES-EJECT-TIMEOUT = \*RANGE(...)**

Specification of a range of values.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**BAND-IDENTIFICATION = \*ALL / <alphanum-name 1..4 with-wild(24)> / list-poss(16): <alphanum-name 4..4> / \*NONE**

The selection criterion is the name of the type band to be used for printing.

**LOAD = \*ALL / \*YES / \*NO**

The selection criterion is the definition whether an RSO printer loadable with a LOOP record must be operated using this function. For 9645 Printers only.

**MODULO2 = \*ALL / \*YES / \*NO**

The selection criterion is the capability for transferring another buffer to the printer while the first one is being printed.

**RECOVERY-RULES = \*ALL / <composed-name 1..16 with-wild(24)> / list-poss(16): \*SYSTEM / <composed-name 1..16>**

The file containing the recovery rules for the selected device serves as a selection criterion, identified here by specifying the file name suffix.

**POLLING = \*ALL / \*YES / \*NO**

The selection criterion is the definition whether RSO queries the printer status in order to obtain information about printer malfunctions. The operand is applicable only to printers for which DEVICE-ACCESS = \*TCP-ACCESS(Access-Type = \*TACLAN) has been specified.

**PRINTER-PARAM-FILE = \*ALL / <composed 1..16 with-wild(24)> / list-poss(16):\*SYSTEM / <composed 1..16>**

The printer parameter file used for the printer serves as a selection criterion; here the suffix of the file name is specified.

**RESOURCE-FILE-PREFIX = \*ALL / <composed 1..8 with-wild(16)> / list-poss(16): \*STD / <composed-name 1..8>**

The file name prefix for the PROLOG/EPILOG/DIA/MEMBER files used by the printer serves as a selection criterion.

**CONTROLLER-START = \*ALL / \*AT-PRINTER-START / \*AT-JOB-START**

When and how the RSO controller is started serve as selection criteria: either with the command START-PRINTER-OUTPUT (\*AT-PRINTER-START) or with the command PRINT-DOCUMENT (\*AT-JOB-START).

**CHARACTER-SET-POS = \*ALL / \*NONE / \*PARAMETERS(...)**

The selection criterion is the definition whether character sets can be selected via their position in the character set memory.

**CHARACTER-SET-POS = \*PARAMETERS(...)**

The selection criterion is the position of the character sets in the character set memory.

**POSITION-1 = \*ALL / list-poss(16): \*NONE / \*OCR-A / \*OCR-B / \*GOTHIC / \*GRAPHIC / \*DATA / \*COURIER / \*FONT-1 / \*FONT-2 / \*FONT-3 / \*FONT-4 / \*FONT-5 / \*FONT-6 / \*FONT-7 / \*FONT-8 / \*FONT-9 / \*FONT-10 / \*FONT-11 / \*FONT-12 / \*FONT-13 / \*FONT-14 / \*FONT-15 / \*FONT-16 / \*NOT-USABLE**

.  
.  
.

**POSITION-16 = \*ALL / list-poss(16): \*NONE / \*OCR-A / \*OCR-B / \*GOTHIC / \*GRAPHIC / \*DATA / \*COURIER / \*FONT-1 / \*FONT-2 / \*FONT-3 / \*FONT-4 / \*FONT-5 / \*FONT-6 / \*FONT-7 / \*FONT-8 / \*FONT-9 / \*FONT-10 / \*FONT-11 / \*FONT-12 / \*FONT-13 / \*FONT-14 / \*FONT-15 / \*FONT-16 / \*NOT-USABLE**

The selection criterion is the position in the character set memory.

**EXCEPT = \*NONE / \*PARAMETERS(...)**

Specifies the device entries that are to be excluded from selection (negative list).

**EXCEPT = \*NONE**

No device entry is to be excluded from the selection criteria.

**EXCEPT = \*PARAMETERS(...)**

Initiates a list of selection criteria.

**DEVICE-NAME = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..8> / \*STD**

Device entries with the specified names are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**OWNER = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*OWN / <name 1..8>**

Device entries with the specified user IDs are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.



The user access rights determine which specifications are allowed here. See also "Access rights" on page [page 488](#).

**SLAVE-MNEMONIC-NAME = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <alphanum-name 2..2>**

The specified device mnemonic for the "slave" twin printer at the local host is not to be taken into account.

**REDIRECTION-DEVICE = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*CENTRAL / <alphanum-name 1..8>**

The specified redirected RSO jobs are not taken into account.

**CHARACTER-IMAGE = \*NONE / <alphanum-name 1..3 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..3>**

Device entries with the specified conversion tables are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**USER-IDENTIFICATION = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): <name 1..8> / \*OWN**

Device entries with the specified user IDs are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.



The user access rights determine which specifications are allowed here. See also “Access rights” on page [page 488](#).

**TERMINAL = \*NONE / \*OWN / \*PARAMETERS(...)**

Device entries with the specified display terminals are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**TERMINAL = \*PARAMETERS(...)**

The display terminals are listed according to processor names and station names.

**PROCESSOR-NAME = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*OWN / <alphanum-name 1..8>**

Specifies the logical processor names. If the value \*NONE (default value) is specified, the operand has no effect.



The user access rights determine which specifications are allowed here. See also “Access rights” on page [page 488](#).

**STATION-NAME = \*NONE / <alphanum-name 1..8 with-wild(24)> /**

**list-poss(16): \*OWN / <alphanum-name 1..8>**

Specifies the station names. If the value \*NONE (default value) is specified, the operand has no effect.



The user access rights determine which specifications are allowed here. See also “Access rights” on page [page 488](#).

**FORM-NAME = \*NONE / <alphanum-name 1..6 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..6>**

Device entries with the specified form names are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**BAND-IDENTIFICATION = \*NONE / <alphanum-name 1..4 with-wild(24)> /**

**list-poss(16): <alphanum-name 4..4>**

Device entries with the specified band IDs are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**RECOVERY-RULES = \*NONE / <composed-name 1..16 with-wild(24)> / list-poss(16): <composed-name 1..16>**

Devices with the specified suffix for the recovery rules file are not to be taken into account.

**PRINTER-PARAM-FILE = \*NONE / <composed-name 1..16 with-wild(24)> / list-poss(16): <composed 1..16>**

Printer parameter files with the specified suffix are ignored.

**RESOURCE-FILE-PREFIX = \*NONE / <composed-name 1..8 with-wild(16)> / list-poss(16): <composed 1..8>**

The files PROLOG/EPILOG/DIA/MEMBER with the specified prefix are ignored.

**SERVER-NAME = \*STD / \*HOME / <alphanum-name 1..8>**

Specifies the servers for which information is to be output. \*HOME is assumed for \*STD.

#### *Notes*

- The value \*STD was included for compatibility reasons. Which parameter file is to be used as the source of information unless otherwise specified is dependent on the operating mode (dynamic, static, from configuration or command).
- If a SPOOL parameter file is assigned (either statically or dynamically), this is the standard source. If no parameter file is assigned (from the configuration or for the command), the standard source is the SPOOL parameter file of the home system.

**INFORMATION = \*SUMMARY / \*ALL / \*list-poss(7): \*DEVICE-ACCESS /**

**\*TWIN-DEVICE-DEV / \*DEVICE-INFORMATION / \*ADMINISTRATOR /**

**\*SPOOL-CONTROL / \*PROCESSING-CONTROL / \*CHARACTER-SET-POS**

Specifies which information is to be output. The fields displayed for each INFORMATION value correspond to the operands of the related structure of the ADD-SPOOL-DEVICE statement. The fields not belonging to any structure are displayed only with INFORMATION = \*ALL. Exception: the fields DEVICE-NAME, DEVICE-TYPE and ACCESS-DATE are displayed with any INFORMATION value.

**INFORMATION = \*SUMMARY**

Only the first line is specified for each element. This value is kept for compatibility reasons.

**INFORMATION = \*ALL**

All lines are specified for each element.

**Access rights**

```
SELECT = *PARAM(OWNER / USER-IDENTIFICATION / TERMINAL =
 *PARAM(PROCESSOR-NAME / STATION-NAME)
```

and

```
EXCEPT = PARAM(OWNER/USER-IDENTIFICATION /
 TERMINAL = PARAM(PROCESSOR-NAME / STATION-NAME)
```

are special settings. They enable users to select or reject devices according to their own specific rights.

The use of these settings is carefully controlled to avoid conflicting entries.

There are three categories of user:

- Systems support  
Systems support is allowed to allocate any device (local or RSO), and also to view the settings assigned to the users for the devices.
- RSO device administrator  
RSO device administrators are allowed to allocate only the devices that they manage, and to view only the settings specific to them.  
They are allowed to make the following combinations of settings:

```
SELECT = PARAM(...,
 USER-IDENTIFICATION = *OWN,
 TERMINAL = PARAM(STATION-NAME = (*OWN / *ANY),
 PROCESSOR-NAME = (*OWN / *ANY)),
 ...)
```

Any entries that are incomplete are filled in automatically if so allowed (and warning message SPM0518 is output). If they are not allowed, they are rejected (and error message SPM0405 is then displayed).

- Other users  
Users who are not allowed to allocate devices are not allowed to view any settings either. Statements to such effect are rejected.



## Outputs formats

Different kinds of layouts are provided, depending on the INFORMATION value.

### Output with INFORMATION = \*SUMMARY

```

DEVICE-NAME DEVICE-TYPE
@@@@@@@@@ @@@@@@@@@@@@@@@@@@@@

```

### Output with INFORMATION = \*DEVICE-ACCESS

```

DEVICE-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@@@
ACCESS-DATE : #####-##-##
----- DEVICE-ACCESS -----
DEVICE-ACCESS : @@@@@@@@@@@@@@@@
ACCESS-TYPE : @@@@@@@@@@@@@@@@@@@@
PROCESSOR-NAME : @@@@@@@@@@
STATION-NAME : @@@@@@@@@@
MNEMONIC-NAME : @@
PROGRAM-NAME : @@@
INTERNET-ADDRESS : @@@
PORT-NAME : @@@@@@@@@@
LPD-PRINTER-NAME : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
FROM-PORT-NUMBER : #####
TO-PORT-NUMBER : #####

```

### Output with INFORMATION = \*TWIN-DEVICE-DEF

```

DEVICE-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@@@
ACCESS-DATE : #####-##-##
----- TWIN-DEVICE-DEF -----
SLAVE-MNEMONIC-NAME : @@
ESD-SIZE : ###

```

Output with INFORMATION = \*DEVICE-INFORMATION

```

DEVICE-NAME : @@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
ACCESS-DATE : ####-##-##
----- DEVICE-INFORMATION -----
FORMS-OVERLAY-BUFFER : #####
CHARACTER-SET-NUMBER : ##
ROTATION : @@@
DUPLEX-PROCESSING : @@@
FORMS-OVERLAY : @@@
RASTER-PATTERN-MEM : @@@@
TRANSMISSION : @@@@
FONT-TYPE : @@@@
FACE-PROCESSING : @@@
MAXIMUM-INPUT-TRAY : ##
MONJV : @@@@
NOTIFICATION : @@@@
ENCRYPTTION : @@@@
UNICODE : @@@@
SUPP-FORMAT-NAMES :
@@
@@
@@
@@
@@
@@
@@
@@
@@

```

Output with INFORMATION = \*ADMINISTRATOR

```

DEVICE-NAME : @@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
ACCESS-DATE : ####-##-##
----- ADMINISTRATOR -----
USER-IDENTIFICATION : @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
 @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
IDENTIFICATION : @@@@@@@@@@@@@@@@@@
TERMINAL : PROCESSOR-NAME : @@@@@@@@
 STATION-NAME : @@@@@@@@

```

**Output with INFORMATION = \*SPOOLOUT-CONTROL**

```

DEVICE-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
ACCESS-DATE : ####-##-##
----- SPOOLOUT-CONTROL -----
SHIFT : ##
LINE-FEED-COMPRESS : @@@
BLANK-COMPRESSON : @@@
START-FORM-FEED : @@@
FORM-FEED : @@@@@@@@@@@@@@@@@@
 DEFAULT-TRAY-NUMBER : @@@
 OUTPUT-TRAY-NUMBER : @@@
SKIP-TO-CHANNEL : @@@@@@
SKIP-TO-NEXT-PAGE : @@@@@@@@@@@@@@@@@@
ESCAPE-VALUE : @@@@@@

```

**Output with INFORMATION = \*PROCESSING-CONTROL**

```

DEVICE-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
ACCESS-DATE : ####-##-##
----- PROCESSING-CONTROL -----
CONTROLLER-RESERVED : @@@
FORM-NAME : @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@
 @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@ @@@@@@
DISCONNECTION : @@@@@@
BUFFER-SIZE : #####
RESET : @@@
REPEAT-MESSAGE : TYPE : @@@
 LIMIT : ###
 RETRY-TIME : @@@
RESTART-ACTION : LIMIT : ###
 RETRY-TIME : @@@
SYNCHRONIZATION : @@@@@@@@
TIMEOUT-MAX : ##
PAGE-EJECT-TIMEOUT : @@@
BAND-IDENTIFICATION : @@@@@@
LOAD : @@@
MODULO2 : @@@
RECOVERY-RULES : @@@@@@@@@@@@@@@@@@
POLLING : @@@
PRINTER-PARAM-FILE : @@@@@@@@@@@@@@@@@@
RESOURCE-FILE-PREFIX : @@@@@@@@
CONTROLLER-START : @@@@@@@@@@@@@@@@@@

```

**Output with INFORMATION = \*CHARACTER-SET-POS**

```

DEVICE-NAME : @@@@@@@@@@
DEVICE-TYPE : @@@@@@@@@@@@@@@@@@
ACCESS-DATE : ####-##-##
----- CHARACTER-SET-POS -----
POSITION-1 : @@@@@@@@@@
POSITION-2 : @@@@@@@@@@
POSITION-3 : @@@@@@@@@@
POSITION-4 : @@@@@@@@@@
POSITION-5 : @@@@@@@@@@
POSITION-6 : @@@@@@@@@@
POSITION-7 : @@@@@@@@@@
POSITION-8 : @@@@@@@@@@
POSITION-9 : @@@@@@@@@@
POSITION-10 : @@@@@@@@@@
POSITION-11 : @@@@@@@@@@
POSITION-12 : @@@@@@@@@@
POSITION-13 : @@@@@@@@@@
POSITION-14 : @@@@@@@@@@
POSITION-15 : @@@@@@@@@@
POSITION-16 : @@@@@@@@@@

```

**Output with INFORMATION = \*ALL**

The concatenation of all preceding INFORMATION types is displayed before the following fields:

```

----- MISCELLANEOUS -----
REDIRECTION-DEVICE : @@@@@@@@@@
LANGUAGE-EXT-TYPE : @@@@@@@@@@
LINE-SIZE : @@@
CHARACTER-IMAGE : @@@@@@@@@@

```

## Meaning of the output fields

The name in parentheses is the corresponding operand of the SPSEIVE statement ADD-SPOOL-DEVICE if this is different.

| Output field                              | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESS<br>(DEVICE-ACCESS:<br>ACCESS-TYPE) | <ul style="list-style-type: none"> <li>– With DEVICE-ACCESS = *NEA-ACCESS(...):<br/>Printer connection: *STD/*DIRECT/*HARDCOPY/<br/>*APPLICATION/*HDLC/*PC/*HARDCOPY-9751</li> <li>– With DEVICE-ACCESS = *TCP-ACCESS(...):<br/>Printer connection: *STD/*TACLAN/*LPD/*IPP</li> <li>– With DEVICE-ACCESS = *LOCAL-ACCESS(...):<br/>Printer connection: *STD/*CHANNEL-TYPE-1/<br/>*CHANNEL-TYPE-2/*BUS-TYPE-1</li> <li>– With DEVICE-ACCESS = *SCSI-ACCESS(...):<br/>Printer connection: *STD/EMULATED-CHANNEL-TYPE-2</li> </ul> |
| ACCESS-DATE                               | Date of the last modification or use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BAND-ID<br>(BAND-IDENTIFICATION)          | Identifier for the type band of a 9645, LP or LP48 printer                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| BLANK-COMP<br>(BLANK-COMPRESSION)         | Conversion of a sequence of blanks into specific printer control characters: *YES/*NO                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BUFFER-SIZE                               | Maximum buffer size (in bytes) of the blocks sent to the printer via DCAM                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CHAR-IMAGE<br>(CHARACTER-IMAGE)           | Character conversion tables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CONTROLLER-START                          | Time and mode for start of RSO controller                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CONTR-RES<br>(CONTROLLER-RESERVED)        | 1 controller is reserved exclusively to support this printer:<br>*YES/*NO                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| C-S-N (CHARACTER-SET-<br>NUMBER)          | Number of character sets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| DEF-TRAY<br>(DEFAULT-TRAY-NUMBER)         | Number of the paper feed tray from which the paper is to be taken on single-sheet printers                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| DEVICE-NAME                               | Device name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DEVICE-TYPE                               | Device type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DISCONNECT<br>(DISCONNECTION)             | The DCAM connection to this printer will be cleared if there are no further print requests for it: YES/NO/FORCE                                                                                                                                                                                                                                                                                                                                                                                                                 |
| DUP-PROC<br>(DUPLEX-PROCESSING)           | Specifies whether paper is printed on both sides                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ESCAPE<br>(ESCAPE-VALUE)                  | Escape character identifying the printer commands contained in a print file (for printer types 9025 and 9026-RENO)                                                                                                                                                                                                                                                                                                                                                                                                              |
| ESD-SIZE                                  | Size of the external data storage of the twin printer                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Output field                                                                     | Contents                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F-O-B (FORMS-OVERLAY-BUFFER)                                                     | Size of the graphics buffer                                                                                                                                                                                                                                       |
| FACE                                                                             | Specifies whether the printer is able to lay the paper "print image up" or "print image down" as required: YES/NO                                                                                                                                                 |
| FONT                                                                             | Specifies whether fonts with 7-bit or 8-bit format are used                                                                                                                                                                                                       |
| FORM-FEED                                                                        | Paper feed: continuous forms or single-sheet feed                                                                                                                                                                                                                 |
| FORM-NAME                                                                        | Forms which are assigned to the printer by FORM-NAME = *STD                                                                                                                                                                                                       |
| FORM-OVER (FORMS-OVERLAY)                                                        | Specifies whether form overlays can be processed on the device                                                                                                                                                                                                    |
| FROM-LOCAL-PORT# (DEVICE-ACCESS=*TCP-ACCESS: ACCESS-TYPE=*LPD: FROM-PORT-NUMBER) | Minimum value for the number of local ports to which the printer is connected.                                                                                                                                                                                    |
| IDENTIFICATION (ADMINISTRATOR)                                                   | Character string of up to 16 characters<br>Function: to make it easier to contact the RSO device administrator; the string should therefore include, for example, the administrator's telephone number (string freely definable by system administrator in A-S-D) |
| INTERNET-ADDRESS (DEVICE-ACCESS=TCP-ACCESS: INTERNET-ADDRESS)                    | Internet address of the TACLAN, IPP, LPD, DOS PC or LAN controller card                                                                                                                                                                                           |
| LANG-EXT-TYPE                                                                    | Identifies the device type for "exotic" output with the product DSEM product V3.0                                                                                                                                                                                 |
| LIMIT (REPEAT-MESSAGE=*PAR(LIMIT=...))                                           | Specifies whether the error response is executed and, if so, how often                                                                                                                                                                                            |
| LIMIT (RESTART-ACTION=*PAR(LIMIT=...))                                           | Specifies whether SPOOL attempts to set up the connection and, if so, how often                                                                                                                                                                                   |
| LINE-FEED-COMP (LINE-FEED-COMPRESSION)                                           | Conversion of line feed control characters into the corresponding printer control characters: YES/NO                                                                                                                                                              |
| LINE-SIZE                                                                        | Maximum number of characters that can be printed in one line on the specified device (see description under A-S-D)                                                                                                                                                |
| LOAD                                                                             | An RSO printer equipped with a loadable VFB (loop) can be operated with this function: YES/NO                                                                                                                                                                     |

| Output field                                                                                  | Contents                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LPD-PRINTER-NAME<br>(DEVICE-ACCESS=<br>*TCP-ACCESS:<br>ACCESS-TYPE=*LPD:<br>LPD-PRINTER-NAME) | Printer name as defined in '/etc/printcap' of the host to which the printer is connected.                                                                                     |
| MAX-TRAY                                                                                      | Maximum number of input trays                                                                                                                                                 |
| MNEM-NAME<br>(DEVICE-ACCESS=<br>LOCAL-ACCESS:<br>MNEMONIC-NAME)                               | Device mnemonic for the twin printer or the "master" twin printer.                                                                                                            |
| MODULO2                                                                                       | A second buffer is sent to the printer while the first buffer is being printed: YES/NO                                                                                        |
| MONJV                                                                                         | Determines whether a monitor job variable is created to control the sequence of the asynchronous part of the START-PRINTER-OUTPUT command (only with SPOOL V4.1A and higher). |
| OUT-TRAY<br>(OUTPUT-TRAY-NUMBER)                                                              | Number of the paper output tray (OUTPUT-TRAY-NUMBER)                                                                                                                          |
| P-EJ-TIMEOUT                                                                                  | Determines the maximum time (in minutes) during which the printer is inactive before the pages still in the printer are automatically ejected into the stacker.               |
| POLLING                                                                                       | Printer status inquiry possible: YES/NO                                                                                                                                       |
| PORT-NAME<br>(DEVICE-ACCESS=<br>TCP-ACCESS:<br>PORT-NAME)                                     | Port name of the TACLAN, IPP, LPD, DOS PC or LAN controller card                                                                                                              |
| POS-1<br>POS-2<br>...<br>POS-16<br>(CHARACTER-SET-<br>POSITION: POSITION-1...)                | Hardware position of character sets in the character set memory of the printer with printer types 9001-31, 9011, 9012, 9013, 9014.                                            |
| PRINTER-LANGUAGE                                                                              | Printer language                                                                                                                                                              |
| PRINTER-PARAM-FILE                                                                            | Suffix for printer parameter file                                                                                                                                             |
| PROC-NAME<br>(ADMINISTRATOR:<br>PROCESSOR-NAME)                                               | Processor name as part of the RSO device administrator address                                                                                                                |
| PROC-NAME<br>(DEVICE-ACCESS=<br>NEA-ACCESS:<br>PROCESSOR-NAME)                                | Processor name as part of the device address                                                                                                                                  |

| Output field                                                      | Contents                                                                                                                                                                              |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROGRAM-NAME<br>(DEVICE-ACCESS=<br>LOCAL-ACCESS:<br>PROGRAM-NAME) | Name of the supervisor LOGON procedure                                                                                                                                                |
| RECOVERY-RULES                                                    | Logical name of the recovery rules file:<br>*STD/SYSTEM / 1..16                                                                                                                       |
| REDIRECTION                                                       | Specifies whether RSO jobs for the device are to be automatically redirected and, if so, to where.                                                                                    |
| REPEAT-MESSAGE                                                    | Message repeated to the printer in the event of an error.                                                                                                                             |
| RESET                                                             | The printer switches are to be reset before each file is printed:<br>YES/NO                                                                                                           |
| RESOURCE-FILE-PREFIX                                              | Prefix for files PROLOG/EPILOG/DIA/MEMBER                                                                                                                                             |
| RESTART-ACTION                                                    | Type of response to faults during connection clearance                                                                                                                                |
| RETRY (REPEAT-MESSAGE=<br>*PAR(RETRY=...))                        | Waiting time (in seconds) between two attempts to print the file                                                                                                                      |
| RETRY (RESTART-ACTION=<br>*PAR(RETRY=...))                        | Waiting time (in seconds) between two attempts to set up the connection                                                                                                               |
| ROT (ROTATION)                                                    | Page rotation module                                                                                                                                                                  |
| R-P-M<br>(RASTER-PATTERN-<br>MEMORY)                              | Specifies the size of the RPM that contains the FOB overlays and character sets (raster pattern memory)                                                                               |
| SHIFT                                                             | Default value for SHIFT if the LEFT-MARGIN operand is not specified in the PRINT-DOCUMENT command (0...31)                                                                            |
| SKIP-TO-CH<br>(SKIP-TO-CHANNEL)                                   | Behavior in the case of two skips to the vertical tabulator character "channel 1", one after the other                                                                                |
| SKIP-TO-NEXT PAGE                                                 | Form feed is activated <ul style="list-style-type: none"> <li>– BY-FORM-FEED: via the corresponding control character</li> <li>– BY-LINES: by counting down the line feeds</li> </ul> |
| SLAVE-MNEM<br>(TWIN-DEVICE-DEF:<br>SLAVE-MNEMONIC-NAME)           | Device mnemonic for the "slave" twin printer                                                                                                                                          |
| STAT-NAME<br>(ADMINISTRATOR:<br>STATION-NAME)                     | Station name as part of the RSO device administrator address                                                                                                                          |
| STAT-NAME<br>(DEVICE-ACCESS=<br>NEA-ACCESS:<br>STATION-NAME)      | RSO device: station name as part of the device address                                                                                                                                |



| Output field                                                                              | Contents                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ST-FORM-FEED<br>(START-FORM-FEED)                                                         | Automatic page feed at the start of each spoolout:<br>YES/NO                                                                                                                                                                                                                                                     |
| SUPP-FORMAT-NAMES                                                                         | Document format that the printer can print                                                                                                                                                                                                                                                                       |
| SYNCHRO                                                                                   | Printing is synchronized after every transferred buffer <ul style="list-style-type: none"> <li>– PRINTER: with the printer acknowledgment</li> <li>– NETWORK: with the network acknowledgment</li> </ul>                                                                                                         |
| TIMEOUT-MAX                                                                               | Maximum time allowed for a buffer transfer                                                                                                                                                                                                                                                                       |
| TO-LOCAL-PORT#<br>(DEVICE-ACCESS=<br>*TCP-ACCESS:<br>ACCESS-TYPE=*LPD:<br>TO-PORT-NUMBER) | Maximum value for the number of the local port to which the printer is connected.                                                                                                                                                                                                                                |
| TRANS                                                                                     | Format of the transfer protocol                                                                                                                                                                                                                                                                                  |
| TYPE (REPEAT-MESSAGE=<br>*PAR(TYPE=...))                                                  | Type of error response <ul style="list-style-type: none"> <li>– SYS: page feed and output of message SRO1001</li> <li>– DUM: page feed and possible repeat of last page</li> </ul>                                                                                                                               |
| USER-ID<br>(1st value of<br>USER-IDENTIFICATION)                                          | User ID of the RSO device administrator(s) if the S-S-D statement was issued under TSOS or under an RSO device administrator ID. If no RSO device administrator was defined (i.e. for public devices), the value *NONE is obtained under TSOS. If S-S-D is issued by a nonprivileged user ID, blanks are output. |
| USER-IDENTIFICATION<br>(ADMINISTRATOR:<br>USER-IDENTIFICATION)                            | Up to 8 user IDs which have been defined as RSO device administrators                                                                                                                                                                                                                                            |

# SHOW-SPOOL-FILTERS

## Request information on filter definitions

**User group:** systems support

This statement allows systems support to display a filter defined in the SPOOL parameter file.

(part 1 of 2)

### SHOW-SPOOL-FILTERS

```

SELECT = ALL / *PARAMETERS(...)
 *PARAMETERS(...)
 FILTER-NAME = ALL / *STD / <alphanum-name 1..8 with-wild(24)> / list-poss (255):
 <alphanum-name 1..8>
 ,FILTER-LOCATION = ALL / <composed-name 1..50 with-wild(24)> / list-poss (255):
 *SYSTEM / <composed-name 1..50>
 ,INPUT-FORMAT-NAME = ALL / list-poss (16): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL /
 *EXCCW / <c-string 1..63 with-low>
 ,OUTPUT-FORMAT-NAME = ALL / list-poss (16): *TEXT / *HP / *SPDS / *PLAIN-TEXT / *PCL /
 *EXCCW / <c-string 1..63 with-low>
 ,REDIRECTION = ALL / *NO / *REMOTE (...)
 *REMOTE(...)
 | DEVICE-NAME = ALL / <alphanum-name 1..8 >
 ,OBJECT-NAME = ALL / *SAME / <alphanum-name 1..8 with-wild(24)>/ list-poss (16):
 <alphanum-name 1..8>
 ,ACCESS-DATE = ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 | FROM = 1950-01-01 / <date 8..10>
 | ,TO = TODAY / <date 8..10>
 ,EXCEPT = NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 | FILTER-NAME = NONE / <alphanum-name 1..8 with-wild(24)> / list-poss (16):
 | <alphanum-name 1..8>

```

continued ➔

```

,FILTER-LOCATION = *NONE / <composed-name 1..50 with-wild(24)> / list-poss (16): *SYSTEM /
 <composed-name 1..50>
,INPUT-FORMAT-NAME = *NONE / list-poss (16): *TEXT / *HP / *SPDS / *EXCCW /
 *PLAIN-TEXT / *PCL / <c-string 1..63 with-low>
,OUTPUT-FORMAT-NAME = *NONE / list-poss (16): *TEXT / *HP / *SPDS / *EXCCW /
 *PLAIN-TEXT / *PCL / <c-string 1..63 with-low>
,REDIRECTION = *NONE / *NO / *REMOTE ()
 *REMOTE(...)
 | DEVICE-NAME = *NONE / <alphanum-name 1..8>
,OBJECT-NAME = *NONE / *SAME / <alphanum-name 1..8 with-wild(24)> / list-poss (16):
 <alphanum-name 1..8>
,CLUSTER-NAME = *STD / *LOCAL-CLUSTER / <alphanum-name 1..8>
,SERVER-NAME = *STD / *HOME / <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL

```

## Operands

### **SELECT = \*ALL / \*PARAMETERS(...)**

Specifies the criteria for selecting the filters about which information is to be displayed. If \*ALL (default) is specified, information is output on all filters entered.

### **SELECT = \*PARAMETERS(...)**

Introduces a list of selection criteria.

**FILTER-NAME = \*ALL / <alphanum-name 1..8 with-wild(24)> / list-poss (255): <alphanum-name 1..8>**

The selection criterion is the symbolic name of the filter.

**FILTER-LOCATION = \*ALL / <composed-name 1..50 with-wild(24)> / list-poss (255): \*SYSTEM / <composed-name 1..50>**

The selection criterion is the object module of the filter.

**INPUT-FORMAT-NAME = \*ALL / list-poss (16): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

The selection criterion is the input format(s), i.e. which document formats can be converted by the filter.

**OUTPUT-FORMAT-NAME = \*ALL / list-poss (16): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

The selection criterion is the output format, i.e. the document format into which the filter converts the text.

**REDIRECTION = \*ALL / \*NO / \*REMOTE( )**

Selection criteria are the remote printers to which spoolout jobs which use the filter must be redirected.

**DEVICE-NAME = \*ALL / <alphanum-name 1..8>**

The name of the printer.

**OBJECT-NAME = \*ALL / \*SAME / <alphanum-name 1..8 with-wild(24)> / <alphanum-name 1..8>**

Selection criteria are the name of the filter object module (library element of type R).

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the output of the filter. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a filter to be output.

**ACCESS-DATE = \*TODAY**

This specification allows the filter created or modified or used on today's date to be output.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for output of a filter.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

**EXCEPT = \*NONE / \*PARAMETERS(...)**

Specifies which filter entries are to be excluded from the selection (negative list).

**EXCEPT = \*NONE**

No filter entries are excluded from the selection.

**EXCEPT = \*PARAMETERS(...)**

Introduces a list of exception criteria.

**FILTER-NAME = \*NONE / <alphanum-name 1..8 with-wild(24)> / list-poss (255): <alphanum-name 1..8>**

Filter entries with the specified symbolic name are excluded.

**FILTER-LOCATION = \*NONE / <composed-name 1..50 with-wild(24)> / list-poss (255): \*SYSTEM / <composed-name 1..50>**

Filter entries with the specified object module are excluded.

**INPUT-FORMAT-NAME = \*NONE / list-poss (16): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

Excludes filter entries with the specified input format(s).

**OUTPUT-FORMAT-NAME = \*NONE / list-poss (16): \*TEXT / \*HP / \*SPDS / \*PLAIN-TEXT / \*PCL / \*EXCCW / <c-string 1..63 with-low>**

Excludes filter entries with the specified output format.

**REDIRECTION = \*NONE / \*NO / \*REMOTE ( )**

Filter entries are excluded if the spoolout jobs using them may be redirected to a remote printer.

**DEVICE-NAME = \*NONE / <alphanum-name 1..8>**

The name of the printer.

**OBJECT-NAME = \*NONE / \*SAME / <alphanum-name 1..8 with-wild(24)> / <alphanum-name 1..8>**

Excludes filter entries with the specified filter object module name (library element of type R).

**CLUSTER-NAME = \*STD / \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies the cluster about which information is to be output.

\*LOCAL-CLUSTER is assumed for \*STD (for more details, see the description of SERVER-NAME).

**SERVER-NAME = \*STD / \*HOME / <alphanum-name 1..8>**

Specifies the server about which information is to be output.

\*HOME is assumed for \*STD. The value \*STD has been introduced for reasons of compatibility. The default source parameter file for this command depends on the work mode (static, dynamic, on-configuration or command).

If a SPOOL parameter file is specified (mode: static or dynamic), this is the default source parameter file. If no parameter files are specified (mode: on-configuration or command), the default source parameter file is the home-system SPOOL parameter file.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies what information is to be output.

**INFORMATION = \*SUMMARY**

Only the first line is output for each element.

**INFORMATION = \*ALL**

All lines are output for all elements.

**Output formats**

(1) INFORMATION = \*SUMMARY

```
FILTER-NAME FILTER-LOCATION
@@@@@@@@@ @@
```

(2) INFORMATION = \*ALL

```
FILTER-NAME FILTER-LOCATION
@@@@@@@@@ @@
ACCESS-DATE: @@@@-@@-@@
INPUT-FORMAT-NAME
@@@
@@@
@@@
@@@
@@@
@@@
@@@
@@@
@@@
OUTPUT-FORMAT-NAME
@@@
REDIRECTION = @@@@@@ (DEVICE-NAME = @@@@@@@@)
OBJECT-NAME = @@@@@@@@
```

**Meanings of the fields**

| Output field       | Contents                                                                                                                  |
|--------------------|---------------------------------------------------------------------------------------------------------------------------|
| ACCESS-DATE        | Date of the last modification or use                                                                                      |
| FILTER-LOCATION    | Specifies the library in which the filter and the SDF-P-LOGON procedure that permits its loading and execution are stored |
| FILTER-NAME        | Symbolic name of the filter                                                                                               |
| INPUT-FORMAT-NAME  | Name of the lists of the output formats                                                                                   |
| OUTPUT-FORMAT-NAME | Output formats                                                                                                            |
| REDIRECTION        | Option for redirecting SPOOL jobs to remote printers                                                                      |
| DEVICE-NAME        | Name of the remote printer                                                                                                |
| OBJECT-NAME        | Name of the object module                                                                                                 |

## SHOW-SPOOL-FORMS

### Request information on form entry

**User group:** nonprivileged users

The SHOW-SPOOL-FORMS statement provides information on specifications (data) from the form entry of the specified form or of the form assigned to the specified printer type. If a form and a printer type are specified, the information is output in its entirety; otherwise, only a selection of important data is made, sorted according to form name. The number of forms listed can be restricted to any quantity by means of selection criteria. The forms selected are those whose form entry contains the values specified under the respective operands (AND operation).

The designation and meaning of the operands of SHOW-SPOOL-FORMS correspond to the operands of the ADD-SPOOL-FORM statement. The operand value \*ALL (usually the default value) means that the respective operand is not used as a selection criterion.

(part 1 of 5)

#### SHOW-SPOOL-FORMS

```
,SELECT = *ALL / *PARAMETERS(...)
```

```
*PARAMETERS(...)
```

```
 FORM-NAME = *ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(255): *STD /
 <alphanum-name 1..6>
```

```
,DEVICE-TYPE = *ALL / <filename 1..16 without-cat-user-gen-vers> / *LOCAL / *RSO /
 list-poss(52): *ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
 *VIRTUAL / *2030-PCL-PRINTER / *2050-APA-PRINTER /
 *2090-APA-PRINTER / *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *4011-REMOTE-PRINTER / *4812-REMOTE-PRINTER / *4813-REMOTE-PRINTER /
 *4818-PCL-REMOTE-PRINTER / *4821-PCL-REMOTE-PRINTER /
 *4822-PCL-REMOTE-PRINTER / *4824-PCL-REMOTE-PRINTER /
 *4825-PCL-REMOTE-PRINTER / *4830-PCL-REMOTE-PRINTER /
 *4850-PCL-REMOTE-PRINTER / *8121-REMOTE-PRINTER /
 *9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
 *9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
 *9000-PRO-REMOTE-PRINTER / *9000-PS-REMOTE-PRINTER /
 *9000-REMOTE-PRINTER / *9001-REMOTE-PRINTER /
 *9001-31-REMOTE-PRINTER / *9002-REMOTE-PRINTER /
 *9003-REMOTE-PRINTER / *9004-REMOTE-PRINTER /
```

continued →

(part 2 of 5)

```

*9011-REMOTE-PRINTER / *9012-REMOTE-PRINTER /
*9013-REMOTE-PRINTER / *9014-REMOTE-PRINTER /
*9015-REMOTE-PRINTER / *9021-REMOTE-PRINTER
*9022-REMOTE-PRINTER / *9022-200-REMOTE-PRINTER /
*9025-REMOTE-PRINTER / *9026-PCL-REMOTE-PRINTER /
*9026-RENO-REMOTE-PRINTER / *9045-ANSI-REMOTE-PRINTER /
*9046-REMOTE-PRINTER / *9097-REMOTE-PRINTER /
*9645-REMOTE-PRINTER
,OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <name 1..8>
,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)
 *INTERVAL(...)
 FROM = 1950-01-01 / <date 8..10>
 ,TO = *TODAY / <date 8..10>
,LINE-SIZE = *ALL / <integer 30..180> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 30..180>
 ,HIGH = <integer 30..180>
,PAGE-SIZE = *ALL / <integer 1..250> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..250>
 ,HIGH = <integer 1..250>
,HEADER-PAGE = *ALL / list-poss(4): *YES / *NO / *RESPOOL / *ONE
,TRAILER-PAGE = *ALL / list-poss(3): *YES / *NO / *INFO
,VERTICAL-CONTROL = *ALL / *LOOP(...) / *SPACING(...) / *NONE
 *LOOP(...)
 LOOP-NAME = *ALL / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
 *SPACING(...)
 LINES-PER-INCH = *ALL / *DENSITY(...) / list-poss(8): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20
 *DENSITY(...)
 LINES = <integer 1..999>
 ,INCHES = <integer 1..999>
 ,CHANNEL1-POSITION = *ALL / <integer 1..255> / *RANGE(...)

```

continued ➔



```

 *RANGE(...)
 |
 | LOW = <integer 1..255>
 | ,HIGH = <integer 1..255>
,ROTATION-CONTROL = *ALL / *LOOP(...) / *SPACING(...) / *NONE
 *LOOP(...)
 |
 | LOOP-NAME = *ALL / <alphanum-name 1.3 with-wild(24)> / list-poss(16):
 | <alphanum-name 1..3>
 *SPACING(...)
 |
 | LINES-PER-INCH = *ALL / *DENSITY(...) / list-poss(8): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20
 | *DENSITY(...)
 | |
 | | LINES = <integer 1..999>
 | | ,INCHES = <integer 1..999>
 | ,CHANNEL1-POSITION = *ALL / <integer 1..255> / *RANGE(...)
 | *RANGE(...)
 | |
 | | LOW = <integer 1..255>
 | | ,HIGH = <integer 1..255>
,CHARACTER-SET = *ALL / <alphanum-name 1.3 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..3>
,ROTATION-CHARACT-SET = *ALL / <alphanum-name 1.3 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..3>
,BAND-IDENTIFICATION = *ALL / <alphanum-name 1..4 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 4..4>
,PREFORM = *ALL / <alphanum-name 1..4 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..4>
,CHARACTER-IMAGE = *ALL / <alphanum-name 1..3 with-wild(24)> / list-poss(16): *NONE /
 <alphanum-name 1..3>
,TWO-UP-PROCESSING = *ALL / list-poss(3): *NO / *MODE-1 / *MODE-2
,DIA-PROCESSING = *ALL / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | FORMS-OVERLAY = *ALL / <alphanum-name 1..2 with-wild(24)> / list-poss(16): *NONE /
 | <alphanum-name 2..2>
 | ,FORMS-OVERLAY-BUFFER = *ALL / <alphanum-name 1..4 with-wild(24)> / list-poss(16):
 | <alphanum-name 1..4>
,PRINTER-RESOURCES = *ALL / *NONE / *LP65(...) / *APA(...)

```

continued →

```

*LP65(...)
 PAGE-DEFINITION = *ALL / <integer 1..50000> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..50000>
 ,HIGH = <integer 1..50000>
 ,STACKER-OFFSET = *ALL / *YES / *NO
 ,SEPARATOR-PAGE-TRAY = *ALL / *NONE / <integer 1..3> / *RANGE(...)
 *RANGE(...)
 LOW = <integer 1..3>
 ,HIGH = <integer 1..3>
*APA(...)
 FORM-DEFINITION = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 <alphanum-name 1..8>
 ,PAGE-DEFINITION = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 <alphanum-name 1..8>
,EXCEPT = *NONE / *PARAMETERS(...)
*PARAMETERS(...)
 FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> / list-poss(16): *STD /
 <alphanum-name 1..6>
 ,OWNER = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <name 1..8>
 ,VERTICAL-CONTROL = *NONE / *LOOP(...)
 *LOOP(...)
 LOOP-NAME = <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
 ,ROTATION-CONTROL = *NONE / *LOOP(...)
 *LOOP(...)
 LOOP-NAME = <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
 ,CHARACTER-SET = *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>

```

continued →

```

,ROTATION-CHARACT-SET = *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
,BAND-IDENTIFICATION = *NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16):
 <alphanum-name 4..4>
,PREFORM = *NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16): <alphanum-name 1..4>
,CHARACTER-IMAGE = *NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16):
 <alphanum-name 1..3>
,DIA-PROCESSING = *NONE / *PARAMETERS(...)
 *PARAMETERS(...)
 |
 | FORMS-OVERLAY = *NONE / <alphanum-name 1..2 with-wild(24)> / list-poss(16):
 | <alphanum-name 2..2>
 | ,FORMS-OVERLAY-BUFFER = *NONE / <alphanum-name 1..4 with-wild(24)> /
 | list-poss(16): <alphanum-name 1..4>
,PRINTER-RESOURCES = *NONE / *APA(...)
 *APA(...)
 |
 | FORM-DEFINITION = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 | <alphanum-name 1..8>
 | ,PAGE-DEFINITION = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
 | <alphanum-name 1..8>
,SERVER-NAME = *STD / *HOME / <alphanum-name 1..8>
,CLUSTER-NAME = *STD / *LOCAL-CLUSTER / <alphanum-name 1..8>
,INFORMATION = *SUMMARY / *ALL

```

## Operands

### **SELECT = \*ALL / \*PARAMETERS(...)**

Specifies the criteria according to which the forms about which information is to be output are to be selected. If the value \*ALL (default value) is specified, information will be output about all entered forms.

### **SELECT = \*PARAMETERS(...)**

Initiates a list of selection criteria.

**FORM-NAME = \*ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(255): \*STD / <alphanum-name 1..6>**

The selection criterion is the form name.

**DEVICE-TYPE = ....**

The device type serves as selection criterion. The \*LOCAL value allows to select all local device types; the \*RSO value allows to select all RSO device types.

**OWNER = \*ALL / <alphanum-name 1..8 with-wild(24)> /****list-poss(16): \*OWN / <name 1..8>**

The user ID of the owner who created the form entry serves as a selection criterion.



Nonprivileged users may only specify \*ALL or \*OWN.

**ACCESS-DATE = \*ANY / \*TODAY / \*INTERVAL(...)**

Date of the last modification or last use as part of the print process. This date can be used as an additional criterion for the output of the form entry. Either a specific date or a date interval may be specified.

The date can be specified in the format YYYY-MM-DD or YY-MM-DD (Y = year, M = month, D = day), e.g. 1999-02-15 or 99-02-15.

If the year is specified with only two digits, the following rule applies: All numbers (XY) less than or equal to 60 are interpreted as 20XY, while numbers greater than 60 are interpreted as 19XY.

*Note*

This functionality is only available with SPOOL V4.1A and higher.

**ACCESS-DATE = \*ANY**

The access date does not serve as a selection criterion for a form entry to be output.

**ACCESS-DATE = \*TODAY**

This specification allows the form entry created or modified or used on today's date to be output.

**ACCESS-DATE = \*INTERVAL(...)**

Specifies a date interval which serves as a selection criterion for output of a form entry.

**FROM = 1950-01-01 / <date 8..10>**

Lower limit of the date interval.

**TO = \*TODAY / <date 8..10>**

Upper limit of the date interval. The default is today.

**LINE-SIZE = \*ALL / <integer 30..180> / \*RANGE(...)**

The selection criterion is the maximum form width; entries possible in 1/10-inch increments.

**LINE-SIZE = \*RANGE(...)**

Specification of a range of values that contains the maximum form width.

**LOW = <integer 30..180>**

Lower limit of the range.

**HIGH = <integer 30..180>**

Upper limit of the range.

**PAGE-SIZE = \*ALL / <integer 1..250> / \*RANGE(...)**

The selection criterion is the form height; entries possible in 1/10-inch increments.

**PAGE-SIZE = \*RANGE(...)**

Specification of a range of values that contains the maximum form height.

**LOW = <integer 1..250>**

Lower limit of the range.

**HIGH = <integer 1..250>**

Upper limit of the range.

**HEADER-PAGE = \*ALL / list-poss(4): \*YES / \*NO / \*RESPOOL / \*ONE**

Whether or not a header page is to be printed serves as a selection criterion.

**TRAILER-PAGE = \*ALL / list-poss(3): \*YES / \*NO / \*INFO**

Whether or not a trailer page is to be printed serves as a selection criterion.

**VERTICAL-CONTROL = \*ALL / \*NONE / \*LOOP(...) / \*SPACING(...)**

The definition of the type of feed control serves as a selection criterion.

**VERTICAL-CONTROL = \*LOOP(...)**

Feed control via LOOP record.

**LOOP-NAME = \*ALL / <alphanumeric-name 1..3 with-wild(24)> /**

**list-poss(16): <alphanumeric-name 1..3>**

Name of the LOOP record.

**VERTICAL-CONTROL = \*SPACING(...)**

Initiates a list of selection criteria.

**LINES-PER-INCH = \*ALL / \*DENSITY(...) /**

**list-poss(8): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20**

The selection criterion is the line density (number of lines per inch).

**LINES-PER-INCH = DENSITY(...)**

the line density, specified by means of the number of lines (LINES) and form length (INCHES).

**LINES = <integer 1..999>**

Number of lines.

**INCHES = <integer 1..999>**

Form length in inches.

**CHANNEL1-POSITION = \*ALL / <integer 1..255> / \*RANGE(...)**

The selection criterion is the position of the line (LOOP record) on which "channel 1" is located.

**CHANNEL1-POSITION = \*RANGE(...)**

Specification of a range of values for specifying the position.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**ROTATION-CONTROL = \*ALL / \*NONE / \*LOOP(...) / \*SPACING(...)**

The selection criterion is the attribute that defines whether the feed of rotated pages is controlled by a LOOP record or an additional line feed control.

**ROTATION-CONTROL = \*LOOP(...)**

Feed control is to be by means of a LOOP record.

**LOOP-NAME - \*ALL / <alphanum-name 1..3 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..3>**

Name of the LOOP record.

**ROTATION-CONTROL = \*SPACING(...)**

Feed is to be by means of an additional line feed control.

**LINES-PER-INCH = \*ALL / \*DENSITY(...) /**

**list-poss(8): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20**

The selection criterion is the line density (number of lines per inch).

**LINES-PER-INCH = \*DENSITY(...)**

The selection criterion is the line density, specified by means of the number of lines (LINES) and form length (INCHES).

**LINES = <integer 1..999>**

Number of lines.

**INCHES = <integer 1..999>**

Form length in inches.

**CHANNEL1-POSITION = \*ALL / <integer 1..255> / \*RANGE(...)**

The selection criterion is the line number of the simulated loop on which the vertical tabulator "channel 1" is defined.

**CHANNEL1-POSITION = \*RANGE(...)**

Specification of a range of values for the line number.

**LOW = <integer 1..255>**

Lower limit of the range.

**HIGH = <integer 1..255>**

Upper limit of the range.

**CHARACTER-SET = \*ALL / <alphanum-name 1..3 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..3>**

The name of the character set serves as a selection criterion.

**ROTATION-CHARACT-SET = \*ALL / <alphanum-name 1..3 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..3>**

The name of the character set used for rotated pages serves as a selection criterion.

**BAND-IDENTIFICATION = \*ALL / <alphanum-name 1..4 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 4..4>**

The band ID serves as a selection criterion.

**PREFORM = \*ALL / <alphanum-name 1..4 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..4>**

The definition of the printer control string to be sent at the beginning of a job serves as a selection criterion. For LP-EMULATED-PRINTER only.

**CHARACTER-IMAGE = \*ALL / <alphanum-name 1..3 with-wild(24)> /**

**list-poss(16): \*NONE / <alphanum-name 1..3>**

The name of the conversion table serves as a selection criterion.

**TWO-UP-PROCESSING = \*ALL / list-poss(3): \*NO / \*MODE-1 / \*MODE-2**

Whether and, if so, which TWO-UP mode is to be employed serves as a selection criterion. For HP90-PRINTER only.

**DIA-PROCESSING = \*ALL / \*PARAMETERS(...)**

The default settings for forms when using overlays serve as a selection criterion.

**DIA-PROCESSING = \*PARAMETERS(...)**

Designates the settings for EFO and FOB data overlays.

**FORMS-OVERLAY = \*ALL / <alphanum-name 1..2 with-wild(24)> /**

**list-poss(16): <alphanum-name 2..2>**

The description of the EFO data overlay serves as a selection criterion.

**FORMS-OVERLAY-BUFFER = \*ALL / <alphanum-name 1..4 with-wild(24)> /**

**list-poss(16): <alphanum-name 1..4>**

The description of the FOB data overlay serves as a selection criterion.

**PRINTER-RESOURCES = \*ALL / \*NONE / \*LP65(...) / \*APA(...)**

Whether certain printer functions are to be used serves as a selection criterion.

**PRINTER-RESOURCES = \*LP65(...)**

Specifies the printer functions for LP65 printers.

**PAGE-DEFINITION = \*ALL / <integer 1..50000> / \*RANGE(...)**

The selection criterion is the number of the standard PCL file.

**PAGE-DEFINITION = \*RANGE(...)**

Specification of a range of values that contains the number.

**LOW = <integer 1..50000>**

Lower limit of the range.

**HIGH = <integer 1..50000>**

Upper limit of the range

**STACKER-OFFSET = \*ALL / \*YES / \*NO**

Whether the individual spoolout jobs are to be separated via stacker offset serves as a selection criterion.

**SEPARATOR-PAGE-TRAY = \*ALL / <integer 1..3> / \*RANGE(...)**

The selection criterion is the number of blank pages between the individual spoolout jobs.

**SEPARATOR-PAGE-TRAY = \*RANGE(...)**

Specification of a range of values for the number of blank pages.

**LOW = <integer 1..3>**

Lower limit of the range.

**HIGH = <integer 1..3>**

Upper limit of the range.

**PRINTER-RESOURCES = \*APA(...)**

The selection criteria are the names of the FORM and PAGE definitions for APA printers.

**FORM-DEFINITION = \*ALL / <alphanum-name 1..8 with-wild(24)> /****list-poss(16): <alphanum-name 1..8>**

The selection criterion is the name of the FORM definition.

**PAGE-DEFINITION = \*ALL / <alphanum-name 1..8 with-wild(24)> /****list-poss(16): <alphanum-name 1..8>**

The selection criterion is the name of the PAGE definition.



**EXCEPT = \*NONE / \*PARAMETERS(...)**

Names of the form entries to be excluded from selection (negative list). If the value \*NONE is specified, none of the forms will be excluded from selection.

**EXCEPT = \*PARAMETERS(...)**

Initiates a list of selection criteria.

**FORM-NAME = \*NONE / <alphanum-name 1..6 with-wild(24)> /****list-poss(16): <name 1..6> / \*STD**

The forms with the specified names are not to be taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**OWNER = \*NONE / <alphanum-name 1..8 with-wild(24)> /****list-poss(16): \*OWN / <name 1..8>**

Form entries created by users with the specified user ID are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.



Nonprivileged users may only specify values other than \*NONE for OWNER if they have specified SELECT=\*PARAMETERS(OWNER=\*OWN) above.

**VERTICAL-CONTROL = \*NONE / \*LOOP(...)**

Form entries with the specified LOOP record are not to be taken into account. If the value NONE (default value) is specified, the operand has no effect.

**LOOP-NAME = <alphanum-name 1..3 with-wild(24)> /****list-poss(16): <alphanum-name 1..3>**

Name of the LOOP record. If the value \*NONE (default value) is specified, the operand has no effect.

**ROTATION-CONTROL = \*NONE / \*LOOP(...)**

Form entries with the specified LOOP record for ROTATION are not to be taken into account. If the value NONE (default value) is specified, the operand has no effect.

**LOOP-NAME = <alphanum-name 1..3 with-wild(24)> /****list-poss(16): <alphanum-name 1..3>**

Name of the LOOP record. If the value \*NONE (default value) is specified, the operand has no effect.

**CHARACTER-SET = \*NONE / <alphanum-name 1..3 with-wild(24)> /****list-poss(16): <alphanum-name 1..3>**

Form entries with the specified character set are not to be taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**ROTATION-CHARACT-SET = \*NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16): <alphanum-name 1..3>**

Form entries with the specified character set for rotated pages are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**BAND-IDENTIFICATION = \*NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16): <alphanum-name 4..4>**

Form entries with the specified type band are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**PREFORM = \*NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16): \*NONE / <alphanum-name 1..4>**

Form entries with the specified printer control string are not taken into account. (For LP-EMULATED-PRINTER only.)

If the value \*NONE (default value) is specified, the operand has no effect.

**CHARACTER-IMAGE = \*NONE / <alphanum-name 1..3 with-wild(24)> / list-poss(16): <alphanum-name 1..3>**

Form entries with the specified conversion table are not taken into account. If the value \*NONE (default value) is specified, the operand has no effect.

**DIA-PROCESSING = \*NONE / \*PARAMETERS(...)**

The specified settings for forms when using overlays are not taken into account.

**DIA-PROCESSING = \*PARAMETERS(...)**

Specifies the settings for EFO and FOB data overlays that are not to be taken into account.

**FORMS-OVERLAY = \*NONE / <alphanum-name 1..2 with-wild(24)> / list-poss(16): <alphanum-name 2..2>**

The specified description of the EFO data overlay is not taken into account.

**FORMS-OVERLAY-BUFFER = \*NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16): <alphanum-name 1..4>**

The specified description of the FOB data overlay is not taken into account.

**PRINTER-RESOURCES = \*NONE / APA(...)**

Form entries with the specified printer attributes are not taken into account. (For APA printers only.)

If the value \*NONE (default value) is specified, the operand has no effect.

**FORM-DEFINITION = \*NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Name of the FORMDEF. If the value \*NONE (default value) is specified, the operand has no effect.

**PAGE-DEFINITION = \*NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>**

Name of the PAGEDEF. If the value \*NONE (default) is specified, the operand has no effect.

**CLUSTER-NAME = \*STD / \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies the cluster for which the information is to be output. \*LOCAL-CLUSTER is assumed for \*STD. The specified cluster must be a BS2000 cluster.

**SERVER-NAME = \*STD / \*HOME / <alphanum-name 1..8>**

Specifies the server for which information is to be output. \*HOME is assumed for \*STD.

**INFORMATION = \*SUMMARY / \*ALL**

Specifies which information is to be output. The output depends on the contents of the VERTICAL-CONTROL and ROTATION-CONTROL fields.

**INFORMATION = \*SUMMARY**

Only the first line is output for each element.

**INFORMATION = \*ALL**

All lines are output for each element.

*Notes*

- The value \*STD was included for compatibility reasons. Which parameter file is to be used as the source of information unless otherwise specified is dependent on the operating mode (dynamic, static, from configuration or command).
- If a SPOOL parameter file is assigned (either statically or dynamically), this is the standard source. If no parameter file is assigned (from the configuration or for the command), the standard source is the SPOOL parameter file of the home system.

## Output formats

A reduced output layout and a complete output layout are available. The complete layout is output only if the form name and the printer type have been specified.

### Reduced layout

```
FORM-NAM DEV-TYPE LI-S PA-S H-P T-P VERT-CONTROL ROT-CONTROL OWNER
 L-N/LPI/C-P/C-S L-N/LPI/C-P/C-S
@@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ @@@ ### ### @@@ @@@@@@@@
@@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ @@@ ### ### @@@ @@@@@@@@
@@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ @@@ ### ### @@@ @@@@@@@@
@@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ @@@ ### ### @@@ @@@@@@@@
```

### Complete layout

There are various output formats, depending on the device type and the values for VERTICAL-CONTROL and ROTATION-CONTROL. The output formats shown below are output if the operand INFORMATION=\*ALL is specified; if INFORMATION=\*SUMMARY is specified, only the first line appears in each case.

### Output if no line densities have been defined for either VERTICAL-CONTROL or ROTATION-CONTROL

```
FORM-NAM DEV-TYPE LI-S PA-S H-P T-P VERT-CONTROL ROT-CONTROL OWNER
 L-N/LPI/C-P/C-S L-N/LPI/C-P/C-S
@@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ @@@ ### ### @@@ @@@@@@@@
BAND-ID PREFORM PAGE-DEF FORM-DEF S-O S-P-T T-UP-P CH-IM F-OV F-O-B
@@@@@ @@@@ @@@@@@@@@ @@@@@@@@@ @@@ # @@@@@@ @@@@@ @@@@@ @@@@@
ACCESS-DATE: @@@@-@@-@@
```

### Output if line densities have been defined for VERTICAL-CONTROL and ROTATION-CONTROL

```
FORM-NAM DEV-TYPE LI-S PA-S H-P T-P VERT-CONTROL ROT-CONTROL OWNER
 L-P-I /C-P/C-S L-P-I /C-P/C-S
@@@@@@@ #####@@@@@ ### ### @@@ @@@ ###/### ### @@@ ###/### ### @@@ @@@@@@@@
BAND-ID PREFORM PAGE-DEF FORM-DEF S-O S-P-T T-UP-P CH-IM F-OV F-O-B
@@@@@ @@@@ @@@@@@@@@ @@@@@@@@@ @@@ # @@@@@@ @@@@@ @@@@@ @@@@@
ACCESS-DATE: @@@@-@@-@@
```

**Output if line densities have been defined for VERTICAL-CONTROL only**

```

FORM-NAM DEV-TYPE LI-S PA-S H-P T-P VERT-CONTROL ROT-CONTROL OWNER
 L-P-I /C-P/C-S L-N/LPI/C-P/C-S
@@@@@@ #####@@@@@ ### ### @@@ @@@ ###/### ### @@@ @@@ ### ### @@@ @@@@@@@@
BAND-ID PREFORM PAGE-DEF FORM-DEF S-O S-P-T T-UP-P CH-IM F-OV F-O-B
@@@@ @@@@ @@@@@@@@@ @@@@@@@@@ @@@ # @@@@@@ @@@@@ @@@@@ @@@@@
ACCESS-DATE: @@@@-@@-@@

```

**Output if line densities have been defined for ROTATION-CONTROL only**

```

FORM-NAM DEV-TYPE LI-S PA-S H-P T-P VERT-CONTROL ROT-CONTROL OWNER
 L-N/LPI/C-P/C-S L-P-I /C-P/C-S
@@@@@@ #####@@@@@ ### ### @@@ @@@ @@@ ### ### @@@ ###/### ### @@@ @@@@@@@@
BAND-ID PREFORM PAGE-DEF FORM-DEF S-O S-P-T T-UP-P CH-IM F-OV F-O-B
@@@@ @@@@ @@@@@@@@@ @@@@@@@@@ @@@ # @@@@@@ @@@@@ @@@@@ @@@@@
ACCESS-DATE: @@@@-@@-@@

```

The following must be noted with respect to the values for the line density:

- The "\*" character in front of the value in the LPI field indicates that it is the calculated value for the line density and not a defined value (the DENSITY(...) operand of the ADD-/MODIFY-SPOOL-FORM statement).
- If the designation of the field is L-P-I (instead of LPI), the line density was defined with the DENSITY(...) operand and is shown in the form of LINES/INCHES. The loop name (L-N field) is not shown.

## Meanings of the fields

| Output field | Meaning / Contents                                                                                                                                                                                                                                           |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCESS-DATE  | Date of the last modification or use                                                                                                                                                                                                                         |
| BAND-ID      | Name of the BAND-ID (type band)                                                                                                                                                                                                                              |
| DEV-TYPE     | Device type: only one device type is output per group; with groups, #### stands for:<br>LP-PRINT (3337, 3338, 3339)<br>HP-PRINT (3351, 3353)<br>HP90-PR (2090, 2140)<br>LP65-PR (3365)<br>LP48-PR (3348, 3349)<br>Other devices are not included in a group. |
| F-O-B        | Name of the FOB data overlay that is used by the type of DIA processing that is used as the default for the form.                                                                                                                                            |
| FORM-DEF     | Standard form definition for APA printers                                                                                                                                                                                                                    |
| FORM-NAM     | Form name                                                                                                                                                                                                                                                    |
| F-OV         | Specifies whether film overlays can be processed on the device                                                                                                                                                                                               |
| H-P          | SPOOL header page (HEADER-PAGE):<br>2 header pages (YES), no header page (NO), 1 header page (ONE),<br>2 header pages after restart (RESPOOL)                                                                                                                |
| LI-S         | Line length in 1/10-inch increments (LINE-SIZE)                                                                                                                                                                                                              |
| OWNER        | Under TSOS:<br>User ID of the form owner who originated the form, i.e. of the RSO device administrator or system administration.<br>Nonprivileged users:<br>The output field always contains blanks.                                                         |
| PAGE-DEF     | Standard PCL file for controlling the printout on LP65 devices; standard form definition for APA printers.                                                                                                                                                   |
| PA-S         | Page length in 1/10-inch increments (PAGE-SIZE)                                                                                                                                                                                                              |
| PREFORM      | Control string for LP-EMULATED-PRINTER                                                                                                                                                                                                                       |
| ROT-CONTROL: | Page feed (ROTATION-CONTROL) for rotated pages to be output on HP laser printers and RSO printers 9000-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO and 9026-PCL.                                                                                              |
| L-N          | Name of the ROTATION loop (LOOP-NAME) assigned to the form by default.                                                                                                                                                                                       |
| LPI          | Line spacing (LINES-PER-INCH, RSO operation only).                                                                                                                                                                                                           |
| C-P          | Line number of the simulated ROTATION loop on which channel 1 is defined (CHANNEL 1-POSITION).                                                                                                                                                               |
| C-S          | Name of the character set (CHARACTER-SET) to be used by default for printing rotated pages with this form.                                                                                                                                                   |

| Output field                                       | Meaning / Contents                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S-O                                                | Separation of jobs by means of offset output of the paper stack into the paper output tray (STACKER-OFFSET, for single-sheet printers)                                                                                                                                                                                                                                                                                           |
| S-P-T                                              | Additional blank page between spoolout jobs; additional blank page between copies of the same job if a header page is printed before each copy (SEPARATOR-PAGE-TRAY)                                                                                                                                                                                                                                                             |
| T-P                                                | SPOOL trailer page (TRAILER-PAGE):<br>Of the 3 parts of the trailer page, 2 (YES) or 3 (INFO) are printed or no trailer page is printed at all (NO)                                                                                                                                                                                                                                                                              |
| T-UP-P                                             | Output of two pages side by side on 17-inch-wide paper on HP90-PRINTER (TWO-UP-PROCESSING)                                                                                                                                                                                                                                                                                                                                       |
| VERT-CONTROL:<br>L-N<br>LPI<br>L-P-I<br>C-P<br>C-S | Page feed (VERTICAL-CONTROL):<br>Name of the loop (LOOP-NAME) assigned to the form by default.<br>Line spacing (LINES-PER-INCH, RSO operation only).<br>Line spacing (LINES-PER-INCH) given as a fraction (lines/inch).<br>Line number of the simulated loop on which the vertical tabulator character "channel 1" is defined (CHANNEL1-POSITION).<br>Name of the character set (CHARACTER-SET) assigned to the form by default. |

The L-N (LOOP-NAME) and LPI fields are mutually exclusive, i.e. one of the two is always empty.

## SHOW-SPOOL-PARAMETERS

### Request information on global SPOOL parameters

**User group:** all users except the operator

This statement requests the values of the global SPOOL default values and scheduling criteria for local SPOOL and RSO to SYSOUT from the current SPOOL parameter file.

#### SHOW-SPOOL-PARAMETERS

```

CLUSTER-NAME = *STD / *LOCAL-CLUSTER / <alphanum-name 1..8>
,SERVER-NAME = *STD / *HOME / <alphanum-name 1..8>
,INFORMATION = *ALL / list-poss(10):
 *VERSIONS / *HEADER-PAGE / *PRINT-CMD-DEFAULTS /
 *SPOOLOUT-OPTIONS / *SPOOLOUT-SIZE / *RSO-OPTIONS /
 *OLTP-OPTIONS / *DPRINT-OPTIONS / *CENTRAL-SCHEDULING / *RSO-SCHEDULING

```

*Note for compatibility reasons*

The old \*SPOOLIN-OPTIONS value is still accepted in batch and procedure mode.

#### Operands

**CLUSTER-NAME = \*STD / \*LOCAL-CLUSTER / <alphanum-name 1..8>**

Specifies the cluster for which the information is to be output. \*LOCAL-CLUSTER is assumed for \*STD. The specified cluster must be a BS2000 cluster.

**SERVER-NAME = \*STD / \*HOME / <alphanum-name 1..8>**

Specifies the server for which information is to be output. \*HOME is assumed for \*STD.

*Notes*

- The value \*STD was included for compatibility reasons. Which parameter file is to be used as the source of information unless otherwise specified is dependent on the operating mode (dynamic, static, from configuration or command).
- If a SPOOL parameter file is assigned (either statically or dynamically), this is the standard source. If no parameter file is assigned (from the configuration or for the command), the standard source is the SPOOL parameter file of the home system.



**INFORMATION = \*ALL / list-poss(11):**

**\*VERSIONS / \*HEADER-PAGE / \*PRINT-CMD-DEFAULTS / \*SPOOLOUT-OPTIONS /  
\*SPOOLOUT-SIZE / \*RSO-OPTIONS / \*OLTP-OPTIONS / \*DPRINT-OPTIONS /  
\*CENTRAL-SCHEDULING / \*RSO-SCHEDULING**

Specifies which information is to be output. The fields displayed for each INFORMATION value correspond to the operands of the related structure of the MODIFY-SPOOL-PARAMETERS statement. For compatibility reasons, the default value is set to \*ALL.

*Note*

If \*VERSION has been requested in the INFORMATION operand when working with SPSEVE on a user spool parameters file, the statement is rejected with the SRV0004 message. Indeed, \*VERSION provides the caller with the versions of the different Spool&Print subsystems.

## Output formats

Different kinds of layout are provided, depending on the INFORMATION value.

### Output with INFORMATION = \*VERSIONS

```
----- VERSIONS -----
SPOOL : @@@@@@@@
RSO : @@@@@@@@@@@@@@@@
SPS : @@@@@@@@@@@@@@@@
DPRINTCM : @@@@@@@@@@@@@@@@
DPRINTCL : @@@@@@@@@@@@@@@@
DPRINTSV : @@@@@@@@@@@@@@@@
SCSIPCL : @@@@@@@@@@@@@@@@
SPCONV : @@@@@@@@@@@@@@@@
IDOM : @@@@@@@@@@@@@@@@
SPCONV : @@@@@@@@@@@@@@@@
```

### Output with INFORMATION = \*HEADER-PAGE

```
----- HEADER-PAGE -----
SPACE-AFTER-HEADER : @@@
FAMILY-MEMBER-HEADER: @@@
COPY-HEADER : @@@
CHARACTER-SET : @@@@@@@@
PRINT-ACCOUNT-NUMBER: @@@
```

### Output with INFORMATION = \*PRINT-CMD-DEFAULTS

```
----- PRINT-CMD-DEFAULTS -----
LINE-SIZE : ###
LOCK-FILE : @@@
LEFT-MARGIN : ##
DESTINATION : @@@@@@@@
 DEVICE-NAME : @@@@@@@@@@
 POOL-NAME : @@@@@@@@@@
DPRINT-DESTINATION : @@@@@@@@@@@@@@@@
 POOL-NAME : @@@@@@@@@@
FAMILY-PROCESSING : LOCAL : @@@
 REMOTE : @@@
ACCEPT-EMPTY-FILE : @@@
ERROR-PROCESSING : TRUNCATION : @@@@@@@@@@
RESOURCES-LOCATION : @@@@@@@@
```

**Output with INFORMATION = \*SPOOLOUT-OPTIONS**

```

----- SPOOLOUT-OPTIONS -----
REMOTE-BUFFER-SIZE : ##
REMOTE-DEVICE-LIMIT : ####
MAX-MSG-TASK-NUMBER : ###
START-SPOOL-LOW-VAL : ###
FORM-NAME-LENGTH : #
SECTION-TASK-LIMIT : ###
DEFAULT-SYSLST-FORM : @@@@
DEFAULT-SYSOUT-FORM : @@@@
REC-RULES-PREFIX : @@@
PRINTER-PARAM-PREF : @@@
FILTER-TASK-LIMIT : ##
PRIORITY : REPLAY-SESSION : ###
 FROM-POSITIONING : ###
 SECTION-POSITIONING : ###
CHECKPOINT-INTERVAL : LINE-PRINTERS : #####
 PAGE-PRINTERS : #####
 REMOTE-PRINTERS : #####
DEVICE-TYPE : LP-PRINTER : @@@
 HP-PRINTER : @@@
 FORMS-OVERLAY-BUFFER: #####
 CHARACTER-SET-NUMBER: ##
 ROTATION : @@@
 LP65-PRINTER : @@@
 HP90-PRINTER : @@@
 FORMS-OVERLAY-BUFFER: #####
 CHARACTER-SET-NUMBER: ##
 FORMS-OVERLAY : @@@
 RASTER-PATTERN-MEM : #####
 ROTATION : @@@
 APA-PRINTER : @@@
 TWIN-PRINTER : @@@
 VIRTUAL-PRINTER : @@@@@@@@@@@@@@@@@
 PCL-PRINTER : @@@

```

*Note for compatibility reasons*

The lines with ERASE-DISKETTE, RBP-STATION-LIMIT and ND-PRINTERS are no more displayed, but the associated S-Variables are still generated.

**Output with INFORMATION = \*SPOOLOUT-SIZE**

```

----- SPOOLOUT-SIZE -----
UNIT : @@@@
LINES-FACTOR : ###
MIN-LINES-PER-PAGE : ##### (@@@@)

```

**Output with INFORMATION = \*SPOOLIN-OPTIONS**

*Note for compatibility reasons*

This output part is no more displayed, but the associated S-Variables are still generated.

**Output with INFORMATION = \*RSO-OPTIONS**

```
----- RSO-OPTIONS -----
CONTROLLER-LIMIT : ###
CONTROLLER-DEV-LIMIT : ####
JOB-CONTROLLER-LIMIT : ###
CHECK-PRINTER-TIME : ##
RETRY-TIME : ###
RELEASE-MEMORY : @@@
```

**Output with INFORMATION = \*OLTP-OPTIONS**

```
----- OLTP-OPTIONS -----
TASK-LIMIT : ###
TASK-DEVICE-LIMIT : ####
```

**Output with INFORMATION = \*DPRINT-OPTIONS**

```
----- DPRINT-OPTIONS -----
SERVER-TASK-LIMIT : ###
RESOURCES-TASK-LIMIT : ##
REMOTE-JOB-PRIORITY : ###
CONNECTION-TIMEOUT : #####
DFTM-WAITING-TIME : #####
```

**Output with INFORMATION = \*CENTRAL-SCHEDULING**

```
----- CENTRAL-SCHEDULING -----
CURRENT-SCHEDULING
DEVICE-WEIGHT : ACCOUNT : ###
 CHARACTER-SET-NUMBER: ###
 CLASS : ###
 FOB-SIZE : ###
 FORM : ###
 FORMS-OVERLAY : ###
 PRIORITY : ###
 ROTATION : ###
 SPOOLOUT-NAME : ###
 USER-IDENTIFICATION : ###
JOB-SEQUENCE : @@
```

JOB-PRIORITY : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

-----  
 NEXT-SCHEDULING

DEVICE-WEIGHT : ACCOUNT : ###  
 CHARACTER-SET-NUMBER: ###  
 CLASS : ###  
 FOB-SIZE : ###  
 FORM : ###  
 FORMS-OVERLAY : ###  
 PRIORITY : ###  
 ROTATION : ###  
 SPOOLOUT-NAME : ###  
 USER-IDENTIFICATION : ###

JOB-SEQUENCE : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

JOB-PRIORITY : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

**Output with INFORMATION = \*RSO-SCHEDULING**

----- RSO-SCHEDULING -----

CURRENT-SCHEDULING

DEVICE-WEIGHT : ACCOUNT : ###  
 CLASS : ###  
 FORM : ###  
 PRIORITY : ###  
 SPOOLOUT-NAME : ###  
 USER-IDENTIFICATION : ###

JOB-SEQUENCE : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

JOB-PRIORITY : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

-----  
 NEXT-SCHEDULING

DEVICE-WEIGHT : ACCOUNT : ###  
 CLASS : ###  
 FORM : ###  
 PRIORITY : ###  
 SPOOLOUT-NAME : ###  
 USER-IDENTIFICATION : ###

JOB-SEQUENCE : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

JOB-PRIORITY : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

**Output with INFORMATION = \*ALL**

The concatenation of all preceding INFORMATION types is displayed.

## Meanings of the fields

| Output field               | Contents                                                                                                                                                                                            |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VERSIONS:</b>           |                                                                                                                                                                                                     |
| SPOOL                      | SPOOL version used in the current session                                                                                                                                                           |
| RSO                        | RSO version used in the current session                                                                                                                                                             |
| SPS                        | SPS version used in the current session                                                                                                                                                             |
| DPRINTCM                   | DPRINTCM version used in the current session                                                                                                                                                        |
| DPRINTCL                   | DPRINTCL version used in the current session                                                                                                                                                        |
| DPRINTSV                   | DPRINTSV version used in the current session                                                                                                                                                        |
| SCSIPCL                    | SCSIPCL version used in the current session                                                                                                                                                         |
| IDOM                       | IDOM version used in the current session                                                                                                                                                            |
| SPCONV                     | SPCONV version used in the current session                                                                                                                                                          |
| <b>HEADER-PAGE:</b>        | Criteria for output of header pages                                                                                                                                                                 |
| SPACE-AFTER-HEADER         | Skip to channel 1 after output of the header page (YES/NO).                                                                                                                                         |
| FAMILY-MEMBER-HEADER       | Header page for each spoolout of a spoolout group (specified in partially qualified form) (YES/NO).                                                                                                 |
| COPY-HEADER                | Header page for each print copy of a spoolout job (YES/NO).                                                                                                                                         |
| CHARACTER-SET              | Character set to be used for printing header and trailer pages.                                                                                                                                     |
| PRINT-ACCOUNT-NUMBER       | Account number on HEADER-PAGE (YES/NO)                                                                                                                                                              |
| <b>PRINT-CMD-DEFAULTS:</b> | Default values for PRINT-DOCUMENT (PRNTDOC macro)                                                                                                                                                   |
| LINE-SIZE                  | Number of characters after which a print line is to be truncated (132,136).                                                                                                                         |
| LOCK-FILE                  | The file to be printed is locked until printing is completed (YES/NO). Tape files are never locked.                                                                                                 |
| LEFT-MARGIN                | For local SPOOL only.<br>Default value for the SHIFT operand in the PRNTDOC macro or LEFT-MARGIN in the PRINT-DOCUMENT command (0...30).                                                            |
| DESTINATION                | Standard destination of the spoolout job:<br>*CENTRAL: pool of all devices administered from the local server.<br>*REMOTE: specified non-Dprint device.<br>*POOL: specified non-Dprint device pool. |
| DEVICE-NAME                | Name of the RSO printer.                                                                                                                                                                            |
| POOL-NAME                  | Name of the pool.                                                                                                                                                                                   |

| Output field                | Contents                                                                                                                                                                            |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DPRINT-DESTINATION          | Standard destination for Distributed Print Services:<br>*CENTRAL: pool of all Dprint printers.<br>*DESTINATION: local DESTINATION is used.<br>*POOL: specified Dprint printer pool. |
| FAMILY-PROCESSING           | Default value of the FAMILY-PROCESSING operand in PRINT-DOCUMENT for local and RSO jobs                                                                                             |
| LOCAL                       | Default value of the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command for local spoolout jobs                                                                                |
| REMOTE                      | Default value of the FAMILY-PROCESSING operand in the PRINT-DOCUMENT command for RSO jobs                                                                                           |
| ACCEPT-EMPTY-FILES          | Behavior after the PRINT-DOCUMENT command in the event of empty SAM files being specified for printing.                                                                             |
| ERROR-PROCESSING:TRUNCATION | Behavior with regard to a file to be deleted after printing, in which lines are truncated during processing of the SPOOL job.                                                       |
| RESOURCES-LOCATION          | Specification of the host whose print resources are to be used:<br>*HOME: the host on which the command was issued.<br>*SERVER: the host on which the print job is processed.       |
| <b>SPOOLOUT-OPTIONS:</b>    | Spoolout control criteria                                                                                                                                                           |
| ERASE-DISKETTE              | Erase floppy disk prior to write operation (WRITE-DISKETTE) (YES/NO).                                                                                                               |
| REMOTE-BUFFER-SIZE          | Buffer size available to the RSO printer (in Kbytes).                                                                                                                               |
| REMOTE-DEVICE-LIMIT         | Maximum number of RSO printers (PRIVATE DEVICES) that can be active at the same time (0...9999).                                                                                    |
| MAX-MSG-TASK-NUMBER         | Maximum number of message tasks that may be active concurrently (0...200).                                                                                                          |
| START-SPOOL-LOW-VAL         | Smallest value that the user may specify for the operand START-SPOOL=n of the PRINT-DOCUMENT command/ PRNTDOC macro (1...32767).                                                    |
| FORM-NAME-LENGTH            | Number of characters of the form name interpreted by SPOOL for scheduling purposes.                                                                                                 |
| SECTION-TASK-LIMIT          | Maximum number of pseudo-controllers for SECTION-PRINT jobs that can be active at the same time.                                                                                    |
| DEFAULT-SYSLST-FORM         | Standard form for SYSLST output if the user does not make any specification.                                                                                                        |
| DEFAULT-SYSOUT-FORM         | Standard form for SYSOUT output if the user does not make any specification.                                                                                                        |
| REC-RULES-PREFIX            | Prefix part of recovery rules files                                                                                                                                                 |

| Output field                | Contents                                                                                                                                                                                                   |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRINTER-PARAM-PREFIX        | Prefix part of the individual printer parameter files                                                                                                                                                      |
| FILTER-TASK-LIMIT           | Number of possible filter tasks                                                                                                                                                                            |
| <b>PRIORITY:</b>            |                                                                                                                                                                                                            |
| REPLAY-SESSION              | For local SPOOL only:<br>Task priority for outputs to replay tapes (60...200).                                                                                                                             |
| FROM-POSITIONING            | For local SPOOL only:<br>Number of pages or lines before the current position at which the job is to resume on restarting (60...200).                                                                      |
| SECTION-POSITIONING         | Number of sections (SECTIONS) before the current position in the file at which the job is to resume on restarting (60...200)                                                                               |
| <b>CHECKPOINT-INTERVAL:</b> |                                                                                                                                                                                                            |
| LINE-PRINTERS               | Interval between spoolout checkpoints for line printers and printers with a loadable VFB (1..32767).                                                                                                       |
| PAGE-PRINTERS               | Interval between spoolout checkpoints for laser printers (page printers) (1..32767).                                                                                                                       |
| REMOTE-PRINTERS             | Interval between spoolout checkpoints for remote printers (1..32767).                                                                                                                                      |
| <b>DEVICE-TYPE:</b>         |                                                                                                                                                                                                            |
| LP-PRINTER                  | Output on LP printers possible, PRFILE present (YES/NO).                                                                                                                                                   |
| HP-PRINTER                  | Output on HP printers possible, PRFILE present (YES/NO).                                                                                                                                                   |
| FORMS-OVERLAY-BUFFER        | Output can be directed to HP printers with a graphics buffer (max. no. of sublines: 672).                                                                                                                  |
| CHARACTER-SET-NUMBER        | Spoolouts can be directed to HP printers with a character memory capable of accommodating up to 64 character sets, or to HP90 printers with a character memory capable of accommodating 46 character sets. |
| ROTATION                    | Spoolouts can be directed to HP printers with/without a page rotation module (YES/NO).                                                                                                                     |
| LP65-PRINTER                | Output on LP65 printers possible, PRFILE present (YES/NO).                                                                                                                                                 |
| HP90-PRINTER                | Output on HP90 printers possible, PRFILE present (YES/NO).                                                                                                                                                 |
| FORMS-OVERLAY-BUFFER        | Maximum size of the overlay that can be loaded into the buffer of the HP90 printer.                                                                                                                        |
| CHARACTER-SET-NUMBER        | Number of character sets for HP90 printer                                                                                                                                                                  |
| FORMS-OVERLAY               | EFO for HP90 printer (YES/NO)                                                                                                                                                                              |



| Output field            | Contents                                                                                                                                                                                                                                                                                                         |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RASTER-PATTERN-MEM      | Size of the shared HP90 memory area for character sets and FOB data overlays                                                                                                                                                                                                                                     |
| ROTATION                | Specifies whether page rotation is permitted for HP90 printer (YES/NO).                                                                                                                                                                                                                                          |
| APA-PRINTER             | Output on APA printers possible; (YES/NO).                                                                                                                                                                                                                                                                       |
| TWIN-PRINTER            | Output on twin printers possible; (YES/NO)                                                                                                                                                                                                                                                                       |
| VIRTUAL-PRINTER         | Output on VIRT-PRINTER possible; (*ALLOWED/*NOT-ALLOWED).                                                                                                                                                                                                                                                        |
| PCL-PRINTER             | Output on PCL printer possible; (YES/NO)                                                                                                                                                                                                                                                                         |
| <b>SPOOLOUT-SIZE:</b>   |                                                                                                                                                                                                                                                                                                                  |
| UNIT                    | Specifies the form of output for SHOW-JOB-STATUS: the scope of the spoolout is output in PAM pages or lines.                                                                                                                                                                                                     |
| LINES-FACTOR            | If LINES is specified: average number of data records in a PAM page (8..100).                                                                                                                                                                                                                                    |
| MIN-LINES-PER-PAGE      | Smallest value specified for the PAGE-SIZE operand of the *STD standard forms present, multiplied by 6/10. SPOOL computes the value at startup. If *STD is given in parentheses in the output field after the value, the value was calculated by SPOOL and was not specified by systems support or the operator. |
| <b>SPOOLIN-OPTIONS:</b> |                                                                                                                                                                                                                                                                                                                  |
| LOGGING DISKETTE        | Specifies whether a log of the spoolin job is to be output (YES/NO).                                                                                                                                                                                                                                             |
| <b>RSO-OPTIONS:</b>     | Default values for RSO operation.                                                                                                                                                                                                                                                                                |
| CONTROLLER-LIMIT        | Maximum number of RSO controllers allowed during a system session (1..200).                                                                                                                                                                                                                                      |
| CONTROLLER-DEV-LIMIT    | Maximum number of printers to be served by one controller (1..1024).                                                                                                                                                                                                                                             |
| JOB-CONTROLLER-LIMIT    | Maximum number of job RSO controllers permissible during an RSO run (1..200)                                                                                                                                                                                                                                     |
| CHECK-PRINTER-TIME      | Intervals (in minutes) at which printers are to be checked for the TIMEOUT error condition (2..10).                                                                                                                                                                                                              |
| RETRY-TIME              | Interval (in seconds) between two attempts to send a new message to the printer following certain errors (1..600).                                                                                                                                                                                               |
| RELEASE-MEMORY          | DMS I/O areas are to be released if no more jobs are pending for the output device (YES) or only if STOP-PRINTER-OUTPUT is specified (NO).                                                                                                                                                                       |

| Output field                                                                                                                                   | Contents                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLTP-OPTIONS:</b>                                                                                                                           | Defaults for OLTP operation                                                                                                                                                                                                                                                                                                                                                                                                     |
| TASK-LIMIT                                                                                                                                     | Maximum number of OLTP tasks permitted during a session (1..200).                                                                                                                                                                                                                                                                                                                                                               |
| TASK-DEVICE-LIMIT                                                                                                                              | Maximum number of printers that can be operated during an OLTP task (1..1024).                                                                                                                                                                                                                                                                                                                                                  |
| <b>DPRINT-OPTIONS:</b>                                                                                                                         | Default value for Distributed Print Services                                                                                                                                                                                                                                                                                                                                                                                    |
| SERVER-TASK-LIMIT                                                                                                                              | Maximum number of tasks that process remote requests                                                                                                                                                                                                                                                                                                                                                                            |
| RESOURCES-TASK-LIMIT                                                                                                                           | Maximum number of tasks that administer resource containers                                                                                                                                                                                                                                                                                                                                                                     |
| REMOTE-JOB-PRIORITY                                                                                                                            | Maximum priority for remote jobs                                                                                                                                                                                                                                                                                                                                                                                                |
| CONNECTION-TIMEOUT                                                                                                                             | Maximum time for setting up a connection to the partner processor                                                                                                                                                                                                                                                                                                                                                               |
| DFTM-WAITING-TIME                                                                                                                              | Waiting time for the DFTM task check loop                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>[NEXT-]CENTRAL-SCHEDULING / [NEXT-]RSO-SCHEDULING</b>                                                                                       | Scheduling criteria, defined separately for local SPOOL and RSO and additionally differentiated according to whether they are to come into effect in the current or the following SPOOL or RSO run.                                                                                                                                                                                                                             |
| <b>DEVICE-WEIGHT:</b>                                                                                                                          | “Weight” defined for each scheduling criterion for the current SPOOL run and which can be assigned by means of START-... to the SPOOL devices in order to control device selection through different weights. Possible values: 0 / 1 / 2 / 4 / 8 / 16 / 32 / 64 / 128                                                                                                                                                           |
| ACCOUNT<br>CHARACTER-SET-NUMBER<br>CLASS<br>FOB-SIZE<br>FORM<br>FORMS-OVERLAY<br>PRIORITY<br>ROTATION<br>SPOOL-OUT-NAME<br>USER-IDENTIFICATION | Weight for the ACCOUNT parameter<br>Weight for the CHARACTER-SET-NUMBER parameter<br>Weight for the SPOOL-OUT-CLASS parameter<br>Weight for the FORMS-OVERLAY-BUFFER parameter<br>Weight for the FORM-NAME parameter<br>Weight for the FORMS-OVERLAY parameter<br>Weight for the PRIORITY parameter<br>Weight for the ROTATION parameter<br>Weight for the SPOOL-OUT-NAME operand<br>Weight for the USER-IDENTIFICATION operand |
| <b>JOB-SEQUENCE</b>                                                                                                                            | Fields according to which the various waiting and active jobs are to be sorted.                                                                                                                                                                                                                                                                                                                                                 |
| <b>JOB-PRIORITY</b>                                                                                                                            | Order in which equivalent jobs are to be processed (waiting time of the spoolout job).                                                                                                                                                                                                                                                                                                                                          |

---

## 5 Notational symbols

This syntax description is valid for SDF V4.1A. The syntax of the SDF command/statement language is explained in the following three tables.

### **Table 1: Notational conventions (metasyntax)**

The meanings of the special characters and the notation used to describe command and statement formats are explained in this table.

### **Table 2: Data types**

Variable operand values are represented in SDF by data types. Each data type represents a specific set of values. The number of data types is limited to those described in this table.

The description of the data types is valid for the entire set of commands/statements. Therefore only deviations (if any) from the attributes described here are explained in the relevant operand descriptions.

**Table 3: Suffixes for data types**

Data type suffixes define additional rules for data type input. They contain a length or interval specification and can be used to limit the set of values (suffix begins with *without*), extend it (suffix begins with *with*), or declare a particular task mandatory (suffix begins with *mandatory*). The following short forms are used in this manual for data type suffixes:

|                  |             |
|------------------|-------------|
| cat-id           | cat         |
| completion       | compl       |
| construction     | constr      |
| correction-state | corr        |
| generation       | gen         |
| lower-case       | low         |
| manual-release   | man         |
| odd-possible     | odd         |
| path-completion  | path-compl  |
| separators       | sep         |
| temporary-file   | temp-file   |
| underscore       | under       |
| user-id          | user        |
| version          | vers        |
| wildcard-constr  | wild-constr |
| wildcards        | wild        |

The description of the ‘integer’ data type in Table 3 contains a number of items in italics; the italics are not part of the syntax and are only used to make the table easier to read.

For special data types that are checked by the implementation, Table 3 contains suffixes printed in italics (see the *special* suffix) which are not part of the syntax.

The description of the data type suffixes is valid for the entire set of commands/statements. Therefore only deviations (if any) from the attributes described here are explained in the relevant operand descriptions.

**Metasyntax**

| Representation           | Meaning                                                                                                                                                             | Examples                                                                                        |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| UPPERCASE LETTERS        | Uppercase letters denote keywords. The keywords for constant operand values begin with *                                                                            | <b>HELP-SDF</b><br><br><b>SCREEN-STEPS = *NO</b>                                                |
| <b>UPPERCASE LETTERS</b> | Uppercase letters printed in boldface denote guaranteed or suggested abbreviations of keywords.                                                                     | <b>GUIDANCE-MODE = *YES</b>                                                                     |
| =                        | The equals sign connects an operand name with the associated operand values.                                                                                        | <b>GUIDANCE-MODE = *NO</b>                                                                      |
| < >                      | Angle brackets denote variables whose range of values is described by data types and suffixes (see Tables 2 and 3).                                                 | <b>SYNTAX-FILE = &lt;filename 1..54&gt;</b>                                                     |
| <u>Underscoring</u>      | Underscoring denotes the default value of an operand.                                                                                                               | <b>GUIDANCE-MODE = *NO</b>                                                                      |
| /                        | A slash serves to separate alternative operand values.                                                                                                              | <b>NEXT-FIELD = *NO / *YES</b>                                                                  |
| (...)                    | Parentheses denote operand values that initiate a structure.                                                                                                        | <b>,UNGUIDED-DIALOG = *YES (...)/ *NO</b>                                                       |
| [ ]                      | Square brackets denote operand values which introduce a structure and are optional. The subsequent structure can be specified without the initiating operand value. | <b>SELECT = [*BY-ATTRIBUTES](...)</b>                                                           |
| Indentation              | Indentation indicates that the operand is dependent on a higher-ranking operand.                                                                                    | <b>,GUIDED-DIALOG = *YES (...)</b><br><b>*YES(...)</b><br> <br><b>SCREEN-STEPS = *NO / *YES</b> |

Table 1: Metasyntax (part 1 of 2)

| Representation                                                                          | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: center;"> </p> <p>,</p> <p>list-poss(n):</p> <p>Abbreviation:</p> | <p>A vertical bar identifies related operands within a structure. Its length marks the beginning and end of a structure. A structure may contain further structures. The number of vertical bars preceding an operand corresponds to the depth of the structure..</p> <p>A comma precedes further operands at the same structure level.</p> <p>The entry “list-poss” signifies that a list of operand values can be given at this point. If (n) is present, it means that the list must not have more than n elements. A list of more than one element must be enclosed in parentheses.</p> <p>The name that follows represents a guaranteed alias for the command or statement name.</p> | <p><b>SUPPORT = *TAPE(...)</b></p> <pre> *TAPE(...)         VOLUME = *<b>ANY</b>(...)                 *<b>ANY</b>(...)                         ...           </pre> <p><b>GUIDANCE-MODE = *NO / *YES</b></p> <p><b>,SDF-COMMANDS = *NO / *YES</b></p> <p>list-poss: <b>*SAM / *ISAM</b></p> <p>list-poss(40): &lt;structured-name 1..30&gt;</p> <p>list-poss(256): <b>*OMF / *SYSLST(...)</b> /<br/>                           &lt;filename 1..54&gt;</p> <p><b>HELP-SDF</b>                   Alias: <b>HPSDF</b></p> |

Table 1: Metasyntax (part 2 of 2)

## Data types

| Data type     | Character set                                                | Special rules                                                                                                                                                                                                                           |
|---------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| alphanum-name | A...Z<br>0...9<br>\$, #, @                                   |                                                                                                                                                                                                                                         |
| cat-id        | A...Z<br>0...9                                               | Not more than 4 characters;<br>must not begin with the string PUB                                                                                                                                                                       |
| command-rest  | freely selectable                                            |                                                                                                                                                                                                                                         |
| composed-name | A...Z<br>0...9<br>\$, #, @<br>hyphen<br>period<br>catalog ID | Alphanumeric string that can be split into multiple substrings by means of a period or hyphen.<br>If a file name can also be specified, the string may begin with a catalog ID in the form :cat: (see data type filename).              |
| c-string      | EBCDIC character                                             | Must be enclosed within single quotes; the letter C may be prefixed; any single quotes occurring within the string must be entered twice.                                                                                               |
| date          | 0...9<br>Structure identifier:<br>hyphen                     | Input format: yyyy-mm-dd<br>yyyy: year; optionally 2 or 4 digits<br>mm:month<br>dd:day                                                                                                                                                  |
| device        | A...Z<br>0...9<br>hyphen                                     | Character string, max. 8 characters in length, corresponding to a device available in the system. In interactive prompting, SDF displays the valid operand values. For notes on possible devices, see the relevant operand description. |
| fixed         | +, -<br>0...9<br>period                                      | Input format: [sign][digits].[digits]<br><br>[sign]:+ or -<br>[digits]:0...9<br><br>must contain at least one digit, but may contain up to 10 characters (0...9, period) apart from the sign.                                           |

Table 2: Data types (part 1 of 6)

| Data type | Character set                                  | Special rules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filename  | A...Z<br>0...9<br>\$, #, @<br>hyphen<br>period | <p>Input format:</p> $[:cat:][\$user.] \left\{ \begin{array}{l} \text{file} \\ \text{file(no)} \\ \text{group} \\ \text{group} \left\{ \begin{array}{l} (*\text{abs}) \\ (+\text{rel}) \\ (-\text{rel}) \end{array} \right\} \end{array} \right\}$ <p>:cat:<br/>                     optional entry of the catalog identifier;<br/>                     character set limited to A...Z and 0...9;<br/>                     maximum of 4 characters; must be enclosed<br/>                     in colons; default value is the catalog<br/>                     identifier assigned to the user ID, as<br/>                     specified in the user catalog.</p> <p>\$user.<br/>                     optional entry of the user ID;<br/>                     character set is A...Z, 0...9, \$, #, @;<br/>                     maximum of 8 characters; first character<br/>                     cannot be a digit; \$ and period are<br/>                     mandatory;<br/>                     default value is the user' s own ID.</p> <p>\$. (special case)<br/>                     system default ID</p> <p>file<br/>                     file or job variable name;<br/>                     may be split into a number of partial names<br/>                     using a period as a delimiter:<br/>                     name<sub>1</sub>[.name<sub>2</sub>[...]]<br/>                     name<sub>i</sub> does not contain a period and must<br/>                     not begin or end with a hyphen;<br/>                     file can have a max. length of 41 characters;<br/>                     it must not begin with a \$ and must include<br/>                     at least one character from the range A...Z.</p> |

Table 2: Data types (part 2 of 6)



| Data type               | Character set              | Special rules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filename<br>(continued) |                            | <p>#file (special case)<br/> @file (special case)<br/> # or @ used as the first character indicates temporary files or job variables, depending on system generation.</p> <p>file(no)<br/> tape file name<br/> no: version number;<br/> character set is A...Z, 0...9, \$, #, @.<br/> Parentheses must be specified.</p> <p>group<br/> name of a file generation group<br/> (character set: as for "file")</p> <p>group { (*abs)<br/> (+rel)<br/> (-rel) }</p> <p>(*abs)<br/> absolute generation number (1-9999);<br/> * and parentheses must be specified.</p> <p>(+rel)<br/> (-rel)<br/> relative generation number (0-99);<br/> sign and parentheses must be specified.</p> |
| integer                 | 0...9, +, -                | + or -, if specified, must be the first character.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| name                    | A...Z<br>0...9<br>\$, #, @ | Must not begin with 0...9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Table 2: Data types (part 3 of 6)

| Data type        | Character set                                                          | Special rules                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| partial-filename | A...Z<br>0...9<br>\$, #, @<br>hyphen<br>period                         | <p>Input format: [:cat:][\$user.][partname.]</p> <p>:cat:see filename<br/>\$user.see filename</p> <p>partname<br/>optional entry of the initial part of a name common to a number of files or file generation groups in the form:<br/>name<sub>1</sub>. [name<sub>2</sub>. [...]]<br/>name<sub>i</sub> (see filename).<br/>The final character of “partname” must be a period.<br/>At least one of the parts :cat:, \$user. or partname must be specified.</p> |
| posix-filename   | A...Z<br>0...9<br>special characters                                   | <p>String with a length of up to 255 characters; consists of either one or two periods or of alphanumeric characters and special characters. The special characters must be escaped with a preceding \ (backslash); the / is not allowed. Must be enclosed within single quotes if alternative data types are permitted, separators are used, or the first character is a ?, ! or ^.<br/>A distinction is made between uppercase and lowercase.</p>            |
| posix-pathname   | A...Z<br>0...9<br>special characters<br>structure identifier:<br>slash | <p>Input format: [/]part<sub>1</sub>/.../part<sub>n</sub><br/>where part<sub>i</sub> is a posix-filename;<br/>max. 1024 characters;<br/>must be enclosed within single quotes if alternative data types are permitted, separators are used, or the first character is a ?, ! or ^.</p>                                                                                                                                                                         |

Table 2: Data types (part 4 of 6)

| Data type       | Character set                            | Special rules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product-version | A...Z<br>0...9<br>period<br>single quote | <p>Input format: <math>[[[C]' ][V][m]m.n.asol[ ' ]]</math></p> <div style="margin-left: 200px;"> </div> <p>where m, n, s and o are digits and a is a letter.<br/>Whether the release and/or correction status may/must be specified depends on the suffixes to the data type (see suffixes without-corr, without-man, mandatory-man and mandatory-corr in Table 3).<br/>product-version may be enclosed within single quotes (possibly with a preceding C).<br/>The specification of the version may begin with the letter V.</p> |
| structured-name | A...Z<br>0...9<br>\$, #, @<br>hyphen     | Alphanumeric string which may comprise a number of substrings separated by a hyphen.<br>First character: A...Z or \$, #, @                                                                                                                                                                                                                                                                                                                                                                                                        |
| text            | freely selectable                        | For the input format, see the relevant operand descriptions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| time            | 0...9<br>structure identifier:<br>colon  | <p>Time-of-day entry:</p> <p>Input format: <math>\left. \begin{matrix} hh:mm:ss \\ hh:mm \\ hh \end{matrix} \right\}</math></p> <p>hh:hours<br/>mm:minutes<br/>ss:seconds <math>\left. \right\}</math> Leading zeros may be omitted</p>                                                                                                                                                                                                                                                                                           |
| vsn             | a) A...Z<br>0...9                        | <p>a) Input format: pvsid.sequence-no<br/>max. 6 characters</p> <p>pvsid: 2-4 characters; PUB<br/>must not be entered</p> <p>sequence-no: 1-3 characters</p>                                                                                                                                                                                                                                                                                                                                                                      |

Table 2: Data types (part 5 of 6)

| Data type | Character set                 | Special rules                                                                                                       |
|-----------|-------------------------------|---------------------------------------------------------------------------------------------------------------------|
|           | b) A...Z<br>0...9<br>\$, #, @ | b) Max. 6 characters;<br>PUB may be prefixed, but must not be followed by \$, #, @.                                 |
| x-string  | Hexadecimal:<br>00...FF       | Must be enclosed in single quotes; must be prefixed by the letter X. There may be an odd number of characters.      |
| x-text    | Hexadecimal:<br>00...FF       | Must not be enclosed in single quotes; the letter X must not be prefixed. There may be an odd number of characters. |

Table 2: Data types (part 6 of 6)

## Suffixes for data types

| Suffix              | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|--------------------|----------------------------|--------------------|---------------------------|----------------|--------------------------------------|------------------|-----------------------------|
| <i>x..y unit</i>    | <p>With data type “integer”: interval specification</p> <p><i>x</i>      minimum value permitted for “integer”.<br/> <i>x</i> is an (optionally signed) integer.</p> <p><i>y</i>      maximum value permitted for “integer”.<br/> <i>y</i> is an (optionally signed) integer.</p> <p><i>unit</i>    with “integer” only: additional units.<br/> The following units may be specified:</p> <table style="margin-left: 40px;"> <tr> <td><i>days</i></td> <td><i>byte</i></td> </tr> <tr> <td><i>hours</i></td> <td><i>2Kbyte</i></td> </tr> <tr> <td><i>minutes</i></td> <td><i>4Kbyte</i></td> </tr> <tr> <td><i>seconds</i></td> <td><i>Mbyte</i></td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>days</i>        | <i>byte</i>                   | <i>hours</i>       | <i>2Kbyte</i>              | <i>minutes</i>     | <i>4Kbyte</i>             | <i>seconds</i> | <i>Mbyte</i>                         |                  |                             |
| <i>days</i>         | <i>byte</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>hours</i>        | <i>2Kbyte</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>minutes</i>      | <i>4Kbyte</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>seconds</i>      | <i>Mbyte</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>x..y special</i> | <p>With the other data types: length specification<br/> For data types <i>catid</i>, <i>date</i>, <i>device</i>, <i>product-version</i>, <i>time</i> and <i>vsn</i> the length specification is not displayed.</p> <p><i>x</i>      minimum length for the operand value; <i>x</i> is an integer.</p> <p><i>y</i>      maximum length for the operand value; <i>y</i> is an integer.</p> <p><i>x=y</i>    the length of the operand value must be precisely <i>x</i>.</p> <p><i>special</i> Specification of a suffix for describing a special data type that is checked by the implementation. “special” can be preceded by other suffixes. The following specifications are used:</p> <table style="margin-left: 40px;"> <tr> <td><i>arithm-expr</i></td> <td>arithmetic expression (SDF-P)</td> </tr> <tr> <td><i>bool-expr</i></td> <td>logical expression (SDF-P)</td> </tr> <tr> <td><i>string-expr</i></td> <td>string expression (SDF-P)</td> </tr> <tr> <td><i>expr</i></td> <td>freely selectable expression (SDF-P)</td> </tr> <tr> <td><i>cond-expr</i></td> <td>conditional expression (JV)</td> </tr> </table> | <i>arithm-expr</i> | arithmetic expression (SDF-P) | <i>bool-expr</i>   | logical expression (SDF-P) | <i>string-expr</i> | string expression (SDF-P) | <i>expr</i>    | freely selectable expression (SDF-P) | <i>cond-expr</i> | conditional expression (JV) |
| <i>arithm-expr</i>  | arithmetic expression (SDF-P)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>bool-expr</i>    | logical expression (SDF-P)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>string-expr</i>  | string expression (SDF-P)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>expr</i>         | freely selectable expression (SDF-P)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>cond-expr</i>    | conditional expression (JV)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>with</i>         | Extends the specification options for a data type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>-compl</i>       | <p>When specifying the data type “date”, SDF expands two-digit year specifications in the form <i>yy-mm-dd</i> to:</p> <table style="margin-left: 40px;"> <tr> <td>20<i>yy-mm-dd</i></td> <td>if <i>yy</i> &lt; 60</td> </tr> <tr> <td>19<i>yy-mm-dd</i></td> <td>if <i>yy</i> ≥ 60</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20 <i>yy-mm-dd</i> | if <i>yy</i> < 60             | 19 <i>yy-mm-dd</i> | if <i>yy</i> ≥ 60          |                    |                           |                |                                      |                  |                             |
| 20 <i>yy-mm-dd</i>  | if <i>yy</i> < 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| 19 <i>yy-mm-dd</i>  | if <i>yy</i> ≥ 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>-low</i>         | Uppercase and lowercase letters are differentiated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>-path-comp</i>   | For specifications for the data type “filename”, SDF adds the catalog and/or user ID if these have not been specified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |
| <i>-under</i>       | Permits underscores “_” for the data type “name”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                               |                    |                            |                    |                           |                |                                      |                  |                             |

Table 3: Data type suffixes (part 1 of 7)

| Suffix                            | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with (contd.)                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| -wild(n)                          | <p>Parts of names may be replaced by the following wildcards. n denotes the maximum input length when using wildcards. Due to the introduction of the data types posix-filename and posix-pathname, SDF now accepts wildcards from the UNIX world (referred to below as POSIX wildcards) in addition to the usual BS2000 wildcards. Since not all commands currently support POSIX wildcards, their use for data types other than posix-filename and posix-pathname can lead to semantic errors.</p> <p>Only POSIX wildcards or only BS2000 wildcards should be used within a search pattern. Only POSIX wildcards are allowed for the data types posix-filename and posix-pathname. If a pattern can be matched more than once in a string, the first match is used.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
|                                   | <table border="1"> <thead> <tr> <th>BS2000 wildcards</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard.</td> </tr> <tr> <td>Terminating period</td> <td>Partially-qualified entry of a name. Corresponds implicitly to the string "./*", i.e. at least one other character follows the period.</td> </tr> <tr> <td>/</td> <td>Replaces any single character.</td> </tr> <tr> <td>&lt;s<sub>x</sub>:s<sub>y</sub>&gt;</td> <td>Replaces a string that meets the following conditions:<br/>                     –It is at least as long as the shortest string (s<sub>x</sub> or s<sub>y</sub>)<br/>                     –It is not longer than the longest string (s<sub>x</sub> or s<sub>y</sub>)<br/>                     –It lies between s<sub>x</sub> and s<sub>y</sub> in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9)<br/>                     –s<sub>x</sub> can also be an empty string (which is in the first position in the alphabetic collating sequence)<br/>                     –s<sub>y</sub> can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF' )</td> </tr> <tr> <td>&lt;s<sub>1</sub>,...&gt;</td> <td>Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "s<sub>x</sub>:s<sub>y</sub>" (see above).</td> </tr> </tbody> </table> | BS2000 wildcards | Meaning | * | Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard. | Terminating period | Partially-qualified entry of a name. Corresponds implicitly to the string "./*", i.e. at least one other character follows the period. | / | Replaces any single character. | <s <sub>x</sub> :s <sub>y</sub> > | Replaces a string that meets the following conditions:<br>–It is at least as long as the shortest string (s <sub>x</sub> or s <sub>y</sub> )<br>–It is not longer than the longest string (s <sub>x</sub> or s <sub>y</sub> )<br>–It lies between s <sub>x</sub> and s <sub>y</sub> in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9)<br>–s <sub>x</sub> can also be an empty string (which is in the first position in the alphabetic collating sequence)<br>–s <sub>y</sub> can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF' ) | <s <sub>1</sub> ,...> | Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "s <sub>x</sub> :s <sub>y</sub> " (see above). |
| BS2000 wildcards                  | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| *                                 | Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| Terminating period                | Partially-qualified entry of a name. Corresponds implicitly to the string "./*", i.e. at least one other character follows the period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| /                                 | Replaces any single character.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| <s <sub>x</sub> :s <sub>y</sub> > | Replaces a string that meets the following conditions:<br>–It is at least as long as the shortest string (s <sub>x</sub> or s <sub>y</sub> )<br>–It is not longer than the longest string (s <sub>x</sub> or s <sub>y</sub> )<br>–It lies between s <sub>x</sub> and s <sub>y</sub> in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9)<br>–s <sub>x</sub> can also be an empty string (which is in the first position in the alphabetic collating sequence)<br>–s <sub>y</sub> can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF' )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |
| <s <sub>1</sub> ,...>             | Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "s <sub>x</sub> :s <sub>y</sub> " (see above).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |         |   |                                                                                                                                                                                                                                                                    |                    |                                                                                                                                        |   |                                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                   |

Table 3: Data type suffixes (part 2 of 7)

| Suffix                             | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with-wild(n)<br>(continued)        | <p>-s<br/>Replaces all strings that do not match the specified string s. The minus sign may only appear at the beginning of string s. Within the data types full-filename or partial-filename the negated string -s can be used exactly once, i.e. -s can replace one of the three name components: cat, user or file.</p> <p>Wildcards are not permitted in generation and version specifications for file names. Only the system administration may use wildcards in user IDs. Wildcards cannot be used to replace the delimiters in name components cat (colon) and user (\$ and period).</p> |
| POSIX wildcards                    | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| *                                  | Replaces any single string (including an empty string). An * appearing at the first position must be duplicated if it is followed by other characters and if the entered string does not include at least one further wildcard.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ?                                  | Replaces any single character; not permitted as the first character outside single quotes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| [c <sub>x</sub> -c <sub>y</sub> ]  | Replaces any single character from the range defined by c <sub>x</sub> and c <sub>y</sub> , including the limits of the range. c <sub>x</sub> and c <sub>y</sub> must be normal characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [s]                                | Replaces exactly one character from string s. The expressions [c <sub>x</sub> -c <sub>y</sub> ] and [s] can be combined into [s <sub>1</sub> c <sub>x</sub> -c <sub>y</sub> s <sub>2</sub> ]                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| [!c <sub>x</sub> -c <sub>y</sub> ] | Replaces exactly one character not in the range defined by c <sub>x</sub> and c <sub>y</sub> , including the limits of the range. c <sub>x</sub> and c <sub>y</sub> must be normal characters. The expressions [!c <sub>x</sub> -c <sub>y</sub> ] and [!s] can be combined into [!s <sub>1</sub> c <sub>x</sub> -c <sub>y</sub> s <sub>2</sub> ]                                                                                                                                                                                                                                                                                                           |
| [!s]                               | Replaces exactly one character not contained in string s. The expressions [!s] and [!c <sub>x</sub> -c <sub>y</sub> ] can be combined into [!s <sub>1</sub> c <sub>x</sub> -c <sub>y</sub> s <sub>2</sub> ]                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Table 3: Data type suffixes (part 3 of 7)

| Suffix              | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|---|-----------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------|
| with-wild-constr(n) | <p>Specification of a constructor string that defines how new names are to be constructed from a previously specified selector (i.e. a selection string with wildcards). See with-wild. n denotes the maximum input length when using wildcards.</p> <p>The constructor may consist of constant strings and patterns. A pattern (character) is replaced by the string that was selected by the corresponding pattern in the selector.</p> <p>The following wildcards may be used in constructors:</p> <table border="1"> <thead> <tr> <th>Wildcard</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Corresponds to the string selected by the wildcard * in the selector.</td> </tr> <tr> <td>Terminating period</td> <td>Corresponds to the partially-qualified specification of a name in the selector;<br/>corresponds to the string selected by the terminating period in the selector.</td> </tr> <tr> <td>/ or ?</td> <td>Corresponds to the character selected by the / or ? wildcard in the selector.</td> </tr> <tr> <td>&lt;n&gt;</td> <td>Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer.</td> </tr> </tbody> </table> <p>Allocation of wildcards to corresponding wildcards in the selector:<br/>All wildcards in the selector are numbered from left to right in ascending order (global index).<br/>Identical wildcards in the selector are additionally numbered from left to right in ascending order (wildcard-specific index).<br/>Wildcards can be specified in the constructor by one of two mutually exclusive methods:</p> <ol style="list-style-type: none"> <li>1. Wildcards can be specified via the global index: &lt;n&gt;</li> <li>2. The same wildcard may be specified as in the selector; substitution occurs on the basis of the wildcard-specific index. For example: the second “/” corresponds to the string selected by the second “/” in the selector</li> </ol> | Wildcard | Meaning | * | Corresponds to the string selected by the wildcard * in the selector. | Terminating period | Corresponds to the partially-qualified specification of a name in the selector;<br>corresponds to the string selected by the terminating period in the selector. | / or ? | Corresponds to the character selected by the / or ? wildcard in the selector. | <n> | Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer. |
| Wildcard            | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |
| *                   | Corresponds to the string selected by the wildcard * in the selector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |
| Terminating period  | Corresponds to the partially-qualified specification of a name in the selector;<br>corresponds to the string selected by the terminating period in the selector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |
| / or ?              | Corresponds to the character selected by the / or ? wildcard in the selector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |
| <n>                 | Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |         |   |                                                                       |                    |                                                                                                                                                                  |        |                                                                               |     |                                                                                                 |

Table 3: Data type suffixes (part 4 of 7)



| Suffix                          | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with-wild-constr<br>(continued) | <p>The following rules must be observed when specifying a constructor:</p> <ul style="list-style-type: none"> <li>– The constructor must include at least one wildcard of the selector.</li> <li>– If the string selected by the wildcard &lt;...&gt; or [...] is to be used in the constructor, the index notation must be selected.</li> <li>– The index notation must be selected if the string identified by a wildcard in the selector is to be used more than once in the constructor. For example: if the selector “A/” is specified, the constructor “A&lt;n&gt;&lt;n&gt;” must be specified instead of “A//”.</li> <li>– The wildcard * can also be an empty string. Note that if multiple asterisks appear in sequence (even with further wildcards), only the last asterisk can be a non-empty string, e.g. for “*****” or “*//*”.</li> <li>– Valid names must be produced by the constructor. This must be taken into account when specifying both the constructor and the selector.</li> <li>– Depending on the constructor, identical names may be constructed from different names selected by the selector. For example: “A/*” selects the names “A1” and “A2”; the constructor “B*” generates the same new name “B” in both cases. To prevent this from occurring, all wildcards of the selector should be used at least once in the constructor.</li> <li>– If the selector ends with a period, the constructor must also end with a period, and vice versa. The string that is selected via the period at the end of the selector cannot be specified in the constructor via the global index.</li> </ul> |

Table 3: Data type suffixes (part 5 of 7)

| Suffix                                                                                                     | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------------------|----------|-----|---------------------|---------|------------------|---------------|----------------------------------|-----------------|--------------------------------------------------|---------------|----------------------------------|-----------------|--------------------------------------------------|-----|------------------------------|-------|-------------------------------------------------------|
| with-constr<br>(continued)                                                                                 | Examples:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
|                                                                                                            | <table border="1"> <thead> <tr> <th>Selector</th> <th>Selection</th> <th>Constructor</th> <th>New name</th> </tr> </thead> <tbody> <tr> <td>A/*</td> <td>AB1<br/>AB2<br/>A.B.C</td> <td>D&lt;3&gt;&lt;2&gt;</td> <td>D1<br/>D2<br/>D.CB</td> </tr> <tr> <td>C.&lt;A:C&gt;/&lt;D,F&gt;</td> <td>C.AAD<br/>C.ABD<br/>C.BAF<br/>C.BBF</td> <td>G.&lt;1&gt;.&lt;3&gt;.XY&lt;2&gt;</td> <td>G.A.D.XYA<br/>G.A.D.XYB<br/>G.B.F.XYA<br/>G.B.F.XYB</td> </tr> <tr> <td>C.&lt;A:C&gt;/&lt;D,F&gt;</td> <td>C.AAD<br/>C.ABD<br/>C.BAF<br/>C.BBF</td> <td>G.&lt;1&gt;.&lt;2&gt;.XY&lt;2&gt;</td> <td>G.A.A.XYA<br/>G.A.B.XYB<br/>G.B.A.XYA<br/>G.B.B.XYB</td> </tr> <tr> <td>A/B</td> <td>ACDB<br/>ACEB<br/>AC.B<br/>A.CB</td> <td>G/XY/</td> <td>G.CX.YD<br/>G.CX.YE<br/>G.CX.Y.<sup>1)</sup><br/>G.XY.C</td> </tr> </tbody> </table> | Selector                         | Selection                                             | Constructor                                      | New name | A/* | AB1<br>AB2<br>A.B.C | D<3><2> | D1<br>D2<br>D.CB | C.<A:C>/<D,F> | C.AAD<br>C.ABD<br>C.BAF<br>C.BBF | G.<1>.<3>.XY<2> | G.A.D.XYA<br>G.A.D.XYB<br>G.B.F.XYA<br>G.B.F.XYB | C.<A:C>/<D,F> | C.AAD<br>C.ABD<br>C.BAF<br>C.BBF | G.<1>.<2>.XY<2> | G.A.A.XYA<br>G.A.B.XYB<br>G.B.A.XYA<br>G.B.B.XYB | A/B | ACDB<br>ACEB<br>AC.B<br>A.CB | G/XY/ | G.CX.YD<br>G.CX.YE<br>G.CX.Y. <sup>1)</sup><br>G.XY.C |
|                                                                                                            | Selector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Selection                        | Constructor                                           | New name                                         |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
|                                                                                                            | A/*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | AB1<br>AB2<br>A.B.C              | D<3><2>                                               | D1<br>D2<br>D.CB                                 |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
|                                                                                                            | C.<A:C>/<D,F>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | C.AAD<br>C.ABD<br>C.BAF<br>C.BBF | G.<1>.<3>.XY<2>                                       | G.A.D.XYA<br>G.A.D.XYB<br>G.B.F.XYA<br>G.B.F.XYB |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| C.<A:C>/<D,F>                                                                                              | C.AAD<br>C.ABD<br>C.BAF<br>C.BBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | G.<1>.<2>.XY<2>                  | G.A.A.XYA<br>G.A.B.XYB<br>G.B.A.XYA<br>G.B.B.XYB      |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| A/B                                                                                                        | ACDB<br>ACEB<br>AC.B<br>A.CB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | G/XY/                            | G.CX.YD<br>G.CX.YE<br>G.CX.Y. <sup>1)</sup><br>G.XY.C |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| 1) The period at the end of the name may violate naming conventions (e.g. for fully-qualified file names). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| without                                                                                                    | Restricts the specification options for a data type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -cat                                                                                                       | Specification of a catalog ID is not permitted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -corr                                                                                                      | Input format: [[C]' ][V][m]m.na['] ]<br>Specifications for the data type product-version must not include the correction status.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -gen                                                                                                       | Specification of a file generation or file generation group is not permitted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -man                                                                                                       | Input format: [[C]' ][V][m]m.n['] ]<br>Specifications for the data type product-version must not include either release or correction status.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -odd                                                                                                       | The data type x-text permits only an even number of characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -sep                                                                                                       | With the data type "text", specification of the following separators is not permitted: ; = ( ) < > _ (i.e. semicolon, equals sign, left and right parentheses, greater than, less than, and blank).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -temp-file                                                                                                 | Specification of a temporary file is not permitted (see #file or @file under filename).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |
| -user                                                                                                      | Specification of a user ID is not permitted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                       |                                                  |          |     |                     |         |                  |               |                                  |                 |                                                  |               |                                  |                 |                                                  |     |                              |       |                                                       |

Table 3: Data type suffixes (part 6 of 7)

| Suffix                                | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| without<br>(contd.)<br>-vers<br>-wild | Specification of the version (see “file(no)”) is not permitted for tape files.<br>The data types posix-filename and posix-pathname must not contain a pattern (character).                                                                                                                                                                                                                                                                                                                                                                                                                 |
| mandatory<br>-corr<br>-man<br>-quotes | Certain specifications are necessary for a data type.<br>Input format: [[C]' ][V][m]m.naso[' ]<br>Specifications for the data type product-version must include the correction status and therefore also the release status.<br>Input format: [[C]' ][V][m]m.na[so][' ]<br>Specifications for the data type product-version must include the release status. Specification of the correction status is optional if this is not prohibited by the use of the suffix without-corr.<br>Specifications for the data types posix-filename and posix-pathname must be enclosed in single quotes. |

Table 3: Data type suffixes (part 7 of 7)



---

# 6 Appendix

## 6.1 Installing SPSEERVE

### Syntax file

System system files and group system files are handled differently.

A description of the management of system and group syntax files and of the SDF-I utility routine is given in the “SDF Management” manual.

### System syntax file

From versions BS2000/OSD-BC V5.0A on all platforms:  
SYSSDF.SPSEERVE.029

This file must be merged into the corresponding installation system syntax file by means of the SDF-I utility routine (SDF-I: see the “SDF Management” manual).

### Group syntax files

The following applies to user-written group syntax files in the event of a version change:

- Group syntax files containing SPSEERVE statements that have been modified with SDF-A must be regenerated.
- Group syntax files used with HIERARCHY = \*NO and containing SPSEERVE statements must also be regenerated.

### Message file

The name of the complete primary message file for SPSEERVE is from BS2000/OSD-BC V3.0A on all platforms: SYSMES.SPSEERVE.029.

This file can be merged into an existing system message file (using the MSGMAKER utility routine) or attached as an additional system message file.

The MODIFY-MSG-FILE-ASSIGNMENT command must then be invoked for the message file.

## Object modules and REP file

The object modules belonging to SPSERVE are contained in the SYSLNK.SPSERVE.029 library.

## Files for issue notes

There are files for issue notes in German and English (SYSFGM.SPOOL.048.D and SYSFGM.SPOOL.048.E).

## File for IMON installation information

A file for IMON installation information is also supplied with SPSERVE: SYSSII.SPSERVE.029. This file reveals the interdependence between the logical IMON name and the path name (or the default file name).

Further details can be found in the following table:

| Logical IMON name | Default file names        |
|-------------------|---------------------------|
| SYSLNK            | \$TSOS.SYSLNK.SPSERVE.029 |
| SYSREP            | \$TSOS.SYSREP.SPSERVE.029 |
| SYSRMS            | \$TSOS.SYSRMS.SPSERVE.029 |
| SYSMES            | \$TSOS.SYSMES.SPSERVE.029 |
| SYSSDF            | \$TSOS.SYSSDF.SPSERVE.029 |
| SYSPRG            | \$TSOS.SPSERVE            |
| SYSSII            | \$TSOS.SYSSII.SPSERVE.029 |
| SYSFGM.D          | \$TSOS.SYSFGM.SPOOL.048.D |
| SYSFGM.E          | \$TSOS.SYSFGM.SPOOL.048.E |

## 6.2 Support of statement return codes

All statement return codes (as of SPSEIVE V2.4A) have the following format:

| S1 | S2 | Maincode | Meaning                                                                                    |
|----|----|----------|--------------------------------------------------------------------------------------------|
| 0  | 0  | CMD0001  | Statement is correct                                                                       |
| 0  | 2  | SRVxxxx  | Statement correct, but with warning<br>SRVxxxx = SPSEIVE message id explaining the warning |
| 64 | 1  | SRVxxxx  | Statement failed<br>SRVxxxx = SPSEIVE message id explaining the error                      |

This new feature can be used in SDF-P procedures, as follows:

*Example 1:*

Validation of the return code during an //ADD-SPOOL-DEVICE statement (positive test):

```

/SET-PROC-OPTIONS DATA-ESCAPE-CHAR=STD, LOGGING-ALLOWED=YES
/...
/DECL-VAR MAINC(TYPE=STRING)
/ASSIGN-SYSDTA TO=*SYSCMD
/MODIFY-JOB-SWITCHES ON=(1,4,5)
/ " ***** "
/BEGIN-BLOCK PROGRAM-INPUT=*MIXED-WITH-CMD(-
/ , PROPAGATE-STMT-RC=*TO-CMD-RC)
/START-SPSERVE
//OPEN-PARAMETER-FILE *SPOOL-PARAMETERS
//ADD-SPOOL-DEVICE DEVICE-NAME=SDMSDM01,-
// DEVICE-TYPE=*HP-PRINTER
/IF-CMD-ERROR
/ MAINC = MAINCODE
/ IF MAINC EQ 'SRV0417'
/ WRITE-TEXT 'ELEMENT ALREADY EXISTS'
/ ELSE-IF MAINC EQ 'SRV0517'
/ WRITE-TEXT 'AN ERROR IN DEVICE DEFINITION OCCURED'
/ END-IF
/ELSE
/ WRITE-TEXT 'THE DEVICE HAS BEEN ADDED IN SPOOL PARAMETERS'
/END-IF
//END
/END-BLOCK
/ " ***** "
/ASSIGN-SYSDTA TO=*PRIMARY
/MODIFY-JOB-SWITCHES OFF=(1,4,5)
/...

```

*Example 2:*

Validation of the return code during an //ADD-PRINTER-POOL statement (negative test):

```

/...
/BEGIN-BLOCK PROGRAM-INPUT=*MIXED-WITH-CMD(-
/ ,PROPAGATE-STMT-RC=*TO-CMD-RC)
/START-SPSERVE
//OPEN-PARAMETER-FILE *SPOOL-PARAMETERS
//ADD-SPOOL-DEVICE DEVICE-NAME=SDMSDM01,-
// DEVICE-TYPE=*HP-PRINTER,-
// DEVICE-ACCESS=*LOCAL(,L8)
//STEP
//ADD-PRINTER-POOL POOL-NAME=POOLSDM,-
// DEVICE-NAME=SDMSDM01,-
// POOL-TYPE=*REMOTE
/IF-CMD-ERROR
/ WRITE-TEXT 'TEST NEG : ADD-PRINTER-POOL **** TEST OK **** '
/ELSE
/ WRITE-TEXT 'TEST NEG : ADD-PRINTER-POOL **** TEST NOT OK **** '
/END-IF
//REMOVE-SPOOL-DEVICE SDM11201
//END
/END-BLOCK

```

## 6.3 Notes for migration and compatibilities

A SPOOL parameter migration is automatically performed by the Print Services Administrator during the first run of SPSSERVE. This enables new parameters for Spool&Print subsystems and allows new information to be displayed.

For security and backup purposes, the SPOOL parameter file should be saved prior to starting a new SPSSERVE or SPOOL version, respectively. User SPOOL parameter files can also be migrated using SPSSERVE.



---

## Related publications

The manuals are available as online manuals, see <http://manuals.fujitsu-siemens.com>, or in printed form which must be paid and ordered separately at <http://FSC-manualshop.com>.

**SPOOL (BS2000/OSD)**

User Guide

**Distributed Print Services (BS2000/OSD)**

**Printing in Computer Networks**

User Guide

**RSO (BS2000/OSD)**

**Remote SPOOL Output**

User Guide

**Spool & Print - Macros and Exits (BS2000/OSD)**

User Guide

**Spool & Print - Messages**

User Guide

**PRM (BS2000/OSD)**

User Guide

**SPCONV (BS2000/OSD)**

User Guide

**PRISMAproduction/BS2000**

**SPS**

Benutzerhandbuch

GERMAN ONLY

**BS2000/OSD-BC**

**Commands, Volume 1 - 5**

User Guide

**BS2000/OSD-BC**  
**Commands, Volume 6, Output in S Variables and SDF-P-BASYS**  
User Guide

**BS2000/OSD-BC**  
**Introductory Guide to Systems Support**  
User Guide

**DSSM/SSCM**  
**Subsystem Management in BS2000/OSD**  
User Guide

**JV (BS2000/OSD)**  
**Job Variables**  
User Guide

**SDF (BS2000/OSD)**  
**Introductory Guide to the SDF Dialog Interface**  
User Guide

**SDF-P (BS2000/OSD)**  
**Programming in the Command Language**  
User Guide

**BS2000/OSD-BC**  
**Executive Macros**  
User Guide

**BS2000/OSD-BC**  
**System Exits**  
User Guide

**LMS (BS2000)**  
**Subroutine Interface**  
User Guide

**BS2000/OSD-BC**  
**System Installation**  
User Guide

**IDOM (BS2000/OSD)**  
**Integrated Document & Output Management**  
User Guide

**BS2000/OSD**  
**Softbooks English**  
CD-ROM

*Internet address*

<http://manuals.fujitsu-siemens.com>



---

# Index

`$$SYSSPOOL.SPOOL.PARAMETERS` 10

## A

access control 23  
    example 24  
access date 414, 416, 418, 421, 424, 457, 461,  
    473, 500, 508  
access rights 488  
A-D-A-C, see ADD-DPRINT-ACCESS-  
    CONTROL 48, 316, 407  
ADD-DPRINT-ACCESS-CONTROL 48, 316, 407  
ADD-DPRINT-HOST 50, 320  
ADD-DPRINT-PRINTER 53  
ADD-DPRINT-PRINTER-POOL 58  
ADD-DPRINT-REMOTE-CLUSTER 59  
ADD-DPRINT-SERVER 65  
ADD-PRINTER-POOL 67  
ADD-SPOOL-CHARACTER-SET 68  
ADD-SPOOL-DEVICE 93  
ADD-SPOOL-FILTER 224  
ADD-SPOOL-FORM 229  
A-D-H, see ADD-DPRINT-HOST 50, 320  
A-D-P, see ADD-DPRINT-PRINTER 53  
A-D-P-P, see ADD-DPRINT-PRINTER-POOL 58  
A-D-R-C, see ADD-DPRINT-REMOTE-  
    CLUSTER 59  
A-D-S, see ADD-PRINT-SERVER 65  
alphanum-name (data type) 535  
A-P-P, see ADD-PRINTER-POOL 67  
A-S-C, see ADD-SPOOL-CHARACTER-SET 68  
A-S-D, see ADD-SPOOL-DEVICE 93  
A-S-F, see ADD-SPOOL-FORM 229  
automatic conversion 16

## B

brief description  
    SPSERVE 9, 10  
BSD-LPD 100, 342, 474

## C

cat (suffix for data type) 546  
cat-id (data type) 535  
changes  
    general 13  
    since last version 13  
    special 13  
character set  
    copy 300  
    define 68  
    output and modify 307  
    remove 415  
character set attributes  
    modify 332  
character set entry 18  
character set information  
    output 459  
characters per line, number of 231  
CHR entry 18  
    \*STD 92  
    generate 68  
    modify 332  
    output and modify 307  
client/server architecture 21  
cluster 22  
    configuration object 22  
    information on access control 425  
    modify access control 316  
    modify entries 325  
    output and modify 305

- cluster
  - remote 325, 411, 445
  - remove access control 407
  - remove remote 411
  - request information 445
- cluster administrator 10, 28
- cluster configuration
  - modifying 40
- command-rest (data type) 535
- compl (suffix for data type) 541
- composed-name (data type) 535
- configuration file 10
- configuration initialization 28
- configuration manager 10, 27
  - scenarios 29
- configuration objects 21
  - assigning names 29
  - cluster 22
  - host 22
  - server 22
- connection interruption 111
- connection type
  - for printer types 124, 343
  - LPD 100, 342, 474
- constructor string 544
- contents
  - summary 11
- conversion
  - of old SPOOL parameter files 16
- copy all entries 315
- copy entry 315
- COPY-SPOOL-CHARACTER-SET 300
- COPY-SPOOL-DEVICE 301
- corr (suffix for data type) 546, 547
- C-S-C-S, see COPY-SPOOL-CHARACTER-SET 300
- C-S-D, see COPY-SPOOL-DEVICE 301
- c-string (data type) 535
- D**
  - data types in SDF 531, 535
  - date (data type) 535
  - default values (for SPOOL startup) 399
  - define printer pool 67
  - defining RSO devices 127
  - device (data type) 535
  - device attributes
    - modify 335
  - device entry 17
    - copy 301
    - delete 417
    - generate 93
    - output and modify 308
  - device information
    - output 465
  - device pool
    - remove 413
  - device pool entry 19
  - DFTM task 395
  - disconnection 352, 481
  - Distributed Print Services 10
  - document format
    - change 345
    - output 477
    - specify 104
  - DOS PC 100, 342, 474
  - Dprint cluster
    - define 31
  - Dprint object 10
  - DPRINTCL 21
  - DPRINTCM 21, 22
  - DPRINTSV 21
  - DVC entry 17
  - DVP entry 19
  - DVP entry, see device pool entry
- E**
  - E-D-H, see EDIT-DPRINT-HOST 303
  - EDIT-DPRINT-HOST 303
  - EDIT-DPRINT-PRINTER 304
  - EDIT-DPRINT-REMOTE-CLUSTER 305
  - EDIT-DPRINT-SERVER 306
  - EDIT-SPOOL-CHARACTER-SET 307
  - EDIT-SPOOL-DEVICE 308
  - EDIT-SPOOL-FILTER 311
  - EDIT-SPOOL-FORM 312
  - EDIT-SPOOL-PARAMETERS 314
  - E-D-P, see EDIT-DPRINT-PRINTER 304

- E-D-R-C, see EDIT-DPRINT-REMOTE-CLUSTER 305
- E-D-S, see EDIT-DPRINT-SERVER 306
- E-S-C, see EDIT-SPOOL-CHARACTER-SET 307
- E-S-D, see EDIT-SPOOL-DEVICE 308
- E-S-F, see EDIT-SPOOL-FORM 312
- E-S-P, see EDIT-SPOOL-PARAMETERS 314
- example
- access control 24
  - ADD-DPRINT-PRINTER 54
  - define printer 54
  - generate a user delta file 404
  - MODIFY-DPRINT-ACCESS-CONTROL 318
- EXCCW printer control characters 225, 226, 366, 367
- F**
- feed control 246  
(ROTATION) 247
- file
- for issue notes 550
- filename (data type) 536
- filter
- define 224
  - remove 420
- filter definitions
- display 498
  - output 498
  - output and modify 311
- filter entry 19
- filter object module 224, 365, 499, 501
- FILTER-TASK-LIMIT 392
- fixed (data type) 535
- form
- define 229
- form attributes
- modify 369
  - output 503
  - output formats 516
- form entry 18
- generate 229
  - output and modify 312
  - remove 422
- FORM entry, see form entry 422
- form size
- default value 235
- FRM entry 18
- FT status 395
- G**
- gen (suffix for data type) 546
- GEN entry 17
- default values 399
- general changes 13
- global SPOOL default values 17
- modify 380
- global SPOOL parameters 520
- group syntax files 549
- H**
- header page (format) 237
- HEADER-PAGE (format) 237
- host 22
- adding to cluster configuration 40
  - configuration object 22
  - modify definition 320
  - output and modify 303
  - remove definition 408
  - removing from cluster configuration 41
  - request information 428
- I**
- IMON installation information 550
- index notation 545
- installing SPSEVERVE 549
- integer (data type) 537
- Internet address 100, 342, 475
- ISO protocol 21
- J**
- job variable 104, 346, 477
- program monitoring 43
- L**
- LAN controller card 100, 342, 474
- language
- define 68

low (suffix for data type) [541](#)  
LPD [100](#), [342](#), [474](#)

**M**

man (suffix for data type) [546](#), [547](#)  
mandatory (suffix for data type) [547](#)  
manual  
    notational conventions [14](#)  
manual overview  
    Spool & Print Services [12](#)  
M-D-A-C, see MODIFY-DPRINT-ACCESS-CONTROL [316](#)  
M-D-H, see MODIFY-DPRINT-HOST [320](#)  
M-D-P, see MODIFY-DPRINT-PRINTER [322](#)  
M-D-P-P, see MODIFY-DPRINT-PRINTER-POOL [323](#)  
M-D-R-C, see MODIFY-DPRINT-REMOTE-CLUSTER [325](#)  
M-D-S, see MODIFY-DPRINT-SERVER [325](#)  
MERGE-SPOOL-PARAMETER-FILE [315](#)  
message files [549](#)  
messages [11](#)  
metasyntax SDF [531](#)  
modify filter definitions [365](#)  
MODIFY-DPRINT-ACCESS-CONTROL [316](#)  
MODIFY-DPRINT-HOST [320](#)  
MODIFY-DPRINT-PRINTER [322](#)  
MODIFY-DPRINT-PRINTER-POOL [323](#)  
MODIFY-DPRINT-REMOTE-CLUSTER [325](#)  
MODIFY-DPRINT-SERVER [325](#)  
MODIFY-PRINTER-POOL [330](#)  
MODIFY-SPOOL-CHARACTER-SET [332](#)  
MODIFY-SPOOL-DEVICE [335](#)  
MODIFY-SPOOL-FILTER [365](#)  
MODIFY-SPOOL-FORM [369](#)  
MODIFY-SPOOL-PARAMETERS [380](#)  
monitor job variable [104](#), [346](#), [477](#)  
M-P-P, see MODIFY-PRINTER-POOL [330](#)  
M-S-C, see MODIFY-SPOOL-CHARACTER-SET [332](#)  
M-S-D, see MODIFY-SPOOL-DEVICE [335](#)  
M-S-F, see MODIFY-SPOOL-FORM [369](#)  
M-S-P, see MODIFY-SPOOL-PARAMETERS [380](#)

**N**

name (data type) [537](#)  
NEA protocol [21](#)  
NEA transport protocol [21](#)  
notational conventions  
    manual [14](#)  
notational symbols (SDF) [531](#)

**O**

object modules [550](#)  
odd (suffix for data type) [546](#)  
OLTP operation [394](#)  
OPEN-PARAMETER-FILE [44](#), [401](#)  
operands of RSO parameter file [74](#)  
output formats  
    SHOW-SPOOL-FORMS [516](#)

**P**

parameter file  
    open [401](#)  
partial-filename (data type) [538](#)  
path-compl (suffix for data type) [541](#)  
POL entry [19](#)  
    generate [67](#)  
pool devices  
    output [456](#)  
pool entry [19](#)  
    delete [413](#)  
    generate [67](#)  
    modify [330](#)  
pool names  
    output [456](#)  
POSIX wildcards [542](#)  
posix-filename (data type) [538](#)  
posix-pathname (data type) [538](#)  
primary message file [549](#)  
printer [23](#)  
    define [93](#)  
    defining Dprint printers [34](#)  
    start [36](#)  
    virtual [391](#)  
printer control characters  
    EXCCW [225](#), [226](#), [366](#), [367](#)  
printer group [23](#)



printer parameter file [121](#), [361](#), [392](#), [484](#)

PRINT-SERVICE-ADMINISTRATION [10](#)

priority of RSO jobs [398](#)

product-version (data type) [539](#)

program

    monitoring (job variable) [43](#)

## Q

quotes (suffix for data type) [547](#)

## R

R-D-A-C, see REMOVE-DPRINT-ACCESS-CONTROL [407](#)

R-D-H, see REMOVE-DPRINT-HOST [408](#)

R-D-P, see REMOVE-DPRINT-PRINTER [409](#)

R-D-P-P, see REMOVE-DPRINT-PRINTER-POOL [410](#)

R-D-R-C, see REMOVE-DPRINT-REMOTE-CLUSTER [411](#)

R-D-S, see REMOVE-DPRINT-SERVER [412](#)

R-M-F [420](#)

R-P-P, see REMOVE-PRINTER-POOL [413](#)

R-S-C, see REMOVE-SPOOL-CHARACTER-SET [415](#)

R-S-D, see REMOVE-SPOOL-DEVICE [417](#)

R-S-F, see REMOVE-SPOOL-FORM [422](#)

README file [14](#)

recovery rules [119](#), [359](#), [392](#), [484](#), [487](#)

REMOVE-DPRINT-ACCESS-CONTROL [407](#)

REMOVE-DPRINT-HOST [408](#)

REMOVE-DPRINT-PRINTER [409](#)

REMOVE-DPRINT-PRINTER-POOL [410](#)

REMOVE-DPRINT-REMOTE-CLUSTER [411](#)

REMOVE-DPRINT-SERVER [412](#)

REMOVE-PRINTER-POOL [413](#)

REMOVE-SPOOL-CHARACTER-SET [415](#)

REMOVE-SPOOL-DEVICE [417](#)

REMOVE-SPOOL-FILTER [420](#)

REMOVE-SPOOL-FORM [422](#)

REP file [550](#)

ROTATION loop entry

    default value [248](#)

RSO [10](#), [13](#)

RSO device

    administrator, specify [106](#)

    attributes, modify [335](#)

    define [93](#)

RSO device types

    printer control characters [354](#)

RSO parameter file [74](#)

RSO pool

    define [67](#)

    modify [330](#)

    remove [413](#)

## S

scheduling criteria [380](#)

    (local SPOOL), modify [395](#)

    (overview) [398](#)

    (RSO), modify [396](#)

SCSI printer [101](#), [344](#), [475](#)

SCSIPCL [10](#)

S-D-A-C, see SHOW-DPRINT-ACCESS-CONTROLS [425](#)

SDF data types

    suffixes [532](#)

SDF interface [44](#)

S-D-H, see SHOW-DPRINT-HOSTS [428](#)

S-D-P, see SHOW-DPRINT-PRINTERS [435](#)

S-D-P-P, see SHOW-DPRINT-PRINTER-POOLS [433](#)

S-D-R-C, see SHOW-DPRINT-REMOTE-CLUSTERS [445](#)

S-D-S, see SHOW-DPRINT-SERVERS [451](#)

sep (suffix for data type) [546](#)

server [22](#)

    configuration object [22](#)

SHOW-DPRINT-ACCESS-CONTROLS [425](#)

SHOW-DPRINT-HOSTS [428](#)

SHOW-DPRINT-PRINTER-POOLS [433](#)

SHOW-DPRINT-PRINTERS [435](#)

SHOW-DPRINT-REMOTE-CLUSTERS [445](#)

SHOW-DPRINT-SERVERS [451](#)

SHOW-PARAMETER-FILE-STATUS [455](#)

SHOW-PRINTER-POOLS [456](#)

SHOW-SPOOL-CHARACTER-SETS [459](#)

SHOW-SPOOL-DEVICES [465](#)

SHOW-SPOOL-FILTERS [498](#)

- SHOW-SPOOL-FORMS 503
    - output formats 516
  - SHOW-SPOOL-PARAMETERS 520
  - SPCONV 10
  - special changes 13
  - specify a constructor 545
  - SPOOL 10, 13
  - Spool & Print Services
    - manual overview 12
  - SPOOL parameter file 10, 127
    - display on screen 35
    - open 401
    - output information 455
  - SPOOL startup 399
  - SPOOL-PC server 100
  - S-P-P, see SHOW-PRINTER-POOLS 456
  - SPPCS 100, 342, 474
  - SPRM 10
  - SPRM privilege 10
  - SPS 10, 13, 102, 344
  - SPSERVE 10, 43
    - brief description 9, 10
    - install 549
  - S-S-C, see SHOW-SPOOL-CHARACTER-SETS 459
  - S-S-D, see SHOW-SPOOL-DEVICES 465
  - S-S-F, see SHOW-SPOOL-FORMS 503
  - S-S-P, see SHOW-SPOOL-PARAMETERS 520
  - standard character set 92, 249
  - standard definitions of BAND-ID 118
  - standard device entries
    - SPOOL parameter file 130
  - standard entries 16
  - standard FORM entry 248, 260
  - standard forms 260
  - START-SPSERVE 43
  - structured-name (data type) 539
  - subsystem
    - SPRINTCM 11
  - suffixes for data types 532, 535, 541
  - summary of contents 11
  - syntax files 549
  - SYSPAR.RSO..SYSTEM. 74
  - system syntax files 549
- T**
  - TACLAN 100, 119, 342, 359, 474, 484
  - TCP/IP
    - LAN 100, 342, 474
    - protocol 21, 100, 342, 474
  - temp-file (suffix for data type) 546
  - text (data type) 539
  - time (data type) 539
  - time stamp 414, 416, 419, 421, 424
  - TIMEOUT 117
  - trailer page
    - format 241
    - local SPOOL 242
    - modify 373
    - RSO printer 243
  - TRAILER-PAGE
    - format 241
    - modify 373
  - TRANSDATA-NEA network 98, 340, 473
  - twin printer 391
    - "master" 475
    - "slave" 102, 344, 476, 485
    - external storage 344, 476
  - types of connection for printer types 362
- U**
  - user (suffix for data type) 546
  - user delta file
    - generation 404
- V**
  - vers (suffix for data type) 547
  - vsn (data type) 539
- W**
  - waiting time
    - DFTM task 395
  - WFT status 395
  - wild (suffix for data type) 547
  - wild(n) (suffix for data type) 542
  - wild-constr (suffix for data type) 544
  - with (suffix for data type) 541
  - with-compl (suffix for data type) 541
  - with-constr (suffix for data type) 544

---

with-low (suffix for data type) [541](#)  
with-under (suffix for data type) [541](#)  
with-wild(n) (suffix for data type) [542](#)  
without (suffix for data type) [546](#)  
without-cat (suffix for data type) [546](#)  
without-corr (suffix for data type) [546](#)  
without-gen (suffix for data type) [546](#)  
without-man (suffix for data type) [546](#)  
without-odd (suffix for data type) [546](#)  
without-sep (suffix for data type) [546](#)  
without-temp-file (suffix for data type) [546](#)  
without-user (suffix for data type) [546](#)  
without-vers (suffix for data type) [547](#)

**X**

x-string (data type) [540](#)  
x-text (data type) [540](#)



Fujitsu Siemens Computers GmbH  
User Documentation  
81730 Munich  
Germany

Comments  
Suggestions  
Corrections

**Fax: (++49) 700 / 372 00000**

e-mail: [manuals@fujitsu-siemens.com](mailto:manuals@fujitsu-siemens.com)  
<http://manuals.fujitsu-siemens.com>

---

Submitted by

---

Comments on SPSERVE V2.9A





## Information on this document

On April 1, 2009, Fujitsu became the sole owner of Fujitsu Siemens Computers. This new subsidiary of Fujitsu has been renamed Fujitsu Technology Solutions.

This document from the document archive refers to a product version which was released a considerable time ago or which is no longer marketed.

Please note that all company references and copyrights in this document have been legally transferred to Fujitsu Technology Solutions.

Contact and support addresses will now be offered by Fujitsu Technology Solutions and have the format ...@[ts.fujitsu.com](mailto:ts.fujitsu.com).

The Internet pages of Fujitsu Technology Solutions are available at [http://ts.fujitsu.com/...](http://ts.fujitsu.com/) and the user documentation at <http://manuals.ts.fujitsu.com>.

Copyright Fujitsu Technology Solutions, 2009

## Hinweise zum vorliegenden Dokument

Zum 1. April 2009 ist Fujitsu Siemens Computers in den alleinigen Besitz von Fujitsu übergegangen. Diese neue Tochtergesellschaft von Fujitsu trägt seitdem den Namen Fujitsu Technology Solutions.

Das vorliegende Dokument aus dem Dokumentenarchiv bezieht sich auf eine bereits vor längerer Zeit freigegebene oder nicht mehr im Vertrieb befindliche Produktversion.

Bitte beachten Sie, dass alle Firmenbezüge und Copyrights im vorliegenden Dokument rechtlich auf Fujitsu Technology Solutions übergegangen sind.

Kontakt- und Supportadressen werden nun von Fujitsu Technology Solutions angeboten und haben die Form ...@[ts.fujitsu.com](mailto:ts.fujitsu.com).

Die Internetseiten von Fujitsu Technology Solutions finden Sie unter [http://de.ts.fujitsu.com/...](http://de.ts.fujitsu.com/), und unter <http://manuals.ts.fujitsu.com> finden Sie die Benutzerdokumentation.

Copyright Fujitsu Technology Solutions, 2009