
1 Preface

This manual contains all the commands available for working with the subsystems SPOOL, RSO, SPS, and Dprint of the Spool & Print services of BS2000/OSD.

The commands are described in alphabetical order in chapter 2, "Commands" on [page 20ff](#). The command descriptions contain all operands which are relevant for SPOOL, RSO, SPS, and Dprint. Neither all commands nor all operands are valid for all subsystems.

You will find assignment tables in [section "Command overview \(privileges\)" on page 7](#) as well as under the relevant individual commands.

The commands for the Spool & Print subsystem IDOM are described in the manual "[IDOM \(BS2000/OSD\)](#)".

1.1 Brief product description of the Spool & Print services

The Spool & Print Services for BS2000/OSD consist of various subsystems and utilities.

Spool & Print subsystems

SPOOL

The local SPOOL (**S**imultaneous **P**eripheral **O**peration **O**n-**L**ine) is a BS2000 subsystem. It controls asynchronous output to printers and magnetic tapes. SPOOL is the fundamental component for the other products described below, which cannot run without it. For further details, see the "[SPOOL \(BS2000/OSD\)](#)" manual.

RSO

Remote **S**pool **O**utput controls output to decentralized printers (RSO printers) which are connected to remote systems. RSO allows only one point-to-point transfer of the data. For further details, see the "[RSO \(BS2000/OSD\)](#)" manual.

Dprint

Distributed **P**rint **S**ervices also controls output to printers which are connected to remote systems, but it uses the local SPOOL of the target system and retains control over the print output. For further details, see the "[Distributed Print Services \(BS2000/OSD\)](#)" manual.

SPS

SPOOLAPA Printing System can be attached to the SPOOL system as a subsystem and performs the task of a printer driver for APA printers. For further details, see the “**SPS**” manual.

IDOM

Integrated Document and Output Management is a subsystem in Spool & Print Services on BS2000/OSD. It extends the Spool & Print Services by allowing you to use document management facilities.

Additional utility routines for administration**PRM**

Print Resource Management creates and manages SPOOL print resources. PRM is mandatory for SPOOL Version 3.0 and higher, as all actions concerning the print resources are carried out via PRM. PRM is described in detail in the manual of the same name.

SNS

The **SPOOL Notification Service** provides a tool to send and to manage notifications in the frame of the BS2000.

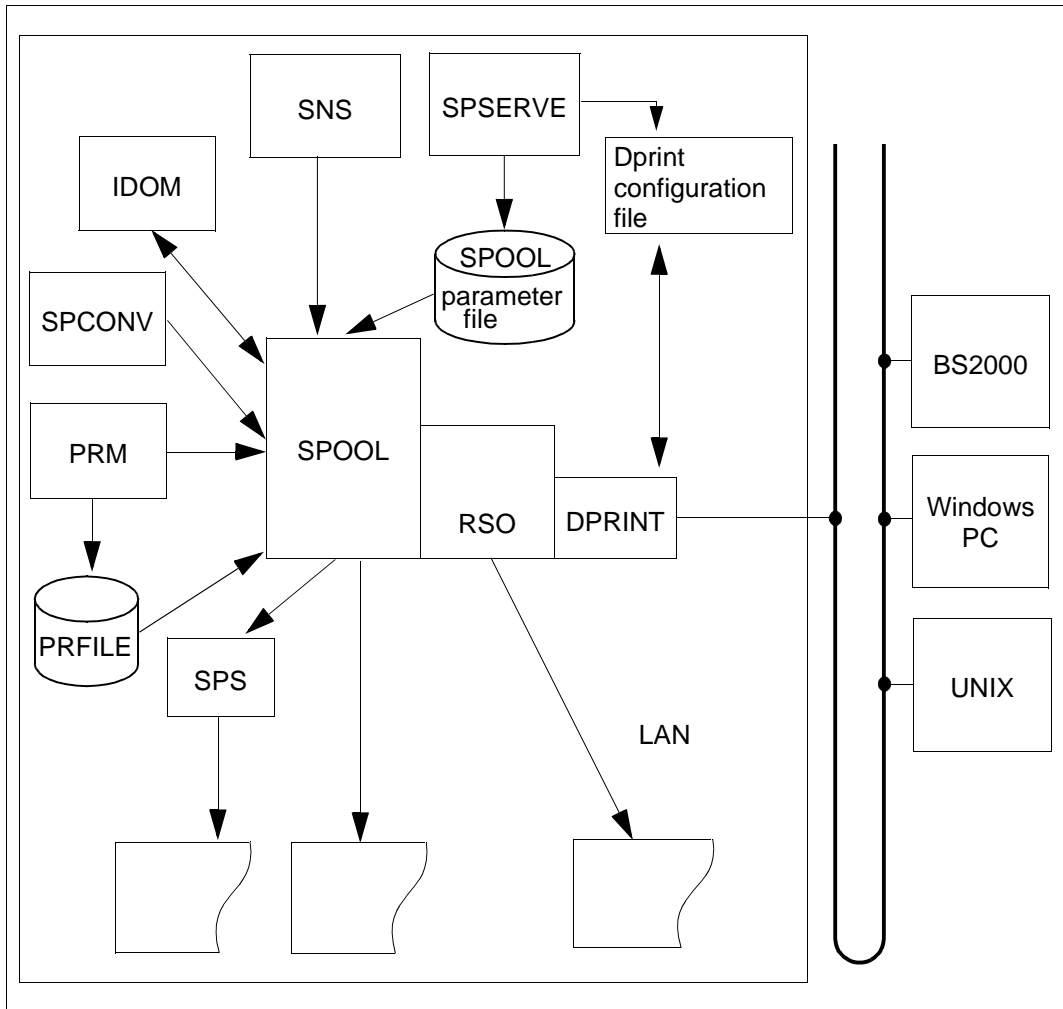
SPSERVE

SPSERVE allows systems support - and to a limited extent also RSO device administrators and nonprivileged users - to enter, modify, delete or display information in a SPOOL parameter file. **SPSERVE** is described in detail in the manual of the same name.

SPCONV

The SPOOL converter implements the filter technology for printing in distributed, heterogeneous environments with BS2000, UNIX and PC systems, i.e. it uses filters to change documents and print resources into formats which can be printed by the various printers. For further details on **SPCONV**, see the manual with the same title.

The figure below presents the components of the Spool & Print Services.



1.2 Target group of the manual

This manual is intended for the users of the Spool & Print services, i.e.

- BS2000 systems support staff
- the SPOOL & Print administrator
- the RSO device administrator
- nonprivileged users of the Spool & Print services.

1.3 Summary of contents

This manual describes the commands for the Spool & Print services. It consists of two chapters and an appendix:

Preface chapter

This contains a short description of the Spool & Print services and general information on the use of this manual

Commands chapter

This contains a number of overview tables and general information to the command descriptions themselves. The command descriptions are arranged in alphabetical order.

Appendix

This contains the SDF syntax representation in detail as well as a section on job identification in a Dprint environment.

The manual is completed by a list of related publications and an index.

1.4 Changes to the commands since the last versions of the manual

The following changes and extensions are available from SPOOL V4.4A and DPRINT V1.1A:

- Extension of the SHOW-SPOOL-DEVICE command:
The new access type *IPP is supported for TCP-ACCESS.
- Extension of the PRINT-DOCUMENT command:
Notification handling is supported.
- For the SHOW-SPOOL-DEVICES, SHOW-SPOOL-PARAMETERS and SHOW-DPRINT-PRINTERS commands structured outputs are provided:
 - The parameters are classed into several categories which are separately displayable.
 - The parameters are systematically organized into '<Keyword>=<value>' form.
- As of BS2000/OSD V4.0, diskette devices are no longer supported, therefore the following commands are no longer described in this manual:
 - MODIFY-DISKETTE-OUTPUT-STATUS
 - START-DISKETTE-INPUT
 - START-DISKETTE-OUTPUT
 - STOP-DISKETTE-INPUT
 - STOP-DISKETTE-OUTPUT
 - WRITE-DISKETTE

1.5 Notational conventions



This symbol introduces vital information.

Note

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

“Reference”

References to chapters, sections or other manuals are enclosed in double quotes.

[]

Square brackets in syntax representations: the characters within the brackets can be omitted.

Bold type

Where syntax representations are explained, the lines currently being described appear in bold.

Otherwise, the syntax representations are subject to the rules as described in the appendix.

SYNTAX/example

Syntax representations and sample inputs and outputs are highlighted by different fonts.

Syntax representations are also enclosed in a frame.

1.6 README file

Information on any functional changes and additions to the current product versions described in this manual can be found in the product-specific README files. You will find the relevant README files on your BS2000 computer under the file name SYSRME.product.version.language

The user ID under which the README files are cataloged can be obtained from your systems support staff. You can view the README files using the SHOW-FILE command or an editor, and print them out on a standard printer using the following command:

```
/PRINT-DOCUMENT FROM-FILE=filename, -  
/DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC-CONTROL)
```

2 Commands

The various user groups can use the commands for their domains with different functional scopes.

The following command overviews show the meaning of the individual commands and the privileges necessary for executing them. They are followed by the command descriptions in alphabetical order.

The description of each individual command explains

- which user group can specify the command in full or in part, and
- which operands can be used for which components of the Spool & Print services.

2.1 Command overview (privileges)

The following overview shows which SPOOL commands, which Dprint commands, which RSO commands and which SPS commands can be used by which users with which SRPM privileges, and which subsystem must be loaded so that they are available.

Most of the commands are SPOOL-GA commands which are of course also available with Dprint, RSO or SPS, since these subsystems cannot be loaded if SPOOL is not loaded.

The table distinguishes between four user groups:

- nonprivileged users,
- device administrators (currently only if RSO is used),
- SPOOL administrators and
- cluster administrators (only if Dprint is used).

The cluster administrator also has all the rights of the SPOOL administrator (on his or her host), the SPOOL administrator also has all the rights of the RSO device administrator, and the RSO device administrator also has all the rights of the nonprivileged user.

SPOOL administrator/systems support

As a result of the decentralization of the systems support tasks, the PRINT-SERVICE-ADMINISTRATION privilege assigned to the user ID to be the SPOOL administrator is used as of SPOOL V3.0. By default, this privilege is assigned both to the SYSSPOOL user ID and, for compatibility reasons, the TSOS user ID.

The SPOOL administrator has the most RSO privileges and can do anything that RSO device administrators and nonprivileged users can do. He or she also defines RSO device administrators. In addition, the user ID with the PRINT-SERVICE-ADMINISTRATION privilege administers:

- RSO printers
- RSO jobs
- SPSERVE
- RSOSERVE

Systems support under the user ID TSOS or the user ID with the SUBSYSTEM-MANAGEMENT privilege additionally performs the loading, administration and unloading of the subsystems Dprint, RSO and SPS.

RSO device administrator

In RSO (see also the “[RSO \(BS2000/OSD\)](#)” manual), a distinction is drawn between two device types: public devices and private devices. Public devices are only administered by a user ID with the PRINT-SERVICE-ADMINISTRATION privilege. Private devices, on the other hand, can be administered by the SPOOL administrator or an RSO device administrator.

The SPOOL administrator can define one or more RSO device administrators for a RSO device, thus assigning them administration tasks. The RSO device administrator is a privileged user for one, several or all RSO devices. These privileges can be assigned to any user ID.

Overview of commands with privileges and user groups

Meaning of the abbreviations for SRPM privileges

- HW HARDWARE-MAINTENANCE
- OP OPERATING
- PS PRINT-SERVICE-ADMINISTRATION
- SA SAT-FILE-MANAGEMENT
- SE SECURITY-ADMINISTRATION
- SF SAT-FILE-EVALUATION
- ST STD-PROCESSING

Command	User group	SRPM privileges	Available with			
			SPOOL	Dprint	RSO	SPS
CANCEL-MULTIPLE-PRINT-JOBS	nonpriv. users	PS,SA,SE,SF,ST		x		
CANCEL-PRINT-JOB	nonpriv. users	OP,PS,SA,SE,SF,ST	x	x	x	x
CLOSE-VIRTUAL-DEVICE-DIALOG	nonpriv. users	PS,ST	x			
CREATE-DPRINT-CLUSTER	cluster admin.	PS		x		
DELETE-DPRINT-CLUSTER	cluster admin.	PS		x		
GET-JOB-FROM-VIRTUAL-DEVICE	nonpriv. users	PS,ST	x			
HOLD-PRINT-JOB	device admin.	OP,PS,SA,SE,SF,ST	x	x	x	x
MODIFY-DPRINT-CLUSTER	cluster admin.	PS		x		
MODIFY-DPRINT-CONFIGURATION	cluster admin.	PS		x		
MODIFY-MULTIPLE-PRINT-JOBS	nonpriv. users	PS,SA,SE,SF,ST		x		
MODIFY-PRINT-JOB-ATTRIBUTES	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x
MODIFY-PRINTER-OUTPUT-STATUS	device admin.	OP,PS,SA,SE,SF,ST	x	x	x	x
MODIFY-SPOOL-OUT-OPTIONS	nonpriv. users	PS,SA,SE,SF,ST	x	x	x	x
MODIFY-TAPE-OUTPUT-STATUS	SPOOL adm.	OP,PS	x			
MOVE-PRINT-JOBS	device admin.	PS	x	x	x	x

Command	User group	SRPM privileges	Available with			
			SPOOL	Dprint	RSO	SPS
OPEN-VIRTUAL-DEVICE-DIALOG	nonpriv. users	PS,ST	x			
PRINT-DOCUMENT	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x
REDIRECT-PRINT-JOB	nonpriv. users	OP,PS,SA,SE,SF,ST	x	x	x	x
RESUME-PRINT-JOB	nonpriv. users	OP,PS,SA,SE,SF,ST	x	x	x	x
RETURN-JOB-TO-VIRTUAL-DEVICE	nonpriv. users	PS,ST	x			
SHOW-ACTIVE-SPOOL-DEVICES	nonpriv. users	OP,PS,SA,SE,SF,ST	x	x	x	x
SHOW-DPRINT-ACCESS-CONTROLS	cluster admin.	PS		x		
SHOW-DPRINT-CLUSTER	SPOOL adm.	PS		x		
SHOW-DPRINT-HOSTS	SPOOL adm.	PS		x		
SHOW-DPRINT-PRINTER-POOLS	nonpriv. users	PS,SA,SE,SF,ST		x		
SHOW-DPRINT-PRINTERS	nonpriv. users	PS,SA,SE,SF,ST		x		
SHOW-DPRINT-REMOTE-CLUSTERS	nonpriv. users	PS,SA,SE,SF,ST		x		
SHOW-DPRINT-SERVERS	nonpriv. users	PS,SA,SE,SF,ST		x		
SHOW-PRINT-JOB-ATTRIBUTES	nonpriv. users	PS,SA,SE,SF,ST	x	x	x	x
SHOW-PRINT-JOB-STATUS	nonpriv. users	OP,PS,SA,SE,SF,ST	x	x	x	x
SHOW-PRINTER-POOLS	nonpriv. users	PS,SA,SE,SF,ST	x	x	x	x
SHOW-SPOOL-CHARACTER-SETS	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x
SHOW-SPOOL-DEVICES	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x
SHOW-SPOOL-FILTERS	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x
SHOW-SPOOL-FORMS	nonpriv. users	HW,PS,SA,SE,SF,ST	x	x	x	x

Command	User group	SRPM privileges	Available with			
			SPOOL	Dprint	RSO	SPS
SHOW-SPOOL-PARAMETERS	nonpriv. users	SA,SE,SF,ST,PS	x	x	x	x
START-DPRINT-LOGGING	SPOOL adm.	PS		x		
START-PRINTER-OUTPUT	device admin.	OP,PS,SA,SE,SF,ST	x	x	x	x
START-TAPE-OUTPUT	SPOOL adm.	OP, PS	x			
START-TAPE-REPLAY	SPOOL adm.	OP, PS	x			
STOP-DPRINT-LOGGING	SPOOL adm.	PS		x		
STOP-PRINTER-OUTPUT	device admin.	OP,PS,SA,SE,SF,ST	x	x	x	x
STOP-TAPE-OUTPUT	SPOOL adm.	OP,PS	x			
STOP-TAPE-REPLAY	SPOOL adm.	OP,PS	x			
VERIFY-DPRINT-CONSISTENCY	SPOOL adm.	PS		x		
WRITE-SPOOL-TAPE	nonpriv. users	HW,PS,SA,SE,SF,ST	x			

2.2 Command overview (meaning)

Command	Function
CANCEL-MULTIPLE-PRINT-JOBS	Cancel multiple print jobs
CANCEL-PRINT-JOB	Cancel print job
CLOSE-VIRTUAL-DEVICE-DIALOG	Close dialog with virtual printer
CREATE-DPRINT-CLUSTER	Create cluster
DELETE-DPRINT-CLUSTER	Delete cluster
GET-JOB-FROM-VIRTUAL-DEVICE	Request print job from virtual printer
HOLD-PRINT-JOB	Suspend print job
HOLD-SPOOLOUT	Suspend print job (not described, alias for HOLD-PRINT-JOB)
MODIFY-DPRINT-CLUSTER	Modify cluster configuration
MODIFY-DPRINT-CONFIGURATION	Modify host hierarchy of a cluster
MODIFY-MULTIPLE-PRINT-JOBS	Modify destination of multiple distributed print jobs
MODIFY-PRINT-JOB-ATTRIBUTES	Modify parameters of a print job
MODIFY-PRINTER-OUTPUT-STATUS	Modify administration parameters for printers

Command	Function
MODIFY-SPOOL-OUT-OPTIONS	Compress spoolouts
MODIFY-TAPE-OUTPUT-STATUS	Modify administration parameters for tape devices
MOVE-PRINT-JOBS	Extract and move print jobs
OPEN-VIRTUAL-DEVICE-DIALOG	Open dialog with virtual printer
PRINT-DOCUMENT	Output files or library elements to printer
REDIRECT-PRINT-JOB	Redirect output to a different printer
REDIRECT-REMOTE-OUTPUT	Redirect output to a different printer (not described, alias for REDIRECT-PRINT-JOB)
RESUME-PRINT-JOB	Release suspended print job
RESUME-SPOOL-OUT	Release suspended print job (not described, alias for RESUME-PRINT-JOB)
RETURN-JOB-TO-VIRTUAL-DEVICE	Return print job to virtual printer
SHOW-ACTIVE-SPOOL-DEVICES	Display information on active SPOOL and RSO devices
SHOW-DPRINT-ACCESS-CONTROLS	Display information on cluster access control
SHOW-DPRINT-CLUSTER	Display information on cluster configuration
SHOW-DPRINT-HOSTS	Display information on hosts
SHOW-DPRINT-PRINTER-POOLS	Display information on printer pools
SHOW-DPRINT-PRINTERS	Display information on printers
SHOW-DPRINT-REMOTE-CLUSTERS	Display information on remote clusters
SHOW-DPRINT-SERVERS	Display information on servers
SHOW-PRINT-JOB-ATTRIBUTES	Display parameters of a print job
SHOW-PRINT-JOB-STATUS	Display information on print jobs
SHOW-PRINTER-POOLS	Display information on device pools
SHOW-SPOOL-CHARACTER-SETS	Display information on character sets of the SPOOL parameter file
SHOW-SPOOL-DEVICES	Display information on devices of the SPOOL parameter file
SHOW-SPOOL-FILTERS	Display information on filters
SHOW-SPOOL-FORMS	Display information on forms of the SPOOL parameter file
SHOW-SPOOL-JOB-STATUS	Display information on print jobs (not described, alias for SHOW-PRINT-JOB-STATUS)
SHOW-SPOOL-PARAMETERS	Display SPOOL parameter default values
SHOW-SYSTEM-STATUS	Display information on the processing status in the system

Command	Function
SHOW-USER-STATUS	Display information on a group of jobs
START-DPRINT-LOGGING	Activate Dprint logging
START-PRINTER-OUTPUT	Assign a printer to spoolout jobs
START-TAPE-OUTPUT	Assign tape devices to spoolout jobs
START-TAPE-REPLAY	Assign tape devices for replay
STOP-DPRINT-LOGGING	Cancel Dprint logging
STOP-PRINTER-OUTPUT	Disconnect printer / cancel printer assignment
STOP-TAPE-OUTPUT	Cancel assignment of tape spoolout device
STOP-TAPE-REPLAY	Cancel assignment of tape device for replay
VERIFY-DPRINT-CONSISTENCY	Check configuration file and set new master
WRITE-SPOOL-TAPE	Output files to tape

2.3 SDF commands

All the commands are arranged alphabetically. The individual command descriptions all have the same structure, composed as follows:

- Command name with brief description
- Domain
Name of one or more SDF domains to which the command is assigned. In guided dialog, the command is offered in the selection menu of these domains.
- Name of the user group to which the command is assigned according to its function.
- Privileges
To execute the command, users require one of the privileges listed here. Nonprivileged BS2000 users have the STD-PROCESSING privilege, with which they can call all commands which have been assigned the STD-PROCESSING privilege.

The tasks of systems support are distributed over various privileges. These privileges and their default distribution over system IDs are described in the manual [“Introductory Guide to Systems Support”](#).
- Command description
A general description of the command functions.
- Format (syntax representation)
The syntax representation describes how the command is to be entered. The metasyntax for representation of the format is explained [section “SDF syntax representation” on page 525 ff.](#)
- Operand description (if operands are available)
The generally valid characteristics of data types and their suffixes (e.g. <integer 0..31>) are explained [section “SDF syntax representation” on page 525 ff](#) rather than here.
- Command return codes
- Notes (optional)
- Examples (optional)

2.3.1 Syntax of the SDF command language

The syntax description of SDF commands and statements is contained in the so-called syntax files.

A command or statement consists of the following elements:

- command or statement name
- operand names
- possible operand values
- additional help texts which explain the command or statement and the operands

Command or statement name, operand names and constant operand values are contained in the syntax description in the form of keywords. They are also specified in this form (see "Abbreviated input"). Variable operand values are described by means of SDF data types (see [table 1 on page 527](#), "Metasyntax", for a list). The data type defines how the operand value may be specified and which characters may be used for this. SDF checks that the specification for a variable operand value is part of the set of permissible operand values defined by the data type.

Keywords generally consist of several words connected by hyphens. These words are commonly used English words. They are selected in such a way that similar operations are specified by the same keywords throughout the command set. Commands always begin with a verb. This is followed by the object of the desired activity, for example: MODIFY-FILE-ATTRIBUTES for modifying file attributes.

There are also pairs of opposing activities, such as CREATE-XY and DELETE-XY for creating and deleting an object XY.

Commands are divided into so-called domains, depending on their applications. One command may belong to more than one domain.

Each operand has a name and at least one possible operand value. Operands whose specification depends on specification of a certain operand value are arranged hierarchically under this value: they are shown in parentheses after the operand value on which they depend. This is called a structure. Further structures may be initiated within a structure (structure nesting).

Simultaneous input of several operand values in a so-called list may be permitted. This possibility is indicated by a preceding list-poss with the maximum permissible number of list elements. This is followed by the operand values which may be specified in the list.

Most operands already have a default value assigned. This value is used if no explicit operand value is specified (see [section "Abbreviated input" on page 17](#)).

The following points should be noted when entering commands:

- The first character for command input is the slash "/"; a statement must be preceded by two slashes "//".
This command or statement identifier must be entered if the input does not come from a data display terminal (i.e. in a procedure or ENTER file). In interactive mode, the identifier is displayed by the system, which uses this to indicate that it is ready to accept commands or statements.
- The command (or statement) name is separated from the following operands by at least one blank.
- A command may be preceded by a name with up to eight characters, preceded by a period. This identifies the command line as the destination of a branch or jump instruction. The name must be separated from the command name by at least one blank.
- Each operand is separated from the following operand by a comma.
- Operand values within a list are separated by commas. If the list contains more than one list element, the entire list must be enclosed in parentheses.
- An operand may be specified either in the form of the operand name and an operand value, connected by an equals sign (keyword operand), or simply in the form of the operand value, where the assignment to the operand is determined purely by its relative position in the input (positional operand).
- Additional blanks between keywords, variable operand values, commas and equals signs are permitted for documentation purposes, and are ignored by the system.
- Character strings enclosed in quotes are regarded as comments and are ignored by the system.
- Continuation lines:
A hyphen as the last character of an input record or followed only by blanks is regarded as a continuation character: the next input record belongs to the command or statement started in the first record. For input from a data display terminal, the system displays "/" or "//" to request further input.

For input of commands from procedure or ENTER files, the continuation line must begin with "/". The continuation character must lie between columns 2 and 72 if CONTINUATION=NEW is set (see SHOW-SDF-OPTIONS or MODIFY-SDF-OPTIONS). If CONTINUATION=OLD is set, the continuation character must be in column 72.

Any characters after column 72 are ignored.

Input records for commands may thus contain up to 72 characters. The total length of a command (with its continuation lines) is 16 Kbytes minus 20, including blanks and comments.

Input records for statements may be longer than 72 characters, and the continuation character may be specified from column 2 onwards. The length of an input record or of a statement may be up to 16 Kbytes minus 20.

For input from an interactive terminal, the length of the input records and the position of any continuation character depend on the size of the terminal's input buffer.

- For input from procedure or ENTER files, the keywords must be entered in uppercase characters. This also applies to job variables, if these are to replace parts of the input.

2.3.2 Abbreviated input

SDF permits abbreviations for command and statement input in both interactive and batch modes.

However, an abbreviation which is currently unambiguous may, if new functions are added in a future version of BS2000, become ambiguous. Therefore, abbreviations should be used only sparingly in automated command sequences.

2.3.3 Abbreviation of names

All names (keywords) may be abbreviated:

- command or statement names
- operand names
- constant operand values

The names may be abbreviated as follows:

- In names which consist of several words connected by hyphens, words may be omitted from right to left. If a word is omitted, its preceding hyphen must also be omitted.
- Within a word or a single-word name, characters may be omitted from right to left.
- An asterisk at the beginning of a name does not belong to the name. It is used only to distinguish the constant operand value from the variable operand value whose value range contains the character string of the constant value. Even if it would be unambiguous, the asterisk alone is not a valid abbreviation.
The leading asterisk of a constant operand value **must** be entered. Constant operand values may be entered without a leading asterisk.

To permit SDF to interpret the abbreviated names correctly, the selected abbreviations must be unambiguous within the immediate syntax environment. However, a minimum abbreviation may be defined in the syntax file for certain names. SDF will not then accept any further abbreviated input even if it is unambiguous. An unambiguous assignment exists under the following circumstances:

- a command name must be unambiguous within all possible command names
- a statement name must be unambiguous within all possible statement names of a loaded program
- an operand name must be unambiguous within all possible operand names of the specified command or statement at the same structure level; for an operand name in a subordinate structure, only the possible operand names of this structure are considered
- a constant operand value must be unambiguous within the set of all possible operand values for the related operand.

For example, the input `/MOD-SDF-OPT SYN-F=*NONE,GUI=MIN` is a possible abbreviation for `/MODIFY-SDF-OPTIONS SYNTAX-FILE=*NONE, GUIDANCE=MINIMUM`

In the command formats, a possible abbreviation for each name is shown in boldface type. These are not necessarily the shortest possible abbreviations, but they are meaningful and will, in terms of the interface guarantee, remain unambiguous for a longer period. This guarantee cannot be provided for any other abbreviations. Only the full names or the guaranteed abbreviations should therefore be used in procedures, particularly since they also improve the legibility of the procedures.

The names shown in the manual are also defined in the syntax files as so-called standard names. Even if the command names are changed in a future version of the program, these standard names will still be accepted, but only in the full-length format. If, for example, the command `CREATE-FILE` were to be renamed `MAKE-FILE`, the input `/CREATE-FILE` would still be accepted, but not the abbreviation `/CR-F`. If procedures are to remain unaffected by such name changes, all names must be specified in the full-length format.

2.3.4 Default values

Most of the operands are optional. Optional operands have an initial operand value assigned, called the default value. If no explicit specification is made for an optional operand, the default value of this operand is used for execution of the command or statement. The operand values `UNCHANGED` and `CURRENT` stand for previously executed settings, i.e. the previous setting is used without modification.

Since only operands which require nondefault settings need to be entered, the input can, in most cases, be considerably shortened.

For example, the input `MOD-SDF-OPT SYN=*N,GUI=MIN` is a possible abbreviation for: `MOD-SDF-OPT SYN=*NONE, GUI=MIN, LOG=UNCH, UT=UNCH, PROC=UNCH, CONT=UNCH, MENU=UNCH, MODE=UNCH, TEST=UNCH`

2.3.5 Positional operands

Each operand may be specified as a keyword operand or a positional operand. Input as a keyword operand means that the desired value is assigned to the operand name (<operandname>=<operandvalue>).

For input as a positional operand, only the operand value is entered. This is assigned to an operand purely on the basis of the position of the value within the input, compared with the command or statement definition. The following should be noted for the input of positional operands:

- Each operand which is omitted before a positional operand must be replaced by a comma.
- If the operand is specified as a keyword operand, all following operands at the same level must also be specified as keyword operands.

For example, the input MOD-SDF-OPT DEAC,MIN is a possible abbreviation for MOD-SDF-OPT SYN-F=*NONE,GUID=MIN.



It cannot be guaranteed that the operands will remain in the same positions in a future version of the program. For this reason, only keyword operands should be used in procedures.

2.3.6 Command return codes

All SPOOL commands supply return codes which provide the user with information about command execution. The command return code allows the user to react to specific error situations.

The command return code comprises three parts:

- subcode1 (SC1), which classifies the error situation that has occurred in an error class from which it is possible to determine how serious an error is and whether it may be possible to react specifically to that error.
- subcode2 (SC2), which can contain additional information relating to the error class.
- the maincode, which corresponds to a message code.

CANCEL-MULTIPLE-PRINT-JOBS

(Alias: CANCEL-PRINT-JOB-LIST)

Cancel multiple print jobs

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	All users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION

Function

The CANCEL-MULTIPLE-PRINT-JOBS command enables users, printer administrators and cluster administrators to cancel multiple distributed print jobs that are currently queued on a specified server. All print jobs that meet the specified criteria can thus be suppressed with a single command. The print jobs to be canceled can also be read from a defined file with a specified format (created on executing the MODIFY-MULTIPLE-PRINT-JOBS command).

In any case, only the distributed print jobs are taken into account (regardless of whether they are processed on a remote or local server).

This command can only be used for Dprint.

Format

CANCEL-MULTIPLE-PRINT-JOBS

```
,SELECT = *STD / *BY-ATTRIBUTES(...) / FROM-JOB-LIST(...)
```

```
  *BY-ATTRIBUTES(...)
```

```
    SERVER-NAME = *HOME / *ALL / list-poss(16): <alphanum_1..8>
```

```
    ,DESTINATION = *ALL / *LOCAL / *CENTRAL / list-poss(16): <alphanum_1..8>
```

```
    ,JOB-TYPE = *ANY / list-poss(3): *WAIT / *ACTIVE / *KEEP
```

```
  ,FROM-JOB-LIST(...)
```

```
    FILE-NAME = <filename_ 1..54_without-gen-vers>
```

Operands

SELECT=*STD **/ *BY-ATTRIBUTES(...)** / *FROM-JOB-LIST(...)

This parameter specifies the criteria by which the print jobs are to be selected.

SELECT=*STD

The standard option means that the print jobs should be selected using the default value of the selection criteria.

SELECT=*BY-ATTRIBUTES(...)

This option specifies which attributes are to be used as the selection criteria for the print jobs.

SERVER-NAME= *HOME / *ALL / list-poss(16): <alphanum-name_1..8>

Specifies the name of the server on which the print jobs to be selected exist.

SERVER-NAME= *HOME

Selects only the print jobs being processed on the local server.

SERVER-NAME= *ALL

Selects all print jobs on all available and accessible servers.

SERVER-NAME= list-poss(16): <alphanum-name_1..8>

Selects only the print jobs being processed on one of the specified servers.

DESTINATION= *ALL / *LOCAL / *CENTRAL / list-poss(16): <alphanum-name_1..8>

This parameter is used to specify the current destination for the print jobs to be selected. Note that it can never refer to an RSO destination.

DESTINATION= *ALL

This option causes the selection criteria to be ignored, i.e. all print jobs are selected, regardless of the destination.

DESTINATION= *LOCAL

Selects only the print jobs for which the destination is a distributed printer pool.

DESTINATION= *CENTRAL

Selects only those print jobs for which the destination is the central printer pool of the server (i.e. print jobs for which no destination was explicitly specified).

DESTINATION= list-poss(16):<alphanum-name_1..8>

Selects only those print jobs for which the destination is one of the specified distributed printer pools.

JOB-TYPE=*ANY **/ list-poss(3): *WAIT / *ACTIVE / *KEEP**

This parameter determines whether print jobs are to be selected without regard to their status or whether only the print jobs with a particular status are to be selected.

JOB-TYPE=*ANY

This option causes the selection criteria to be ignored, i.e. all print jobs are selected, regardless of their status.

JOB-TYPE= list-poss(3): *WAIT / *ACTIVE / *KEEP

Defines in which status (one or more) a print job must be in order to be selected.

SELECT=*FROM-JOB-LIST(...)

Selects only those print jobs whose data belongs to the specified file.

FILE-NAME= filename_1..54_without-gen-vers>

Names the file from which the print jobs are to be selected.

Notes

1. JOB-TYPE=*WAIT refers to print jobs that could be in the “wait status WT”, i.e. in the SPOOL waiting queues, the “wait pre-processing status WP” or the “wait file transfer status WFT”. JOB-TYPE=*ACTIVE refers to print jobs in the “active status ACT”, in the “*before apa print status TRT”, the “*after apa print status TRD”, the “pre-processing status PRE” or the “file transfer status FT”. JOB-TYPE=*KEEP refers to print jobs in the “keep status KP”.
2. Selecting print jobs with JOB-TYPE=*ACTIVE only makes sense if the server system on which the print jobs are being processed is still running. If the original server has crashed, there is no way to access any active print job of that server, so none of those jobs can be canceled.
3. The file specified in the operand SELECT=*FROM-JOB-LIST(FILE-NAME=...) is created on executing the /MODIFY-MULTIPLE-PRINT-JOBS command. This file has a special layout (see [page 48](#)), which is checked.
4. Since the file specified with FROM-JOB-LIST must be accessed not only to retrieve data from it, but also to update it, write authorization is required for this file.
5. Only the cluster administrator and the printer administrator on the server host are authorized to cancel print jobs by using information from the FROM-JOB-LIST file. Normal users can only cancel print jobs by specifying the operand SELECT=*STD/*BY-ATTRIBUTES.
6. If SELECT=*FROM-JOB-LIST was specified, the data for the correctly canceled print jobs is identified accordingly in the file (with a ‘*’ in the first column) so that no further attempt to cancel such jobs can be made by this method. Apart from this restriction, the data on the currently canceled print jobs is retained and remains available.

Command return codes

(SC2)	SC1	Maincode	Meaning/Guaranteed messages
0	0	CMD0001	No error; command executed
0	20	CMD2201	Parameter error (invalid internal name, invalid file format)
0	64	SDC0300	DMS error
0	130	SDC7010	Function not supported
1	32	SDC7002	System error
2	0	SDC7004	No print job meets the criteria
2	0	SDC7009	Warning
2	32	SDC7005	Internal error

CANCEL-PRINT-JOB

Cancel print job

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,STD-PROCESSING

Function

This command is used to cancel print jobs.

Nonprivileged users can cancel their own jobs irrespective of whether they are being processed by SPOOL, RSO, the local server or a remote server (in the local cluster or a remote cluster).

Device administrators can cancel their own jobs (like nonprivileged users) and all print jobs being processed by any printer for which they are the device administrator.

SPOOL administrators can cancel their own jobs (like nonprivileged users) and all print jobs being processed on their host (by SPOOL, RSO or the local server).

Cluster administrators can cancel their own jobs (like nonprivileged users) and all print jobs which are processed within the local cluster.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-IDENTIFICATION = *TSN(...)	X	X	X	X
TSN =	X	X	X	X
CLUSTER-NAME =	X			
JOB-IDENTIFICATION = *SERVER-TSN(...)	X			
TSN =	X			
SERVER-NAME =	X			
JOB-IDENTIFICATION = *MONJV(...)	X	X	X	X
MONJV =	X	X	X	X
JOB-IDENTIFICATION = *FOREIGN(...)	X			
IDENTIFICATION =	X			
CLUSTER-NAME =	X			
JOB-IDENTIFICATION = *SYSTEM-FILE(...)			X	
NAME = list-poss(16): *SYSOUT / *SYSLST(...)			X	
NAME = *SYSLST(...)			X	
SYSLST-NUMBER =			X	

Format

CANCEL-PRINT-JOB	
JOB-IDENTIFICATION	= *TSN (...) / *SERVER-TSN (...) / *MONJV (...) / *FOREIGN (...) / *SYSTEM-FILE (...)
*TSN (...)	TSN = <alphanum-name 1..4> , CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
*SERVER-TSN (...)	TSN = <alphanum-name 1..4> , SERVER-NAME = <alphanum-name 1..8>
*MONJV (...)	MONJV = <filename 1..54 without-gen-vers>
*FOREIGN (...)	IDENTIFICATION = <integer 1..2147483647> , CLUSTER-NAME = <alphanum-name 1..8>
*SYSTEM-FILE (...)	NAME = list-poss(16): *SYSOUT / *SYSLST (...) *SYSLST (...) SYSLST-NUMBER = *STD / <integer 1..99>

Operands

JOB-IDENTIFICATION = *TSN(...) / *SERVER-TSN(...) / *MONJV(...) / *FOREIGN(...) / *SYSTEM-FILE(...)

Type of job identification.

JOB-IDENTIFICATION = *TSN(...)

The job is identified by means of its local task sequence number (TSN).

TSN = <alphanum-name 1..4>

TSN of the job to be canceled.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Name of the cluster in which the print job is being processed. If a cluster name is specified, the specified TSN is the TSN on the gateway host in the specified remote cluster. Only a BS2000 cluster can be specified.

JOB-IDENTIFICATION = *SERVER-TSN(...)

The print job is identified by means of its TSN on the server. Only print jobs in the local cluster can be addressed in this way.

TSN = <alphanum-name 1..4>

TSN of the job to be canceled on the server.

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

Name of the server on which the print job can be addressed by means of its TSN.

JOB-IDENTIFICATION = *MONJV(...)

The print job is identified by means of its MONJV.

MONJV = <filename 1..54 without-gen-vers>

This operand can be used to address a print job by means of its MONJV, provided the specified MONJV is accessible on the host at which the command is issued. Only print jobs in the local cluster can be addressed in this way.

JOB-IDENTIFICATION = *FOREIGN(...)

The print job is identified by means of a non-BS2000 job name.

IDENTIFICATION = <integer 1..2147483647>

This operand can be used to address print jobs processed in a UNIX cluster.

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

Name of the UNIX cluster in which the print job is processed. See the manual "[Distributed Print Services \(BS2000/OSD\)](#)".

JOB-IDENTIFICATION = *SYSTEM-FILE(...)

Identifies the system files *SYSOUT and *SYSLST. This operand resets a previous PRINT-DOCUMENT ...,START-PROCESSING=*AT-FILE-CLOSING/integer command. The system file is then printed with the default attributes, not those specified for PRINT-DOCUMENT.

NAME = list-poss(16): *SYSOUT / *SYSLST(...)

Specifies the system files *SYSOUT and/or *SYSLST.

NAME = *SYSLST(...)

Specifies the *SYSLST system file.

SYSLST-NUMBER = *STD / <integer 1..99>

The default SYSLST file or one or more numbers of the desired SYSLST files can be specified.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed messages: SCP0891, SCP1031, SCP1032
2	0	SCP1034	No response received from operator
2	0	SPS0178	File lock cannot be canceled Guaranteed message: SPS0178
2	0	SPS0455	MONJV processing error Guaranteed message: SPS0455
2	0	SPS0464	JV subsystem not loaded
2	0	SPS0469	MONJV validity problem Guaranteed message: SPS0469
4	32	SCP0974	Memory or system error. Command rejected
4	64	SCP0976	Invalid operand value
6	128	SCP1062	DPRINTCL subsystem not loaded
1	128	SPS0266	SPOOL subsystem not loaded/SPOOL task not available
2	0	SCP0892	TSN not found or command processing not permitted

Notes

- Several spoolout jobs can have the same TSN (task sequence number), e.g. following a PRINT-DOCUMENT command for several files. The CANCEL-PRINT-JOB command then affects all jobs which have the TSN specified in the command. The SHOW-USER-STATUS command outputs a list of the jobs which have not yet been canceled. The jobs concerned can already be undergoing processing or they can be waiting to be processed.
- If the job to be canceled has already been completed, the CANCEL-PRINT-JOB command is rejected and a corresponding message is output on the terminal.
- For files which are printed with LOCK-FILE=*YES, the CANCEL-PRINT-JOB command releases the lock.
- Files which are printed with the DELETE-AFTER-PRINT operand are not deleted (except for EAM files and temporary files).

Notes for Dprint

1. Users must use this command to cancel print jobs they have sent to a different cluster (since local copies are not kept of print jobs sent to a different cluster). For example, the command `/CANCEL-PRINT-JOB (TSN=12AB,CLUSTER-NAME=C1)` cancels job 12AB in cluster C1.

For their own jobs in their own cluster, users can also use the existing command `CANCEL-JOB`, since there will be at least one local copy of this print job.

2. The cluster administrator can cancel any print job in his or her cluster. For example, to cancel a print job with a TSN of 1234 on the remote server S1 that was issued on a remote client (i.e. when there is no local copy on the host at which the cluster administrator issues the `CANCEL-PRINT-JOB` command), the cluster administrator issues the command `CANCEL-PRINT-JOB *SERVER-TSN(1234,S1)`.
3. A server need not be specified to cancel a print job in a remote cluster. In the remote cluster, copies of all the print jobs that come from the local cluster are kept on a selected server that receives all print jobs from remote clusters.

Notes for RSO printers 9025/9026-RENO

Once the `PRINT-DOCUMENT` command has been issued, the print job is in one of three states. The effect of the `CANCEL-PRINT-JOB` command on the addressed print job differs according to which of these states the job is in:

State of the print job	Effect of the CANCEL-PRINT-JOB command
Queue	The print job is deleted and nothing is printed.
File transfer from BS2000 to the memory of the 9025/9026-RENO has started but is not yet complete	Spoolin is interrupted: the part of the print file which has already been transferred or has already undergone spoolin is printed; the print job is aborted.
File transfer from BS2000 to the memory of the 9025/9026-RENO is finished. Spoolout has started or is already finished	The command has no effect there is no error message and the print job is executed in full

CLOSE-VIRTUAL-DEVICE-DIALOG

Close dialog with virtual printer

Domain:	SPOOL-PRINT-SERVICES
User group:	all users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING

Function

This command closes the dialog mechanism between the virtual device and the corresponding user application procedure. It is part of a set of 4 commands that allow the creation of an application associated with a virtual device in the form of an SDF-P batch procedure instead of a program. These commands manage the dialog between a virtual device and an application written as an SDF-P procedure.

The concerned commands are:

- OPEN-VIRTUAL-DEVICE-DIALOG
- GET-JOB-FROM-VIRTUAL-DEVICE
- RETURN-JOB-TO-VIRTUAL-DEVICE
- CLOSE-VIRTUAL-DEVICE-DIALOG

For an example of command usage, please refer to the "[IDOM \(BS2000/OSD\)](#)" manual.

Format

CLOSE-VIRTUAL-DEVICE-DIALOG

Notes

1. If the dialog cannot be initialized, the command is rejected (command return code is set).
2. If the initialization mechanism has not been done, the command is rejected (command return code is set).
3. This command is only allowed in batch mode.
4. Spin-off processing is activated each time an error is detected.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
0	0	CMD0001	No error; command successfully processed
0	32		Unexpected command
5	32		Memory request error

CREATE-DPRINT-CLUSTER

Create cluster

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

Function

The CREATE-DPRINT-CLUSTER command allows SPOOL administrators to generate their own cluster configuration. The SPOOL administrator then automatically becomes the cluster administrator.

This command can only be used for Dprint.

Format

CREATE-DPRINT-CLUSTER
HOST-NAME = <u>*HOME</u> / list-poss(16): <alphanum-name 1..8>

Operands

HOST-NAME = *HOME / list-poss(16): <alphanum-name 1..8>

Specifies which hosts are to be included in the cluster.

HOST-NAME = *HOME

A cluster containing only the local host is created.

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

List of BCAM names of the hosts which are to be included in the cluster. The sequence of the hosts in this list is also the recovery sequence, i.e. the sequence in which the hosts from this list are to become the master host if the master fails. There is no need to specify the local host (*HOME) when creating a cluster; this is included automatically.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
2	0	SDC2002	Host not defined
2	0	SDC5012	Host already present in cluster
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDC0801	Invalid operand value

Notes

1. A cluster can only be created by the SPOOL administrator. When this has been successfully performed, the SPOOL administrator becomes the cluster administrator. A cluster administrator is thus identified by way of the SPOOL administrator privilege on a particular host.
2. The request for cluster creation is sent to each host which is specified in the list. A host can be included in a cluster configuration if its SPOOL administrator has previously defined him/herself and the host from which the request comes in his/her own configuration.

The cluster creation is performed successfully if at least one host in the list can be included in the cluster. When the cluster has been created, the cluster transfers its own and original configuration file to the other hosts and overwrites their configurations.

3. When a CREATE-DPRINT-CLUSTER command has been issued, a cluster is created and a host hierarchy is formed from the included hosts. This is utilized in the event of failure of the master host, e.g. in the case of a shutdown, communications errors or a system crash.

When the cluster configuration has been created, the cluster administrator can use the SPERVE subsystem to modify the characteristics of his/her configuration (access lists etc.).

4. A check is performed on each host which is included in the cluster configuration. The host will only be included if it does not already belong to another cluster.
5. When a cluster has been created, all associated hosts are considered to be "ATTACHED" (see also the MODIFY-DPRINT-CLUSTER command, [page 43](#)).
6. If several CREATE-DPRINT-CLUSTER commands are issued simultaneously, it may happen that several individual clusters are created. However, a synchronization mechanism ensures that no host may belong to more than one cluster.

DELETE-DPRINT-CLUSTER

Delete cluster

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

Function

The DELETE-DPRINT-CLUSTER command allows cluster administrators to delete their cluster configuration.

This command can only be used for Dprint.

Format

DELETE-DPRINT-CLUSTER

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
2	0	SDC2002	Host not defined
2	0	SDC5015	Command for host not executed
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDC0803	Invalid operand value

Notes

1. The request to delete a cluster is automatically sent to each host which belongs to the cluster. Each host then removes from its configuration file all objects which do not belong to that host.
2. If a host is unavailable for a period of time, the updating of its configuration will be delayed. When it is available once again, the host receives a warning from the cluster administrator to whom it previously belonged in order that the host may remove from its configuration those objects which do not belong to it.

GET-JOB-FROM-VIRTUAL-DEVICE

Request print job from virtual printer

Domain:	SPOOL-PRINT-SERVICES
User group:	all users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING

Function

This command requests a new print job from the virtual device. If requested, an identification of the print job is provided into an S-variable. If requested, the original user file is copied under a specified (or default) filename according to the FILE-PREFIX parameter. If requested, the description of the print job into metadata layout is provided into a specified (or default) filename. The descriptor file is an ISAM file containing the attributes of the print job. Each record has the attribute name as key and contains the corresponding attribute value. The attributes returned in the file are described in the "[IDOM \(BS2000/OSD\)](#)" manual.

This command is part of a set of 4 commands that allow the creation of an application associated with a virtual device in the form of an SDF-P batch procedure instead of a program. These commands manage the dialog between a virtual device and an application written as an SDF-P procedure.

The concerned commands are:

- OPEN-VIRTUAL-DEVICE-DIALOG
- GET-JOB-FROM-VIRTUAL-DEVICE
- RETURN-JOB-TO-VIRTUAL-DEVICE
- CLOSE-VIRTUAL-DEVICE-DIALOG

For an example of command usage, please refer to the "[IDOM \(BS2000/OSD\)](#)" manual.

Format

```
GET-JOB-FROM-VIRTUAL-DEVICE
```

```
FILE-PREFIX = *STD / *NONE / <partial-filename_1..25>
```

```
,METADATA-PREFIX = *STD / *NONE / <partial-filename_1..25>
```

```
,OUTPUT-DOC-ID = <structured-name_1..20>
```

Operands

FILE-PREFIX = *STD / *NONE / <partial-filename_1..25>

This parameter specifies if and under which filename prefix the original user file must be copied.

FILE-PREFIX = *STD

The original user file will be copied under \$<userid>.S.VIRTUAL.DOC.<document-id>.000, where <userid> corresponds to the user-id where the applications task is running and <document-id> corresponds to the identification of the generated document.

FILE-PREFIX = *NONE

The original user file is not to be copied.

FILE-PREFIX = <partial-filename_1..25>

The original user file will be copied under \$<userid>.<file-prefix>.<document-id>.000, where <userid> corresponds to the user-id where the applications task is running and <document-id> corresponds to the identification of the generated document.

METADATA-PREFIX = *STD / *NONE / <partial-filename_1..25>

This parameter specifies if and under which filename prefix the print job metadata must be generated .

METADATA-PREFIX = *STD

The print job metadata will be generated under \$<userid>.S.VIRTUAL.MTD.<document-id>, where <userid> corresponds to the user-id where the applications task is running and <document-id> corresponds to the identification of the generated IDOM document.

METADATA-PREFIX = *NONE

The print job metadata will not be generated.

METADATA-PREFIX = <partial-filename_1..25>

The print job metadata will be generated under \$<userid>.<metadata.prefix>.<document-id>, where <userid> corresponds to the user-id where the applications task is running and <document-id> corresponds to the identification of the generated IDOM document.

OUTPUT-DOC-ID = *STD / *NONE / <structured-name_1..20>

This parameter specifies the variable name in which the identification of the returned print job will be given.

OUTPUT-DOC-ID = *STD

The identification of the print job metadata will be generated in the DOC-ID variable.

OUTPUT-DOC-ID = *NONE

The identification of the print job metadata will not be generated in the DOC-ID variable.

OUTPUT-DOC-ID = <structured-name_1..20>

The identification of the print job metadata will be generated in the specified S-variable.

Notes

1. When the original user file is copied (FILE-PREFIX other than *NONE), a normalization of this file occurs in the target file. This means that the original user file is copied into a SAM file (conversion, library element are extracted,...). This is performed under the user-id where the virtual device application procedure is running, without protection (no access rights, passwords or ACLs), but with the SHARE=NO option.
2. The user-id associated with the IDOM server where the application task is running, corresponds to the user-id specified in the device record (PROGRAM-NAME operand). Otherwise, it corresponds to \$SYSSPOOL.
3. The generated metadata file is an ISAM file, with keypos=5, keylen=64, blksize=(std,2), This file is defined with no protection and the SHARE=NO option. The key (64 characters) corresponds to the attribute name and the field (1024 characters) corresponds to the attribute value.
4. The generated metadata file contains the document descriptor attributes described in the "[IDOM \(BS2000/OSD\)](#)" manual.
5. If the dialog cannot be initialized, the command is rejected (command return code is set).
6. If the initialization has not been done (OPEN-VIRTUAL-DEVICE-DIALOG command), the command is rejected (command return code is set).
7. If the RETURN-JOB-TO-VIRTUAL-DEVICE command has already been executed, the command is rejected (command return code is set).
8. This command is only allowed in batch mode
9. Spin-off processing is activated each time an error is detected.

Output

S-Variable name	T	Contents	Meaning
Var.DOC-ID	S	<attribute-value>	Identification of associated print job

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
0	0	CMD0001	No error; command successfully processed
0	32		Unexpected command
5	32		Memory request error

HOLD-PRINT-JOB

Stop print job

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	Device administrators
Privileges:	OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The HOLD-PRINT-JOB command stops a print job. The print job is identified by means of the name of the device on which it is being processed.

Note

HOLD-PRINT-JOB corresponds to the HOLD-SPOOLOUT command; the command name HOLD-SPOOLOUT is still accepted as an alias.

The following comments apply to replay jobs assigned with START-TAPE-REPLAY and the operand value OUTPUT-MODE=DIRECT:

- The tape containing the output file is positioned at the desired point, and output is resumed immediately via the specified device.
- Current output is stopped. All the spoolout jobs are written back to the SR.vsn file and provided with information relevant for resuming interrupted output. Resumption may then only be initiated by means of the START-TAPE-REPLAY command.

For output to a laser printer the spoolout job is resumed from the last file page correctly output by SPOOL. With laser printers which print on a page-by-page basis there are always a number of pages which are in an undefined state (i.e. somewhere between file page and print page). For this reason, if output is to resume within a file a maximum of 45 pages will be printed twice in the case of HP and HP90 printers.

Note

With the DEVICE-NAME operand, the operand value <alphanum-name 2..2> can only be used with the PRINT-SERVICE-ADMINISTRATION privilege.

The following table shows which operand can be used for which subsystem:

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-IDENTIFICATION =	X	X	X	X
RESUME-CONDITION =	X	X	X	X
RESTART-POSITION = *BEGIN-OF-SPOOLOUT	X	X	X	X
RESTART-POSITION = *CURRENT-PAGE	X	X	X	X
RESTART-POSITION = *LAST-CHECKPOINT	X	X	X	X
RESTART-POSITION = *PREVIOUS-CHECKPOINT	X	X	X	X
RESTART-POSITION = *PAGE(...)	X	X	X	
RESTART-POSITION = *BACK(...)	X	X	X	

Format

HOLD-PRINT-JOB
<p>JOB-IDENTIFICATION = *DEVICE-NAME(...)</p> <p> *DEVICE-NAME(...)</p> <p> DEVICE-NAME = <alphanum-name 1..8> / <alphanum-name 2..2></p> <p>RESUME-CONDITION = *IMMEDIATE / *BY-PRIORITY(...) / *BY-OPERATOR</p> <p> *BY-PRIORITY(...)</p> <p> PRIORITY = *UNCHANGED / <integer 30..255></p> <p>RESTART-POSITION = *BEGIN-OF-SPOOLOUT / *CURRENT-PAGE / *LAST-CHECKPOINT /</p> <p> *PREVIOUS-CHECKPOINT / *PAGE(...) / *BACK(...)</p> <p> *PAGE(...)</p> <p> PAGE-NUMBER = <integer 1..10000000></p> <p> *BACK(...)</p> <p> PAGES = <integer 1..10000000></p>

Operands

JOB-IDENTIFICATION = *DEVICE-NAME(...)

Specifies the name of the device on which the print job is to be processed.

DEVICE-NAME = <alphanum-name 1..8> / <alphanum-name 2..2>

The symbolic or mnemonic device name is specified.

RESUME-CONDITION = *IMMEDIATE / *BY-PRIORITY(...) / *BY-OPERATOR

The spoolout job is to be resumed immediately, resumed after a delay or suspended.

RESUME-CONDITION = *IMMEDIATE

The spoolout job is to be resumed immediately.

RESUME-CONDITION = *BY-PRIORITY(...)

The spoolout job is to be resumed after a delay.

PRIORITY = *UNCHANGED / <integer 30..255>

Priority for the delayed resumption of the spoolout job.

PRIORITY = *UNCHANGED

The job is placed in the job queue with its original priority. For a spoolout job this is the job queue (TYPE 4), while an RSO job is placed in the job queue (TYPE 7).

RESUME-CONDITION = *BY-OPERATOR

The spoolout job is to be suspended until the RESUME-PRINT-JOB command is issued.

RESTART-POSITION =

Determines the point from which the file is to be output in the event of a restart. The restart point for a particular printer after a printer fault must not be confused with the CHECKPOINT-INTERVAL value from the SPOOL parameter file (M-S-P) which is the restart point after a SPOOL or system crash.

RESTART-POSITION = *BEGIN-OF-SPOOLOUT

The spoolout job is to be repeated from the start of file.

RESTART-POSITION = *CURRENT-PAGE

The spoolout job is to be restarted from the page which was being output at the time of the interruption.

RESTART-POSITION = *LAST-CHECKPOINT

The spoolout job is to be repeated as of the last checkpoint. Systems support uses the MODIFY-SPOOL-PARAMETERS statement (SPSERVE utility routine) to define the number of print pages after which a checkpoint is to be set each time.

RESTART-POSITION = *PREVIOUS-CHECKPOINT

The spoolout job is to be restarted from the last checkpoint but one.

RESTART-POSITION = *PAGE(...)

The spoolout job is to be restarted from a particular page; all print pages preceding this one are skipped.

PAGE-NUMBER = <integer 1..10000000>

Number of the page.

RESTART-POSITION = *BACK (...)

The spoolout job is to be restarted from the specified number of pages back from the current page.

PAGES = <integer 1..10000000>

Number of pages.

Note

With SPS jobs, the operands PAGE(...) and BACK(...) must not be specified.

Command return codes

(SC2)	SC1	Maincode	Meaning/Guaranteed messages
	0	CMD0001	No errors guaranteed message: SPS0B06
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	32	SRO0174	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value
	64	SRO0175	No authorization for command
	64	SRO0176	Invalid operand value

MODIFY-DPRINT-CLUSTER

Modify cluster configuration

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

Function

The MODIFY-DPRINT-CLUSTER command allows cluster administrators to modify a cluster configuration by including new hosts in the cluster or deleting existing hosts from the cluster. In addition, cluster administrators can detach hosts from their cluster, i.e. make them unavailable, or attach hosts to their cluster, i.e. make them available.

This command can only be used for Dprint.

Format

MODIFY-DPRINT-CLUSTER
HOST-NAME = list-poss(16): <alphanum-name 1..8> ,ACTION = *ADD / *REMOVE / *DELETE / *ATTACH / *DETACH

Operands

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

Specifies for which hosts the action specified in the ACTION operand is to be performed.

ACTION = *ADD / *REMOVE / *DELETE / *ATTACH / *DETACH

Specifies which action is to be performed for the specified hosts.

ACTION = *ADD

The specified hosts are to be added to the already existing local cluster.

ACTION = *REMOVE

The specified hosts are to be “logically” removed from the local cluster. The master host cannot be removed from the local cluster. See also Note 4.

ACTION = *DELETE

The specified hosts are to be “physically” removed from the local cluster. The master host cannot be removed from the local cluster. See also Note 3.

ACTION = *ATTACH

The specified hosts are to be attached to the local cluster, i.e. be made available.

ACTION = *DETACH

The specified hosts are to be detached from the local cluster, i.e. they still belong to the cluster but are unavailable for a time. All the servers and printers belonging to this host are then also no longer available, and no further print jobs can be sent to them. And the users on the detached host may send no further print jobs to remote servers and printers.

On stopping Dprint, the corresponding host is automatically detached from the local cluster.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
2	0	SDC2002	Host not defined
2	0	SDC5015	Command for host not executed
2	0	SDC5012	Host already present in cluster
2	0	SDC5014	Cluster administrator's host must not be detached
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDC0801	Invalid operand value

Notes

1. When a host is included in a cluster, its configuration is overwritten by the already existing configuration file of the master host. A check is performed to ensure that the host will only be included if it does not already belong to another cluster.
2. A host can be removed logically or physically from the cluster configuration.

In order to remove a host correctly from the cluster configuration, it is advisable that no further print jobs exist which

- have been issued from the host in question and sent to another host in the cluster (through server selection).
- have been issued from another host in the cluster and sent to the host in question.

This can be ensured by previously placing the host and connected servers in "DETACHED" status by means of the MODIFY-DPRINT-CLUSTER command. In this way, all print jobs are processed on the host on which they were issued, provided that an available server is able to receive them.

If the host is removed without the measures recommended above, although processing of the Dprint print jobs will be continued the SCB (SPOOL Control Block) will however cease to be updated from the server to the client.

3. When a host is physically removed from the cluster configuration (*DELETE), it automatically receives its information from the master host. The host then deletes from its configuration file all those objects which do not belong to it. At the same time, the master host deletes from its configuration file all the objects of the removed host and distributes the updated configuration file to all hosts remaining in the cluster configuration.
4. When a host is logically removed from the cluster configuration (*REMOVE), it automatically receives its information from the master host. The host then creates a private cluster. In its configuration file, the master host places all the objects of the removed host in "UNDEFINED" status and distributes the updated configuration file to all hosts remaining in its cluster configuration.
5. The master host cannot be removed from the cluster configuration.

MODIFY-DPRINT-CONFIGURATION

Modify host hierarchy of cluster

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

Function

The MODIFY-DPRINT-CONFIGURATION command allows cluster administrators to modify the host hierarchy of their cluster.

This command can only be used for Dprint.

Format

MODIFY-DPRINT-CONFIGURATION
<pre> HOST-NAME = <alphanum-name 1..8> , POSITION = *<u>UNCHANGED</u> / *MASTER / *AFTER(...) *AFTER(...) HOST-NAME = <alphanum-name 1..8> </pre>

Operands

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

BCAM name of the host whose hierarchy is to be modified.

POSITION = *UNCHANGED / *MASTER** / ***AFTER(...)****

Specifies which position the specified host is to receive.

POSITION = *MASTER****

The specified host is to become the master host of the local cluster.

POSITION = *AFTER(...)****

The host is to be the nominated recovery host for the host specified here.

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

BCAM name of the host, after which the host specified in the first operand HOST-NAME is to be positioned in the hierarchy.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDC0801	Invalid operand value

Notes

1. The recovery hierarchy can be output by means of the SHOW-DPRINT-CLUSTER command.
2. When a host becomes the new master host of the local cluster, then the privileges of the cluster administrator are immediately transferred from the current master to the new master. The recovery hierarchy can only be modified by the first host in the recovery list (master host from which the request to create a cluster was issued). So although in the event of a problem a new master can be set by means of the VERIFY-DPRINT-CONSISTENCY command, the recovery list can however only be updated if the host which created the cluster is made available once again and is also automatically made the master host again.
3. The recovery processing is described in detail in the [“Distributed Print Services \(BS2000/OSD\)”](#) manual.

MODIFY-MULTIPLE-PRINT-JOBS (Alias: MODIFY-PRINT-JOB-LIST)

Modify destination of multiple distributed print jobs

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	All users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION

Function

The MODIFY-MULTIPLE-PRINT-JOBS command enables users, printer administrators and cluster administrators to change the destination of multiple distributed print jobs that are currently queued on a specified server. All print jobs that meet the specified criteria can thus be modified or redirected with a single command. The information on the redirected print jobs can be stored in a special file with a specified format. This file can then be used to cancel any previously redirected print jobs if Dprint was unable to do this itself (due to a crash of the server system).

In any case, only the distributed print jobs are taken into account (regardless of whether they are processed on a remote or local server).

This command can only be used for Dprint.

Format

MODIFY-MULTIPLE-PRINT-JOBS

```
,SELECT = *STD / *BY-ATTRIBUTES(...)
      *BY-ATTRIBUTES(...)
SERVER-NAME = *HOME / *ALL / list-poss(16): <alphanum_1..8>
      |
      | ,DESTINATION = *ALL / *LOCAL / *CENTRAL / list-poss(16): <alphanum_1..8>
      |
      | ,JOB-TYPE = *ANY / list-poss(3): *WAIT / *ACTIVE / *KEEP
,TO-PRINTER = *STD / <alphanum_1..8>
,CREATE-JOB-LIST = *NONE / <filename_ 1..54_without-gen-vers>
```


Operands

SELECT=*STD / ***BY-ATTRIBUTES(...)**

This parameter specifies the criteria by which the print jobs are to be selected.

SELECT=*STD

The standard option means that the print jobs should be selected on the basis of the default value of the selection criteria.

SELECT=*BY-ATTRIBUTES(...)

This option specifies which attributes are to be used as the selection criteria for the print jobs.

SERVER-NAME= *HOME / ***ALL** / **list-poss(16): <alphanum-name_1..8>**

Specifies the name of the server on which the print jobs to be selected exist.

SERVER-NAME= *HOME

Selects only the print jobs being processed on the local server.

SERVER-NAME= *ALL

Selects all print jobs on all available and accessible servers.

SERVER-NAME= **list-poss(16): <alphanum-name_1..8>**

Selects only the print jobs being processed on one of the specified servers

DESTINATION= *ALL / ***LOCAL** / ***CENTRAL** / **list-poss(16): <alphanum-name_1..8>**

This parameter is used to specify the current destination for the print jobs to be selected. Note that it can never refer to an RSO destination.

DESTINATION= *ALL

This option causes the selection criteria to be ignored, i.e. all print jobs are selected, regardless of the destination.

DESTINATION= *LOCAL

Selects only the print jobs for which the destination is a distributed printer pool.

DESTINATION= *CENTRAL

Selects only those print jobs for which the destination is the central printer pool of the server (i.e. print jobs for which no destination was explicitly specified).

DESTINATION= **list-poss(16):<alphanum-name_1..8>**

Selects only those print jobs for which the destination is one of the specified distributed printer pools.

JOB-TYPE=*ANY / **list-poss(3): *WAIT** / ***ACTIVE** / ***KEEP**

This parameter determines whether print jobs are to be selected without regard to their status or whether only those print jobs with a particular status are to be selected.

JOB-TYPE=*ANY

This option causes the selection criterion to be ignored, i.e. all print jobs are selected, regardless of their status.

JOB-TYPE= list-poss(3): *WAIT / *ACTIVE / *KEEP

Defines in which status (one or more) a print job must be in order to be selected.

TO-PRINTER=*STD / <alphanum-name_1..8>

Specifies the target printer for the selected print jobs. This could be a distributed printer pool, a non-distributed local printer pool, an RSO printer pool or an RSO printer. More details can be found under the TO-PRINTER and PRINTER-NAME operands of the MODIFY-PRINT-JOB-ATTRIBUTES command.

TO-PRINTER=*STD

Causes all selected print jobs are to be redirected to the standard drive specified in SHOW-SPOOL-PARAMETERS (print-cmd-defaults) on the client host of each print job.

TO-PRINTER= <alphanum-name_1..8>

Causes all selected print jobs to be redirected to the specified target printer (see above).

CREATE-JOB-LIST=*NONE/<filename_1..54_without-gen-version>

Specifies whether or not information on redirected print jobs is to be saved in a file.

CREATE-JOB-LIST =*NONE

No information on redirected print jobs is to be saved in a file.

CREATE-JOB-LIST = <filename_1..54_without-gen-version>

Information on redirected print jobs is saved in the specified file.

Layout:

```
*REDIRECTED PRINT JOBS VERSION 001
@@@@ @@@@@@@@@ @@@@ @@@@@@@@@ @@@@@@@@@
@@@@ @@@@@@@@@ @@@@ @@@@@@@@@ @@@@@@@@@
. . . .
```

The first record (unmodified part) is always:

```
*REDIRECTED PRINT JOBS VERSION 001
```

The remaining fields are used as follows:

- First field: 4 characters for the <client-tsn>
- Second field: 8 characters for the <client-host-name>
- Third field: 4 characters for the <server-tsn>
- Fourth field: 8 characters for the <server-name>
- Fifth field: 8 characters for the <userid>

The fields are left-aligned, padded with blanks and separated from one another with one blank each.

Notes

1. JOB-TYPE=*WAIT refers to print jobs that could be in the “wait status WT”, i.e. in the SPOOL waiting queues, the “wait pre-processing status WP” or the “wait file transfer status WFT”. JOB-TYPE=*ACTIVE refers to print jobs in the “active status ACT”, in the “*before apa print status TRT”, the “*after apa print status TRD”, the “pre-processing status PRE” or the “file transfer status FT”. JOB-TYPE=*KEEP refers to print jobs in the “keep status KP”.
2. Selecting print jobs with JOB-TYPE=*ACTIVE only makes sense if a system crash has occurred on the server system on which the print jobs are being processed. If the original server has not crashed, however, any print job that is still active will be protected against access so that it can still be processed by its original server system.
3. Selected active print jobs (only possible in the event of a system crash) can be reset to the “wait” status, while those jobs which are already in the “wait” (or “keep”) status remain in the same status.
4. If the command is being used to redirect distributed print jobs that are currently being processed on an overloaded server, the CREATE-JOB-LIST operand need not be specified. This is because, on executing Dprint, the association of the client and server data of a print job is already taken into account (so it is not necessary to cancel the print job on the server).

5. Subsequent MODIFY-MULTIPLE-PRINT-JOBS commands can use the same output file (CREATE-JOB-LIST operand) to store information on print jobs. If the output file does not exist, a new output file is created; otherwise, the existing file is extended. In the latter case, the unmodified portion is checked.
6. Depending on what was specified for the TO-PRINTER operand, distributed print jobs could become local print jobs on their client host.
7. If new server TSNs need to be assigned to the redirected print jobs, console messages are issued as for the MODIFY-PRINT-JOB-ATTRIBUTES command.
8. Since the file specified with CREATE-JOB-LIST must be accessed not only to save data from it, but also to check it, both write (for saving) and read (for checking) authorization are required for this file.
9. In order to modify print jobs that are currently being processed by a server which has crashed or become unavailable, the name of the server must be specified alone as the SERVER-NAME operand value.

Command return codes

(SC2)	SC1	Maincode	Meaning/Guaranteed messages
0	0	CMD0001	No error, command executed
0	20	CMD2201	Parameter error (invalid internal name or invalid file format)
0	64	SDC0300	DMS error
0	130	SDC7010	Function not supported
1	32	SDC7002	System error
2	0	SDC7004	No print job meets the criteria
2	0	SDC7009	Warning
2	32	SDC7005	Internal error

MODIFY-PRINT-JOB-ATTRIBUTES

Modify print job parameters

Domain:	SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	HARDWARE-MAINTENANCE, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING,

Function

The MODIFY-PRINT-JOB-ATTRIBUTES command modifies for a print job the parameters of the PRINT-DOCUMENT command after it has been accepted. The effect of this command is the same as issuing a new PRINT-DOCUMENT command with modified operands.

However, some operands of the PRINT-DOCUMENT cannot be modified. This depends on the status of the print job. For more information, refer to the notes starting on [page 112](#).

If you specify the operand value *UNCHANGED, the original value of the relevant parameter remains the same.

Note that print jobs that have the status PREPROCESSING or ACTIVE cannot be modified. There are also constraints in other statuses (see the notes on [page 112](#)).

The following table shows which operands can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-IDENTIFICATION = *TSN(...)	X	X	X	X
TSN =	X	X	X	X
CLUSTER-NAME =	X			
JOB-IDENTIFICATION = *MONJV(...)	X	X	X	X
JOB-IDENTIFICATION = *SERVER-TSN(...)	X			
JOB-IDENTIFICATION = *CLIENT-TSN(...)	X			
DOCUMENT-PART =	X	X	X	X
DOCUMENT-FORMAT = *UNCHANGED	X	X	X	X
DOCUMENT-FORMAT = *TEXT(...)	X	X	X	

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
DOCUMENT-FORMAT = *PAGE-FORMAT(...)	X	X	X	X
FORMAT-NAME =			X	
CONTROL-MODE = *UNCHANGED	X	X	X	X
CONTROL-MODE = *PAGE-MODE(...)	X		X	
CONTROL-MODE = *LINE-MODE(...)		X		
CONTROL-MODE = *LOGICAL(...)		X		
CONTROL-MODE = *PHYSICAL(...)		X		
CONTROL-MODE = *APA(...)				X
DOCUMENT-FORMAT = *SPECIAL-FORMAT(...)	X	X		
FORMAT-NAME = *UNCHANGED		X		
FORMAT-NAME = *NONE		X		
FORMAT-NAME = *PCL				
FORMAT-NAME = <c-string 1..63 with-low>	X			
LINE-SPACING = *NO	X	X		
LINE-SPACING = * 1 / 2 /3		X		
LINE-SPACING = *BY-EBCDIC-CONTROL		X		
LINE-SPACING = *BY-IBM-CONTROL		X		
LINE-SPACING = *BY-ASA-CONTROL		X		
PRINT-JOB-CONTROL = *PARAMETERS(...)	X	X	X	X
FAILURE-PROCESSING =				X
SCHEDULING-TIME=	X	X	X	X
LAYOUT-CONTROL = *UNCHANGED	X	X	X	X
LAYOUT-CONTROL = *PARAMETERS(...)	X	X	X	X
PAGE-COPIES =	X	X	X	X
LEFT-MARGIN =	X	X	X	X
TWO-SIDED = *UNCHANGED	X	X	X	X
TWO-SIDED = *STD	X	X	X	X
TWO-SIDED = *NO / *YES / *TUMBLE	X	X	X	X
ROTATION = *UNCHANGED	X	X	X	X
ROTATION = *NO	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
ROTATION = *BY-CONTROL-CODES	X		X	
ROTATION = 0 / 90 / 180 / 270	X	X	X	X
ROTATION = 0-180 / 180-0 / 90-270 / 270-90	X		X	
INPUT-TRAY-NUMBER = *STD	X	X	X	X
INPUT-TRAY-NUMBER = *IGNORE		X		
INPUT-TRAY-NUMBER = <integer 1..99>	X	X	X	X
INPUT-TRAY-NUMBER = *BY-FORMAT(...)		X		
OUTPUT-TRAY-NUMBER = *STD	X	X	X	X
OUTPUT-TRAY-NUMBER = *IGNORE		X		
OUTPUT-TRAY-NUMBER = <integer 1..99>	X	X	X	X
OUTPUT-TRAY-NUMBER = *SORTER(...)		X		
COVER-PAGES =	X	X	X	X
TABLE-REFERENCE-CHAR =				X
LANGUAGE-EXTENSION =	X	X	X	X
TOP-OFFSET =	X	X	X	X
LEFT-OFFSET =	X	X	X	X
RESOURCE-DESCRIPTION = *UNCHANGED	X	X	X	X
RESOURCE-DESCRIPTION = *PARAMETERS(...)	X	X	X	X
CHARACTER-SETS =	X	X	X	
CHARACTER-SETS = *STD	X	X	X	X
CHARACTER-SETS = *POOL(...)			X	
CHARACTER-SETS = *BY-EXTENDED-NAME(...)				X
CHARACTER-SETS = <c-string 1..3 with-low>	X			
CHARACTER-SETS = list-poss(16): <alphanum-name 1..3>	X	X	X	
CHAR-SET-ATTRIBUTES =		X		
OVERLAY-RESOURCES = *PARAMETERS(...)	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
ELECTRONIC-OVERLAY =	X	X	X	
OVERLAY =			X	X
FORMS-OVERLAY-BUFFER =			X	
PAGE-DEFINITION =			X	X
FORM-DEFINITION =				X
USER-RESOURCES-FILE =	X	X	X	X
TRANSLATION-TABLE =	X	X	X	
RESOURCES-LOCATION =	X			
TO-PRINTER = *UNCHANGED	X	X	X	X
TO-PRINTER = *PARAMETERS(...)	X	X	X	X
PRINTER-NAME = *STD	X	X	X	X
PRINTER-NAME = <alphanum-name 1..8>	X	X	X	X
PRINTER-NAME = <c-string 1..8 with-low>	X			
PRINTER-TYPE = *ANY	X	X	X	X
PRINTER-TYPE = *HP-PRINTER			X	
PRINTER-TYPE = *LP65-PRINTER			X	
PRINTER-TYPE = *APA-PRINTER				X
REDIRECTION-ALLOWED = *STD		X	X	
REDIRECTION-ALLOWED = *YES / *NO		X		
CLUSTER-NAME =	X			
OUTPUT-FORMAT =	X		X	
VIRTUAL-PRINTER =	X	X	X	X
ADDITIONAL-COPIES =	X	X	X	X
LOCK-FILE =	X	X	X	X
DELETE-AFTER-PRINT =	X	X	X	

Format

(part 1 of 6)

MODIFY-PRINT-JOB-ATTRIBUTES**JOB-IDENTIFICATION** = *TSN(...) / *MONJV(...) / *SERVER-TSN(...) / *CLIENT-TSN(...)

*TSN(...)

| **TSN** = <alphanum-name 1..4>| , **CLUSTER-NAME** = *LOCAL-CLUSTER / <alphanum-name 1..8>

*MONJV(...)

| **MONJV** = <filename 1..54 without-gen-vers>

*SERVER-TSN(...)

| **TSN** = <alphanum-name 1..4>| , **SERVER-NAME** = *HOME / <alphanum-name 1..8>

*CLIENT-TSN(...)

| **TSN** = <alphanum-name 1..4>| , **HOST-NAME** = *HOME / <alphanum-name 1..8>, **DOCUMENT-PART** = *UNCHANGED / *PARAMETERS(...)

*PARAMETERS(...)

| **INPUT-SECTION** = *UNCHANGED / *WHOLE-FILE / *PARAMETERS(...)

| *PARAMETERS(...)

| | **SECTION-IDENTIFIER** = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>| | , **POSITION** = *UNCHANGED / *STD / <integer 1..2047>| , **INPUT-PART** = *UNCHANGED / *ALL / *PARAMETERS(...)

| *PARAMETERS(...)

| | **FIRST-RECORD** = *UNCHANGED / *BEGIN-OF-FILE / <integer 1..2147483647> /| | | *BY-STRING-ID(...)| | | *BY-STRING-ID(...)| | | | **STRING** = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>| | | | , **POSITION** = *UNCHANGED / *STD / <integer 1..2047>| | | | , **OCCURRENCE** = *UNCHANGED / <integer 1..32767>

continued ➔

```

, LAST-RECORD = *UNCHANGED / *END-OF-FILE / <integer 1..2147483647> /
    *BY-STRING-ID(...)
    *BY-STRING-ID(...)
        STRING = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>
    , POSITION = *UNCHANGED / *STD / <integer 1..2047>
    , OCCURRENCE = *UNCHANGED / <integer 1..32767>
, RECORD-PART = *UNCHANGED / *ALL / *PARAMETERS(...)
    *PARAMETERS(...)
        FIRST-CHARACTER = *UNCHANGED / <integer 1..32767>
        , LAST-CHARACTER = *UNCHANGED / *STD / <integer 1..32767>
, OUTPUT-PART = *UNCHANGED / *ALL / *RANGE(...) / *LAST(...)
    *RANGE(...)
        FROM = *UNCHANGED / *BEGIN-OF-FILE / <integer 1..2147483647>
        , TO = *UNCHANGED / *END-OF-FILE / <integer 1..2147483647>
        , DIMENSION = *UNCHANGED / *PAGES / *LINES
    *LAST(...)
        LAST = *UNCHANGED / <integer 1..2147483647>
        , DIMENSION = *UNCHANGED / *PAGES / *LINES
, DOCUMENT-FORMAT = *UNCHANGED / *TEXT(...) / *PAGE-FORMAT(...) / *SPECIAL-FORMAT(...)
    *TEXT(...)
        LINE-PER-PAGE = *UNCHANGED / *STD / <integer 1..32767>
    , LINE-SPACING = *UNCHANGED / 1 / 2 / 3 / *BY-EBCDIC-CONTROL(...) / *BY-IBM-CONTROL(...) /
        *BY-ASA-CONTROL(...)
        *BY-EBCDIC-CONTROL(...)
            CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
        *BY-IBM-CONTROL(...)
            CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
        *BY-ASA-CONTROL(...)
            CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
    , HEADER-LINE = *UNCHANGED / *NO / *STD / list-poss(3): *DATE / *FIRST-RECORD /
        *PAGE-NUMBER

```

continued →

```

| ,OUTPUT-FORMAT = *UNCHANGED / *CHARACTER / *HEXADECIMAL

*PAGE-FORMAT(...)
| FORMAT-NAME = *UNCHANGED / *STD / <c-string 1..63 with-low>
| CONTROL-MODE = *UNCHANGED / *LINE-MODE / *PAGE-MODE(...) / *LOGICAL(...) /
|   *PHYSICAL(...) / *APA(...)
|   *PAGE-MODE(...)
|   | PAGE-CONTROL-CHAR = *UNCHANGED / *YES / *NO
|   | ,CONTROL-TYPE = *UNCHANGED / *HP / *COMPATIBLE
|   | ,LINE-SPACING = *UNCHANGED / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL /
|   |   *BY-ASA-CONTROL
|   *LOGICAL(...)
|   | LINE-PER-PAGE = *UNCHANGED / *STD / <integer 1..32767>
|   | ,LINE-SPACING = *UNCHANGED / 1 / 2 / 3 / *BY-EBCDIC-CONTROL(...) /
|   |   *BY-IBM-CONTROL(...) / *BY-ASA-CONTROL(...)
|   |   *BY-EBCDIC-CONTROL(...)
|   |   | CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
|   |   *BY-IBM-CONTROL(...)
|   |   | CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
|   |   *BY-ASA-CONTROL(...)
|   |   | CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>
|   *PHYSICAL(...)
|   | LINE-SPACING = *UNCHANGED / *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL /
|   |   *BY-IBM-CONTROL / *BY-ASA-CONTROL
|   *APA(...)
|   | LINE-SPACING = *UNCHANGED / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL /
|   |   *BY-ASA-CONTROL

*SPECIAL-FORMAT(...)
| ,FORMAT-NAME = *UNCHANGED / *NONE / *PCL / <c-string 1..63 with-low>
| ,LINE-SPACING = *UNCHANGED / *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL /
|   *BY-ASA-CONTROL

```

continued ➔

```

,PRINT-JOB-CONTROL = *UNCHANGED / *PARAMETERS (...)
  *PARAMETERS(...)
    |
    | CHECKPOINT = *UNCHANGED / *ON-PAGES / *ON-SECTION-RECORDS
    |
    | ,PRINT-JOB-NAME = *UNCHANGED / <alphanum-name 1..8> / <c-string 1..8 with-low>
    |
    | ,PRINT-JOB-PRIORITY = *UNCHANGED / <integer 30..255>
    |
    | ,PRINT-JOB-CLASS = *UNCHANGED / <integer 1..255>
    |
    | ,FAILURE-PROCESSING = *UNCHANGED / *PARAMETERS(...)
    |
    | *PARAMETERS(...)
    |   |
    |   | MSG-PAGE = *UNCHANGED / *YES / *NO
    |
    | ,SCHEDULING-TIME = *UNCHANGED / *STD / *EARLIEST(...)
    |
    | *EARLIEST(...)
    |   |
    |   | DATE = *UNCHANGED / *TODAY / <date>
    |   |
    |   | ,TIME = *UNCHANGED / <time>
    |
    | ,LAYOUT-CONTROL = *UNCHANGED / *PARAMETERS(...)
    |
    | *PARAMETERS(...)
    |   |
    |   | PAGE-COPIES = *UNCHANGED / *STD / <integer 0..255>
    |   |
    |   | ,LEFT-MARGIN = *UNCHANGED / *STD / <integer 0..31>
    |   |
    |   | ,TWO-SIDED = *UNCHANGED / *STD / *NO / *YES / *TUMBLE
    |   |
    |   | ,ROTATION = *UNCHANGED / *NO / *BY-CONTROL-CODES / 0 / 90 / 180 / 270 / 0-180 / 180-0 /
    |   |   90-270 / 270-90
    |   |
    |   | ,COVER-PAGES = *UNCHANGED / *PARAMETERS(...)
    |   |
    |   | *PARAMETERS(...)
    |   |   |
    |   |   | HEADER-PAGE-TEXT = *UNCHANGED / *NONE / <c-string 1..32 with-low>
    |   |   |
    |   |   | ,HEADER-EXIT-NUMBER = *UNCHANGED / *NO / <integer 0..2147483639>
    |   |   |
    |   |   | ,TRAILER-EXIT-NUMBER = *UNCHANGED / *NO / <integer 0..2147483639>
    |   |
    |   | ,TABLE-REFERENCE-CHAR = *UNCHANGED / *NO / *YES
    |   |
    |   | ,LANGUAGE-EXTENSION = *UNCHANGED / *NONE / *PARAMETERS(...)
    |   |
    |   | *PARAMETERS(...)
    |   |   |
    |   |   | LANGUAGE-NAME = *UNCHANGED / *ARABIC / *FARSI
    |   |   |
    |   |   | ,LANGUAGE-MODE = *UNCHANGED / *RIGHT-TO-LEFT / *LEFT-TO-RIGHT
  
```

continued ➔

```

,INPUT-TRAY-NUMBER = *UNCHANGED / *STD / *IGNORE / <integer 1..99> / *BY-FORMAT(...)
|
| *BY-FORMAT(...)
|   INPUT-TRAY-FORMAT = *UNCHANGED / *A3 / *A4 / *A5 / *B4 / *B5 / *FOLIO / *INVOICE /
|   *EXEC / *LEGAL / *LETTER / *DOUBLE-LETTER / *MONARCH /
|   *COMMERCIAL-10 / *DL / *C5 / *MANUAL / *A3-UNCUT / *A4-UNCUT / LEDGER
,OUTPUT-TRAY-NUMBER = *UNCHANGED / *STD / *IGNORE / *SORTER(...) / <integer 1..99>
|
| *SORTER(...)
|   SORT-MODE = *UNCHANGED / *NO / *GROUP / *COLLATE / *STACKER / *AUTOMATIC
, TOP-OFFSET = *UNCHANGED / *IGNORE / <integer -255..255>
, LEFT-OFFSET = *UNCHANGED / *IGNORE / <integer -255..255>

```

```

,RESOURCE-DESCRIPTION = *UNCHANGED / *PARAMETERS(...)

```

```

*PARAMETERS(...)

```

```

|   FORM-NAME = *UNCHANGED / *STD / <alphanum-name 1..6>
, LOOP-NAME = *UNCHANGED / *STD / <alphanum-name 1..3>
, ROTATION-LOOP-NAME = *UNCHANGED / *STD / <alphanum-name 1..3>
, CHARACTER-SETS = *UNCHANGED / *STD / *POOL(...) / *BY-EXTENDED-NAME(...) /
|   list-poss(16): <alphanum-name 1..3>
|   *POOL(...)
|   |   POOL-NAME = *UNCHANGED / <alphanum-name 1..4>
|   |   , POOL-INDEX = *UNCHANGED / <integer 0..64>
|   *BY-EXTENDED-NAME(...)
|   |   NAME = *UNCHANGED / list-poss(4): <alphanum-name 1..8>
, CHAR-SET-ATTRIBUTES = *UNCHANGED / *ALL / *RESTRICTED
, OVERLAY-RESOURCES = *UNCHANGED / *PARAMETERS(...)
|   *PARAMETERS(...)
|   |   ELECTRONIC-OVERLAY = *UNCHANGED / *NONE / <alphanum-name 2..2>

```

continued ➔

```

,OVERLAY = *UNCHANGED / *STD / *NONE / *PARAMETERS(...)
    *PARAMETERS(...)
        |
        |   FACE-SIDE = *UNCHANGED / *NONE / <integer 1..127>
        |   ,REVERSE-SIDE = *UNCHANGED / *NONE / <integer 1..127>
        |
    ,FORMS-OVERLAY-BUFFER = *UNCHANGED / *NONE / <alphanum-name 1..4>
,PAGE-DEFINITION = *UNCHANGED / *STD / <integer 1..50000> / <alphanum-name 1..8>
,FORM-DEFINITION = *UNCHANGED / *STD / <alphanum-name 1..8>
,USER-RESOURCES-FILE = *UNCHANGED / *STD / <filename 1..44 without-gen-vers>
,TRANSLATION-TABLE = *UNCHANGED / *NONE / *PARAMETERS(...)
    *PARAMETERS(...)
        |
        |   NAME = *UNCHANGED / <alphanum-name 1..8>
        |   ,FILE = *UNCHANGED / *SYSTEM / <filename 1..44 without-gen-vers>
    ,RESOURCES-LOCATION = *UNCHANGED / *STD / *HOME / *SERVER
,TO-PRINTER = *UNCHANGED / *PARAMETERS(...)
    *PARAMETERS(...)
        |
        |   PRINTER-NAME = *UNCHANGED / *STD / <alphanum-name 1..8> / <c-string 1..8 with-low>
        |   ,PRINTER-TYPE = *UNCHANGED / *HP-PRINTER / *LP65-PRINTER / *APA-PRINTER / *ANY
        |   ,REDIRECTION-ALLOWED = *UNCHANGED / *STD / *YES / *NO
        |   ,CLUSTER-NAME = *UNCHANGED / <alphanum-name 1..8>
        |   ,OUTPUT-FORMAT = *UNCHANGED / *NONE / <c-string 1..63 with-low>
        |   ,VIRTUAL-PRINTER = *UNCHANGED / *STD / *ALLOWED / *NOT-ALLOWED / MUST(...)
        |   *MUST(...)
        |       |
        |       |   NAME = *UNCHANGED / <alphanum-name 1..8>
        |       |   ,STRING = *UNCHANGED / *NONE / <c-string 1..32>
        |
,ADDITIONAL-COPIES = *UNCHANGED / <integer 0..255>
,LOCK-FILE = *UNCHANGED / *YES / *NO
,DELETE-AFTER-PRINT = *UNCHANGED / *NO / *YES(...) / *DESTROY(...)
    *YES(...)
        |
        |   LINE-TRUNCATION = *UNCHANGED / *STD / *DELETE-FILE / *KEEP-FILE
    *DESTROY(...)
        |
        |   LINE-TRUNCATION = *UNCHANGED / *STD / *DELETE-FILE / *KEEP-FILE

```

Operands

JOB-IDENTIFICATION = *TSN(...) / *MONJV(...)

*SERVER-TSN(...)

*CLIENT-TSN(...)

Specifies how the job is identified.

JOB-IDENTIFICATION = *TSN(...)

The print job is identified by its local task sequence number (TSN).

TSN = <alphanumeric-name 1..4>

TSN of the job to be modified.

CLUSTER-NAME = *LOCAL-CLUSTER / <name 1..8>

Name of the cluster in which the print job is processed. If you specify a cluster name, the specified TSN is the TSN on the gateway host in the specified remote cluster. Only BS2000 clusters can be specified.

JOB-IDENTIFICATION = *MONJV(...)

The print job is identified by its monitoring job variable.

MONJV = <filename 1..54 without-gen-vers>

This operand allows a print job to be addressed by means of its MONJV, provided the specified MONJV is accessible on the host at which the command is issued. Only print jobs in the local cluster can be addressed in this way.

JOB-IDENTIFICATION = *SERVER-TSN(...)

The print job is identified by its TSN (task sequence number) on the server. Only print jobs in the local cluster can be addressed in this way.

TSN = <alphanumeric-name 1..4>

Task sequence number of the job to be modified on the server.

SERVER-NAME = *HOME / <alphanumeric-name 1..8>

Name of the server on which the print job is processed.

JOB-IDENTIFICATION = *CLIENT-TSN(...)

Only for the cluster administrator. The print job is identified by its TSN on the client. Only print jobs in the local cluster can be addressed in this way.

TSN = <alphanumeric-name 1..4>

Task sequence number of the job to be modified on the client.

HOST-NAME = *HOME / <alphanumeric-name 1..8>

Name of the host on which the print job is processed.

DOCUMENT-PART = *UNCHANGED / *PARAMETERS(...)

Allows you to limit processing of the print file to only a part of it and thus change what was specified in the PRINT-DOCUMENT command.

The file to be printed (the input file) consists of a sequence of records each of which can be identified by SPOOL by means of its record number or a string it contains.

SPOOL also allows you to structure the print file by using strings as file marks. These file

marks divide the file up into sections. SPOOL takes into account all the options set by the user and converts the input file into a file edited for printing (an output file). This file consists of logical files and pages. The delimitation of part or parts of a file can apply to either the input file or the output file. The following alternatives for defining parts of a file are available in the substructures of this operand:

- INPUT-SECTION: the input file can be subdivided into sections on the basis of a specified string, or the whole file can be processed.
- INPUT-PART: only a certain number of the input file's records are processed. You can specify the first and last record by means of a record number, a section number or a string.
- RECORD-PART: of the records selected by means of the above operands, only a specified part of each record is processed.
- OUTPUT-PART: the whole input file is edited for printing, but output is limited to a subset of all logical print pages.

DOCUMENT-PART = *PARAMETERS(...)

The part of the file to be processed can be specified in the following substructure.

INPUT-SECTION = *UNCHANGED / *WHOLE-FILE / *PARAMETERS(...)

Specifies whether the file is to be structured by means of file marks, and thus allows you to change what was specified in PRINT-DOCUMENT.

INPUT-SECTION = *WHOLE-FILE

The file is not structured. The whole input file is a single logical section.

INPUT-SECTION = *PARAMETERS(...)

The file is structured by means of file marks that can be specified in the following substructure. You use the INPUT-PART operand to specify which sections of the structured print file are to be output.

SECTION-IDENTIFIER = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>

Specifies the file marks by means of which the input file is to be structured. Any strings in the records can be used as file marks. These strings can be either in SECTION records, which are not printed, or in the print file's normal records, which are printed. A string can be specified in the form of printable characters or hexadecimal characters.

You use the INPUT-PART operand to specify which parts of the subdivided print file are to be output. The search for the start of the section to be printed is executed in a separate "pseudo controller" task. Neither the user task nor the printer is locked while this is being done.

A pseudo controller writes the address of the first record in the section to the SPOOL control block; the spoolout job can then be processed (PREPROCESSING). If the desired section is not found in the file, an error message appears on the trailer page (for the layout of the trailer page, see the "SPOOL (BS2000/OSD)" and "RSO (BS2000/OSD)" manuals).

POSITION = *UNCHANGED / *STD / <integer 1..2047>

Specifies the position as of which the specified string begins in the SECTION record.

POSITION = *STD

The relevant string begins by default at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field
- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

POSITION = <integer 1..2047>

The relevant string begins at the specified byte (after the record length field).

INPUT-PART = *UNCHANGED / *ALL / *PARAMETERS(...)

Specifies whether only a certain number of the input file's records are to be processed, and thus allows you to change what was specified in PRINT-DOCUMENT. You can specify the first and last record by means of a record number, a section number or a string.

INPUT-PART = *ALL

All the file's records are to be processed.

INPUT-PART = *PARAMETERS(...)

Only a certain number of the input file's records are to be processed. You can specify the first and last records.

FIRST-RECORD = *UNCHANGED / *BEGIN-OF-FILE / <integer 1..2147483647> / *BY-STRING-ID(...)

Specifies the record as of which the file is to be processed. You can specify the first record in the file, the number of a record or file mark, or a string in a record.

FIRST-RECORD = *BEGIN-OF-FILE

Output begins with the file's first record, even if SECTION records are specified.

FIRST-RECORD = <integer 1..2147483647>

Number of the SECTION record or normal record as of which a section of the file is to be output.

FIRST-RECORD = *BY-STRING-ID(...)

The record in which a specified string occurs is the first record to be output.

STRING = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>

Output begins with the record in which the specified string of printable or hexadecimal characters is found at a specific position.

POSITION = *UNCHANGED / STD / <integer 1..2047>

Position within the record at which the specified string of hexadecimal characters begins. By default (STD), the FIRST-RECORD string begins at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field
- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

OCCURRENCE = *UNCHANGED / <integer 1..32767>

Specifies the record (containing the FIRST-RECORD string) as of which output is to start.

LAST-RECORD = *UNCHANGED / *END-OF-FILE / <integer 1..2147483647> / *BY-STRING-ID(...)

Specifies the last record in the part of the file to be output. You can specify the last record in the file, the number of a record or file mark, or any string in a record.

LAST-RECORD = *END-OF-FILE

Output continues until the end of the file, even if SECTION records are specified.

LAST-RECORD = <integer 1..2147483647>

Number of the last record (SECTION record or normal record) in the part of the file to be output.

LAST-RECORD = *BY-STRING-ID(...)

Specifies that the last record is to contain a specified string.

STRING = *UNCHANGED / <c-string 1..60 with-low> / <x-string 1..120>

Output ends with the record in which the specified string of printable or hexadecimal characters is found at a specific position in the file.

POSITION = *UNCHANGED / STD / <integer 1..2047>

Position in the record as of which the specified string begins. By default (STD), the LAST-RECORD string begins at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field
- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

OCCURRENCE = *UNCHANGED / <integer 1..32767>

Specifies the occurrence of the record containing the LAST-RECORD string at which output is to stop.

Note

If the LAST-RECORD record is found before the FIRST-RECORD record, the PRINT-DOCUMENT command aborts.

RECORD-PART = *UNCHANGED / *ALL / *PARAMETERS(...)

Specifies whether only a specific part of each of the records selected by means of the above operands is to be processed.

RECORD-PART = *ALL

All of each selected record is to be processed.

RECORD-PART = *PARAMETERS(...)

Only a specific part of each record is to be processed.

FIRST-CHARACTER = *UNCHANGED / <integer 2..32767>

Allows a byte number (record column) to be specified indicating the point as of which the records of a file are to be output. (The bytes of a record are numbered consecutively from left to right starting with 1; ISAM keys and control characters are components of a record).

What happens depends on whether or not one of the values *BY-EBCDIC-CONTROL, *BY-IBM-CONTROL or *BY-ASA-CONTROL is specified in the LINE-SPACING operand.

If one of these values is specified:

Output starts with the data byte following the specified byte number. The feed control character is interpreted irrespective of the entry for FIRST-CHARACTER, provided the value for FIRST-CHARACTER is less than the length of the record. If the specified value is greater than the length of the record, it is ignored (i.e. printing does not take place, nor does line feed).

If none of these values is specified:

Output starts with the data byte corresponding to the specified byte number. If the records are longer than the form definition allows, printing continues in the next line. If CONTROL-MODE=*PAGE-MODE is specified, an entry for FIRST-CHARACTER is problematical because SPOOL takes no account of the number of control characters in a record.

LAST-CHARACTER = *UNCHANGED / *STD / <integer 1..32767>

Specifies the byte indicating the point at which printing of each record is to stop.

What happens depends on whether or not one of the values *BY-EBCDIC-CONTROL, *BY-IBM-CONTROL or *BY-ASA-CONTROL is specified in the LINE-SPACING operand.

If one of these values is specified:

Output ends with the data byte following the specified byte number (unless FIRST-CHARACTER is specified for an ISAM file with KEY-POSITION=5, in which case output ends with the data byte corresponding to the specified byte number).

If none of these values is specified:

Output ends with the data byte corresponding to the specified byte number. If the records are longer than the form definition allows, printing continues on the next line. If CONTROL-MODE=*PHYSICAL is specified, an entry for LAST-CHARACTER is problematical because SPOOL takes no account of the number of control characters in a record.

Default (*STD):

- end of print line (136).
- 2048 for an EAM file, SYSLST or SYSOUT.

OUTPUT-PART = *UNCHANGED / *ALL / *RANGE / *LAST(...)

Specifies that the whole input file is to be edited for printing but that output is to be limited to a subset of all logical print pages, and thus allows you to change what was specified in PRINT-DOCUMENT.

OUTPUT-PART = *ALL

All logical print pages of the edited file are to be output.

OUTPUT-PART = *RANGE(...)

Part of the file is to be output.

FROM = *UNCHANGED / *BEGIN-OF-FILE / <integer 1..2147483647>

Allows a page or line number in the print file to be specified as of which output is to start, as specified by the DIMENSION operand. By default, output commences at the beginning of the file. The pages in a print file are defined as described for the LINE-PER-PAGE operand (unless a control character produces a premature page feed).

This operand may only be used with CONTROL-MODE=*APA, provided DIMENSION=*PAGES is also specified at the same time.

TO = *UNCHANGED / *END-OF-FILE / <integer 1..2147483647>

Allows a page or line number in the print file to be specified at which output is to end, as specified by the DIMENSION operand.

By default, output terminates at the end of the file. The pages in a print file are defined as described for the LINE-PER-PAGE operand (unless a control character produces a premature page feed). The value specified here must be greater than that specified in the FROM operand.

This operand may only be used with CONTROL-MODE=*APA, provided DIMENSION=*PAGES is also specified at the same time.

DIMENSION = *UNCHANGED / *PAGES / *LINES

Specifies whether the values in the FROM and TO operands are to be interpreted as page or line numbers.

OUTPUT-PART = *LAST(...)

Only the last so many pages or lines of the print file are to be output.

LAST = *UNCHANGED / <integer 1..2147483647>

Number of pages or lines to be output, calculated from the end of the file. The DIMENSION operand indicates whether the value is to be interpreted as a page or line number. Pages in a print file are defined by the LINE-PER-PAGE operand (unless a control character produces a premature page feed).

DIMENSION = *UNCHANGED / *PAGES / *LINES

Specifies whether the value in the LAST operand is to be interpreted as a page or line number.

Example of SECTION processing:

The following sections of an ISAM file are to be output.

```
01000000      Line 0
02000000    *SECTION0001
03000000      Line 1
04000000    *SECTION0002
05000000      Line 2
06000000    *SECTION0003
07000000      Line 4
```

SECTION records in default positions:

```
PRINT-DOCUMENT file, DOCUMENT-PART=*PAR( INPUT-SECTION=*PAR( SECT-ID=
C'*SECTION', POS=*STD), INPUT-PART=*PAR( FIRST-RECORD=1, LAST-RECORD=3))
```

The following part of the file is printed:

```
03000000      Line 1
05000000      Line 2
```

DOCUMENT-FORMAT = *UNCHANGED / *TEXT(...) / *PAGE-FORMAT(...) / *SPECIAL-FORMAT(...)

Specifies the type of the document contents, i.e. the format of the file to be printed as regards the interpretation of feed control characters, printer control characters, font identifiers, RENO commands and/or VTSU codes. You can specify the following operands and the corresponding substructures here:

- *TEXT: the file has no printer-specific control characters except for feed control characters.
- *PAGE-FORMAT: the file has laser printer-specific control characters.
- *SPECIAL-FORMAT: the file has special printer-specific control characters.

DOCUMENT-FORMAT = *TEXT(...)

Except for feed control characters, the file has no printer-specific control characters. The position of the feed control character in the record can be specified in the substructure of the LINE-SPACING operand.

The data is sent to the printer unchanged. Since only the data to be printed is sent to the printer, records can be truncated.

The following applies to HP and HP90 printers:

When the operand TO-PRINTER=*PAR(PRINTER-TYPE=*ANY) is specified, the character X'FF' is replaced by the character X'1F' in order to be compatible with the PRM statement CONVERT-PRINT-RESOURCES.

The following applies to LP65 printers:

Spoolout jobs for which DOCUMENT-FORMAT=*TEXT is specified can contain any LP65 control characters and printer control characters. Only records longer than 8192 characters are truncated.

The following applies to RSO:

Records of type A-1 or A-2 are to be printed (no control characters in the data stream); in other words, except for feed control characters in the first column of the records, no control characters are interpreted. This is also the reason why a font change is not possible. The form's default font or the first font specified for CHARACTER-SETS, if specified, is used. Nonprintable characters, i.e. characters with a hexadecimal value less than X'40', are output as blanks. If the record length exceeds the maximum line length, the record is truncated in the printout. The maximum line length depends on the character spacing, which is defined by means of the font used (see the CHARACTER-SETS operand).

Note

RSO printers: If a list of fonts is specified in conjunction with DOCUMENT-FORMAT=*TEXT (CHARACTER-SETS=... operand), the command interprets only the first element in the list.

LINE-PER-PAGE = *UNCHANGED / *STD / <integer 1..32767>

Specifies how many lines (including the header and blank lines) are to be printed on a page.

LINE-PER-PAGE = *STD

If the operand is omitted, the number of lines per print page is calculated using the following formula, regardless of what has been specified for the HEADER-LINE operand:

Number of lines = P * L - N - 6

Where:

P = paper size in inches

L = line density

N = number of lines before the first channel 1

Printers with a loadable vertical format buffer

- The vertical tab "channel 1" controls the line on which printing is to start. Unless otherwise specified, 2 blank lines are set before printing starts; i.e. channel 1 (CHANNEL 01) is in the third line of the loop.
- If the value specified for the LINE-PER-PAGE operand is greater than the specified number of lines in the loop, the value in the loop is used.
- If the LINE-PER-PAGE operand is specified together with the HEADER-LINE and LINE-SPACING operands, a value specified here must be at least three times that of the line feed specified for LINE-SPACING=1/2/3.

LINE-SPACING = *UNCHANGED / 1 / 2 / 3 / *BY-EBCDIC-CONTROL(...) / *BY-IBM-CONTROL(...) / *BY-ASA-CONTROL(...)

Specifies the number of line feeds or the type of control character interpretation.

LINE-SPACING= 1 / 2 / 3

The records are to be printed with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL(...)

The contents of the first byte of each record are to be interpreted as EBCDIC feed control characters.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

LINE-SPACING = *BY-IBM-CONTROL(...)

The contents of the first byte of each record are to be interpreted as IBM feed control characters.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

LINE-SPACING = *BY-ASA-CONTROL(...)

The contents of the first byte of each record are to be interpreted as ASA feed control characters.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

HEADER-LINE = *UNCHANGED / *NO / *STD / list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER

Specifies whether a header line is to be printed on every page (except the header and trailer pages).

HEADER-LINE = *NO

No header line is printed.

HEADER-LINE = *STD

The header has the following format:

Header	DATE yyyy-mm-dd	userid	file	PAGE nnnn
Column	1	41(11,11)	60(21,67)	124 (77)

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

- yy-mm-dd year-month-day
- userid user identification
- file file name
- nnnn page number

Unless otherwise specified, the header line is followed by a blank line. The header is shifted in accordance with the LEFT-MARGIN operand, but the header line will be truncated at column 132. DATE and PAGE are only present in the header line if the line size ≥ 032.

HEADER-LINE = list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER

The header has the following format:

HEADER-LINE=	DATE	FIRST-RECORD	PAGE-NUMBER
Header	DATEyyyy-mm-dd (yyyy-mm-dd)	First record	PAGE nnnn (nnnn, nnnn)
Column	1	21	124 (77,67)

***DATE:**

The value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 70 characters (with differing values).

***PAGE-NUMBER:**

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

yyyy-mm-dd	year-month-day
First record	first logical record of the file
nnnn	page number

If *DATE, *FIRST-RECORD or *PAGE-NUMBER is omitted, the appropriate section is filled with blanks. Unless otherwise specified, the header line is followed by a blank line. The header is shifted in accordance with the value in the LEFT-MARGIN operand, but the header line will be truncated at column 132. *DATE and *PAGE are only present in the header line if the line size ≥ 032. If *FIRST-RECORD is specified, the first record is regarded as not belonging to the date.

OUTPUT-FORMAT = *UNCHANGED / *CHARACTER / *HEXADECIMAL

Indicates whether the output format is character format only or character format and hexadecimal format.

OUTPUT-FORMAT = *CHARACTER

Outputs in character format only. Records which exceed the length of a print line are truncated.

OUTPUT-FORMAT = *HEXADECIMAL

Outputs the data records in character format and in hexadecimal format.

Output format

Each output line starts with an 8-byte prefix followed by data 50 bytes in length. Each output line is first printed using the appropriate font and then repeated in hexadecimal format.

Format of the output line

Column	Contents
1-4	Number of the byte in the record which is output first in this line
5-8	Blanks
9-50	Characters in the input record using the appropriate font; the individual characters are separated by a blank. The characters are repeated in hexadecimal format in the next line

DOCUMENT-FORMAT = *PAGE-FORMAT(...)

The file shows - in a change to the original declarations in the PRINT-DOCUMENT command - specific control characters for laser printers.

FORMAT-NAME = *UNCHANGED / *STD / <c-string 1..63 with-low>

Name of the format in which the data to be output is transferred to the printer. If no value was specified for FORMAT-NAME, a default value is automatically derived from the value of the CONTROL-MODE operand as follows:

CONTROL-MODE = *PAGE-MODE(...)	FORMAT-NAME = *HP
CONTROL-MODE = *APA(...)	FORMAT-NAME = *SPDS
CONTROL-MODE = *LOGICAL / *PHYSICAL / *LINEMODE	FORMAT-NAME = *STD

The value FORMAT-NAME = *STD means that the contents of the file to be printed are not relevant.

CONTROL-MODE = *UNCHANGED / *PAGE-MODE(...) / *LINE-MODE / *LOGICAL(...) / *PHYSICAL(...) / *APA(...)

Specifies how the control characters are to be interpreted.

CONTROL-MODE = *PAGE-MODE(...)

The control characters are suitable for processing on page printers.

PAGE-CONTROL-CHAR = *UNCHANGED / *YES / *NO

Specifies whether the control character list must be at the beginning of each page (i.e. always after branching to the vertical tab "channel 1" in the loop).

PAGE-CONTROL-CHAR = *YES

The control character list must be there.

PAGE-CONTROL-CHAR = *NO

No control character list at the beginning of the page. However, this means that the following functions cannot be controlled in the case of output to HP printers:

- Film overlays on individual pages in the file; specified in the MODIFY-PRINT-JOB-ATTRIBUTES command, a film overlay is used on each page of the print file of the spoolout job.
- Page copies of individual pages of the file; all pages of the print file are output with as many copies as were specified in the in the MODIFY-PRINT-JOB-ATTRIBUTES command.
- Column-oriented indentation on individual pages; the value specified in the MODIFY-PRINT-JOB-ATTRIBUTES command is valid for all the pages in the print file.
- FOB data overlay on individual pages in the file; specified in the MODIFY-PRINT-JOB-ATTRIBUTES command, an FOB data overlay is used on each page in the print file of the spoolout job.

- A copy reference number cannot be specified.
- Page rotation control for individual pages in the print file; all the pages are output in either portrait or landscape format, as specified in the MODIFY-PRINT-JOB-ATTRIBUTES command.

CONTROL-TYPE = *UNCHANGED / *HP / *COMPATIBLE

Specifies whether the control characters are suitable for processing on HP or HP90 printers or whether they have to be converted.

CONTROL-TYPE = *HP

The file contains HP or HP90 printer-specific control characters that can only be processed by these printers.

CONTROL-TYPE = *COMPATIBLE

The file does not contain HP or HP90 printer-specific control characters. SPOOL must convert the control characters.

LINE-SPACING = *UNCHANGED / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Specifies the number of line feeds or the type of control character interpretation.

LINE-SPACING = *BY-EBCDIC-CONTROL

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-MODE = *LINE-MODE

Only for RSO. Records of type C (see appendix) are printed out. The records may contain data mixed with LINE-MODE control characters. LINE-MODE control characters are (in any combination):

- printer control characters (i.e. physical control character beginning with X'27' or X'3C')
- RENO commands
- VTSU codes

Control over record and file formats (including page and line feed with LINE-MODE control characters) rests solely with the user. With the 9025/9026 RENO page printer, users must also ensure that the printer is set to the correct start position on the paper.

A loop is not interpreted. Nonprintable characters, i.e. characters with a hexadecimal value < X'40' are output as blanks.

The spoolout job is executed with the default font of the form used until you change the font in the file with the aid of LINE-MODE control characters.

CONTROL-MODE = *LOGICAL(...)

Only for RSO printers. Specifies that records of type B-1 or B-2 are to be printed out, i.e. records which, in addition to a feed control character in the first byte, may contain data mixed with font identifiers, printer control characters, RENO commands and VTSU codes (see the "[RSO \(BS2000/OSD\)](#)" manual, section "Record type B-1/B-2"). With the exception of the VTSU codes VPA, NP, VT, NL and CR, which are output as blanks, the above-mentioned control characters are interpreted. A character set identifier, a VTSU code or a RENO command remains valid until a new control character is specified. If the font identifier is omitted, the default font for the form is used.

Since page feed is implemented via a loop or constant line feed when CONTROL-MODE=LOGICAL is specified, the file should not contain the RENO commands \LF, \VF and \CR. Setting the form height is likewise not permitted.

LINE-PER-PAGE = *UNCHANGED / *STD / <integer 1..32767>

Specifies how many lines (including header and blank lines) are to be printed on a page.

LINE-PER-PAGE = *STD

If no value is specified, the number of lines per print page is calculated according to the following formula, regardless of the value in the HEADER-LINE operand:

$$\text{Number of lines} = P * L - N - 6$$

Where:

P = paper size in inches

L = line spacing

N = number of line before the first channel 1

If the value specified for the LINE-PER-PAGE operand is greater than the specified number of lines in the loop, the value in the loop is used. A value specified here must be at least three times as large as the line feed specified for LINE-SPACING=1/2/3 if the LINE-PER-PAGE operand is specified together with the HEADER-LINE and LINE-SPACING operands.

LINE-SPACING = *UNCHANGED / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Defines the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING= 1 / 2 / 3

The records are to be printed out with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

LINE-SPACING = *BY-IBM-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

LINE-SPACING = *BY-ASA-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-CHAR-POS = *UNCHANGED / *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

CONTROL-MODE = *PHYSICAL(...)

Only for RSO. Specifies that

- laser printer-specific control characters (local SPOOL) or
- records of type D-1 / D-2 (RSO) - i.e. data mixed with VTSU codes, printer control characters and RENO commands - are to be interpreted.

It thus allows you to change what was specified in PRINT-DOCUMENT. Control characters contained in the print data are interpreted. In the case of HP printers, a record for a 13.6-inch form may be up to 700 bytes long (including control characters and the escape character X'FF'). If the number of characters to be printed per record exceeds the physical capacity of the laser printer, the spoolout job is terminated abnormally. The maximum line length depends on the character pitch (see table of valid character spacings). The interpretation of control characters must be activated in the first record of each print page.

Output to local SPOOL devices:

When CONTROL-MODE = *PAGE-MODE and CONTROL-TYPE = *COMPATIBLE are specified, the X'FF' characters are converted to X'1F'. Laser printer-specific control characters in the records are interpreted. The first character in each record is interpreted as a feed control character. For ISAM files the key must be at the start of each record.

The file can be printed out using more than one font. The appropriate control characters can occur in any position in the text. The LEFT-MARGIN, PAGE-COPIES and LINE-PER-PAGE operands are ignored if they are specified together with CONTROL-MODE=*PHYSICAL.

Output to RSO devices:

LINE-SPACING=*NO is set automatically, which means that you must implement page and line feeds with LINE-MODE control characters (i.e. VTSU codes, printer control characters and RENO commands) in the file itself.

If you specify LINE-SPACING=*BY-EBCDIC-CONTROL for records of type D-2, the feed control character in the first byte is interpreted as a line or page feed control character. Nonprintable characters are also transferred to the printer (in contrast to CONTROL-MODE=*LINE-MODE).

You are responsible for the correctness of the control characters in the file (including feed control).

LINE-SPACING = *UNCHANGED / *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Specifies the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING = *NO

The contents of the first byte of each record are not interpreted as a control character.

LINE-SPACING = 1 / 2 / 3

Permitted only for RSO. The records are to be printed out with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-MODE = *APA(..)

Specifies that the file to be printed contains APA printer control characters that are to be interpreted, and thus changes what was specified in PRINT-DOCUMENT.

LINE-SPACING = *UNCHANGED / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Specifies the type of the printer control characters (E, I or A).

DOCUMENT-FORMAT = *SPECIAL-FORMAT(...)

Specifies that, contrary to an original declaration in the PRINT-DOCUMENT command, a printer-specific language is used in the document. In this case, SPOOL provides transparent control for the document, i.e. the file is transferred without being evaluated.

FORMAT-NAME = *UNCHANGED / *NONE / *PCL / <c-string 1..63 with-low>

Specifies the format to be processed. The document is processed in transparent mode.

FORMAT-NAME = *NONE

The document is either processed by RSO in transparent mode or is sent to UNIX-SPOOL/Xprint without a special format.

Data records of type E-1 or E-2 are printed by RSO (see the “[RSO \(BS2000/OSD\)](#)” manual). The records can contain any characters except VTSU codes for RSO.

All characters of a record are transferred to the printer without being interpreted by RSO, except for the feed control character in the first byte of type E-2 records.

You are responsible for the correctness of the control characters in the file (including feed control). If the LINE-SPACING operand is omitted, the default value LINE-SPACING=*NO is used and you must implement page and line feeds in the file with LINE-MODE control characters.

If LINE-SPACING=*BY-EBCDIC-CONTROL is specified for type E-2 records, the feed control character in the first byte is interpreted as a line or page feed control character. If the LEFT-MARGIN operand is specified at the same time, blanks are inserted at the start of each record which shift the text the desired number of columns during printout.

FORMAT-NAME = *PCL

The following applies to PCL printers only:

The document contains control sequences for PCL printers. PCL documents are complete in themselves. All of the necessary definitions are already contained in the document file or are provided by the printer. UNIX and Windows printer drivers create this type of document file. PCL document files can be written in any version of the PCL printer language as of PCL3.

Under BS2000 a PCL document must be printed using the DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL) operand in the PRINT-DOCUMENT command.

FORMAT-NAME=*PCL has the same effect as FORMAT-NAME='PCL'.

FORMAT-NAME = <c-string 1..63 with-low>

This operand specifies that the document to be processed has a specific content type (e.g. HP LASERJET).

With jobs which are sent to a UNIX cluster, the operand value is determined by the document format attribute transferred to the UNIX cluster. It is interpreted by SINIX-SPOOL/Xprint as the 'content type' attribute of the UNIX-SPOOL/Xprint job (xpad -job -ct...). This document content type fulfills the relevant requirements of ISO DPA class 1, which is necessary for interoperability between the BS2000 Spool & Print subsystems and foreign spool and print systems.

With jobs sent to RSO, the job is printed by the RSO printer if the printer supports the specified format name or if a filter exists which can convert this format name into one which is supported by the printer.

As soon as the value of CLUSTER-NAME refers to a BS2000 cluster or is not specified, the length of the format name is restricted to 8 characters. If the value of FORMAT-NAME is longer in this case, the command is rejected. The file to be printed is processed by a printer which understands the specified format name.

In any case, the printer must have been defined in the SPOOL parameter file together with the format name.

LINE-SPACING = *UNCHANGED / *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Specifies the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING = *NO

The contents of the first byte of the records are not interpreted as control characters.

LINE-SPACING = 1 / 2 / 3

Only permitted for RSO. The records are to be printed out with 1-, 2, or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL

Only for RSO. The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

Only for RSO. The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

Only for RSO. The contents of the first byte of each record are to be interpreted as an ASA feed control character.

PRINT-JOB-CONTROL = *UNCHANGED / *PARAMETERS(...)

Specifies whether the parameters specified in PRINT-DOCUMENT for controlling the processing of this print job are to be changed.

PRINT-JOB-CONTROL = *PARAMETERS(...)**CHECKPOINT = *UNCHANGED / *ON-PAGES / *ON-SECTION-RECORDS**

Specifies whether checkpoint processing is to be performed by the controller on the basis of pages or SECTIONS.

CHECKPOINT = *ON-PAGES

Default restart mechanism. When an interrupted job is restarted, processing is resumed from a point a given number of pages back.

CHECKPOINT = *ON-SECTION-RECORDS

The operand value can be specified for all printer types but offers advantages particularly in the case of output to HP90 printers using the TWO-UP procedure and LP65 printers.

With these types of printer, a physical page can comprise a number of logical pages without SPOOL detecting it (the information is in the PCL file); in other words, the default restart mechanism, which is geared to logical pages, is highly prone to errors with this type of printer.

SECTION records are used here as restart markers. You divide your files into sections with the aid of SECTION records. These SECTION records must contain the printer commands needed to ensure correct data processing. If a physical page contains a number of logical pages, the start of a physical page must also be clearly indicated in the SECTION record.

If an error occurs, processing is resumed with HOLD-PRINT-JOB and RESUME-PRINT-JOB a given number of sections further on in the file; i.e. RESTART-POSITION = PAGE(...) or BACK(...) refers to sections rather than pages. Similarly, the values shown in error messages are not pages but sections.

To arrive at a correct result, a section must correspond to at least one physical page (ideally to precisely one page). If the operand value CONTROL-MODE=*PAGE-MODE is specified together with CHECKPOINT=*ON-SECTION-RECORDS, in the case of output to a laser printer, you must ensure that the SECTION records are located immediately ahead of records which contain the control character line at the start of the print page. As soon as repositioning takes place (PRINT-DOCUMENT or restart of an interrupted job), the first record that SPOOL prints must contain the control character line.

PRINT-JOB-NAME = *UNCHANGED / <alphanum-name 1..8> / <c-string 1..8 with-low>

Job name for the spoolout job. The job name can be formed from a maximum of 8 characters from the set (A,...,Z,0,...,9,@,#,\$,,-) but must not start with a hyphen or end with a period. It may only start with a period if this is followed by an alpha character; in

this case, the period is not printed as part of the job name on the header page. The special character string period and hyphen '.'-' may only be specified in quotes. The job name is printed on the header page in the third uppercase line and also appears in the output of the SHOW-PRINT-JOB-STATUS command. If this operand is omitted, the job name from the SET-LOGON-PARAMETERS command is used instead.

PRINT-JOB-NAME = <alphanum-name 1..8 / <c-string 1..8 with-low>

Job name which is to be assigned to the spoolout job (and which overwrites a job name assigned to the job issuing the command).

PRINT-JOB-PRIORITY = *UNCHANGED / <integer 30..255>

Defines the urgency with which this spoolout job is started relative to other spoolout jobs.

PRINT-JOB-PRIORITY = <integer 30..255>

Priority to be assigned to the spoolout job. The highest priority you can assign here is defined in the user catalog and can be displayed with the SHOW-USER-ATTRIBUTES command. If an invalid priority is entered (or no priority at all), the spoolout job is given the same priority as the job issuing the command.

PRINT-JOB-CLASS = *UNCHANGED / <integer 1..255>

For the SPOOL administrator only.

Defines the job class of the spoolout job.

PRINT-JOB-CLASS = <integer 1..255>

The specified job class is assigned to the spoolout job. For reasons of compatibility the value 0 (zero) is not permitted.

FAILURE-PROCESSING = *UNCHANGED / *PARAMETERS(...)

Specifies whether a specific message page is to be created when an error occurs during current processing on an APA printer.

FAILURE-PROCESSING = *PARAMETERS(...)

Specifies what happens in the event of an error.

MSG-PAGE = *UNCHANGED / *YES / *NO

Specifies whether or not the APA message page is to be printed. The APA message page contains error messages and warnings. If an APA printer is not being used, this parameter is ignored.

SCHEDULING-TIME =

Defines the scheduling time, i.e. the earliest time at which a print job can be started.

SCHEDULING-TIME = *STD

There is no scheduling time, i.e. the print job will be started depending on the printer availability and processing rules for print jobs.

SCHEDULING-TIME = *EARLIEST(...)

Starts the print job at the earliest possible date and time.

DATE = *UNCHANGED / *TODAY / <date>

Defines the day on which a print job is started.

DATE = *TODAY

Schedules the print job for the current date.

DATE = <date>

Defines the date in the form <year>-<month>-<day>. This entry comprises three unsigned integer values separated by hyphens. The year must be specified in four positions. The month entry can have up to two positions with 1..12 as the possible values. The entry for the day can also have up to two positions with 1..31 as the possible values, provided the resulting date specification is valid. In other words, a date such as 2000-02-30 is not allowed.

TIME = *UNCHANGED / <time>

Determines the time at which a print job is started.

TIME = <time>

Defines the time of day in the form <hours>:<minutes>. This entry comprises two unsigned integer values of 2 positions each, separated by a colon. The possible integers are 0..23 for the hours and 0..59 for the minutes. Single-digit values may be preceded by a zero.

LAYOUT-CONTROL = *UNCHANGED / *PARAMETERS(...)

Specifies all the parameters that control page layout, and thus allows you to change what was specified in PRINT-DOCUMENT.

PAGE-COPIES = *UNCHANGED / *STD / <integer 0..255>

Number of page copies.

Specifies how many times each individual page is to be repeated. The ADDITIONAL-COPIES operand allows additional printouts of the whole file to be requested.

A PRINT-DOCUMENT command with the PAGE-COPIES operand is rejected if the line number specified in the LINE-PER-PAGE operand is greater than the number of lines in the loop record minus the number of lines before the line on which the vertical tab "channel 1" is defined.

On an HP or HP90 printer or a 2050 or 2090-APA printer (incl. printer pairs), a maximum of 255 copies of a page can be printed in succession.

PAGE-COPIES=255 has the same effect as PAGE-COPIES=254: one original and 254 copies are printed.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

In local SPOOL mode, only for the printer types HP, HP90 and LP65.

PAGE-COPIES = *STD

For LP65, 4830-PCL and 4850-PCL printers:

The number of page copies is as specified in the PCL file.

For all other printer types:

PAGE-COPIES=0.

LEFT-MARGIN = *UNCHANGED / *STD / <integer 0..31>

Number of columns by which the output text is to be indented.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

For APA printers:

The operand LEFT-MARGIN corresponds to the parameters PDSOFFXF/INFOFFXF and PDSOFFXB/INFOFFXB of the job parameter files. It may be specified together with the LEFT-OFFSET operand. In this case, both parameter specifications are added, thus determining the offset of the logical page.

LEFT-MARGIN = *STD

For all printers with the exception of RSO printers:

the output text is to be indented by the specified number of columns.

For all RSO printers:

the output text is to be indented by the specified number * 1/10 inch.

The default value can be displayed using the SHOW-SPOOL-PARAMETERS command or SPSERVE statement; the information is given in the PRINT-CMD-DEFAULTS:...LEFT-MARGIN = ... output field. The LEFT-MARGIN operand is ignored if the operand CONTROL-MODE=*PHYSICAL is specified at the same time.

For APA printers:

The operand specifies to what extent the left margin of the logical page is to be indented. The logical page will be indented by the specified number * 1/10 inch, independently of the CONTROL-MODE=*APA or CONTROL-MODE=*TEXT setting.

TWO-SIDED = *UNCHANGED / *STD / *NO / *YES / *TUMBLE

Specifies whether the LP65 printer is to print the paper on one side or two. This function is supported for LP65 single-sheet printers of the type 3365, 4830-PCL and PCL.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

TWO-SIDED = *STD

The paper is printed on one side (simplex mode) or two (duplex mode), as defined in the PCL file. For APA printers, printing is either single-sided (simplex mode) or two-sided (duplex mode), depending either on the PRINT-DOCUMENT command printing resource form definition or on the definition in the SPOOL parameter file.

TWO-SIDED = *NO

The paper is printed on one side (simplex mode).

TWO-SIDED = *YES

The paper is printed on two sides (duplex mode).

TWO-SIDED = *TUMBLE

The paper is printed on two sides (duplex mode), and the pages are turned over from top to bottom rather than left to right.

Note

The functions TWO-SIDED, ELECTRONIC-OVERLAY and PAGE-COPIES are linked and part of one and the same printer command. If only one of these operands is specified, default values are generated for the others.

ROTATION = *UNCHANGED / *NO / *BY-CONTROL-CODES / 0 / 90 / 180 / 270 / 0-180 / 180-0 / 90-270 / 270-90

Specifies whether the pages to be printed from the spoolout job are to be rotated, and if so by how many degrees.

The print page set up in the printer is rotated (clockwise) by a certain number of degrees and printed on the form; for example, paper inserted in the printer in portrait format can be printed in landscape format. A separate loop is needed for pages rotated through 90⁰/270⁰ (see the LOOP-NAME operand). Unless ROTATION=*NO is specified, output is directed (automatically) to HP, HP90, PCL printers as well as 4830-PCL and 4850-PCL printers.

For HP and HP90 printers SHOW-SPOOL-PARAMETERS indicates whether or not an HP or HP90 printer with a page rotation module is available in the current SPOOL configuration: output field DEVICE-TYPE:..., ROT=YES/NO.

Spoolout jobs with page rotation are displayed in the outputs for the commands SHOW-USER-STATUS and SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION=TSN (TSN=...) .

The feed for rotated pages is generally controlled via a separate loop (ROTATION-LOOP-NAME). If you have specified neither a ROTATION-LOOP-NAME for PRINT-DOCUMENT nor a form with a defined ROTATION-LOOP (see ADD-SPOOL-FORM), the default rotation loop R06 in the default form handles feed control for the rotated pages. Header and trailer pages are not printed out in rotated format.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

The values 0, 90, 180 and 270 can only be specified for 4830-PCL and 4850-PCL printer types.

For APA printers:

This parameter overrides the form definition specifications relevant to rotation (medium orientation). Header and trailer pages are not printed in rotated format. With line data, the page definition always complies with the PRINT-DOCUMENT specification, irrespective of the selected rotation (page orientation).

ROTATION = *NO

Page rotation is not performed. Any control characters for page rotation in the file are not interpreted.

For APA printers:

Page rotation is not performed, except when specified in the form definition.

ROTATION = *BY-CONTROL-CODES

Control characters for page rotation in the file are interpreted.

ROTATION = 0 / 90 / 180 / 270

Each print page is rotated by 90⁰ / 180⁰ / 270⁰ (clockwise) and printed out. Control characters for page rotation contained in the file are not interpreted. A separate loop is needed for pages rotated through 90⁰ / 270⁰. You must check that output with the specified loop does not lead to errors. If an error occurs, the job is rejected.

If the print job is to be printed on an APA printer, the specified loop and rotation loop, if present, must match an existing page definition. See also the operands LOOP-NAME and ROTATION-LOOP-NAME.

ROTATION = 0-180 / 180-0 / 90-270 / 270-90

The odd pages (number before the hyphen) and even pages (number after the hyphen) are to be printed at different angles.

This operand may not be specified with APA printers.

COVER-PAGES = *UNCHANGED / *PARAMETERS(...)

Parameters for system exit routines relating to the printing of header and trailer pages.

HEADER-PAGE-TEXT = *UNCHANGED / *NONE / <c-string 1..32 with-low>

The specified information (maximum of 32 characters) is stored in the SCB for processing the system exits. The first 8 characters are printed on the header page as an uppercase line under the mailing box. Only alpha characters, digits and a number of special characters are printed on the header page (in outsize type). All other character codes are automatically replaced by the printable character '?'.

Format of the header page:

1. User ID in outsize letters (10 lines + 2 blank lines)
2. Account number in outsize letters (10 lines + 2 blank lines)
3. Job name in outsize letters (10 lines + 2 blank lines)
4. Mailing box (address and identification field: 12 lines + 2 blank lines)

5. 'text' in outsize letters (10 lines + 2 blank lines)

Priority sequence:

1. Mailing box (address and identification field: 12 lines + 2 blank lines)
2. 'text' in outsize letters (10 lines + 2 blank lines)
3. Job name in outsize letters (10 lines + 2 blank lines)
4. User ID in outsize letters (10 lines + 2 blank lines)
5. Account number in outsize letters (10 lines + 2 blank lines)

HEADER-EXIT-NUMBER = *UNCHANGED / *NO / <integer 1..2147483639>

Number of desired header pages. The precise significance of this operand depends on the definitions made for the computer center. The default value is NO = 0.

TRAILER-EXIT-NUMBER = *UNCHANGED / *NO / <integer 1..2147483639>

Number of desired trailer pages. The precise significance of this operand depends on the definitions made for the computer center. The default value is NO = 0.

Note

The layout of the trailer page for local SPOOL is shown in the “[SPOOL \(BS2000/OSD\)](#)” manual.

TABLE-REFERENCE-CHAR = *UNCHANGED / *NO / *YES

Specifies whether users select fonts for print page layout by means of control characters in the text. The selection can be made with the aid of TRCs (table reference characters), which reference a list of fonts from within the records. The list can either be part of the PAGEDDEF page definition or can be declared by means of the CHARACTER-SETS operand. For a detailed description of how to use the TRC, see the “[SPOOL \(BS2000/OSD\)](#)” manual.

TABLE-REFERENCE-CHAR = *NO

No font selection control characters (TRCs) are stored in the print file, or these characters are not to be evaluated.

TABLE-REFERENCE-CHAR = *YES

The print file contains font selection control characters (TRCs) that are to be evaluated by SPS. Each TRC value represents a specific font that is to be used to print out the relevant record. The individual values (from X'00' to X'0F') must either be linked to the entries in the font list in the PAGEDDEF page definition, in the order in which they occur, or must be explicitly linked to the fonts specified in the CHARACTER-SETS operand in the order in which they occur. Regardless of the number of different TRC values in the file, a maximum of four fonts, to be specified in the form of a list, can be used for printing out the records. TRC values greater than X'03' (corresponding to the fourth element in the list) automatically reference the first font specified in the list.

LANGUAGE-EXTENSION = *UNCHANGED / *NONE / *PARAMETERS(...)

Only relevant when the optional product DSEM is available. Specifies whether a text with a language extension (i.e. containing two languages) is to be printed out.

LANGUAGE-EXTENSION = *NONE

The document does not contain a language extension.

LANGUAGE-EXTENSION = *PARAMETERS(...)

The document contains language extensions. These are specified in the substructure.

LANGUAGE-NAME = *UNCHANGED / *ARABIC / *FARSI

Language (Arabic or Farsi) contained in the document.

LANGUAGE-MODE = *UNCHANGED / *RIGHT-TO-LEFT / *LEFT-TO-RIGHT

Specifies whether the characters in the selected language are to be printed from right to left or left to right.

INPUT-TRAY-NUMBER = *UNCHANGED / *STD / *IGNORE / <integer 1..99> / *BY-FORMAT(...)

Number of the input tray from which the paper is to be taken for printing.

The following applies for PCL printers:

The number of the input tray specified is not checked against the actual number of input trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

The following applies to APA printers:

For page printers, the input tray is specified from which the paper is to be taken. The tray is selected by its physical tray number.

INPUT-TRAY-NUMBER = *STD

This operand is ignored if the print job is directed to a local SPOOL or a special printer pool. Otherwise, if the print job is directed to a particular RSO printer, for example, the paper is taken from the input tray defined in the device record of the printer in the SPOOL parameter file. This also applies to PCL printers. The input tray selection is valid for the entire spoolout process, i.e. including processing of the header and trailer pages.

For APA printers:

The paper is taken from the input tray specified in the form definition.

INPUT-TRAY-NUMBER = *IGNORE

Applicable for RSO and PCL printers only.

For RSO printers: RSO does not send a command to the printer specifying the input tray selected. The printers' preset value will be used.

For PCL printers: When *IGNORE is entered the default value will be used, this means that you cannot specify the input tray.

INPUT-TRAY-NUMBER = <integer 1..99>

Number of the input tray from which the paper is taken for printing the file itself as well as the header page and trailer page.

RSO does not check the specified value. Possible values: 1...99.

The following applies to PCL printers:

The number of the input tray specified is not checked against the actual number of input trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

The following applies to APA printers:

The number of input trays specified is not checked against the actual number of trays on the printer. If the requested input tray does not exist, SPS will cancel the printing process, except if an input tray substitution is defined in the parameter file (parameter: PDSFLH4, value: PDFS4BIN, see the "SPS" manual).

The following table shows the printer types and the maximum number of input trays in each case ("Max." column).

Printer	Max.	Printer	Max.	Printer	Max.	Printer	Max.
2030-PCL	2	9000	0	9002	0	9022	2
4011	2	9000-PCL	2	9003	0	9022-200	2
4812	2	9000-PRO	0	9004	3	9025	2
4813	2	9000-PS	0	9011	2	9026-PCL	4
4818-PCL	2	9000-EPFX	0	9012	2	9026-RENO	4
4821-PCL	2	9000-EPLQ	2	9013	3	9045-ANSI	0
4822-PCL	3	9000-EPSQ	2	9014	3	9046	0
4824-PCL	2	9000-EPSQ	2	9015	2	9645	0
4825-PCL	3	9001	0	9021	2	DJET	1
4830-PCL	3	9001-31	0				
4850-PCL	2	PCL printer	3				

The following table shows how RSO processes certain operand values depending on the device definition:

- INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command
- Device definition of the ADD-SPOOL-DEVICE statement with the operand FORM-FEED=*SINGLE-SHEET(DEFAULT-TRAY-NUMBER=...)

Default from the device definition	Value of the operand INPUT-TRAY-NUMBER		
	*STD	1..99	*IGNORE
1..99	Sets default value (1) or sets value *LISTING (2)	Sets value (1) or sets value *LISTING (2)	Last tray specified is used
*IGNORE	Last tray specified is used	Sets value (1) or sets value *LISTING (2)	Last tray specified is used

- (1) on single-sheet printers and printer type 9015 (list printer)
- (2) on list printers, except for printer type 9015

INPUT-TRAY-NUMBER = *BY-FORMAT(...)

Defines the input tray via specification of the paper format.

INPUT-TRAY-FORMAT = *UNCHANGED / *A3 / *A4 / *A5 / *B4 / *B5 / *FOLIO / *INVOICE / *EXEC / *LEGAL / *LETTER / *DOUBLE-LETTER / *MONARCH / *COMMERCIAL-10 / *DL / *C5 / *MANUAL / *A3-UNCUT / *A4-UNCUT / *LEDGER

The operand values all correspond to a paper format, with the exception of *MANUAL.

To ensure that the values specified in the FORM operand for PAGE-SIZE and LINE-SIZE do not exceed the maximum values permitted for the chosen paper format, the values of the FORM operand are compared with the maximum permissible values for the paper format.

The table below contains the maximum permissible values for PAGE-SIZE and LINE-SIZE for the various paper formats and shows which printers support the paper format. For all paper formats, the sheets are taken from the first input tray that contains sheets of this format.

Paper format	Max. PAGE-SIZE	Max. LINE-SIZE	Can be used with printers of type
A3	165	116	9026-PCL, PCL printers, 4830-PCL and 9026-RENO

Paper format	Max. PAGE-SIZE	Max. LINE-SIZE	Can be used with printers of type
A4	116	82	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
A5	82	58	4818-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 9026-PCL, PCL printers and 9026-RENO
B4	143	101	2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 9000-PCL, 9026-RENO
B5	101	71	4830-PCL, 9026-PCL and 9026-RENO
FOLIO	129	85	9026-RENO
INVOICE	85	55	9026-PCL and 9026-RENO
EXEC	105	72	9021, 9000-PCL, 9026-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
LEGAL	140	85	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4821-PCL, 4822-PCL, 4824PCL, 4825-PCL, 4830-PCL and PCL printers
LETTER	110	85	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4821-PCL, 4822-PCL, 4824PCL, 4825-PCL, 4830-PCL and PCL printers
DOUBLE-LETTER	150	117	9026-RENO
MONARCH	75	38	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
COMMERCIAL-10	95	41	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL and 4825-PCL
DL	86	43	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
C5	90	63	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
A3-UNCUT	120	120	PCL printers
A4-UNCUT	169	84	PCL printers
LEDGER	170	110	PCL printers

INPUT-TRAY-FORMAT = *MANUAL

The form feed is manual. You should therefore insert a new sheet each time a new page is to be printed.

The following printers can support manual form feed: 9014, 9021, 9022, 9022-200, 9026-Reno, 9026-PCL, 4812, DJET, 4814-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 9000-PCL.

OUTPUT-TRAY-NUMBER = *UNCHANGED / *STD / *IGNORE / *SORTER(...)/ <integer 1..99>

Defines the paper output tray for the printer type LP65 as well as for PCL printers, APA printers and for RSO printers 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9014, 9015, 9026-PCL and 9026-RENO.

The following applies for PCL printers:

The number of the input tray specified is not checked against the actual number of input trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

OUTPUT-TRAY-NUMBER = *STD

Output is to the output tray defined in the device entry (SPOOL parameter file) as the default. This also applies to PCL printers.

The choice of output tray is valid for the entire spoolout process, i.e. including processing of the header and trailer pages.

The following applies to LP65 printers only:

Selection of the output tray via BS2000 can be prevented by a PCL file or via an entry at the printer's operator console. In such cases, the specifications for OUTPUT-TRAY-NUMBER have no effect. An input tray can also be defined in the PCL file.

The order of priority for selection of an input tray is as follows:

1. the paper tray whose number is specified in PRINT-DOCUMENT, provided this is not prevented by a PCL file or an entry at the printer console.
2. if applicable, the selection made via the PCL file specified in the PRINT-DOCUMENT command.
3. if applicable, the selection made via the PCL file specified in the form definition in the SPOOL parameter file.
4. the default values defined in the device entry.

The following applies to APA printers:

Paper output is directed to the standard output tray defined in the form definition. Output tray selection is valid for the complete printing process, including header and trailer pages.

OUTPUT-TRAY-NUMBER = *IGNORE

For RSO and PCL printers only.

If this value is specified, the printer controller does not send a code to the printer for selection of an output tray. This allows you to define the output tray in the prolog file. For PCL printers: When specifying this value the printer controller does not send a code to the printer for selection of an output tray. This allows you to define the output tray in the prolog file.

OUTPUT-TRAY-NUMBER = <integer 1..99>

Defines which output tray is used for the current job.

For PCL printers: The number of the input tray specified is not checked against the actual number of input trays present on the target printer (maximum=2). A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

For LP65 printers, only values 1..3 are valid.

In the case of the 4850-PCL printer, support for the sheet-cutter is integrated in the selection of the output tray.

RSO printer types	Output tray number	Output tray selected
2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 9000-PCL	1 2	Upper output tray Lower output tray
4850-PCL	1 2 3 *STD *IGNORE	Selects the upper/topmost output tray and activates the sheet-cutter for each sheet. Selects the lower/lowest output tray Selects the lower/lowest output tray and activates the sheet-cutter for each sheet. Default value of the device definition (IGNORE) RSO does not select any output tray. The last selection or the default value for the printer remains in effect.
9014	1 2	Stacker Front output tray
9015	1 2 3 4	Uncut in rear output tray Cut in rear output tray Uncut in front output tray Cut in front output tray
9026-RENO	1..20	Appropriate output tray of the sort mechanism

The following applies to APA printers:

Tray numbers from 1 to 99 may be specified. The number of the output tray specified is not checked against the actual number of output trays present on the target printer. If the requested output tray is not present, an error may occur.

OUTPUT-TRAY-NUMBER = *SORTER(...)

For RSO printers only:

Specifies that the sort mechanism is used for the current job.

OUTPUT-TRAY-NUMBER=*SORTER(...) is permitted for the printers 9026-RENO, 4822-PCL and 4825-PCL. This sort mechanism can be used for up to 20 output trays. It cannot be controlled by the default values defined in the device entry.

SORT-MODE = *UNCHANGED

The sort mechanism remains unchanged.

SORT-MODE = *NO

All pages of the document are stored in the sort trays from bottom to top, with the exception of 9026-RENO: here, pages are stored in the most accessible paper tray.

SORT-MODE = *GROUP

Each copy of a specific page - as many as were specified under PAGE-COPIES - is stored individually in a sort tray, i.e. the next page to be stored in each sort tray is always the next one in the printing sequence. When the job has finished printing, each sort tray used will contain a copy of the printed document.

Example

The file contains three pages, and PAGE-COPIES=1 was specified:

page 3	page 3	
page 2	page 2	
page 1	page 1	
tray 1	tray 2	tray 3

SORT-MODE = *COLLATE

All copies of a page - as many as were specified under PAGE-COPIES - are collected in one sort tray. The copies of the next page are stored in the next sort tray, and so on. The sort trays are used from bottom to top.

Example

The file contains three pages, and PAGE-COPIES=2 was specified:

page 1	page 2	page 3
page 1	page 2	page 3
page 1	page 2	page 3
tray 1	tray 2	tray 3

SORT-MODE = *STACKER

Cannot be used for 9026 printers.

All printed pages are stored in the stacker of the sort mechanism up to a maximum of 500 pages. This mode is useful if a single copy of a very long document is to be printed.

SORT-MODE = *AUTOMATIC

For 9026 printers only.

The storage behavior is selected automatically, depending on the number of copies per page requested in PAGE-COPIES and the number of sort trays. The printed pages are stored unsorted, as with *NO, if the number of copies specified in PAGE-COPIES is the same as the number of sort trays.

The printed pages are sorted by document, as with *GROUP, if the number of copies specified in PAGE-COPIES is less than the number of sort trays. Or the printed pages are stored in the sort trays sorted by page, as with *COLLATE, if the number of copies specified in PAGE-COPIES is greater than the number of sort trays.

Note

Header and trailer pages as well as print resources such as PROLOG, EPILOG, DIA, MEMBER and font character files are sent before the output tray is selected and are therefore not included in the sorting.

TOP-OFFSET = *UNCHANGED / *IGNORE / <integer -255..255>

Defines the offset of the top margin of the print page from the top edge of the physical page in millimeters. First the print page is positioned on the paper and then the writing is rotated and positioned within the print page. This means that when the print page is moved around on the paper, the orientation of the text within it is ignored.

This operand is only permitted for the following printers: 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200, PCL-printers, 2030-PCL and for APA printers.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Note

If DOCUMENT-FORMAT=*SPECIAL-FORMAT, only TOP-OFFSET=*IGNORE can be used.

For APA printers:

Defines the margin between the first line to be printed and the top edge of the sheet (medium), specified in millimeters.

TOP-OFFSET = *IGNORE

The printer controller does not set an offset between the print page and the top edge of the sheet. The printer default or the setting via the prolog file defines the offset that will become effective when the document is printed.

TOP-OFFSET = <integer -255..255>

The permissible value range is -255 through +255. Positive values move the print page down, negative values move it up.

For APA printers:

Only positive values between 0 and 255 are permitted. Default value is 0, except if a different value was specified in the form definition.

LEFT-OFFSET = *UNCHANGED / *IGNORE / <integer -255..255>

Defines the offset of the left margin of the print page from the left edge of the physical page in millimeters. First the print page is positioned on the paper and then the writing is rotated and positioned within the print page. This means that when the print page is moved around on the paper, the orientation of the text within it is ignored.

This operand is only permitted for APA printers and for PCL printers which includes the following: 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200, 9026-PCL and 2030-PCL.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Note

If DOCUMENT-FORMAT=*SPECIAL-FORMAT, only LEFT-OFFSET=*IGNORE can be used.

For APA printers:

Margin between the first line and the left edge of the sheet (medium), specified in millimeters.

LEFT-OFFSET = *IGNORE

The printer controller does not set an offset between the print page and the left edge of the sheet. The printer default or the setting via the prolog file defines the offset that will become effective when the document is printed.

LEFT-OFFSET = <integer -255..255>

The permissible value range is -255 through +255. Positive values move the print page to the right, negative values move it to the left.

For APA printers:

Only positive values between 0 and 255 are permitted. Default value is 0, except if a different value was specified in the form definition.

RESOURCE-DESCRIPTION = *UNCHANGED / *PARAMETERS(...)

Specifies the print resources to be used for the printout, and thus allows you to change what was specified in PRINT-DOCUMENT.

FORM-NAME = *UNCHANGED / *STD / <alphanum-name 1..6>

Specifies the paper (form) to be used for output (e.g. STD, STDSF1, STDWA4). Default forms must be defined in the SPOOL parameter file for all printer types. With SHOW-SPOOL-FORMS you can output the entries to SYSOUT. The SPOOL parameter file also specifies whether header and trailer pages are to be printed.

FORM-NAME = *STD

Default form.

FORM-NAME = <alphanum-name 1..6>

Name of the form with which the spoolout job is to be processed. A loop (or a page and format definition for APA printers) is implicitly named when the form is specified. The associated loop (or the PAGEDEF and FORMATDEF) must be in a printer control file. The following table shows which printer control file must contain this loop (or the PAGEDEF and FORMDEF) for the relevant printer type:

Output device	Printer control file with the loop for the specified form
Printers 3337, 3338, 3339, 3348, 3349, 3365, 2090-LIP, 2140-LIP, LP-EMULATED	\$SYSSPOOL.PRFILE
Printers: 3351, 3353, 2090, 2140, 2240, PCL printer	\$SYSSPOOL.PRFILE or the user PRFILE specified in the USER-RESOURCES-FILE operand
APA printers	Depending on the printer resolution \$SYSSPOOL.SYSPRT.SPS.240dpi, \$SYSSPOOL.SYSPRT.SPS.300dpi, \$SYSSPOOL.SYSPRT.SPS.600dpi or the user SPPLIB specified in the USER-RESOURCES-FILE operand

The loop named implicitly via the FORM-NAME operand is ignored if the LOOP-NAME operand is specified at the same time. If the FORM-NAME and LOOP-NAME operands are omitted, the file is printed out using the default form entered for the printer type.

A loop explicitly specified in the LOOP-NAME operand must have the same length as the loop record assigned to the form used.

No loops can be specified for APA printers. If page and format specifications are made in the FORM-NAME operand, these are used for printing header, trailer and message pages, even if the PAGE-DEFINITION and FORM-DEFINITION operands are explicitly assigned.

LOOP-NAME = *UNCHANGED / *STD / <alphanum-name 1..3>

Name of the loop entry that is defined as the standard loop for the specified form. The loop must be defined in the PRFILE or RSOFIL, depending on the printer type for which the form is defined. The loop name must not include any of the characters '\$', '&' or '@'.

For APA printers, the loop name refers to a page definition that is used to print the document (not relevant for header and trailer pages). This convention combines a loop name (e.g. C12) with the name of a page definition (e.g. P10C12) that is stored in the available SPSLIB.

LOOP-NAME = *STD

Feed control for the spoolout job is to be implemented with the default loop of the form used.

LOOP-NAME = <alphanum-name 1..3>

Name of the loop which is to control line feed. The length of the specified loop must match the length of the default loop of the form used. A loop for feed control is needed for the HP and HP90 printers (3351, 3353, 2090, 2140) and printers of types 3337, 3338, 3339, 3348, 3349, 3365, 2140-LIP and 2090-LIP. Loops are stored in the PRFILE resource library. If no loop is specified, the implicit entries in the FORM-NAME operand are used. If the FORM-NAME or LOOP-NAME operand is omitted, default values apply.

ROTATION-LOOP-NAME = *UNCHANGED / *STD / <alphanum-name 1..3>

Only for HP and HP90 printers with a page rotation module, APA, PCL and RSO printers.

Specifies the loop to control output in landscape format. The default value is taken from the standard form entry. The loop must be defined in the PRFILE or RSOFIL, depending on the printer type that is defined for the form. The loop name must not include any of the characters '\$', '&' or '@'.

For APA printers, the loop name refers to a page definition that is used to print the document (not relevant for header and trailer pages). This convention combines a loop name (e.g. C12) with the name of a page definition (e.g. P10C12) that is stored in the available SPSLIB.

ROTATION-LOOP-NAME = *STD

Output of rotated pages is to be controlled by the default rotation loop of the specified form or the default rotation loop R06 of the default form (if no form was specified in the PRINT-DOCUMENT command).

ROTATION-LOOP-NAME = <alphanum-name 1..3>

Name of the loop with which line feed for the rotated pages is to be controlled.

CHARACTER-SETS = *UNCHANGED / *STD / *POOL / *BY-EXTENDED-NAME(...) / list-poss(16): <alphanum-name 1..3>

Names of the fonts or font pools (only for HP and HP90 printers) to be used for output. Up to 4 fonts may be specified in the list for local SPOOL, up to 16 for RSO. For local SPOOL, the fonts must be contained in the \$SYSSPOOL.PRFILE resource library or in a user PRFILE (specified by means of the USER-RESOURCES-FILE operand). If more than four fonts are to be used, a font pool must be specified. If more than one font is to be used in a spoolout job, CONTROL-MODE=*PAGE-MODE must be specified. For DOCUMENT-FORMAT=*TEXT, only the first specified font is used for printing the (entire) file. The name of the first font and the number of specified fonts are shown in the output for the command SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION=TSN(TSN=...).

Only Siemens standard fonts may have names consisting of three numerical characters.

If the HEADER-LINE operand is specified, the first font specified or the font pool specified with an index for CHARACTER-SETS=*POOL is used for the header line. The default value for CHARACTER-SETS for the form used can be displayed with SHOW-SPOOL-FORMS; the information is given in the C-S output field.

The following must be observed for HP printers:

The system administration can specify whether the header page is printed with the default font or with the font specified in CHARACTER-SETS. This default setting can be displayed using the SHOW-SPOOL-PARAMETERS command or SPSEVERE statement; the information is given in the HEADER-PAGE: CHARACTER-SET=... output field.

For APA printers, the font name refers to a coded font that is used to print the document (not relevant for header and trailer pages). This convention combines a font name (e.g. 101) with the name of a coded font (e.g. X00101), which in turn references a code page (e.g. T10101) and a font character set (e.g. C00101) that is stored in the available SPSLIB.

Note

Fonts for HP/HP90 printers are defined in the PRFILE with the aid of the PRM utility routine; fonts for APA printers are defined in the SPSLIB. The software product TRANSLIB can be used for this purpose.

CHARACTER-SETS = *STD

The default font is selected for this printer type from the desired form. It can be displayed by means of SHOW-SPOOL-FORMS.

CHARACTER-SETS = *POOL(...)

Only PRFILES may contain descriptions of font pools. If a font pool is specified, the spoolout job will be processed on an HP or HP90 printer.

POOL-NAME = *UNCHANGED / <alphanum-name 1..4>

Specifies a font pool (with a maximum of 64 fonts for an HP printer or 46 fonts for an HP90 printer) from which one or more fonts are to be used for output. All the fonts of this font pool are loaded into the font buffer when the spoolout job is executed.

POOL-INDEX = *UNCHANGED / <integer 0..64>

Number of the font from the font pool with which the spoolout job is to be processed. The number of the font is determined by its position in the definition of the font pool. The specified font is used if POOL-INDEX is specified together with CONTROL-MODE=*PAGE-MODE.

CHARACTER-SETS = *BY-EXTENDED-NAME(...)

Specifies the fonts to be interpreted by SPS when the TABLE-REFERENCE-CHAR operand is used.

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

Name of a font to be linked with a TRC value in the print file (each TRC value represents a specific font). Regardless of the number of different TRC values in the file, up to four fonts, specified in the form of a list, can be used to print the records. TRC values greater than X'03' (corresponding to the fourth value in the list) automatically reference the first font in the list.

CHARACTER-SETS = list-poss(16): <alphanum-name 1..3>

Names of the fonts with which the spoolout job is to be processed. For DOCUMENT-FORMAT=*TEXT (default), only the first specified font is used for printing. For laser printers in local SPOOL mode, a maximum of four fonts may be specified. The printer control characters for changing fonts are only interpreted if CONTROL-MODE=*PAGE-MODE is also specified.

In the case of PCL printers, up to 16 fonts which are related to PCL fonts can be selected. A PCL font can be either an internal printer font or a PCL soft font.

In the case of RSO printers, a maximum of 16 fonts may be specified. Font identifiers (CSIs) in the text are only interpreted if CONTROL-MODE=*LOGICAL is specified at the same time. The command is rejected if a list of fonts is specified in conjunction with DOCUMENT-FORMAT=*TEXT.

For APA printers and laser printers in local SPOOL mode, a maximum of 4 fonts may be specified. The printer control characters for changing fonts are only interpreted if CONTROL-MODE=*PAGE-MODE is also specified.

If CONTROL-MODE=*APA is specified, this list is not allowed, and the operand *BY-EXTENDED-NAME(...) must be used.

CHAR-SET-ATTRIBUTES = *UNCHANGED / *ALL / *RESTRICTED

Only for RSO. Specifies whether all or only selected font attributes are supported for the spoolout job. Attributes include character type, near-letter quality (NLQ), color etc. (see the SHOW-SPOOL-CHARACTER-SETS command or SPSERVE statement). This operand does not apply to header and trailer pages.

CHAR-SET-ATTRIBUTES = *ALL

All the attributes of the fonts used for printout are supported for the spoolout job.

CHAR-SET-ATTRIBUTES = *RESTRICTED

Only the following three attributes are supported:

- character type
- language
- NLQ

OVERLAY-RESOURCES = *UNCHANGED / *PARAMETERS(...)

Specifies whether a film overlay is to be used for processing a spoolout job.

The following applies to PCL printers:

Only one overlay can be specified for each printing job, the overlay specified must be a PCL overlay resource. You can specify the overlay by using either the operand FORMS-OVERLAY-BUFFER or ELECTRONIC-OVERLAY. (You cannot use both operands together because this will lead to an error).

ELECTRONIC-OVERLAY = *UNCHANGED / *NONE / <alphanum-name 2..2>

Specifies whether a film overlay - in the case of HP90 and 3365 printers an EFO data overlay - is to be used for processing the spoolout job.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

For 4830-PCL and 4850-PCL printers:

This operand can be used with DOCUMENT-FORMAT=*TEXT(...) or *PAGE(CONTROL-MODE=*LOGICAL or *PHYSICAL or *LINE-MODE).

ELECTRONIC-OVERLAY = *NONE

No film overlay (HP90 and 3365: no EFO data overlay) is used for output.

ELECTRONIC-OVERLAY = <alphanum-name 2..2>

Name of the film overlay (HP90 and 3365: EFO data overlays) to be used for processing the spoolout job (the name must be approved by systems support).

OVERLAY = *UNCHANGED / *STD / *NONE / *PARAMETERS(...)

Specifies for LP65 printers whether EFO data overlays are to be used on the recto and/or verso. They must be stored in printer memory.

The OVERLAY, TWO-SIDED and PAGE-COPIES operands are part of one and the same LP65 printer command and are consequently linked to one another. If only the

OVERLAY operand is specified, SPOOL will generate default values for the other two operands. These default values are overwritten by each value specified in a PCL file or at the printer control console.

For an overview of the possible combinations of these three linked functions, see the description of the printer type LP65 in the “[SPOOL \(BS2000/OSD\)](#)” manual.

For APA printers:

Specifies if an APA overlay is to be used on the front or rear side of the paper (see also “[SPS](#)” manual).

OVERLAY = *STD

The EFO data overlays defined in the PCL file are used.

For APA printers:

APA overlays to be used are defined in the appropriate form definition.

OVERLAY = *NONE

No EFO data overlays are used for output.

For APA printers:

No APA overlays are to be used for output, except otherwise defined in the form definition. Corresponds to the *STD value.

OVERLAY = *PARAMETERS(...)

The specified EFO data overlays (APA printers: specified APA overlays) are used for output.

FACE-SIDE = *UNCHANGED / *NONE / <integer 1..127>

Identification number of the overlay to be used on the recto.

REVERSE-SIDE = *UNCHANGED / *NONE / <integer 1..127>

Identification number of the overlay to be used on the verso. This is only permitted for single-sheet printers of the type LP65.

FORMS-OVERLAY-BUFFER = *UNCHANGED / *NONE / <alphanum-name 1..4>

Defines whether an FOB data overlay is to be used for processing the spoolout job (for a description of an overlay, see the “[SPOOL \(BS2000/OSD\)](#)” manual).

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

For APA printers, the name of the FOB data overlay refers to an APA overlay that is used to print the document (not relevant for header and trailer pages). This convention combines a FOB data overlay (e.g. abcd) with the name of an overlay (e.g. O1abcd01) that is stored in the available SPSLIB.

FORMS-OVERLAY-BUFFER = *NONE

No FOB data overlay is used for output.

FORMS-OVERLAY-BUFFER = <alphanum-name 1..4>

Name of the overlay to be used for processing the spoolout job. If an overlay is specified, the file is printed out on an HP or HP90 printer. Use of an overlay for the spoolout job is indicated in the output of the command SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION=TSN(TSN=...).

PAGE-DEFINITION = *UNCHANGED / *STD / <integer 1..50000> / <alphanum-name 1..8>

Specifies which page definition is to be used for output on LP65 or APA printers.

PAGE-DEFINITION = *STD

For APA printers:

The default definition specified in the SPSLIB is to be used (see the table of SPSLIB default definitions in the appendix).

For LP65 printers:

Number of the PCL file with which the print file is to be output. Only the print file itself is output with this PCL file. The header and trailer pages are controlled by the PCL file defined in the SPOOL parameter file form.

Notes

- A PCL file that makes it impossible to select another PCL file by means of a channel command must not be used.
- After the specified PCL file has started, the operating mode of the printer is checked. If EXCCW mode is active, and an error occurs during the print process, the restart point is the last SECTION record; if no value was entered under the SECTION operand in the PRINT-DOCUMENT command, the file is printed out again from the start.

PAGE-DEFINITION = <integer 1..50000>

Only for LP65 printers. Number of the PCL file with which the print file is to be output.

PAGE-DEFINITION = <alphanum-name 1..8>

Only for APA printers. The page definition with the specified name is to be used. This must be in the SPSLIB.



The first two characters of the specified name must be "P1".
If they are not, the command is rejected.

FORM-DEFINITION = *UNCHANGED / *STD / <alphanum-name 1..8>

Specifies which format definition is to be used for output on APA printers.

FORM-DEFINITION = *STD

The default definition specified in the SPSLIB is to be used.

FORM-DEFINITION = <alphanum-name 1..8>

The format definition with the specified name is to be used. This must be in the SPSLIB.



The first two characters of the specified name must be "F1".
If they are not, the command is rejected.

USER-RESOURCES-FILE = *UNCHANGED / *STD /

<filename 1..44 without-gen-vers>

Specifies a user file containing all the resources required for output on different printer types: user-defined loops, fonts, overlays, font pools, code translation tables and SPS data stream definitions. The following can be specified:

- a user PRFILE containing loops, fonts, overlay entries (FORMS-OVERLAY-BUFFER operand) and font pool entries (the CHARACTER-SETS operand)
- a user SPSLIB containing the PAGEDEFs (PAGE-DEFINITION operand), FORMDEFs (FORM-DEFINITION operand), fonts, page segments, overlays and raster image data
- a user RSOFIL (only for RSO) containing loops

If no user PRFILE, SPSLIB or RSOFIL is specified, the information is taken from the following files: \$SYSSPOOL.PRFILE, \$SYSSPOOL.SYSPRT.SPS.021 or \$SYSSPOOL.RSOFIL, respectively.

USER-RESOURCES-FILE = *STD

The required resources are taken from \$SYSSPOOL.PRFILE, \$SYSSPOOL.SYSPRT.SPS.021 or \$SYSSPOOL.RSOFIL.

USER-RESOURCES-FILE = <filename 1..44 without-gen-vers>

Name of a user PRFILE, SPSLIB or RSOFIL, which may contain a catalog ID and a user ID. SPOOL uses this file name with the suffix .PRFILE, .SPSLIB or .RSOFIL. The string can contain up to 28 characters without the catalog ID and user ID, to ensure that this user file can be called from any ID. If the file name is specified without a user ID, the file is searched for under the user ID of the caller first, then under SYSSPOOL. If it is not found, the command is rejected. If a user ID is specified, the file is searched for under this ID only.

Example 1

```
PRINT-DOCUMENT FILE,USER-RESOURCES-FILE=$XX.XX
```

A search is carried out for the \$XX.XX.PRFILE file. If the file is not found, the command is rejected.

Example 2

If the catalog ID is specified, the search is limited to the specified subset:

```
PRINT-DOCUMENT FILE, USER-RESOURCES-FILE=:A:XXXXX
```

The file :A:\$userid.XXXXX.PRFILE is searched for. If it is not found, a search is carried out for the file :A:\$SYSSPOOL.XXXXX.PRFILE. If this file is not found either, the command is rejected.

Example 3

PRINT-DOCUMENT FILE, USER-RESOURCES-FILE=:A:\$XX.XXXXX

The file :A:\$XX.XXXXX.PRFILE is searched for. If it is not found, the command is rejected.

If the file is on an exported PVS (EXPORT-PUBSET command), all spoolout jobs that require this PVS are placed in the KEEP queue. When the PVS becomes available again (IMPORT-PUBSET command), the spoolout jobs are restarted.

TRANSLATION-TABLE = *UNCHANGED / *NONE / *PARAMETERS(...)

Specifies whether a code translation table is to be used for processing the spoolout job. The code translation table is necessary if the default escape character 'FF' is to be replaced by a random character.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

TRANSLATION-TABLE = *NONE

No code translation table is used.

TRANSLATION-TABLE = *PARAMETERS(...)

A code translation table is used.

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

Name of the code translation table to be used for processing the spoolout job.

FILE = *UNCHANGED / *SYSTEM / <filename 1..44 without-gen-vers>

The specified code translation table is taken by default from the \$SYSSPOOL.PRFILE (*SYSTEM) file; a user RSOFILE can be specified for RSO printers.

RESOURCES-LOCATION = *UNCHANGED / *STD / *HOME / *SERVER

Only for Dprint. Specifies, when the optional Distributed Print Services subsystem (Dprint) is used, whether the resources of the client or those of the server are to be used for printing the document.

RESOURCES-LOCATION = *STD

The value from the GEN record of the SPOOL parameter file is to be used.

RESOURCES-LOCATION = *HOME

The print job is to be executed using the print resources defined on the client system. In this case, an extract containing all the required print resources is taken from the resource file (i.e. a print resources container is created) and transferred to the selected server.

RESOURCES-LOCATION = *SERVER

The print job is to be executed using the print resources defined on the server system. In this case, no print resources container is created and transferred.

TO-PRINTER = *UNCHANGED / *PARAMETERS(...)

Describes the requested target devices for the print job, and thus allows you to change what was specified in PRINT-DOCUMENT.

PRINTER-NAME = *UNCHANGED / *STD / <alphanum-name 1..8> / <c-string 1..8 with-low>

Specifies the requested target printer of the print job. You can specify a distributed local printer pool, a nondistributed local printer pool, an RSO printer pool or an RSO printer.

If you specify a printer pool:

The job is output on any printer in the specified device pool. The pool must be defined in the SPOOL parameter file and can contain up to 16 RSO devices or 16 local SPOOL devices, but not both at the same time. Device pools are managed by means of the SPSEIVE statements ADD-, MODIFY-, REMOVE-, and SHOW-PRINTER-POOL (see the “[SPSERVE \(BS2000/OSD\)](#)” manual).

The spoolout job is rejected if:

- No printer type from the device pool is assigned in the PRINT-DOCUMENT command (see the SHOW-SPOOL-FORMS command or SPSEIVE statement).
- The ELECTRONIC-OVERLAY operand is specified.

Please bear in mind that the pool can contain various types of devices: if the file to be printed contains control characters that are only interpreted by a specific printer type, you should specify a printer of this type in the MODIFY-PRINT-JOB-ATTRIBUTES command.

PRINTER-NAME = *STD

The spoolout job is to be processed on the default device type specified in the SPOOL parameters (PRINT-CMD-DEFAULTS).

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

Symbolic name of the device on which the spoolout job is to be processed.

PRINTER-TYPE = *UNCHANGED / *ANY / *HP-PRINTER / *LP65-PRINTER / APA-PRINTER

Specifies which printer type is to process the print job. Only local printer types can be specified.

PRINTER-TYPE = *ANY

A specific printer type is not requested. In this case, the SPOOL subsystem automatically determines the permitted printer types that can process the user request. *ANY must be specified for output on RSO printers.

PRINTER-TYPE = *HP-PRINTER

The spoolout job is to be processed on an HP or HP90 printer. *HP-PRINTER includes the following printer types: 3351/3353/2090/2140/2240(HP90). The control characters for HP and HP90 laser printers are identical; a spoolout job for an HP printer can be processed on an HP90 printer and vice versa.

Selection of the printer type is affected by whether or not the CONTROL-MODE operand is specified at the same time:

Printer selection	CONTROL-MODE = *PAGE-MODE (default)	CONTROL-MODE =*PAGE-MODE(CONTROL-TYPE=*HP)
PRINTER-TYPE = *ANY	Output is possible on all printer types	Output is possible on HP and HP90 printers. Other control characters are converted to HP/HP90 control characters.
	The following applies to HP/HP90 printers: The OVERPRINT function is converted to the LINE-MERGE function.	
PRINTER-TYPE = *HP-PRINTER	Output is possible only on HP and HP90 printers. The OVERPRINT function is converted to the LINE-MERGE function.	
	PRFILE restrictions: The file must not contain the X'FF' character.	HP-specific control characters are supported. The following restriction applies: The file can contain the X'FF' character only as an escape character if control character interpretation is active (CHAR-SET-ATTRIBUTES = *ALL)

Note for HP/HP90 printers

If the entries in MODIFY-PRINT-JOB-ATTRIBUTES specify output to an HP or HP90 laser printer, a PRFILE must be available, otherwise the command is rejected. If there is no HP/HP90 available in an installation, or only devices with insufficient configurations (not enough fonts, no graphics buffer for FOBs or no page rotation module, for example), the jobs can only be output to replay tape. System administration can run the SHOW-SPOOL-JOB-STATUS command to obtain information on these jobs.

PRINTER-TYPE = *LP65-PRINTER

The spoolout job is to be processed on an LP65 printer.

PRINTER-TYPE = *APA-PRINTER

The spoolout job is to be processed on a 2050-APA-PRINTER, 2090-APA-PRINTER or 2090-TWIN-PRINTER.

REDIRECTION-ALLOWED = *UNCHANGED / *STD / *YES / *NO

Specifies whether a device administrator can redirect the spoolout job to a different printer. This does not affect the redirection of jobs by the user or system administration.

REDIRECTION-ALLOWED = *STD

Means YES for RSO print jobs. SPOOL print jobs are ignored.

REDIRECTION-ALLOWED = *YES / *NO

Can only be specified for RSO print jobs, not for SPOOL print jobs.

CLUSTER-NAME = *UNCHANGED / <alphanum-name 1..8>

Specifies the cluster to which the print job is to be sent.

For Dprint only:

If the print job is to be sent to UNIX, a UNIX cluster name which is defined in the Dprint configuration file must be specified. The remote clusters defined in the Dprint configuration file can be queried with the SHOW-DPRINT-REMOTE-CLUSTERS command (for a detailed explanation, see the [“Distributed Print Services \(BS2000/OSD\)”](#) manual).

Use of the CLUSTER-NAME operand is restricted to redirecting a print job from the local cluster or from local SPOOL to a remote cluster. As soon as the remote cluster has accepted the print job, the resources of the remote cluster become effective. As of this point the CLUSTER-NAME operand can no longer be used on the redirected print job.

OUTPUT-FORMAT = *UNCHANGED / *NONE / <c-string 1..63 with-low>

Specifies which printer language is to be used for the print job.

OUTPUT-FORMAT = *NONE

No output format was specified. The format of the document is compatible with the printer language of the chosen printer. If a UNIX cluster was specified in the CLUSTER-NAME operand, the value of the DOCUMENT-FORMAT operand is passed on to the UNIX-SPOOL.

OUTPUT-FORMAT = <c-string 1..63 with-low>

Defines a specific content type (e.g. HP_LASERJET) for the document to be printed. The document format is incompatible with the format supported by the printer. OUTPUT-FORMAT=<c-string 1..63 with-low> can only be specified if a UNIX cluster was defined in the CLUSTER-NAME operand. In this case the value of the OUTPUT-FORMAT is passed on to the UNIX-SPOOL.

VIRTUAL-PRINTER = *UNCHANGED / *STD / *ALLOWED / *NOT-ALLOWED / MUST(...)

This operand allows the print job to be passed on to an application for processing via a virtual printer.

The operand is ignored if VIRTUAL-PRINTER = *NOT-ALLOWEDSPOOL was specified in the SPOOL parameter file.

VIRTUAL-PRINTER = *STD

The virtual printer which is to receive the print job is determined from the SPOOL parameter file.

The print job is preferably transferred to a virtual printer. If no virtual printer is active when the print job is entered in the list of print jobs, it is assigned to a real printer.

VIRTUAL-PRINTER = *ALLOWED

This print job can be passed on to an application program via a virtual printer. Which virtual printer receives the print job is not determined until the job is assigned.

The print job is preferably transferred to a virtual printer. If no virtual printer is active when the print job is entered in the list of print jobs, it is assigned to a real printer.

VIRTUAL-PRINTER = *NOT-ALLOWED

This print job cannot be passed to an application program via a virtual printer.

VIRTUAL-PRINTER = *MUST(...)

The print job is transferred to a specific virtual printer which is defined by the parameters in the brackets. If the supervisor task of this virtual printer is inactive, the print job remains in the wait state.

NAME = <alphanum-name 1..8>

Specifies the device name which is linked to the supervisor. This device name appears in the device entry of the SPOOL parameter file.

STRING = *NONE / <c-string 1..32>

Passes a specific character string to the application program.

ADDITIONAL-COPIES = *UNCHANGED / <integer 0..255>

Specifies how many additional times the file is to be printed. The entry can also be made in parentheses. Each additional printout has its own header page. Default: 0 (no additional printouts).

LOCK-FILE = *UNCHANGED / *YES / *NO

Specifies whether the file is to be protected as long as the spoolout job is in the wait state (TYPE 4, see output of the SHOW-PRINT-JOB-STATUS command). During this time the file can only be read. As a rule, tape files are never locked. During processing of the spoolout job (TYPE 5, see output of the SHOW-PRINT-JOB-STATUS command), the file is protected irrespective of the setting of this operand.

A spoolout job is also generated if the file to be output is reserved by a SECURE-RESOURCE-ALLOCATION command. This reservation must, however, be canceled by the time the spoolout job is processed; otherwise the job is not executed.

The file to be output is locked until the end of the session if the LOCK-FILE=*YES operand is specified in the PRINT-DOCUMENT command and the job cannot be executed owing to reservation.

LOCK-FILE = *YES

The file is protected while the spoolout job is in the wait state. LOCK-FILE=*YES is ignored if one of the values *OMF, *SYSLST or *SYSOUT is specified in the operand at the same time. A PRINT-DOCUMENT command for a library element with LOCK=*YES is rejected. File protection offered by LOCK-FILE=*YES remains in force even if the spoolout job is not processed until the next system run.

LOCK-FILE = *NO

The file is not protected while the spoolout job is in the wait state. The file can be deleted or modified before processing of the spoolout job commences. LOCK-FILE=*NO is ignored for temporary files.

DELETE-AFTER-PRINT = *UNCHANGED / *NO / *YES(...) / *DESTROY(...)

Specifies whether the file is to be deleted at the end of output and, if so, whether its catalog entry and the data are to be overwritten with X'00..0'. By default, the file is not deleted after printing and not overwritten with binary zeros. You must have write access to the file. If the file to be output belongs to a file generation group (see the FROM-FILE operand), the DELETE-AFTER-PRINT operand is ignored. If a spoolout job is used to print several elements of a PLAM library with INPUT-SECTION(...), the DELETE-AFTER-PRINT operand is set to *NO (i.e. suppressed). The operand must not be specified together with *SYSLST, SYSLSTnn or *SYSOUT.

DELETE-AFTER-PRINT = *NO

The file is not to be deleted after printing (exceptions: EAM and system files).

DELETE-AFTER-PRINT = *YES(...)

The file is to be deleted as soon as output has been completed.

LINE-TRUNCATION = *UNCHANGED / *STD / *DELETE-FILE / *KEEP-FILE

Specifies what happens if lines are truncated.

LINE-TRUNCATION = *STD

The default value from the SPOOL parameter is valid. You can display this value with the SHOW-SPOOL-PARAMETERS command or SPSERVE statement (field: ERROR-PR=(TRUNC=)).

LINE-TRUNCATION = *DELETE-FILE

Processing of the spoolout job continues (i.e. DELETE-AFTER-PRINT=*YES is executed).

An appropriate message is printed on the trailer page.

LINE-TRUNCATION = *KEEP-FILE

Processing of the spoolout job is continued, but the file is not subsequently deleted.

DELETE-AFTER-PRINT = *DESTROY(...)

Not for EAM and cataloged system files. Specifies that once the file has been printed both its catalog entry and its data are to be overwritten with binary zeros.

LINE-TRUNCATION = *UNCHANGED / *STD / *DELETE-FILE / *KEEP-FILE

Specifies what happens if lines are truncated.

LINE-TRUNCATION = *STD

The default value from the SPOOL parameter is valid. You can display this value with the SHOW-SPOOL-PARAMETERS command or SPSEIVE statement (field: ERROR-PR=(TRUNC=)).

LINE-TRUNCATION = *DELETE-FILE

Processing of the spoolout job continues (i.e. DELETE-AFTER-PRINT=*DESTROY is executed).

An appropriate message is printed out on the trailer page.

LINE-TRUNCATION = *KEEP-FILE

Processing of the spoolout job is continued, but neither the catalog entry nor the data of the file itself is overwritten with binary zeros.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error Guaranteed messages: SCP0894, SCP1032, SCP1031
2	0	SCP0897	TSN not found
2	0	SCP0930	PRFILE not available
2	0	SCP1000	JV processing error. MONJV ignored Guaranteed message: SCP1000
2	0	SCP1056	Error releasing the file
2	0	SCP1058	DELETE-FILE entry not permitted
2	0	SCP1061	Error during server access
2	0	SCP1069	Output restart from the beginning
2	0	SCP1070	Job cannot be released
2	0	SCP1076	No information available on this job
2	0	SPS0455	JVS error in SPOOL MONJV Guaranteed message: SPS0455
2	0	SPS0469	JV is already being used or has been destroyed Guaranteed message: SPS0469
2	0	SPS0464	JV subsystem not loaded
2	0	SPS0870	SLOT/SCB inconsistency
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command Guaranteed message: SCP0972
	64	SCP0976	Invalid operand value Guaranteed messages: SCP0858, SCP0995, SCP0997, SCP1030, SCP1028, SCP1029
	128	SCP0896	DSEM/RSO/SPS/DPRINTCL/DPRINTSV/DPRINTCM Subsystem not loaded/ready Guaranteed message: SCP0896
	128	SCP0996	JV subsystem not available Guaranteed message: SCP0996
	128	SCP1049	RSO not loaded
	128	SPS0266	SPOOL subsystem in wait state

Notes

1. If an operand value originally specified in the PRINT-DOCUMENT command is modified, this change affects not only the operand itself but also the operand's substructures: all suboperands within the structure are assigned default values.
2. Jobs issued using an earlier version of SPOOL than Version 3.0 and accepted via a replay tape or warm startup, and jobs issued by means of the command WRITE-SPOOL-TAPE, cannot be modified.

3. In the event of a command error (a syntax or semantic error or as a result of illegal changes), the requested changes are not accepted.
4. The table below shows which operands can be modified depending on the status of the print job, where
 - x means that the operand and all suboperands can be modified (operands which are enclosed in substructures), and
 - means that no modification is allowed.

Operands of MOD-PRINT-JOB-ATTR	Statuses of the print job						
	WFT	FT	WP	PRE	WT	ACT	KP
DOCUMENT-FORMAT	x	x	x	-	x	(*)	x
PRINT-JOB-CONTROL	x	x	x	-	x	(*)	x
LAYOUT-CONTROL	x	x	x	-	x	(*)	x
RESOURCE-DESCRIPTION	x	x	x	-	x	(*)	x
TO-PRINTER	x	x	x	-	x	(*)	x

(*) If the job is active on a synchronous virtual device, the application running under the control of this virtual device can modify the job.

5. The file attributes must remain unchanged from the acceptance of the print job (PRINT-DOCUMENT command) to the termination of output (actual output on the device). The MODIFY-PRINT-JOB-ATTRIBUTES command therefore ignores any changes to the file attributes.
6. If at least one member of a family is active during family processing, any change to the print job is rejected.
7. Print jobs that have the status KEEP retain this status after a change even when they have been redirected to a different server by means of automatic server selection.
8. If a print job is interrupted when only part of its document is printed, any change involving a change to the layout causes the print job to be repeated from the beginning of the document.
9. Dprint-specific information for Dprint jobs can be found in the [“Distributed Print Services \(BS2000/OSD\)”](#) manual.

MODIFY-PRINTER-OUTPUT-STATUS

Change administration parameters for printers

Domain SPOOL-PRINT-ADMINISTRATION
User group: Device administrators (restricted)
Privileges: OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-MANAGEMENT, SAT-FILE-EVALUATION, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

This command modifies the administration parameters for the specified printers.

The following operands can only be used with the PRINT-SERVICE-ADMINISTRATION or OPERATING privileges: ROTATION, TWO-UP-PROCESSING, FORMS-OVERLAY-BUFFER, CHARACTER-SET-NUMBER.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
DEVICE-NAME = *ANY-LOCAL-PRINTER(...)	X		X	X
FORMS-OVERLAY =	X		X	
PRINT-SAMPLE =	X		X	
TRACE = *YES	X	X	X	X
DEVICE-NAME = *RSO-PRINTER(...)		X		
USER-IDENTIFICATION =	X	X	X	X
SPOOLOUT-CLASS =	X	X	X	X
SPOOLOUT-NAME =	X	X	X	X
ACCOUNT =	X	X	X	X
EXIT-ROUTINES =	X	X	X	X
ROTATION =	X	X	X	
TWO-UP-PROCESSING =	X	X	X	
FORMS-OVERLAY-BUFFER =	X	X	X	
PRIORITY =	X	X	X	X
CHARACTER-SET-NUMBER =	X	X	X	
REVISION-NUMBER =	X	X	X	X

Format

(part 1 of 4)

MODIFY-PRINTER-OUTPUT-STATUS**DEVICE-NAME** = *ANY-LOCAL-PRINTER(...) / *RSO-PRINTER(...)*ANY-LOCAL-PRINTER(...)**NAME** = list-poss(8): <alphanum-name 1..8>**,DESTINATION** = *UNCHANGED / *NONE / *STD / *ADD(...) / *REMOVE(...) /
list-poss(16): *CENTRAL / <alphanum-name 1..8>***ADD(...)**| **DESTINATION-LIST** = list-poss(16): *CENTRAL / <alphanum-name 1..8>***REMOVE(...)**| **DESTINATION-LIST** = list-poss(16): *CENTRAL / <alphanum-name 1..8>**,FORM-NAME** = *UNCHANGED / *ALL / *STD / *EQUIVALENT(...) / *EXCEPT(...) /
*EQUIVALENT-EXCEPT(...) / *ADD(...) / *REMOVE(...) /
list-poss(16): <alphanum-name 1..6>***EQUIVALENT(...)**| **EQUIVALENT-FORMS** = *ALL / list-poss(16): <alphanum-name 1..6>***EXCEPT(...)**| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>***EQUIVALENT-EXCEPT(...)**| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>***ADD(...)**| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>***REMOVE(...)**| **FORMS-LIST** = list-poss(15): <alphanum-name 1..6>**,FORMS-OVERLAY** = *UNCHANGED / *ALL / *NONE / *ONLY / *EXCEPT(...) / *ADD(...) /
*REMOVE(...) / list-poss(16): <alphanum-name 2..2>***EXCEPT(...)**| **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>***ADD(...)**| **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>

continued ➔

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*REMOVE(...)
    |   FORMS-OVERLAY-LIST = list-poss(15): <alphanum-name 2..2>
,HOST-NAME = *UNCHANGED / *ALL-CLUSTERS / *LOCAL-CLUSTER / *HOME / *EXCEPT(...) /
            *ADD / *REMOVE(...) / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

*EXCEPT(...)
    |   HOST-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

*ADD(...)
    |   HOST-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

*REMOVE(...)
    |   HOST-LIST = list-poss(15): <alphanum-name 1..8> / <c-string 1..8 with-low>
,PRINT-SAMPLE = *UNCHANGED / *NO / *YES
,TRACE = *UNCHANGED / *NO / *YES(...)

*YES(...)
    |   LEVEL = *COMPLETE / *STATUS / *BLOCK-CONTROL

*RSO-PRINTER(...)
    NAME = list-poss(8): <alphanum-name 1..8>
,DESTINATION = *UNCHANGED / *NONE / *STD / *ADD(...) / *REMOVE(...) /
              list-poss(16): <alphanum-name 1..8>

*ADD(...)
    |   DESTINATION-LIST = list-poss(16): <alphanum-name 1..8>

*REMOVE(...)
    |   DESTINATION-LIST = list-poss(16): <alphanum-name 1..8>
,FORM-NAME = *UNCHANGED / *STD / *EQUIVALENT(...) / *EQUIVALENT-EXCEPT(...) /
            <alphanum-name 1..6> / *ADD(...) / *REMOVE(...)

*EQUIVALENT(...)
    |   EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>

*EQUIVALENT-EXCEPT(...)
    |   FORMS-LIST = list-poss(16): <alphanum-name 1..6>

*ADD(...)
    |   FORMS-LIST = list-poss(16): <alphanum-name 1..6>

```

continued ➔

```

    *REMOVE(...)
        |   FORMS-LIST = list-poss(16): <alphanum-name 1..6>
,PRINT-SAMPLE = *UNCHANGED / *NO / *YES
,TRACE = *UNCHANGED / *NO / *YES
,ALLOWED-ACCESSES = *UNCHANGED / list-poss(4): <c-string 1..4>
,USER-IDENTIFICATION = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
    list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

*EXCEPT(...)
    |   USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*ADD(...)
    |   USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*REMOVE(...)
    |   USER-IDENT-LIST = list-poss(15): <alphanum-name 1..8> / <c-string 1..8 with-low>
,SPOOL-OUT-CLASS = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
    list-poss(16): <integer 1..255>

*EXCEPT(...)
    |   SPOOL-OUT-CLASS-LIST = list-poss(16): <integer 1..255>
*ADD(...)
    |   SPOOL-OUT-CLASS-LIST = list-poss(16): <integer 1..255>
*REMOVE(...)
    |   SPOOL-OUT-CLASS-LIST = list-poss(15): <integer 1..255>
,SPOOL-OUT-NAME = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
    list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

*EXCEPT(...)
    |   SPOOL-OUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*ADD(...)
    |   SPOOL-OUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*REMOVE(...)
    |   SPOOL-OUT-NAME-LIST = list-poss(15): <alphanum-name 1..8> / <c-string 1..8 with-low>

```

continued ➔

(part 4 of 4)

```

,ACCOUNT = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
          list-poss(16): <alphanum-name 1..8>

*EXCEPT(...)
  | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
*ADD(...)
  | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
*REMOVE(...)
  | ACCOUNT-LIST = list-poss(15): <alphanum-name 1..8>
,EXIT-ROUTINES = *UNCHANGED / *NOT-ACTIVE / *ACTIVE
,ROTATION = *UNCHANGED / *ANY / *YES / *NO / *MANUAL
,TWO-UP-PROCESSING = *UNCHANGED / *ANY / *YES / *NO / *MODE-1 / *MODE-2
,FORMS-OVERLAY-BUFFER = *UNCHANGED / *ANY / *ONLY / *NO / *RANGE(...)
  *RANGE(...)
    | LOW = *UNCHANGED / <integer 0..32767>
    | ,HIGH = *UNCHANGED / <integer 0..32767>
,PRIORITY = *UNCHANGED / *ALL / *RANGE(...)
  *RANGE(...)
    | FROM = *UNCHANGED / <integer 30..255>
    | ,TO = *UNCHANGED / <integer 30..255>
,CHARACTER-SET-NUMBER = *UNCHANGED / *ALL / *ONE / RANGE(...)
  *RANGE(...)
    | LOW = *UNCHANGED / <integer 1..32767>
    | ,HIGH = *UNCHANGED / <integer 1..32767>
,REVISION-NUMBER = *ANY / <integer 1..255>

```

Operands

DEVICE-NAME =

The output devices for which administration parameters are to be changed.

DEVICE-NAME = *ANY-LOCAL-PRINTER(...)

Administration parameters are to be changed for local printers which will be specified more precisely below.

NAME = list-poss(8): <alphanum-name1..8>

Mnemonic or logical device names of the printers whose assignment parameters for waiting spoolout jobs are to be changed. Up to 8 device names can be specified.

DESTINATION =

Specifies whether and how the assignment of the specified local printers to a pool is to be changed.

DESTINATION = *NONE

The list of the local pools for the specified printers is deleted, i.e. spoolout jobs for these pools are no longer processed.

DESTINATION = *STD

Standard pools for local printers.

The list of assigned pools for local printers is replaced by a list of standard pools containing the specified local printers (SPOOL parameter file).

DESTINATION = *ADD(...)

Pools for local printers which are to be added to an existing list of local pools to which spoolout jobs for the specified printers can be directed.

DESTINATION-LIST = list-poss(16): *CENTRAL / <alphanum-name 1..8>

List of the pools to be added for local printers.

DESTINATION = *REMOVE(...)

Pools for local printers which are to be deleted from an existing list of local pools to which spoolout jobs for the specified printers can be directed.

DESTINATION-LIST = list-poss(16): *CENTRAL / <alphanum-name 1..8>

List of the pools to be deleted for local printers.

DESTINATION = list-poss(16): *CENTRAL / <alphanum-name 1..8>

List of the local pools to which the spoolout jobs for the specified printers can be directed.

FORM-NAME =

Names of the forms with which spoolout jobs can be processed on the specified printers.

FORM-NAME = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the form used.

FORM-NAME = *STD

Spoolout jobs can be processed on the specified printers with all equivalent forms permitted in the SPOOL parameter file for these printers.

FORM-NAME = *EXCEPT(...)

Forms with which spoolout jobs cannot be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of the excluded forms.

FORM-NAME = *EQUIVALENT(...)

Spoolout jobs can be processed on the specified printers with equivalent forms. Print output is not interrupted when the form is changed.

EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>

List of the equivalent forms.

FORM-NAME = *EQUIVALENT-EXCEPT(...)

Equivalent forms with which spoolout jobs cannot be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of the excluded equivalent forms.

FORM-NAME = *ADD(...)

Forms to be added to an existing list of forms with which spoolout jobs can be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of the forms to be added.

FORM-NAME = *REMOVE(...)

Forms to be deleted from an existing list of forms with which spoolout jobs can be processed on the specified printers.

FORMS-LIST = list-poss(15): <alphanum-name 1..6>

List of the forms to be deleted.

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

List of the forms with which spoolout jobs can be processed on the specified printers. If a (positive) list of forms for the specified printers already exists, it will be replaced by this new list. The print output will be interrupted with a message at the operator console every time a form is changed.

FORMS-OVERLAY =

Film overlays with or without which spoolout jobs can be processed on the specified laser printers.

FORMS-OVERLAY = *ALL

Spoolout jobs can be processed on the specified laser printers irrespective of the specified film overlays.

FORMS-OVERLAY = *NONE

Only spoolout jobs which do not use film overlays can be processed on the specified printers.

FORMS-OVERLAY = *ONLY

Only spoolout jobs which use a (random) film overlay can be processed on the specified printers.

FORMS-OVERLAY = *EXCEPT(...)

Film overlays with which spoolout jobs cannot be processed on the specified laser printers.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of the excluded film overlays.

FORMS-OVERLAY = *ADD(...)

Film overlays which are to be added to an existing list of film overlays with which spoolout jobs can be processed on the specified laser printers.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of the film overlays to be added.

FORMS-OVERLAY = *REMOVE(...)

Film overlays which are to be removed from an existing list of film overlays with which spoolout jobs can be processed on the specified laser printers.

FORMS-OVERLAY-LIST = list-poss(15): <alphanum-name 2..2>

List of the film overlays to be deleted.

FORMS-OVERLAY = list-poss(16): <alphanum-name 2..2>

List of the film overlays with which spoolout jobs can be processed on the specified laser printers.

If a (positive) list of film overlays for the specified printers already exists, it will be replaced by this new list.

HOST-NAME = *UNCHANGED / *ALL-CLUSTERS / *LOCAL-CLUSTER / *HOME / *EXCEPT(...) / *ADD(...) / *REMOVE(...) / list-poss(16): <name 1..8>

Specifies for a local printer the hosts from which print jobs are processed.

HOST-NAME = *ALL-CLUSTERS

Print jobs from all hosts are processed on the specified printer.

HOST-NAME = *LOCAL-CLUSTER

Print jobs from all hosts in the local cluster are processed on the specified printer.

HOST-NAME = *HOME

Only print jobs from the local host are processed on the specified printer.

HOST-NAME = *EXCEPT(...)

Print jobs from all hosts except those on the EXCEPT list are processed on the specified printer.

HOST-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

BCAM names of the hosts to be excluded.

HOST-NAME = *ADD(...)

The specified hosts are added to the existing ACCEPT list for the printer from whose hosts print jobs are processed.

HOST-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
BCAM names of the hosts to be added.

HOST-NAME = *REMOVE(...)

The specified hosts are removed from the existing ACCEPT list for the printer from whose hosts print jobs are processed.

HOST-LIST = list-poss(15): <alphanum-name 1..8> / <c-string 1..8 with-low>
BCAM names of the hosts to be deleted.

HOST-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Only print jobs from hosts on this ACCEPT list are processed on the specified printer.

PRINT-SAMPLE = *UNCHANGED / *NO / *YES

Specifies whether a print sample is to be produced for the first spoolout job to be printed with modified assignment parameters. For printers of type LP65 and for APA printers, PRINT-SAMPLE=*YES is rejected.

TRACE = *UNCHANGED / *NO / *YES (...)

Defines whether a trace file is to be created. The trace file is cataloged under the following name:

- for SPOOL printers:
\$SYSSPOOL.SYSTRC.SPOOL.<dev-mnemonic>.<yy-mm-dd.hh-mm>
- for SPS printers:
\$SYSSPOOL.SYSTRC.SPS.<dev-name>.<yy-mm-dd.hh-mm><W/S>
(W=winter, S=summer)

TRACE = *YES (...)**LEVEL = *COMPLETE / *STATUS / *BLOCK-CONTROL**

Specifies which data is to be written to the runtime log (trace file).

LEVEL = *COMPLETE

Specifies a full trace of the complete process; default for local SPOOL devices (for a description of the data, see also the “[SPOOL \(BS2000/OSD\)](#)” manual).

LEVEL = *STATUS

For SPS printers only: runtime and status data are to be logged.

LEVEL = *BLOCK-CONTROL

For SPS printers only: runtime, status and block control data are to be logged.

DEVICE-NAME = *RSO-PRINTER(...)

Administration parameters are to be changed for RSO printers which are specified in more detail below.

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

Names of active RSO printers whose assignment parameters for waiting spoolout jobs are to be changed.

Up to 8 names can be specified.

DESTINATION =

Defines whether and how the assignment of the specified RSO printers to a pool is changed.

DESTINATION = *NONE

The list of RSO pools for the specified printers is deleted, i.e. spoolout jobs for these RSO pools are no longer processed.

DESTINATION = *STD

Standard RSO pools.

The list of assigned pools is replaced by a list of standard pools containing the specified RSO printers (SPOOL parameter file).

DESTINATION = *ADD(...)

RSO pools to be added to an existing list of RSO pools to which spoolout jobs for the specified printers can be directed.

DESTINATION-LIST = list-poss(16): <alphanum-name 1..8>

List of the RSO pools to be added.

The list may contain up to 100 pools.

DESTINATION = *REMOVE(...)

RSO pools to be removed from an existing list of RSO pools to which spoolout jobs for the specified printers can be directed.

DESTINATION-LIST = list-poss(15): <alphanum-name 1..8>

List of the RSO device pools to be deleted.

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

List of the RSO pools to which spoolout jobs for the specified printers can be directed.

FORM-NAME =

Specifies the forms with which spoolout jobs can be processed on the specified printers.

FORM-NAME = *STD

Spoolout jobs can be processed with all equivalent forms that are permitted in the SPOOL parameter file for the respective RSO printers.

FORM-NAME = *EQUIVALENT(...)

Spoolout jobs can be processed on the specified printers with equivalent forms.

EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>

Spoolout jobs can be processed on the specified printers with all equivalent forms or with one of the equivalent forms on the list.

FORM-NAME = *EQUIVALENT-EXCEPT(...)

Equivalent forms with which spoolout jobs cannot be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of the excluded equivalent forms.

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

Forms with which spoolout jobs can be processed on the specified printers.

FORM-NAME = *ADD(...)

Forms to be added to an existing list of forms with which spoolout jobs can be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of the forms to be added.

FORM-NAME = *REMOVE(...)

Forms to be deleted from an existing list of forms with which spoolout jobs can be processed on the specified printers.

FORMS-LIST = list-poss(15): <alphanum-name 1..6>

List of the forms to be deleted.

PRINT-SAMPLE = *UNCHANGED / *NO / *YES

Specifies whether a print sample is to be produced.

In RSO operation a print sample can be requested for public devices which print on continuous paper (not for single-sheet printers).

TRACE = *UNCHANGED / *NO / *YES

Defines whether a trace file is to be created for the RSO printer. The trace file is cataloged under the following name:

\$SYSSPOOL.SYSTRC.RSO.<device>.<yy-mm-dd.hh-mm>

ALLOWED-ACCESSES =

Specifies which accesses are allowed. The operand can be used for any RSO printer.

ALLOWED-ACCESSES = *UNCHANGED

The access setting remains unchanged.

ALLOWED-ACCESSES = list-poss(4): <c-string 1..4>

List of permitted accesses. The following can be specified:

C'RSO' RSO print jobs can be assigned to the started printer.

C'UTM' UTM print jobs can be assigned to the started printer.

USER-IDENTIFICATION =

User IDs under which spoolout jobs can be processed on the specified printers.

USER-IDENTIFICATION = *ALL

Spoolout jobs can be processed on the specified printers under all user IDs.

USER-IDENTIFICATION = *EXCEPT(...)

User IDs under which spoolout jobs cannot be processed on the specified printers.

**USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of excluded user IDs.

USER-IDENTIFICATION = *ADD(...)

User IDs to be added to an existing list of user IDs under which spoolout jobs can be processed on the specified printers.

**USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of user IDs to be added.

USER-IDENTIFICATION = *REMOVE(...)

User IDs which are to be removed from an existing list of user IDs under which spoolout jobs can be processed on the specified printers.

**USER-IDENT-LIST = list-poss(15): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of user IDs to be removed.

**USER-IDENTIFICATION = list-poss(16): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of user IDs under which print jobs can be processed on the specified printers.

If a (positive) list of user IDs for the specified printers already exists, it will be replaced by this new list.

SPOOLOUT-CLASS =

Spoolout classes from which spoolout jobs can be processed on the specified printers.

SPOOLOUT-CLASS = *ALL

Spoolout jobs from all spoolout classes can be processed on the specified printers.

SPOOLOUT-CLASS = *EXCEPT(...)

Spoolout classes from which spoolout jobs cannot be processed on the specified printers.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of excluded spoolout classes.

SPOOLOUT-CLASS = *ADD(...)

Spoolout classes to be added to an existing list of spoolout classes from which spoolout jobs can be processed on the specified printers.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of spoolout classes to be added.

SPOOLOUT-CLASS = *REMOVE(...)

Spoolout classes to be removed from an existing list of spoolout classes from which spoolout jobs can be processed on the specified printers.

SPOOLOUT-CLASS-LIST = list-poss(15): <integer 1..255>

List of spoolout classes to be removed.

SPOOLOUT-CLASS = list-poss(16): <integer 1..255>

List of the spoolout classes from which print jobs can be processed on the specified printers.

If a (positive) list of spoolout classes for the specified printers already exists, it will be replaced by this new list.

SPOOLOUT-NAME =

Job names under which spoolout jobs can be processed on the specified printers.

SPOOLOUT-NAME = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the job name.

SPOOLOUT-NAME = *EXCEPT(...)

Job names under which spoolout jobs cannot be processed on the specified printers.

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

<c-string 1..8 with-low>

List of excluded job names.

SPOOLOUT-NAME = *ADD(...)

Job names to be added to an existing list of job names under which spoolout jobs can be processed on the specified printers.

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

<c-string 1..8 with-low>

List of job names to be added.

SPOOLOUT-NAME = *REMOVE(...)

Job names which are to be removed from an existing list of job names under which spoolout jobs can be processed on the specified printers.

SPOOLOUT-NAME-LIST = list-poss(15): <alphanum-name 1..8> /

<c-string 1..8 with-low>

List of job names to be removed.

SPOOLOUT-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of job names under which spoolout jobs can be processed on the specified printers. If there is already a (positive) list of job names for the specified printers, it is replaced by this new list.

ACCOUNT =

Account numbers with which spoolout jobs can be processed on the specified printers.

ACCOUNT = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the account number.

ACCOUNT = *EXCEPT(...)

Account numbers under which spoolout jobs cannot be processed on the specified printers.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of excluded account numbers.

ACCOUNT = *ADD(...)

Account numbers to be added to an existing list of account numbers under which spoolout jobs can be processed on the specified printers.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of account numbers to be added.

ACCOUNT = *REMOVE(...)

Account numbers which are to be removed from an existing list of account numbers under which spoolout jobs can be processed on the specified printers.

ACCOUNT-LIST = list-poss(15): <alphanum-name 1..8>

List of account numbers to be removed.

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

List of account numbers under which spoolout jobs can be processed on the specified printers.

If there is already a (positive) list of account numbers for the specified printers it is replaced by this new list.

EXIT-ROUTINES = *UNCHANGED / *NOT-ACTIVE / *ACTIVE

Indicates whether EXIT routines are to be called for spoolout to the specified printers.

ROTATION =

Indicates whether spoolout jobs which require the page rotation module can be processed on the specified printers.

ROTATION = *ANY

Spoolout jobs can be processed on the specified printers whether they require the page rotation module or not.

ROTATION = *NO

Only spoolout jobs which do not require the page rotation module can be processed on the specified printers.

ROTATION = *YES

Only spoolout jobs which require the page rotation module can be processed on the specified printers.

ROTATION = *MANUAL

In contrast to the value NO, the operator can access the page rotation module manually via hardware switches. In this case all the pages are printed out in rotated form.

TWO-UP-PROCESSING = *UNCHANGED / *ANY / *YES / *NO / *MODE-1 / *MODE-2 /

Specifies 'TWO-UP' processing for the specified HP90 printers (2090, 2140) (see the "SPOOL (BS2000/OSD)" manual).

FORMS-OVERLAY-BUFFER =

Indicates whether spoolout jobs which use an FOB data overlay can be processed on the specified printers.

FORMS-OVERLAY-BUFFER = *ANY

Spoolout jobs with and without FOB data overlays can be processed on the specified printers. The maximum possible FORMS-OVERLAY-BUFFER is taken from the corresponding standard device entry.

FORMS-OVERLAY-BUFFER = *ONLY

Only spoolout jobs which require an FOB data overlay can be processed on the specified printers. The maximum possible FORMS-OVERLAY-BUFFER is taken from the corresponding standard device entry.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Only spoolout jobs with FOB data overlays which lie within the specified size range (in sublines) can be processed on the specified printers.

LOW = *UNCHANGED / <integer 0..32767>

Lower limit of the range.

HIGH = *UNCHANGED / <integer 0..32767>

Upper limit of the range.

PRIORITY =

Priorities with which spoolout jobs can be processed on the specified printers.

PRIORITY = *ALL

Spoolout jobs can be processed on the specified printers irrespective of their priority.

PRIORITY = *RANGE(...)

Spoolout jobs with priorities within this range can be processed on the specified printers.

FROM = *UNCHANGED / <integer 30..255>

Lower limit of the range.

TO = UNCHANGED / <integer 30..255>

Upper limit of the range.

CHARACTER-SET-NUMBER =

Spoolout jobs can be processed on the specified printers according to the number of character sets required.

CHARACTER-SET-NUMBER = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the number of character sets required. The maximum possible number of required character sets is taken from the corresponding standard device entry.

CHARACTER-SET-NUMBER = *ONE

Only spoolout jobs which require no more than one character set can be processed on the specified printers.

CHARACTER-SET-NUMBER = *RANGE(...)

Spoolout jobs with a number of required character sets which falls within the range can be processed on the specified printers.

LOW = *UNCHANGED / <integer 1..32767>

Minimum number of required character sets.

HIGH = *UNCHANGED / <integer 1..32767>

Maximum number of required character sets.

REVISION-NUMBER = *ANY / <integer 1..255>

Number of the processing status. The specified number must match that of the current processing status.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
			Guaranteed message: SPS0B06
2	0	SCP0915	Element to be deleted not found
2	0	SCP0954	Only first 100 pools activated for the device
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value
			Guaranteed messages: SCP0907, SCP0944, SCP0951, SCP0957, SCP0967, SPS0168
	128	SPS0896	Subsystem not loaded/ready
			Guaranteed message: SCP0896
	128	SCP0911	RSO subsystem in dump creation or restart phase
	128	SCP0992	APA subsystem not loaded or not supported

MODIFY-SPOOLOUT-OPTIONS

Compress SPOOL output

Domain:	SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

Compresses printouts by reducing line feeds.

The MODIFY-SPOOLOUT-OPTIONS command affects the way in which feed control characters in files edited for printing are handled during printout. You can define the degree of compression. Entries made here affect all subsequent PRINT-DOCUMENT commands in which interpretation of the feed control character has been explicitly requested (CONTROL-CHARACTERS operand). The entries lose their effect at the end of the job or when the MODIFY-SPOOLOUT-OPTIONS command is issued with corresponding entries.

Format

MODIFY-SPOOLOUT-OPTIONS
COMPRESS-OUTPUT = <u>UNCHANGED</u> / NO / MINIMUM / MAXIMUM

Operands

COMPRESS-OUTPUT =

Degree of compression.



The COMPRESS-OUTPUT operand is ignored if the operand CONTROL-CHARACTERS = EBCDIC / IBM / ASA is omitted from the PRINT-DOCUMENT command.

COMPRESS-OUTPUT = UNCHANGED

The existing entry is valid (= NO at the start of a job).

COMPRESS-OUTPUT = NO

No compression, i.e. the entries in the PRINT-DOCUMENT command (CONTROL-CHARACTERS operand) are not changed.

COMPRESS-OUTPUT = MINIMUM

Interprets the feed control characters in the edited file as follows:

Feed control character for	Line feed
1 line	1 line
2 line	1 line
3 lines	2 lines
> 3 lines	3 lines

COMPRESS-OUTPUT = MAXIMUM

Selects a 1-line feed (minimum space requirement) for the output of edited files.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Syntax error

MODIFY-TAPE-OUTPUT-STATUS

Change administration parameters for tape devices

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

Function

The MODIFY-TAPE-OUTPUT-STATUS command changes the administration parameters for the specified tape devices.

This command can only be used for local SPOOL.

Format

(part 1 of 3)

MODIFY-TAPE-OUTPUT-STATUS**UNIT** = list-poss(8): <alphanum-name 2..2>**DESTINATION** = *UNCHANGED / *NONE / *ADD(...) / *REMOVE(...) /
list-poss(16): <alphanum-name 1..8> / *CENTRAL***ADD(...)**| **DESTINATION-LIST** = list-poss(16): *CENTRAL / <alphanum-name 1..8>***REMOVE(...)**| **DESTINATION-LIST** = list-poss(16): *CENTRAL / <alphanum-name 1..8>**FORM-NAME** = *UNCHANGED / *ALL / *STD / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
list-poss(16): <alphanum-name 1..6>***EXCEPT(...)**| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>***ADD(...)**| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>***REMOVE(...)**| **FORMS-LIST** = list-poss(15): <alphanum-name 1..6>**FORMS-OVERLAY** = *UNCHANGED / *ALL / *NONE / *ONLY / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
list-poss(16): <alphanum-name 2..2>***EXCEPT(...)**| **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>***ADD(...)**| **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>***REMOVE(...)**| **FORMS-OVERLAY-LIST** = list-poss(15): <alphanum-name 2..2>**USER-IDENTIFICATION** = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
list-poss(16): <name 1..8>***EXCEPT(...)**| **USER-IDENT-LIST** = list-poss(16): <name 1..8>

continued ➔

(part 2 of 3)

```

*ADD(...)
  | USER-IDENT-LIST = list-poss(16): <name 1..8>
,*REMOVE(...)
  | USER-IDENT-LIST = list-poss(15): <name 1..8>
,SPOOL-OUT-CLASS = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
  list-poss(16): <integer 1..255>
*EXCEPT(...)
  | SPOOL-OUT-CLASS-LIST = list-poss(16): <integer 1..255>
*ADD(...)
  | SPOOL-OUT-CLASS-LIST = list-poss(16): <integer 1..255>
*REMOVE(...)
  | SPOOL-OUT-CLASS-LIST = list-poss(15): <integer 1..255>
,SPOOL-OUT-NAME = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
  list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*EXCEPT(...)
  | SPOOL-OUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*ADD(...)
  | SPOOL-OUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*REMOVE(...)
  | SPOOL-OUT-NAME-LIST = list-poss(15): <alphanum-name 1..8> / <c-string 1..8 with-low>
,ACCOUNT = *UNCHANGED / *ALL / *EXCEPT(...) / *ADD(...) / *REMOVE(...) /
  list-poss(16): <alphanum-name 1..8>
*EXCEPT(...)
  | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
*ADD(...)
  | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
*REMOVE(...)
  | ACCOUNT-LIST = list-poss(15): <alphanum-name 1..8>
,ROTATION = *UNCHANGED / *ANY / *NO / *YES

```

continued ⇒

```

, TWO-UP-PROCESSING = *UNCHANGED / *ANY / *YES / *NO / *MODE-1 / *MODE-2
, FORMS-OVERLAY-BUFFER = *UNCHANGED / *ANY / *ONLY / *NO / *RANGE(...)
  RANGE(...)
    |
    | LOW = *UNCHANGED / <integer 0..32767>
    | , HIGH = *UNCHANGED / <integer 0..32767>
, PRIORITY = *UNCHANGED / *ALL / *RANGE(...)
  *RANGE(...)
    |
    | FROM = *UNCHANGED / <integer 30..255>
    | , TO = *UNCHANGED / <integer 30..255>
, CHARACTER-SET-NUMBER = *UNCHANGED / *ALL / *ONE / *RANGE(...)
  *RANGE(...)
    |
    | LOW = *UNCHANGED / <integer 1..32767>
    | , HIGH = *UNCHANGED / <integer 1..32767>
, SPOOLOUT-TYPE = *UNCHANGED / *ALL / *HP-PRINTER / *PRINTER / *PAGE-PRINTER /
  *BUFFER-LINE-PRINTER / *LIST(...)
  *LIST(...)
    |
    | SELECTION-TYPE = *MAY / *MUST
    | , DEVICE-TYPE = list-poss(9): *HP-PRINTER / *LP-PRINTER / *LP48-PRINTER / *LP65-PRINTER /
    |   *HP90-PRINTER / *LP-EMULATED-PRINTER / *2090-APA-PRINTER /
    |   *2050-APA-PRINTER / *2090-TWIN-PRINTER / *PCL-PRINTER
, REVISION-NUMBER = *ANY / <integer 1..255>

```

Operands

UNIT = list-poss(8): <alphanum-name 2..2>

Mnemonic device names of the tape devices whose assignment parameters are to be modified for waiting spoolout jobs.

DESTINATION =

Defines the device pools for which the spoolout jobs which can be processed on the specified tape devices are intended.

DESTINATION = *NONE

The list of local pools is cleared, i.e. spoolout jobs for local device pools are no longer processed on the specified tape devices.

DESTINATION = *ADD(...)

Device pools which are to be added to an existing list of local pools for which the spoolout jobs which can be processed on the specified tape devices are intended.

DESTINATION-LIST = list-poss(16): *CENTRAL / <alphanum-name 1..8>

List of local device pools to be added.

DESTINATION = *REMOVE(...)

Local device pools which are to be removed from an existing list of pools for which the spoolout jobs which can be processed on the specified tape devices are intended.

DESTINATION-LIST = list-poss(16): *CENTRAL / <alphanum-name 1..8>

List of local device pools to be removed.

DESTINATION = list-poss(16): <alphanum-name 1..8> / *CENTRAL

List of local device pools for which the spoolout jobs which can be processed on the specified tape devices are intended.

FORM-NAME =

Names of the forms with which spoolout jobs can be processed on the specified tape devices.

FORM-NAME = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the form used.

FORM-NAME = *STD

Only spoolout jobs with FORM=*STD can be processed on the specified tape devices.

FORM-NAME = *EXCEPT(...)

Forms with which spoolout jobs cannot be processed on the specified tape devices.

FORMS-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded forms.

FORM-NAME = *ADD(...)

Forms to be added to an existing list of forms with which spoolout jobs can be processed on the specified tape devices.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of forms to be added.

FORM-NAME = *REMOVE(...)

Forms which are to be removed from an existing list of forms with which spoolout jobs can be processed on the specified tape devices.

FORMS-LIST = list-poss(15): <alphanum-name 1..6>

List of forms to be removed.

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

List of forms with which spoolout jobs can be processed on the specified tape devices. If there is already a (positive) list of forms for the specified tape devices it is replaced by this new list.

FORMS-OVERLAY =

Film overlays with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the film overlays specified.

FORMS-OVERLAY = *NONE

Only spoolout jobs which do not use film overlays can be processed on the specified tape devices.

FORMS-OVERLAY = *ONLY

Only spoolout jobs which use (any) film overlay can be processed on the specified devices.

FORMS-OVERLAY = *EXCEPT(...)

Film overlays with which spoolout jobs cannot be processed on the specified tape devices.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded film overlays.

FORMS-OVERLAY = *ADD(...)

Film overlays to be added to an existing list with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of film overlays to be added.

FORMS-OVERLAY = *REMOVE(...)

Film overlays which are to be removed from an existing list with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY-LIST = list-poss(15): <alphanum-name 2..2>

List of film overlays to be removed.

FORMS-OVERLAY = list-poss(16): <alphanum-name 2..2>

List of film overlays with which spoolout jobs can be processed on the specified tape devices.

USER-IDENTIFICATION =

User IDs under which spoolout jobs can be processed on the specified tape devices.

USER-IDENTIFICATION = *ALL

Spoolout jobs can be processed on the specified tape devices under all user IDs.

USER-IDENTIFICATION = *EXCEPT(...)

User IDs under which spoolout jobs cannot be processed on the specified tape devices.

USER-IDENT-LIST = list-poss(16): <name 1..8>

List of excluded user IDs.

USER-IDENTIFICATION = *ADD(...)

User IDs to be added to an existing list of user IDs under which spoolout jobs can be processed on the specified tape devices.

USER-IDENT-LIST = list-poss(16): <name 1..8>

List of user IDs to be added.

USER-IDENTIFICATION = *REMOVE(...)

User IDs which are to be removed from an existing list of user IDs under which spoolout jobs can be processed on the specified tape devices.

USER-IDENT-LIST = list-poss(15): <name 1..8>

List of user IDs to be removed.

USER-IDENTIFICATION = list-poss(16): <name 1..8>

List of user IDs under which spoolout jobs can be processed on the specified tape devices. If there is already a (positive) list of user IDs for the specified tape devices, it is replaced by this new list.

SPOOLOUT-CLASS =

Spoolout classes from which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-CLASS = *ALL

Spoolout jobs from all spoolout classes can be processed on the specified tape devices.

SPOOLOUT-CLASS = *EXCEPT(...)

Spoolout classes from which spoolout jobs cannot be processed on the specified tape devices.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of excluded spoolout classes.

SPOOLOUT-CLASS = *ADD(...)

Spoolout classes to be added to an existing list of spoolout classes from which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of spoolout classes to be added.

SPOOLOUT-CLASS = *REMOVE(...)

Spoolout classes to be removed from an existing list of spoolout classes from which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-CLASS-LIST = list-poss(15): <integer 1..255>

List of spoolout classes to be removed.

SPOOLOUT-CLASS = list-poss(16): <name 1..8>

List of spoolout classes from which spoolout jobs can be processed on the specified tape devices.

If there is already a (positive) list of spoolout classes for the specified tape devices, it is replaced by this new list.

SPOOLOUT-NAME =

Job names under which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-NAME = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the job name.

SPOOLOUT-NAME = *EXCEPT(...)

Job names under which spoolout jobs cannot be processed on the specified tape devices.

SPOOLOUT-NAME-LIST = list-poss(16): <alphanumeric-name 1..8> / <c-string 1..8 with-low>

List of excluded job names.

SPOOLOUT-NAME = *ADD(...)

Job names to be added to an existing list of job names under which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-NAME-LIST = list-poss(16): <alphanumeric-name 1..8> / <c-string 1..8 with-low>

List of job names to be added.

SPOOLOUT-NAME = *REMOVE(...)

Job names which are to be removed from an existing list of job names under which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-NAME-LIST = list-poss(15): <alphanumeric-name 1..8> / <c-string 1..8 with-low>

List of job names to be removed.

SPOOLOUT-NAME = list-poss(16): <alphanumeric-name 1..8> / <c-string 1..8 with-low>

List of job names under which spoolout jobs can be processed on the specified tape devices. If there is already a (positive) list of job names for the specified tape devices it is replaced by this new list.

ACCOUNT =

Account numbers with which spoolout jobs can be processed on the specified tape devices.

ACCOUNT = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the account number.

ACCOUNT = *EXCEPT(...)

Account numbers under which spoolout jobs cannot be processed on the specified tape devices.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of excluded account numbers.

ACCOUNT = *ADD(...)

Account numbers to be added to an existing list of account numbers under which spoolout jobs can be processed on the specified tape devices.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of account numbers to be added.

ACCOUNT = *REMOVE(...)

Account numbers which are to be removed from an existing list of account numbers under which spoolout jobs can be processed on the specified tape devices.

ACCOUNT-LIST = list-poss(15): <alphanum-name 1..8>

List of account numbers to be removed.

ACCOUNT = list-poss(16): <name 1..8>

List of account numbers under which spoolout jobs can be processed on the specified tape devices.

If there is already a (positive) list of account numbers for the specified tape devices it is replaced by this new list.

ROTATION =

Indicates whether spoolout jobs which require the page rotation module can be processed on the specified tape devices.

ROTATION = *ANY

Spoolout jobs can be output on the specified tape devices whether they require the page rotation module or not.

ROTATION = *NO

Only spoolout jobs which do not require the page rotation module can be processed on the specified tape devices.

ROTATION = *YES

Only spoolout jobs which require the page rotation module can be processed on the specified tape devices.

TWO-UP-PROCESSING = *UNCHANGED / *ANY / *YES / *NO / *MODE-1 / *MODE-2

Specifies 'TWO-UP' processing for the specified HP90 (2090, 2140) printers (see the "[SPOOL \(BS2000/OSD\)](#)" manual).

FORMS-OVERLAY-BUFFER =

Indicates whether spoolout jobs which use an FOB overlay can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *ANY

Spoolout jobs with and without FOB overlays can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *ONLY

Only spoolout jobs which require an FOB overlay can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Only spoolout jobs with FOB overlays which lie within the specified size range can be processed on the specified tape devices.

LOW = *UNCHANGED / <integer 0..32767>

Lower limit of the range.

HIGH = *UNCHANGED / <integer 0..32767>

Upper limit of the range.

PRIORITY =

Priorities with which spoolout jobs can be processed on the specified tape devices.

PRIORITY = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of their priority.

PRIORITY = *RANGE(...)

Spoolout jobs with priorities within this range can be processed on the specified tape devices.

FROM = *UNCHANGED / <integer 30..255>

Lower limit of the range.

TO = *UNCHANGED / <integer 30..255>

Upper limit of the range.

CHARACTER-SET-NUMBER =

Spoolout jobs can be processed on the specified tape devices according to the number of character sets required.

CHARACTER-SET-NUMBER = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the number of character sets required.

CHARACTER-SET-NUMBER = *ONE

Only spoolout jobs which require no more than one character set can be processed on the specified tape devices.

CHARACTER-SET-NUMBER = *RANGE(...)

Spoolout jobs with a number of required character sets which falls within the range can be processed on the specified tape devices.

LOW = *UNCHANGED / <integer 1..32767>

Lower limit of the range.

HIGH = *UNCHANGED / <integer 1..32767>

Upper limit of the range.

SPOOLOUT-TYPE =

Spoolout jobs for certain types of output device can be processed on the specified tape devices.

SPOOLOUT-TYPE = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the type of output device for which they were created.

SPOOLOUT-TYPE = *HP-PRINTER

Only spoolout jobs for printers of type 3351/3353 can be processed on the specified tape devices.

SPOOLOUT-TYPE = *PRINTER

Only spoolout jobs for printers can be processed on the specified tape devices.

SPOOLOUT-TYPE = *PAGE-PRINTER

Only spoolout jobs for laser printers can be processed on the specified tape devices.

SPOOLOUT-TYPE = *BUFFER-LINE-PRINTER

Only spoolout jobs for line printers with loadable buffers (3337, 3338, 3339, 3348, 3349) can be processed on the specified tape devices.

SPOOLOUT-TYPE = *LIST(...)

Spoolout jobs for the specified list of device types can be processed on the specified tape devices.

SELECTION-TYPE = *MAY / *MUST

The selection of spoolout jobs

- is restricted to those which at least may be output on one of the specified device types (MAY)
- is restricted to those which must be output on one of the specified device types and may not be output on any device type than the ones specified (MUST).

DEVICE-TYPE = list-poss(9): *HP-PRINTER / *LP-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *HP90-PRINTER / *LP-EMULATED-PRINTER / *2090-APA-PRINTER / *2050-APA-PRINTER / *2090-TWIN-PRINTER / *PCL-PRINTER

List of device types. For the symbolic specifications, see the “High-performance printers” chapter in the “[SPOOL \(BS2000/OSD\)](#)” manual.

REVISION-NUMBER = *ANY / <integer 1..255>

The number given must match the current revision number.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SCP0915	Element to be deleted not found
2	0	SCP0954	Only first 100 pools activated for the device
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value

MOVE-PRINT-JOBS

Extract and move print jobs

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	SPOOL administrators
Privileges:	PRINT-SERVICES-ADMINISTRATION

Function

The MOVE-PRINT-JOBS command enables the Spool & Print administrator to extract print jobs from a specified EQUISAMQ file and insert them into another file.

Local print jobs can be processed, regardless of whether or not the SPOOL subsystem is loaded. Distributed print jobs can only be processed if the SPOOL subsystem is not loaded.

Selection criteria are used to define which local print jobs or print jobs within a cluster are to be selected. In particular, this includes:

1. the PUBSET: A print job is selected if all related resources belong to the predefined list of catalog IDs. The following related resources are assigned to a print job:
the file to be printed, the monitoring job variable, the resource file and the conversion table.
2. the JOB-TYPE: A print job is selected if it is currently in one of the specified states.

A specific operand (JOB-POSITION) allows optional selection of distributed print jobs (print jobs processed by the local server or processed by the local and remote servers).

A specific operand (HOST-NAME) allows updating the client or server host associated with a print job, when this print job is inserted into the EQUISAMQ file of the target system.

Format

<pre> MOVE-PRINT-JOBS FROM-FILE = *<u>STD</u> / <filename_1..54_without-gen-vers> / *INACTIVE-SYSTEM-PRINT-QUEUE(..) *INACTIVE-SYSTEM-PRINT-QUEUE(...) PUBSET= <catid_1..4> ,TO-FILE = *<u>STD</u> / <filename_1..54_without-gen-vers> ,SELECT = *BY-ATTRIBUTES(...) *BY-ATTRIBUTES(...) RESOURCES-PUBSET = *<u>ANY</u> / list-poss(128): <cat-id_1..4> ,JOB-TYPE = *<u>ANY</u> / list-poss(3): *WAIT / *ACTIVE / *KEEP ,JOB-SCOPE = *<u>ANY</u> / list-poss(2): *<u>LOCAL-PRINT-JOBS</u> / *DISTRIBUTED-PRINT-JOBS(...) *DISTRIBUTED-PRINT-JOBS(...) JOB-POSITION = *<u>LOCAL-DISTRIBUTED</u> / *ALL ,HOST-NAME = *<u>STD</u> / *UNCHANGED </pre>
--

Operands

FROM-FILE= *STD / <filename_1..54_without-gen-vers> / *INACTIVE-SYSTEM-PRINT-QUEUE(...)****

Specifies the name of the EQUISAMQ input file from which the print jobs are to be selected.

FROM-FILE=*STD

The input file is the standard file EQUISAMQ (\$TSOS.EQUISAMQ).

FROM-FILE=*INACTIVE-SYSTEM-PRINT-QUEUE(...)****

The input file is the standard file EQUISAMQ of an inactive pubset (that was imported). The full file name is created internally during the processing.

PUBSET= <catid_1..4>

Specifies the catalog ID of the imported remote home pubset on which the EQUISAMQ file of the system is located.

TO-FILE=*STD / <filename_1..54_without-gen-vers>

Specifies the name of the output file (EQUISAMQ) to which the selected print jobs are to be copied.

TO-FILE=*STD

The output file is the standard file EQUISAMQ (\$TSOS.EQUISAMQ).

SELECT=*BY-ATTRIBUTES(...)****

Specifies selection criteria (attributes) to be applied when selecting print jobs.

RESOURCES-PUBSET= *ANY / list-poss(128): <cat-id_1..4>

Selects print jobs for which the related resources can either be located anywhere, or only specific print jobs whose related resources are on the listed pubset(s).

RESOURCES-PUBSET = list-poss(128): <cat-id_1..4>

Specifies the list of pubsets on which the related resources of any print job to be selected must be located.

JOB-TYPE=*ANY / list-poss(3): *WAIT / *ACTIVE / *KEEP

Determines whether the print jobs to be selected may be in any state or only in one of the specified states.

JOB-TYPE=list-poss(3): *WAIT / *ACTIVE / *KEEP

Specifies a list of possible states in which a print job must be in order to be selected.

JOB-SCOPE=*ANY / list-poss(2):*LOCAL-PRINT-JOBS / *DISTRIBUTED-PRINT-JOBS(...)

Specifies which types of print jobs may be selected, i.e. local, distributed or both. See also the notes on distributed print jobs below.

JOB-SCOPE=*ANY

Both local and distributed print jobs are to be selected.

JOB-SCOPE=list-poss(2):*LOCAL-PRINT-JOBS / *DISTRIBUTED-PRINT-JOBS(...)

Specifies which print jobs are to be selected, depending on their scope.

JOB-POSITION=*LOCAL-DISTRIBUTED / *ALL

Specifies which kind of distributed print job will be selected.

The default value *LOCAL-DISTRIBUTED allows selecting only type 1 distributed print jobs (see note 3) with resource-pubset validation for print jobs issued on the home server.

The value *ALL allows selecting type 2 distributed print jobs (see note 3) without any resource-pubset validation, even for print jobs issued on the home server.

Moving type 2 distributed print jobs is meaningful only when running in virtual hosts context.

In any case, the default catalogue ID of the SYSDPRNT user ID is checked when distributed print jobs are moved (see notes).

HOST-NAME=*STD / *UNCHANGED

Specifies if the host name associated with the print jobs (client or server, depending on which one is changed) must be updated.

The value *UNCHANGED means that no update will occur. This is meaningful in virtual hosts context. In the case of the *STD default value, the concerned host name associated with the print job (client or server) will be updated with the real BCAM host name of the target system.

Notes

The following notes apply to the usage of the MOVE-PRINT-JOBS command in the event of a system crash or for a still active system. All points that apply only to a system crash are explicitly indicated as such.

1. Only the print services administrator is authorized to issue this command.
2. The values for the FROM-FILE and TO-FILE operands must be different. Therefore, there is no default value for the TO-FILE operand.
3. Distributed print jobs can be processed by using the JOB-SCOPE=*DISTRIBUTED-PRINT-JOBS keyword in the command. Several kinds of print jobs may be considered which can be classified as follows:
 - Type 1 print jobs (identified as local distributed print jobs):
 - Print jobs issued from a BS2000 client host and processed by its home server (client host = server host).
 - Print jobs issued from BS2000 remote clusters, UNIX domains or Windows, and processed by the server located on the gateway host (gateway host = server host).
 - Type 2 print jobs (identified as real distributed print jobs):
 - Print jobs issued from a BS2000 client host and processed by a remote server (client host <> server host).
 - Print jobs issued from BS2000 remote clusters, UNIX domains or Windows, and processed by a remote server not located on the gateway host (gateway host <> server host).

The selection of distributed print jobs can be refined by the JOB-POSITION parameter: If the value *LOCAL-DISTRIBUTED is specified, the command only concerns type 1 distributed print jobs.

If the value *ALL is specified, all distributed print jobs are concerned (type 1 and type 2).

It is advised, however, to process remote server distributed print jobs with the commands MODIFY-MULTIPLE-PRINT-JOBS and CANCEL-MULTIPLE-PRINT-JOBS.

4. The MOVE-PRINT-JOBS command can be used to manage both local and distributed print jobs as well as both types simultaneously.
Local print jobs can be moved, regardless of whether or not the SPOOL subsystem is loaded.
Distributed print jobs can only be moved if the SPOOL subsystem is not loaded.
5. This command cannot be executed when loading or unloading the SPOOL subsystem if one of the specified EQUISAMQ files (FROM-FILE or TO-FILE) is the standard file.

6. It may not be possible to load or unload the SPOOL subsystem while executing this command if one of the specified EQUISAMQ files (FROM-FILE or TO-FILE) is the standard file.
7. If the EQUISAMQ file of the system needs to be accessed, a special value can be entered in the parameter file (SYSSSI.SPOOLSYS.021) to specify whether the MOVE-PRINT-JOBS command must be stopped until the SPOOL subsystem has reached the “created” or “not created” status.
The default value is MOVE.SPOOL.REQUEST=ABORT-REQUEST, which means that the command is rejected if SPOOL is currently in the “in-create/resume” or “in-delete/hold” state. The value WAIT-SPOOL must be used if the command should wait until SPOOL is created or not created. Similarly, a special value can also be entered in the parameter file (SYSSSI.SPOOL.043) to specify whether the command “SPOOL start/resume” or “SPOOL stop/hold” should wait until a currently executing MOVE-PRINT-JOBS command has completed.
The default value is MOVE.SPOOL.REQUEST=ABORT-REQUEST, i.e. the command on the SPOOL subsystem is rejected if the MOVE-PRINT-JOBS command is being executed.
The value WAIT-MOVE must be used if the command should wait until the MOVE command has completed.
8. The MOVE-PRINT-JOBS command cannot be executed simultaneously from multiple processes. A special value can be entered in the parameter file (SYSSSI.SPOOLSYS.021) to specify whether the MOVE-PRINT-JOBS command should wait until any other currently executing MOVE-PRINT-JOBS command has completed. The default value is MOVE.COMMAND=ABORT-REQUEST, i.e. the command is rejected if another such command is already being executed. The value WAIT-REQUEST must be used if the command should wait until the other command has fully executed.
9. If SELECT=*BY-ATT(PUBSET=*ANY, JOB-SCOPE=*LOCAL-PRINT-JOBS) was specified, all local print jobs are selected, regardless of where their related resources are located. This means that print jobs which use resources on the HOME pubset are also selected. Such print jobs can, however, only be executed on another system if the HOME pubset is in the IMCAT status. If this is not the case, these print jobs are placed in the KEEP status. A print job is selected only if all related resources (file, monitoring job variable, resource file and conversion table) are located on one or more of the pubsets in the list.
10. In the case of distributed print jobs under BS2000 with client = server, the RESOURCES-PUBSET parameter refers to the monitoring job variable and the user resources file if these were specified on issuing the print job.
11. When a print job has been selected and copied to the output file, it is deleted from the input file in order to ensure that it is not printed twice.

12. JOB-TYPE=*WAIT means that there are print jobs in the “wait” (WT) status (in SPOOL or RSO queues), “wait pre-processing” (WP) or “wait file transfer” (WT). JOB-TYPE=*ACTIVE means that there are print jobs in the “active” (ACT) status, “*before apa print” (TRT), “*after apa print” (TRD), “pre-processing” (PRE) or “file transfer” (FT).
JOB-TYPE=*KEEP means that there are print jobs in the “keep” (KP) status.
13. The selection of print jobs with JOB-TYPE=*ACTIVE is significant if these print jobs were taken from the EQUISAMQ file of a system that has crashed. If the original system has not failed, all access to an active print job is blocked to enable further processing by the original system.
14. The administrator is responsible for maintaining the files specified as the FROM-FILE and TO-FILE (i.e. for deleting a file when it is empty, for example, or when it is not the EQUISAMQ file of the system).
15. If the print jobs to be moved access more than 128 pubsets, the command can be issued multiple times by using the same FROM-FILE and TO-FILE operands.
16. Even if RSO is not loaded, RSO print jobs can be moved from the EQUISAMQ file of the system to a work file. Note, however, that if RSO is not loaded when such print jobs are being loaded into the EQUISAMQ file of the system, these print jobs will remain invisible until RSO is ready.
17. The contents of the monitoring job variable for a print job are updated after the print job has been stored in the target file. The new TSN and the status of the print job (and thus also the device name) are modified; the other fields remain unchanged.
18. The SPA0114 message is issued at the end of each command to indicate the number of executed print jobs (0 if no print job can be selected or if an error that prevents the selection of a print job has occurred).
19. The same output file (TO-FILE operand) can be used by successive MOVE-PRINT-JOBS commands to save the print job. If the output file does not exist, a new output file is created; otherwise, the existing file is extended. Note, however, that if the output file corresponds to the EQUISAMQ file of the system, and this file does not exist, then no such output file is created, and the occurrence of an error is reported instead (the EQUISAMQ file of the system is created on starting the SPOOLSYS and should always be present).
20. Family print jobs are dissociated when stored in the EQUISAMQ file of the system, i.e. new TSNs are assigned to the (n-1) last elements of the family.
21. Selected active print jobs (only possible in the event of a system crash) can be reset to the “wait” status, while those jobs which are already in the “wait” (or “keep”) status remain in the same status.

22. Print jobs for which the file had to be locked (LOCK-FILE operand of the command PRINT-DOCUMENT or MODIFY-PRINT-JOB-ATTRIBUTES, temporary file) could not always be executed when they were moved from the work file to the EQUISAMQ file of the system: if an error occurs on locking the file again (e.g. if the file is no longer exists or belongs to an unavailable pubset), the associated print jobs are not moved, but remain in the work file.
23. Distributed print jobs can be moved to the target EQUISAMQ file of the system if the SYSDPRNT pubset that was used when issuing the print job is now the default pubset of the target system.
24. If the TSN of a print job already refers to another task or another print job on the remote system to which it was moved with the MOVE-PRINT-JOBS command, this print job is assigned a new TSN, and a console message (SPA0105) is issued. In addition, this second print job (on the target system) is set with message SPA0117 to “not schedulable”, i.e. stopped, in the following cases:
 - a) if the print job to be moved is a distributed print job on different clusters, with gateway = server
 - b) if the TSN of the print job matches the TSN of a distributed print job (not client = server) on the target system
 - c) if the SPOOL subsystem is not loaded.

The assignment of a new TSN occurs only when print jobs are moved to the standard EQUISAMQ file of the system. If a new TSN was assigned, the order of the print jobs involved must be defined in accordance with the new TSN. Note, however, that this does not apply to SAP R/3 users, since the original TSN of print jobs is mandatory under R/3 (the data is stored internally in R/3 tables). Since R/3 requirements are always output by user IDs such as '<xxx>adm' (convention name for the SAP user administrator), this mechanism to define the order for all user IDs of this format was made available: the original TSN is always returned in this case.

In the BS2000 context, it is essential that the standby system use the SYSDPRNT pubset of the work system that had a system crash or was switched. For this reason, the existing distributed print jobs cannot be processed on the standby system. If a TSN conflict occurs, such existing print jobs on the standby system are temporarily halted (error message SPA0117) if the SPOOL subsystem is not loaded. These print jobs are then automatically taken up again, either on restarting DPRINTSV after DPRINTCM was started without the subsystem parameter '*print-jobs-recovery' (the original SYSDPRNT pubset should be available on the standby system) or on entering another MOVE-PRINT-JOBS command with the EQUISAMQ file of the standby system specified as the 'FROM-FILE' operand.

25. Even if no TSN conflict occurs, the print jobs (of the target system that had to use the SYSDPRNT pubset of the target system) are not processed until this pubset is again the standard pubset. They are probably placed in the KP status, and message SDD3013 is issued. This applies to the print jobs that were started before switching the SYSDPRNT pubset.
26. New distributed print jobs that were started after the command was executed, but during the time when the SYSDPRNT pubset of the original system was still the standard pubset of the target system, are processed normally.
27. The distributed print jobs (from remote clusters, with gateway = server) that were started with a DPRINT-CL version before V01.0G are never moved to an EQUISAMQ file of the system, since some of the information needed to define the print job is missing.
28. The JOB-POSITION=*ALL operand should be specified only if distributed print jobs processed by remote servers have to be relocated.
29. Concerning distributed print jobs (type 2): In a real BCAM host names environment, the client (resp. server) associated with print jobs must always remain different.
30. Concerning distributed print jobs (type 2): If both the client and server hosts of distributed print jobs have to be changed, relocation will have to occur for the print jobs involved. However, if TSN change occurs for the same print jobs on both new hosts, these print jobs will never be processed any more.
31. Concerning distributed print jobs (type 2): If successive MOVE-PRINT-JOBS commands are issued and result in several TSN changes for the same print jobs, these jobs will never be processed any more.
32. Concerning distributed print jobs (type 1 and 2): Each time distributed print jobs have been relocated, the value *PRINT-JOBS-RECOVERY must be specified for the subsystem parameter operand at the next START-SU DPRINTCM command.
33. The SYSDPRNT user-id should be defined under a (switchable or sharable) pubset that is not the home pubset, in order to be easily managed within HIPLEX (if this function is available).

Command return codes

(SC2)	SC1	Maincode	Meaning/Guaranteed messages
0	0	CMD0001	No error
0	32	SPA0101	System error
0	64	CMD0216	Required authorization does not exist
0	64	CMD2201	Parameter error
0	64	SPA0102	Command aborted
0	64	SPA0103	Command processed in another task

OPEN-VIRTUAL-DEVICE-DIALOG

Open dialog with virtual printer

Domain:	SPOOL-PRINT-SERVICES
User group:	all users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING

Function

This command initializes the dialog mechanism between the virtual device and the corresponding user application procedure. It is part of a set of 4 commands that allow the creation of an application associated with a virtual device in the form of an SDF-P batch procedure instead of a program. These commands manage the dialog between a virtual device and an application written as an SDF-P procedure.

The concerned commands are:

- OPEN-VIRTUAL-DEVICE-DIALOG
- GET-JOB-FROM-VIRTUAL-DEVICE
- RETURN-JOB-TO-VIRTUAL-DEVICE
- CLOSE-VIRTUAL-DEVICE-DIALOG

For an example of command usage, please refer to the "[IDOM \(BS2000/OSD\)](#)" manual.

Format

OPEN-VIRTUAL-DEVICE-DIALOG

Notes

1. This dialog mechanism must be initialized only once, at the beginning of the user application procedure.
2. If the dialog cannot be initialized, the command is rejected (command return code is set).
3. If the initialization has already been done, the command is rejected (command return code is set).
4. This command is only allowed in batch mode.

5. Spin-off processing is activated each time an error is detected.

Command return codes

(SC2)	SC1	Maincode	Meaning/Guaranteed messages
0	0	CMD0001	No error; command successfully processed
0	32		Unexpected command
5	32		Memory request error

PRINT-DOCUMENT

Print files or library elements on printer

Domain:	SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	HARDWARE-MAINTENANCE, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The PRINT-DOCUMENT command enables you to output files on a printer. By specifying the relevant operands you can control the print job. If a print job contains nothing other than the name of the file to be printed, SPOOL uses default values.

The specifications in the PRINT-DOCUMENT command are entered in a spool control block (SCB) along with the default values for device selection. The SCB is placed in a spoolout queue (local spoolout, RSO) and managed as a separate job with a separate TSN.

You can monitor the processing of your spoolout jobs with the SHOW-PRINT-JOB-STATUS command, modify specific print control parameters with the MODIFY-PRINT-JOB-ATTRIBUTES command, change the priority of your jobs with the CHANGE-TASK-PRIORITY command or cancel them with the CANCEL-PRINT-JOB command.

Notes

- The PRINT-DOCUMENT command is an enhanced version of the PRINT-FILE command. The functional scope of PRINT-FILE corresponds to SPOOL Version 2.7B, i.e. only PRINT-DOCUMENT allows you to use the additional and enhanced features.
- As of SPOOL V4.1A, the start of a print job can be delayed by using the SCHEDULING-TIME operand, which enables a precise date and time (year, month, day, hour, minute) to be specified. The print job will then be printed thereafter depending on the printer availability and the processing (prioritization) rules for it.

Overview of control options

Control option	Operand to be specified	See page
Specify the name of the print file or library element	FROM-FILE	180
Only output part of each record	RECORD-PART	187
Set a common TSN for several jobs	FAMILY-PROCESSING	203
Only output part of a file	INPUT-PART	185
Set a restart process for interrupted job	CHECKPOINT	204
Lock a file until end of job	LOCK-FILE	240
Delete a file after printing	DELETE-AFTER-PRINT	241
Assign a job name for the SPOOL job	PRINT-JOB-NAME	205
Assign a priority for the SPOOL job	PRINT-JOB-PRIORITY	205
Print multiple copies of a file	ADDITIONAL-COPIES	240
Specify a form (paper)	FORM-NAME	225
Set print attributes	LAYOUT-CONTROL	209
Determine the printer for output	TO-PRINTER	236
Influence output of header and trailer pages	COVER-PAGES	213
Execute job under different user ID	PROCESSING-ADMISSION	206
Control error processing	FAILURE-PROCESSING	207
Support notification handling	NOTIFICATION	242

Printer selection

If a print job does not specify which printer to use, SPOOL assigns it to any available high-speed printer. The number of characters this printer prints per line depends on the form.

If the job is to be printed on a particular printer, you specify this printer in the TO-PRINTER operand structure (see the operand description on [page 236](#)).

The operands listed present the minimum requirements with regard to the printer(s) used. Thus, if you specify one of these operands, you influence printer selection. The printers specified belong to the local SPOOL.

Operand	Printer required (minimum requirement)
PRINTER-TYPE=*LP65-PRINTER	LP65 printer
PRINTER-TYPE=*APA-PRINTER	APA printer
PRINTER-TYPE=*HP-PRINTER	HP printer or HP90 printer
USER-RESOURCES-FILE [≡*STD]	HP, HP90 or APA printer
PAGE-COPIES [≡*STD and ≠0]	HP, HP90 or LP65 printer
FORM-DEFINITION= <name>	APA printer
TABLE-REFERENCE-CHAR = <name>	APA printer
PAGE-DEFINITION = <name>	APA printer
CHARACTER-SETS = *POOL	HP printer or HP90 printer
FORMS-OVERLAY-BUFFER	HP printer or HP90 printer
ROTATION	HP printer or HP90 printer
OVERLAY (<face>,<reverse>)	LP65 printer
PAGE-DEFINITION = n	LP65 printer
DOCUMENT-FORMAT=*SPECIAL-FORMAT (FORMAT-NAME=*PCL)	PCL printer

If none of the operands in this table is specified, the default value in the SPOOL parameter file is used for printer selection.

Specifying the form

If a print job does not specify which form to use, SPOOL uses the default form (STD) defined in the SPOOL parameter file.

The default STD form normally refers to:

- the default loop C1 with a line density of 6 lpi and the vertical tab “channel 1” (normally the beginning of the page) on line 3
- the default rotation loop R06 for HP printers and HP90 printers with a line density of 6 lpi and a form length of 13.5 inches

To use another form, enter the desired form using RESOURCE-DESCRIPTION=*PARAMETERS(FORM-NAME=...). For details see [page 225](#).

Controlling paper feed

Appropriate paper feed (loop) information is associated with each form. Unless you specify otherwise, the loop assigned to the form is used automatically. However, RESOURCE-DESCRIPTION=*PARAMETERS(LOOP-NAME=...) also lets you specify a different loop name. For all printers, this loop must be contained in the system PRFILE \$SYSSPOOL.PRFILE or an appropriate user PRFILE.

Note

When explicitly specifying a loop, ensure that the length of the loop corresponds to the length of the form.

For printers with a loadable vertical format buffer, specifying a paper form (FORM-NAME operand) loads the loop associated with this form into the buffer. If the LOOP-NAME operand is specified in the same spoolout job, the feed is governed by the loop specified in LOOP-NAME. In all cases, the loop called must be available in a PRFILE.

If the paper form and font are not specified, SPOOL assumes that the vertical tab "channel 1" is set to the start of a new page in the loop (line 3).

The default loop "C1", the default font "101" and other fonts intended for laser printers are normally contained in the system PRFILE.

Defining loops yourself

You can use the PRM utility routine to define and administer your own loops. For more details, see the "[PRM \(BS2000/OSD\)](#)" manual.

Feed control characters

EBCDIC feed control characters:

Feed control characters	Effect
X'40' through X'4F'	n line feeds before printing, 1 line feed after printing
X'00' through X'0F'	n line feeds after printing
X'C1' through X'CB'	Channel feed before printing
X'81' through X'8B'	Channel feed after printing

Siemens (EBCDIC) and IBM printer control byte formats:

Value	Bit position and meaning (EBCDIC)							
	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰
0	Line feed	After printing	Always 0	Always 0	Number of lines or V tab number Value: 8	Number of lines or V tab number Value: 4	Number of lines or V tab number Value: 2	Number of lines or V tab number Value 1
1	Channel feed	Before printing						

Value	Bit position and meaning (IBM)							
	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰
0	Line feed	V tab number	V tab number	Number of lines or V tab number Value 2	Number of lines or V tab number Value 1	Always 0	After printing	Always 1
1	Channel feed	Value 8	Value 4				Before printing	

Note

V tab is the vertical tab “channel n”

ASA feed control characters and corresponding EBCDIC feed control characters:

ASA feed	EBCDIC feed	Effect
C'+'	X'00'	No line feed after printing
C'-'	X'42'	2-line feed before printing
C'0'	X'40'	1-line feed before printing
C'1'	X'C1'	Jump to channel 1 before printing
.	.	.
.	.	.
.	.	.
C'A'	X'CA'	Jump to channel 10 before printing
C'B'	X'CB'	Jump to channel 11 before printing
others	X'40'	No line feed before printing

Any invalid control characters are corrected in laser printers.

Notes

- The vertical tab “channel 12” (X'CC') or (X'8C') is reserved for SPOOL.
- The differences in printer hardware mean that ASA and SNI feed control characters are not completely identical: SNI printers advance not before but **after** printing a line - except in the case of X'00' (see above).

Specifying fonts

Every form entered in the SPOOL parameter file is assigned a font. This assignment is entered in the SPOOL parameter file.

If no font is specified in the PRINT-DOCUMENT command, the font “101” is used as the default. This font is assigned to the “STD” form in the SPOOL parameter file for all printers except types 3337, 3338 and 3339. The font “101” has the OCR-B font and is defined for a line density of 6 lines per inch (lpi) and a character density of 10 characters per inch (cpi).

The operand RESOURCE-DESCRIPTION=*PARAMETERS(CCHARACTER-SETS=) enables you to specify a font from the system PRFILE for HP/HP90 printers. If the desired font is in a user PRFILE, you must specify this in the USER-RESOURCES-FILE operand.

For the operand RESOURCE-DESCRIPTION=*PARAMETERS(CCHARACTER-SETS=), specify

- either the names of up to four fonts (for HP/HP90 printers)
- or the name of a font pool containing up to 64 fonts (HP/HP90 printers)

to be used to print a file. The fonts are contained in the \$SYSSPOOL.PRFILE resource library. However, you can also create a private user PRFILE containing one or more of your own fonts that you have created using the PRM utility routine. You can also define a font pool yourself in a user PRFILE. To print a file using your own font, you must specify the file name using the USER-RESOURCES-FILE operand.

You can also specify a font directly from the standard SPSLIB when printing in APA mode. If the desired font is contained in a user SPSLIB, this must be specified simultaneously with the USER-RESOURCES-FILE operand, in the same way as for HP/HP90 printers. In the case of the operand RESOURCE-DESCRIPTION=*PARAMETERS(...), you can specify fonts in the PAGE-DEFINITION suboperand. The fonts are contained in the printer control file \$SYSSPOOL.SYSPRT.SPS.021. You can use the software product SPM to create your own fonts in a user SPSLIB. For details, see the “SPS” manual. To print a file with a user-defined font, you must specify the file name in the USER-RESOURCES-FILE operand.

Before starting to print the file, the SPOOL system loads the specified fonts from the specified PRFILE into the character memory of the laser printer. If a file is printed with DOCUMENT-FORMAT=*TEXT in the PRINT-DOCUMENT command / PRNTDOC macro - i.e. control characters in the text are not interpreted (except in printer type 3365, see the “SPOOL (BS2000/OSD)” manual) - the first font specified in the CHARACTER-SETS

operand of the PRINT-DOCUMENT command is used to print the whole file. It is thus preferable to specify just one font. Conversely, if the print file text contains control characters to be interpreted by SPOOL - i.e. CONTROL-MODE=*PAGE-MODE must be specified in the PRINT-DOCUMENT command - the font to be used in each instance is selected from the fonts loaded as follows:

- The control information in the first record on each print page determines, among other things, which font should be used to start printing the page. Control characters within the print data enable the font to be changed anywhere on the page (for every character, if need be).
- The fonts specified for CHARACTER-SETS are loaded into the printer's character memory when the command is processed.
- The procedure for switching from one font to another by means of control characters is as follows:

All fonts you specify (either explicitly or by specifying a pool name) are loaded on the requested device during scheduling. Only the first font specified can be used if DOCUMENT-FORMAT=*TEXT applies. The number of fonts (specified either explicitly in the PRINT-DOCUMENT command or implicitly by means of a pool) is compared with the upper limit defined as a global parameter at installation time. The scheduler checks whether the specified device has enough memory for all explicitly or implicitly specified fonts to be loaded.

Whenever possible, you should refer to the pools set up by systems support:

- either by specifying the pool name alone
- or by specifying a pool name and an index

The scheduler forms groups of jobs using the same font or the same pool, thus avoiding unnecessary font changing and reloading operations.

If the PRINT-DOCUMENT command contains references to fonts not yet loaded into the device's character buffer, and if there is no more space in the character buffer, the controller checks the loaded fonts for those which are called least frequently; these are then replaced with new ones.

If more than four fonts are requested in the PRINT-DOCUMENT command, it may happen that none of the available HP laser printers is able to load the requested number of fonts. In this case, the relevant job cannot be processed.

In the information you request with the SHOW-USER-STATUS command, all jobs requiring more than four fonts (or overlays or the page rotation module) are marked by an asterisk in the OPT field. The SHOW-PRINT-JOB-STATUS command allows you to display the number of requested fonts.

If you issue the PRINT-DOCUMENT command with the operands LOOP-NAME, CHARACTER-SETS and so on for laser printers, the \$SYSSPOOL.PRFILE resource library is checked to see whether the relevant entries are available. If not, the PRINT-DOCUMENT command is rejected.

If you issue the PRINT-DOCUMENT command with the FORM-NAME and/or LOOP-NAME operands for printers with a loadable VFB, the resource library is checked to see whether the relevant entry is available. If not, the PRINT-DOCUMENT command is rejected.

Example

A file containing four different fonts is to be printed on a laser printer.

```
/PRINT-DOCUMENT FROM-FILE=filename, . . . , RESOURCE-DESCRIPTION=
    *PAR(CHARACTER-SETS=(100,360,370,#XY)), . . .
```

To switch to font 370 (the third font), for example, one of the following control characters should be selected, depending on the desired character density:

X'06'	Character density 10 characters/inch and font in MXM section 3.
X'0A'	Character density 12 characters/inch and font in MXM section 3.
X'0E'	Character density 15 characters/inch and font in MXM section 3.

The character density for which font 3 (370) was originally defined should of course be taken into account.

Interpreting layout control characters

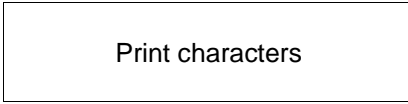
If you want to print a file containing layout control characters, when you create the job you can specify whether or not these control characters are to be interpreted by assigning the appropriate value to the operand DOCUMENT-FORMAT=*PARAMETERS. For further information on control characters, see the “[SPOOL \(BS2000/OSD\)](#)” manual.

SPOOL loads the font buffer and feed buffer as appropriate when processing the spoolout.

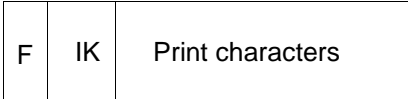
Note

The operator can use the START-PRINTER-OUTPUT command to ensure that the laser printer jobs specified with DOCUMENT-FORMAT=*TEXT may also be printed on an impact printer (line printer). In this case, the operands LOOP-NAME, PAGE-COPIES, ADDITIONAL-COPIES, USER-RESOURCES-FILE, CHARACTER-SETS and OVERLAY-RESOURCES are not interpreted.

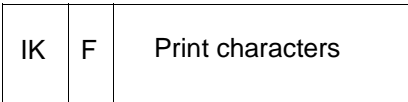
Examples of control characters in a file



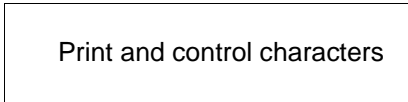
The record comprises only printable characters (without feed control characters).



The record starts with a feed control character (F), followed by text (including ISAM-KEY (IK) for ISAM files).



The record starts with the ISAM key (KEY-POS=5), followed by the feed control character (F) and the text.



The record contains text mixed with control characters (e.g. for changing font).

Defining your own forms, loops and fonts

For HP/HP90 printers:

Paper forms, loops and fonts are generally defined by systems support. You can, however, also create loops and fonts yourself, store them in a user-specific resource library (PRFILE) and use them for SPOOL jobs. The loops and fonts must relate to a paper form already available in the SPOOL parameter file. You can use the USER-RESOURCES-FILE operand to cause SPOOL to use your resource library for this job. For further details, see the [“PRM \(BS2000/OSD\)”](#) manual.

For APA printers:

You can also create a private printer control file (SPSLIB) containing your own fonts etc. for printers that run in APA mode. In this case too, you use the USER-RESOURCES-FILE operand to indicate to SPOOL that it should use this file (see also the [“SPOOL \(BS2000/OSD\)”](#) manual).

Printout of files swapped out with the aid of HSMS

In previous versions, when a controller task accessed a file swapped out with HSMS, other printers controlled by the task were blocked until the file was retrieved. To prevent these situations arising, certain improvements were made to RSO. These affect four types of RSO resource files: DIA, prolog, epilog and member files.

A partial solution already exists for printing user files. Since SPOOL V2.7B, swapped-out files have been retrieved when the PRINT-FILE command is checked rather than waiting until the command is processed.

DIA files

In the case of a swapped-out DIA file, retrieval of the file is initiated during checking of the PRINT-DOCUMENT command.

When command processing starts, a swapped-out DIA file is treated as a user error. The job is terminated with corresponding information on the trailer page, and a message is sent to the console.

Prolog/epilog files

Nothing is done during checking of the PRINT-DOCUMENT command in the case of swapped-out prolog/epilog files.

When command processing starts, a swapped-out prolog/epilog file is regarded as a user error. The job is terminated with corresponding information on the trailer page, and a message is sent to the console.

Member files

Nothing is done during checking of the PRINT-DOCUMENT command in the case of swapped-out member files.

When command processing starts, a swapped-out member file is not taken into account.

Monitoring spoolout with job variables

SPOOL jobs can be monitored with job variables. Entering the name of a monitor variable (MONJV) in the PRINT-DOCUMENT command causes SPOOL to store a continuous stream of information on the processing of the job in the monitoring job variable.

These SPOOL job variables are not under the control of the software product "JV", but are controlled by SPOOL itself. This means that SPOOL also protects them from being accessed by other jobs. For instance, if a job variable is assigned to a spoolout job, it cannot be requested or used by another job, regardless of whether the spoolout job is queued, has been canceled or is currently being processed.

SPOOL job variables can also be password-protected. Before a password-protected SPOOL job variable is interrogated, the password must first be entered in the password table by means of the ADD-PASSWORD command or in the PRINT-DOCUMENT command by means of the JV-PASSWORD operand.

Note

As of SPOOL V4.1A, the contents of the MONJV have been extended with the DMS error code for all print jobs.

Error processing involving SPOOL job variables

If there are access problems involving SPOOL job variables, SPOOL can respond as follows:

- If the error occurs during syntax checking of the PRINT-DOCUMENT command, the command is rejected on account of the operand in which the error has occurred. In the case of shared processing of several jobs (FAMILY-PROCESSING operand), only the relevant file is rejected. Processing of the command then continues. If only one job is being processed, this is canceled.

If the operand START-PROCESSING=<integer.> or *AT-FILE-CLOSING is specified in the PRINT-DOCUMENT command, SPOOL continues processing despite the problem with the variable, since otherwise part of the data would be printed. Instead, SPOOL gives a warning to the user and continues processing the job without monitoring job variables.

- If the error occurs during spoolout, SPOOL outputs message SPS0450 on the trailer page but otherwise continues spoolout processing as normal.

Contents of the SPOOL job variable

The job variable is structured as follows:

Sta	TSN	Proc.	Reserve	S	OTSN	E#	EC#	Device	ERCOD	ERMSG
0	3	8	16	37	39	44	48	52	61	70

The first three fields of the job variable are reserved for ENTER jobs. The subsequent fields are assigned to SPOOL and reflect the various processes involved in SPOOL job processing.

The fields "Status" and "Processor" are left-justified and are initially filled with blanks. The other fields are right-justified and are also initially filled with blanks.

If the job variable does not exist, it is created if necessary when the command is checked for validity.

You can use the SHOW-JV command to display the contents of a job variable. The job variable fields have the following meanings:

Field	Contents	Meaning
Sta	\$S \$R \$P \$T \$A \$K	Job accepted and queued (spooled-in) Job active (running) Job of which a part is currently being preprocessed Job successfully terminated Job canceled or abnormally terminated (aborted) Job kept
TSN	tsn	Contains the TSN of the job preceded by the filler character "0"; in the case of replay jobs, tsn is the current TSN. The original TSN is in another field.
Proc.	proc	As with ENTER-JOB jobs, contains the catalog ID for the system (home pubset) on which the job was issued or the tape read in
Reserve		Reserved
S	0 1 2 3	Specifies whether the job involves tape processing Job does not contain preprocessed sections General job processing Job is on tape or has been stored there Job comes from a tape
OTSN	otsn	Contains the original TSN in the case of a replay job
E#	nnn	Number of copies to be printed
EC#	nnn	Number of copies already processed
Device	xxxxxx	For active jobs (\$R, \$T or \$A), specifies the device name, device short name or "TP" for user tapes
ERCOD	xxxxxxx	Error code for RSO jobs
ERMSG	xxxxxxx	Identification number of the error message in the case of Spool&Print jobs

Notes

- The normal progression of job status is \$\$, \$R and \$T (or \$A/\$K). A replay job is set to status \$T after the file has been transferred to tape. This tape can be played back on the same system. In this case, the job variable is checked as soon as the file is in the system. If the original job variable still exists, it is reinitialized and set to the status \$S.
- The job variable subsystem is optional, but it cannot be unloaded while the system is running.

If it is not available during the PRINT-DOCUMENT command validity check and if a job variable is requested, SPOOL rejects the command.

- The SPOOL job variables cannot be specified in the commands SHOW-PRINT-JOB-STATUS, CANCEL-PRINT-JOB and CHANGE-TASK-PRIORITY.

Special aspects to be observed for APA printers

- The following operands of the PRINT-DOCUMENT command must not be specified for output to APA printers, since they are not supported by the APA controller:
 - CONTROL-MODE=*LOGICAL/*PHYSICAL
 - DELETE-AFTER-PRINT=*YES(...)*DESTROY(...).
- The following operands may only be specified for output to APA printers, provided CONTROL-MODE=*APA is used for printing:
 - RECORD-PART
 - OUTPUT-PART (unless a section is specified)
 - LEFT-MARGIN
 - CHECKPOINT=*ON-SECTION-RECORDS
- The APA controller does not interpret any LP65 printer control characters.
- If the operand FORM-DEFINITION, PAGE-DEFINITION or CONTROL-MODE=*APA is specified in a PRINT-DOCUMENT command without the SPS subsystem being loaded, the command is rejected.
- ISAM files are supported with CONTROL-MODE=*APA if the ISAM key is at the start of the record (KEYPOS=5).
- A SPOOL job to be printed from a replay tape with CONTROL-MODE=*APA is always printed from the beginning, since no checkpoint information is maintained on a replay tape.

Brief description of the PRINT-DOCUMENT operands:

Operand level 1	Substructure	Function
FROM-FILE		Name of the print file:
	<posix-pathname>	Name of the POSIX file
	*EAM(...)	Temporary EAM object module file
	<filename>	Fully qualified file name
	*LIBRARY-ELEMENT(...)	PLAM library element
	*OMF	Object module file
	*SYSLST(...)	SYSLST system file
	*SYSOUT	SYSOUT system file
DOCUMENT-PART		The part of the file that is to be output
	INPUT-SECTION(...)	Division of the file into sections
	INPUT-PART(...)	First and last records to be output
	RECORD-PART(...)	First and last characters of each record to be output
	OUTPUT-PART(...)	Logical lines or pages of the edited file
DOCUMENT-FORMAT		Type of document contents as regards control character interpretation
	*TEXT(...)	No printer-specific control characters
	*PAGE-FORMAT(...)	Specifies that specific control characters for laser printers are to be interpreted
	*SPECIAL-FORMAT(...)	Specifies the use of a printer-specific language
PRINT-JOB-CONTROL		Controls print job processing
	START-PROCESSING	Specifies the printout start time
	FAMILY-PROCESSING	Assigns a common TSN to several spoolout jobs
	CHECKPOINT	Type of restart procedure (checkpointing)
	PRINT-JOB-NAME	Specifies a job name
	PRINT-JOB-PRIORITY	Priority of the spoolout job
	PRINT-JOB-CLASS	Job class of the spoolout job
	MONJV	Specifies a job variable for storing information
	JV-PASSWORD	Password protecting the SPOOL job variable

Operand level 1	Substructure	Function
PRINT-JOB-CONTROL (continued)	PROCESSING-ADMISSION	Only for TSOS or PRINT-SERVICE-ADM: specifies that the job is to be processed under a different user ID
	FAILURE-PROCESSING	Specifies that the type of error handling for files currently being processed
LAYOUT-CONTROL	SCHEDULING-TIME	Defines the scheduling time, i.e. the earliest time at which a print job is to be started. This causes the print job to be started thereafter, depending on the printer availability and the processing rules for print jobs.
		Specifies the parameters defining page layout
	PAGE-COPIES	Number of page copies
	LEFT-MARGIN	Indentation of the output text
	TWO-SIDED	Single-sided or two-sided printing
	ROTATION	Specifies use of the page rotation module
	COVER-PAGES	Parameters for the printing of header and trailer pages
	TABLE-REFERENCE-CHAR	Specifies whether font selection is by means of control characters in the text (1)
	LANGUAGE-EXTENSION	Language extension code
	INPUT-TRAY-NUMBER	Number of the input tray
	OUTPUT-TRAY-NUMBER	Number of the output tray
	TOP-OFFSET	Defines the vertical position of the text on the paper
LEFT-OFFSET	Defines the horizontal position of the text on the paper	
RESOURCE-DESCRIPTION		Specifies the print resources to be used for the printout
	FORM-NAME	Form name
	LOOP-NAME	Loop
	ROTATION-LOOP-NAME	Loop for pages to be rotated (landscape mode)
	CHARACTER-SETS	Fonts for output
	CHAR-SET-ATTRIBUTES	Specifies the font attributes to be supported (2)
	OVERLAY-RESOURCES	Specifies whether a film overlay is to be used

Operand level 1	Substructure	Function
RESOURCE-DESCRIPTION (continued)	PAGE-DEFINITION	Page definitions for LP65 and APA printers (1)
	FORM-DEFINITION	Format definitions for APA printers (1)
	USER-RESOURCES-FILE	Assigns a user PRFILE, SPSLIB or RSOFILE
	TRANSLATION-TABLE	Specifies use of a code translation table
	RESOURCES-LOCATION	Specifies use of distributed resources(3)
TO-PRINTER		Printer type for output:
	PRINTER-NAME	Name of the requested printer or printer pool
	PRINTER-TYPE	Type of the requested printer Any local printer Any printer from a device pool LP65 printer HP or HP90 printer APA printer (1)
	REDIRECTION-ALLOWED	Permits the device administrator to redirect spoolout jobs
	CLUSTER-NAME	Specifies the cluster to which the print job is to be transferred (3)
	VIRTUAL-PRINTER	Print output of an application
ADDITIONAL-COPIES		Number of additional copies of the file to be printed
LOCK-FILE		Specifies that the file is to be protected during processing
DELETE-AFTER-PRINT		Specifies whether the file is to be deleted after it has been processed
NOTIFICATION		Notification processing for the associated print job
	OBJECT-ATTRIBUTES	Specifies the object attributes associated to the notifications
	EVENT-NAMES	Specifies the subscribed events
	USER-DATA	Specifies the data to be included in the delivery
	RECIPIENT	Specifies the delivery address for the notifications

The operands marked (1) are permitted only for the local SPOOL only. They are described in detail in the “[SPOOL \(BS2000/OSD\)](#)” manual.

The operands marked (2) are permissible for RSO only

The operands marked (3) are effective only in a distributed system. They are described in detail in the “[Distributed Print Services \(BS2000/OSD\)](#)” manual.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
FROM-FILE =	X	X	X	X
DOCUMENT-PART =	X	X	X	X
DOCUMENT-FORMAT = *TEXT(...)	X	X	X	X
DOCUMENT-FORMAT = *PAGE-FORMAT(...)	X	X	X	X
FORMAT-NAME =			X	
CONTROL-MODE = *PAGE-MODE(...)	X		X	
CONTROL-MODE = *LINE-MODE(...)		X		
CONTROL-MODE = *LOGICAL(...)		X		
CONTROL-MODE = *PHYSICAL(...)		X		
CONTROL-MODE = *APA(...)				X
DOCUMENT-FORMAT = *SPECIAL-FORMAT(...)	X	X		
FORMAT-NAME = *NONE	X	X		
FORMAT-NAME = *PCL				
FORMAT-NAME = <c-string 1..63 with-low>	X	X		
LINE-SPACING = *NO	X	X		
LINE-SPACING = * 1 / 2 /3		X		
LINE-SPACING = *BY-EBCDIC-CONTROL		X		
LINE-SPACING = *BY-IBM-CONTROL		X		
LINE-SPACING = *BY-ASA-CONTROL		X		
PRINT-JOB-CONTROL = *PARAMETERS(...)	X	X	X	X
PROCESSING-ADMISSION =			X	X
FAILURE-PROCESSING =				X
SCHEDULING-TIME	X	X	X	X
LAYOUT-CONTROL = *PARAMETERS(...)	X	X	X	X
PAGE-COPIES =	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
LEFT-MARGIN =	X	X	X	X
TWO-SIDED = *STD			X	X
TWO-SIDED = *NO / *YES / *TUMBLE		X	X	X
ROTATION = *NO	X	X	X	X
ROTATION = *BY-CONTROL-CODES	X		X	
ROTATION = 0 / 90 / 180 / 270	X	X	X	X
ROTATION = 0-180 / 180-0 / 90-270 / 270-90	X		X	
INPUT-TRAY-NUMBER = *STD	X	X	X	X
INPUT-TRAY-NUMBER = *IGNORE		X		
INPUT-TRAY-NUMBER = <integer 1..99>	X	X	X	X
INPUT-TRAY-NUMBER = *BY-FORMAT(...)		X		
OUTPUT-TRAY-NUMBER = *STD	X	X	X	X
OUTPUT-TRAY-NUMBER = *IGNORE		X		
OUTPUT-TRAY-NUMBER = <integer 1..99>	X	X	X	X
OUTPUT-TRAY-NUMBER = *SORTER(...)		X		
COVER-PAGES =	X	X	X	X
TABLE-REFERENCE-CHAR =				X
LANGUAGE-EXTENSION =	X	X	X	X
TOP-OFFSET =			X	X
LEFT-OFFSET =			X	X
RESOURCE-DESCRIPTION = *PARAMETERS(...)	X	X	X	X
CHARACTER-SETS =	X	X	X	
CHARACTER-SETS = *STD	X	X	X	X
CHARACTER-SETS = *POOL(...)	X		X	
CHARACTER-SETS = *BY-EXTENDED- NAME(...)				X
CHARACTER-SETS = <c-string 1..3 with-low>	X			
CHARACTER-SETS = list-poss(16): <alphanum-name 1..3>	X	X	X	
CHAR-SET-ATTRIBUTES =		X		
OVERLAY-RESOURCES = *PARAMETERS(...)	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
ELECTRONIC-OVERLAY =	X	X	X	
OVERLAY =			X	X
FORMS-OVERLAY-BUFFER =			X	
PAGE-DEFINITION =			X	X
FORM-DEFINITION =				X
USER-RESOURCES-FILE =	X	X	X	X
TRANSLATION-TABLE =	X	X	X	
RESOURCES-LOCATION =	X			
TO-PRINTER = *PARAMETERS(...)	X	X	X	
PRINTER-NAME = *STD	X	X	X	X
PRINTER-NAME = <alphanum-name 1..8>	X	X	X	X
PRINTER-NAME = <c-string 1..8 with-low>	X			
PRINTER-TYPE = *ANY	X	X	X	X
PRINTER-TYPE = *HP-PRINTER			X	
PRINTER-TYPE = *LP65-PRINTER			X	
PRINTER-TYPE = *APA-PRINTER				X
REDIRECTION-ALLOWED = *STD		X	X	
REDIRECTION-ALLOWED = *YES / *NO		X		
CLUSTER-NAME =	X			
OUTPUT-FORMAT =	X		X	
VIRTUAL-PRINTER =	X	X	X	X
ADDITIONAL-COPIES =	X	X	X	X
LOCK-FILE =	X	X	X	X
DELETE-AFTER-PRINT =	X	X	X	
NOTIFICATION =	X	X	X	X

Format

(part 1 of 7)

PRINT-DOCUMENT

```

FROM-FILE = *OMF / <posix-pathname 1..1023 without-wild> / *LIBRARY-ELEMENT(...) /
  list-poss(16): *SYSLST(...) / *SYSOUT / *EAM(...) / <filename 1..54 with-wild(80)>
  *LIBRARY-ELEMENT(...)
    |
    | LIBRARY = <filename 1..54 without-vers>
    | ,ELEMENT = <composed-name 1..64 with-under with-wild(80)>(…)
    |   <composed-name>(…)
    |     |
    |     | VERSION = *HIGHEST-EXISTING / *UPPER-LIMIT /
    |     |   <composed-name 1..24 with-under with-wild(40)>
    |     |
    |     | ,TYPE = <alphanum-name 1..8 with-wild(12)>
    |
  *SYSLST(…)
    |
    | SYSLST-NUMBER = *STD / <integer 1..99>
  *EAM(…)
    |
    | EAM-NUMBER = <integer 1..65535>
  ,DOCUMENT-PART = *PARAMETERS (… )
  *PARAMETERS(…)
    |
    | INPUT-SECTION = *WHOLE-FILE / *PARAMETERS(…)
    |   *PARAMETERS(…)
    |     |
    |     | SECTION-IDENTIFIER = <c-string 1..60 with-low> / <x-string 1..120>
    |     | ,POSITION = *STD / <integer 1..2047>
    |     |
    |     | ,INPUT-PART = *ALL / *PARAMETERS(…)
    |     |
    |     | *PARAMETERS(…)
    |     |   |
    |     |   | FIRST-RECORD = *BEGIN-OF-FILE / <integer 1..2147483647> / *BY-STRING-ID(…)
    |     |   |   *BY-STRING-ID(…)
    |     |   |     |
    |     |   |     | STRING = <c-string 1..60 with-low> / <x-string 1..120>
    |     |   |     | ,POSITION = *STD / <integer 1..2047>
    |     |   |     | ,OCCURRENCE = 1 / <integer 2..32767>
    |     |   |     | ,LAST-RECORD = *END-OF-FILE / <integer 1..2147483647> / *BY-STRING-ID(…)
    |     |   |     |   *BY-STRING-ID(…)
    |     |   |     |     |
    |     |   |     |     | STRING = <c-string 1..60 with-low> / <x-string 1..120>
    |     |   |
  
```

continued →

```

    ,POSITION = *STD / <integer 1..2047>
    ,OCCURRENCE = 1 / <integer 2..32767>
,RECORD-PART = *ALL / *PARAMETERS(...)
    *PARAMETERS(...)
        FIRST-CHARACTER = 1 / <integer 2..32767>
        ,LAST-CHARACTER = *STD / <integer 1..32767>
,OUTPUT-PART = *ALL / *RANGE(...) / *LAST(...)
    *RANGE(...)
        FROM = *BEGIN-OF-FILE / <integer 1..2147483647>
        ,TO = *END-OF-FILE / <integer 1..2147483647>
        ,DIMENSION = *PAGES / *LINES
    *LAST(...)
        LAST = <integer 1..2147483647>
        ,DIMENSION = *PAGES / *LINES
,DOCUMENT-FORMAT = *TEXT (...) / *PAGE-FORMAT(...) / *SPECIAL-FORMAT(...)
    *TEXT(...)
        LINE-PER-PAGE = *STD / <integer 1..32767>
,LINE-SPACING = 1 / 2 / 3 / *BY-EBCDIC-CONTROL(...) / *BY-IBM-CONTROL(...) /
    *BY-ASA-CONTROL(...)
    *BY-EBCDIC-CONTROL(...)
        CONTROL-CHAR-POS = *STD / <integer 1..2040>
    *BY-IBM-CONTROL(...)
        CONTROL-CHAR-POS = *STD / <integer 1..2040>
    *BY-ASA-CONTROL(...)
        CONTROL-CHAR-POS = *STD / <integer 1..2040>
,HEADER-LINE = *NO / *STD / list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER
,OUTPUT-FORMAT = *CHARACTER / *HEXADECIMAL
*PAGE-FORMAT(...)
    FORMAT-NAME = *STD / <c-string 1..63 with-low>
    CONTROL-MODE = *PAGE-MODE(...) / *LINE-MODE / *LOGICAL(...) / *PHYSICAL(...) / *APA(...)

```

continued ➔

***PAGE-MODE(...)**

PAGE-CONTROL-CHAR = *YES / *NO

,**CONTROL-TYPE** = *COMPATIBLE / *HP

,**LINE-SPACING** = *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL /

***LOGICAL(...)**

LINE-PER-PAGE = *STD / <integer 1..32767>

,**LINE-SPACING** = 1 / 2 / 3 / *BY-EBCDIC-CONTROL(...) / *BY-IBM-CONTROL(...) /
*BY-ASA-CONTROL(...)

*BY-EBCDIC-CONTROL(...)

| **CONTROL-CHAR-POS** = *STD / <integer 1..2040>

*BY-IBM-CONTROL(...)

| **CONTROL-CHAR-POS** = *STD / <integer 1..2040>

*BY-ASA-CONTROL(...)

| **CONTROL-CHAR-POS** = *STD / <integer 1..2040>

,**HEADER-LINE** = *NO / *STD / list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER

***PHYSICAL(...)**

LINE-SPACING = *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL /
*BY-ASA-CONTROL

***APA(...)**

LINE-SPACING = *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

***SPECIAL-FORMAT(...)**

FORMAT-NAME = *PCL / *NONE / <c-string 1..63 with-low>

,**LINE-SPACING** = *NO / 1 / 2 / 3 / *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL /
*BY-ASA-CONTROL

,**PRINT-JOB-CONTROL** = *PARAMETERS (...)

***PARAMETERS(...)**

START-PROCESSING = *IMMEDIATE / *AT-FILE-CLOSING / <integer 1..2147483639>

,**FAMILY-PROCESSING** = *STD / *YES / *NO

,**CHECKPOINT** = *ON-PAGES / *ON-SECTION-RECORDS

continued ➔

(part 4 of 7)

```

,PRINT-JOB-NAME = *JOB-NAME / <alphanum-name 1..8> / <c-string 1..8 with-low>
,PRINT-JOB-PRIORITY = *JOB-PRIORITY / <integer 30..255>
,PRINT-JOB-CLASS = *BY-USER-ATTRIBUTES / <integer 1..255>
,MONJV = *NONE / *STD / <filename 1..54 without-gen-vers>
,JV-PASSWORD = *NONE / *SECRET / <c-string 1..4> / <x-string 1..8>
,PROCESSING-ADMISSION = *SAME / *PARAMETERS(...)
    *PARAMETERS(...)
        |
        | USER-IDENTIFICATION = <name 1..8>
        | ,ACCOUNT = *NONE / <alphanum-name 1..8>
        | ,PASSWORD = *NONE / <c-string 1..8> / <x-string 1..16> / *SECRET / <c-string 9..32>
    ,FAILURE-PROCESSING = *PARAMETERS (...)
        *PARAMETERS(...)
            |
            | MSG-PAGE = *YES / *NO
    ,SCHEDULING-TIME = *STD / *EARLIEST(...)
        *EARLIEST(...)
            |
            | DATE = *TODAY / <date>
            | ,TIME = <time>
, LAYOUT-CONTROL = *PARAMETERS (...)
    *PARAMETERS(...)
        |
        | PAGE-COPIES = *STD / <integer 0..255>
        | ,LEFT-MARGIN = *STD / <integer 0..31>
        | ,TWO-SIDED = *STD / *NO / *YES / *TUMBLE
        | ,ROTATION = *NO / *BY-CONTROL-CODES / 0 / 90 / 180 / 270 / 0-180 / 180-0 / 90-270 / 270-90
        | ,COVER-PAGES = *PARAMETERS (...)
        *PARAMETERS(...)
            |
            | HEADER-PAGE-TEXT = *NONE / <c-string 1..32 with-low>
            | ,HEADER-EXIT-NUMBER = *NO / <integer 0..2147483639>
            | ,TRAILER-EXIT-NUMBER = *NO / <integer 0..2147483639>
        ,TABLE-REFERENCE-CHAR = *NO / *YES
    ,LANGUAGE-EXTENSION = *NONE / *PARAMETERS(...)

```

continued →


```

*PARAMETERS(...)
  |
  |   LANGUAGE-NAME = *ARABIC / *FARSI
  |   ,LANGUAGE-MODE = *RIGHT-TO-LEFT / *LEFT-TO-RIGHT
,INPUT-TRAY-NUMBER = *STD / *IGNORE / <integer 1..99> / *BY-FORMAT(...)
  *BY-FORMAT(...)
  |
  |   INPUT-TRAY-FORMAT = *A3 / *A4 / *A5 / *B4 / *B5 / *FOLIO / *INVOICE / *EXEC /
  |   *LEGAL / *LETTER / *DOUBLE-LETTER / *MONARCH / *COMMERCIAL-10 /
  |   *DL / *C5 / *MANUAL / *A3-UNCUT / *A4-UNCUT / *LEDGER
,OUTPUT-TRAY-NUMBER = *STD / *IGNORE / *SORTER(...) / <integer 1..99>
  *SORTER(...)
  |
  |   SORT-MODE = *NO / *GROUP / *COLLATE / *STACKER / *AUTOMATIC
, TOP-OFFSET = *IGNORE / <integer -255..255>
, LEFT-OFFSET = *IGNORE / <integer -255..255>
, RESOURCE-DESCRIPTION = *PARAMETERS (...)
  *PARAMETERS(...)
  |
  |   FORM-NAME = *STD / <c-string 1..6 with-low> / <alphanum-name 1..6>
  |   , LOOP-NAME = *STD / <alphanum-name 1..3>
  |   , ROTATION-LOOP-NAME = *STD / <alphanum-name 1..3>
  |   , CHARACTER-SETS = *STD / *POOL(...) / *BY-EXTENDED-NAME(...) / <c-string 1..3 with-low> /
  |   list-poss(16): <alphanum-name 1..3>
  |   *POOL(...)
  |   |
  |   |   POOL-NAME = <alphanum-name 1..4>
  |   |   , POOL-INDEX = 0 / <integer 0..64>
  |   *BY-EXTENDED-NAME(...)
  |   |
  |   |   NAME = list-poss(4): <alphanum-name 1..8>
  |   , CHAR-SET-ATTRIBUTES = *ALL / *RESTRICTED
  |   , OVERLAY-RESOURCES = *PARAMETERS (...)
  |   *PARAMETERS(...)
  |   |
  |   |   ELECTRONIC-OVERLAY = *NONE / <alphanum-name 2..2>
  |   |   , OVERLAY = *STD / *NONE / *PARAMETERS(...)

```

continued →

```

    *PARAMETERS(...)
        |
        |   FACE-SIDE = *NONE / <integer 1..127>
        |   ,REVERSE-SIDE = *NONE / <integer 1..127>
        |   ,FORMS-OVERLAY-BUFFER = *NONE / <alphanumeric-name 1..4>
        |   ,PAGE-DEFINITION = *STD / <integer 1..50000> / <alphanumeric-name 1..8>
        |   ,FORM-DEFINITION = *STD / <alphanumeric-name 1..8>
        |   ,USER-RESOURCES-FILE = *STD / <filename 1..44 without-gen-vers>
        |   ,TRANSLATION-TABLE = *NONE / *PARAMETERS(...)
        |   *PARAMETERS(...)
        |       |
        |       |   NAME = <alphanumeric-name 1..8>
        |       |   ,FILE = *STD / *SYSTEM / <filename 1..44 without-gen-vers>
        |       |   ,RESOURCES-LOCATION = *STD / *HOME / *SERVER
        |   ,TO-PRINTER = *PARAMETERS (...)
        |   *PARAMETERS(...)
        |       |
        |       |   PRINTER-NAME = *STD / <alphanumeric-name 1..8> / <c-string 1..8 with-low>
        |       |   ,PRINTER-TYPE = *ANY / *HP-PRINTER / *LP65-PRINTER / *APA-PRINTER
        |       |   ,REDIRECTION-ALLOWED = *STD / *NO / *YES
        |       |   ,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanumeric-name 1..8>
        |       |   ,OUTPUT-FORMAT = *NONE / <c-string 1..63 with-low>
        |       |   ,VIRTUAL-PRINTER = *STD / *ALLOWED / *NOT-ALLOWED / *MUST(...)
        |       |   *MUST(...)
        |       |       |
        |       |       |   NAME = <alphanumeric-name 1..8>
        |       |       |   ,STRING = *NONE / <c-string 1..32>
        |   ,ADDITIONAL-COPIES = 0 / <integer 1..255>
        |   ,LOCK-FILE = *STD / *YES / *NO
        |   ,DELETE-AFTER-PRINT = *NO / *YES(...) / *DESTROY(...)
        |   *YES(...)
        |       |
        |       |   LINE-TRUNCATION = *STD / *DELETE-FILE / *KEEP-FILE
        |   *DESTROY(...)
        |       |
        |       |   LINE-TRUNCATION = *STD / *DELETE-FILE / *KEEP-FILE

```

continued ➔

,**NOTIFICATION** = ***STD** / ***NO** / ***PARAMETERS(...)**

***PARAMETERS(...)**

OBJECT-ATTRIBUTES = ***NONE** / ***ALL** / list-possible(20):<text 1..64>

,**EVENT-NAMES** = ***ALL** / list-possible(20):<alphanum 1..24>

,**USER-DATA** = ***NONE** / <text 1..63 with-lowercase> / <c-string 1..63 with-lowercase>

,**RECIPIENT** = ***PARAMETERS(...)**

ADDRESS = <text 1..224 with-lowercase> / <c-string 1..63 with-lowercase>

,**METHOD-NAME** = <alphanum-name 1..8> / ***MAIL**

Operands

**FROM-FILE = *OMF / <posix-pathname 1..1024 without-wild> /
*LIBRARY-ELEMENT(...) / <list-poss(16): *SYSLIST(...) / *SYSOUT /
*EAM(...) / <filename 1..54 with-wild(80)>**

Names of the files to be output.

Up to 16 file names can be specified per command call.

FROM-FILE = *OMF

Outputs the temporary object module file of the current job.

FROM-FILE = <posix-pathname 1..1024 without-wild>

Path name or name of a POSIX file to be printed. This must be enclosed in double quotes if it does not contain any POSIX-specific characters (to distinguish it from BS2000 file names). The file name *.profile* can, for example, be specified without double quotes because a BS2000 file name cannot begin with a period.

FILE-NAME = *LIBRARY-ELEMENT(...)

The specified element from a PLAM library is to be output. An element is fully defined by its name, its type and the version number. The records of an element are assigned to particular record types. There are 255 record types. A distinction is drawn between user record types (1 through 159) and special record types (160 through 255). Only the user record types of an element can be output with SPOOL.

LIBRARY = <filename 1..54 without-vers>

Name of the PLAM library from which an element is to be output.

ELEMENT = <composed-name 1..64 with-under with-wild(80)>

Name of the element to be output from the specified PLAM.

**VERSION = *HIGHEST-EXISTING / *UPPER-LIMIT /
<composed-name 1..24 with-under with-wild(40)>**

Version number of the element to be output. If this operand is omitted, SPOOL selects *HIGHEST, i.e. the last element in alphabetical order.

If the version is specified with wildcards and there are library elements with the same name in versions corresponding to the wildcard entry, all these library elements are output. Specification of a version with wildcards can have more than one creation date (operand CREATION DATE).

Library elements which do not have a version number can also be created with LMS.

These elements are printed out with the default value *HIGHEST. Various wildcard formats (*, ' / etc.) can be used for outputting these library elements. In messages relating to these library elements and messages relating to the trailer page, the version is replaced by the '@' character.

Note

If a version is not specified with a wildcard, it always has exactly one creation date (CREATION DATE).

TYPE = <alphanum-name 1..8 with-wild (12)>

Type of library element to be output.

If specified in wildcard format, the name consists of a maximum of 12 alphanumeric characters.

Note

The records of an LMS element of type C or R belong to special record types (160 through 255). No special records from such elements (C or R) may therefore be printed.

FROM-FILE = *SYSLST(...)

Outputs the system file SYSLST.

SYSLST-NUMBER = *STD

Outputs the SYSLST system file (which is automatically output on termination of an interactive task). If assigned to a cataloged file, the contents of this file are output. The following conditions apply to output:

- a maximum of 2048 bytes per output line (operand LAST-CHARACTER=2048)
- *SYSLST is not locked (operand LOCK-FILE=*NO)
- *SYSLST is deleted at the end of output (operand DELETE-AFTER-PRINT=*YES)
- feed control character handling: (operand DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC-CONTROL))

The *SYSLST system file may be combined with the temporary EAM object module file *OMF and the system file *SYSOUT in any sequence in a PRINT-DOCUMENT command, e.g. PRINT-DOCUMENT (*OMF,*SYSLST,*SYSOUT), but it must not be combined with an EAM file number or a cataloged file.

SYSLST-NUMBER = <integer 1..99>

Two-digit number nn to be used in the file name SYSLSTnn.

A maximum of 16 different SYSLSTn system files can be specified in a list (in parentheses and separated by commas). All the specified operand values are then valid for each of these system files.

FROM-FILE = *EAM

Outputs an EAM object module file.

EAM-NUMBER = <integer 1..65535>

Number of the EAM file to be output. If several EAM files are specified, the numbers must be separated by commas and placed in parentheses. There is a detailed description of EAM files in the manual [“Introductory Guide to DMS”](#).

FROM-FILE = *SYSOUT

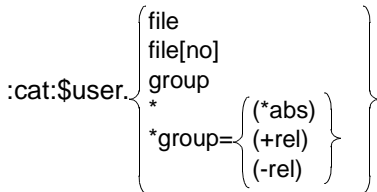
The system file SYSOUT is output. If assigned to a cataloged file, the contents of this file are output. The following applies by default to output:

- a maximum of 2048 bytes per output line (operand LAST-CHARACTER=2048)
- *SYSOUT is deleted at the end of output (operand DELETE-AFTER-PRINT=*YES)
- feed control character handling (operand DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC-CONTROL))

The *SYSOUT system file may be combined with the temporary EAM object module file *OMF and the system file *SYSLST in any order in a PRINT-DOCUMENT command, e.g. PRINT-DOCUMENT (*OMF,*SYSLST,*SYSOUT), but it must not be combined with an EAM file number or a cataloged file.

FROM-FILE = <filename 1..54 with-wild(80)>

Input format:



Character set:

A...Z, 0...9, \$, #, @, hyphen, period.

:cat:

Catalog identifier (catid) of the pubset on which the file is stored. The catalog ID consists of a maximum of 4 characters from the set A..Z and 0..9 (no special characters) and must be enclosed in colons. Default value: the catalog ID assigned to the user ID (entry in user catalog).

\$user.

User ID (userid) to which the file is assigned. The user ID must be enclosed in the characters dollar sign (\$) and period (.). Default value: the user ID from the SET-LOGON-PARAMETERS command (i.e. the user's own user ID).

file

A file name consists of a maximum of 41 characters; the first character must be a digit or a letter, the last character must not be a hyphen or period; a file name must not consist solely of digits and/or special characters.

PAM files must not be specified in batch mode.

The PRINT-DOCUMENT command is rejected if the specified file:

- is a newly cataloged file to which nothing has yet been written
- has already been opened in output mode

If the file does not belong to the user's own user ID, it must be shareable (MODIFY-FILE-ATTRIBUTES command).

The following points apply to the output of cataloged files:

- A spoolout job is created even if the file to be output is reserved by a SECURE-RESOURCE-ALLOCATION command. This reservation must, however, be canceled before the spoolout job is processed; otherwise, the job is not executed. The file to be output is locked until the end of the session if the operand LOCK-FILE=*YES was specified in the PRINT-DOCUMENT command and the job could not be executed because of the reservation.
- The files *OMF, *SYSLST and *SYSOUT cannot be specified together with a cataloged file in a spoolout job.

#file

@file

Name of a temporary file. The prefix '#' or '@' is defined at system generation time to identify temporary files. If only the prefix is specified, all the temporary (user) files are output.

The following points apply to the output of temporary files:

- A PRINT-DOCUMENT command for a temporary file is always executed automatically with LOCK-FILE=*YES,DELETE-AFTER-PRINT=*YES. This ensures that a temporary file is not erased prematurely by EXIT-JOB but only after printing has been completed.
- The temporary file is also erased if the spoolout job is terminated abnormally (e.g. by means of the CANCEL-PRINT-JOB command).
- A detailed description of temporary files is given in the manual [“Introductory Guide to DMS”](#).

group

Name of a file generation group from which a file (generation) is to be printed.

The name must not be more than 34 characters long and must not be partially qualified.

The first character must be a digit or a letter, the last character must not be a hyphen or period; a file name must not consist solely of digits and/or special characters.

$$\text{group} \left\{ \begin{array}{l} (*\text{abs}) \\ (+\text{rel}) \\ (-\text{rel}) \end{array} \right\}$$

Name of a file generation group from which a file (generation) is to be printed. The name must not be more than 34 characters long and must not be partially qualified. The first character must be a digit or a letter, the last character must not be a hyphen or period; a file name must not consist solely of digits and/or special characters.

(*abs)

Absolute generation number of the file generation to be printed. 'abs' is an element from the set (1, 2, ..., 9999).

(+rel)**(-rel)**

Relative generation number of the file generation to be printed. The signs must be included. 'rel' is an element of the set (1, 2, ..., 99).

It refers to a base value (see the BASE-NUM field in the output of the SHOW-FILE-ATTRIBUTES command).

The rule is: $rel = abs - \text{base value}$.

DOCUMENT-PART =

Allows processing of the print file to be limited to only a part of it. The file to be printed (the input file) consists of a sequence of records, each of which can be identified by SPOOL by means of its record number or a string it contains. SPOOL also allows you to structure the print file by using strings as file marks. These file marks divide the file up into sections. SPOOL takes into account all the options set by the user and converts the input file into a file edited for printing (an output file). This file consists of logical files and pages. The delimitation of part or parts of a file can apply to either the input file or the output file. The following alternatives for defining parts of a file are available in the substructures of this operand:

- INPUT-SECTION: the input file can be subdivided into sections on the basis of a specified string, or the whole file can be processed.
- INPUT-PART: only a certain number of the input file's records are processed. You can specify the first and last record by means of a record number, a section number or a string.
- RECORD-PART: of the records selected by means of the above operands, only a specified part of each record is processed.
- OUTPUT-PART: the whole input file is edited for printing, but output is limited to a subset of all logical print pages.

DOCUMENT-PART = *PARAMETERS(...)

The part of the file to be processed can be specified in the following substructure.

INPUT-SECTION =

Specifies whether the file is structured by means of file marks.

INPUT-SECTION = *WHOLE-FILE

The file is not structured. The whole input file is a single logical section.

INPUT-SECTION = *PARAMETERS(...)

The file is structured by means of file marks that can be specified in the following substructure. You use the INPUT-PART operand to specify which sections of the structured print file are to be output.

SECTION-IDENTIFIER = <c-string 1..60 with-low> / <x-string 1..120>

Specifies the file marks by means of which the input file is to be structured. Any strings in the records can be used as file marks. These strings can either be in SECTION records, which are not printed, or in the print file's normal records, which are printed. A string can be specified in the form of printable characters or hexadecimal characters.

You use the INPUT-PART operand to specify which parts of the subdivided print file are to be output. The search for the start of the section to be printed is executed in a separate "pseudo controller" task. Neither the user task nor the printer is locked while this is being done.

A pseudo controller writes the address of the first record in the section to the SPOOL control block; the spoolout job can then be processed (PREPROCESSING). If the desired section is not found in the file, an error message appears on the trailer page (for the layout see the "SPOOL (BS2000/OSD)" manual).

POSITION =

Specifies the position as of which the specified string begins in the SECTION record.

POSITION = *STD

The relevant string begins by default at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field
- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

POSITION = <integer 1..2047>

The relevant string begins at the specified byte (after the record length field).

INPUT-PART =

Specifies whether only a certain number of the input file's records are to be processed. You can specify the first and last record by means of a record number, a section number or a string.

INPUT-PART = *ALL

All the file's records are to be processed.

INPUT-PART = *PARAMETERS(...)

Only a certain number of the input file's records are to be processed. You can specify the first and last records.

FIRST-RECORD =

Specifies the record as of which the file is to be processed. You can specify the first record in the file, the number of a record or file mark, or a string in a record.

FIRST-RECORD = *BEGIN-OF-FILE

Output begins with the file's first record, even if SECTION records are specified.

FIRST-RECORD = <integer 1..2147483647>

Number of the SECTION record or normal record as of which a section of the file is to be output.

FIRST-RECORD = *BY-STRING-ID(...)

The record in which a specified string occurs is the first record to be output.

STRING = <c-string 1..60 with-low> / <x-string 1..120>

Output begins with the record in which the specified string of printable or hexadecimal characters is found at a specific position.

POSITION = *STD / <integer 1..2047>

Position within the record at which the specified string of hexadecimal characters begins. By default, the FIRST-RECORD string begins at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field
- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

OCCURRENCE = 1 / <integer 2..32767>

Specifies the record (containing the FIRST-RECORD string) as of which output is to start.

LAST-RECORD =

Specifies the last record in the part of the file to be output. You can specify the last record in the file, the number of a record or file mark, or any string in a record.

LAST-RECORD = *END-OF-FILE

Output continues until the end of the file, even if SECTION records are specified.

LAST-RECORD = <integer 1..2147483647>

Number of the last record (SECTION record or normal record) in the part of the file to be output.

LAST-RECORD = *BY-STRING-ID(...)

Specifies that the last record is to contain a specified string.

STRING = <c-string 1..60 with-low> / <x-string 1..120>

Output ends with the record in which the specified string of printable or hexadecimal characters is found at a specific position in the file.

POSITION = *STD / <integer 1..2047>

Position in the record as of which the specified string begins. By default, the LAST-RECORD string begins at the start of the record, i.e.:

- in a SAM file: at the first byte after the record length field

- in an ISAM file with KEY-POS=5: at the first byte after the key
- in an ISAM file with KEY-POS > 5: at the first byte after the record length field.

OCCURRENCE = 1 / <integer 2..32767>

Specifies the occurrence of the record containing the LAST-RECORD string at which output is to stop.

Note

If the LAST-RECORD record is found before the FIRST-RECORD record, the PRINT-DOCUMENT command aborts.

RECORD-PART =

Specifies whether only a specific part of each of the records selected by means of the above operands is to be processed.

RECORD-PART = *ALL

All of each selected record is to be processed.

RECORD-PART = *PARAMETERS(...)

Only a specific part of each record is to be processed.

FIRST-CHARACTER = 1 / <integer 2..32767>

Allows a byte number (record column) to be specified indicating the point as of which the records of a file are to be output. (The bytes of a record are numbered consecutively from left to right starting with 1; ISAM keys and control characters are components of a record.)

What happens depends on whether or not one of the values *BY-EBCDIC-CONTROL, *BY-IBM-CONTROL or *BY-ASA-CONTROL is specified in the LINE-SPACING operand.

If one of these values is specified:

Output starts with the data byte following the specified byte number. The feed control character is interpreted irrespective of the entry for FIRST-CHARACTER, provided the value for FIRST-CHARACTER is less than the length of the record. If the specified value is greater than the length of the record, it is ignored (i.e. printing does not take place, nor does line feed).

If none of these values is specified:

Output starts with the data byte corresponding to the specified byte number. If the records are longer than the form definition allows, printing continues in the next line. If CONTROL-MODE=*PAGE-MODE is specified, an entry for FIRST-CHARACTER is problematical because SPOOL takes no account of the number of control characters in a record.

LAST-CHARACTER = *STD / <integer 1..32767>

Specifies the byte indicating the point at which printing of each record is to stop. What happens depends on whether or not one of the values *BY-EBCDIC-CONTROL, *BY-IBM-CONTROL or *BY-ASA-CONTROL is specified in the LINE-SPACING operand.

If one of these values is specified:

Output ends with the data byte following the specified byte number (unless FIRST-CHARACTER is specified for an ISAM file with KEY-POSITION=5, in which case output ends with the data byte corresponding to the specified byte number).

If none of these values is specified:

Output ends with the data byte corresponding to the specified byte number. If the records are longer than the form definition allows, printing continues on the next line. If CONTROL-MODE=*PAGE-MODE is specified, an entry for LAST-CHARACTER is problematical because SPOOL takes no account of the number of control characters in a record.

Default (*STD):

- end of print line (136)
- 2048 for an EAM file, SYSLST or SYSOUT.

OUTPUT-PART =

Specifies that the whole input file is to be edited for printing, but that output is to be limited to a subset of all logical print pages.

OUTPUT-PART = *ALL

All logical print pages of the edited file are to be output.

OUTPUT-PART = *RANGE(...)

Part of the file is to be output.

FROM = *BEGIN-OF-FILE / <integer 1..2147483647>

Allows a page or line number in the print file to be specified as of which output is to start, as specified by the DIMENSION operand. By default, output commences at the beginning of the file. The pages in a print file are defined as described for the LINE-PER-PAGE operand (unless a control character produces a premature page feed).

This operand may only be used with CONTROL-MODE=*APA, provided DIMENSION=*PAGES is also specified at the same time.

TO = *END-OF-FILE / <integer 1..2147483647>

Allows a page or line number in the print file to be specified at which output is to end, as specified by the DIMENSION operand. By default, output terminates at the end of the file. The pages in a print file are defined as described for the LINE-PER-PAGE operand (unless a control character produces a premature page feed). The value specified here must be greater than that specified in the FROM operand.

This operand may only be used with CONTROL-MODE=*APA, provided DIMENSION=*PAGES is also specified at the same time.

DIMENSION = *PAGES / *LINES

Specifies whether the values in the FROM and TO operands are to be interpreted as page or line numbers.

OUTPUT-PART = *LAST(...)

Only the last so many pages or lines of the print file are to be output.

LAST = <integer 1..2147483647>

Number of pages or lines to be output, calculated from the end of the file. The DIMENSION operand indicates whether the value is to be interpreted as a page or line number. Pages in a print file are defined by the LINE-PER-PAGE operand (unless a control character produces a premature page feed).

DIMENSION = *PAGES / *LINES

Specifies whether the value in the LAST operand is to be interpreted as a page or line number.

Example of SECTION processing:

The following sections of an ISAM file are to be output.

```
01000000      Line 0
02000000  *SECTION0001
03000000      Line 1
04000000  *SECTION0002
05000000      Line 2
06000000  *SECTION0003
07000000      Line 4
```

SECTION records in default positions:

```
PRINT-DOCUMENT file,DOCUMENT-PART=*PAR(INPUT-SECTION=*PAR(SECT-ID=
C'*SECTION',POS=*STD),INPUT-PART=*PAR(FIRST-RECORD=1, LAST-RECORD=3))
```

The following part of the file is printed:

```
03000000      Line 1
05000000      Line 2
```

DOCUMENT-FORMAT =

Specifies the type of the document contents, i.e. the format of the file to be printed as regards the interpretation of feed control characters, printer control characters, font identifiers, RENO commands and/or VTSU codes. You can specify the following operands and the corresponding substructures here:

- *TEXT: the file has no printer-specific control characters except for feed control characters.
- *PAGE-FORMAT: the file has laser printer-specific control characters.
- *SPECIAL-FORMAT: the file has special printer-specific control characters.

DOCUMENT-FORMAT = *TEXT(...)

Except for feed control characters, the file has no printer-specific control characters. The position of the feed control character in the record can be specified in the substructure of the LINE-SPACING operand. The data is sent to the printer unchanged. Since only the data to be printed is sent to the printer, records can be truncated.

The following applies to HP and HP90 printers:

When the operand TO-PRINTER=*PAR(PRINTER-TYPE=*ANY) is specified, the character X'FF' is replaced by the character X'1F' in order to be compatible with the PRM statement CONVERT-PRINT-RESOURCES.

The following applies to LP65 printers:

Spoolout jobs for which DOCUMENT-FORMAT=*TEXT is specified can contain any LP65 control characters and printer control characters. Only records longer than 8192 characters are truncated.

The following applies to RSO:

Records of type A-1 or A-2 are to be printed (no control characters in the data stream); in other words, except for feed control characters in the first column of the records, no control characters are interpreted. This is also the reason why a font change is not possible. The form's default font or the first font specified for CHARACTER-SETS, if specified, is used. Nonprintable characters, i.e. characters with a hexadecimal value less than X'40', are output as blanks. If the record length exceeds the maximum line length, the record is truncated in the printout. The maximum line length depends on the character spacing, which is defined by means of the font used (see the CHARACTER-SETS operand).

Note for RSO printers

If a list of fonts is specified (operand CHARACTER-SETS=...) in conjunction with DOCUMENT-FORMAT=*TEXT, the command evaluates only the first element in the list.

LINE-PER-PAGE = *STD / <integer 1..32767>

Specifies how many lines (including the header and blank lines) are to be printed on a page.

LINE-PER-PAGE = *STD

If the operand is omitted, the number of lines per print page is calculated using the following formula, regardless of what has been specified for the HEADER-LINE operand:

$$\text{Number of lines} = P * L - N - 6$$

Where:

P = paper size in inches

L = line density

N = number of lines before the first vertical tab "channel 1"

Printers with a loadable vertical format buffer

- The vertical tab "channel 1" controls the line on which printing is to start. Unless otherwise specified, 2 blank lines are set before printing starts; i.e. channel 1 (CHANNEL 01) is in the third line of the loop.
- If the value specified for the LINE-PER-PAGE operand is greater than the specified number of lines in the loop, the value in the loop is used.
- If the LINE-PER-PAGE operand is specified together with the HEADER-LINE and LINE-SPACING operands, a value specified here must be at least three times that of the line feed specified for LINE-SPACING=1/2/3.

LINE-SPACING =

Specifies the number of line feeds or the type of control character interpretation.

LINE-SPACING= 1 / 2 / 3

The records are to be printed with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL(...)

The contents of the first byte of each record are to be interpreted as EBCDIC feed control characters.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

LINE-SPACING = *BY-IBM-CONTROL(...)

The contents of the first byte of each record are to be interpreted as IBM feed control characters.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

LINE-SPACING = *BY-ASA-CONTROL(...)

The contents of the first byte of each record are to be interpreted as ASA feed control characters.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length are not counted as part of the data.

HEADER-LINE =

Specifies whether a header line is to be printed on every page (except the header and trailer pages).

HEADER-LINE = *NO

No header line is printed.

HEADER-LINE = *STD

The header has the following format:

Header	DATE yyyy-mm-dd	userid	file	PAGE nnnn
Column	1	41(11,11)	60(21,67)	124 (77)

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

yy-mm-dd	year-month-day
userid	user identification
file	file name
nnnn	page number

Unless otherwise specified, the header line is followed by a blank line. The header is shifted in accordance with the LEFT-MARGIN operand, but the header line will be truncated at column 132. DATE and PAGE are only present in the header line if the line size ≥ 032.

HEADER-LINE = list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER

The header has the following format:

HEADER-LINE=	DATE	FIRST-RECORD	PAGE-NUMBER
Header	DATEyyyymm-dd (yyyymm-dd)	First record	PAGE nnnn (nnnn, nnnn)
Column	1	21	124 (77,67)

***DATE:**

The value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 70 characters (with differing values).

***PAGE-NUMBER:**

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

yyyymm-dd	year-month-day
First record	first logical record of the file
nnnn	page number

If *DATE, *FIRST-RECORD or *PAGE-NUMBER is omitted, the appropriate section is filled with blanks.

Unless otherwise specified, the header line is followed by a blank line.

The header is shifted in accordance with the value in the LEFT-MARGIN operand, but the header line will be truncated at column 132. DATE and PAGE are only present in the header line if the line size ≥ 032. If *FIRST-RECORD is specified, the first record is regarded as not belonging to the date.

OUTPUT-FORMAT =

Indicates whether the output format is character format only or character format and hexadecimal format.

OUTPUT-FORMAT = *CHARACTER

Outputs in character format only. Records which exceed the length of a print line are truncated.

OUTPUT-FORMAT = *HEXADECIMAL

Outputs the data records in character format and in hexadecimal format.

Output format

Each output line starts with an 8-byte prefix followed by data 50 bytes in length. Each output line is first printed using the appropriate font and then repeated in hexadecimal format.

Format of the output line

Column	Contents
1-4	Number of the byte in the record which is output first in this line
5-8	Blanks
9-50	Characters in the input record using the appropriate font; the individual characters are separated by a blank. The characters are repeated in hexadecimal format in the next line

DOCUMENT-FORMAT = *PAGE-FORMAT(...)

The file has laser printer-specific control characters.

FORMAT-NAME =

Format in which the data to be output is transferred to the printer.

FORMAT-NAME = *STD

A default value is automatically derived from the value of the CONTROL-MODE operand as follows:

CONTROL-MODE = *PAGE-MODE(...)

FORMAT-NAME = HP

CONTROL-MODE = *APA(...)

FORMAT-NAME = SPDS

CONTROL-MODE = *LOGICAL / *PHYSICAL / *LINEMODE

Contents of the file to be printed are not relevant

FORMAT-NAME = <c-string 1..63 with-low>

Any string which names a specific file format.

CONTROL-MODE =

Specifies how the control characters are to be interpreted.

CONTROL-MODE = *PAGE-MODE(...)

The control characters are interpreted as page printer-specific control characters.

PAGE-CONTROL-CHAR = *YES / *NO

Specifies whether the control character list must be at the beginning of each page (i.e. always after jumping to the vertical tab "channel 1" in the loop).

PAGE-CONTROL-CHAR = *YES

The control character list must be available.

PAGE-CONTROL-CHAR = *NO

No control character list at the beginning of the page. However, this means that the following functions cannot be controlled in the case of output to HP printers:

- Film overlays on individual pages in the file; specified in the PRINT-DOCUMENT command, a film overlay is used on each page of the print file of the spoolout job.
- Page copies for individual pages in the file; all the pages of the print file are output with as many copies as specified in the PRINT-DOCUMENT command.
- Column-oriented indentation on individual pages; the value specified in the PRINT-DOCUMENT command is valid for all the pages in the print file.
- FOB data overlay on individual pages in the file; specified in the PRINT-DOCUMENT command, an FOB data overlay is used on each page in the print file of the spoolout job.
- A copy reference number cannot be specified.
- Page rotation control for individual pages in the print file; all the pages are output in either portrait or landscape format, as specified in the PRINT-DOCUMENT command.

CONTROL-TYPE =

Specifies whether the control characters are suitable for processing on HP or HP90 printers or whether they have to be converted.

CONTROL-TYPE = *COMPATIBLE

The file does not contain HP or HP90 printer-specific control characters. SPOOL must convert the control characters.

CONTROL-TYPE = *HP

The file contains HP or HP90 printer-specific control characters that can only be processed by these printers.

LINE-SPACING =

Specifies the number of line feeds or the type of control character interpretation.

LINE-SPACING = *BY-EBCDIC-CONTROL

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-MODE = *LINE-MODE

Only for RSO. Records of type C (see appendix) are printed out. The records may contain data mixed with LINE-MODE control characters. LINE-MODE control characters are (in any combination):

- printer control characters (i.e. physical control characters beginning with X'27' or X'3C')
- RENO commands
- VTSU codes

Control over record and file formats (including page and line feed with LINE-MODE control characters) rests solely with the user. With the 9025/9026 RENO page printer, users must also ensure that the printer is set to the correct start position on the paper. A loop is not interpreted. Nonprintable characters, i.e. characters with a hexadecimal value < X'40', are output as blanks.

The spoolout job is executed with the default font of the form used until you change the font in the file with the aid of LINE-MODE control characters.

CONTROL-MODE = *LOGICAL(...)

Only for RSO printers. Specifies that records of type B-1 or B-2 are to be printed out, i.e. records which, in addition to a feed control character in the first byte, may contain data mixed with font identifiers, printer control characters, RENO commands and VTSU codes. With the exception of the VTSU codes VPA, NP, VT, NL and CR, which are output as blanks, the above-mentioned control characters are interpreted. A character set identifier, a VTSU code or a RENO command remains valid until a new control character is specified. If the font identifier is omitted, the default font for the form is used. Since page feed is implemented via a loop or constant line feed when CONTROL-MODE=*LOGICAL is specified, the file should not contain the RENO commands \LF, \FF and \CR. Setting the form height is also not permitted.

LINE-PER-PAGE = *STD / <integer 1..32767>

Specifies how many lines (including header and blank lines) are to be printed on a page.

LINE-PER-PAGE = *STD

If no value is specified, the number of lines per print page is calculated according to the following formula, regardless of the value in the HEADER-LINE operand:

$$\text{Number of lines} = P * L - N - 6$$

Where:

P = paper size in inches

L = line spacing

N = number of line before the first channel 1

If the value specified for the LINE-PER-PAGE operand is greater than the specified number of lines in the loop, the value in the loop is used. A value specified here must be at least three times as large as the line feed specified for LINE-SPACING=1/2/3 if the LINE-PER-PAGE operand is specified together with the HEADER-LINE and LINE-SPACING operands.

LINE-SPACING =

Defines the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING= 1 / 2 / 3

The records are to be printed out with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

LINE-SPACING = *BY-IBM-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

LINE-SPACING = *BY-ASA-CONTROL(...)

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-CHAR-POS = *STD / <integer 1..2040>

Number of the data byte in which SPOOL finds the feed control character. In the case of records of variable length, the fields containing the length information are not counted as data.

HEADER-LINE =

Specifies whether a header line is to be printed on every page (except the header and trailer pages).

HEADER-LINE = *NO

No header line is printed.

HEADER-LINE = *STD

The header has the following format:

Header	DATE yyyy-mm-dd	userid	file	PAGE nnnn
Column	1	41(11,11)	60(21,21)	124(77,67)

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

- yy-mm-dd year-month-day
- userid user identification
- file file name
- nnnn page number

Unless otherwise specified, the header line is followed by a blank line. The header is shifted in accordance with the LEFT-MARGIN operand, but the header line will be truncated at column 132. DATE and PAGE are only present in the header line if the line size ≥ 032.

HEADER-LINE = list-poss(3): *DATE / *FIRST-RECORD / *PAGE-NUMBER

The header has the following format:

HEADER-LINE=	DATE	FIRST-RECORD	PAGE-NUMBER
Header	DATE yyyy-mm-dd (yyyy-mm-dd)	First record	PAGE nnnn (nnnn, nnnn)
Column	1	21	124 (77,67)

***DATE:**

The value in parentheses applies in the case of a form definition with a line length < 132

and ≥ 70 characters (with differing values). For *PAGE-NUMBER:

The first value in parentheses applies in the case of a form definition with a line length < 132 and ≥ 80 characters (with differing values). The second value in parentheses applies in the case of a form definition with a line length < 80 and ≥ 70 characters (with differing values).

- yyyy-mm-dd year-month-day
- First record first logical record of the file
- nnnn page number

If *DATE, *FIRST-RECORD or *PAGE-NUMBER is omitted, the appropriate section is filled with blanks. Unless otherwise specified, the header line is followed by a blank line. The header is shifted in accordance with the value in the LEFT-MARGIN operand, but the header line will be truncated at column 132. *DATE and *PAGE are only present in the header line if the line size \geq 032.

If *FIRST-RECORD is specified, the first record is regarded as not belonging to the date.

CONTROL-MODE = *PHYSICAL(...)

Only for RSO.

LINE-SPACING=*NO is set automatically, which means that you must implement page and line feeds with LINE-MODE control characters (i.e. VTSU codes, printer control characters and RENO commands) in the file itself.

If you specify LINE-SPACING=*BY-EBCDIC-CONTROL for records of type D-2, the feed control character in the first byte is interpreted as a line or page feed control character. Nonprintable characters are also transferred to the printer (in contrast to CONTROL-MODE=*LINE-MODE). You are responsible for the correctness of the control characters in the file (including feed control).

LINE-SPACING =

Specifies the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING = *NO

The contents of the first byte of each record are not interpreted as a control character.

LINE-SPACING = 1 / 2 / 3

The records are to be printed out with 1-, 2- or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL

The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

The contents of the first byte of each record are to be interpreted as an ASA feed control character.

CONTROL-MODE = *APA(..)

For local SPOOL only.

Specifies that the file to be printed contains APA printer control characters that are to be interpreted.

LINE-SPACING = *BY-EBCDIC-CONTROL / *BY-IBM-CONTROL / *BY-ASA-CONTROL

Specifies the type of the printer control characters (E, I or A).

DOCUMENT-FORMAT = *SPECIAL-FORMAT(...)

A printer-specific language is used in the document. In this case, the SPOOL and Distributed Print Services (Dprint) subsystems provide transparent control for the document. In other words, the file is transferred to an RSO or Xprint printer without interpretation.

FORMAT-NAME =

Specifies the format to be processed. The document is either processed by RSO in transparent mode or sent to Xprint without a special format.

FORMAT-NAME = *NONE

The document is either processed by RSO in transparent mode or is sent to UNIX-SPOOL/Xprint without a special format.

Data records of type E-1 or E-2 are printed by RSO. The records can contain any characters except VTSU codes for RSO.

All characters of a record are transferred to the printer without being interpreted by RSO, except for the feed control character in the first byte of type E-2 records.

You are responsible for the correctness of the control characters in the file (including feed control). If the LINE-SPACING operand is omitted, the default value LINE-SPACING=*NO is used and you must implement page and line feeds with LINE-MODE control characters in the file.

LINE-SPACING=*BY-EBCDIC-CONTROL for type E-2 records causes the feed control character in the first to be interpreted as a line or page feed control character. If the LEFT-MARGIN operand is specified at the same time, blanks are inserted at the start of each record which shift the text the desired number of columns during printout.

FORMAT-NAME = *PCL

This operand specifies that the contents of the document to be processed are in PCL format. The entries FORMAT-NAME=*PCL and FORMAT-NAME='PCL' have the same effect.

PCL documents are complete in themselves. All of the necessary definitions are already contained in the document file or are provided by the printer. UNIX and Windows printer drivers create this type of document file.

Under BS2000 a PCL document must be printed using the DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL) operand in the PRINT-DOCUMENT command.

FORMAT-NAME = <c-string 1..63 with-low>

This operand specifies that the contents of the document to be processed are of a specific type (e.g. HP LASERJET). The operand value is determined by the document format attribute transferred to the UNIX cluster. It is interpreted by UNIX SPOOL/Xprint as the content type attribute of the UNIX SPOOL/Xprint job (xpadd -job -ct...). Speci-

fyng <alphanumeric 1..63> for FORMAT-NAME is therefore only permitted provided a BS2000 cluster is not specified as the operand value for CLUSTER-NAME. This document content type fulfills the relevant requirements of ISO DPA class 1, which is required for interoperability between the BS2000 SPOOL & PRINT subsystems and remote SPOOL and PRINT subsystems.

With jobs to RSO, the job is printed by the RSO printer if the printer supports the specified format name or if a filter exists which converts this format name into a format name which the printer supports.

As soon as the value of CLUSTER-NAME refers to a BS2000 cluster or is not specified, the length of the format name is restricted to 8 characters. If the value of FORMAT-NAME is longer in this case, the command is rejected. The file to be printed is processed by a printer which understands the specified format name.

In any case, the printer must have been defined in the SPOOL parameter file together with the format name.

Examples

1. A document containing only text records is transferred to the local SPOOL:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*TEXT
```

2. A document containing only text records is transferred to a UNIX SPOOL/Xprint server:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*TEXT,
RES-DESCRIPTION(FORM-NAME=unix-form),
TO-PRINTER(PRINTER-NAME=xxxxxxx,
CLUSTER-NAME=unix-cluster)
```

3. A document containing text records whose tenth data byte is interpreted as EBCDIC-PCC is transferred to a UNIX SPOOL/Xprint server:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*TEXT(
LINE-SPACING=*BY-EBCDIC-CONTROL,CONTROL-CHAR-POS=10),
RES-DESCRIPTION(FORM-NAME=unix-form),
TO-PRINTER(PRINTER-NAME=xxxxxxx,
CLUSTER-NAME=unix-cluster)
```

4. An HP PCL4 document is transferred to a UNIX SPOOL/Xprint server:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*SPECIAL-FORMAT(
FORMAT-NAME=HP-LASERJET or *NONE),
RES-DESCRIPTION(FORM-NAME=unix-form),
TO-PRINTER(PRINTER-NAME=xxxxxxx,
CLUSTER-NAME=unix-cluster)
```

You will also find detailed examples in the manual [“Distributed Print Services \(BS2000/OSD\)”](#).

5. A PCL5 document is transferred to local SPOOL in transparent mode:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*SPECIAL-FORMAT(
    FORMAT-NAME=PCL5),
    RES-DESCRIPTION(FORM-NAME=FRM001)
```

Please note that FORM FRM001 must be defined in the SPOOL parameters for a 2050-PCL or 2090-PCL.

6. A PCL5 document is transferred to RSO in transparent mode:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*SPECIAL-FORMAT(
    FORMAT-NAME=*NONE or PCL5),
    RES-DESCRIPTION(FORM-NAME=FRM001),
    TO-PRINTER=*PARAMETERS(PRINTER-NAME=PRNPCL)
```

For more detailed examples, see the “[SPOOL \(BS2000/OSD\)](#)” manual.

7. An HP job is transferred to a SINIX server:

```
/PRINT-DOCUMENT FROM-FILE=myfile,DOC-FORMAT=*PAGE-FORMAT(
    CONTROL-MODE=*PAGE-MODE),
    TO-PRINTER=*PARAM(PRINTER-NAME=xxxxxxxx,
    CLUSTER-NAME=unix-cluster,OUTPUT-FORMAT='HP-LASERJET')
```

In this case the SPCONV product is required. For more information, see the “[SPCONV \(BS2000/OSD\)](#)” manual.

LINE-SPACING =

Specifies the number of line feeds and the way in which control characters are interpreted.

LINE-SPACING = *NO

The contents of the first byte of the records are not interpreted as control characters.

LINE-SPACING = 1 / 2 / 3

Only permitted for RSO. The records are to be printed out with 1-, 2, or 3-line spacing.

LINE-SPACING = *BY-EBCDIC-CONTROL

Only permitted for RSO. The contents of the first byte of each record are to be interpreted as an EBCDIC feed control character.

LINE-SPACING = *BY-IBM-CONTROL

Only permitted for RSO. The contents of the first byte of each record are to be interpreted as an IBM feed control character.

LINE-SPACING = *BY-ASA-CONTROL

Only permitted for RSO. The contents of the first byte of each record are to be interpreted as an ASA feed control character.

PRINT-JOB-CONTROL = *PARAMETERS(...)

Specifies all the parameters for controlling print job processing.

START-PROCESSING =

Time of printout for the system file prior to termination of the job.

START-PROCESSING = *IMMEDIATE

The spoolout job is to be generated and processed immediately after command entry.

START-PROCESSING = *AT-FILE-CLOSING

The spoolout job is to be processed immediately after the system file has been closed. A system file is closed:

- a) for primary assignment: by means of the LOGOFF or CANCEL-PRINT-JOB command (from a different identifier), i.e. after the end of the job
- b) for a file assigned to a cataloged file:
 - by means of the LOGOFF or CANCEL-PRINT-JOB command (from a different identifier), i.e. after the end of the job
 - by means of a new ASSIGN-SYSFILE command (change of assignment) issued for the same system file
- c) during a procedure run whenever procedure level 0 has been reached

START-PROCESSING = <integer 1..2147483639>

Number of logical pages after which printing is started. The remainder of the relevant file (\leq "integer" pages) is printed out after the system file has been closed (see the operand value *AT-FILE-CLOSING). The minimum value for "integer" can be displayed using the SHOW-SPOOL-PARAMETERS command or SPSERVE statement; the information is available in the output field SPOOLOUT-OPTIONS:...ST-SP-LOW-VAL=...

Notes

- All the operand values from a PRINT-DOCUMENT command with START-PROCESSING="integer" or START-PROCESSING=*AT-FILE-CLOSING are recorded for each addressed system file.
- Each spoolout job is given its own TSN.

FAMILY-PROCESSING =

Specifies whether a common TSN is allocated (FAMILY) if two or more file or library elements are specified in a PRINT-DOCUMENT command (in order to ensure that these files are output sequentially on the same printer).

FAMILY-PROCESSING = *STD

For spoolout jobs to local printers and RSO devices, the default value from the SPOOL parameter file applies. This can be defined separately (and hence differently) for local and RSO printers in the SP SERVE statement MODIFY-SPOOL-PARAMETERS. You can display the value by means of the SHOW-SPOOL-PARAMETERS command or SP SERVE statement (FAMILY-PROCESS field).

FAMILY-PROCESSING = *YES

A common TSN (FAMILY-PRINT) is to be allocated if two or more files or library elements are specified in a spoolout job. The individual files or library elements cannot be processed in parallel.

FAMILY-PROCESSING = *NO

The files or library elements specified at the same time in a PRINT-DOCUMENT command are to be processed under separate TSNs. This means that parallel processing is possible.

CHECKPOINT =

Specifies whether checkpoint processing is to be performed by the controller on the basis of pages or SECTIONS.

CHECKPOINT = *ON-PAGES

Default restart mechanism. When an interrupted job is restarted, processing is resumed from a point a given number of pages back.

CHECKPOINT = *ON-SECTION-RECORDS

The operand value can be specified for all printer types but offers advantages particularly in the case of output to HP90 printers using the TWO-UP procedure and LP65 printers.

With these types of printer, a physical page can comprise a number of logical pages without SPOOL detecting it (the information is in the PCL file); in other words, the default restart mechanism, which is geared to logical pages, is highly prone to errors with this type of printer.

SECTION records are used here as restart markers. You divide your files into sections with the aid of SECTION records. These SECTION records must contain the printer commands needed to ensure correct data processing. If a physical page contains a number of logical pages, the start of a physical page must also be clearly indicated in the SECTION record.

If an error occurs, processing is resumed with HOLD-PRINT-JOB and RESUME-PRINT-JOB a given number of sections further on in the file; i.e. RESTART-POSITION = PAGE(...) or BACK(...) refers to sections rather than pages. Similarly, the values shown in error messages are not pages but sections.

To arrive at a correct result, a section must correspond to at least one physical page (ideally to precisely one page). If the operand value CONTROL-MODE=*PAGE-MODE is specified together with CHECKPOINT=*ON-SECTION-RECORDS, in the case of output to a laser printer, you must ensure that the SECTION records are located immediately ahead of records which contain the control character line at the start of the print page. As soon as repositioning takes place (PRINT-DOCUMENT or restart of an interrupted job), the first record that SPOOL prints must contain the control character line.

PRINT-JOB-NAME =

Job name for the spoolout job. The job name can be formed from a maximum of 8 characters from the set (A,...Z,0,...9,@,#,\$,,-) but must not start with a hyphen or end with a period. It may only start with a period if this is followed by an alpha character; in this case, the period is not printed as part of the job name on the header page. The special character string period and hyphen (.-) may only be specified in quotes. The job name is printed on the header page in the third uppercase line and also appears in the output of the SHOW-PRINT-JOB-STATUS command. If this operand is omitted, the job name from the SET-LOGON-PARAMETERS command is used instead.

PRINT-JOB-NAME = *JOB-NAME

The spoolout job does not have its own name. If a job name has been assigned (in the SET-LOGON-PARAMETERS command) to the job issuing the command, this name is printed in the third uppercase line on the header page.

PRINT-JOB-NAME = <alphanum-name 1..8 / <c-string 1..8 with-low>

Job name which is to be assigned to the spoolout job (and which overwrites a job name assigned to the job issuing the command).

PRINT-JOB-PRIORITY =

Defines the urgency with which this spoolout job is started relative to other spoolout jobs.

PRINT-JOB-PRIORITY = *JOB-PRIORITY

Defines the priority with which the spoolout job is started relative to other spoolout jobs.

PRINT-JOB-PRIORITY = <integer 30..255>

Priority to be assigned to the spoolout job. The highest priority you can assign here is defined in the user catalog and can be displayed by means of the SHOW-USER-ATTRIBUTES command. If an invalid priority is entered (or no priority at all), the spoolout job is given the same priority as the job issuing the command.

PRINT-JOB-CLASS =

Only for the SPOOL administrator.
Specifies the job class of the spoolout job.

PRINT-JOB-CLASS = *BY-USER-ATTRIBUTES

The default value for the print job class is taken from the user catalog.

PRINT-JOB-CLASS = <integer 1..255>

The specified job class is assigned to the spoolout job. For reasons of compatibility, the value 0 (zero) is not permitted.

MONJV =

Specifies the job variable in which information on job processing is to be stored. See also [page 163](#).

The command is rejected if the specified variable name is the name of a temporary job variable.

MONJV = *NONE

No job variable is to be linked to the job.

MONJV = *STD

The job variable should be given the name of the file to be printed (without catalog ID and without user ID). It is created under the user ID and catalog ID of the caller.

The PRINT-DOCUMENT command MONJV=*STD is rejected if:

- a file generation is specified
- a temporary file is specified
- an OMF or EAM file is specified
- a PLAM element is specified

The PRINT-DOCUMENT command (XX,XX),MONJV=*STD is rejected. The reason for this is that if the job variable XX has been created for the first job, it is no longer available for a second job.

MONJV = <filename 1..54 without-gen>

The job variable should contain the specified name. If the job contains several files, the following suffix is added to the name of the job variable:

- a consecutive number <1..9999> if FAMILY-PROCESSING=*YES is also specified
- the TSN of the spoolout job if FAMILY-PROCESSING=*NO or START-PROCESSING=<integer 1..2147483639> is also specified

JV-PASSWORD = *NONE / *SECRET / <c-string 1..4> / <x-string 1..8>

Specifies the password with which the job variable is protected. In the case of *SECRET, a protected entry can be requested. See also [page 163](#).

PROCESSING-ADMISSION =

Only for spoolout jobs under the user ID with the privilege PRINT-SERVICE-ADMINISTRATION. This allows the user to specify whether the spoolout job is to be executed under the user's own ID or another specified user ID and account number.

PROCESSING-ADMISSION = *SAME

The spoolout job is to be executed under the user's own ID.

PROCESSING-ADMISSION = *PARAMETERS(...)

The spoolout job is to be executed under another user ID.

USER-IDENTIFICATION = <name 1..8>

User ID under which the spoolout job is to be executed.

ACCOUNT = *NONE / <alphanum-name 1..8>

Account number under which the spoolout job is to be executed.

PASSWORD = *NONE / *SECRET / <c-string 1..8> / <x-string 1..16> / <c-string 9..32>

Password for the user ID.

FAILURE-PROCESSING =

For local SPOOL only.

Specifies whether a specific message page is to be created when an error occurs during current processing on an APA printer.

FAILURE-PROCESSING = *PARAMETERS(...)

Specifies what happens in the event of an error.

MSG-PAGE = *YES / *NO

Specifies whether or not the APA message page is to be printed. The APA message page contains error messages and warnings. If an APA printer is not being used, this parameter is ignored.

SCHEDULING-TIME =

Defines the scheduling time, i.e. the earliest time at which a print job is to be started. This causes the print job to be started thereafter, depending on the printer availability and the processing rules for print jobs. In cases where the jobs are in the WFT status, the data transfer can be initiated as of the specified time. This operand cannot be used in connection with UNIX.

SCHEDULING-TIME = *STD

There is no scheduling time, i.e. the print job will be started depending on the printer availability and processing rules for print jobs.

SCHEDULING-TIME = *EARLIEST(...)

Starts the print job at the earliest possible date and time.

DATE = *UNCHANGED / *TODAY / <date>

Defines the day on which a print job is started.

DATE = *TODAY

Schedules the print job for the current date.

DATE = <date>

Defines the date in the form <year>-<month>-<day>. This entry comprises three unsigned integer values separated by hyphens. The year must be specified in four positions. The month entry can have up to two positions with 1..12 as the possible values. The entry for the day can also have up to two positions with 1..31 as the possible values, provided the resulting date specification is valid. In other words, a date such as 2000-02-30 is not allowed.

TIME = *UNCHANGED / <time>

Determines the time at which a print job is started.

TIME = <time>

Defines the time of day in the form <hours>:<minutes>. This entry comprises two unsigned integer values of 2 positions each, separated by a colon. The possible integers are 0..23 for the hours and 0..59 for the minutes. Single-digit values may be preceded by a zero.

Notes

1. The date and time specified in this command are printed in the local time zone representation.
2. In order to ensure that the client and server times are synchronized, the date and time are internally converted to the UTC (Universal Time Coordinated) format and reconverted again whenever the date and time entries are output.
3. The date and time displayed by the SHOW-PRINT-JOB-ATTRIBUTES command are always indicated in accordance with the local time representation on the system on which the SHOW command was entered. This means that the displayed date and time values may differ from the original values specified in the PRINT-DOCUMENT command.

Such differences could occur due to the following cases:

- The distributed print jobs are displayed on clients and servers in different time zones.
 - The distributed print jobs are displayed on a client and a server in the same time zone, but their clocks are not synchronized.
 - The print jobs were issued during the summer or winter months, i.e. with or without the Daylight Savings Time in effect, and then displayed at some other time after or before the time change.
4. In order to avoid inconsistencies in the displayed dates and times, it is advisable to synchronize all system clocks in a distributed environment.
 5. If the SCHEDULING-TIME operand is not supported by the SPOOL version in a distributed environment, this operand is ignored, and the print job is processed normally.
 6. In order to assign a replay tape to a print job, the print job must have reached its scheduling time limit.

LAYOUT-CONTROL = *PARAMETERS(...)

Specifies all the parameters that control page layout.

PAGE-COPIES = *STD / <integer 0..255>

In local SPOOL mode, only for the printer types HP, HP90 and LP65.

In RSO mode, valid only for the following printer types:

2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-PCL, DJET, 9000-PCL.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Number of page copies.

This specifies how many times each individual page is to be repeated. The ADDITIONAL-COPIES operand allows additional printouts of the whole file to be requested.

A PRINT-DOCUMENT command with the PAGE-COPIES operand is rejected if the line number specified in the LINE-PER-PAGE operand is greater than the number of lines in the loop record minus the number of lines before the line on which the vertical tab "channel 1" is defined.

On an HP or HP90 printer a maximum of 255 copies of a page can be printed in succession.

PAGE-COPIES=255 has the same effect as PAGE-COPIES=254: one original and 254 copies are printed.

PAGE-COPIES = *STD

For LP65 printers: the number of page copies is as specified in the PCL file.

For all other printer types: PAGE-COPIES=0.

LEFT-MARGIN = *STD / <integer 0..31>

For all printers with the exception of RSO printers:

The output text is to be indented by the specified number of columns.

For all RSO printers:

The output text is to be indented by the specified number * 1/10 inch.

The default value can be displayed by means of the SHOW-SPOOL-PARAMETERS command or SPSERVE statement; the information is given in the PRINT-CMD-DEFAULTS:...LEFT-MARGIN = ... output field. The LEFT-MARGIN operand is ignored if the operand CONTROL-MODE=*PHYSICAL is specified at the same time.

For PCL printers:

Applicable to DOCUMENT-FORMAT=*TEXT(...), not applicable to DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

For APA printers:

The operand specifies to what extent the left margin of the logical page is to be indented. The logical page will be indented by the specified number * 1/10 inch,

independently of the CONTROL-MODE=*APA or CONTROL-MODE=*TEXT setting. The default value for the corresponding output device is shown by the command or the SPERVE statement SHOW-SPOOL-DEVICES. The information may be found in the SPOOL-CONTROL:...SHIFT output field. If the *STD default value is specified there, see the PRINT-CMD-DEFAULTS:...LEFT-MARGIN=... output field in the SPOOL parameter file for more information on the default value.

The LEFT-MARGIN operand corresponds to the PDSOFFXF/INFOFFXF and PDFSOFFXB/INFOFFXB parameters in the parameter files. It can be specified in conjunction with the LEFT-OFFSET parameter. In this case, both parameters specifications are added up, thus determining the offset of the logical page.

More information on this subject may be found in the "IDOM (BS2000/OSD)" manual.

TWO-SIDED =

Specifies whether the LP65, PCL, APA or RSO printer is to print the paper on one side or two. In conjunction with the ROTATION operand, the TWO-SIDED operand determines the type of two-sided print to be used.

TWO-SIDED=	ROTATION=	Type of two-sided print
*NO	any	Single-sided (SIMPLEX)
*YES	*NO, 0, 180	Portrait mode, bound along the long edge
*YES	90, 270	Landscape mode, bound along the short edge
*TUMBLE	*NO, 0, 180	Portrait mode, bound along the short edge
*TUMBLE	90, 270	Landscape mode, bound along the long edge

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Notes

- For LP65 printers (and only LP65 printers) the functions TWO-SIDED, ELECTRONIC-OVERLAY and PAGE-COPIES are linked and part of one and the same printer command. If only one of these operands is specified, default values are generate for all others.
- Only the operand TWO-SIDED=*STD can be specified along with DOCUMENT-FORMAT=*SPECIAL-FORMAT.

TWO-SIDED = *STD

For LP65 printers, printing is either single-sided ((simplex mode) or two-sided (duplex mode), as specified in the PCL file. For RSO printers this parameter is ignored.

For APA printers, printing is either single-sided (simplex mode) or two-sided (duplex mode), depending either on the PRINT-DOCUMENT command printing resource form definition or on the definition in the SPOOL parameter file.

TWO-SIDED = *NO

The paper is printed on one side (simplex mode).

TWO-SIDED = *YES

The paper is printed on two sides (duplex mode). The pages are printed along the vertical edge.

The job can be performed on LP65 printers capable of single-sheet processing and on 2030-PCL, 9026-PCL, 9026-RENO, 4822-PCL, 4825-PCL, 4824-PCL, 4830-PCL, 4850-PCL and 9000-PCL printers.

TWO-SIDED = *TUMBLE

The paper is printed on two sides (duplex mode), and the pages are turned over from top to bottom rather than left to right. The pages are printed along the horizontal edge.

The job can be performed on LP65 printers capable of single-sheet processing and on 2030-PCL, 9026-PCL, 9026-RENO, 4822-PCL, 4825-PCL, 4824-PCL, 4830-PCL, 4850-PCL and 9000-PCL printers.

ROTATION =

Specifies whether the pages to be printed from the spoolout job are to be rotated, and if so by how many degrees. The print page set up in the printer is rotated (clockwise) by a certain number of degrees and printed on the form; for example, paper inserted in the printer in portrait format can be printed in landscape format if ROTATION=90 was defined.

When this operand is specified, output is (automatically) directed to HP and HP90 printers or to the PCL, 4830-PCL and 4850-PCL printers.

SHOW-SPOOL-PARAMETERS indicates whether or not an HP or HP90 printer with a page rotation module is available in the current SPOOL configuration: output field DEVICE-TYPE:..., ROT=YES/NO.

Spoolout jobs with page rotation are displayed in the outputs for the commands SHOW-USER-STATUS and SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION = TSN(TSN=...).

Header and trailer pages are not printed in rotated format.

In the case of RSO printers, prolog, epilog, DIA and member files are sent to the printer before RSO sets page rotation at the printer.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

The values 0, 90, 180 and 270 can only be specified for 4830-PCL and 4850-PCL printer types.

For APA printers:

This parameter overrides the form definition specifications relevant to rotation (medium orientation). Header and trailer pages are not printed in rotated format.

With line data, the page definition always complies with the PRINT-DOCUMENT specification, irrespective of the selected rotation (page orientation).

ROTATION = *NO

The following applies to all printers except RSO printers:

page rotation is not performed. Any page rotation control characters in the file are ignored.

For all RSO printers:

This value instructs RSO not to send any settings for page rotation to the printer. Nevertheless, as in earlier versions, RSO checks whether ROTATION-CONTROL was defined in the relevant form definition. If it was, RSO assumes that printing will be executed in landscape mode (upside down), i.e. with ROTATION=90/270, and exchanges the values for PAGE-SIZE and LINE-SIZE in the form definition.

The printer command for specifying printout in landscape format (upside down) must be provided by the user either in the user file or by means of a PROLOG file.

For APA printers:

Page rotation is not performed, except when specified in the form definition.

ROTATION = *BY-CONTROL-CODES

Control characters for page rotation in the file are interpreted.

RSO does not support this function.

ROTATION = 0 / 90 / 180 / 270

Each print side in the user file is rotated (clockwise) through 0^0 / 90^0 / 180^0 / 270^0 and printed out.

For printing with ROTATION=0 (portrait mode) or ROTATION=180 (portrait mode, upside down), the loop used is either:

- the one specified in the LOOP-NAME operand of the PRINT-DOCUMENT command
- the one specified in the LOOP-NAME operand in the structure VERTICAL-CONTROL=LOOP() of the form definition (see the SHOW-SPOOL-FORMS command)
- or, for RSO printers, the one from the parameters of the structure VERTICAL-CONTROL=SPACING and the PAGE-SIZE operand of the form definition (see the SHOW-SPOOL-FORMS command).

For printing with ROTATION=90 (landscape mode) or ROTATION=270 (landscape mode, upside down), the operands PAGE-SIZE and LINE-SIZE of the form definition are exchanged and the loop used is either:

3. Job name in outsize letters (10 lines + 2 blank lines)
4. Mailing box (address and identification field: 12 lines + 2 blank lines)
5. 'text' in outsize letters (10 lines + 2 blank lines)

Priority sequence:

1. Mailing box (address and identification field: 12 lines + 2 blank lines)
2. 'text' in outsize letters (10 lines + 2 blank lines)
3. Job name in outsize letters (10 lines + 2 blank lines)
4. User ID in outsize letters (10 lines + 2 blank lines)
5. Account number in outsize letters (10 lines + 2 blank lines)

HEADER-EXIT-NUMBER = *NO / <integer 1..2147483639>

Number of desired header pages. The precise significance of this operand depends on the definitions made for the computer center. The default value is *NO = 0.

TRAILER-EXIT-NUMBER = *NO / <integer 1..2147483639>

Number of desired trailer pages. The precise significance of this operand depends on the definitions made for the computer center. The default value is *NO = 0.

Note

The layout of the trailer page for RSO is shown in the "[RSO \(BS2000/OSD\)](#)" manual.

TABLE-REFERENCE-CHAR =

Specifies whether users select fonts for print page layout by means of control characters in the text. The selection can be made with the aid of TRCs (table reference characters), which reference a list of fonts from within the records. The list can either be part of the page definition (PAGE-DEFINITION) or can be declared by means of the CHARACTER-SETS operand. For a detailed explanation of how to use the TRC, see the “[SPOOL \(BS2000/OSD\)](#)” manual.

TABLE-REFERENCE-CHAR = *NO

No font selection control characters (TRCs) are stored in the print file, or these characters are not to be evaluated.

TABLE-REFERENCE-CHAR = *YES

The print file contains font selection control characters (TRCs) that are to be evaluated by SPS. Each TRC value represents a specific font that is to be used to print out the relevant record. The individual values (from X'00' to X'0F') must either be linked to the entries in the font list in PAGE-DEFINITION, in the order in which they occur, or must be explicitly linked to the fonts specified in the CHARACTER-SETS operand in the order in which they occur. Regardless of the number of different TRC values in the file, a maximum of four fonts, to be specified in the form of a list, can be used for printing out the records. TRC values greater than X'03' (corresponding to the fourth element in the list) automatically reference the first font specified in the list.

LANGUAGE-EXTENSION =

Specifies whether a text with a language extension (i.e. containing two languages) is to be printed out.

LANGUAGE-EXTENSION = *NONE

The document does not contain a language extension.

LANGUAGE-EXTENSION = *PARAMETERS(...)

The document contains language extensions. These are specified in the substructure.

LANGUAGE-NAME = *ARABIC / *FARSI

Language (Arabic or Farsi) contained in the document.

LANGUAGE-MODE = *RIGHT-TO-LEFT / *LEFT-TO-RIGHT

Specifies whether the characters in the selected language are to be printed from right to left or left to right.

INPUT-TRAY-NUMBER =

Specifies the paper input tray for LP65 and PCL, APA printers or RSO printers 2030-PCL, 4011, 4812, 4813, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-EPLQ, 9000-EPSQ, 9000-PCL, 9004, 9011, 9012, 9013, 9014, 9015, 9021, 9022, 9022-200, 9025, 9026-PCL, 9026-RENO, 9097 and DJET. In the case of LP65 printers, the tray numbers 1 to 3 can be specified, whereas for RSO printers the tray numbers 1 to 99 can be specified.

Only for LP65 printers:

The paper input tray is to be selected by means of a PCL file or an entry at the printer control console.

The PCL file can in turn select an input tray.

The order of priority for selecting an input tray is as follows:

1. the number of the input tray specified in PRINT-DOCUMENT
2. any selection via the PCL file specified in the PRINT-DOCUMENT command
3. any selection via the PCL file specified in the form definition in the SPOOL parameter file
4. the default values defined in the device record

The following applies to PCL printers:

The number of input trays specified is not checked against the actual number of input trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

The following applies to all printers listed above:

- If a paper input tray is specified here, but is not applicable for the particular printer, the result is a printer error on most printer types.
- The PRINT-DOCUMENT command is rejected if the selected paper size is not available on the particular printer or if the paper size in the standard forms entries is larger than that for the selected paper.
- Printer resources such as prolog, epilog, DIA, member and font character files are sent before the paper input tray is selected.

The following applies to APA printers:

For page printers, the input tray is specified from which the paper is to be taken. The tray is selected by its physical tray number.

INPUT-TRAY-NUMBER = *STD

This operand is ignored if the print job is directed to a local SPOOL or a special printer pool. Otherwise, if the print job is directed to a particular RSO printer, for example, the paper is taken from the input tray defined in the device record of the printer in the SPOOL parameter file (operand DEFAULT-TRAY-NUMBER of the ADD-SPOOL-DEVICE statement). It is not possible to specify the paper size in this statement operand). This also applies to PCL printers. The input tray selection is valid for the entire spoolout process, i.e. including processing of the header and trailer pages. This also applies for PCL printers.

If a standard paper size is specified, the printer selects the first input tray that contains this paper size. If this paper is not available, the printer switches to offline and the operator is prompted in the printer channel to insert the selected paper.

For APA printers:

The paper is taken from the input tray specified in the form definition.

INPUT-TRAY-NUMBER = *IGNORE

Only for RSO and PCL printers:

Once this operand value is specified, RSO sends no further commands for input tray selection to the printer. The default setting of the printer is used.

When specifying *IGNORE for a PCL printer the default values are used. This is to say that the input tray cannot be specified.

INPUT-TRAY-NUMBER = <integer 1..99>

Number of the input tray from which the paper is taken for printing the file itself as well as the header page (HEADER-PAGE) and trailer page (TRAILER-PAGE).

RSO does not check the specified value. Possible values: 1...99.

For PCL printers the number of the input tray specified is not checked against the actual number of input trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing input tray.

The following table shows the printer types and the maximum number of input trays in each case ("Max." column).

Printer	Max.	Printer	Max.	Printer	Max.	Printer	Max.
2030-PCL	2	8121	0	9002	0	9022	2
4011	2	9000	0	9003	0	9022-200	2
4812	2	9000-PCL	2	9004	3	9025	2
4813	2	9000-PRO	0	9011	2	9026-PCL	4
4818-PCL	2	9000-PS	0	9012	2	9026-RENO	4
4821-PCL	2	9000-EPFX	0	9013	3	9045-ANSI	0
4822-PCL	3	9000-EPLQ	2	9014	3	9046	0
4824-PCL	2	9000-EPSQ	2	9015	2	9645	0
4825-PCL	3	9001	0	9021	2	DJET	1
4830-PCL	3	9001-31	0				
4850-PCL	2	PCL printer	3				

The following table indicates what RSO printers do when certain operand values are specified:

- INPUT-TRAY-NUMBER operand of the PRINT-DOCUMENT command
- Device definition of the ADD-SPOOL-DEVICE statement with the operand FORM-FEED=*SINGLE-SHEET(DEFAULT-TRAY-NUMBER=...)

Default from the device definition	Value of the operand INPUT-TRAY-NUMBER		
	*STD	1..99	*IGNORE
1..99	Sets default value (1) or sets value *LISTING (2)	Sets value (1) or sets value *LISTING (2)	Last tray specified is used
*IGNORE	Last tray specified is used	Sets value (1) or sets value *LISTING (2)	Last tray specified is used

(1) Only single-sheet printers and printer type 9015 (list printer)

(2) On list printers except for printer type 9015

The following applies to APA printers:

Tray numbers from 1 to 99 may be specified. The number of input trays specified is not checked against the actual number of trays on the printer. If the requested input tray does not exist, SPS will cancel the printing process, except if an input tray substitution is defined in the parameter file (parameter: PDSFLH4, value: PDFS4BIN, see the "SPS" manual).

INPUT-TRAY-NUMBER = *BY-FORMAT(...)

Defines the paper input tray via specification of the paper format.

INPUT-TRAY-FORMAT = *A3 / *A4 / *A5 / *B4 / *B5 / *FOLIO / *INVOICE / *EXEC / *LEGAL / *LETTER / *DOUBLE-LETTER / *MONARCH / *COMMERCIAL-10 / *DL / *C5 / *MANUAL / *A3-UNCUT / *A4-UNCUT / *LEDGER

The operand values all correspond to a paper format, with the exception of *MANUAL.

To ensure that the values specified in the FORM operand for PAGE-SIZE and LINE-SIZE do not exceed the maximum values permitted for the chosen paper format, the values of the FORM operand are compared with the maximum permissible values for the paper format. The table below contains the maximum permissible values for PAGE-SIZE and LINE-SIZE for the various paper formats and shows which printers support the paper format. For all paper formats, the sheets are taken from the first input tray that contains sheets of this format.

Paper format	Maximum PAGE-SIZE	Maximum LINE-SIZE	Can be used with printers of type
A3	165	116	9026-PCL, PCL printer, 4830-PCL and 9026-RENO
A4	116	82	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL und 4830-PCL
A5	82	58	4818-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 9026-PCL, PCL printer and 9026-RENO
B4	143	101	2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4825-PCL, 4830-PCL, 9000-PCL, 9026-RENO
B5	101	71	4830-PCL, 9026-PCL and 9026-RENO
FOLIO	129	85	9026-RENO
INVOICE	85	55	9026-PCL and 9026-RENO
EXEC	105	72	9021, 9000-PCL, 9026-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
LEGAL	140	85	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4821-PCL, 4822-PCL, 4824PCL, 4825-PCL, 4830-PCL and PCL printer
LETTER	110	85	9021, 9000-PCL, 9026-PCL, 9026-RENO, 2030-PCL, 4821-PCL, 4822-PCL, 4824PCL, 4825-PCL, 4830-PCL and PCL printer
DOUBLE-LETTER	150	117	9026-RENO
MONARCH	75	38	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
COMMERCIAL-10	95	41	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL and 4825-PCL
DL	86	43	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL
C5	90	63	9021, 9000-PCL, 2030-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 4830-PCL

Paper format	Maximum PAGE-SIZE	Maximum LINE-SIZE	Can be used with printers of type
A3-UNCUT	120	120	PCL printer
A4-UNCUT	169	84	PCL printer
LEDGER	170	110	PCL printer

INPUT-TRAY-FORMAT = *MANUAL

The form feed is manual. You should therefore insert a new sheet each time a new page is to be printed.

The following printers can support manual form feed: 9014, 9021, 9022, 9022-200, 9026-Reno, 9026-PCL, 4812, DJET, 4814-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL and 9000-PCL.

OUTPUT-TRAY-NUMBER =

Specifies the paper output tray for output on printer type LP65, for PCL printers, APA printers as well as for the RSO printers 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9014, 9015, 9026-PCL and 9026-RENO.

The following applies to PCL printers:

The number of the output tray specified is not checked against the actual number of output trays present on the target printer. A printer error may occur if the number you have entered does not correspond with the number of an existing output tray.

OUTPUT-TRAY-NUMBER = *STD

Paper is output to the default tray defined in the device record (SPOOL parameter file). (Using the OUTPUT-TRAY-NUMBER operand in the SP SERVE statement ADD-SPOOL-DEVICE). This also applies to PCL printers.

The output tray selection is valid for the entire spoolout process, i.e. including processing of header and trailer pages.

Only for LP65 printers:

Selection of the paper output tray by BS2000 can be prevented by a PCL file or by making an appropriate entry at the printer control console. In these cases, the entries for OUTPUT-TRAY-NUMBER have no effect. An output tray can also be defined in the PCL file.

The order of priority for selecting an output tray is as follows:

1. the number of the output tray specified in PRINT-DOCUMENT, provided this is not prevented by a PCL file or an entry at the printer console
2. any selection via the PCL file specified in the PRINT-DOCUMENT command
3. any selection via the PCL file specified in the form definition in the SPOOL parameter file

4. the default values defined in the device record

The following applies to APA printers:

Paper output is directed to the standard output tray defined in the form definition. Output tray selection is valid for the complete printing process, including header and trailer pages.

OUTPUT-TRAY-NUMBER = *IGNORE

Only for RSO and PCL printers.

If this value is specified, the printer controller does not send a code to the printer for selection of an output tray. In this way, you can define the output tray in the prolog file.

OUTPUT-TRAY-NUMBER = <integer 1..99>

This value specifies the output tray to be used for the current job.

Only the values 1..3 are valid for LP65 printers.

The following applies to PCL printers:

The number of the output tray specified is not checked against the actual number of output trays present on the target printer. A printer error may occur if the number you have entered does not correspond to the number of an existing output tray.

In the case of the 4850-PCL printer, support for the sheet-cutter is integrated in the selection of the output tray.

RSO printer types	Output tray number	Selection of output tray.
2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 9000-PCL	1 2	Top output tray Bottom output tray
4850-PCL	1 2 3 *STD *IGNORE	Selects the upper/topmost output tray and activates the sheet-cutter for each sheet. Selects the lower/lowest output tray Selects the lower/lowest output tray and activates the sheet-cutter for each sheet. Default value of the device definition (IGNORE) RSO does not select any output tray. The last selection or the default value for the printer remains in effect.
9014	1 2	Stacker Front output tray
9015	1 2 3 4	Uncut in rear output tray Cut in rear output tray Uncut in front output tray Cut in front output tray
9026-RENO	1..20	Appropriate output tray of the sort mechanism

The following applies to APA printers:

Tray numbers from 1 to 99 may be specified. The number of the output tray specified is not checked against the actual number of output trays present on the target printer. If the requested output tray is not present, an error may occur.

OUTPUT-TRAY-NUMBER = *SORTER(...)

Only for RSO printers:

This value specifies that the sort mechanism to be used for the current job. OUTPUT-TRAY-NUMBER = *SORTER(...) is permissible for 9026-RENO, 4822-PCL and 4825-PCL printers. This sort mechanism can be used for up to 20 output trays. It cannot be controlled by the default values defined in the device record.

SORT-MODE = *NO

All pages in the document are output to the sort tray from bottom to top.

Exception 9026-RENO printer: here the pages are output to an output tray to provide optimal access.

SORT-MODE = *GROUP

Each copy of a particular page - as many copies as specified in PAGE-COPIES - is output to a separate sort tray. Each subsequent page is placed on top of the preceding pages. When the print job is completed, each sort tray used contains a complete copy of the printed document.

Example

The file comprises three pages and PAGE-COPIES=1 was specified:

Page 3	Page 3	
Page 2	Page 2	
Page 1	Page 1	
Tray 1	Tray 2	Tray 3

SORT-MODE = *COLLATE

All copies of a page - as many copies as specified in PAGE-COPIES - are collected in one sort tray. The copies of the next page are placed in the next sort tray. The sort trays are occupied from bottom to top.

Example

The file comprises three pages and PAGE-COPIES=2 was specified:

Page 1	Page 2	Page 3
Page 1	Page 2	Page 3
Page 1	Page 2	Page 3
Tray 1	Tray 2	Tray 3

SORT-MODE = *STACKER

Cannot be used for the 9026 printer.

All printed pages are output to the stacker of the sort mechanism up to a maximum of 500 pages. This mode is suitable if a single copy of a very long document is to be printed.

SORT-MODE = *AUTOMATIC

Applicable to the 9026 only.

The output mode is selected automatically depending on the number of copies per page requested in PAGE-COPIES and the number of sort trays available. The printed pages are output to the sort trays either unsorted, as for the option *NO, if the number of copies specified in PAGE-COPIES is the same as the number of sort trays. The printer pages are grouped according to documents, as for *GROUP, if the number of copies specified in PAGE-COPIES is less than the number of sort trays. Or the printer pages are sorted according to page number, as for *COLLATE, if the number of copies specified in PAGE-COPIES is greater than the number of sort trays.

Note

Header and footer pages and printer resources such as prolog, epilog, DIA, member and font character files are sent before output tray selection and are therefore not included in sorting.

TOP-OFFSET =

Defines in millimeters the margin between the top of the physical sheet and the first line to be printed. The print page first positioned on the paper and only then is the lettering within the page rotated and positioned. This means that when the print page is moved with respect to the paper page the orientation of the text within the print page is ignored.

This operand is only permitted for PCL printers, which include the following: 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200, PCL and 2030-PCL.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Note

Only TOP-OFFSET=*IGNORE can be specified in conjunction with DOCUMENT-FORMAT=*SPECIAL-FORMAT.

For APA printers:

Defines the margin between the first line to be printed and the top edge of the sheet (medium), specified in millimeters.

TOP-OFFSET = *IGNORE

The printer controller does not set a margin between the first line and the top edge of the sheet. The preset printer value or the setting in the prolog file defines the margin that is effective when the document is printed.

TOP-OFFSET = <integer -255..255>

The permissible value range is -255 to +255. Positive values move the first line down, negative values move it up.

For APA printers:

Only positive values between 0 and 255 are permitted. Default value is 0, except if a different value was specified in the form definition.

LEFT-OFFSET =

Defines in millimeters the margin between the left edge of the physical sheet and the first line to be printed. The print page first positioned on the paper and only then is the lettering within the page rotated and positioned. This means that when the print page is moved with respect to the paper page the orientation of the text within the print page is ignored.

This operand is only permitted for PCL printers, which include the following: 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200, 9026-PCL, 2030-PCL, PCL printers and APA printers.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Note

Only LEFT-OFFSET=*IGNORE can be specified in conjunction with DOCUMENT-FORMAT=*SPECIAL-FORMAT.

For APA printers:

Margin between the first line and the left edge of the sheet (medium), specified in millimeters.

LEFT-OFFSET = *IGNORE

The printer controller does not set a margin between the first line and the left edge of the sheet. The preset printer value or the setting in the prolog file defines the margin that is effective when the document is printed.

LEFT-OFFSET = <integer -255..255>

The permissible value range is -255 to +255. Positive values move the first line to the right, negative values move it to the left.

For APA printers:

Only positive values between 0 and 255 are permitted. Default value is 0, except if a different value was specified in the form definition.

RESOURCE-DESCRIPTION = *PARAMETERS(...)

Specifies the print resources to be used for the printout.

FORM-NAME =

Specifies the paper (form) to be used for output (e.g. STD, STDSF1, STDWA4). Default forms must be defined in the SPOOL parameter file for all printer types. With SHOW-SPOOL-FORMS you can output the entries to SYSOUT. The SPOOL parameter file also specifies whether header and trailer pages are to be printed.

FORM-NAME = *STD

Default form.

FORM-NAME = <c-string 1..6 with-low> / <alphanum-name 1..6>

Name of the form with which the spoolout job is to be processed. A loop (or a page and format definition for APA printers) is implicitly named when the form is specified. The associated loop (or the PAGEDEF and FORMDEF) must be contained in a specific printer control file (TSOS.RSOFIL or user RSOFIL). The following table shows which printer control file must contain this loop (or the PAGEDEF and FORMDEF) for the relevant printer type:

Output device	Printer control file with the loop for the specified form
Printer: 3337, 3338, 3339, 3348, 3349, 3365, 2090-LIP, 2140-LIP, LP-EMULATED	\$SYSSPOOL.PRFILE
Printer: 3351, 3353, 2090, 2140, 2240, PCL printer	\$SYSSPOOL.PRFILE or the user PRFILE specified in the USER-RESOURCES-FILE operand
APA printer	Depending on the printer resolution \$SYSSPOOL.SYSPRT.SPS.240dpi, \$SYSSPOOL.SYSPRT.SPS.300dpi, \$SYSSPOOL.SYSPRT.SPS.600dpi or the user SPLIB specified in the USER-RESOURCES-FILE operand

The loop named implicitly via the FORM-NAME operand is ignored if the LOOP-NAME operand is specified at the same time.

If the FORM-NAME and LOOP-NAME operands are omitted, the file is printed out using the default form entered for the printer type.

A loop explicitly specified in the LOOP-NAME operand must have the same length as the loop assigned to the form used.

No loops can be specified for APA printers. If page and format specifications are made in the FORM-NAME operand, these are used for printing header, trailer and message pages, even if the PAGE-DEFINITION and FORM-DEFINITION operands are explicitly assigned.

LOOP-NAME =

Name of the loop to be loaded into the feed information buffer (FCB). The loop must be defined in the PRFILE or RSOFIL, depending on the printer type that is defined for the form. The loop name must not include the character '\$', '&' or '@'.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

Only for HP and HP90 printers with a page rotation module, APA, PCL and RSO printers.

For APA printers, the loop name refers to a page definition that is used to print the document (not relevant for header and trailer pages). This convention combines a loop name (e.g. C12) with the name of a page definition (e.g. P10C12) that is stored in the available SPSLIB.

LOOP-NAME = *STD

Feed control for the spoolout job is to be implemented with the default loop of the form used.

LOOP-NAME = <alphanum-name 1..3>

Name of the loop which is to control line feed. The length of the specified loop must match the length of the default loop of the form used. A loop for feed control is needed for the HP and HP90 printers (3351, 3353, 2090, 2140) and printers of types 3337, 3338, 3339, 3348, 3349 and 3365. Loops for non-RSO printers are stored in the PRFILE printer control file. If no loop is specified, the implicit entries in the FORM-NAME operand are used. If the FORM-NAME or LOOP-NAME operand is omitted, default values apply.

Loops for RSO printers are stored in the RSOFIL file.

ROTATION-LOOP-NAME =

Only for HP and HP90 printers with a page rotation module and for RSO and PCL printers.

Specifies the loop to control output in landscape format.

The loop name must not include the character '\$', '&' or '@'.

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

ROTATION-LOOP-NAME = *STD

Output of rotated pages is to be controlled by the default rotation loop of the specified form (or of the default form if no form was specified in the PRINT-DOCUMENT command).

ROTATION-LOOP-NAME = <alphanum-name 1..3>

Name of the loop with which line feed for the rotated pages is to be controlled.

CHARACTER-SETS =

Names of the fonts or font pools (only for HP and HP90 printers) to be used for output. Up to 4 fonts may be specified in the list for local SPOOL, and up to 16 for RSO. For local SPOOL, the fonts must be contained in the \$SYSSPOOL.PRFILE resource library or in a user PRFILE (specified by means of the USER-RESOURCES-FILE operand).

If more than four fonts are to be used, a font pool must be specified.

If more than one font is to be used in a spoolout job, CONTROL-MODE=*PAGE-MODE must be specified. For DOCUMENT-FORMAT=*TEXT, only the first specified font is used for printing the (entire) file. The name of the first font and the number of specified fonts are shown in the output for the command SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION=TSN(TSN=...).

Only Siemens standard fonts may have names consisting of three numerical characters.

If the HEADER-LINE operand is specified, the first font specified or, for CHARACTER-SETS=*POOL, the font (specified with an index) from the font pool is used for the header line.

The default value for CHARACTER-SETS for the form used can be displayed using SHOW-SPOOL-FORMS; the information is given in the C-S output field.

Note for HP printers:

systems support can specify whether the header page is printed with the default font or with the font specified in CHARACTER-SETS. This default setting can be displayed by means of the SHOW-SPOOL-PARAMETERS command or SPSEIVE statement; the information is given in the output field HEADER-PAGE: CHARACTER-SET=....

For all printer types (with the exception of 9025 and 9026-RENO printers) the validity of the character density specified in the character set definition for the particular printer is checked after a new character set has been requested (in the command or via the control character \CSi; in the print file). If the device does not support the requested character set because of its CPI value, the following occurs:

- the spoolout job is aborted
- a trailer page is output

- the file is not deleted (not even if PRINT-DOCUMENT FROM-FILE=<file>, DELETE-AFTER-PRINT=*YES was specified)
- message SRO0142 is output to console
- message SRO0143 is printed on the trailer page.

For APA printers, the font name refers to a coded font that is used to print the document (not relevant for header and trailer pages). This convention combines a font name (e.g. 101) with the name of a coded font (e.g. X00101), which in turn references a code page (e.g. T10101) and a font character set (e.g. C00101) that is stored in the available SPSLIB.

Notes:

- If the rejected character set is that for output of the header and trailer page only message SRO0142 is output to console.
- Fonts for HP/HP90 printers are defined in the PRFILE with the aid of the PRM utility routine; fonts for APA printers are defined in the SPSLIB. The software product TRANSLIB can be used for this purpose.

CHARACTER-SETS = *STD

The default font is selected for this printer type from the desired form. It can be displayed by means of SHOW-SPOOL-FORMS.

CHARACTER-SETS = *POOL(...)

Only for local spool.

Only PRFILES may contain descriptions of font pools. If a font pool is specified, the spoolout job will be processed on an HP or HP90 printer.

POOL-NAME = <alphanum-name 1..4>

Specifies a font pool (with a maximum of 64 fonts for an HP printer or 46 fonts for an HP90 printer) from which one or more fonts are to be used for output. All the fonts of this font pool are loaded into the font buffer when the spoolout job is executed.

POOL-INDEX = 0 / <integer 0..64>

Number of the font from the font pool with which the spoolout job is to be processed. The number of the font is determined by its position in the definition of the font pool. The specified font is used if POOL is specified together with CONTROL-MODE=*PAGE-MODE.

CHARACTER-SETS = *BY-EXTENDED-NAME(...)

Only for local spool.

Specifies the fonts to be interpreted by SPS when the TABLE-REFERENCE-CHAR operand is used.

NAME = list-poss (4): <alphanum-name 1..8>

Names of the fonts to be linked with the TRC values in the print file (each TRC value represents a specific font). Regardless of the number of different TRC values in the file, up to four fonts, specified in the form of a list, can be used to print the records. TRC values greater than X'03' (corresponding to the fourth value in the list) automatically reference the first font in the list.

CHARACTER-SETS = <c-string 1..3 with-low>

Name of the font with which the spoolout is to be processed.

Note

See also the section dealing with the use of RSO fonts in the [“RSO \(BS2000/OSD\)”](#) manual.

CHARACTER-SETS = list-poss(16): <alphanum-name 1..3>

Names of the fonts with which the spoolout job is to be processed. For DOCUMENT-FORMAT=*TEXT (default), only the first specified font is used for printing. For laser printers in local SPOOL mode, a maximum of four fonts may be specified. The printer control characters for changing fonts are only interpreted if CONTROL-MODE=*PAGE-MODE is also specified.

In the case of PCL printers, up to 16 fonts which are related to PCL fonts can be selected. A PCL font can be either an internal printer font or a PCL soft font.

In the case of RSO printers, a maximum of 16 fonts may be specified. Font identifiers (CSIs) in the text are only interpreted if CONTROL-MODE=*LOGICAL is specified at the same time. The command is rejected if a list of fonts is specified in conjunction with DOCUMENT-FORMAT=*TEXT.

For APA printers and laser printers in local SPOOL mode, a maximum of 4 fonts may be specified. The printer control characters for changing fonts are only interpreted if CONTROL-MODE=*PAGE-MODE is also specified.

If CONTROL-MODE=*APA is specified, this list is not allowed, and the operand *BY-EXTENDED-NAME(...) must be used.

Note

See also the section dealing with the use of RSO fonts in the [“RSO \(BS2000/OSD\)”](#) manual.

CHAR-SET-ATTRIBUTES =

Only for RSO. Specifies whether all or only selected font attributes are supported for the spoolout job. Attributes include character type, near-letter quality (NLQ), color etc. (see the SHOW-SPOOL-CHARACTER-SETS command or SPERVE statement). This operand does not apply to header and trailer pages.

CHAR-SET-ATTRIBUTES = *ALL

All the attributes of the fonts used for printout are supported for the current spoolout job.

CHAR-SET-ATTRIBUTES = *RESTRICTED

Only the following three attributes are supported:

- character type
- language
- near letter quality

OVERLAY-RESOURCES = *PARAMETERS(...)

Specifies whether a forms overlay is to be used if a spoolout job is to be processed.

The following applies for PCL printers:

Only one overlay can be specified for each printing job, the overlay specified must be a PCL overlay resource. You can specify the overlay by using either the operand FORMS-OVERLAY-BUFFER or ELECTRONIC-OVERLAY. (You cannot use both operands together because this will lead to an error.)

ELECTRONIC-OVERLAY =

Specifies whether an overlay is to be used for processing the spoolout job. In RSO operation, this can only be specified for the RENO printers 9025 and 9026-RENO and for the PCL printers 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 9000-PCL, 9021, 9022-200 and 9026-PCL.

Depending on the printer type involved, the overlay can be stored either in a BS2000 file or in the printer memory or on a hard disk belonging to the printer. In the case of a BS2000 file, the contents of this file are copied to printer memory. The following table shows the various possibilities of storing an overlay, as well as the sequence in which RSO searches for this overlay.

1. BS2000 file under the user ID of the user.
2. BS2000 file under the user ID of the first device administrators (private disk) or under the user ID SYSSPOOL (public disk).
3. In printer memory or on a hard disk belonging to the printer (this does not apply to PCL printers).

A BS2000 overlay file must be named in accordance with the following conventions:

RP<device-type>.DIA.<xy>

where <device-type> stands for the RSO printer and <xy> is the name of the overlay that must be specified as the value of the ELECTRONIC-OVERLAY operand (see the “[SPOOL \(BS2000/OSD\)](#)” manual, section “Generic prefix names for prolog, epilog, overlay (DIA) and member files”).

Examples

RP9025.DIA.AB

Overlay with the name AB for a 9025 printer.

RP4821-PCL.DIA.ZZ

Overlay with the name ZZ for a 4821-PCL printer

In the case of print output via a pool, the pool must contain at least one of the above-named printers when the ELECTRONIC-OVERLAY operand is specified; otherwise the PRINT-DOCUMENT command will be rejected.

Notes

- The ELECTRONIC-OVERLAY operand is permitted for the 9025 and 9026-RENO printers if DOCUMENT-FORMAT=*TEXT or DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*LOGICAL) was specified.
- The ELECTRONIC-OVERLAY operand is permitted for the 2030-PCL, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 9000-PCL, 9021, 9022-200 and 9026-PCL printers if DOCUMENT-FORMAT=*TEXT, DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*LOGICAL), DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*PHYSICAL) or DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*LINE-MODE) was specified.
- The following applies to both printer types:
 - Header and trailer pages are always printed without an overlay. Overlay outputs are sent before a user document is printed and are retained until the document has been completely printed.
 - printer resources such as prolog, epilog, DIA, member and font character files are sent before overlay outputs.
- See also the description of DIAs specifically for the 9025 and 9026-RENO printers in the “[RSO \(BS2000/OSD\)](#)” manual.
- For PCL printers:
Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).
- For 4830-PCL and 4850-PCL printers:
This operand can be used with DOCUMENT-FORMAT=*TEXT(...) or *PAGE(CONTROL-MODE=*LOGICAL or *PHYSICAL or *LINE-MODE).

ELECTRONIC-OVERLAY = *NONE

No overlay is used for output.

ELECTRONIC-OVERLAY = <alphanum-name 2..2>

Name of the overlay to be used for processing the spoolout job (the name must have been confirmed by systems support).

OVERLAY =

For local SPOOL only.

This specifies whether an EFO data overlay is to be used on the front or rear side for printers of type LP65.

The overlays must exist in printer memory.

The OVERLAY, TWO-SIDED and PAGE-COPIES operands are part of one and the same LP65 printer command, and are consequently linked. If only the OVERLAY operand is specified, SPOOL generates default values for both other operands.

These default values are overwritten by every value specified in a PCL file or at the printer console.

An overview of the possible combinations of these three interlinked functions can be found in the description of the LP65 printer in the “[SPOOL \(BS2000/OSD\)](#)” manual.

For APA printers:

Specifies if an APA overlay is to be used on the front or rear side of the paper (see also “[SPS](#)” manual).

OVERLAY = *STD

The EFO data overlays defined in the PCL file are used.

For APA printers:

APA overlays to be used are defined in the appropriate form definition.

OVERLAY = *NONE

No EFO data overlays are used for output.

For APA printers:

No APA overlays are to be used for output, except otherwise defined in the form definition. Corresponds to the *STD value.

OVERLAY = PARAMETERS(...)

The specified EFO data overlays (APA printers: specified APA overlays) are used for output.

FACE-SIDE = *NONE / <integer 1..127>

Identification number of the overlay to be used on the recto.

REVERSE-SIDE = *NONE / <integer 1..127>

Identification number of the overlay to be used on the verso. The job can only be executed on LP65 printers that handle single sheets.

FORMS-OVERLAY-BUFFER =

Only for local SPOOL, (see “[SPOOL \(BS2000/OSD\)](#)” manual) and for PCL printers. Specifies whether an FOB data overlay is to be used for processing the spoolout job (see the “[SPOOL \(BS2000/OSD\)](#)” manual for a description of an overlay).

For PCL printers:

Applicable for DOCUMENT-FORMAT=*TEXT(...), not applicable for DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL).

For APA printers, the name of the FOB data overlay refers to an APA overlay that is used to print the document (not relevant for header and trailer pages). This convention combines a FOB data overlay (e.g. abcd) with the name of an overlay (e.g. O1abcd01) that is stored in the available SPSLIB.

FORMS-OVERLAY-BUFFER = *NONE

No FOB data overlay is used for output.

FORMS-OVERLAY-BUFFER = <alphanum-name 1..4>

Name of the overlay to be used for processing the spoolout job. If an overlay is specified, the file is printed out on an HP or HP90 printer. Use of an overlay for the spoolout job is indicated in the output of the command SHOW-PRINT-JOB-STATUS JOB-IDENTIFICATION=TSN(TSN=...).

PAGE-DEFINITION =

For local SPOOL only.

Specifies which page definition is to be used for output on LP65 or APA printers.

PAGE-DEFINITION = *STD

For APA printers:

The standard definition specified in the SPSLIB is to be used (see the table of SPSLIB standard definitions in the appendix).

For LP65 printers:

Number of the PCL file with which the print file is to be output. Only the print file itself is output with this PCL file. The header and trailer pages are controlled by the PCL file defined in the SPOOL parameter file form.

Notes

- A PCL file that makes it impossible to select another PCL file by means of a channel command must not be used.
- After the specified PCL file has started, the operating mode of the printer is checked. If EXCCW mode is active, and an error occurs during the print process, the restart point is the last SECTION record; if no value was entered under the SECTION operand in the PRINT-DOCUMENT command, the file is printed out again from the start.

PAGE-DEFINITION = <integer 1..50000>

Only for LP65 printers. Number of the PCL file with which the print file is to be output.

PAGE-DEFINITION = <alphanum-name 1..8>

Only for APA printers. The page definition with the specified name is to be used. This must be in the SPSLIB.

Notes

The first two characters of the specified name must be "P1". If they are not, the command is rejected.

FORM-DEFINITION =

For local spool only.

Specifies which format definition is to be used for output on APA printers.

FORM-DEFINITION = *STD

The default definition specified in the SPSLIB is to be used.

FORM-DEFINITION = <alphanum-name 1..8>

The format definition with the specified name is to be used. This must be in the SPSLIB.

Notes

The first two characters of the specified name must be "F1". If they are not, the command is rejected.

USER-RESOURCES-FILE =

Specifies a user file containing all the resources required for output on different printer types: user-defined loops, fonts, overlays, font pools, code translation tables and SPS data stream definitions. The following can be specified:

- a user PRFILE containing loops, fonts, overlay entries (FORMS-OVERLAY-BUFFER operand) and font pool entries (the CHARACTER-SETS operand)
- a user SPSLIB containing the PAGEDEFs (PAGE-DEFINITION operand), FORMDEFs (FORM-DEFINITION operand), fonts, page segments, overlays and raster image data
- a user RSOFIL (only for RSO) containing loops

If no user PRFILE, SPSLIB or RSOFIL is specified, the information is taken from the following files: \$SYSSPOOL.PRFILE, \$SYSSPOOL.SYSPRT.SPS.0xx (where xx is the version of SPS, e.g. 021) or \$SYSSPOOL.RSOFIL, respectively.

USER-RESOURCES-FILE = *STD

The required resources are taken from \$SYSSPOOL.PRFILE, \$SYSSPOOL.SYSPRT.SPS.0xx (where xx is the version of SPS, e.g. 021) or \$SYSSPOOL.RSOFIL.

USER-RESOURCES-FILE = <filename 1..44 without-gen-vers>

Name of a user PRFILE, SPSLIB or RSOFIL, which may contain a catalog ID and a user ID. SPOOL uses this file name with the suffix .PRFILE, .SPSLIB or .RSOFIL. The string can contain up to 28 characters without the catalog ID and user ID, to ensure that this user file can be called from any ID. If the file name is specified without a user ID, the file is searched for under the user ID of the caller first, then under SYSSPOOL. If it is not found, the command is rejected. If a user ID is specified, the file is searched for under this ID only.

Example 1

```
PRINT-DOCUMENT FILE,USER-RESOURCES-FILE=$XX.XX
```

A search is carried out for the \$XX.XX.PRFILE file. If the file is not found, the command is rejected.

Example 2

If the catalog ID is specified, the search is limited to the specified subset:

PRINT-DOCUMENT FILE, USER-RESOURCES-FILE=:A:XXXXX

The file :A:\$userid.XXXXX.PRFILE is searched for. If it is not found, a search is carried out for the file :A:\$SYSSPOOL.XXXXX.PRFILE. If this file is not found either, the command is rejected.

Example 3

PRINT-DOCUMENT FILE, USER-RESOURCES-FILE=:A:\$XX.XXXXX

The file :A:\$XX.XXXXX.PRFILE is searched for. If it is not found, the command is rejected.

If the file is on an exported PVS (EXPORT-PUBSET command), all spoolout jobs that require this PVS are placed in the KEEP queue. When the PVS becomes available again (IMPORT-PUBSET command), the spoolout jobs are restarted.

TRANSLATION-TABLE =

Specifies whether a code translation table is to be used for processing the spoolout job. The code translation table is necessary if the default escape character 'FF' is to be replaced by a random character.

For PCL printers:

Applicable for DOCUMENT-FORMAT = *TEXT(...), not applicable for DOCUMENT-FORMAT = *SPECIAL-FORMAT(FORMAT-NAME = *PCL).

TRANSLATION-TABLE = *NONE

No code translation table is used.

TRANSLATION-TABLE = *PARAMETERS(...)

A code translation table is used.

NAME = <alphanum-name 1..8>

Name of the code translation table to be used for processing the spoolout job.

FILE = *SYSTEM / <filename 1..44 without-gen-vers>

For RSO jobs, the specified code conversion table from either the specified file (if FILE = <filename..>) or the default resource file \$TSOS.RSOFIL (if FILE = *STD/*SYSTEM) is used.

For SPOOL jobs, only FILE = *STD is relevant. Other values are ignored and converted to *STD. Consequently, the code conversion table is always taken from the user's own resource file specified in USER-RESOURCE-FILE or from the default resource file \$SYSSPOOL.PRFILE (if no user-specific resource file is specified).

RESOURCES-LOCATION =

Specifies whether the resources of the client or those of the server are to be used for printing the document when the optional Distributed Print Services subsystem (Dprint) is used.

Note

In Dprint operation RESOURCE-LOCATION=*SERVER must be specified for jobs intended for APA printers. If *STD is specified, the value *SERVER is used and the value of the GEN record is ignored.

RESOURCES-LOCATION = *STD

The value from the GEN record of the SPOOL parameter file is to be used.

RESOURCES-LOCATION = *HOME

The print job is to be executed using the print resources defined on the client system. In this case, an extract containing all the required print resources is taken from the resource file (i.e. a print resources container is created) and transferred to the selected server.

RESOURCES-LOCATION = *SERVER

The print job is to be executed using the print resources defined on the server system. In this case, no print resources container is created and transferred.

TO-PRINTER = *PARAMETERS(...)

Describes the requested target devices for the print job.

PRINTER-NAME =

Specifies the requested target printer of the print job. You can specify a distributed local printer pool, a nondistributed local printer pool, an RSO printer pool, an RSO printer, a UNIX printer pool or a UNIX printer.

If you specify a printer pool:

The job is output on any printer in the specified device pool. The pool must be defined in the SPOOL parameter file and can contain up to 16 RSO devices or 16 local SPOOL devices, but not both at the same time. Device pools are managed by means of the SPSEERVE statements ADD-, MODIFY-, REMOVE-, and SHOW-PRINTER-POOL (see the [“SPSERVE \(BS2000/OSD\)”](#) manual).

The spoolout job is rejected if no printer type from the device pool is assigned in the PRINT-DOCUMENT command (e.g. requested form, rotation, etc.).

Please bear in mind that the pool can contain various types of devices: if the file to be printed contains control characters that are only interpreted by a certain printer type, a printer of this type should be specified (implicitly) in the PRINT-DOCUMENT command. One possibility is to specify in the PRINT-DOCUMENT command a form that is defined only for the desired printer type (ADD-SPOOL-FORM).

PRINTER-NAME = *STD

The spoolout job is to be processed on the default device type specified in the SPOOL parameters (PRINT-CMD-DEFAULTS).

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

Only for RSO. Symbolic name of the RSO device on which the spoolout job is to be processed.

PRINTER-NAME = <c-string 1..8 with-low>

Reserved for queries to a UNIX cluster.

PRINTER-TYPE =

Specifies which printer type is to process the print job. Only local printer types can be specified.

PRINTER-TYPE = *ANY

A specific printer type is not requested. In this case, the SPOOL subsystem automatically determines the permitted printer types that can process the user request. *ANY must be specified for output on RSO and UNIX printers.

PRINTER-TYPE = *HP-PRINTER

For local SPOOL only.

The spoolout job is to be processed on an HP or HP90 printer. *HP-PRINTER includes the following printer types: 2090/2140/2240(HP90). The control characters for HP and HP90 laser printers are identical; a spoolout job for an HP printer can be processed on an HP90 printer and vice versa.

Selection of the printer type is affected by whether or not the CONTROL-MODE operand is specified at the same time:

Printer selection	CONTROL-MODE = *PAGE-MODE (default)	CONTROL-MODE =*PAGE-MODE (CONTROL-TYPE=*HP)
PRINTER-TYPE = *ANY	Output is possible on all printer types	Output is possible on HP and HP90 printers. Other control characters are converted to HP/HP90 control characters.
	The following applies to HP/HP90 printers: The OVERPRINT function is converted to the LINE-MERGE function.	
PRINTER-TYPE = *HP-PRINTER	Output is possible only on HP and HP90 printers. The OVERPRINT function is converted to the LINE-MERGE function.	
	PRFILE restrictions: The file must not contain the X'FF' character.	HP-specific control characters are supported. The following restriction applies: the file can contain the X'FF' character only as an escape character if control character interpretation is active (CHAR-SET-ATTRIBUTES = *ALL)

Note for HP/HP90 printers

If the entries in PRINT-DOCUMENT specify output to an HP or HP90 laser printer, a PRFILE must be available, otherwise the command is rejected. If there is no HP/HP90 available in an installation, or only devices with insufficient configurations (not enough fonts, no graphics buffer for FOBs or no page rotation module, for example), the jobs can only be output to replay tape. Systems support can run the SHOW-SPOOL-JOB-STATUS command to obtain information on these jobs.

PRINTER-TYPE = *LP65-PRINTER

For local SPOOL only.

The spoolout job is to be processed on an LP65 printer.

PRINTER-TYPE = *APA-PRINTER

For local SPOOL only.

The spoolout job is to be processed on a 2050-APA-PRINTER, 2090-APA-PRINTER or 2090-TWIN-PRINTER.

REDIRECTION-ALLOWED =

Specifies whether a device administrator can redirect the spoolout job to a different printer. This does not affect the redirection of jobs by the user or by systems support.

REDIRECTION-ALLOWED = *STD

Means YES for RSO print jobs. SPOOL print jobs are ignored.

REDIRECTION-ALLOWED = *YES / *NO

Can only be specified for RSO print jobs, not for SPOOL print jobs.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies the cluster to which the print job is to be transferred. *LOCAL-CLUSTER means that the print job is to be processed in the local cluster.

Only for Dprint:

To transfer the print job to UNIX, a UNIX cluster name defined in the Distributed Print Services (Dprint) configuration file must be specified. The remote clusters defined in the Distributed Print Services (Dprint) configuration file can be displayed by means of the SHOW-DPRINT-REMOTE-CLUSTER command (for a command description and detailed explanation, see the [“Distributed Print Services \(BS2000/OSD\)”](#) manual).

OUTPUT-FORMAT =

Only relevant for interoperability with UNIX SPOOL.

Specifies which printer language is to be used for the print job.

OUTPUT-FORMAT = *NONE

No output format was specified. The document is transferred to UNIX without modifications. It is assumed that the UNIX printer knows the format name specified in the operand structure DOCUMENT-FORMAT=*SPECIAL-FORMAT(...).

OUTPUT-FORMAT = <c-string 1..63 with-low>

Format name known to and supported by the UNIX printer specified in the PRINTER-NAME operand.

Note

For a document to be printed, its format name (defined implicitly with FORMAT-NAME=*STD or explicitly via a freely selectable string) must be compatible with one of the format names supported by the printer.

The supported format names can be defined for each printer in the SPOOL parameter file (see the “[SPSERVE \(BS2000/OSD\)](#)“ manual).

By default all printers support the 'TEXT' format. HP and HP90 printers also support the 'HP' format, and printers 2050-APA, 2090-APA and 2090-TWIN the 'SPDS' format.

If a printer does not support the format of the document, it can only print the document if a filter exists which can convert the document's format name into a format name that the printer supports.

Example:

The print job issued with PRINT-DOCUMENT <file>,...,FORMAT-NAME=xxx is printed by a printer for which

- either 'SUPP-FORMAT-NAME=xxx' was defined accordingly, or
- 'SUPP-FORMAT-NAME=yyy' and a filter which converts the input format 'xxx' into the output format 'yyy' were defined.

The filter is defined with the SPSEIVE utility routine. For information on the filter possibilities, see the “[SPCONV \(BS2000/OSD\)](#)“ manual.

VIRTUAL-PRINTER =

This operand defines whether or not a print job is passed on to a virtual printer for processing.

The operand is ignored if VIRTUAL-PRINTER = *NOT-ALLOWED was not defined in the SPOOL parameter file.

VIRTUAL-PRINTER = *STD

The virtual printer which is to receive the print job is determined from the SPOOL parameter file.

The print job is preferably transferred to a virtual printer. If no virtual printer is active when the print job is entered in the list of print jobs, it is assigned to a real printer.

VIRTUAL-PRINTER = *ALLOWED

Assignment of the print job to a virtual printer is given preference. If no virtual device is active when the print job is entered into the list of print jobs, the print job is assigned to a real device.

The print job is preferably transferred to a virtual printer. If no virtual printer is active when the print job is entered in the list of print jobs, it is assigned to a real printer.

VIRTUAL-PRINTER = *NOT-ALLOWED

This print job should not be transferred to an application program via a virtual device.

VIRTUAL-PRINTER = *MUST(...)

The print job is transferred to a specific virtual printer which is defined by the parameters in the brackets. If the supervisor task of this virtual printer is inactive, the print job remains in the wait state.

NAME = <alphanum-name 1..8>

Specifies the device name entered in the SPOOL parameter file.

STRING = *NONE / <c-string 1..32>

Passes a specific character string to the application program.

ADDITIONAL-COPIES = 0 / <integer 1..255>

Specifies how many additional times the file is to be printed. The entry can also be made in parentheses. Each additional printout has its own header page. Default: 0 (no additional printouts).

LOCK-FILE =

Specifies whether the file is to be protected as long as the RSO job is in the wait state (TYPE 7 WT, see output of the SHOW-JOB-STATUS command). During this time the file can only be read.

As a rule, tape files are never locked. During processing of the spoolout job (TYPE 7 ACT, see output of the SHOW-JOB-STATUS command), the file is protected regardless of the setting of this operand.

A spoolout job is also generated if the file to be output is reserved by a SECURE-RESOURCE-ALLOCATION command. This reservation must, however, be canceled by the time the spoolout job is processed; otherwise the job is not executed.

The file to be output is locked until the end of the session if the operand LOCK-FILE=*YES is specified in the PRINT-DOCUMENT command and the job cannot be executed owing to reservation.

LOCK-FILE = *STD

The value defined at system generation time is valid (NO or YES); this value is entered in the SPOOL parameter file.

LOCK-FILE = *YES

The file is protected while the spoolout job is in the wait state. LOCK-FILE=*YES is ignored if one of the values *OMF, *SYSLST or *SYSOUT is specified for the FROM-FILE operand at the same time. A PRINT-DOCUMENT command for a library element with LOCK=*YES is rejected. File protection offered by LOCK-FILE=*YES remains in force even if the spoolout job is not processed until the next system run.

LOCK-FILE = *NO

The file is not protected while the spoolout job is in the wait state. The file can be deleted or modified before processing of the spoolout job commences. LOCK-FILE=*NO is ignored for temporary files.

DELETE-AFTER-PRINT =

Specifies whether the file is to be deleted at the end of output and, if so, whether its catalog entry and the data are to be overwritten with X'00..0'. By default, the file is not deleted after printing and not overwritten with binary zeros. You must have write access to the file. If the file to be output belongs to a file generation group (see the FROM-FILE operand), the DELETE-AFTER-PRINT operand is ignored. If a spoolout job is used to print several elements of a PLAM library with INPUT-SECTION(...), the DELETE-AFTER-PRINT operand is set to *NO (i.e. suppressed). The operand must not be specified together with *SYSLST, SYSLSTnn or *SYSOUT.

DELETE-AFTER-PRINT = *NO

The file is not to be deleted after printing (exceptions: EAM and system files).

DELETE-AFTER-PRINT = *YES(...)

The file is to be deleted as soon as output has been completed.

LINE-TRUNCATION =

Specifies what happens if lines are truncated.

LINE-TRUNCATION = *STD

The default value from the SPOOL parameter is valid. You can display this value by means of the SHOW-SPOOL-PARAMETERS command or SPSEIVE statement (field: ERROR-PR=(TRUNC=)).

LINE-TRUNCATION = *DELETE-FILE

Processing of the spoolout job continues (i.e. DELETE-AFTER-PRINT=*YES is executed). An appropriate message is printed on the trailer page.

LINE-TRUNCATION = *KEEP-FILE

Processing of the spoolout job is continued, but the file is not subsequently deleted.

DELETE-AFTER-PRINT = *DESTROY

Not for EAM and cataloged system files. Specifies that once the file has been printed both its catalog entry and its data are to be overwritten with binary zeros.

LINE-TRUNCATION =

Specifies what happens if lines are truncated.

LINE-TRUNCATION = *STD

The default value from the SPOOL parameter is valid. You can display this value by means of the SHOW-SPOOL-PARAMETERS command or SPSEIVE statement (field: ERROR-PR=(TRUNC=)).

LINE-TRUNCATION = *DELETE-FILE

Processing of the spoolout job continues (i.e. DELETE-AFTER-PRINT=*DESTROY is executed). An appropriate message is printed out on the trailer page.

LINE-TRUNCATION = *KEEP-FILE

Processing of the spoolout job is continued, but neither the catalog entry nor the data of the file itself is overwritten with binary zeros.

NOTIFICATION =

Selects the notification processing for the associated print jobs.

The permanent subscriptions are realised asynchronously. At the print job submission the previous subscriptions can be discarded temporarily for the current print job by selecting NOTIFICATION=*NO. It is also possible to temporarily associate another subscription to the current print job by giving the subscription attributes at the print job submission.

NOTIFICATION = *STD

Notification delivery will be processed for the current print job if the owner of this print job has previously recorded permanent subscriptions in the notification resource file.

NOTIFICATION = *NO

Notification processing is turned off for this print job. Notifications will not be generated even if there are valid subscriptions recorded in the notification resource file belonging to the owner of this print job. However, the notifications generated for subscriptions belonging to other privileged users is not turned off.

NOTIFICATION = *PARAMETERS(...)

This operand creates one temporary subscription resource. This subscription exists as long as the current print job exists. It allows the user to associate subscription resource with a particular job.

OBJECT-ATTRIBUTES =

Specifies the object attributes associated to the notifications.

Objects, e.g. a print job, for which notifications are sent may have attributes associated to them. The user may want to have one or more of these associated attributes returned with a particular notification. Generally these may include any attribute associated to the object emitting the notification.

OBJECT-ATTRIBUTES = *NONE

No attribute is selected.

OBJECT-ATTRIBUTES = *ALL

All the attributes associated to the print job are selected.

OBJECT-ATTRIBUTES = list-possible(20):<text 1..64>

Some of the attributes are selected.

EVENT-NAMES =

List of subscribed events.

EVENT-NAMES = *ALL

All the events associated to the print job are selected.

EVENT-NAMES = list-possible(20):<alphanum 1..24>

Some of the events are selected.

USER-DATA =

Specifies opaque data that some delivery methods include in each notification data; for example, for a notification by mail, the user data is included in the mail text.

USER-DATA = *NONE

No user data is specified.

USER-DATA = <text 1..63 with-lowercase>

Specifies the user data value.

USER-DATA = <c_string_1..63 with lowercase>

Specifies the user data value.

RECIPIENT = *PARAMETERS(...)

According to the selected method the user has to specify the delivery address for the notifications.

ADDRESS = <text 1..224 with-lowercase> / <c_string_1..63 with lowercase>

Specifies the delivery address.

METHOD-NAME = <alphanum-name 1..8> / *MAIL

Specifies the notification delivery method. In case of print jobs addressed to a remote XPRINT cluster, the predefined *MAIL keyword must be used. The notification then will be performed by the foreign cluster.

Notes

- When NOTIFICATION=*PARAMETERS(...) is used, a new subscription is registered in the *notification.parameters* file. This subscription is associated to the current print job. This current print job is identified in the frame of the notification system by a 16-digit alphanumeric id of the following form: TTTTSSSSHHHHHHHH, where TTTT is the TSN of the print job, SSSS is the sequence number of the print job (range in the family) and HHHHHHHH is the host name. The subscription is temporary and will be deleted after the processing of the SPOOLJOBABORTED or SPOOLJOBCOMPLETED events. Those events are defined as terminal for that purpose.
- The object name of the created subscription is indicated with *ANY in the notification manager display.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error Guaranteed messages: SCP0810, SCP1025, SCP1026, SCP1027
2	0	SCP0829	Command registered Guaranteed message: SCP0829
2	0	SCP0855	Tape file. LOCK-FILE ignored
2	0	SCP0862	Not file owner. DELETE ignored
2	0	SCP0863	FGG file. DELETE ignored Guaranteed message: SCP0863
2	0	SCP0864	File protected by ACCESS=READ. DELETE ignored Guaranteed message: SCP0864
2	0	SCP0865	File protected by write password. DELETE ignored Guaranteed message: SCP0865
2	0	SCP0866	File protected by EXDATE. DELETE ignored Guaranteed message: SCP0866
2	0	SCP0930	PRFILE not available
2	0	SCP0971	RECORD-CLASS 164 not accessible (PLAM) Guaranteed message: SCP0971
2	0	SCP0988	Print element with section. DELETE ignored
2	0	SCP1000	JV processing error. MONJV ignored Guaranteed message: SCP1000
2	0	SCP1004	PLAM error. DELETE/DESTROY ignored
2	0	SCP1076	No information available for the job
2	0	SCP1077	Job accepted but FAMILY not ready
2	0	SCP1078	LOCK error after job acceptance
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command Guaranteed messages: SCP0860, SCP0925, SCP0972
	64	SCP0976	Invalid operand value Guaranteed messages: SCP0813, SCP0850, SCP0851, SCP0857, SCP0858, SCP0938, SCP0995, SCP0997, SCP1028, SCP1029, SCP1079
	128	SPS0266	SPOOL subsystem not available
	128	SCP0896	DSEM/RSO/SPS/DPRINTCL/DPRINTSV/DPRINTCM subsystem not loaded/ready Guaranteed message: SCP0896
	128	SCP0996	JV subsystem not loaded/ready Guaranteed message: SCP0996
	128	SCP1087	POSIX subsystem not loaded/ready

Incompatibilities between PRINT-DOCUMENT command operands

The PRINT-DOCUMENT command is rejected if one of the operands in the column on the left is specified at the same time as one of the corresponding operands in the column on the right.

Operand	Incompatible operands
CHARACTERS-SETS= chars-name	PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER, CONTROL-MODE=*APA
CHARACTER-SETS=*POOL	CONTROL-MODE=*LOGICAL / *APA / *LINE-MODE / *PHYSICAL, PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER
CONTROL-MODE=*APA	RECORD-PART, DOCUMENT-PART (if no sections are specified), LEFT-MARGIN, CHECKPOINT=*ON-SECTION-RECORDS
Only for RSO: CONTROL-MODE= *LINE-MODE / *PHYSICAL	OUTPUT-FORMAT=*HEXADECIMAL, ROTATION=n / *BY-CONTROL-CODES, ELECTRONIC-OVERLAY, ROTATION-LOOP-NAME, CHARACTER-SETS=*POOL, FORMS-OVERLAY-BUFFER, PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER / *HP-PRINTER, PAGE-CONTROL-CHAR=*NO,
Only for RSO: CONTROL-MODE =*LOGICAL	OUTPUT-FORMAT=*HEXADECIMAL, ROTATION=n / *BY-CONTROL-CODES, ROTATION-LOOP-NAME, CHARACTER-SETS=*POOL, FORMS-OVERLAY-BUFFER, PRINTER-TYPE=*LP65 -PRINTER/ *APA-PRINTER / *HP-PRINTER,
CONTROL-MODE =*PAGE-MODE(CONTROL- TYPE=*HP)	PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER, INPUT-TRAY-NUMBER, OUTPUT-TRAY-NUMBER
DELETE-AFTER-PRINT	FROM-FILE = *EAM / *OMF
DOCUMENT-FORMAT= *SPECIAL-FORMAT	TWO-SIDED=*NO/*YES/*TUMBLE ROTATION=*NO/0/90/180/270/0-180/180-0/90-270/270-90 TOP-OFFSET=<integer -255..255> LEFT-OFFSET=<integer -255..255>

Operand	Incompatible operands
ELECTRONIC-OVERLAY	PRINTER-TYPE=*APA-PRINTER, CONTROL-MODE=*LINE-MODE / *APA / *PHYSICAL, DOCUMENT-FORMAT=*SPECIAL-FORMAT, FORMS-OVERLAY-BUFFER
FAMILY-PROCESSING=*YES	INPUT-SECTION
FORMS-OVERLAY-BUFFER	CONTROL-MODE=*LOGICAL / *APA / *LINE-MODE / *PHYSICAL, DOCUMENT-FORMAT=*SPECIAL-FORMAT, ELECTRONIC-OVERLAY, PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER
FROM-FILE=*EAM	DELETE-AFTER-PRINT=*DESTROY, START-PROCESSING
FROM-FILE =*LIBRARY-ELEMENT	LOCK-FILE=*YES, START-PROCESSING
FROM-FILE=*OMF	DELETE-AFTER-PRINT=*DESTROY
INPUT-PART	FAMILY-PROCESSING=*YES
LEFT-MARGIN	CONTROL-MODE=*APA
LOCK-FILE=*YES	FROM-FILE=*LIBRARY-ELEMENT
LOOP-NAME	PRINTER-TYPE=*APA-PRINTER, CONTROL-MODE=*APA
OUTPUT-FORMAT =*HEXADECIMAL	CONTROL-MODE=*PHYSICAL
PAGE-COPIES	CONTROL-MODE=*APA, PRINTER-TYPE=*APA-PRINTER
PRINTER-TYPE=*APA	CONTROL-MODE=*LOGICAL / *PHYSICAL / *LINE-MODE / *PAGE-MODE, DOCUMENT-FORMAT=*SPECIAL-FORMAT, PAGE-COPIES, ROTATION-LOOP-NAME, LOOP-NAME, ROTATION, CHARACTER-SETS, ELECTRONIC-OVERLAY, FORMS-OVERLAY-BUFFER
RECORD-PART	CONTROL-MODE=*APA
ROTATION =n / *BY-CONTROL-CODES	CONTROL-MODE=*LOGICAL / *APA / *LINE-MODE / *PHYSICAL DOCUMENT-FORMAT=*SPECIAL-FORMAT / *TEXT, PRINTER-TYPE=*LP65-PRINTER / *APA-PRINTER

Operand	Incompatible operands
START-PROCESSING=n	DELETE-AFTER-PRINT=*DESTROY, LOCK-FILE=*YES, INPUT-PART
START-PROCESSING =*AT-FILE-CLOSING	DELETE-AFTER-PRINT=*DESTROY
USER-RESOURCES-FILE	PRINTER-TYPE=*LP65-PRINTER

Notes

- Spoolout jobs for which the operand PAGE-COPIES, CONTROL-MODE, USER-RESOURCES-FILE or ELECTRONIC-OVERLAY has been specified in the PRINT-DOCUMENT command cannot be printed on impact printers. The operands automatically ensure that another type of printer is used (laser printers, RSO printers).
- For printers with a loadable VFB, specifying the FORM operand causes the VFB to be loaded if nothing else is specified for the LOOP operand. This means that at least one loop must be available in the \$SYSSPOOL.PRFILE file.

Example 1

A batch job contains the following commands:

```
/PRINT-DOCUMENT FROM-FILE=DAT,DELETE-AFTER-PRINT=*YES,ADDITIONAL-COPIES=3,-
/      DOCUMENT-FORMAT=*TEXT(LINE-SPACING=*BY-EBCDIC-CONTROL) _____ (1)

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.DAT' ACCEPTED: TSN: '4BLV', PNAME:
'ALC', MONJV='(NONE) '
/PRINT-DOCUMENT FROM-FILE=TEST.DAT.,DOCUMENT-FORMAT= -
/      *TEXT(HEADER-LINE=*STD) _____ (2)

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.TEST.DAT.1' ACCEPTED: TSN: '4BLW',
PNAME: 'ALC', MONJV='(NONE) '
/PRINT-DOCUMENT FROM-FILE=(FILE1,FILE2,FILE3),RESOURCES-DESCRIPTION= -
/      *PARAMETERS(FORM-NAME=STDWA4) _____ (3)

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.FILE1' ACCEPTED: TSN: '4BLX', PNAME:
'ALC', MONJV='(NONE) '

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.FILE2' ACCEPTED: TSN: '4BLX', PNAME:
'ALC', MONJV='(NONE) '

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.FILE3' ACCEPTED: TSN: '4BLX', PNAME:
'ALC', MONJV='(NONE) '
/PRINT-DOCUMENT FROM-FILE=(A,A),DELETE-AFTER-PRINT=*YES _____ (4)

% SCP0810 SPOOLOUT OF FILE ':P:$ALC.A' ACCEPTED: TSN: '4BLY', PNAME: 'ALC',
MONJV='(NONE) '
```

```
% SCP0810 SPOOLOUT OF FILE ':P:$ALC.A' ACCEPTED: TSN: '4BLY', PNAME: 'ALC',
MONJV='(NONE)'
```

- (1) The file DAT is to be printed four times in all, and then deleted. The file contains (EBCDIC) feed control characters.
- (2) All files whose names start with "TEST.DAT." are to be printed with a default header line.
- (3) The files FILE1, FILE2 and FILE3 are to be printed out on white paper (DIN A4).
- (4) The file A is to be printed once and then deleted. For printing in duplicate, the operand ADDITIONAL-COPIES=1 must be specified.

Example 2

The file FILE has been divided by SPOOL into 3 print pages of up to 64 lines each:

Page 1	Page 2	Page 3
Start 1 2 . . . 20 . . . Line 64	Line 65 Line 128	Line 129 . . End 150

1. Print FILE as of line 20.

```
/PRINT-DOCUMENT FROM-FILE=FILE,DOCUMENT-PART=*PARAMETERS( -
                  OUTPUT-PART=*RANGE(FROM=20,DIMENSION=*LINES))
```

Page 1	Page 2	Page 3
Line 20 Line 83	Line 84 Line 147	Line 148 149 End 150

The page feed now occurs after line 83 (=64+19) or 147 (=128+19).

2. Print FILE from page 1 through page 3.

```
/PRINT-DOCUMENT FROM-FILE=FILE,DOCUMENT-PART=*PARAMETERS( -
      OUTPUT-PART=*RANGE(FROM=1,TO=3))
```

The whole file is printed.

3. Print the last page of FILE.

```
/PRINT-DOCUMENT FROM-FILE=FILE,DOCUMENT-PART=*PARAMETERS( -
      OUTPUT-PART=*LAST(LAST=1))
```

Page 3

Line	129
	.
	.
End	150

Not the last 64 lines of FILE but the last page, number three, is printed

Only for RSO

Valid character spacings (CPI)

As of RSO V2.2A, all PRINT-DOCUMENT commands requesting CPI values which are not actually supported by the destination printer are rejected. If the destination is a pool of printers, the selection will be restricted to printer types from the pool which actually support the requested CPI values.

Exceptions to the rule:

1. 8121, 9002 and 9645 printers are not provided with escape sequences that set character spacing (the hardware value is 10 cpi). Therefore, RSO only accepts a 10 cpi value on these printer types.
2. On 9000, 9025 and 9026 RENO printers, RSO cannot send any escape sequence setting the character spacing. However, the character spacing can be set by means of a 256-character string linked to the font (using the product RSOSERVE). RSO nevertheless permits certain CPI values for these printer types. The values 1 through 100 can be specified in the CHARACTERS-PER-INCH operand of the SPSERVE statement ADD-SPOOL-CHARACTER-SET.

This value is not set by RSO, however, but is used for computing the line size, i.e. the maximum number of characters per line used for the header and trailer pages and for detecting possibly truncated lines.

The following table indicates for each printer type the CPI operand values that are supported by RSO for the PRINT-DOCUMENT command and at the start of spoolout, and the CPI values that are translated by RSO into printer commands.

Printer types	CPI values checked for PRINT-DOCUMENT and at start of spoolout (1)	CPI values translated 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
9012	10/12/15/17	10/12/15/17

Printer types	CPI values checked for PRINT-DOCUMENT and at start of spoolout (1)	CPI values translated by RSO and sent to the printer (2)
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

- The table indicates for each printer type the CPI operand values for the font as supported by RSO. This check is performed at PRINT-DOCUMENT command validation and print job scheduling time. The specification of other values leads to the following behavior.
 - For the PRINT-DOCUMENT command:
The command is rejected.
 - At the start of spoolout:
The print job is placed in the KEEP queue and the device status is set to "S".
- Some printer types do not support any printer commands that set the character density ('-' in the table). This means that the requested character density is never set by RSO, no matter what the CPI operand value of the font may be.

Nevertheless, on 9000, 9025 and 9026 RENO printers, character spacing can be set by means of using the RSOSERVE utility routine to link a 256-character string to a font.

Printing RSO files swapped out with HSMS

In previous versions, when a controller task accessed a file swapped out with HSMS, other printers controlled by the task were blocked until the file was retrieved. To prevent these situations arising, certain improvements were made to RSO. These affect four types of RSO resource files: DIA, prolog, epilog and member files.

A partial solution already exists for printing user files. Since SPOOL V2.7B, swapped-out files have been retrieved when the PRINT-FILE command is checked rather than waiting until the command is processed.

DIA files

In the case of a swapped-out DIA file, retrieval of the file is initiated during checking of the PRINT-DOCUMENT command.

When command processing starts, a swapped-out DIA file is treated as a user error. The job is terminated with corresponding information on the trailer page, and a message is sent to the console.

Prolog/epilog files

Nothing is done during checking of the PRINT-DOCUMENT command in the case of swapped-out prolog/epilog files.

When command processing starts, a swapped-out prolog/epilog file is regarded as a user error. The job is terminated with corresponding information on the trailer page, and a message is sent to the console.

Member files

Nothing is done during checking of the PRINT-DOCUMENT command in the case of swapped-out member files.

When command processing starts, a swapped-out member file is not taken into account.

Validity check for /PRINT-DOCUMENT ..., USER-RESOURCES-FILE=xxxx

In previous versions, a PRINT-DOCUMENT command with a loop entry (FORM-NAME or LOOP-NAME operand) was rejected if the file existed neither under the user ID of the caller nor under SYSSPOOL. As of RSO V2.2A, a command like this is accepted provided the LOOP-NAME operand has not been specified in the PRINT-DOCUMENT command.

Example 1

```

/S-S-F FORM1
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
FORM1      9001RP      80 120 YES INF      6   3 101                TSOS

/PRINT-DOCUMENT FROM-FILE=ORION,TO-PRINTER=*PAR(PRINTER-NAME=PRN27272),
    RESOURCES-DESCRIPTION=*PAR(FORM-NAME=FORM1,USER-RESOURCES-FILE=XXXX
% SCP0810 SPOOLOUT FOR FILE ':C:$TSOS.ORION' ACCEPTED: TSN: '4FUN',SPOOLOUT-
NAME: 'LUC', MONJV: '*NONE'

```

Example 2

```

/S-S-F FORM2
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
FORM1      9001RP      80 120 YES INF  C6                101                TSOS

/PRINT-DOCUMENT FROM-FILE=ORION,TO-PRINTER=*PAR(PRINTER-NAME=PRN27272),
    RESOURCES-DESCRIPTION=*PAR(FORM-NAME=FORM2,USER-RESOURCES-FILE=XXXX
% SCP0810 SPOOLOUT FOR FILE ':C:$TSOS.ORION' ACCEPTED: TSN: '5FUN',SPOOLOUT-
NAME: 'LUC', MONJV: '*NONE'

```

Example 3

```

/PRINT-DOCUMENT FROM-FILE=ORION,TO-PRINTER=*PAR(PRINTER-NAME=PRN27272),
    RESOURCES-DESCRIPTION=*PAR(FORM-NAME=FORM2,USER-RESOURCES-FILE=XXXX

% SR00308 DMS ERROR '(&00)' DURING RSO ACCESS TO FILE '(&01)'. IN SYSTEM
MODE:
/HELP-MSG DMS(&00)
% SR00340 RSO REQUEST WITHOUT VALID OR COMPLETE CONTROL STATEMENTS. COMMAND
REJECTED

```

Notes

1. For reasons of compatibility, the “old” PRINT-FILE command continues to be supported, but the new functionality can only be used explicitly with the new PRINT-DOCUMENT command.
2. POSIX path name

The following operands are not supported for UFS files: LOCK-FILE=*YES, DELETE-AFTER-PRINT=*YES and MONJV=*STD.

If a POSIX path name (up to 1024 characters) is specified, depending on the code type (ASCII or EBCDIC) of the UFS file, an automatic ASCII/EBCDIC conversion is carried out for the whole UFS file (including metacharacters). The automatic ASCII/EBCDIC conversion is carried out by a preparatory server task that simultaneously creates a copy of the UFS file. This copy is given a name and stored in a DMS work file under the user ID \$SYSSPOOL. If the UFS file is in ASCII code and the print job is sent to RSO in transparent mode (DOC-FORMAT=*SPECIAL-FORMAT), no ASCII/EBCDIC conversion is carried out. CCSNAME 88591 is set in the catalog entry of the DMS work file.

If a path name containing wildcards is specified, several UFS files can be processed. If FAMILY-PROCESSING=*YES is specified, all the print jobs are created with the same TSN and cannot be distributed. If FAMILY-PROCESSING=*NO is specified, the print jobs are created with different TSNs and can be distributed.

Print jobs for UFS files cannot be output to magnetic tape.

A POSIX extension allows the record structures of BS2000 files that are to be printed by the BS2000 SPOOL and PRINT subsystems to be preserved. The files can be copied from BS2000 to UFS by means of the RCOPY function with special operands. These files can then be processed only by BS2000 applications. If a print job is issued for them, an RCOPY function is executed in the opposite direction and the original BS2000 files (with the original record structures) restored.

The RCOPY function from UFS to BS2000 with the special operands for storing the BS2000 record structures can be carried out for all print jobs created by means of the PRINT-DOCUMENT command, except if the following operands were specified:

- DOC-FORMAT=*TEXT(...)
- DOC-FORMAT=*SPECIAL(LINE-SPACING=*NO/1/2/3).

3. You will find information on outputting print data in a Dprint environment in the [“Distributed Print Services \(BS2000/OSD\)”](#) manual.

Support of large objects from OSD V5.0

The SPOOL-GA will also support large volumes (>= 32 GB). But it is necessary to make a difference between large volumes and large files. A single document occupying 32 GB can represent several millions of A4 pages and would require two weeks to print on the fastest printer. Therefore, the spoolout request of a large file will be rejected with the following message at submission of the PRINT-DOCUMENT command.

```
% SCP1130 SPOOLOUT OF LARGE FILE NOT SUPPORTED. COMMAND OR MACRO REJECTED  
FOR FI LE 'xxx'
```

REDIRECT-PRINT-JOB

Redirect jobs to another printer

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	Nonprivileged users
Privileges:	OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING,

Function

The REDIRECT-PRINT-JOB command redirects spoolout jobs:

- from an RSO printer or pool to another RSO printer or pool
- from an RSO printer or pool to a local printer pool
- from a local printer pool to an RSO printer or pool
- from a local printer pool to a local printer pool
- from a local printer pool to a central printer pool
- from a Dprint printer pool to a Dprint printer pool

Nonprivileged users can only redirect their own jobs. RSO device administrators can redirect their own jobs and jobs started with the operand REDIRECTION-ALLOWED=*YES in the PRINT-DOCUMENT command on a device for which they are entered as the RSO device administrator. The SPOOL administrator can redirect any job being processed on his or her host.

Only jobs in the WAIT or KEEP status are redirected. All jobs can be redirected, or only some of them. In the latter case the jobs are selected by specifying the TSN, the job status (job type), the user ID and the name of the form or job. It is possible to specify a negative list.

As a check on the new destination, the jobs to be redirected are also submitted to PRINT-DOCUMENT command validation.

The print jobs processed by an IDOM application cannot be redirected with this command.

Note

The REDIRECT-PRINT-JOB command corresponds to the REDIRECT-REMOTE-OUTPUT command; the command name REDIRECT-REMOTE-OUTPUT is still accepted as an alias.

Requirements for command execution

- The specifications for both printers must be different (different printer names or different printer pool names).
- The control character (ESCAPE character) must be defined the same for the specified printers.
- In family processing, **all** (sub)jobs must have the specified status (JOB-TYPE=...).
- The files to be printed must not be on an exported subset.
- If the spoolout job is directed to a printer pool, the assigned printer must not be specified in the REDIRECT-PRINT-JOB command. The job always belongs to the pool, even if it is in the KEEP status for example.

Example

A FAMILY-PRINT has been started for the pool POOL1. A job from this is in KEEP status on the device DVC1 which belongs to the pool POOL1.

```
/SHOW-SPOOL-JOB-STATUS DESTINATION
```

TSN	M	STA	R	DEVICE	DESTIN	ERCOD	ERMSG	DEVICE	TYPE
TSN1	R	KP		DVC1	POOL1				
TSN1	R	WT		POOL1	POOL1				

The following commands have no effect for FAMILY TSN1:

```
/REDIRECT-PRINT-JOB JOB-ID=*DEVICE(DEV-NAME=DVC1),SELECT=*PAR(JOB-
TYPE=*KEEP)
/REDIRECT-PRINT-JOB JOB-ID=*DEVICE(DEV-NAME=DVC1),SELECT=*PAR(JOB-
TYPE=*ALL)
```

The following commands redirect FAMILY TSN1:

```
/REDIRECT-PRINT-JOB JOB-ID=*DEVICE(DEV-NAME=POOL1),SELECT=*PAR(JOB-
TYPE=*ALL)
/REDIRECT-PRINT-JOB JOB-ID=*TSN(TSN=TSN1),SELECT=*PAR(JOB-TYPE=*ALL)
```


Restrictions

The following restrictions are applicable, depending on the direction of redirection.

*JOB-IDENTIFICATION = *DEVICE-NAME*

FROM=	TO=	RSO printer	RSO pool	Local pool	*CENTRAL	Dprint pool
RSO printer		(1)	(2)	(3)	(3)	n.s.
RSO pool		(2)	(2)	(3)	(3)	n.s.
Local pool		(4)	(4)	(5)	n.s.	n.s.
*CENTRAL		n.s.	n.s.	n.s.	n.s.	n.s.
Dprint pool		n.s.	n.s.	n.s.	n.s.	(6)

n.s.= not supported (a pool must be set up for redirecting local printouts)

1. Rejected in the following cases:
 - the CONTROL-MODE operand in the PRINT-DOCUMENT command is not set to *PAGE, and device types concerned are different.
 - escape characters are incompatible.
2. Rejected if CONTROL-MODE in the PRINT-DOCUMENT command was not set to *PAGE.
3. Rejected if the following operands were specified in the PRINT-DOCUMENT command:
 - INPUT-TRAY=...
 - CHARS-SET-ATTRIBUTES=...
 - FORMS-OVERLAY-BUFFER=...
 - LINE-SPACING=*NO
 - CONTROL-MODE≠*PAGE
4. Rejected if the following operands were specified in the PRINT-DOCUMENT command:
 - ROTATION-LOOP-NAME=...
 - CHARACTER-SETS=*POOL
 - FORMS-OVERLAY-BUFFERS=...
 - CONTROL-MODE≠*PAGE
 - FORMS-OVERLAY-BUFFER=...
 - ROTATION=...
 - INPUT-TRAY=...

5. Local print jobs valid for a subset of device types in a printer pool can be redirected to another printer if the target printer belongs to that subset.
6. Dprint jobs can only be redirected if the command is entered on the server accepting the print job. If this is not the case, the print job must be redirected using the MODIFY-PRINT-JOB-ATTRIBUTES command. Distributed print jobs valid for a subset of device types in a Dprint pool can be redirected to another printer if the target printer belongs to that subset.

*JOB-IDENTIFICATION= *TSN*

If the TSN is used as the selection criterion, all operands of the PRINT-DOCUMENT command are permitted, albeit on the user's own responsibility.

Information following command processing

On normal termination the number of redirected jobs is output.

On abnormal termination the reason is output:

- no output for the device
- device(s) not defined
- system error
- redirection mode not supported

For each "redirectable" (see above) job that was not redirected, a warning message indicating the reason is output.

Format

REDIRECT-PRINT-JOB
<p>JOB-IDENTIFICATION = *DEVICE-NAME (...) / *TSN(...)</p> <p>*DEVICE-NAME(...)</p> <p> DEVICE-NAME = <alphanum-name 1..8></p> <p>*TSN(...)</p> <p> TSN = list-poss(16): <alphanum-name 1..4></p> <p>,TO-DEVICE = *CENTRAL / <alphanum-name 1..8></p> <p>,SELECT = *PARAMETERS(...) / *ALL</p> <p>*PARAMETERS(...)</p> <p> JOB-TYPE = *WAIT / *KEEP / *ALL</p> <p> ,USER-IDENTIFICATION = *ALL / list-poss(16): <name 1..8> / <c-string 1..8 with-low></p> <p> ,FORM-NAME = *ALL / list-poss(16): <alphanum-name 1..6></p> <p> ,SPOOLOUT-NAME = *ALL / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low></p> <p>,EXCEPT = *NONE / *PARAMETERS(...)</p> <p>*PARAMETERS(...)</p> <p> USER-IDENTIFICATION = *NONE / list-poss(16): <name 1..8> / <c-string 1..8 with-low></p> <p> ,FORM-NAME = *NONE / list-poss(16): <alphanum-name 1..6></p> <p> ,SPOOLOUT-NAME = *NONE / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low></p>

Operands

JOB-IDENTIFICATION = ***DEVICE-NAME**(...)/ ***TSN**(...)

Identification of the spoolout jobs to be redirected.

JOB-IDENTIFICATION = ***DEVICE-NAME**(...)

The spoolout jobs to be redirected are identified using the name of the printer on which the jobs are to be processed.

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

Name of the printer or printer pool.

JOB-IDENTIFICATION = ***TSN**(...)

Spoolout jobs designated by their TSN are redirected.

TSN = list-poss(16): <alphanum-name 1..4>

List of TSNs for the spoolout jobs.

TO-DEVICE = *CENTRAL / <alphanum-name 1..8>

The spoolout jobs are redirected to the central computer center printer (*CENTRAL) or the specified printer or the specified printer pool.

SELECT = *PARAMETERS(...) / *ALL

The spoolout jobs can be selected by specifying the user ID for the job, the status, the job name or the form name.

SELECT = *PARAMETERS(...)

Selection of a subset of spoolout jobs. The spoolout jobs are redirected if they fulfill the specified criteria (AND operation).

JOB-TYPE = WAIT / *KEEP / *ALL

The selection criterion is whether the spoolout job is in the WAIT or KEEP status. If *ALL is specified, no distinction is made.

USER-IDENTIFICATION = *ALL / list-poss(16): <name 1..8> / <c-string 1..8 with-low>

The selection criterion is the user ID under which the spoolout job was created; it is possible to specify a list. If *ALL is specified, the user ID is not used as a selection criterion.

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

The selection criterion is the name of the form to be used for printing; it is possible to specify a list. If *ALL is specified, the form name is not used as a selection criterion.

SPOOLOUT-NAME = *ALL / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

The selection criterion is the job name for the spoolout job; it is possible to specify a list. If *ALL is specified, the job name is not used as a selection criterion.

SELECT = ALL

All spoolout jobs are redirected.

EXCEPT = NONE / *PARAMETERS(...)

List of exceptions for spoolout jobs which are not to be redirected.

EXCEPT = NONE

No list of exceptions.

EXCEPT = *PARAMETERS(...)

Specifies the jobs selected with SELECT=... which are to be excepted. Specifying *NONE means that no exceptions are specified.

USER-IDENTIFICATION = *NONE / list-poss(16): <name 1..8>

Spoolout jobs created by the specified user IDs are not redirected.

FORM-NAME = *NONE / list-poss(16): <alphanum-name 1..6>

Spoolout jobs using the specified forms are not redirected.

SPOOLOUT-NAME = *NONE / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Spoolout jobs with the specified job names are not redirected.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
2	0	SCP1036	Lock error
2	0	SCP1039	Device incompatibility Guaranteed message: SCP1039
2	0	SCP1040	No device definition Guaranteed message: SCP1040
2	0	SCP1041	No authorization for specified TSN Guaranteed message: SCP1041
2	0	SCP1042	EQUISAM file error for specified TSN Guaranteed message: SCP1042
2	0	SCP1043	Slot manager error for specified TSN Guaranteed message: SCP1043
2	0	SCP1044	Specified TSN not found Guaranteed message: SCP1044
2	0	SCP1045	Pubset exported Guaranteed message: SCP1045
2	0	SCP1047	Output not possible on specified device Guaranteed message: SCP1047
2	0	SCP1048	Invalid PRINT-DOCUMENT command
2	0	SCP1049	RSO subsystem not loaded
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Identification of device not possible Guaranteed message: SPS0306

RESUME-PRINT-JOB

Resume suspended print job

Domain: SPOOL-PRINT-ADMINISTRATION

User group: Nonprivileged users

Privileges: OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The RESUME-PRINT-JOB command resumes processing of a suspended print job in the local cluster. The print job is identified by its TSN or MONJV. The cluster administrator can address a print job by means of the server name and the TSN on the server on which it is processed.

Note

The command name RESUME-SPOOLOUT is still accepted as an alias.

The following shows which operands can be used for which subsystem:

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-IDENTIFICATION =	X	X	X	X
JOB-IDENTIFICATION = *TSN(...)	X	X	X	X
JOB-IDENTIFICATION = *SERVER-TSN(...)	X			
JOB-IDENTIFICATION = *MONJV(...)	X	X	X	X
PRIORITY =	X	X	X	X
RESTART-POSITION =	X	X		X

Format

RESUME-PRINT-JOB
<p>JOB-IDENTIFICATION = *TSN(...) / *SERVER-TSN(...) / *MONJV(...)</p> <p>*TSN(...) TSN = <alphanum-name 1..4></p> <p>*SERVER-TSN(...) TSN = <alphanum-name 1..4> SERVER-NAME = <alphanum-name 1..8></p> <p>*MONJV(...) MONJV = <filename 1..54 without-gen></p> <p>,PRIORITY = *<u>UNCHANGED</u> / <integer 30..255></p> <p>,RESTART-POSITION = *<u>UNCHANGED</u> / *BEGIN-OF-SPOOLOUT / *PAGE(...) / *BACK(...)</p> <p>*PAGE(...) PAGE-NUMBER = <integer 1..10000000></p> <p>*BACK(...) PAGES = <integer 1..10000000></p>

Operands

JOB-IDENTIFICATION = *TSN(...) / *SERVER-TSN(...) / *MONJV(...)

Specifies how the job is identified.

JOB-IDENTIFICATION = *TSN(...)

The job is identified by its local TSN.

TSN = <alphanum-name 1..4>

TSN of the job to be canceled

JOB-IDENTIFICATION = *SERVER-TSN(...)

The print job is identified by its TSN on the server. Print jobs in the local cluster can be addressed in this way by the cluster administrator.

TSN = <alphanum-name 1..4>

TSN of the job to be canceled on the server

SERVER-NAME = <name 1..8>

Name of the server on which the print job can be addressed by its TSN.

JOB-IDENTIFICATION = *MONJV(...)

The print job is identified by its monitoring job variable.

MONJV = <filename 1..54 without-gen-vers>

This operand allows print jobs to be addressed by their monitoring job variables, provided the specified MONJV is accessible on the host at which the command is issued.

PRIORITY = *UNCHANGED / <integer 30..255>

Priority for the released spoolout job.

PRIORITY = *UNCHANGED

The priority that the spoolout job previously had remains in force.

RESTART-POSITION =

Defines the point from which the spoolout file is to be output again.



If there are control characters in the data, they are only interpreted if the value X'A3' is contained in byte 6 of the control character list for the first page to be printed (see the "[SPOOL \(BS2000/OSD\)](#)" manual).

RESTART-POSITION = *UNCHANGED

The spoolout job should be repeated from the place specified in the HOLD-PRINT-JOB command.

RESTART-POSITION = *BEGIN-OF-SPOOLOUT

Repeat from the start of the file.

RESTART-POSITION = *PAGE(...)

The spoolout job is to be repeated as of a specific page.

PAGE-NUMBER = <integer 1..10000000>

Repeat output from the specified page; all preceding pages are skipped.

RESTART-POSITION = *BACK(...)

The spoolout job is to be restarted from the specified number of pages back from the current page; all preceding pages are skipped.

PAGES = <integer 1..10000000>

Number of pages.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value Guaranteed message: SPS0968
	128	SCP1051	Subsystem required for operand

RETURN-JOB-TO-VIRTUAL-DEVICE

Return print job to virtual printer

Domain:	SPOOL-PRINT-SERVICES
User group:	all users except for the operator
Privileges:	PRINT-SERVICES-ADMINISTRATION, STD-PROCESSING

Function

This command returns the current print job to the virtual device. The action that must be performed on this print job may also be specified: either let it in wait or in keep status or delete it. When an error occurred, the print job remains in wait status and the application task is cancelled. In case of keep status or error, an error message may be specified. Finally, the application may decide to keep control of this print job.

This command is part of a set of 4 commands that allow the creation of an application associated with a virtual device in the form of an SDF-P batch procedure instead of a program. These commands manage the dialog between a virtual device and an application written as an SDF-P procedure.

The concerned commands are:

- OPEN-VIRTUAL-DEVICE-DIALOG
- GET-JOB-FROM-VIRTUAL-DEVICE
- RETURN-JOB-TO-VIRTUAL-DEVICE
- CLOSE-VIRTUAL-DEVICE-DIALOG

For an example of command usage, please refer to the "[IDOM \(BS2000/OSD\)](#)" manual.

Format

```
RETURN-JOB-TO-VIRTUAL-DEVICE
```

```
POST-ACTION = *WAIT / *KEEP / *CANCEL-JOB / *TERMINATE-JOB / *ERROR  
,ERROR-MSG = *NONE / <alphanum_7..7>
```

Operands

POST-ACTION = *WAIT / *KEEP / *CANCEL-JOB / *TERMINATE-JOB / *ERROR

Specifies which action must be performed on the returned print job.

POST-ACTION = *WAIT

The current print job will be set to wait status within the Spool&Print queues.

POST-ACTION = *KEEP

The current print job will be set to keep status within the Spool&Print queues. If an error message (ERROR-MSG parameter) was generated, it can be displayed with the SHOW-PRINT-JOB-STATUS command.

POST-ACTION = *CANCEL-JOB

The value *CANCEL-JOB means that the current print job will be suppressed from the Spool&Print queues; the possibly associated MONJV status is set to \$A and the associated file is not erased (even if the corresponding print request was submitted with the DELETE-AFTER-PRINT<>*NO option).

POST-ACTION = *TERMINATE-JOB

The value *TERMINATE-JOB means that the current print job will be suppressed from the Spool&Print queues. The possibly associated MONJV status is set to \$T and the associated file is erased (only if the corresponding print job was submitted with the DELETE-AFTER-PRINT<>*NO option).

POST-ACTION = *ERROR

The value *ERROR means that the current print job will be set to wait status within the Spool&Print queues and the application task is cancelled. Possibly, an error message (ERROR-MSG parameter) is sent to the console.

ERROR-MSG = *NONE / <alphanum_7..7>

Specifies if an error message is to be generated. This parameter is only meaningful if the operands POST-ACTION=*KEEP or POST-ACTION=*ERROR have been specified.

Notes:

1. If the dialog cannot be established, the command is rejected (command return code is set).
2. If the initialization has not been performed (OPEN-VIRTUAL-DEVICE-DIALOG command), the command is rejected (command return code is set).
3. If the GET-JOB-FROM-VIRTUAL-DEVICE command has not been executed, the command is rejected (command return code is set).
4. This command is only allowed in batch mode.
5. Spin-off processing is activated each time an error is detected.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
0	0	CMD0001	No error; command successfully processed
0	32		Unexpected command
5	32		Memory request error

SHOW-ACTIVE-SPOOL-DEVICES

Information on active SPOOL devices

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-ACTIVE-SPOOL-DEVICES command requests information on assigned SPOOL and RSO devices (i.e. on devices to which a START-PRINTER-OUTPUT command has been issued; output to SYSOUT).

The command gives out the same information for PCL printers as it does for local HP-/HP90 printers.

Nonprivileged users are only given information on devices whose authorization list contains the user ID or *ALL. RSO device administrators also receive information on the devices they manage, while systems support can call down information on all devices. Information on user IDs and account numbers is only output to privileged users (RSO device administrators or systems support).

Overview of explicit/implicit specifications in START-PRINTER-OUTPUT and corresponding output/non-output of devices on the screen with SHOW-ACTIVE-SPOOL-DEVICES:

Value specified in S-A-S-D	Value specified in START-PRINTER-OUTPUT				
	*ALL	(A,B)	*EX(A,B)	A	*EX(A)
*ALL	EXPL	EXPL	EXPL	EXPL	EXPL
A	IMPL	EXPL	====	EXPL	====
C	IMPL	====	IMPL	====	IMPL
*EX(A)	====	====	EXPL	====	EXPL
*EX(C)	====	IMPL	====	IMPL	====
(A,B)	IMPL	EXPL	====	EXPL	IMPL
(A,C)	IMPL	EXPL	IMPL	EXPL	IMPL
*EX(A,B)	====	====	EXPL	IMPL	EXPL
*EX(A,C)	====	IMPL	EXPL	IMPL	EXPL

The following table shows which operands can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
DEVICE-NAME =	X	X	X	X
SERVER-NAME =	X			
CLUSTER-NAME =	X			
SCHEDULING-STATE =	X	X	X	X
DESTINATION =	X	X	X	X
FORM-NAME =	X	X	X	X
FORMS-LIST =	X	X	X	X
USER-IDENTIFICATION =	X	X	X	X
USER-IDENT-LIST =	X	X	X	X
HOST-NAME =	X			
HOST-LIST =	X			
SPOOLOUT-CLASS =	X	X	X	X
SPOOLOUT-CLASS-LIST =	X	X	X	X
SPOOLOUT-NAME =	X	X	X	X
SPOOLOUT-NAME-LIST =	X	X	X	X
ACCOUNT =	X	X	X	X
ACCOUNT-LIST =	X	X	X	X
FORMS-OVERLAY =	X	X	X	X
FORMS-OVERLAY-LIST =	X	X	X	X
FORMS-OVERLAY-BUFFER =	X		X	
PRIORITY =	X	X	X	X
CHARACTER-SET-NUMBER =	X	X	X	X
ROTATION =	X	X	X	X
TWO-UP-PROCESSING =	X	X	X	X
INFORMATION =	X	X	X	X

Format

(part 1 of 2)

SHOW-ACTIVE-SPOOL-DEVICES

DEVICE-NAME = *ALL / list-poss(8): <alphanum-name 1..8 with-wild(24)> / <alphanum-name 2..2>

SERVER-NAME = *ALL / *HOME / <alphanum-name 1..8 with-wild(24)> /
list-poss(16): <alphanum-name 1..8>

CLUSTER-NAME = *LOCAL-CLUSTER / <name 1..8>

,SCHEDULING-STATE = *NEXT-JOB / *CURRENT-JOB

,DESTINATION = *LOCAL / *ALL / *REMOTE / *PUBLIC-REMOTE /
list-poss(16): *CENTRAL / <alphanum-name 1..8>

,FORM-NAME = *ALL / *STD / *EXCEPT(...) / list-poss(8): <alphanum-name 1..6>
*EXCEPT(...)
| **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>

,USER-IDENTIFICATION = *ALL / *EXCEPT(...) / list-poss(16): <name 1..8>
*EXCEPT(...)
| **USER-IDENT-LIST** = list-poss(16): <name 1..8>

,HOST-NAME = *ALL-CLUSTERS / *HOME / *LOCAL-CLUSTER / *EXCEPT(...) /
list-poss(16): <alphanum-name 1..8>
*EXCEPT(...)
| **HOST-LIST** = list-poss(16): <alphanum-name 1..8>

,SPOOLOUT-CLASS = *ALL / *EXCEPT(...) / list-poss(16): <integer 1..255>
*EXCEPT(...)
| **SPOOLOUT-CLASS-LIST** = list-poss(16): <integer 1..255>

,SPOOLOUT-NAME = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
*EXCEPT(...)
| **SPOOLOUT-NAME-LIST** = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

continued ➡

```

,ACCOUNT = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8>
    *EXCEPT(...)
        | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
,FORMS-OVERLAY = *ALL / *NONE / *ONLY / *EXCEPT(...) / list-poss(16): <alphanum-name 2..2>
    *EXCEPT(...)
        | FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>
,FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)
    *RANGE(...)
        | LOW = 0 / <integer 0..32767>
        | ,HIGH = 4032 / <integer 0..32767>
,PRIORITY = *ALL / *RANGE(...)
    *RANGE(...)
        | FROM = 30 / <integer 30..255>
        | ,TO = 255 / <integer 30..255>
,CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)
    *RANGE(...)
        | LOW = 1 / <integer 1..32767>
        | ,HIGH = 64 / <integer 1..32767>
,ROTATION = *ANY / *YES / *NO / *MANUAL
,TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2
,INFORMATION = *STD / *COUNT

```

Operands

DEVICE-NAME = *ALL / list-poss(8): <alphanum-name 1..8 with-wild(24)> / <alphanum-name 2..2>

Names of active SPOOL devices on which information is requested. If *ALL is specified, brief information is output on each device you are allowed to access. If a device name is specified, only the SCHEDULING-STATE operand may be specified in addition. If ALL occurs in a name (e.g. FIXALL) and this name is addressed using the *ALL wildcard pattern, the asterisk must be doubled: **ALL.

SERVER-NAME = *ALL / *HOME / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>

The SPOOL device is selected by means of the server that manages it. An active printer can only process print jobs accepted by the server belonging to the host to which the printer is connected. If a remote cluster is specified, *ALL is the only value permitted here.

SERVER-NAME = *ALL

SPOOL devices managed by all the servers on all the hosts in the addressed cluster are addressed.

SERVER-NAME = *HOME

Only SPOOL devices managed by the local server are addressed. The printers can be started on a distributed or local basis.

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

The SPOOL devices managed by the specified servers on the hosts in the specified cluster are selected.

CLUSTER-NAME = *LOCAL-CLUSTER / <name 1..8>

The SPOOL device is selected by means of the cluster containing the server that manages it.

SCHEDULING-STATE = *NEXT-JOB / *CURRENT-JOB

Determines whether the operand values for the next scheduling operation on SYSOUT (default value) or those valid for the current job should be output. Differences can arise only if changes have been made with MODIFY-PRINTER-OUTPUT during the current job.

The following applies to the operands below:

If several devices are specified information is output only for those devices which satisfy all the selection criteria defined with the subsequent operands. The values ANY and *ALL each mean that there are no restrictions.

DESTINATION = *LOCAL / *ALL / *REMOTE / *PUBLIC-REMOTE /

list-poss(16): *CENTRAL / <alphanum-name 1..8>

Information is requested on active SPOOL devices defined in START-PRINTER-OUTPUT under DESTINATION as the corresponding device type or on the specified active printers.

DESTINATION = *LOCAL

Local device types are selected (distributed or nondistributed).

DESTINATION = *ALL

All device types are selected (local and RSO). Since RSO is not distributed, only active RSO devices defined in the local SPOOL parameter file are selected.

DESTINATION = *REMOTE

Active RSO devices are selected. This operand is permitted only in conjunction with CLUSTER-NAME=*LOCAL-CLUSTER and SERVER-NAME=*ALL or *HOME.

DESTINATION = *PUBLIC-REMOTE

Active public RSO devices are selected. This operand is permitted only in conjunction with CLUSTER-NAME=*LOCAL-CLUSTER and SERVER-NAME=*ALL or *HOME.

FORM-NAME = *ALL / *STD / *EXCEPT(...) / list-poss(8): <alphanum-name 1..6>

Information is requested on active SPOOL devices to which the specified forms have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

FORM-NAME = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified forms are not admitted.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of forms which are not admitted.

USER-IDENTIFICATION = *ALL / *EXCEPT(...) / list-poss(16): <name 1..8>

Information is requested on active SPOOL devices to which the specified user IDs have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

USER-IDENTIFICATION = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified user IDs are not admitted.

USER-IDENT-LIST = list-poss(16): <name 1..8>

List of user IDs which are not admitted.

HOST-NAME = *ALL-CLUSTERS / *HOME / *LOCAL-CLUSTER / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8>

Information is requested on active SPOOL devices on which print jobs coming from the specified host can or cannot be processed (see also the START-PRINTER-OUTPUT command on [page 472](#)).

HOST-NAME = *ALL-CLUSTERS

Information is output on active SPOOL devices on which print jobs from any host in any cluster can be processed.

HOST-NAME = *HOME

Information is output on active SPOOL devices on which print jobs from the local host can be processed.

HOST-NAME = *LOCAL-CLUSTER

Information is output on active SPOOL devices on which print jobs from any host in the local cluster can be processed.

HOST-NAME = *EXCEPT(...)

Information is output on active SPOOL devices on which print jobs from any host except those specified in this list can be processed.

HOST-LIST = list-poss(16): <alphanum-name 1..8>

Specifies the active devices that cannot accept print jobs from the specified hosts (see also the START-PRINTER-OUTPUT command on [page 472](#)).

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

Information is output on active SPOOL devices on which print jobs from the specified hosts can be processed.

SPOOLOUT-CLASS = *ALL / *EXCEPT(...) / list-poss(16): <integer 1..255>

Information is requested on active SPOOL devices to which the specified spoolout classes have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

SPOOLOUT-CLASS = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified spoolout classes are not admitted.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of spoolout classes which are not admitted.

SPOOLOUT-NAME = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8 / <c-string 1..8 with-low>

Information is requested on active SPOOL devices to which the specified job names have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

SPOOLOUT-NAME = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified job names are not admitted.

SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of job names which are not admitted.

ACCOUNT = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8>

Information is requested on active SPOOL devices to which the specified account numbers have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

ACCOUNT = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified account numbers are not admitted.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of account numbers which are not admitted.

FORMS-OVERLAY = *ALL / *NONE / *ONLY / *EXCEPT(...) / list-poss(16): <alphanum-name 2..2>

Information is requested on active SPOOL devices to which the specified film overlays have been assigned or for which they have been excluded (START-PRINTER-OUTPUT).

FORMS-OVERLAY = *NONE

Information is requested about devices which do not process film overlays.

FORMS-OVERLAY = *ONLY

Information is requested about devices which do process film overlays.

FORMS-OVERLAY = *EXCEPT(...)

Information is requested on active SPOOL devices for which the specified film overlays are not admitted.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of film overlays which are not admitted.

FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)

Information is requested on active SPOOL devices for which matching entries have been made in the FORMS-OVERLAY-BUFFER (FOB data overlays) operand in the START-PRINTER-OUTPUT command.

The values for RANGE in the START-PRINTER-OUTPUT command (number of sublines) must lie within the range specified here.

Information on printers without graphics buffer is only output for the operand value ANY.

FORMS-OVERLAY-BUFFER = *RANGE(...)

FOB range.

LOW = 0 / <integer 0..32767>

Lower limit of the range.

HIGH = 4032 / <integer 0..32767>

Upper limit of the range.

PRIORITY = *ALL / *RANGE(...)

Information is requested on active SPOOL devices for which a priority in the range has been defined (START-PRINTER-OUTPUT).

PRIORITY = *RANGE(...)

Priority range.

FROM = 30 / <integer 30..255>

Lower limit of the range.

TO = 255 / <integer 30..255>

Upper limit of the range.

CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)

Information is requested on active SPOOL devices for which any number character sets or a single character set or a number of character sets within the range (RANGE) are admitted (START-PRINTER-OUTPUT).

Information on non-HP printers is only output if CHARACTER-SET-NUMBER=ALL is specified.

CHARACTER-SET-NUMBER = *RANGE(...)

Information is requested on active SPOOL devices for which a number of character sets within a specified range are admitted.

LOW = 1 / <integer 1..32767>

Lower limit of the range.

HIGH = 64 / <integer 1..32767>

Upper limit of the range.

ROTATION = *ANY / *YES / *NO / *MANUAL

Information is requested on active SPOOL devices according to the entry in the ROTATION operand in the START-PRINTER-OUTPUT or START-TAPE-OUTPUT or START-TAPE-REPLAY command.

Information on printers without page rotation modules is only output for ROTATION=ANY. (NO means that ROTATION is deactivated).

TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

Information is requested about printers (LP65) for which the corresponding value for TWO-UP-PROCESSING was specified in the START-PRINTER-OUTPUT command.

INFORMATION = *STD / *COUNT

Allows to select the type of returned information.

INFORMATION = *STD

Returns information on the devices matching the selection criteria either in the form of a summarized list when DEVICE-NAME=*ALL or contains wildcards or in the form of a complete display when an explicit list of device names without wildcards is specified in the DEVICE-NAME operand.

INFORMATION = *COUNT

Returns the number of devices matching the selection criteria. The number is inserted into the message SCP1124.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
2	0	SCP1052	Information not complete
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0976	Invalid operand value
	128	SPS0266	SPOOL subsystem not available

Notes

Within the framework of support for BS2000/UNIX interoperability, new printer statuses based on an ISO reference have been introduced. The following statuses are displayed by means of the SHOW-ACTIVE-SPOOL-DEVICES command:

- **I**(IDLE): the printer is ready to output; a print job is not currently being processed.
- **R**(RUN): the printer is active.
- **M**(Message): there is a console message concerning the printer.
- **D**(DETACHED): this is the status between the entry of the START-PRINTER-OUTPUT command and its execution by the controller task or the status after the STOP-PRINTER-OUTPUT command is entered.
- **T**(TRANSFER): a started spoolout job is waiting for transport confirmation.
- **U**(UNKNOWN): the status is not known.

The connections between the above statuses and the statuses in the ISO reference are shown in the following table:

Displayed statuses	Print jobs for printers of the type			ISO statuses
	Spool	APA	RSO	
A (ATTACHED)			X	idle
I (IDLE)	X	X	X	idle
T (TRANSFER)	X		X	running
R (RUN)	X	X	X	running
M (MESSAGE)	X	X	X	needs attention
S (STOPPED)			X	needs attention
W (WORKING FOR ADM)			X	needs attention
D (DETACHED)	X	X	X	shutdown
U (UNKNOWN)	X	X	X	shutdown

Output forms

Output when no device is specified or if a device name is specified with a wildcard

```

DEV-NAME  DEV-TYPE  C-USERID  C-TSN  EXIT  C-FORM  C-CL  SSU  ADM  CRI
@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@   @@@  @@@@@@ ###  @@@  @@@  @@@
...      ...      ...      ...   ...  ...    ...  ...  ...  ...
@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@   @@@  @@@@@@ ###  @@@  @@@  @@@
    
```

Meanings of the output fields

Output field	Meaning
DEV-NAME	Device name
DEV-TYPE	Device type
C-USERID	User ID of the current job (output for systems support and RSO device administrator only; otherwise blank).
C-TSN	TSN of the current job (output for systems support and RSO device administrator only; otherwise blank).
EXIT	Exit routines activated: YES/NO
C-FORM	Form used for printing out the current job
C-CL	Spoolout class of the current job
SSU	S: printer status, see notes. S: printer area; the printer is started locally (L) or as a distributed printer (C). U: STOP-... command issued. NO/blank.
ADM	Caller of the command is systems support / RSO device administrator for this device: YES/blank
CRI	Selection criteria were all specified explicitly in the START-... command for the specified device (EXP) not specified at all (blank).

Complete output for an individual device

General information for all device types

This information is output for all device types. Information specifically for local printers, RSO printers or tapes is output in addition to this.

```

DEV-NAME: @@@@@@ DEV-TYP: @@@@@@ REV: ### SCHED: @@@-JOB
C-USERID: @@@@@@ PRIORITY: ##/# USE: @@ C-TSN: @@@
CLASSES(@): ### ## ## ## ## ## ## ## ## ## ## ## ## ## ## ##
             ### ## ##
FORM(@@): @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@
PNAME(@): @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@
USER (@): @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@
ACC (@): @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
          @@@@@ @@@@@
DESTS: @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
        @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
        ...
        @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
    
```

Meanings of the output fields

Output field	Meaning
DEV-NAME	Device name
DEV-TYP	Device type
USE	Type of device activation
REV	Revision number; processing state of the device; a counter is incremented by 1 for each MODIFY-PRINTER-OUTPUT-STATUS command
SCHED	SCHEDULING-STATE: During a job, device characteristics can be changed via MODIFY-PRINTER-OUTPUT-STATUS; this does not take effect until the subsequent job. The field indicates whether the values output apply to the current job or the next job..
PRIORITY	Value range of the priorities admitted for the specified device
C-USERID	User ID of the current job (output for RSO device administrator and systems support only; otherwise blank)

Output field	Meaning
C-TSN	TSN of the current job (output for RSO device administrator and systems support only; otherwise blank)
CLASSES(@) Auxiliary field	Spoolout classes admitted for the specified device. A : All spoolout classes are admitted P : All specified spoolout classes are admitted N : All spoolout classes except those specified here are admitted
FORM(@@) Auxiliary field 1 Auxiliary field 2	Forms admitted for the specified device. A : All forms are admitted. P : All specified forms are admitted. N : All forms except those specified here are admitted. E : The specified forms are equivalent. _ : The specified forms are not equivalent.
PNAME(@) Auxiliary field	Job names admitted for the specified device. A : All job names are admitted P : All specified job names are admitted N : All job names except those specified here are admitted
USER(@) Auxiliary field	User IDs admitted for the specified device (output to systems support and RSO device administrators only; otherwise blank). A : All user IDs are admitted P : All specified user IDs are admitted N : All user IDs except those specified here are admitted
ACC(@) Auxiliary field	Account numbers admitted for the specified device (displayed only to systems support and the device administrator; otherwise blank). A : All account numbers are admitted P : All specified account numbers are admitted N : All account numbers except those specified here are admitted
DESTS	Device pools that can contain the specified device.

Additional information on local printers

```
CURRENT-FORM: @@@@@@ SAMPLE: @@@          EXIT: @      TRACE: @@@
SERVER-NAME: @@@@@@@@ HOST-NAME : @@@@@@@@
PRINTER-STATE: @      PRINTER-SCOPE: @
HOSTS(@): @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
```

Additional information when a PCL or local HP/HP90 printer is specified

This information is only output if a PCL printer or a local HP/HP90 printer is specified in the NAME operand.

```
CURRENT-FORM: @@@@@@ SAMPLE: @@@          EXIT: @@@      TRACE: @@@
CURRENT-DIA:  @@      T-UP-P: @@@@@@
ROTATION: @@@  FOB:   ###/  ###  CHAR-SET:  ##/  ##
DIAS   (@@@@): @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@  @@
SERVER-NAME: @@@@@@@@ HOST-NAME : @@@@@@@@
PRINTER-STATE: @      PRINTER-SCOPE: @
HOSTS(@): @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
```

Additional information when an APA printer is specified

```
CURRENT-FORM: @@@@@@ TRACE: @@@(LEVEL=@) EXIT: @
SERVER-NAME: @@@@@@@@ HOST-NAME : @@@@@@@@
PRINTER-STATE: @      PRINTER-SCOPE: @
HOSTS(@): @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@
```

Meanings of the output fields

Output field	Meaning
CHAR-SET	HP printers only: Number of character sets (range) that can be processed on the specified device.
CURRENT-DIA	Film overlay loaded on the specified device.
CURRENT-FORM	Form loaded on the specified device

Output field	Meaning
DIAS Auxiliary field	In local SPOOL only for HP and HP90: List of film overlays that can be processed on the device. (A): All film overlays (P): The specified film overlays (positive list) (N): All except the specified film overlays (negative list) (ONLY): Only devices on which film overlays can be processed (NONE): Only devices on which film overlays cannot be processed
EXIT	Exit routines activated for the specified device: yes/no
FOB	HP or LED printers only. Size range of an FOB data overlay that can be processed on the specified device.
PRINTER STATE	See note on page 276 .
PRINTER SCOPE	Printer scope (L: local or C: distributed).
PRINTER-ERR-TYPE	Error class based on the printer error status: <ul style="list-style-type: none"> – OPER: Technical error: manual intervention is necessary before the message can be answered at the console. – DATA: Data error: the message at the console must be answered. – LOAD: Loading error: the message at the console must be answered. – JOB: Job error: the message at the console concerning the job just processed by the printer must be answered. – UNDEF: Undefined error.
ROTATION	Jobs that call the page rotation module can be processed on the specified device: YES/NO/ANY/MANUAL (see START-PRINTER-OUTPUT)
SAMPLE	Sample printout: yes/no
T-UP-P	TWO-UP-PROCESSING: output of two pages side by side on HP90 printers
TRACE Auxiliary field:	TRACE activated with START-PRINTER-OUTPUT command y/n LEVEL: trace level activated

Additional information when a virtual printer is specified

This information is only output if a virtual printer is specified in the NAME operand.

```

PRINTER-STATE: @          PRINTER-SCOPE: @    PRINTER-ERR-TYPE : @@@@
SERVER-NAME: @@@@@@@@@@ HOST-NAME : @@@@@@@@@@ PROGRAM-TASK : @@@@
HOSTS(@): @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@
           @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@
           @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@ @@@@@@@@@@
    
```

Additional information when an RSO printer is specified

This information is only output if an RSO printer is specified in the NAME operand.

```

CURRENT-FORM: @@@@@@ TRACE: @@@ EXIT: @@@ SAMPLE: @@@
PRINTER-STATE: @ MONJV: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
ACCESSES : @@@@ @@@@ @@@@ @@@@
    
```

Meanings of the output fields

Output field	Meaning
CURRENT-FORM	Form that is loaded on the specified device.
TRACE	A trace file is to be created for the specified device: YES/NO (is only output to systems support; otherwise, the field remains empty).
EXIT	EXIT routines activated for the specified device: YES/NO.
SAMPLE	Print sample: YES/NO
PRINTER STATE	See note on page 276 .
MONJV	Name of the monitoring job variable if specified in the device record of the spool parameter file (\$SYSSPOOL.PRT.RSO.<device-name>); otherwise *NONE
ACCESSES	The permitted access routes, e.g. RSO, UTM

Additional information when a UNIX printer is specified

This information is only output if a UNIX printer is specified in the NAME operand.

```

DEV-NAME CURRENT-FORM PRINTER-STATE
@@@@@@@@ @@@@@@ @
    
```

Additional information when a tape device is specified

This information is only output if a tape device is specified in the NAME operand.

```

ROTATION: @@@   FOB: #####/#####   CHAR-SET: #####/#####
DIAS   (@@@@): @@ @@ @@ @@ @@ @@ @@ @@ @@ @@ @@ @@ @@ @@ @@
RETPD:   @@@   RMODE: @@@@         IMPORT: @@@@
DENSITY: @@@@@@   T-UP-P: @@@@@@
TYPE (@@@@): @@@@ @@@@ @@@@ @@@@ @@@@ @@@@

```

```

VSN: @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@
     @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@@@

```

Meanings of the output fields

Output field	Meaning
ROTATION	See output for local printers.
FOB	See output for local printers.
CHAR-SET	See output for local printers.
DIAS Auxiliary field	List of film overlays which can be processed on the device (A): All film overlays (P): The specified film overlays (positive list) (N): All except the specified film overlays (negative list) (ONLY): Only devices on which film overlays can be processed (NONE): Only devices on which film overlays cannot be processed
RETPD	Retention period for tape files in days
RMODE	Outputs the tape processing mode: COPY/DIRECT.
IMPORT	VSN of the tape on which the directory file is stored
TYPE Auxiliary field	Scheduling type defined in the SPOOL-OUT-TYPE operand (START-TAPE-OUTPUT): LP, HP, FD, LP65, HP90, LP48, LP-EM, 2050-APA, 2090-APA, PCL (ALL): All types of job (MAY): Job for which SELECTION-TYPE = MAY has been specified (MUST): Job for which SELECTION-TYPE = MUST has been specified
DENSITY	Recording density for a tape (the recording density is not specified in START-TAPE.. but depends on the output device).
T-UP-P	See output for local printers.
VSN	List of volume serial numbers permitted on the device (output for systems support only; otherwise blank)

Example

Four devices have been activated as follows:

```
Device 1: START-PRINTER-OUTPUT DEV-NAME=L1
Device 2: START-PRINTER-OUTPUT DEV-NAME=L2,(FORM-NAME=FORM01)
Device 3: START-PRINTER-OUTPUT DEV-NAME=L3,(FORM-NAME=(FORM01,FORM02))
Device 4: START-PRINTER-OUTPUT DEV-NAME=L4,(FORM=FORM02)
```

If the FORM operand is omitted in S-A-S-D information on all four devices is output. For S-A-S-D FORM=FORM01, information on device 2 and device 3 is output. For S-A-S-D FORM=FORM02, information on device 3 and device 4 is output. For S-A-S-D FORM=(FORM01,FORM02), information on device 3 is output.

Output in S variables

The NAME operand of the command is used to define which S variables are supplied with values. The following entries can be made for NAME

:

Notation in the command	Abbreviated notation in the table
DEVICE-NAME=*ALL	DEV=*ALL
DEVICE-NAME= list-poss(8):<alphanum-name 1..8>	DEV=<name>
DEVICE-NAME= <alphanum-name 2..2>	DEV=<name>
DEVICE-NAME= <alphanum-name 1..24 with-wild>	DEV=<name with-wild>

Output information	Name of the S variable	T	Contents	Condition
Access routes allowed (e.g. UTM, RSO)	var(*LIST).ACCESS(*LIST)	S	' ' <allowed-access>	DEV= <name>
Account number	var(*LIST).ACCOUNT(*LIST)	S	' ' <account>	DEV= <name>
Account numbers allowed for the specified device (output only for system administrator/RSO device administrator) *ALL = all *NEGATIV = all except those specified *POSITIV = all those specified	var(*LIST).ACCOUNT-ADMIS	S	*ALL *NEGATIV *POSITIV	DEV= <name>
The caller of the command is the system administrator/RSO device administrator of this device	var(*LIST).ADM	S	*NO *YES	DEV=*ALL/ <name with-wild>
Form with which the current job is printed	var(*LIST).CURR-FORM	S	' ' <form-name>	DEV= <name>
Current form name	var(*LIST).CURR-FORM-NAME	S	' ' <form-name>	DEV=*ALL/ <name with-wild>
Current film overlay	var(*LIST).CURR-FORM-OVERLAY	S	<forms-overl>	DEV= <name>
Current spoolout class	var(*LIST).CURR-PRINT-JOB-CLASS	S	0..255	DEV=*ALL/ <name with-wild>
TSN of the current job	var(*LIST).CURR-TSN	S	' ' <tsn>	DEV=*ALL/ <name>/ <name with-wild>

Output information	Name of the S variable	T	Contents	Condition
User ID of the current job	var(*LIST).CURR-USER-ID	S	' ' <user-id>	DEV=*ALL/ <name>/ <name with-wild>
Number of character sets, lower limit	var(*LIST).CHAR-SET-NUM.FROM	S	0..32767	DEV= <name>
Number of character sets, upper limit	var(*LIST).CHAR-SET-NUM.TO	S	0..32767	DEV= <name>
Recording density that can be used on a tape	var(*LIST).DENSITY	S	' ' <density>	DEV= <name>
Device pool in which the device can be located	var(*LIST).DEST(*LIST)	S	<destination>	DEV= <name>
Device name	var(*LIST).DEV-NAME	S	' ' <dev-name>	DEV=*ALL/ <name>/ <name with-wild>
Device type	var(*LIST).DEV-TYPE	S	' ' <dev-type>	DEV=*ALL/ <name>/ <name with-wild>
Number of devices matching the selection criteria	var(*LIST).DEVICE-NUMBER	S	<0..999999>	DEV=*ALL/ <name>/ <name with-wild>
Error code	var(*LIST).ERR-CODE	S	<error code> ' '	DEV= <name>
Error message	var(*LIST).ERR-MSG	S	<error msg> ' '	DEV= <name>
Are exit routines activated for the specified device?	var(*LIST).EXIT	S	*NO *YES	DEV=*ALL/ <name>/ <name with-wild>
FOB data overlay, lower size limit	var(*LIST).FOB.FROM	S	0..32767	DEV= <name>
FOB data overlay, upper size limit	var(*LIST).FOB.TO	S	0..32767	DEV= <name>
Form name	var(*LIST).FORM-NAME(*LIST)	S	' ' <form-name>	DEV= <name>
Forms allowed for the specified device *ALL = all *NEGATIV = all except those specified *POSITIV = all those specified	var(*LIST).FORM-NAME-ADMIS	S	*ALL *NEGATIV *POSITIV	DEV= <name>

Output information	Name of the S variable	T	Contents	Condition
Equivalence of the specified forms	var(*LIST).FORM-NAME-EQUIV	S	' ' *EQUIVALENT	DEV= <name>
Name of the film overlay	var(*LIST).FORM-OVERLAY(*LIST)	S	' ' <forms-overl>	DEV= <name>
Film overlays which can be processed on the device *ALL = all *POSITIV = all those specified *NEGATIV = all except those specified *ONLY = only devices on which film overlays are processed *NONE = only devices on which no film overlays are processed	var(*LIST).FORM-OVERLAY-ADMIS	S	*ALL *NEGATIV *NONE *ONLY *POSITIV	DEV= <name>
Hosts	var(*LIST).HOST(*LIST)	S	' ' <host-name>	DEV= <name>
Hosts allowed for the specified device *ALL=all *POSITIV= all those specified *NEGATIV=all except those specified *LOCAL-HOST=local host *LOCAL-CLUSTER=all hosts in the local cluster	var(*LIST).HOST-ADMIS	S	*ALL *POSITIV *NEGATIV *LOCAL-HOST *LOCAL-CLUSTER	DEV= <name>
Name of the host to which the printer belongs	var(*LIST).HOST-NAME	S	<host-name>	DEV= <name>
VSN of the tape on which the directory file is located	var(*LIST).IMPORT	S	' ' <import>	DEV= <name>
Date of the last scheduling	Var(*LIST).LAST-SCHED.DATE	S	*NONE <YYYY-MM-DD>	DEV=*ALL/<name>/ name with-wild>
Time of the last scheduling	Var(*LIST).LAST-SCHED.TIME	S	*NONE <HH:MM>	DEV=*ALL/<name>/ name with-wild>
Information on the season	Var(*LIST).LAST-SCHED.SEASON	S	*NONE *SUMMER *WINTER	DEV=*ALL/<name>/ name with-wild>

Output information	Name of the S variable	T	Contents	Condition
Local name of device as defined in the SPOOL parameters. For a local printer, the S variable contains the logical name used to start the printer. For a distributed printer, the S variable contains the logical name of the logical device associated with the distributed printer.	var(*LIST).LOCAL-DEVICE-NAME	S	<device-name>	DEV=*ALL/ <name>/ <name with-wild>
Name of the RSO job variable	Var(*LIST).MONJV	S	' '\$SYSSPOOL.PRT. RSO.<device-name>	DEV= <name>
Operating mode of the tape	var(*LIST).OUT-MODE	S	' '*COPY ' *DIRECT	DEV= <name>
Error class based on the printer error status: *OPER: Technical error: manual intervention is necessary before the message on the console can be answered. *DATA: Data error: the message to the console must be answered. *LOAD: Loading error: the message to the console must be answered. *JOB: Job error: the message to the console concerning the job just processed by the printer must be answered. *UNDEF: Undefined error.	var(*LIST).PRINTER-ERR-TYPE	S	'*OPER' '*DATA' '*LOAD'	DEV= <name>
Spoolout class	var(*LIST).PRINT-JOB-CLASS(*LIST)	S	0..255	DEV= <name>
Spoolout class allowed on the device *ALL = all *POSITIV = all those specified *NEGATIV = all except those specified	var(*LIST).PRINT-JOB-CLASS-ADMI	S	*ALL *NEGATIV *POSITIV	DEV= <name>
Spoolout name	var(*LIST).PRINT-JOB-NAME(*LIST)	S	' '<spool-name>	DEV= <name>
Job names allowed on the device *ALL = all *POSITIV = all those specified *NEGATIV = all except those specified	var(*LIST).PRINT-JOB-NAME-ADMIS	S	*ALL *NEGATIV *POSITIV	DEV= <name>

Output information	Name of the S variable	T	Contents	Condition
Priority of the job, lower limit	var(*LIST).PRINT-JOB-PRIO.FROM	S	30..255	DEV= <name>
Priority of the job, upper limit	var(*LIST).PRINT-JOB-PRIO.TO	S	30..255	DEV= <name>
Retention period for tape files	var(*LIST).RETENT-PERIOD	S	<integer>	DEV= <name>
Revision number	var(*LIST).REVISION	S	0..255	DEV= <name>
Call of the page rotation module	var(*LIST).ROT	S	' ' *ANY *MAN *NO *YES	DEV= <name>
Output of a print sample	var(*LIST).SAMPLE	S	*NO *YES	DEV= <name>
Validity of the device data that is output (current data or data of the next job)	var(*LIST).SCHED-STA	S	*CURR-JOB *NEXT-JOB	DEV= <name>
Scope	var(*LIST).SCOPE	S	*CLUSTER *LOCAL	DEV=*ALL/ <name>/ <name with- wild>
Selection criterion	var(*LIST).SEL-CRITERIA	S	' ' *EXP	DEV=*ALL/ <name with- wild>
Name of the server	var(*LIST).SERVER-NAME	S	' ' <server-name>	DEV= <name>
Device types for which spoolout jobs are processed on the specified tape devices	var(*LIST).SPOOL-TYPE(*LIST)	S	' ' <spool-type>	DEV= <name>
Restriction of the device types	var(*LIST).SPOOL-TYPE-ADMIS	S	*MAY *MUST	DEV= <name>
Printer status	var(*LIST).STA	S	<print-state> ' '	DEV=*ALL/ <name>/ <name with- wild>
Creation of a trace file	var(*LIST).TRACE	S	*NO *YES	DEV= <name>
Activated trace level	var(*LIST).TRACE-LEV	S	" <trace-level>	DEV= <name>

Output information	Name of the S variable	T	Contents	Condition
TWO-UP processing	var(*LIST).TWO-UP-PROCESS	S	' ' *ANY *MODE-1 *MODE-2 *NO *YES	DEV= <name>
Type of activation of the device	var(*LIST).USE	S	' ' *NO	DEV=*ALL/ <name with- wild>
		S	*IN *NO *OUT *PAGE-PRINT-OUT	DEV= <name>
User ID	var(*LIST).USER-ID(*LIST)	S	' ' <user-id>	DEV= <name>
User IDs allowed on the device *ALL = all *POSITIV = all those specified *NEGATIV = all except those specified	var(*LIST).USER-ID-ADMIS	S	*ALL *NEGATIV *POSITIV	DEV= <name>
VSN	var(*LIST).VOL(*LIST)	S	' ' <vsn>	DEV= <name>

SHOW-DPRINT-ACCESS-CONTROLS

Request information on cluster access control

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

Function

The SHOW-DPRINT-ACCESS-CONTROLS command provides information about access control for a cluster.

This command can only be used for Dprint.

Format

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 for which access controls information is to be output.

SELECT = *ALL / *BY-ATTRIBUTES(...)

Specifies the criteria according to which the access controls are to be selected for the output.

SELECT = *ALL

By default, 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 the subject.

SUBJECTS = *ALL

By default, all subjects are selected.

SUBJECTS = *ALL-USER(...)

Information is to be output about all users.

ADMISSION = *ALL / *YES / *NO

Restricts the output to the definitions which were specified during creation or modification of the access control for *ALL-USER.

SUBJECTS = *HOST(...)

Specifies that the access controls are to be selected according to the host.

HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /

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

Information is to be output about the specified hosts.

ADMISSION = *ALL / *YES / *NO

Restricts the output to the definitions which were specified during creation or modification of the access control for subjects of type *HOST.

SUBJECTS = *USER(...)

Specifies that the access control objects are to be selected according to the user ID.

HOST-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /

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

Information is to be output 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 output about the specified user IDs.

ADMISSION = *ALL / *YES / *NO

Restricts the output to the definitions which were specified during creation or modification of the access control for subjects of type *USER.

INFORMATION = *SUMMARY / *ALL

Specifies whether the information output is to be restricted only 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 the Dprint access control (*ALL).

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Outputs**Output of the contents of an access control (INFORMATION=*ALL)**

```
ACCESS-CONTROL-NAME:    @@@@
SUBJECT(S):
  HOST-NAM  USER-ID  ADMISSION
  @@@@      @@@@      @@@
  @@@@      @@@@      @@@
  @@@@      @@@@      @@@
```

The subject *ALL-USERS is always in first position and has the entry *ALL for host name and user ID.

The subject *HOST has the entry *ALL for user ID.

Output of a list of access controls (INFORMATION=*SUMMARY)

```
ACCESS-CONTROL-NAME(S):
  @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@
  @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@
```

Output in S variables

The INFORMATION operand of the SHOW-DPRINT-ACCESS-CONTROLS command defines which S variables are supplied with values. *ALL and *SUMMARY can be specified for INFORMATION.

Output information	Name of the S variable	T	Contents	Condition
Name of the access control	var(*LIST).ACCESS-CONTR-NAME	S	<a-c-l-name>	INF=*ALL
Name of the access control (list)	var(*LIST).ACCESS-CONTR-NAME(*LIST)	S	<a-c-l-name>	INF=*SUM
Access authorization	var(*LIST).SUBJECT(*LIST).ADMIS	S	*NO *YES	INF=*ALL
Host name	var(*LIST).SUBJECT(*LIST).HOST-NAME	S	*ALL <host-name>	INF=*ALL
User ID	var(*LIST).SUBJECT(*LIST).USER-ID	S	*ALL <user-id>	INF=*ALL

SHOW-DPRINT-CLUSTER

Request information on cluster configuration

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

Function

The SHOW-DPRINT-CLUSTER command provides information about the configuration of the local cluster. The names of the hosts which belong to the cluster are output in the sequence of their recovery hierarchy.

This command can only be used for the Dprint subsystem.

Format

SHOW-DPRINT-CLUSTER

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Note

Normally, the first host in the output list is the master host. But it can happen that the current master host (indicated under ADM-HOST with YES) does not appear in first position, as is the case for example if the master host defined first is unavailable and a VERIFY-DPRINT-CONSISTENCY command has been issued.

Output

```
HOST-NAME  ADM-HOST  HOST-STATE  CLUSTER-LINK
@@@@@@@@@  @@@      @@@@      @@@@@@@@@@@@@@
...        ...        ...        ...
```

Meanings of the output fields

Output field	Meaning
HOST-NAME	Logical name of the host (BCAM address)
ADM-HOST	Indicates whether the host is currently the master of the cluster . *YES: cluster administrator is defined on this host (master of the cluster) *NO: cluster administrator is not defined on this host
HOST-STATE	*ATT: MODIFY-DPRINT-CLUSTER ACTION=*ATTACH has been entered for the host, i.e. jobs can be issued to remote hosts and remote jobs can be processed on this host. *DET: MODIFY-DPRINT-CLUSTER ACTION=*DETACH has been entered for the host, i.e. jobs cannot be issued to remote hosts and remote jobs cannot be processed on this host.
CLUSTER-LINK	Indicates the status of the host in respect of the cluster configuration (host is always part of the cluster). *IN CREATE: Dprint is presently being loaded on the host. *CREATED: Dprint is loaded on the host. *IN-DELETE: Dprint is presently being unloaded on the host. *NOT-CREATED: Dprint is not loaded on the host.

Output in S variables

Output information	Name of the S variable	T	Contents	Condition
Is the host currently the master of the cluster?	var(*LIST).ADM-HOST	S	*NO *YES	
Status of the host with regard to the cluster configuration	var(*LIST).CLUST-LINK	S	*CREATED *IN-CREATE *IN-DELETE *NOT-CREATED *UNDEFINED	
Logical name of the host	var(*LIST).HOST-NAME	S	<host-name>	
Status of the host	var(*LIST).HOST-STA	S	*ATTACH *DETACH	

SHOW-DPRINT-HOSTS

Request information on hosts

Domain: SPOOL-PRINT-ADMINISTRATION
User group: SPOOL administrators
Privileges: PRINT-SERVICE-ADMINISTRATION

Function

The SHOW-DPRINT-HOSTS command provides information about hosts. This command can only be used for Dprint.

Format

```

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 for which hosts information is to be output.

SELECT = *ALL / *BY-ATTRIBUTES(...)

Specifies the criteria according to which the hosts are to be selected for the output.

SELECT = *ALL

By default, all hosts are selected.

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 the Internet address.

PORT-NAME = *ALL / *NONE / <integer 1..32767> / *RANGE(...)

Specifies that the hosts are to be selected according to the port name.

PORT-NAME = *RANGE(...)

Specifies a range of port names for the selection.

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 in accordance with the way in which they are accessed. The operand may only be entered by the cluster administrator.

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 output about the hosts with the specified access control names.

INFORMATION = *SUMMARY / *ALL

Specifies whether the information output is to be restricted only to the first line of the output format shown below (*SUMMARY), or whether all information is to be output for each element (*ALL).

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Note

The name of the access control list is output only to the cluster administrator. For other users, the field is filled with blanks.

Output

```

HOST-NAME ADM ACCESS INTERNET-ADDRESS PORT-NAME
@@@@@@@@ @@@@ @@@@@@@@ @@@@@@@@@@@@@@@@@@@@@@ #####
HOST-STATE CONN-STATE COMM-ERR FT-STATE
@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

```

Meanings of the output 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) *NO: cluster administrator is not defined on this host
ACCESS	Indicates whether users may access the host from remote clusters. *NO: users must not access the host from remote clusters (the host is not the gateway host of the local cluster). *ALL: all users may access the host from remote clusters (the host is thus a gateway host of the local cluster). <alphanum-name>: users who may or may not access the host are entered in the specified access control list (the host is thus 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 has been entered for the host, i.e. jobs can be issued to remote hosts and remote jobs can be processed on this host. *DET: MODIFY-DPRINT-CLUSTER ACTION=*DETACH has been entered for the host, i.e. jobs cannot be issued to remote hosts and remote jobs cannot be processed on this host.
CONN-STATE	*UNDEF: the host is only defined in the configuration or not yet connected to the cluster (neither DPRINTSV nor DPRINTCL loaded). *ACC: the host can be accessed via CMX. *NOT-ACC: the host cannot be accessed via CMX.
COMM-ERROR	SRV-SAT: server saturation, i.e. there is no further server task free. <CMX return code>: 8 characters (only when CONN-STATE=*NOT-ACC) DR<disconnect reason>: 8 characters TIMEOUT:a timeout has been recognized for this partner (only when CONN-STATE=*NOT-ACC)
FT-STATE	*NORMAL: FT and FTAC are loaded and usable. *ERROR: FT or FTAC subsystem is unloaded. *SAT: the host is saturated, i.e. the user ID SYSDPRNT has attained a certain saturation status.

Output in S variables

The INFORMATION operand of the SHOW-DPRINT-HOSTS command defines which S variables are supplied with values. *ALL and *SUMMARY can be specified for INFORMATION.

Output information	Name of the S variable	T	Contents	Condition
Name of the access control from remote clusters to the host	var(*LIST).ACCESS-CONTR-NAME	S	*ALL *NO <a-c-l-name>	INF=*ALL/*SUM
Is the cluster administrator defined on this host?	var(*LIST).ADM	S	*NO *YES	INF=*ALL/*SUM
Server saturation or CMX return code	var(*LIST).COMM-ERROR	S	' ' <cmx-rc>	INF=*ALL
Connection status of the host	var(*LIST).CONN-STA	S	*ACCESS *NOT-ACCESS *UNDEF	INF=*ALL
File transfer status	var(*LIST).FT-STA	S	*ERROR *NORMAL *SAT	INF=*ALL
Logical name of the host	var(*LIST).HOST-NAME	S	<host-name>	INF=*ALL/*SUM
Status of the host	var(*LIST).HOST-STA	S	*ATTACH *DETACH	INF=*ALL
Internet address of the host	var(*LIST).INTERNET-ADDR	S	' ' <internet-address>	INF=*ALL/*SUM
Identification of the application on the host	var(*LIST).PORT-NAME	S	0..32767	INF=*ALL/*SUM

Examples

*Output for a single host with INFORMATION=*ALL and no further selection:*

```
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
```

Explanation

- Host D000ZE01 is the master host of the cluster.
- The access control list ACCESS1 specifies which users may or may not access the local cluster, i.e. the host is a gateway host for remote clusters.
- The Internet address of the host is AAA.BBB.CCC.DDD and the communications application is identified by 32.
- The host has not been detached from the local cluster, it is in the “ATTACHED” status.
- The host can be accessed via CMX and neither an FT or FTAC error nor a saturation state has occurred.

*Output for a list of hosts with INFORMATION=*SUMMARY and no further selection:*

```
HOST-NAME ADM  ACCESS
1. D000ZE01  *YES ACCESS1
2. D000ZE02  *NO  *NO
3. D000ZE03  *NO  ACCESS3
4. D000ZE04  *NO  *ALL
```

Explanation

1. Host D000ZE01 is the master of the cluster. The access control list ACCESS1 specifies which users may or may not access the local cluster, i.e. the host is a gateway host for remote clusters.
2. Host D000ZE02 is a slave host. No user may 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 may or may not access the local cluster, i.e. the host is a gateway host for remote clusters.
4. Host D000ZE04 is a slave host. All users may access it from remote clusters, i.e. the host is a gateway host for remote clusters.

SHOW-DPRINT-PRINTER-POOLS

Request information on printer pools

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-DPRINT-PRINTER-POOLS command provides information about printer pools.

This command can only be used for Dprint.

Format

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 for which printer pools information is to be output.

SELECT = *ALL / ***BY-ATTRIBUTES**(...)
Specifies the criteria according to which the printer pools are to be selected for the output.

SELECT = *ALL
By default, 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)> / <c-string 1..8 with-low>

Specifies that the printer pools are to be selected according to the associated printers.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies whether the printer pools are located within the local cluster or within a specified BS2000 cluster or an Xprint domain.

INFORMATION = *SUMMARY / *ALL

Specifies whether the information output is to be restricted only to the names of the printer pools (*SUMMARY), or whether information about the associated printers is also to be output (*ALL).

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Note

In the case of access to UNIX, only printers and printer pools whose names do not exceed 8 characters in length is output.

Output for INFORMATION = *SUMMARY:

```
POOL-NAME(S) :
@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@
...
```

Output for INFORMATION = *ALL:

```
POOL-NAME : @@@@@@@@@
PRINTER-NAME(S) :
@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@ @@@@@@@@@
...
```

Output in S variables

The INFORMATION operand of the SHOW-DPRINT-PRINTER-POOLS command defines which S variables are supplied with values. *ALL and *SUMMARY can be specified for INFORMATION.

Output information	Name of the S variable	T	Contents	Condition
Name of the printer pool	var(*LIST).POOL-NAME	S	<pool-name>	INF=*ALL
Name of the printer pool (list)	var(*LIST).POOL-NAME(*LIST)	S	<pool-name>	INF=*SUM
Name of the printer	var(*LIST).PRINT-NAME(*LIST)	S	<printer-name>	INF=*ALL

SHOW-DPRINT-PRINTERS

Request information on printers

Function group: Dprint

User group: Nonprivileged users

Privileges: PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION,
SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,
STD-PROCESSING

Function

The SHOW-DPRINT-PRINTERS command provides information about printers.

This command can only be used for Dprint.

Format

(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): *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
        | *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *PCL-PRINTER /
        | *VIRTUAL / *2050-APA-PRINTER / *2090-APA-PRINTER / *2090-TWIN-PRINTER
        |
        | , FORM-OVERLAY-BUFFER = *ALL / list-poss(5): *NO / 0 / 672 / 1344 / 4032
        |
        | , 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>
        |
        | , 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..9> / *RANGE(...)
        | | *RANGE(...)
        | | | LOW = <integer 1..9>
        | | | , HIGH = <integer 1..9>
        | |
        | | , OUTPUT-TRAY-NUMBER = *ALL / <integer 0..3> / *RANGE(...)
        | | *RANGE(...)
        | | | LOW = <integer 0..3>
        | | | , HIGH = <integer 0..3>

```

continued →

```

,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 / *SPOOLOUT-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 for which printers information is to be output.

SELECT = *ALL / *BY-ATTRIBUTES(...)
 Specifies the criteria according to which the printers are to be selected for the output.

SELECT = *ALL
 By default, 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)> /
 The printers are to be selected according to the server to which they belong.

DEVICE-TYPE =
 The selection criterion is the device type. See format for possible specifications.

FORM-OVERLAY-BUFFER = *ALL / list-poss(5): *NO / 0 / 672 / 1344 / 4032
 The selection criterion is the size of the buffer for FOB data overlays.

CHARACTER-SET-NUMBER = *ALL / list-poss(7): 1 / 4 / 6 / 23 / 36 / 46 / 64
 The selection criterion is the number of character sets which can be loaded.

ROTATION = *ALL / *YES / *NO
 The selection criterion is the existence of a page rotation module.

DUPLEX-PROCESSING = *ALL / *YES / *NO
 The selection criterion is the characteristic of printing on both sides of the page.

FORMS-OVERLAY = *ALL / *YES / *NO
 The selection criterion is the characteristic of processing forms overlays.

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 of the specified range of values are selected.

LOW = <integer 4096..65535>

Lower range limit.

HIGH = <integer 4096..65535>

Upper range limit.

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 to print on continuous stationery or single-sheet paper and which input tray to use.

DEFAULT-TRAY-NUMBER = *ALL / *IGNORE / <integer 1..9> / *RANGE(...)

The selection criterion is the number of the input tray.

DEFAULT-TRAY-NUMBER = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..9>

Lower range limit.

HIGH = <integer 1..9>

Upper range limit.

OUTPUT-TRAY-NUMBER = *ALL / <integer 0..3> / *RANGE(...)

The selection criterion is the number of the output tray.

OUTPUT-TRAY-NUMBER = *RANGE(...)

Specification of a range of values.

LOW = <integer 0..3>

Lower range limit.

HIGH = <integer 0..3>

Upper range limit.

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 to be used for printing.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies whether the printers are located within the local cluster or within a specified BS2000 cluster or Xprint domain.

INFORMATION = *SUMMARY / *ALL / list-possible(5):

***DEVICE-ACCESS / *TWIN-DEVICE-DEF / *DEVICE-INFORMATION / *SPOOL-CONTROL / *PROCESSING-CONTROL**

Specifies which information is to be output. The fields displayed for each INFORMATION value correspond to the operands of the related structure of the SHOW-SPOOL-DEVICES statement. The fields PRINTER-NAME, SERVER-NAME, LOCAL-PRINTER-NAME and DEVICE-TYPE are displayed with any INFORMATION value.

INFORMATION = *SUMMARY

Restricts the information output to the definitions in the configuration file.

INFORMATION = *ALL

Specifies information about the associated values in the SPOOL parameter file also to be output.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects
2	0	SDD2108	Warning: SPOOL information not available

Notes

1. Depending on the access control which has been defined for the server object, not all users can access all printers which are controlled by this server.

Following the authorization check, any user can access the Dprint printers in whose ACCEPT list that user is entered, or in whose EXCEPT list the user is not entered.

Similarly, nonprivileged users and SPOOL administrators also only receive information about those printers to which they are allowed access.

2. If Dprint printers are to be selected according to certain physical attributes, selection criteria can be specified which affect the records in the SPOOL parameter file. If SPOOL records are defined only in the configuration file, then only these fields are output for the devices. And only the corresponding selection criteria can be specified.
3. Attributes of the local SPOOL (other than PRINTER-NAME, SERVER-NAME, LOCAL-PRINTER-NAME) can only be specified as the selection criterion for devices belonging to hosts on which the DPRINTSV subsystem is loaded.
4. In the case of access to UNIX, only the short output form (INF=*SUMMARY) is supported.

Output

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 "SERVER-NAME" title.

The Xprint PCL name (Printer Capabilities List name) corresponding to each Xprint printer will be displayed (truncated to 8 characters) under "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     : @@
PROGRAM-NAME      : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
INTERNET-ADDRESS  : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
PORT-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 :
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
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@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
    
```

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

All the INFORMATION types described above are displayed, i.e. the following four first lines are displayed, then all the other display information described above, then the last three lines are displayed.

```

PRINTER-NAME      : @@@@@@@@@@
SERVER-NAME       : @@@@@@@@@@
LOCAL-PRINTER-NAME : @@@@@@@@@@
DEVICE-TYPE       : @@@@@@@@@@@@@@@@@@
----- MISCELLANEOUS -----
LANGUAGE-EXT-TYPE : @@@@@@@@@@
CHARACTER-IMAGE   : @@@@@@@@@@

```

Meanings of the output fields

Output field	Contents
SUMMARY/any information	
PRINTER-NAME	Logical name of the Dprint printer as defined in the configuration file of the cluster
SERVER-NAME	Logical name of the server that controls the printer (*HOME = home server)
LOCAL-PRINTER-NAME	Logical name of the printer as defined in the SPOOL parameter file of the server
DEVICE-TYPE	Device type
DEVICE-ACCESS	
DEVICE-ACCESS	Access type to printers
ACCESS-TYPE	Printer connection: <ul style="list-style-type: none"> – With DEVICE-ACCESS = *TCP-ACCESS(...): Printer connection: *STD/*TACLAN – With DEVICE-ACCESS = *LOCAL-ACCESS(...): Printer connection: *STD/*CHANNEL-TYPE-1/*CHANNEL-TYPE-2
PROCESSOR-NAME	Processor name as part of the device address
MNEMONIC-NAME	Device mnemonic for the twin printer or the "master" twin printer.
PROGRAM-NAME	Name of the supervisor LOGON procedure
INTERNET-ADDRESS	Internet address of the LAN controller card
PORT-NAME	Port name of the LAN controller card
TWIN-DEVICE-DEF	
SLAVE-MNEMONIC-NAME	Device mnemonic for the "slave" twin printer
ESD-SIZE	Size of the external data storage of the twin printer
DEVICE-INFORMATION	
FORMS-OVERLAY-BUFFER	Size of the graphics buffer
CHARACTER-SET-NUMBER	Number of character sets
ROTATION	Page rotation module
DUPLEX-PROCESSING	Specifies whether paper is printed on both sides
FORMS-OVERLAY	Specifies whether form overlays can be processed on the device
RASTER-PATTERN-MEM	Specifies the size of the RPM that contains the FOB overlays and character sets (raster pattern memory)

Output field	Contents
MAX-INPUT-TRAY	Maximum number of input trays
SUPP-FORMAT-NAMES	Document format that the printer can print
SPOOL-CONTROL	
SHIFT	Default value for SHIFT if the LEFT-MARGIN operand is not specified in the PRINT-DOCUMENT command (0...31)
FORM-FEED	Paper feed: continuous forms or single-sheet feed
DEFAULT-TRAY-NUMBER	Number of the paper feed tray from which the paper is to be taken on single-sheet printers
OUTPUT-TRAY-NUMBER	Number of the paper output tray
SKIP-TO-CHANNEL	Behaviour in the case of two skips to the vertical tabulator character "channel 1", one after the other
PROCESSING-CONTROL	
FORM-NAME	Forms which are assigned to the printer by FORM-NAME = *STD
PAGE-EJECT-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.
BAND-IDENTIFICATION	Identifier for the type band of an LP or LP48 printer
MISCELLANEOUS	
LANGUAGE-EXT-TYPE	Identifies the device type for "exotic" output with the product DSEM product V3.0
CHARACTER-IMAGE	Character conversion tables

Output in S variables

The INFORMATION operand of the command defines which S variables are supplied with values. The values of the INFORMATION operand can be specified as follows:

Notation in the command	Abbreviated notation (in the Condition column)
INFORMATION = *ALL	1
INFORMATION = *SUMMARY	2
INFORMATION = *DEVICE-ACCESS	3
INFORMATION = *TWIN-DEVICE-DEF	4
INFORMATION = *DEVICE-INFORMATION	5
INFORMATION = *SPOOL-CONTROL	6
INFORMATION = *PROCESSING-CONTROL	7

Output information	Name of the S variable	T	Contents	Condition
Printer access mode	var(*LIST).ACCESS	S	*BUS-TYPE-1 *CHAN-TYPE-1 *CHAN-TYPE-2 *TACLAN	1, 3
ID for a type band	var(*LIST).BAND-ID	S	*NONE <band-id>	1, 7
Character conversion table	var(*LIST).CHAR-IMAGE(*LIST)	S	<char-image> *NONE	1
Number of character sets	var(*LIST).CHAR-SET	S	1..64	1, 5
Remote Sinix cluster name	var(*LIST).CLUST-NAME	S	<cluster-name>	2
Access type to printers	var(*LIST).DEVICE-ACCESS	S	*NEA-ACCESS *TCP-ACCESS *LOCAL-ACCESS *SCSI-ACCESS	1, 3
Device type	var(*LIST).DEV-TYPE	S	<dev-type>	1, 3, 4, 5, 6, 7
Printing on both sides of the page	var(*LIST).DUPLEX-PROCESS	S	*NO *YES	1, 5
Size of the external record memory of the twin printer	var(*LIST).ESD-SIZE	S	0..128	1, 4
Size of graphical memory	var(*LIST).FOB	S	0..32767	1, 5
Number of the paper input tray	var(*LIST).FORM-FEED.IN-TRAY	S	*IGNORE 1..9	1, 6
Number of the paper output tray	var(*LIST).FORM-FEED.OUT-TRAY	S	0..3	1, 6
Paper feed (single-sheet / continuous forms)	var(*LIST).FORM-FEED.TYPE	S	*LIST *SINGLE-SHEET	1, 6
Form name	var(*LIST).FORM-NAME(*LIST)	S	<form-name>	1, 7
Processing of forms overlays possible	var(*LIST).FORM-OVERLAY	S	*NO *YES	1, 5
Internet address of the TACLAN, IPP, the DOS PC or the LAN controller card	var(*LIST).INTERNET-ADDR	S	' ' *NONE <internet-add>	1, 3
Device type for "exotic" output using the product DSEM V3.0	var(*LIST).LANG-EXT-TYPE	S	*SYSTEM <lang-ext-type>	1
Name of the printer, as defined in the SPOOL parameter file of the server. Additional information: for remote UNIX clusters, the Xprint PCL name (printer type) is output here	var(*LIST).LOC-PRINT-NAME	S	' ' <printer-name>	1, 2, 3, 4, 5, 6, 7
Sinix printer type	var(*LIST).LOC-PRINT-TYPE	S	<printer-type>	2

Output information	Name of the S variable	T	Contents	Condition
Maximum number of paper input trays	var(*LIST).MAX-INPUT-TRAY	S	0..99	1, 5
Mnemonic device name for the twin printer or for the master device of the twin printer	var(*LIST).MNEM-NAME	S	<mnem-name>	1, 3
Maximum time during which the printer is inactive	var(*LIST).PAGE-EJECT-TIMEOUT	S	*NO 1..255	1, 7
Port name of the TACLAN, IPP, the DOS PC or the LAN controller card	var(*LIST).PORT-NAME	S	' ' <port-name>	1, 3
Logical name of the Dprint printer, as defined in the configuration file of the cluster	var(*LIST).PRINTER-NAME	S	<printer-name>	1, 2, 3, 4, 5, 6, 7
Name of the processor	var(*LIST).PROCESSOR-NAME	S	<process-name> *HOST	1, 3
Name of the procedure associated to the virtual device	var(*LIST).PROGRAM-NAME		' ' *NONE <file-name>	1, 3
Size of the raster pattern memory	var(*LIST).RAST-PAT-MEM	S	' ' *NONE 4096..65535	1, 5
Page rotation module	var(*LIST).ROT	S	*NO *YES	1, 5
Logical name of the server controlling the printer. Additional information: for remote UNIX clusters, the name of the UNIX-Xprint domain is output here.	var(*LIST).SERVER-NAME	S	' ' <server-name>	1, 2, 3, 4, 5, 6, 7
Number of columns by which the output text is indented	var(*LIST).SHIFT	S	0..31	1, 6
Behavior in the event of two skips to channel 1 in succession	var(*LIST).SKIP-TO-CHAN	S	*NORMAL *OPTIM	1, 6
Mnemonic device name of the slave device of the twin printer	var(*LIST).SLAVE-MN	S	' ' *NONE <slave-mnem-name>	1, 4
Supported format name	var(*LIST).SUPP-FORMAT-NAME		<supp-to-na>	1, 5

SHOW-DPRINT-REMOTE-CLUSTERS

Request information on remote clusters

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-DPRINT-REMOTE-CLUSTERS command provides information about remote BS2000 clusters and Xprint domains.

This command can only be used for Dprint.

Format

SHOW-DPRINT-REMOTE-CLUSTERS

```

CLUSTER-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *STD /
    <alphanum-name 1..8>
,SELECT = *ALL / *BY-ATTRIBUTES(...)
    *BY-ATTRIBUTES(...)
        TYPE = *ALL / *BS2000 / *UNIX-ISO(...) / *UNIX-TCP(...)
            *UNIX-ISO(...)
                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
            *UNIX-TCP(...)
                INTERNET-ADDRESS = *ALL / <composed-name 1..15 with-wild(24)> /
                    list-poss(16): <composed-name 7..15>
                ,PORT-NAME = *ALL / <integer 1..32767> / *RANGE(...)
                    *RANGE(...)
                        LOW = <integer 1..32767>
                        ,HIGH = <integer 1..32767>
                    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..8 with-wild(24)> /
                    list-poss(16): <composed-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..8 with-wild(24)> / list-poss(16): *STD / <alphanum-name 1..8>

Specifies for which clusters information is to be output.

SELECT = *ALL / *BY-ATTRIBUTES(...)

Specifies the criteria according to which the clusters are to be selected for the output.

SELECT = *ALL

By default, 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 the cluster type.

TYPE = *UNIX-ISO(...)

Clusters of type UNIX are selected which are accessed via ISO.

GATEWAY-NAME = *ALL / list-poss(16): <c-string 1..256 with-low>

Logical names of the gateways in the remote Xprint domains about which information is desired.

HOST-NAME = *ALL / list-poss(16): <c-string 1..256 with-low>

Logical host names of the gateways in the remote Xprint domains about which information is desired.

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 type UNIX are selected which are accessed via TCP.

INTERNET-ADDRESS = *ALL / <composed-name 1..15 with-wild(24)> / list-poss(16): <composed-name 7..15>

Internet addresses of the Xprint domains about which information is desired.

PORT-NAME = *ALL / <integer 1..32767> / *RANGE(...)

Port names of the Xprint domains about which information is desired.

PORT-NAME = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..32767>

Lower range limit.

HIGH = <integer 1..32767>

Upper range limit.

GATEWAY-NAME = *ALL / list-poss(16): <c-string 1..256 with-low>

Logical names of the gateways in the remote Xprint domains about which information is desired.

HOST-NAME = *ALL / list-poss(16): <c-string 1..256 with-low>

Logical host names of the gateways in the remote Xprint domains about which information is desired.

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 the network address.

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

Specifies that the clusters are to be selected according to how they are accessed. The operand may only be entered by the cluster administrator.

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

Clusters 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 output about the clusters with the specified access control names.

INFORMATION = *SUMMARY / *ALL

Specifies whether the information output is to be restricted only to the first line of the output format shown below (*SUMMARY), or whether all information is to be output for each element (*ALL).

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Notes

1. The nonprivileged user and SPOOL administrator only receive information about clusters which they are permitted to access.
2. The name of the access control list is output only to the cluster administrator. For other users, the field is filled with blanks.

Output

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 output fields

Output field	Meaning
CL-NAME	Logical name of the remote cluster
NETW-ADDR	BCAM address of the host which is the entry point (gateway) on the remote cluster
TYPE	Type of the remote cluster. *BS2: BS2000 cluster (NEA protocol) *U-ISO: Xprint domain (communication protocol ISO) *U-TCP: Xprint domain (communication protocol TCP/IP)
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 which is the entry point (gateway) on the local cluster
ACCESS	Indicates whether users may access the remote cluster. *NO: no users may access the remote cluster. *ALL: all users may access the remote cluster. <alphanum-name>: users who may or may not access the remote cluster are entered in the specified access control list.
CONN-STATE	*ACC: the cluster is accessible, i.e. the gateway host can be accessed via CMX. *NOT-ACC: the cluster is not accessible, i.e. the gateway host cannot be accessed via CMX.
COMM-ERROR	SRV-SAT: server saturation, i.e. there is no further server task free. <CMX return code>: 8 characters (only when CONN-STATE=*NOT-ACC) DR<disconnect reason>: 8 characters TIMEOUT:a timeout has been recognized for this partner (only when CONN-STATE=*NOT-ACC)
GATEWAY-NAME	Logical name of the gateway, as known in the remote cluster
HOST-NAME	Logical host name of the gateway, as known in the remote cluster

Output in S variables

The INFORMATION operand of the SHOW-DPRINT-REMOTE-CLUSTERS command defines which S variables are supplied with values. *ALL and *SUMMARY can be specified for INFORMATION.

Output information	Name of the S variable	T	Contents	Condition
Name of the access control for the remote cluster	var(*LIST).ACCESS-CONTR-NAME	S	*ALL *NO <a-c-l-name>	INF=*ALL
Logical name of the remote cluster	var(*LIST).CLUST-NAME	S	<cluster-name>	INF=*ALL/*SUM
Server saturation or CMX return code	var(*LIST).COMM-ERROR	S	<cmx-rc>	INF=*ALL
Access to the remote cluster	var(*LIST).CONN-STA	S	*ACCESS *NOT-ACCESS *UNDEF	INF=*ALL
Logical name of the gateway	var(*LIST).GATEWAY-NAME	S	<gateway-name>	INF=*ALL
Address of the gateway host	var(*LIST).HOME-GATEWAY-ADDR	S	<gateway-address>	INF=*ALL/*SUM
Logical host name of the gateway	var(*LIST).HOST-NAME	S	<host-name>	INF=*ALL
Internet address of the remote cluster	var(*LIST).INTERNET-ADDR	S	' ' <internet-address>	INF=*ALL/*SUM
Network address of the remote cluster	var(*LIST).NET-ADDR	S	<net-address>	INF=*ALL/*SUM
Port name of the gateway host on the remote cluster	var(*LIST).PORT-NAME	S	0..32767	INF=*ALL/*SUM
System type of the remote cluster	var(*LIST).TYPE	S	*BS2000 *UNIX-ISO *UNIX-TCP	INF=*ALL

Examples

*Output for a remote single cluster with INFORMATION=*ALL and no further selection:*

```
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
```

Explanation

- Cluster C1 is a UNIX-SPOOL domain whose gateway is the host having the BCAM address D000ZE01.
- The TCP/IP protocol must be used for the 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 on which the UNIX requests return.
- All users of the local cluster may access cluster C1.
- Access is possible to the cluster 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 with INFORMATION=*SUMMARY and no further selection:*

```
CL-NAME  NETW-ADDR  TYPE      INTERNET-ADDRESS  PORT-NAME  HOME-G-ADDR
1. C1     D000ZE01  *BS2                                *NONE
2. C2     D000ZE02  *U-ISO                                D000ZE10
3. C3     D000ZE03  *U-TCP   AAA.BBB.CCC.DDD  273        D000ZE11
```

Explanation

1. Cluster C1 is a BS2000 cluster whose gateway is the host with the BCAM address D000ZE01. The NEA protocol is used for the communication with the gateway.
2. Cluster C2 is a UNIX-SPOOL domain whose gateway is the host having the BCAM address D000ZE02. The ISO protocol must be used for the 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-SPOOL domain whose gateway is the host having the BCAM address D000ZE03. The TCP/IP protocol must be used for the 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 on servers

Domain: SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES

User group: Nonprivileged users

Privileges: PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-DPRINT-SERVERS command provides information about servers.

This command can only be used for Dprint.

Format

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 = *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 for which servers information is to be output.

SELECT = *ALL / *BY-ATTRIBUTES(...)

Specifies the criteria according to which the servers are to be selected for the output.

SELECT = *ALL

By default, 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 the host name.

PRINT-JOB-CLASS = *ALL / *ANY / *RANGE(...) / list-poss (16): <integer 1..255>
Job classes which are associated with the server objects about which information is desired.

PRINT-JOB-CLASS = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

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

Specifies that the servers are to be selected according to how they are accessed. The operand may only be entered by the cluster administrator.

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

Servers 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 output about the servers with the specified access control names.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies whether the servers are to be selected within the local cluster or within a specified cluster. In the case of *LOCAL-CLUSTER the selected server must be located within the user's cluster.

INFORMATION = *SUMMARY / *ALL

Specifies whether the information output is to be restricted only to the first line of the output format shown below (*SUMMARY), or whether all information is to be output for each element (*ALL).

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors
	1	CMD0202	Syntax error
	32	CMD0221	System error. Command rejected
	64	CMD0216	No command authorization
	64	SDD0800	Semantic error
	64	SDD0803	Invalid operand value
	128	CMD2281	Subsystem error
2	0	SDD2108	Warning: no information on specified objects

Notes

1. Nonprivileged users and SPOOL administrator only receive information about servers which they are permitted to access.
2. The name of the access control list is output only to the cluster administrator. For other users, the field is filled with blanks.

Output

Output with INFORMATION = *SUMMARY

```
SERVER-NAME HOST-NAME ACCESS
@@@@@@@@@  @@@@@@@@@  @@@@@@@@@
```

Output with INFORMATION = *ALL

```
SERVER-NAME HOST-NAME ACCESS
@@@@@@@@@  @@@@@@@@@  @@@@@@@@@
PRINT-JOB-CLASS
@@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@  @@@
SERVER-STATE CONN-STATE COMM-ERR
@@@          @@@@@@@@@  @@@@@@@@@
```

Meanings of the output 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	Indicates whether users may access the server. *NO: no users may access the server. *ALL: all users may access the server. <alphanum-name>: users who may or may not access the server are entered in the specified access control list.
PRINT-JOB-CLASS	Job classes which are assigned to the server object. *ANY: all print jobs may access the server, depending on the job class. <list>: all print jobs whose job class is included in the list may access the server.
SERVER-STATE	*ATT: MODIFY-DPRINT-CLUSTER ACTION=*ATTACH has been entered for the host to which the server is connected, i.e. jobs from remote hosts can be processed on this server. *DET: MODIFY-DPRINT-CLUSTER ACTION=*DETACH has been entered 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 defined only in the configuration or is not yet connected to the cluster (DPRINTSV not loaded). *ACC: the host can be accessed via CMX. *NOT-ACC: the host cannot be accessed via CMX.
COMM-ERROR	SRV-SAT: server saturation, i.e. there is no further server task free. <CMX return code>: 8 characters (only when CONN-STATE=*NOT-ACC) DR<disconnect reason>: 8 characters TIMEOUT:a timeout has been recognized for this partner (only when CONN-STATE=*NOT-ACC)

Output in S variables

The INFORMATION operand of the SHOW-DPRINT-SERVERS command defines which S variables are supplied with values. *ALL and *SUMMARY can be specified for INFORMATION.

Output information	Name of the S variable	T	Contents	Condition
Name of the access control	var(*LIST).ACCESS-CONTR-NAME	S	' ' *ALL *NO <a-c-l-name>	INF=*ALL/ *SUM
Server saturation or CMX return code	var(*LIST).COMM-ERROR	S	' ' <cmx-rc>	INF=*ALL
Access to the host *ACCESS: access via CMX *NOT-ACCESS: access via CMX not possible *UNDEF: access not defined	var(*LIST).CONN-STA	S	*ACCESS *NOT-ACCESS *UNDEF	INF=*ALL
Logical name of the host	var(*LIST).HOST-NAME	S	' ' <host-name>	INF=*ALL/ *SUM
Job classes assigned to the server object	var(*LIST).PRINT-JOB-CLASS	S	*ANY 1..255	INF=*ALL
Logical name of the server	var(*LIST).SERVER-NAME	S	<server-name>	INF=*ALL/ *SUM
Server status *ATTACH: jobs from remote hosts can be processed *DETACH: remote hosts cannot be processed on this server	var(*LIST).SERVER-STA	S	*ATTACH *DETACH	INF=*ALL

Examples

*Output for a single server with INFORMATION=*ALL and no further selection:*

```
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>
```

Explanation

- Server S1 is connected to host D000ZE01.
- The access control list ACCESS1 specifies which users may or may not access the server.
- Print jobs whose job class is 115, 120 or 208 can be processed by the server S1.
- The host to which the server is connected has not been detached from the local cluster, it is in the “ATTACHED” status.
- The host to which the server is connected cannot be accessed via CMX (error <cmx rc> has been reported by CMX).

*Output for a list of servers with INFORMATION=*SUMMARY and no further selection:*

```
SERVER-NAME HOST-NAME ACCESS
1. S1          D000ZE01 ACCESS1
2. S2          D000ZE02 *NO
3. S3          D000ZE03 *ALL
```

Explanation

1. Server S1 is connected to host D000ZE01. The access control list ACCESS1 specifies which users may or may not access the server S1.
2. Server S2 is connected to host D000ZE02. No user may access S2.
3. Server S3 is connected to host D000ZE03. All users may access S3.

SHOW-PRINT-JOB-ATTRIBUTES

Request information on print job operands

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-PRINT-JOB-ATTRIBUTES command requests information on the print job operands specified in the PRINT-DOCUMENT command. The command should be used in conjunction with the MODIFY-PRINT-JOB-ATTRIBUTES command, since SHOW-PRINT-JOB-ATTRIBUTES only displays the attributes of those operands that can be modified using MODIFY (except for entries such as the file name or MONJV, which cannot be changed).

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-IDENTIFICATION = *TSN(...)				
TSN =	X	X	X	X
CLUSTER-NAME =	X			
JOB-IDENTIFICATION = *SERVER-TSN(...)	X			
JOB-IDENTIFICATION = *MONJV(...)	X	X	X	X
JOB-IDENTIFICATION = *FOREIGN(...)	X			
INFORMATION =	X	X	X	X

Format

SHOW-PRINT-JOB-ATTRIBUTES
<p>JOB-IDENTIFICATION = *TSN (...) / *SERVER-TSN(...) / *MONJV(...) / *FOREIGN(...)</p> <p>*TSN(...)</p> <ul style="list-style-type: none"> TSN = <alphanum-name 1..4> ,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8> <p>*SERVER-TSN(...)</p> <ul style="list-style-type: none"> TSN = <alphanum-name 1..4> ,SERVER-NAME = <alphanum-name 1..8> <p>*MONJV(...)</p> <ul style="list-style-type: none"> MONJV = <filename 1..54 without-gen-vers> <p>*FOREIGN(...)</p> <ul style="list-style-type: none"> IDENTIFICATION = <integer 1..2147483647> ,CLUSTER-NAME = <alphanum-name 1..8> <p>,INFORMATION = *ALL / list-poss(5): *DOCUMENT-PART / *DOCUMENT-FORMAT / *PRINT-JOB-CONTROL / *LAYOUT-CONTROL / *RESOURCES-DESCRIPTION / *TO-PRINTER</p>

Operands

JOB-IDENTIFICATION = *TSN(...) / *SERVER-TSN(...) / *MONJV(...) / *FOREIGN(...)

Specifies how the job is identified.

JOB-IDENTIFICATION = *TSN(...)

The print job is identified by its local TSN.

TSN = <alphanum-name 1..4>

TSN of the job to be displayed.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies the cluster in which the print job is processed. Only BS2000 clusters can be specified. The TSN is the local TSN at the gateway of the addressed BS2000 cluster.

JOB-IDENTIFICATION = *SERVER-TSN(...)

The print job is identified by its TSN on the server.

TSN = <alphanum-name 1..4>

TSN of the job to be displayed on the server.

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

Name of the server on which the print job can be addressed by its TSN.

JOB-IDENTIFICATION = *MONJV(...)

The print job is identified by its monitoring job variable.

MONJV = <filename 1..54 without-gen-vers>

This operand allows a print job to be addressed by its monitoring job variable, provided the specified MONJV is accessible on the host at which the command is issued.

JOB-IDENTIFICATION = *FOREIGN(...)

This operand allows a print job to be addressed in a Xprint domain.

IDENTIFICATION = <integer 1..2147483647>

The print job is specified via its local ID in the Xprint domain.

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

Specifies the Xprint domain in which the print job is processed. For details of the operands allowed for addressing a Xprint domain, see the "[Distributed Print Services \(BS2000/OSD\)](#)" manual.

INFORMATION = *ALL / list-poss(5): *DOCUMENT-PART / *DOCUMENT-FORMAT / *PRINT-JOB-CONTROL / *LAYOUT-CONTROL / *RESOURCES-DESCRIPTION / *TO-PRINTER

This operand allows you to select which information is to be output.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
2	0	SCP1005	Output interrupted
	32	SCP0974	System error. Command rejected
4	64	SCP0976	Invalid operand value
6	128	CMD2241	DPRINTCL subsystem not loaded
1	128	SPS0266	SPOOL subsystem/SPOOL administrator task not available
2	0	SCP0892	TSN not found or command processing not permitted
8	128	CMD2241	DPRINTSV subsystem not loaded

Notes

1. If a field does not contain any relevant information, it is filled with blanks.
2. In the case of print requests with FAMILY=YES, only the file name or MONJV of the first member of the family is output.
3. POSIX path names are restricted to 54 characters.
4. For print jobs which are processed in an Xprint domain, a special output format is supported (see below).
5. The server name is shortened to 8 characters (for UNIX print jobs).

Output

Within BS2000

Below is the output format of the SHOW-PRINT-JOB-ATTRIBUTES command. This is, however, not the complete format but only the lines or output fields which correspond to the operands specified in PRINT-DOCUMENT (see also the explanation below). The output fields also correspond to the operands of the PRINT-DOCUMENT command. Their meanings are described there (see [page 154](#) ff).

```

      TSN          : @@@@ (@@@@) SERVER-NAME : @@@@@@@@ STATE          : @@@
(1) FILE-NAME    : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1) FILE-NAME    : ( LIB : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                ELEM : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                ( VERS : @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ )
(1)                TYP  : @@@@@@@@
      ADD-COPIES  : ###          LOCK-FILE  : @@@@
(1) DEL-AFTER-PR : @@@@
(1) DEL-AFTER-PR : @@@@@@@@ (LINE-TRUNC : @@@@@@@)
----- DOCUMENT-PART -----
(1) INPUT-SECT   : *WHOLE-FILE
(1) INPUT-SEC    : (SECTION-ID : (@)@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                SECTION-POS: ####)
(1) INPUT-PART   : *ALL
(1) INPUT-PART   : FIRST-RECORD : *BEGIN-OF-FILE
(1) INPUT-PART   : FIRST-RECORD : @@@@@@@@@@@@@@@
(1)                (STRING : (@)@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                POSITION: #### OCCURRENCE : #####)
(1)                LAST-RECORD : *END-OF-FILE
(1)                LAST-RECORD : @@@@@@@@@@@@@@@
(1)                (STRING : (@)@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
(1)                POSITION #### OCCURRENCE : #####)
(1) RECORD-PART : *ALL
(1) RECORD-PART : (FIRST-CHAR : @@@@ LAST-CHAR : @@@@ )
(1) OUTPUT-PART : *ALL
(1) OUTPUT-PART : (FROM : @@@@@@@@@@@@@@@ TO : @@@@@@@@@@@@@@ DIMENSION : @@@@@ )
(1) OUTPUT-PART : LAST (LAST : @@@@@@@@@@@@@@@ DIMENSION : @@@@@ )
----- DOCUMENT-FORMAT -----
(2) DOC-FORMAT   : *TEXT
(2) LINE-P-PAGE  : ####          HEADER-LINE : @@@@,@@@@,@@@@
(1) LINE-SPACING : #
(1) LINE-SPACING : @@@@@@@@@@@@@@@@@@@@@@@ (CONTROL-CHAR-POS : ####)
(2) OUTPUT-FORM  : @@@@@@@@@@@@@@@
(2) DOC-FORMAT   : *PAGE-FORMAT

```


UNIX access

```

IDENTIFICATION : #####
(1) FILE-NAME   : @@@@
(1) FILE-NAME   : ( LIB : @@@@
(1)             ELEM : @@@@
(1)             ( VERS : @@@@
(1)             TYP  : @@@@
(3) SERVER-NAME : @@@@ STATE : @@
    ADD-COPIES  : ###
----- DOCUMENT-PART -----
(1) OUTPUT-PART : *ALL
(1) OUTPUT-PART : ( FR : @@@@ TO : @@@@ DIMENSION : PAGES )
----- DOCUMENT-FORMAT -----
DOC-FORMAT   : *SPECIAL-FORMAT
FORMAT-NAME  : @@@@
----- PRINT-JOB-CONTROL -----
PR-JOB-NAME  : @@@@ PR-JOB-PRIO : @@@@
----- LAYOUT-CONTROL -----
PAGE-COPIES : ### LEFT-MARGIN  : ## ROTATION   : @@@@
----- RESOURCES-DESCRIPTION -----
FORM-NAME   : @@@@
(2) CHAR-SETS : @@@
----- DESTINATION -----
PRINTER-NAME : @@@@

```

Explanation

- (1) Either no line or only one line corresponding to the PRINT-DOCUMENT command issued is output.
- (2) The line is only output if the corresponding operand was specified in the PRINT-DOCUMENT command.
- (3) The server name output is the name of the cluster.
- (4) The SCHEDULING-TIME operand is only shown if it was specified in the PRINT-DOCUMENT command. It is indicated in the form YYYY-MM-DD HH:MMX, where X can have the value S for summer time or W for winter time (e.g. 1998-12-31 23:15W). If the default value *TODAY was specified in the operand, the current date is shown. The date and time are printed in accordance with the time zone of the system on which the command was entered. The displayed values could therefore differ if the client of server is located in another time zone. Consequently, to avoid such inconsistencies, it is advisable to synchronize all system clocks in a distributed environment to the same time zone.
- (5) The line is displayed only if the print job has been filtered.
- (6) Either only the first or the last two lines marked with (6) are displayed.

Output in S variables

The INFORMATION operand of the command defines which S variables are supplied with values. The following can be specified for INFORMATION:

Notation in the command	Abbreviated notation in the table
INFORMATION = *ALL	1
INFORMATION = *DOCUMENT-PART	2
INFORMATION = *LAYOUT-CONTROL	3
INFORMATION = *PRINT-JOB-CONTROL	4
INFORMATION = *TO-PRINTER	5
INFORMATION = *RESOURCE-DESCRIPTION	6
INFORMATION = *DOCUMENT-FORMAT	7

Output information	Name of the S variable	T	Contents	Condition
Number of additional copies	var(*LIST).ADD-COP	S	0..255	1,2,3,4,5,6,7
Scope of character set attributes	var(*LIST).CHAR-SET-ATTR	S	*ALL *RESTRICT	1,6
Name of the character set. Meaningful values out of a list of character sets always start from var(*LIST).CHAR-SET.NAME#2	var(*LIST).CHAR-SET.NAME(*LIST)	S	<char-set-name>	1,6
Number of character set in character set pool	var(*LIST).CHAR-SET.POOL-INDEX	S	0..64	1,6
Name of character set pool	var(*LIST).CHAR-SET.POOL-NAME	S	'' <pool-name>	1,6
Checkpoint processing based on pages (*ON-PAGE) or sections (*ON-SECT-REC)	var(*LIST).CHECK	S	*ON-PAGE *ON-SECT-REC	1,4
Number of the data byte whose contents are interpreted by SPOOL as EBCDIC, ASA, or IBM feed control characters	var(*LIST).CONTR-CHAR-POS	S	0..2040	1,7
Control characters for printers of type HP or HP90 *COMPATIBLE: control characters must be converted for HP or HP90 *HP: specific control characters exist	var(*LIST).CONTR-MODE.CONTR-TYPE	S	'' *COMPATIBLE *HP	1,7
Control character bar must be present at the start of each page	var(*LIST).CONTR-MODE.PAGE-CONTR-CHAR	S	'' *NO *YES	1,7

Output information	Name of the S variable	T	Contents	Condition
Interpretation of control characters	var(*LIST).CONTR-MODE.TYPE	S	' ' *APA *LINE-MODE *LOGIC *NO *PAGE-MODE *PHYS *TRANSPARENT	1,7
Number of the desired header page (specification for system exit routine)	var(*LIST).COV-PAGE.HEAD-EXIT	S	0..2147483639	1,3
Text (first 8 characters) which appears on the header page in oversized characters under the mailing box	var(*LIST).COV-PAGE.HEAD-PAGE	S	' ' <c-string 1..32>	1,3
Number of the desired trailer page (specification for system exit routine)	var(*LIST).COV-PAGE.TRAIL-EXIT	S	0..2147483639	1,3
File is deleted after printing *DESTROY=catalog entry and data are overwritten	var(*LIST).DEL-F	S	*DESTROY *NO *YES	1,2,3,4,5,6,7
Format of the document	var(*LIST).DOC-FORM	S	*PAGE-FORMAT *SPECIAL-FORMAT *TEXT	1,7
Name of the file to be output	var(*LIST).F-NAME	S	' ' <file-name>	1,2,3,4,5,6,7
An APA message page is output in the event of an error	var(*LIST).FAIL-PROCESS.MSG	S	*YES *NO	1,4
Format definition	var(*LIST).FORM-DEF	S	' ' <form-def>	1,6
Name of the form	var(*LIST).FORM-NAME	S	' ' <form-name>	1,6
Content type of the document (Dprint)	var(*LIST).FORMAT-NAME	S	' ' <format-name>	1,7
Structure of the header	var(*LIST).HEAD-LINE(*LIST)	S	' ' *DATE *FIRST *NO *PAGE	1,7
Xprint ID of the job	var(*LIST).IDENTIFICATION	S	<identification>	1,2,3,4,5,6,7
Number of the data record containing the FIRST-RECORD string	var(*LIST).INPUT-PART.FIRST-REC.OCCUR	S	0..32767	1,2
Position of the specified string within the first data record	var(*LIST).INPUT-PART.FIRST-REC.POS	S	0..2047	1,2

Output information	Name of the S variable	T	Contents	Condition
String; output begins with the data record containing this string	var(*LIST).INPUT-PART.FIRST-REC.STRING	S	' ' <string-id>	1,2
Specified string contains printable characters (C) or hexadecimal characters (X); output begins with the data record containing this string	var(*LIST).INPUT-PART.FIRST-REC.STRING-TYPE	S	C X	1,2
Type of print start within the first data record	var(*LIST).INPUT-PART.FIRST-REC.TYPE	S	*BEGIN-OF-FILE *BY-STRING-ID 0..2147483647	1,2
Number of the data record containing the LAST-RECORD string	var(*LIST).INPUT-PART.LAST-REC.OCCUR	S	0..32767	1,2
Position of the specified string within the last data record	var(*LIST).INPUT-PART.LAST-REC.POS	S	0..2047	1,2
String; output ends with the data record containing this string	var(*LIST).INPUT-PART.LAST-REC.STRING	S	' ' <string-id>	1,2
Specified string contains printable characters (C) or hexadecimal characters (X); output ends with the data record containing this string	var(*LIST).INPUT-PART.LAST-REC.STRING-TYPE	S	C X	1,2
Type of print start within the last data record	var(*LIST).INPUT-PART.LAST-REC.TYPE	S	*BY-STRING-ID *END-OF-FILE 0..21474893647	1,2
Selection of the data records from the input file to be processed	var(*LIST).INPUT-PART.SEL	S	' ' *ALL	1,2
File mark for structuring the input file	var(*LIST).INPUT-SECT.SECT-ID	S	' ' <section id>	1,2
Specified file mark contains printable characters (C) or hexadecimal characters (X); the input file is structured with this file mark	var(*LIST).INPUT-SECT.SECT-ID-TYPE	S	C X	1,2
Position of the file mark	var(*LIST).INPUT-SECT.SECT-POS	S	0..2047	1,2
The whole input file is not structured	var(*LIST).INPUT-SECT.SEL	S	' ' *WHOLE-FILE	1,2

Output information	Name of the S variable	T	Contents	Condition
Format of the paper input tray	var(*LIST).INPUT-TRAY-FORM	S	' ' *A3 *A4 *A5 *B4 *B5 *COM-10 *C5 *DL *DOUBLE-LETTER *EXEC *FOLIO *INVOICE *LEGAL *LETTER *MANUAL *MONARCH *A3-UNCUT *A4-UNCUT *LEDGER	1,3
Number of the paper input tray	var(*LIST).INPUT-TRAY-NUM	S	' ' *BY-FORMAT *IGNORE 1..9	1,3
Print direction of the characters for the languages Arabic and Farsi	var(*LIST).LANGUAGE-MODE	S	' ' *LEFT-TO-RIGHT *RIGHT-TO-LEFT	1,3
Document contains the language extensions Arabic or Farsi	var(*LIST).LANGUAGE-NAME	S	' ' *ARABIC *FARSI	1,3
Number of columns by which the output text is indented	var(*LIST).LEFT-MARGIN	S	0..31	1,3
Setting for the left offset	var(*LIST).LEFT-OFFSET	S	' ' *IGNORE <left-offset>	1,3
Name of the PLAM library element	var(*LIST).LIB.ELEM	S	' ' <element-name>	1,2,3,4,5,6,7
Name of the PLAM library	var(*LIST).LIB.LIB	S	' ' <lib-name>	1,2,3,4,5,6,7
Type of the PLAM library element	var(*LIST).LIB.TYPE	S	' ' <element-type>	1,2,3,4,5,6,7
Version of the PLAM library element	var(*LIST).LIB.VERSION	S	' ' <element-version>	1,2,3,4,5,6,7
Number of lines per print page	var(*LIST).LPP	S	0..32767	1,7

Output information	Name of the S variable	T	Contents	Condition
Type of the printer control characters	var(*LIST).LINE-SPACING	S	' ' 1 2 3 *BY-ASA-CONTR *BY-EBCDIC-CONTR *BY-IBM-CONTR	1,7
Behavior if lines are truncated *IGNORE=spoolout job continues, file is deleted *KEEP-FILE=spoolout job continues, file is not deleted	var(*LIST).LINE-TRUNC	S	' ' *IGNORE *KEEP-FILE	1,2,3,4,5,6,7
Protection of the file while the spoolout job is in the wait state	var(*LIST).LOCK-F	S	*NO *YES	1,2,3,4,5,6,7
Name of the loop that controls the feed	var(*LIST).LOOP	S	*STD <loop-name>	1,6
Name of the job variable in which the information on job processing is stored	var(*LIST).MONJV	S	' ' <monjv>	1,4
Output format of the data records *CHAR = in character format *HEX = in character format and in hexadecimal notation	var(*LIST).OUT-FORM	S	' ' *CHARACTER *HEXADECIMAL	1,7
Number of the paper output tray	var(*LIST).OUT-TRAY-NUM	S	' ' *IGNORE *SORTER 0..9	1,3
A section of the file to be printed is selected via logical lines or pages	var(*LIST).OUTPUT-PART.DIM	S	' ' *LINES *PAGES	1,2
Number of the logical line or page as of which the printout begins	var(*LIST).OUTPUT-PART.FROM	S	*BEGIN-OF-FILE 0..2147483647	1,2
Number of the last logical line or page	var(*LIST).OUTPUT-PART.LAST	S	0..2147483647	1,2
Scope of the file to be output based on logical lines or pages	var(*LIST).OUTPUT-PART.SEL	S	*ALL *LAST *RANGE	1,2
Number of the logical line or page with which the printout ends	var(*LIST).OUTPUT-PART.TO	S	*END-OF-FILE 0..2147483647	1,2
Name of the EFO data overlay used for the output	var(*LIST).OVERLAY-RESOURCE. ELECT-O	S	*NONE <overlay-name>	1,6
Name of the FOB data overlay used for the output	var(*LIST).OVERLAY-RESOURCE.FOB	S	" <fob-name>	1,6

Output information	Name of the S variable	T	Contents	Condition
ID number of the overlay (or APA overlay) used on the front of the page	var(*LIST).OVERLAY-RESOURCE. OVERLAY.FACE	S	*NONE 1..127 0 <alphanum 1..8 for APA>	1,6
ID number of the overlay (or APA overlay) used on the back of the page	var(*LIST).OVERLAY-RESOURCE. OVERLAY.REV	S	*NONE 1..127 0 <alphanum 1..8 for APA>	1,6
Number of copies per page, i.e. how often each page is repeated consecutively	var(*LIST).PAGE-COP	S	0..255	1,3
Definition of the print page	var(*LIST).PAGE-DEF	S	' ' <page-def>	1,6
TSN of the spoolout job	var(*LIST).PARTNER-TSN	S	<tsn>	1,2,3,4,5,6,7
Job class for the spoolout job	var(*LIST).PRINT-JOB-CLASS	S	0..255	1,4
Job name for the spoolout job	var(*LIST).PRINT-JOB-NAME	S	' ' <spool-name>	1,4
Priority of the spoolout job	var(*LIST).PRINT-JOB-PRIO	S	30..255	1,4
Printer type	var(*LIST).PRINT-TYPE	S	' ' <printer-type>	1,5
Name of the printer	var(*LIST).PRINTER-NAME	S	<printer- name> *CENTRAL	1,5
Byte number (record column) as of which the data records of the file are output	var(*LIST).REC-PART.FIRST-CHAR	S	0..32767	1,2
Byte number (record column) up to which the data records of the file are output	var(*LIST).REC-PART.LAST-CHAR	S	0..32767	1,2
Type of restriction of the output records to a subsection of the input records *ALL = input record is output as of column 1 until the end of the record or print line	var(*LIST).REC-PART.SEL	S	' ' *ALL	1,2
Redirection of the spoolout job to a different printer is allowed	var(*LIST).REDIRECT	S	*YES *NO	1,5
Origin of the print resources for the spoolout job	var(*LIST).RESOURCE-LOC	S	*HOME *SERVER	1,6

Output information	Name of the S variable	T	Contents	Condition
Rotation of the pages to be printed *BY-CONTR-CODE=control characters for page rotation are interpreted *NO = no page rotation 0 through 270 = clockwise rotation of the print page by the specified number of degrees	var(*LIST).ROT	S	' ' *BY-CONTR-CODE *NO 0 180 270 90	1,3
Name of the loop with which the feed for the rotated pages to be output is controlled; only for HP printers and HP90 printers with page rotation module	var(*LIST).ROT-LOOP	S	*STD <rot-loop-name>	1,6
Earliest date at which the print job can be executed	var(*LIST).SCHEDULING.DATE	S	*NONE <YYYY-MM-DD>	1,4
Earliest time at which the print job can be executed	var(*LIST).SCHEDULING.TIME	S	*NONE <HH:MM>	1,4
Information on the season	var(*LIST).SCHEDULING.SEASON	S	*NONE *SUMMER *WINTER	1,4
Name of the server	var(*LIST).SERVER-NAME	S	' ' <server-name>	1,2,3,4,5,6,7
Sort mode	var(*LIST).SORT-MODE	S	' ' *AUTOMATIC *COLLATE *GROUP *NO *STACKER	1,3
Status of the job	var(*LIST).STA	S	*ACTIVE *DIR *FT *KEEP *PRE *TRD *TRT *WFT *WP *WAIT	1,2,3,4,5,6,7
Fonts are selected for print page layout via control characters in the text	var(*LIST).TAB-REF-CHAR	S	' ' *NO *YES	1,3
Name of the target printer corresponding to the printer name where a filtered print job is or will be processed (SPOOL or RSO print job).	var(*LIST).TARGET-PRINTER-NAME	S	<printer-name> ' '	1,5

Output information	Name of the S variable	T	Contents	Condition
Setting for the top offset	var(*LIST).TOP-OFFSET	S	' ' *IGNORE <top-offset>	1,3
Name of the file containing the code conversion table	var(*LIST).TRANSL-TAB.F	S	' ' <filename>	1,6
Name of the code conversion table	var(*LIST).TRANSL-TAB.NAME	S	' ' <transl-tab-name>	1,6
TSN of the print job	var(*LIST).TSN	S	<tsn>	1,2,3,4,5,6,7
Printing also takes place on the back of the print page *NO = single-sided *YES= double-sided *TUMBLE= double-sided, page is turned over from top to bottom	var(*LIST).TWO-SIDED	S	' ' *NO *TUMBLE *YES	1,3
Name of the user file containing self-generated loops, character sets, overlays, etc.	var(*LIST).USER-RESOURCE-F	S	' ' <filename>	1,6
Assignment of this job to a virtual printer	var(*LIST).VIRTUAL-PRINTER	S	'*ALLOWED' *'NOT-ALLOWED' *'MUST'	1,5
Name of the virtual printer	var(*LIST).VIRTUAL-PRINTER-NAME	S	' ' <name>	1,5
Contents of the character string which is also to be sent to the virtual printer	var(*LIST).VIRTUAL-PRINTER-STRING	S	' ' *'NONE ' <string>	1,5

SHOW-PRINT-JOB-STATUS

Request information on print jobs

Domain: SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES

User group: Nonprivileged users

Privileges: OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

Note

The SHOW-PRINT-JOB-STATUS command corresponds to the SHOW-SPOOL-JOB-STATUS command; the command name SHOW-SPOOL-JOB-STATUS is still accepted as an alias.

The SHOW-PRINT-JOB-STATUS command requests information on print jobs. The print jobs can be selected by specifying the server involved and the cluster in which they are processed. The operand INFORMATION=*DISTRIBUTED allows you to request client and server information for the specified print job.

The following table shows which operands can be used with which subsystem:

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
INFORMATION =	X	X	X	X
INFORMATION = *ORIGIN	X	X	X	X
INFORMATION = *DESTINATION	X	X	X	X
INFORMATION = *TRAITS	X	X	X	X
INFORMATION = *SUMMARY	X	X	X	X
INFORMATION = *DISTRIBUTED	X	X	X	X
INFORMATION = *SPOOL-FILTER	X	X	X	X
INFORMATION = *RSO-FILTER	X	X	X	X
CLUSTER-NAME =	X			
OUTPUT =	X	X	X	X
SELECT = STD(*ALL)	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
SELECT = *PARAMETERS(...)	X	X	X	X
SPOOLOUT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low> / *NONE	X	X	X	X
USER-IDENTIFICATION = *STD / *OWN / <alphanum-name 1..8 with-wild(24)> / *ALL / list-poss(16): <name 1..8>	X	X	X	X
HOST-NAME =	X			
SERVER-NAME =	X			
FORM-NAME =	X	X	X	X
TSN =	X	X	X	X
IDENTIFICATION =	X			
SERVER-TSN =	X			
FORMS-OVERLAY =	X		X	
SPOOLOUT-CLASS =	X	X	X	X
ACCOUNT =	X	X	X	X
VIRTUAL-PRINTER-NAME =	X		X	X
DESTINATION = *ALL / *MANAGED-DEVICES(...) / *DEVICE(...) / <alphanum-name 1..8 with-wild(24)> / list-poss(16):<alphanum-name 1..8>	X	X	X	X
DESTINATION = *LOCAL(...)	X		X	X
DESTINATION = *REMOTE(...)		X		
DESTINATION = *CENTRAL(...)	X		X	X
FORMS-OVERLAY-BUFFER =	X		X	X
CHARACTER-SET-NUMBER =	X	X	X	
PRIORITY =	X	X	X	X
ROTATION =	X	X	X	X

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
JOB-TYPE = *ALL / list- poss(10): *WAIT / *ACTIVE / *KEEP / *REPLAY / *WAIT- PREPROCESSING / *PREPROCESSING / *WAIT-FILE-TRANSFER / *FILE-TRANSFER / *BEFORE- APA-PRINT / *AFTER- APA-PRINT	X	X	X	X
FORMAT-NAME =	X	X	X	X
EXCEPT = *NONE	X	X	X	X
EXCEPT = *PARAMETERS(...)	X	X	X	X
SPOOLOUT-NAME =	X	X	X	X
USER-IDENTIFICATION =	X	X	X	X
HOST-NAME =	X			
SERVER-NAME =	X			
FORM-NAME =	X	X	X	X
TSN =	X	X	X	X
SERVER-TSN =	X			
FORMS-OVERLAY =	X		X	
SPOOLOUT-CLASS =	X	X	X	X
ACCOUNT =	X	X	X	X
VIRTUAL-PRINTER-NAME =	X	X	X	X
DESTINATION =	X	X	X	X
FORMAT-NAME =	X	X	X	X

Format

(part 1 of 4)

SHOW-PRINT-JOB-STATUS

```

INFORMATION = *ORIGIN / *DESTINATION / *TRAITS / *SUMMARY / *DISTRIBUTED /
                *SPOOL-FILTER / *RSO-FILTER
, CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
, OUTPUT = *SYSOUT / *SYSLST
, SELECT = *PARAMETERS (...) / *STD(*ALL)
    *PARAMETERS(...)
        |
        | SPOOLOUT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
        | <alphanum-name 1..8> / <c-string 1..8 with-low> / *NONE
        |
        | USER-IDENTIFICATION = *STD / *ALL / *OWN / <alphanum-name 1..8 with-wild(24)> /
        | list-poss(16): <name 1..8> / <c-string 1..8 with-low>
        |
        | HOST-NAME = *HOME / *ALL / <alphanum-name 1..8 with-wild(24)> /
        | list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
        |
        | SERVER-NAME = *STD / *HOME / *ALL / <alphanum-name 1..8 with-wild(24)> /
        | list-poss(16): <alphanum-name 1..8>
        |
        | FORM-NAME = *ALL / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>
        |
        | TSN = *ALL / list-poss(16): <alphanum-name 1..4>
        |
        | IDENTIFICATION = *ALL / <integer 1..2147483647>
        |
        | SERVER-TSN = *ALL / list-poss(16): <alphanum-name 1..4>
        |
        | SPOOLOUT-CLASS = *ALL / list-poss(16): <integer 1..255>
        |
        | ACCOUNT = *ALL / list-poss(16): <alphanum-name 1..8>
        |
        | VIRTUAL-PRINTER-NAME = *ALL / list-poss(16): <alphanum-name 1..8>
        |
        | DESTINATION = *ALL / *LOCAL(...) / *REMOTE(...) / *CENTRAL(...) / *MANAGED-DEVICES(...) /
        | *DEVICE(...) / <alphanum-name 1..8 with-wild(24)> /
        | list-poss(16): <alphanum-name 1..8>
        |
        | *LOCAL(...)
        | |
        | | SELECTION-TYPE = *MAY / *MUST
        | |
        | | DEVICE-TYPE = *ALL / list-poss(16): * / HP-PRINTER / *HP90-PRINTER /
        | | *LP-PRINTER / *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER /
        | | *TAPE / *2050-APA-PRINTER / *2090-APA-PRINTER / *2090-TWIN-PRINTER /
        | | *VIRTUAL-PRINTER / *PCL-PRINTER

```

continued ➔

REMOTE(...)*SELECTION-TYPE = *MAY / *MUST**

,DEVICE-TYPE = *ALL / list-poss(16): *DJET-REMOTE-PRINTER /
***2030-PCL-REMOTE-PRINTER / *4011-PCL-REMOTE-PRINTER /**
***4812-REMOTE-PRINTER /*4813-REMOTE-PRINTER /**
***4814-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-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 /**
***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**

CENTRAL(...)*SELECTION-TYPE = *MAY / *MUST**

,DEVICE-TYPE = *ALL / list-poss(16): *HP-PRINTER / *HP90-PRINTER /
***LP-PRINTER /*LP-EMULATED-PRINTER /*LP48-PRINTER /*LP65-PRINTER /**
***TAPE /*2050-APA-PRINTER /*2090-APA-PRINTER /*2090-TWIN-PRINTER /**
***VIRTUAL-PRINTER /*PCL-PRINTER**

MANAGED-DEVICES(...)*SELECTION-TYPE = *MAY / *MUST**

,DEVICE-TYPE = *ALL / list-poss(16): *DJET-REMOTE-PRINTER /
***2030-PCL-REMOTE-PRINTER /*4011-PCL-REMOTE-PRINTER /**
***4812-REMOTE-PRINTER /*4813-REMOTE-PRINTER /**
***4814-REMOTE-PRINTER /*4818-PCL-REMOTE-PRINTER /**
***4821-PCL-REMOTE-PRINTER /*4822-PCL-REMOTE-PRINTER /**
***4824-PCL-REMOTE-PRINTER /*4825-PCL-REMOTE-PRINTER /**
***8121-REMOTE-PRINTER /*9000-REMOTE-PRINTER /**

continued →

(part 3 of 4)

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*9000-EPFX-REMOTE-PRINTER / *9000-EPLQ-REMOTE-PRINTER /
*9000-EPSQ-REMOTE-PRINTER / *9000-PCL-REMOTE-PRINTER /
*9000-PRO-REMOTE-PRINTER / *9000-PS-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(...)
  |
  | NAME = *OWN / *ALL / <alphanum-name 1..8 with-wild(24)> /
  | list-poss(16): <alphanum-name 1..8>
, FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)
  *RANGE(...)
  |
  | LOW = 0 / <integer 0..32767>
  | , HIGH = 32767 / <integer 0..32767>
, CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)
  *RANGE(...)
  |
  | LOW = 1 / <integer 1..32767>
  | , HIGH = 32767 / <integer 1..32767>
, PRIORITY = *ALL / *RANGE(...)
  *RANGE(...)
  |
  | FROM = 30 / <integer 30..255>
  | , TO = 255 / <integer 30..255>
, ROTATION = *ANY / *YES / *NO
, JOB-TYPE = *ALL / list-poss(10): *WAIT / *ACTIVE / *KEEP / *REPLAY /
  *WAIT-PREPROCESSING / *PREPROCESSING / *BEFORE-APA-PRINT /
  *AFTER-APA-PRINT / *WAIT-FILE-TRANSFER / *FILE-TRANSFER
FORMAT-NAME = *ALL / list-poss(16): *HP / *SPDS / *TEXT / *PCL / *PLAIN-TEXT /
<c-string 1..63 with-low>

```

continued →


```

,EXCEPT = *NONE / *PARAMETERS(...)
  *PARAMETERS(...)
    SPOOLOUT-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> /
      list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
    ,USER-IDENTIFICATION = *NONE / <alphanum-name 1..8 with-wild(24)> /
      list-poss(16): <name 1..8> / <c-string 1..8 with-low>
    ,HOST-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> /
      list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
    ,SERVER-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
      <alphanum-name 1..8>
    ,FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>
    ,TSN = *NONE / list-poss(16): <alphanum-name 1..4>
    ,SERVER-TSN = *NONE / list-poss(16): <alphanum-name 1..4>
    ,FORMS-OVERLAY = *NONE / list-poss(16): <alphanum-name 2..2>
    ,SPOOLOUT-CLASS = *NONE / list-poss(16): <integer 1..255>
    ,ACCOUNT = *NONE / list-poss(16): <alphanum-name 1..8>
    ,VIRTUAL-PRINTER-NAME = *NONE / list-poss(16): <alphanum-name 1..8>
    ,DESTINATION = *NONE / *DEVICE(...) / *CENTRAL / <alphanum-name 1..8 with-wild(24)> /
      list-poss(16): <alphanum-name 1..8>
      *DEVICE(...)
        | NAME = *NONE / <alphanum-name 1..24 with-wild> / list-poss(16): <alphanum-name 1..8>
    ,FORMAT-NAME = *NONE / list-poss(16): *HP / *SPDS / *TEXT / *PCL / *PLAIN-TEXT /
      <c-string 1..63 with-low>

```

Operands

INFORMATION =

Types of information on spoolout jobs to be output to SYSOUT or SYSLST (OUTPUT operand). Although all available information on all spoolout jobs can be requested simultaneously, you should use this operand (INFORMATION) to select a subset of the available information to avoid cluttering up the screen.

INFORMATION = *ORIGIN

Outputs the following information on the origin of the spoolout jobs:

- TSN
- name of the server on which the job is processed
- user ID

- account number of the user who generated the spoolout job
- number of specified page copies
- number of specified file copies
- spoolout name of the job
- type and size of the file
- name of the client host
- TSN of the job issuing the job

This information is primarily of interest to the nonprivileged user.

INFORMATION = *DESTINATION

Outputs information on the output medium of the spoolout job:

- TSN
- name of the server on which the job is processed
- job type (RSO or local SPOOL)
- name of the device
- name of the device pool
- device types
- status and type of job (WAIT,ACTIVE,KEEP,...)
- RSO error code

This information is primarily of interest to the device administrator.

INFORMATION = *TRAITS

Outputs information on the following attributes of the spoolout jobs:

- priority
- form name
- spoolout class
- number of character sets required
- size of the FOB data overlay required
- name of the film overlay required
- use of the page rotation module
- output control (CONTROL)
- name of the server on which the job is processed
- location of the resources

This information is primarily of interest to systems support, since it relates to the attributes (traits) of the local SPOOL devices.

INFORMATION = *SUMMARY

Outputs the number of spoolout jobs selected and the number of PAM pages provided for these jobs.

INFORMATION = *DISTRIBUTED

Global information on print jobs is output:

- TSN on the local and remote host (client and server TSN)
- name of the client host
- name of the server on which the job is processed
- job type (local, distributed, between clusters)
- information on the requesting user ID

INFORMATION = *SPOOL-FILTER/*RSO-FILTER

These values can be used to display selective information on the destination and status of a print job. The list of device types corresponds to those on which the print job can be executed after applying the filter. Depending on the filter, the print jobs can be executed by SPOOL (if INFORMATION = *SPOOL-FILTER is specified) or by RSO (if INFORMATION = *RSO-FILTER is specified). Both values can be specified in coordination with INFORMATION=*DESTINATION if the field ERMSG (error message) contains 'FILTER' or 'DEL/FLT'.

Output information:

- TSN
- name of the server on which the print job is currently being executed
- job type (RSO or local SPOOL)
- device name
- printer pool name
- device type
- status and type of the order (WAIT,ACTIVE,KEEP,...)

Error code

Error message

Note

These details are primarily only of interest to the device manager and to systems support (PRINT-SERVICE-ADMINISTRATION).

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Name of the cluster in which the command is executed. If a UNIX cluster is specified, only a subset of operands and values is allowed for selection of the print job. For more detailed information, see the chapter “Dprint management facilities and activities” in the [“Distributed Print Services \(BS2000/OSD\)”](#) manual.

OUTPUT = *SYSOUT / *SYSLST

Specifies whether the information is to be output to SYSOUT (screen) or SYSLST.

SELECT = *PARAMETERS(...) / *STD(*ALL)

Specifies whether information is to be output on all print jobs, which corresponds to the default value, or only on those that fulfill the specified criteria (SELECT = *PARAMETERS).

SELECT = *PARAMETERS(...)

Selection criteria for spoolout jobs on which information is to be output.

SPOOLOUT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> /

list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low> / *NONE

Spoolout names of the spoolout jobs on which information is to be output.

USER-IDENTIFICATION = *STD / *OWN / <alphanum-name 1..8 with-wild(24)> /

***ALL / list-poss(16): <name 1..8> / <c-string 1..8 with-low>**

User IDs of the print jobs on which information is to be output. *STD means *ALL for operator tasks and *OWN for all other tasks.

HOST-NAME = *HOME / *ALL / <alphanum-name 1..8 with-wild(24)> /

list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Information is output on print jobs started from the specified hosts.

HOST-NAME = *HOME

Only print jobs started from the local host are selected.

HOST-NAME = *ALL

Information is output on all print jobs of all hosts. Nonprivileged users who specify this value only receive information on their own print jobs.

HOST-NAME = <alphanum-name 1..8 with-wild(24)> /

list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Information is output on print jobs started from the specified hosts. Nonprivileged users do not receive any information if they specify a remote host; they can only obtain information on their own print jobs.

SERVER-NAME = *STD / *HOME / *ALL / <alphanum-name 1..8 with-wild(24)> /

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

Information is output on print jobs processed on the specified server.

SERVER-NAME = *STD

*STD is equivalent to *ALL for inter-cluster requirements and *HOME for intra-cluster requirements.

SERVER-NAME = *HOME

Only print jobs on the local server are selected.

SERVER-NAME = *ALL

All print jobs on all available servers are selected.

SERVER-NAME = <alphanum-name 1..8 with-wild(24)> /

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

Only the specified servers are selected, provided they belong to the local cluster.

FORM-NAME = *ALL / <alphanum-name 1..6 with-wild(24)> /

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

Form names of the spoolout jobs on which information is to be output.

TSN = *ALL / list-poss(16): <alphanum-name 1..4>

Task sequence numbers of the spoolout jobs on which information is to be output.

SERVER-TSN = *ALL / list-poss(16): <alphanum-name 1..4>

Server TSN of the print jobs on which information is to be output.

IDENTIFICATION = *ALL / <integer 1..2147483647>>

UNIX print jobs can be addressed via their IDs. In this case, an Xprint domain must be selected. Which other operands and values are allowed in this case is explained in the chapter “Dprint management facilities and activities” in the “[Distributed Print Services \(BS2000/OSD\)](#)” manual.

FORMS-OVERLAY = *ALL / list-poss(16): <alphanum-name 2..2>

Information is to be output on spoolout jobs for which the named physical forms overlays have been specified.

SPOOLOUT-CLASS = *ALL / list-poss(16): <integer 1..255>

Spoolout classes of the spoolout jobs on which information is to be output.

ACCOUNT = *ALL / list-poss(16): <alphanum-name 1..8>

Account numbers of the spoolout jobs on which information is to be output.

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

As soon as the name of a virtual printer is specified, information on all print jobs assigned to that virtual printer is output.

Note

Make sure that the virtual printer name used as a selection criterion corresponds to the one specified with the PRINT-DOCUMENT command (TO-PRINTER(*MUST(NAME=...))).

DESTINATION = *ALL / *LOCAL(...) / *REMOTE(...) / *CENTRAL / *MANAGED-DEVICES(...) / *DEVICE(...) / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>

Information is to be output on the print jobs processed on the specified output media. Information can be requested on:

- all jobs (*ALL)
- jobs for local SPOOL devices (*LOCAL)
- jobs for RSO devices (*REMOTE)
- jobs whose destination is the central printer pool (*CENTRAL)
- jobs for devices managed by the user (*MANAGED-DEVICES)
- jobs for specific devices (*DEVICE)

DESTINATION = *LOCAL(...)

Information is requested on spoolout jobs to be processed on local SPOOL devices.

SELECTION-TYPE = *MAY / *MUST

Selection of local spoolout jobs is restricted to those that may be output on at least one of the specified device types (*MAY) or to those that must be output on one of the specified device types and may not be output on any device type other than the ones specified (*MUST).

DEVICE-TYPE = *ALL / list-poss(16): HP-PRINTER / HP90-PRINTER / LP-PRINTER / LP48-PRINTER / LP-EMULATED-PRINTER / LP65-PRINTER / TAPE / 2050-APA-PRINTER / 2090-APA-PRINTER / 2090-TWIN-PRINTER / *VIRTUAL-PRINTER / *PCL-PRINTER

Device types for local spoolout jobs on which information is requested.

DESTINATION = *REMOTE(...)

Information is requested on spoolout jobs to be processed on RSO devices.

SELECTION-TYPE = *MAY / *MUST

Selection of RSO spoolout jobs is restricted to those that may be output on at least one of the specified device types (*MAY) or to those that must be output on one of the specified device types and may not be output on any device type other than the ones specified (*MUST).

DEVICE-TYPE = *ALL / list-poss(16): *DJET-REMOTE-PRINTER / ...

Device types for RSO jobs about which information is requested. For possible values, see the syntax format.

DESTINATION = *CENTRAL(...)

Information is requested on spoolout jobs to be processed on SPOOL devices belonging to the central printer pool.

SELECTION-TYPE = *MAY / *MUST

Selection of local spoolout jobs is restricted to those that may be output on at least one of the specified device types (*MAY) or to those that must be output on one of the specified device types and may not be output on any device type other than the ones specified (*MUST).

DEVICE-TYPE = *ALL / list-poss(16): HP-PRINTER / HP90-PRINTER / LP-PRINTER / LP48-PRINTER / LP-EMULATED-PRINTER / LP65-PRINTER / TAPE / 2050-APA-PRINTER / 2090-APA-PRINTER / 2090-TWIN-PRINTER / *VIRTUAL-PRINTER / *PCL-PRINTER

Device types for local print jobs about which information is requested.

DESTINATION = *MANAGED-DEVICES(...)

Requests information on jobs for devices that you yourself manage.

SELECTION-TYPE = *MAY / *MUST

Selection of self-managed spoolout jobs is restricted to those that may be output on at least one of the specified device types (MAY) or to those that must be output on one of the specified device types and may not be output on any device type other than the ones specified (MUST).

DEVICE-TYPE = *ALL / list-poss(16): *DJET-REMOTE-PRINTER / ...

Device types for self-administered jobs about which information is requested. For possible values, see the syntax format.

DESTINATION = *DEVICE(...)

Information is requested on spoolout jobs for the devices specified in the substructure.

NAME = *OWN / *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>

Names of the devices on which information is requested. Information will be provided on spoolout jobs for the specified RSO devices.

FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)

Information is to be output on spoolout jobs for which

- a particular FOB data overlay has been specified (*ONLY)
- no FOB data overlay has been specified (*NO)
- FOB data overlays in the specified range have been specified (*RANGE)

If you specify *ANY, the operand does not act as a selection criterion.

FORMS-OVERLAY-BUFFER = *RANGE(...)

FOB range.

LOW = 0 / <integer 0..32767>

Lower limit of the range.

HIGH = 4032 / <integer 0..32767>

Upper limit of the range.

CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)

Information is to be output on spoolout jobs that

- require only one character set (*ONE)
- require a number of character sets within the specified range (*RANGE)

CHARACTER-SET-NUMBER = *RANGE(...)

Range of required character sets.

LOW = 1 / <integer 0..32767>

Lower limit of the range.

HIGH = 32767 / <integer 0..32767>

Upper limit of the range.

PRIORITY = *ALL / *RANGE(...)

Information is to be output on spoolout jobs with priorities within the specified range (*RANGE). If you specify *ALL, the operand does not act as a selection criterion.

PRIORITY = *RANGE(...)

Priority range.

FROM = 30 / <integer 30..255>

Lower limit of the range.

TO = 255 / <integer 30..255>

Upper limit of the range.

ROTATION = *ANY / *YES / *NO

Information is to be output on spoolout jobs for which

- page rotation has been requested in PRINT-DOCUMENT (*YES)
- page rotation has not been requested in PRINT-DOCUMENT (*NO)

If you specify *ANY, the operand does not act as a selection criterion.

JOB-TYPE = *ALL / list-poss(10): *WAIT / *ACTIVE / *KEEP / *REPLAY / *WAIT-PREPROCESSING / *PREPROCESSING / *BEFORE-APA-PRINT / *AFTER-APA-PRINT / *WAIT-FILE-TRANSFER / *FILE-TRANSFER

Information is to be output on the following types of spoolout job:

- waiting spoolout jobs: *WAIT
- active spoolout jobs: *ACTIVE
- suspended spoolout jobs: *KEEP
- spoolout jobs to be output to replay tape: *REPLAY
- waiting SECTION-SPOOLOUT jobs (output section by section): *WAIT-PREPROCESSING
- active SECTION-SPOOLOUT jobs (output section by section): *PREPROCESSING
- *BEFORE-APA (APA printers: job status = “TRANSFERRED”, see also the “[SPOOL \(BS2000/OSD\)](#)” manual)
- *AFTER-APA (APA printers: job status = “TRANSIT”, see also the “[SPS](#)” manual)
- jobs waiting for file transfer: *WAIT-FILE-TRANSFER
- jobs currently undergoing file transfer: *FILE-TRANSFER

FORMAT-NAME = *ALL / list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

Allows print jobs to be included in the selection according to the name of their document format.

FORMAT-NAME = *ALL

Information is output on all print jobs.

FORMAT-NAME = list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

Print jobs whose document format names are on the specified list are included in the selection.

EXCEPT = *NONE / *PARAMETERS(...)

Specifies whether information is to be output on all print jobs or whether jobs with certain attributes (EXCEPT = *PARAMETERS) are to be excluded from output.

EXCEPT = *PARAMETERS(...)

Criteria for print jobs to be excluded from the information output.

SPOOLOUT-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Spoolout names of the spoolout jobs to be excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

USER-IDENTIFICATION = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <name 1..8> / <c-string 1..8 with-low>

User IDs of the print jobs to be excluded from the information output.

If you specify *NONE, the operand does not act as a selection criterion.

HOST-NAME = *NONE / *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Print jobs started from the specified hosts are excluded from the information output. The specified hosts must belong to the local cluster. If you specify *NONE, the operand does not act as a selection criterion.

SERVER-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>

Print jobs to be processed on the specified server are excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>

Form names of the spoolout jobs to be excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

TSN = *NONE / list-poss(16): <alphanum-name 1..4>

Task sequence numbers of the spoolout jobs to be excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

SERVER-TSN = *NONE / list-poss(16): <alphanum-name 1..4>

Print jobs with the specified server TSN are excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

FORMS-OVERLAY = *NONE / list-poss(16): <alphanum-name 2..2>

Spoolout jobs for which these physical forms overlays have been specified are to be excluded from the information output.

SPOOLOUT-CLASS = *NONE / list-poss(16): <integer 1..255>

Spoolout classes of the spoolout jobs to be excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

ACCOUNT = *NONE / list-poss(16): <alphanum-name 1..8>

Account numbers of the spoolout jobs to be excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

VIRTUAL-PRINTER-NAME = *NONE / list-poss(16): <alphanum-name 1..8>

Print jobs which were assigned to the specified virtual printer are removed from the selection.

Note

Make sure that the virtual printer name used as a selection criterion corresponds to the one specified with the PRINT-DOCUMENT command (TO-PRINTER(*MUST(NAME=...))). If you specify *NONE, the operand does not act as a selection criterion.

DESTINATION = *NONE / <alphanum-name 1..8 with-wild(24)> / *DEVICE(...) / *CENTRAL / list-poss(16): <alphanum-name 1..8>

Print jobs to be processed on the specified output media (pool or devices) are excluded from the information output. If you specify *NONE, the operand does not act as a selection criterion.

NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8>

Names of the devices to be excluded from the information output. Information will be excluded for spoolout jobs for the specified RSO devices. If you specify *NONE, the operand does not act as a selection criterion.

FORMAT-NAME = *NONE / list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

Allows print jobs to be removed from the selection according to the name of their document format.

FORMAT-NAME = *NONE

Information on all print jobs is output.

FORMAT-NAME = list-poss(16): *TEXT / *HP / *SPDS / <c-string 1..63 with-low>

Print jobs whose document format names are on the specified list are removed from the selection.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed message: SCP0947
2	0	SCP0932	No corresponding job exists
2	0	SCP1052	One or more servers are not available
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
2	64	SCP0975	No authorization for command
4	64	SCP0976	Invalid operand value Guaranteed messages: SCP1028, SCP1029
6	128	SCP1062	DPRINTCL subsystem not loaded Guaranteed message: SCP1062
1	128	SPS0266	SPOOL subsystem/SPOOL administrator task not available

Notes

1. When INFO=ORIGIN, DESTINATION or TRAITS is specified, the local TSN is displayed in the TSN field, i.e. the TSN assigned to the print job locally. This is either the server TSN (for a print job issued on a remote client and processed on the local server) or the client TSN (for a print job issued on the local client and processed locally or on a remote server). For nonprivileged users and the SPOOL administrator, this has no effect on subsequent processing; i.e. the TSN displayed is the TSN that must be specified in order to cancel, display and modify the print job.
2. For the cluster administrator, this command always displays the TSN at the server end. For other users (nonprivileged users and the SPOOL administrator), if *HOME is displayed in the SERVER field, this means that the print job is processed on the local server and the server TSN is displayed in the TSN field. If not, the client TSN is displayed. In the case of global output, if the fields TSN and P-TSN are identical, this means that the print job is processed by the client's local server.
3. If the DPRINTCL subsystem is not loaded, distributed print jobs issued on a remote server are not displayed. The next time DPRINTCL is loaded, a check establishes whether the print job has been processed by the remote server.

If values other than the defaults are specified for the CLUSTER-NAME and IDENTIFICATION operands when DPRINTCL is not loaded, the command is rejected.

4. If the DPRINTSV subsystem is not loaded, distributed print jobs issued by a remote client to the local server are not displayed. They are restarted the next time DPRINTSV is loaded. For the cluster administrator, the selected jobs are searched for on the server. If SERVER-NAME=*ALL is specified, the jobs of unavailable servers are not displayed.

For nonprivileged users, however, jobs issued to a server are displayed even when this server is not available.

5. If the specified cluster name is not the local cluster, the value `DESTINATION=*ALL` has the same effect as `DESTINATION=*LOCAL`.
6. For the cluster administrator only:
If a server of the cluster from which he or she has requested information on the processed jobs is not available, the information on these jobs is sought by all available clients of the cluster (if the jobs have not already been returned by the server).
7. If the name of the server in the UNIX system is defined with up to 8 characters, it can be assumed that the job ID (global ID) is up to 14 characters long (`<server-name>:integer 1..30000`).
For each output format the server name is output abbreviated to 8 characters.
8. When the execution of a print job is delayed with the `SCHEDULING-TIME` operand of the `PRINT-DOCUMENT` or `MODIFY-PRINT-JOB-ATTRIBUTES` command, the string 'DELAYED' appears in the `ERMSG` field of the `INFO=DESTINATION` output, but only for the jobs in the `WAIT`, `WAIT PRE-PROCESSING` and `WAIT FILE TRANSFER` states. This indicates why the current job is not being currently processed. As soon as the specified scheduling time has passed, 'DELAYED' is no longer displayed.
9. There is no way to select or address print jobs on the basis of their `SCHEDULING-TIME` values.
10. The print jobs for which the value 'FILTERED' is displayed in the error message field are jobs that are currently being filtered. To process such jobs after the filtering process, more precise details on the device type can be obtained with `INFORMATION= *SPOOL-FILTER` or `INFORMATION=*RSO-FILTER`. These details are also displayed by the `SHOW-SPOOL-FILTERS` command.
11. When a print job for which a scheduling time was defined is to be filtered, the value 'DEL/FLT' appears in the error message field.
12. The value `*STD` for the `SELECT` operand has replaced `*ALL`, though `*ALL` is still supported for compatibility reason.
13. If the Dprint cluster administrator defines a `TSN` or if a `SERVER-TSN` is used as the selection criterion, care must be taken to ensure that the `HOST-NAME` and `SERVER-NAME` operands correspond to one another (the default value for both operands is `*HOME`).
14. A more user-friendly way to get the possible device types for a print job is to use the value `*DESTINATION` for the `INFORMATION` operand.

Outputs

There are various output formats depending on what is specified for the INFO operand. The meanings of the output fields are listed alphabetically in a table after the output formats.

Output when INFO=ORIGIN is specified

Within BS2000

```

TSN  SERVER  SP-NAME  RTSN  HOST      USER-ID  ACCOUNT  F-C  P-C  F-T  FCB-T  F-
SIZE
@@@@ @@@@@@@@ @@@@@@@@ @@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@ @@@ @@@
@@@@ @@@@@@
    
```

Access to UNIX

```

IDENTIFICATION SERVER  SP-NAME  HOST      USER-ID  F-C  P-C
#####          @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@ @@@
    
```

Output when INFO=DESTINATION is specified

Within BS2000

```

TSN  SERVER  M STA R  DEVICE  DESTIN  ERMSG  ERMSG  DEVICE TYPE
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@-
@@, @@@@, @@@@, .
                                     @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@, @@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@, @@@@
    
```

Access to UNIX

```

IDENTIFICATION SERVER  STA  DEVICE
#####          @@@@@@@@ @@@ @@@@@@@@
    
```

Output when INFO=TRAITS is specified

Within BS2000

```

TSN  SERVER  PRI  FORM-N  CLAS  C-S-N  F-O-B  F-O  ROT      CONT  RES-LOC
@@@@ @@@@@@@@ @@@ @@@@@@ @@@@ @@@ @@@@ @@@ @@@/@@@ @@@@ @@@@@@
    
```

Access to UNIX

```

IDENTIFICATION SERVER  PRI  FORM-N  ROT
#####          @@@@@@@@ @@@ @@@@@@ @@@
    
```

Output when INFO=DISTRIBUTED is specified

```

TSN  SERVER  P-TSN  J-TYPE  HOST      USER-ID  ACCOUNT  ERCOD   ERMSG
@@@@ @@@@@@@@ @@@@  @@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

```

Output when INFO=SPOOL-FILTER is specified

```

TSN  SERVER  M STA R DEVICE  DESTIN  ERCOD   ERMSG  DEVICE TYPE
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@-
@@, @@@@, @@@@, .

                                         @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@, @@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@, @@@@

```

Output when INFO=RSO-FILTER is specified

```

TSN  SERVER  M STA R DEVICE  DESTIN  ERCOD   ERMSG  DEVICE TYPE
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@-
@@, @@@@, @@@@, .

                                         @@@@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@, @@, @@@@
@@@@ @@@@@@@@ @ @@@ @ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@, @@@@, @@@@, @@@@

```

Meanings of the output fields

Output field	Meaning / contents
ACCOUNT	Account number of the user who issued the command; output only under TSOS and the user's own user ID
C-S-N	In the case of SPOOL jobs for HP and PCL printers: Number of character sets specified for this SPOOL job; in the case of SPOOL jobs for other printer types and RSO jobs, the value in this field is 1.
CLAS	Spoolout class as defined in the JOIN entry (blank if no spoolout class has been defined)
CONT	Control character interpretation specified in PRINT-DOCUMENT for this SPOOL job: PHYS: CONTROL-MODE = *PHYSICAL LOG: CONTROL-MODE = *LOGICAL TRAN: DOCUMENT-FORMAT = *SPECIAL-FORMAT LINE: CONTROL-MODE = *LINE-MODE NO: DOCUMENT-FORMAT = *TEXT
DESTIN	Name of the device pool
DEVICE	Device name of the local or RSO printer
DEVICE TYPE	List of device types (separated by commas) on which the specified job can be processed. Possible values for RSO jobs: 2030-PCL, 4011, 4812, 4813, 4818-PCL, 4821-PCL, 4822-PCL, 4824-PCL, 4825-PCL, 4830-PCL, 4850-PCL, 8121, 9000, 9000-EPFX, 9000-EPLQ, 9000-EPSQ, 9000-PCL, 9000-PRO, 9000-PS, 9001, 9001-31, 9002, 9003, 9004, 9011, 9012, 9013, 9014, 9015, 9021, 9022, 9022-200, 9025, 9026-PCL, 9026-RN, 9043-ANSI, 9044-ANSI, 9046, 9097, 9645, DJET Possible values for SPOOL jobs: HP, HP90, LP, LP-EM, LP48, LP65, TAPE, VIRT, 2050-APA, 2090-APA, 2090-TWIN, PCL
ERCOD	FT error code, POSIX error code or RSO error code
ERMSG	FT error message, POSIX error message or RSO error message. The string 'DELAYED' appears in this field if the execution of a print job is delayed with the SCHEDULING-TIME operand of the PRINT-DOCUMENT or MODIFY-PRINT-JOB-ATTRIBUTES commands, but only for jobs in the WAIT, WAIT PRE-PROCESSING and WAIT FILE TRANSFER states. If 'DELAYED' does not appear here, this means that the scheduling time has passed. If the job is being filtered, the value 'FILTER' appears here. If a print job for which a scheduling time was defined is to be filtered, the value 'DEL/FLT' appears in the error message field.
F-C	Number of copies (FILE COPIES) requested (in the ADDITIONAL-COPIES operand of the PRINT-DOCUMENT command)

Output field	Meaning / contents
FCB-T	FCB type (access method) PAM: PAM file SAM: SAM file ISAM: ISAM file EAM: EAM file TAPE: replay tape file BTAM: BTAM file
FORM-N	Form with which the SPOOL job must be processed
F-O	EFO data overlay (HP90) specified for the SPOOL job or physical overlay specified for the RSO job
F-O-B	Size of the FOB data overlay to be processed for this SPOOL job
F-SIZE	File size in PAM pages (FILE-SIZE)
F-T	File type (FILE TYPE): EAM: EAM file OPT: SYSOPT file DMS: (permanent) user file TMP: temporary user file LST: SYSLST file OUT: SYSOUT file OMF: temporary object module file in EAM area PLM: PLAM library element
HOST	BCAM name of the host on which the command was issued
J-TYPE	Type of the print job: *LOC: job is processed by SPOOL *DIST: job is processed by DPRINT *INTER: job comes from a remote cluster and is processed by DPRINT
M	Job type (MODE): L - local job R - RSO job I - IDOM-Job
P-C	Number of page copies requested (in the PAGE-COPIES operand of the PRINT-DOCUMENT command)
PRI	Priority of the print job
P-TSN	Task sequence number of the print job (only for Distributed Print Services; see the " Distributed Print Services (BS2000/OSD) " manual)
R	* - Job from replay tape in COPY mode (the job can have the status WAIT, KEEP or ACTIVE)
RES-LOC	Specifies whether the resources for processing the print job are used by the client or by the server: *HOME: the resources where checked on the client system *SERVER: the resources where checked on the server

Output field	Meaning / contents
ROT	Only for local SPOOL (page rotation module)
RTSN	TSN of the task issuing the command
SERVER	Logical name of the server that processes the print job (only for Distributed Print Services; see the " Distributed Print Services (BS2000/OSD) " manual)
SP-NAME	Job name of the print job
STA	Job status: WT - WAIT KP - KEEP ACT - ACTIVE DIR - DIRECT (job from replay tape in DIRECT mode, waiting for an output device) WP - WAITING FOR PRE-PROCESSING (print job waits until a pseudo controller is free in order to position on the SECTION record from which a file section is to be output) PRE - IN PRE-PROCESSING (active PRE-PROCESSING job) TRD - TRANSFER (APA printers: job status = "TRANSFERRED") TRT - TRANSIT (APA printers: job status = "TRANSIT") FT - FILE TRANSFER (active file transfer) WFT - WAIT FILE TRANSFER (job waits for file transfer)
TSN	Task sequence number of the print job
USER-ID	User ID of the user who issued the command; output only under TSOS and the user's own user ID

Output in S variables

The INFORMATION operand of the SHOW-PRINT-JOB-STATUS command defines which S variables can be supplied with values. The following entries can be made for INFORMATION:

Notation in the command	Abbreviated notation in the table
INFORMATION = *ORIGIN	INF=ORIG
INFORMATION = *DESTINATION	INF=DEST
INFORMATION = *TRAITS	INF=TRAITS
INFORMATION = *SUMMARY	INF=SUM
INFORMATION = *DISTRIBUTED	INF=DISTR
INFORMATION = *SPOOL-FILTER	INF=SP-FILT
INFORMATION = *RSO-FILTER	INF=RSO-FILT

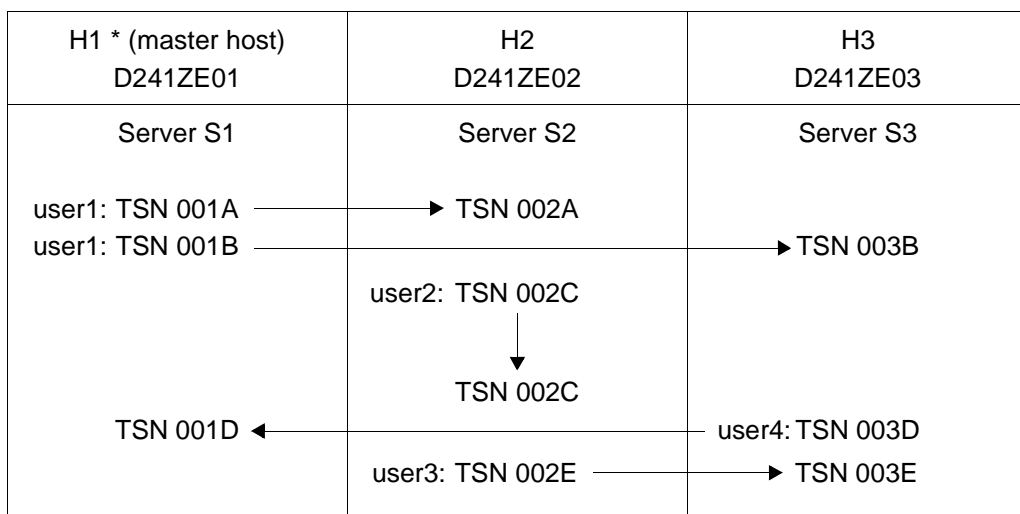
Output information	Name of the S variable	T	Contents	Condition
Access method (FCB type)	var(*LIST).ACCESS-METHOD	S	*BTAM *EAM *ISAM *PAM *SAM *TAPE	INF=ORIG
Account number of the user issuing the command	var(*LIST).ACCOUNT	S	' ' <account>	INF=DISTR/ ORIG
Number of copies requested	var(*LIST).ADD-COP	S	0..255	INF=ORIG
Number of character sets specified for this SPOOL job	var(*LIST).CHAR-SET-NUM	S	1..32767	INF=TRAITS
Interpretation of the control characters	var(*LIST).CONTR-CHAR	S	' ' *APA *LINE *LOG *NO *PHYS *TRAN	INF=TRAITS
Destination of the print job	var(*LIST).DEST	S	' ' *CENTRAL <destination>	INF=DEST/ SP-FILT/ RSO-FILT
Device name of the local or RSO printer	var(*LIST).DEV-NAME	S	' ' <dev-name>	INF=DEST/ SP-FILT/ RSO-FILT
Device type on which the current job is processed	var(*LIST).DEV-TYPE(*LIST)	S	' ' <dev-type>	INF=DEST/ SP-FILT/ RSO-FILT

Output information	Name of the S variable	T	Contents	Condition
Device type on which the current job is processed	var(*LIST).DEV-TYPE(*LIST)	S	' ' *2030-PCL-R-P *2050-APA-PRINT *2090-APA-PRINT *2090-TWIN-PRINT *4011-REM-PRINT *4812-REM-PRINT *4813-REM-PRINT *4818-PCL-PRINT *4821-PCL-PRINT *4822-PCL-PRINT *4824-PCL-PRINT *4825-PCL-PRINT *4830-PCL-PRINT *4850-PCL-PRINT *8121-REM-PRINT *9000-EPFX-R-P *9000-EPLQ-R-P *9000-EPSQ-R-P *9000-PCL-R-P *9000-PRO-R-P *9000-PS-PRINT *9000-REM-PRINT *9001-31-REM-PR *9001-REM-PRINT *9002-REM-PRINT *9003-REM-PRINT *9004-REM-PRINT *9011-REM-PRINT *9012-REM-PRINT *9013-REM-PRINT *9014-REM-PRINT *9015-REM-PRINT *9021-REM-PRINT *9022-200-REM-PR *9022-REM-PRINT *9025-REM-PRINT *9026-PCL-R-P *9026-RN-REM-PR *9097-REM-PRINT *9043-ANSI-R-P *9044-ANSI-R-P *9046-REM-PRINT *9645-REM-PRINT *DJET-REM-PRINT *HP-PRINTER *HP90-PRINTER *LP-EMUL-PRINTER	INF= DEV-TYPE

Output information	Name of the S variable	T	Contents	Condition
Device type on which the current job is processed (continued)	var(*LIST).DEV-TYPE(*LIST)	S	*LP-PRINTER *LP48-PRINTER *LP65-PRINTER *TAPE *VIRTUAL *PCL-PRINTER	INF=DEV-TYPE
RSO, FT or POSIX error code	var(*LIST).ERROR-CODE	S	' ' <error-code>	INF=DEST/ SP-FILT/ RSO-FILT/ DISTR
RSO, FT or POSIX error message	var(*LIST).ERROR-MSG	S	' ' <msg-id> 'DELAYED' 'FILTER' 'DEL/FLT'	INF=DEST/ SP-FILT/ RSO-FILT
Size of the file (in PAM pages)	var(*LIST).F-SIZE	S	0..32767	INF=ORIG
File type	var(*LIST).FILE-TYPE	S	*DMS *EAM *OMF *PLM *LST *OPT *OUT *TMP *UFS	INF=ORIG
Size of the FOB data overlay	var(*LIST).FOB	S	<integer>	INF=TRAITS
Name of the form with which the SPOOL job is processed	var(*LIST).FORM-NAME	S	' ' <form-name>	INF=TRAITS
EFO data overlay	var(*LIST).FORM-OVERLAY	S	' ' <forms-overlay>	INF=TRAITS
Name of the host	var(*LIST).HOST-NAME	S	<host-name>	INF=DISTR/ ORIG
Xprint ID of the job	var(*LIST).IDENTIFICATION	S	<identification>	INF=DEST/ SP-FILT/ RSO-FILT DEV-TYPE/ DISTR/ ORIG/ TRAITS/
Number of jobs	var(*LIST).JOB-COUNT	S	<integer>	INF=SUM
Type of job processing	var(*LIST).JOB-TYPE	S	*LOC *REM *IDOM	INF=DEST

Output information	Name of the S variable	T	Contents	Condition
		S		
		S	*DIST *INTER *LOC	INF=DISTR
Number of page copies requested	var(*LIST).PAGE-COP	S	0..255	INF=ORIG
Number of PAM pages	var(*LIST).PAM-PAGE-COUNT	S	<integer>	INF=SUM
TSN of the partner print job	var(*LIST).PARTNER-TSN	S	<tsn>	INF=DISTR
Spoolout class	var(*LIST).PRINT-JOB-CLASS	S	0..255	INF=TRAITS
Priority of the SPOOL job	var(*LIST).PRINT-JOB-PRIO	S	30..255	INF=TRAITS
Replay tape	var(*LIST).REPLAY-TAPE	S	*NO *YES	INF=DEST/ SP-FILT/ RSO-FILT
Use of the resources of the client or the server for printing the document	var(*LIST).RESOURCE-LOC	S	*HOME *SERVER	INF=TRAITS
Degree by which the pages are rotated before printing	var(*LIST).ROT	S	0 90 180 270 0/180 90/270 180/0 270/90 *NO *YES	INF=TRAITS
TSN of the job issuing the command	var(*LIST).RTSN	S	<tsn>	INF=ORIG
Name of the server	var(*LIST).SERVER-NAME	S	<server-name>	INF=DEST/ DEV-TYPE/ DISTR/ ORIG/ TRAITS
Job name of the SPOOL job	var(*LIST).SPOOL-NAME	S	' ' <spool-name>	INF=ORIG
Status of the job	var(*LIST).STA	S	*ACT *DIR *FT *KP *PRE *TRD *TRT *WFT *WP *WT	INF=DEST/ SP-FILT/ RSO-FILT

Output information	Name of the S variable	T	Contents	Condition
Job number of the SPOOL job	var(*LIST).TSN	S	<tsn>	INF=DEST/ SP-FILT/ RSO-FILT DEV-TYPE DISTR/ ORIG/ TRAITS
User ID of the user who issued the command	var(*LIST).USER-ID	S	' ' <user-id>	INF=DISTR/ ORIG

Examples

Information output for SHOW-PRINT-JOB-STATUS depending on the user

In a cluster configuration with the hosts H1, H2 and H3, the following information is output for a SHOW-PRINT-JOB-STATUS command, depending on the user:

user1 on H1

```
/SHOW-PRINT-JOB-STATUS SELECT=*P(SERVER-NAME=*ALL)
```

TSN	SERVER	SP-NAME	RTSN	HOST	USER-ID	ACCOUNT	...
001A	S2	PNAME1A	1ABC	D241ZE01	USER1	ACCNT1	
001B	S3	PNAME1B	1ABC	D241ZE01	USER1	ACCNT1	

H2-SPOOL administrator on H2

```
/SHOW-PRINT-JOB-STATUS SELECT=*P(USER-ID=*ALL,HOST-NAME=*ALL)
```

TSN	SERVER	SP-NAME	RTSN	HOST	USER-ID	ACCOUNT	...
002A	*HOME	PNAME1A	1ABC	D241ZE01	USER1	ACCNT1	
002C	*HOME	PNAME2C	2DEF	D241ZE02	USER2	ACCNT2	

H3-SPOOL administrator on H3

```
/SHOW-PRINT-JOB-STATUS SELECT=*P(USER-ID=*ALL,HOST-NAME=*ALL)
```

TSN	SERVER	SP-NAME	RTSN	HOST	USER-ID	ACCOUNT	...
003B	*HOME	PNAME1B	1ABC	D241ZE01	USER1	ACCNT1	
003E	*HOME	PNAME2E	2XYZ	D241ZE02	USER3	ACCNT3	

H1-SPOOL administrator on H1

```
/SHOW-PRINT-JOB-STATUS SELECT=*P(USER-ID=*ALL,HOST-NAME=*ALL)
```

TSN	SERVER	SP-NAME	RTSN	HOST	USER-ID	ACCOUNT	...
001D	*HOME	PNAME3D	3UVW	D241ZE03	USER4	ACCNT4	

H1-SPOOL administrator on H1

```
/SHOW-PRINT-JOB-STATUS INF=*DISTRIBUTED,SEL=*P(USER-ID=*ALL,HOST-NAME=*ALL)
```

TSN	SERVER	P-TSN	J-TYPE	HOST	USER-ID	ACCOUNT	...
001D	*HOME	003D	*DIST	D241ZE03	USER4	ACCNT4	

Cluster administrator on H1

```
/SHOW-PRINT-JOB-STATUS INF=*DISTRIBUTED,SEL=*P(USER-ID=*ALL,HOST-NAME=*ALL)
```

TSN	SERVER	P-TSN	J-TYPE	HOST	USER-ID	ACCOUNT	...
002A	S2	001A	*DIST	*HOME	USER1	ACCNT1	
003B	S3	001B	*DIST	*HOME	USER1	ACCNT1	
002C	S2	002C	*DIST	D241ZE02	USER2	ACCNT2	
001D	*HOME	003D	*DIST	D241ZE03	USER4	ACCNT4	
003E	S3	002E	*DIST	D241ZE02	USER3	ACCNT3	

Comment:

SERVER=*HOME and J-TYPE=*DIST mean that the job is processed on the local server (for one user only).

SHOW-PRINTER-POOLS

Request information on pool names

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged user
Privileges:	PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-PRINTER-POOLS command requests information on printer pools (output on SYSOUT).

Information can be requested for the following:

- Device pools (BY-POOL operand) The RSO devices or local printers associated with the specified pools are output.
- RSO devices or local printers (BY-DEVICE operand) The names of the device pools to which the specified RSO devices or local printers belong are output.

A device pool may contain either local SPOOL devices or RSO devices, but not both at the same time.

The wildcard format can also be used to specify a pool or device name.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
SELECT =	X	X	X	X
SERVER-NAME =	X			

Format

SHOW-PRINTER-POOLS

SELECT = ***BY-POOL** (...) / ***BY-DEVICE**(...)

***BY-POOL**(...)

 | **POOL-NAME** = ***ALL** / <name 1..8> / <alphanumeric-name 1..8 with-wild(24)>

***BY-DEVICE**(...)

 | **DEVICE-NAME** = ***ALL** / <alphanumeric-name 1..8> / <alphanumeric-name 1..8 with-wild(24)>

,SERVER-NAME = ***HOME** / <alphanumeric-name 1..8>

Operands

SELECT =

Determines whether the devices belonging to a pool should be output or a list of pools (BY-POOLS) or the pools to which a device belongs or a list of devices (BY-DEVICE).

SELECT = ***BY-POOL**(...)

POOL-NAME = ***ALL** / <name 1..8> / <alphanumeric-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, should be output on SYSOUT.

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) belong should be output on SYSOUT.

SERVER-NAME = ***HOME** / <alphanumeric-name 1..8>

For Dprint only.

Specifies the server for which the information is to be output.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SPM0455	No pool found
	32	SCP0974	System error. Command rejected
	128	SPS0266	SPOOL administrator task not available

Output formats**Output for a single pool**

POOL-NAME: @@@@@@@@ POOL-TYPE: @@@@@@

ACCESS-DATE : @@@@-@@-@@

DEVICE-NAME(S):

@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

...

Output for a single device

DEVICE-NAME: @@@@@@@@

POOL-NAME(S):

@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

...

Output for a pool list

POOL-NAME(S) :

@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

...

Output for a device list

DEVICE-NAME(S) :

@@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@@@

...

Output in S variables

The SELECT operand of the SHOW-PRINTER-POOLS command defines which S variables are supplied with values. The following values can be specified for SELECT:

Representation in the command	Short form in the table
SELECT = BY-DEVICE(DEVICE-NAME=<name with-wild>)	1
SELECT = BY-DEVICE(DEVICE-NAME=<name>)	2
SELECT = BY-POOL(POOL-NAME=<name with-wild>)	3
SELECT = BY-POOL(POOL-NAME=<name>)	4

Output information	Name of the S variable	T	Contents	Condition
Device name	var(*LIST).DEV-NAME(*LIST)	S	<device-name>	1,4
	var(*LIST).DEV-NAME	S	<device-name>	2
Pool name	var(*LIST).POOL-NAME(*LIST)	S	<pool-name>	2,3
	var(*LIST).POOL-NAME	S	<pool-name>	4
Time stamp	var(*LIST).LAST-ACCESS	S	*NONE <YYYY-MM-DD>	INF=*ALL
Pool type	var(*LIST).POOL-TYPE	S	*LOC *REM	4

Notes

1. The ACCESS-DATE is not available with this command, but only in the corresponding SPSERVE command. Please note that the necessary administration (clean-up) resulting from this command also has to be executed via SPSERVE.
2. An element of the variable var(*LIST).dev-name(*LIST) may be accessed only at a second level. For example, the output of SHOW-PRINTER-POOLS SELECT=*BY-POOL(POOL-NA=<pool name>) gives its results in the var variable:
The command SHOW-VARIABLE VAR-NAME=**var#1**.DEV-NAME is rejected, while the command SHOW-VARIABLE VAR-NAME=**var#2**.DEV-NAME is accepted.

SHOW-SPOOL-CHARACTER-SETS

Request information on character sets

Domain: SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES

User group: Nonprivileged users

Privileges: HARDWARE-MAINTENANCE,
PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION,
SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,
STD-PROCESSING

Function

The SHOW-SPOOL-CHARACTER-SETS command provides information on data from the specified character set. The number of character sets listed can be freely limited by specifying selection criteria. All those character sets are selected whose entry contains the values specified in the relevant operands (logical ANDing).

The SHOW-SPOOL-CHARACTER-SETS operands have the same names and meanings as the operands of the SPSEIVE statement ADD-SPOOL-CHARACTER-SETS. The operand value *ALL (usually the default) means that the respective operand will not be used as a selection criterion.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
SELECT =	X	X	X	X
EXCEPT =	X	X	X	X
CLUSTER-NAME =	X			
SERVER-NAME =	X			

Format

(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>****,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****,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****,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)*****INTERVAL(...)****FROM = 1950-01-01 / <date 8..10>****TO = *TODAY / <date 8..10>**

continued →

```
,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 = *HOME / <alphanum-name 1..8>
,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
```

Operands

SELECT = *ALL / *PARAMETERS(...)

Specifies from what character sets 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 selection criterion is the name of the character set. Specifying *STD designates the standard character set of the same name.

OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *NONE / *OWN / <name 1..8>

The selection criterion is the user ID of the user who created the character set.

Nonprivileged users may only specify *ALL or *OWN.

COLOUR = ALL / list-poss(9): *BLACK / *MAGENTA / *BLUE / *GREEN / *YELLOW / *CYAN / *RED / *NEUTRAL / *IGNORE

The selection criterion is the color.

WEIGHT = *ALL / list-poss(4): *LIGHT / *NORMAL / *BOLD / *IGNORE

The selection criterion is the line weight.

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 selection criterion is the font.

CHARACTER-STYLE = *ALL / list-poss(3): *STRAIGHT / *ITALICS / *IGNORE

The selection criterion is the type size specified for the character set.

UNDERSCORE = *ALL / list-poss(3): *YES / *NO / *IGNORE

The selection criterion is whether or not underscoring has been specified for the character set.

CHARACTERS-PER-INCH = *ALL / <integer 1..100> / *IGNORE / *RANGE(...)

The selection criterion is the character density.

CHARACTERS-PER-INCH = *RANGE(...)

Specifies a value range. All character sets whose character density is within the specified range are output.

LOW = <integer 1..100>

Lower range limit.

HIGH = <integer 1..100>

Upper range limit.

LINES-PER-INCH = *ALL / list-poss(9): 3 / 4 / 6 / 8 / 10 / 12 / 15 / 20 / 24

The selection criterion is the line density.

LANGUAGE = *ALL / list-poss(16): *INTERNATIONAL / *ENGLISH / *USA / *BELGIAN / *FRENCH / *DUTCH / *GERMAN / *NORWEGIAN / *SWEDISH / *DANISH / *SPANISH / SWISS / ITALIAN / NONE / 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 selection criterion is the language specified for the character set.

NEAR-LETTER-QUALITY = *ALL / list-poss(3): *YES / *NO / *IGNORE

The selection criterion is the indicator for NLQ quality in the character set.

ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)

Date of the last change or last usage within the framework of the print process. This date can be used as an additional criterion for displaying the character set. Either a special date or a date interval may be specified.

The date can be entered 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 positions, the following rule applies:

All numbers (XY) less than or equal to 60 are interpreted as 20XY, and all numbers greater than 60 are interpreted as 19XY.

ACCESS-DATE = *ANY

The access date is not used as a selection criterion for a character set to be displayed.

ACCESS-DATE = *TODAY

Selects and displays any character set that was created or modified on the current date.

ACCESS-DATE = *INTERVAL(...)

Specifies a date interval as a selection criterion for displaying 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 value is the current date (today).

EXCEPT = *NONE / *PARAMETERS(...)

Specifies what character sets are to be excluded from the selection (i.e. not taken into account). Specifying NONE (the default) means 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 with the specified characteristics are not to be taken into account. Specifying *NONE (the default) means 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 with the specified characteristics are not to be taken into account. Specifying *NONE (the default) means the operand is not used as a selection criterion.

Nonprivileged users may only specify values other than *NONE for OWNER if they specified SELECT=PARAMETERS(OWNER=*OWN) above.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

For Dprint only.

Specifies the cluster for which information is to be output. Only BS2000 clusters can be specified.

SERVER-NAME = *HOME / <alphanum-name 1..8>

For Dprint only.

Specifies the server for which information is to be output.

Notes

1. The value *STD is supported for reasons of compatibility. Which parameter file is used by default as the information source depends on the operating mode (dynamic, static, from configuration, from command.)
2. If a SPOOL parameter file is assigned (statically or dynamically), this is the default source. If no parameter file is assigned, the default source is the SPOOL parameter file of the home system.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SPM0413	No character set present
2	0	SPM0518	No authorization
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command

Output

```
C-S-NAME COLOUR WEIGHT CH-TYPE CH-STYLE UND CPI LPI LANGUAGE NLQ OWNER
@@@@@@@@ @@@@@ @@@@@ @@@@@ @@@@@ @@@ ### ## @@@@@ @@@ @@@@@
ACCESS-DATE : @@@-@@-@@
```

Note

The value IGN (IGNORE) in the fields COLOUR, WEIGHT, CH-TYPE, CH-STYLE, UNDERSCORE, LANGUAGE, NLQ and CPI shows that the respective operand is not interpreted by RSO.

Meanings of the output fields

(The name in parentheses is the corresponding operand of the command ADD-SPOOL-CHARACTER-SET.)

Output field	Meaning / contents
ACCESS-DATE	Date of the last change or last usage
C-S-NAME (CHARACTER-SET-NAME)	Name of the character set
COLOUR (COLOUR)	Color in which the character set is to be printed
WEIGHT (WEIGHT)	Character weight
CH-TYPE (CHARACTER-TYPE)	Font (OCR-A, OCR-B, ...)
CH-STYLE (CHARACTER-STYLE)	Character style (STRAIGHT, ITALICS)
UND (UNDERScore)	Underlining
CPI (CHARACTERS-PER-INCH)	Character density
LPI (LINES-PER-INCH)	Line density (in lines per inch)
LANGUAGE (LANGUAGE)	Language for which the character set is intended (INTERNAT, ENGLISH, ...)
NLQ (NEAR-LETTER-QUALITY)	The print quality for printing: YES/NO
OWNER	Under TSOS: User ID of the character set owner, i.e. of the RSO device administrator or systems support operative who created it. For nonprivileged users, the output field is always blank

Output in S variables

Output information	Name of the S variable	T	Contents	Condition
Time stamp	var(*LIST).LAST-ACCESS	S	*NONE <YYYY-MM-DD>	
Name of the character set	var(*LIST).CHAR-SET-NAME	S	' ' <char-set-name>	
Character style used to print the character set	var(*LIST).CHAR-STYLE	S	*IGNORE *ITALICS *STRAIGHT	
Character type used to print the character set	var(*LIST).CHAR-TYPE	S	*COURIER *DATA *FONT-1 *FONT-10 *FONT-11 *FONT-12 *FONT-13 *FONT-14 *FONT-15 *FONT-16 *FONT-2 *FONT-3 *FONT-4 *FONT-5 *FONT-6 *FONT-7 *FONT-8 *FONT-9 *GOTHIC *GRAPHIC *IGNORE *NONE *OCR-A *OCR-B	
Color used for printing the character set	var(*LIST).COLOUR	S	*BLACK *BLUE *CYAN *GREEN *IGNORE *MAGENTA *NEUTRAL *RED *YELLOW	
Character density (in characters per inch)	var(*LIST).CPI	S	*IGNORE 1..100	

Output information	Name of the S variable	T	Contents	Condition
Language in which the character set is used	var(*LIST).LANG	S	*ARABIC *BELGIAN *DANISH *DUTCH *ENGLISH *FARSI *FRENCH *GERMAN *IGNORE *INTERNATIONAL *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 *ITALIAN *NONE *NORWEGIAN *SPANISH *SWEDISH *SWISS *USA	
Line density (in lines per inch)	var(*LIST).LPI	S	3,4,6,8,10,12,15,20, 24	
Printing in near-letter quality (NLQ)	var(*LIST).NLQ	S	*IGNORE *NO *YES	
User ID of the character set owner	var(*LIST).OWNER	S	' ' <user-id>	
Any characters printed out are underscored	var(*LIST).UNDERSCORE	S	*IGNORE *NO *YES	
Weight with which the character set is printed	var(*LIST).WEIGHT	S	*BOLD *IGNORE *LIGHT *NORMAL	

SHOW-SPOOL-DEVICES

Request information on devices

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	HARDWARE-MAINTENANCE, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-SPOOL-DEVICES command provides information on data from the device entry of the specified printer or type of printer. Specifying a printer type without specifying a printer name means only a selection of important data will be output, sorted by printer name. The number of devices listed can be freely limited by specifying selection criteria. Those printers are selected whose device entry contains the values specified for the relevant operands (logical ANDing).

The SHOW-SPOOL-DEVICES operands have the same names and meanings as the operands of the SPSEIVE statement ADD-SPOOL-DEVICES. The operand value *ALL (usually the default) means that the respective operand will not be used as a selection criterion.

The following table shows which operand can be used for which subsystem:

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
SELECT = PARAMETERS(...)	X	X	X	X
DEVICE-ACCESS = *NEA-ACCESS(...) / *TCP-ACCESS(...)	X	X	X	X
DEVICE-ACCESS = *LOCAL- ACCESS(...)			X	X
DEVICE-ACCESS = *SCSI-ACCESS(...)			X	
SLAVE-MNEMONIC-NAME =				X
ESD-SIZE =				X
EXCEPT =	X	X	X	
SLAVE-MNEMONIC-NAME =				X
SERVER-NAME =	X			
INFORMATION =	X	X	X	X

Format

(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> /
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 /
*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>

continued ➔

```

,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..8>
        ,FROM-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)
            RANGE(...)
                LOW = <integer 0 ..1024>
                ,HIGH = <integer 0 ..1024>
        ,TO-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)
            RANGE(...)
                LOW = <integer 0 ..1024>
                ,HIGH = <integer 0 ..1024>
    ,INTERNET-ADDRESS = *ALL / <alphanum-name 1..32 with-wild(48)> /
                <composed-name 1..32 with-wild(48)> / list-poss(16): *NONE /
                <alphanum-name 1..32> / <composed-name 7..32 with wild>
    ,PORT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
                *NONE / <alphanum-name 1..8>

*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 1..50>

```

continued ➔

```

*SCSI-ACCESS(...)
    |
    |   ACCESS-TYPE = *ALL / *EMULATED-CHANNEL-TYPE-2
    |   ,MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
    |       <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
    |   |   |   |
    |   |   |   |   ,MAXIMUM-INPUT-TRAY = *ALL / <integer 1..99> / *RANGE(...)
    |   |   |   |   *RANGE(...)
    |   |   |   |   |
    |   |   |   |   |   LOW = <integer 1..99>
    |   |   |   |   |   ,HIGH = <integer 1..99>

```

continued ⇒


```

,SUPP-FORMAT-NAMES = *ALL / *DEFAULT / list-poss(8): *TEXT / *HP / *SPDS / *PCL /
    *PLAIN-TEXT / *EXCCW / *PML / <c-string 1..63 with-low>
,MONJV = *ALL / *NO / *YES
,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 / <alphanum-name 1..8 with-wild(24)> / list-poss(16):
    *OWN / <name 1..8>
,IDENTIFICATION = *ALL / list-poss(16): *NONE / <c-string 1..16>
,TERMINAL = *ALL / NONE / *OWN / *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-COMPRESSION = *ALL / *YES / *NO
,START-FORM-FEED = *ALL / *YES / *NO
,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 / *IGNORE / <integer 0..99> / *RANGE(...)

```

continued →

```

    *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>
    ,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(...)

```

continued →

```

    *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): *SYSTEM /
        <composed-name 1..8>
    ,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 .
        |
        |   .
        |
        |   .
        |
        |   .

```

continued →

(part 7 of 8)

```

,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>
  ,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 = *HOME / <alphanum-name 1..8>

```

continued →

,INFORMATION = *SUMMARY / *ALL / list-possible(7):

***DEVICE-ACCESS / *TWIN-DEVICE-DEF / *DEVICE-INFORMATION / *ADMINISTRATOR /
*SPOOLOUT-CONTROL / *PROCESSING-CONTROL / *CHARACTER-SET-POS**

Operands

SELECT = *ALL / *PARAMETERS(...)

Specifies the criteria to be used for selecting the printers via which the information is to be output. Specifying *ALL (default value) means that information is output via all printers entered.

SELECT = *PARAMETERS(...)

The selection criteria are listed.

**DEVICE-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(255):
*STD / <alphanum-name 1..8>**

The selection criterion is the device name. The specification *STD designates the same device name.

DEVICE-TYPE =

The selection criterion is the device type.

**OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <name 1..8>
/ *OWN / *NONE**

The selection criterion is the user ID of the user who created the device entry.

The permitted specifications depend on the users' access rights. See "Access rights", [page 411](#).

ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)

Date of the last change or last usage within the framework of the print process. This date can be used as an additional criterion for displaying the character set. Either a special date or a date interval may be specified.

The date can be entered 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 positions, the following rule applies:

All numbers (XY) less than or equal to 60 are interpreted as 20XY, and all numbers greater than 60 are interpreted as 19XY.

ACCESS-DATE = *ANY

The access date is not used as a selection criterion for a character set to be displayed.

ACCESS-DATE = *TODAY

Selects and displays any character set that was created or modified on the current date.

ACCESS-DATE = *INTERVAL(...)

Specifies a date interval as a selection criterion for displaying 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 value is the current date (today).

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

The selection criterion is the type of access to the various local and RSO printers as well as their addressing (see also the “[RSO \(BS2000/OSD\)](#)” manual). Instead of DEVICE-ACCESS, the old operands ACCESS, PROCESSOR-NAME and STATION-NAME are also still supported, but only in procedures and in batch mode.

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

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

ACCESS-TYPE = *ALL / list-poss(9): *DIRECT / *HARDCOPY / *APPLICATION / *HDLC / *PC / *HARDCOPY-9751

The selection criterion is the printer access mode.

PROCESSOR-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 1..8> / *NONE

The selection criterion is the logical processor name (PDN generation).

STATION-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *NONE / <alphanum-name 1..8>

The selection criterion is the logical station name of the RSO printer.

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

The RSO or APA printer is accessed directly via the TCP/IP LAN. The TCP/IP protocol is used.

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

The selection criterion is the printer access mode.

ACCESS-TYPE = *TACLAN

The value TACLAN means that the printer is connected to the TCP/IP LAN via either a TACLAN (model 91863-R or 91863-O), a DOS PC running SPPCS V1.0, or a LAN controller card.

ACCESS-TYPE = *LPD(...)

The selection criterion is the printer which is accessed via the printer daemon BSD-LPD.

LPD-PRINTER-NAME = *ALL / <c-string 1..8>

The selection criterion is the printer name as defined in the `/etc/printcap` file of the host to which the printer is connected.

FROM-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)

Minimum value for the number of the local port to which the printer is connected.

FROM-PORT-NUMBER = *RANGE(...)

Specification of a range of values for FROM-PORT-NUMBER.

LOW = <integer 0..1024>

Lower range limit.

HIGH = <integer 0..1024>

Upper range limit.

TO-PORT-NUMBER = *ALL / *STD / <integer 0..1024> / *RANGE(...)

Maximum value for the number of the local port to which the printer is connected.

TO-PORT-NUMBER = *RANGE(...)

Definition of the value range for TO-PORT-NUMBER.

LOW = <integer 0..1024>

Lower range limit.

HIGH = <integer 0..1024>

Upper range limit.

ACCESS-TYPE = *IPP

Printer is accessed across the Internet via the IPP protocol (see also the "[RSO \(BS2000/OSD\)](#)" manual). This value is only relevant to RSO printers.

INTERNET-ADDRESS = *ALL / <alphanum-name 1..32 with-wild(48)> /

<composed-name 1..32 with-wild(48)> / list-poss(16):

<alphanum-name 1..32> / <composed-name 7..32 with wild> / *NONE

The selection criterion is the Internet address for the TACLAN (or for the DOS PC running SPPCS V1.0, or for the LAN controller card, or for the host on which BSD-LPD is running), depending on how the printer is connected.

This address must be specified either as an IP address in point notation (e.g. nnn.nnn.nnn.nnn) or as the socket host name, as generated via BCAM. See also the "[RSO \(BS2000/OSD\)](#)" manual.

PORT-NAME = *ALL / <alphanum-name 1..8 with-wild(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 SPPCS V1.0, or for the LAN controller card, or for BSD-LPD if ACCESS-TYPE = *LPD), depending on how the printer is connected. For BSD-LPD the port name is usually 515. See also the "[RSO \(BS2000/OSD\)](#)" manual.

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

A local printer is used with a corresponding format.

ACCESS-TYPE = *ALL / list-poss(3): *CHANNEL-TYPE-1 / *CHANNEL-TYPE-2 / *BUS-TYPE-1

The selection criterion is the printer access mode.

MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2> / *NONE

The selection criterion is the device mnemonic for the twin printer or the “master device” of the twin printer at the local host.

MNEMONIC-NAME = *V

The selection criterion is the device mnemonic for a local printer or for the “master device” of the twin printer at the local host.

PROGRAM-NAME = *ALL / *NONE / <filename 1..50>

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

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

A SCSI printer with the corresponding format is used.

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

The selection criterion is the connection type of the SCSI printer.

MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2>

The selection criterion is the device mnemonic for a local printer at the SCSI host.

SLAVE-MNEMONIC-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2> / *NONE

The selection criterion is the device mnemonic for the “slave device” of the twin printer at the local host. The name specified here must be different from the name for the “master device”. The “slave device” is always the second printer along the paper feed.

ESD-SIZE = *ALL / <integer 1..128> / *RANGE(...)

The selection criterion is the size (in Mbytes) of the external memory for the twin printer.

ESD-SIZE = *RANGE(...)

Specification of a range of values.

LOW = <integer 256..4096>

Lower range limit.

HIGH = <integer 256..4096>

Upper range limit.

REDIRECTION-DEVICE = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *NONE / *CENTRAL / <alphanum-name 1..8>

The selection criterion is redirected RSO jobs.

LANGUAGE-EXT-TYPE = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *NONE /<alphanum-name 1..8>

The selection criterion is the device type for printed output in conjunction with the product DSEM V3.0.

FORMS-OVERLAY-BUFFER = *ALL / *NO / *RANGE(...)

The selection criterion is the size of the buffer for FOB data overlays.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Specification of the range of values.

LOW = <integer 1..32767>

Lower range limit.

HIGH = <integer 1..32767>

Upper range limit.

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 page rotation module.

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

The selection criterion is the characteristic of printing on both sides of the page.

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

The selection criterion is the characteristic of processing film overlays.

RASTER-PATTERN-MEM = *ALL / *NONE / *RANGE(...)

All printers with a raster pattern memory of the specified size are selected.

RASTER-PATTERN-MEM = *RANGE(...)

Specification of a range of values.

LOW = <integer 4096..65535>

Lower range limit.

HIGH = <integer 4096..65535>

Upper range limit.

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 how the print pages are stacked.

MAXIMUM-INPUT-TRAY = *ALL / <integer 1..9> / *RANGE(...)

The selection criterion is the maximum number of input trays; a range of values can be specified.

MAXIMUM-INPUT-TRAY = *RANGE(...)

Specification of a range of values containing the value for the maximum number.

LOW = <integer 1..99>

Lower range limit.

HIGH = <integer 1..99>

Upper range limit.

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

The selection criterion is which document format the printer can print.

MONJV = *ALL / *NO / *YES

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.

LINE-SIZE = *ALL / *RANGE(...) / *IGNORE / <integer 3..255>

The selection criterion is the maximum number of characters that can be printed in a line; it is possible to specify a range of values.

LINE-SIZE = *RANGE(...)

Specification of a range of values containing the maximum number of lines.

LOW = <integer 3..255>

Lower range limit.

HIGH = <integer 3..255>

Upper range limit.

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 / list-poss(16): <name 1..8> / *OWN

The selection criterion is the user ID of the RSO device administrator.

The permitted specifications depend on the users' access rights. See "Access rights", [page 411](#).

IDENTIFICATION = *ALL / list-poss(16): *NONE / <c-string 1..16>

The selection criterion is details of the RSO device administrator (name, telephone number, etc.) as given in the device entry.

TERMINAL = *ALL / *OWN / *NONE / *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 selection criterion is the logical processor name.

The permitted specifications depend on the users' access rights. See "Access rights", [page 411](#).

STATION-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / *ANY / <alphanum-name 1..8>

The selection criterion is the terminal name.

The permitted specifications depend on the users' access rights. See "Access rights", [page 411](#).

LEFT-MARGIN = *ALL / <integer 0..31> / *RANGE(...)

The selection criterion is the value for indenting the output text on printing.

LEFT-MARGIN = *RANGE(...)

Specification of a range of values.

LOW = <integer 0..31>

Lower range limit.

HIGH = <integer 0..31>

Upper range limit.

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

The selection criterion is whether line feed compression is switched on or off.

BLANK-COMPRESSSION = *ALL / *NO / *YES

The selection criterion is whether space character compression is switched on or off.

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

The selection criterion is whether page feed is automatic at the start of spoolout.

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

The selection criterion is whether printing is on continuous paper or on single sheets, and which input tray is used.

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

Printing is on single sheets.

DEFAULT-TRAY-NUMBER = *ALL / <integer 1..99> / *IGNORE / *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 range limit.

HIGH = <integer 1..99>

Upper range limit.

OUTPUT-TRAY-NUMBER = *ALL / *IGNORE / <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 range limit.

SKIP-TO-CHANNEL-ONE = *ALL / *NORMAL / *OPTIMIZED

The selection criterion is what the printer does if a skip to the "channel 1" vertical tab is specified twice in succession.

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

The selection criterion is the indication of how page feed is initiated (by counting lines or by the relevant control characters).

ESCAPE-VALUE = *ALL / list-poss(16): *NONE / <x-string 1..2>

The selection criterion is the specified escape character to identify the printer commands.

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

The selection criterion is whether an RSO controller is available for the exclusive use of 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 entry specifying whether the connection between RSO and printer is interrupted.

BUFFER-SIZE = *ALL / <integer 256..4096> / *RANGE(...)

The selection criterion is the maximum buffer size for data transfer.

BUFFER-SIZE = *ALL / <integer 256..32767> / *RANGE(...)

Specification of a range of values.

LOW = <integer 256..32767>

Lower range limit.

HIGH = <integer 256..32767>

Upper range limit.

RESET = *ALL / *YES / *NO

The selection criterion is the indication 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 indication of the procedure for dealing with errors (printer error, end of paper, etc.).

REPEAT-MESSAGE = *NO

No message is to be displayed in the event of errors.

REPEAT-MESSAGES = *PARAMETERS(...)

Specifies how to react to an error (type, frequency, time limit).

TYPE = *ALL / *SYSTEM / *DUMMY

Defines a response in the event of an error.

TYPE = *SYSTEM

A page feed occurs and message SRO1001 is printed (this means that the next page may already be printed). Printing is continued by another page feed operation.

TYPE = *DUMMY

A page feed occurs and, if necessary, the last page is repeated.

LIMIT = *ALL / *NO / <integer 1..255> / *RANGE(...)

Defines whether or how often to react to errors.

LIMIT = *NO

No limit has been set.

LIMIT = *RANGE(...)

Specifies a range of values containing the value specified for LIMIT.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

RETRY-TIME = *ALL / *GLOBAL / <integer 1..600> / *RANGE(...)

The selection criterion is the specified delay (in seconds) between two attempts to print the file. It is possible to specify a range of values.

RETRY-TIME = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..600>

Lower range limit.

HIGH = <integer 1..600>

Upper range limit.

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

The selection criterion is how to react to failure of connection setup (printer not available and/or printer malfunctions). Instead of RESTART-ACTION, the old operand REPEAT-OPEN-CONNECT is also still supported, albeit only in procedures and in batch mode.

RESTART-ACTION = *NO

No limit for the number of retries and the delay has been specified.

RESTART-ACTION = *PARAMETERS(...)

Specifies how to react to errors (frequency, time limit).

LIMIT = *ALL / *NO / <integer 1..255> / *RANGE(...)

Specifies the number of attempts to set up the connection.

LIMIT = *NO

No limit has been set.

LIMIT = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

RETRY-TIME = *ALL / *GLOBAL / <integer 1..600> / *RANGE(...)

The selection criterion is the specified delay (in seconds) between two attempts to set up the connection.

RETRY-TIME = *RANGE(...)

Specification of a range of values for the delay.

LOW = <integer 1..600>

Lower range limit.

HIGH = <integer 1..600>

Upper range limit.

SYNCHRONIZATION = *ALL / *PRINTER / *NETWORK

The selection criterion is the entry specifying whether printing with the printer acknowledgment (PRINTER) or the network acknowledgment (NETWORK) is to be synchronized.

TIMEOUT-MAX = *ALL / <integer 2..30> / *RANGE(...)

The selection criterion is the maximum printing time in minutes for each printer transmitted.

TIMEOUT-MAX = *RANGE(...)

Specification of a range of values.

LOW = <integer 2..30>

Lower range limit.

HIGH = <integer 2..30>

Upper range limit.

PAGES-EJECT-TIMEOUT = *ALL / *NO / <integer 1..255> / *RANGE(...)

The selection criterion is the maximum wait time (in minutes), if the printer is inactive, before the pages still remaining in the printer are automatically output to the stacker. The value *NO means that the pages are not output.

PAGES-EJECT-TIMEOUT = *RANGE(...)

Specification of a range of values.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

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 entry specifying whether an RSO printer that can be loaded with a loop record is to be operated with this function. For 9645 printers only.

MODULO2 = *ALL / *YES / *NO

The selection criterion is whether a second buffer is to be transmitted to the printer while the first one is being printed.

RECOVERY-RULES = *ALL / <composed-name 1..4 with-wild(24)> / list-poss(16): *SYSTEM / <composed-name 1..16>

The selection criterion is the recovery rules file used for the specified device. The suffix of the file name is specified.

POLLING = *ALL / *YES / *NO

The selection criterion is whether RSO can obtain the printer status or printer error functions. This operand applies only to printers for which DEVICE-ACCESS = TCP-ACCESS(Access-Type = TACLAN) is specified.

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

The selection criterion is the printer parameter file used for the printer; in this case the suffix of the file name is specified.

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

The selection criterion is the file name prefix for the PROLOG/EPILOG/DIA/MEMBER files which are used for the printer.

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

The selection criterion is when and how the RSO controller is started: either with the START-PRINTER-OUTPUT (*AT-PRINTER-START) command or with the PRINT-DOCUMENT (*AT-JOB-START) command.

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

The selection criterion is the entry specifying whether character sets can be selected by their position in the character set memory.

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

The selection criterion is the position of the character set 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 which device entries are to be excluded from the selection (negative list).

EXCEPT = *NONE

No device entries are excluded from the selection.

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 devices are not taken into account. Specifying *NONE (the default) means the operand is ignored.

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. Specifying *NONE (the default) means the operand is ignored.

The permitted specifications depend on the users' access rights. See "Access rights", [page 411](#).

SLAVE-MNEMONIC-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): <alphanum-name 2..2>

The mnemonic device name of the “slave device” of the twin printer for the local host is ignored.

REDIRECTION-DEVICE = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *CENTRAL / <alphanum-name 1..8>

The specified redirected RSO jobs are ignored.

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. Specifying *NONE (the default) means the operand is ignored.

USER-IDENTIFICATION = *NONE / list-poss(16): <name 1..8> / *OWN

Device entries with the specified user IDs are not taken into account. Specifying *NONE (the default) means the operand is ignored.

The permitted specifications depend on the users' access rights. See “Access rights”, [page 411](#).

TERMINAL = *NONE / *OWN / *PARAMETERS(...)

Device entries with the specified data display terminals are not taken into account. Specifying *NONE (the default) means the operand is ignored.

TERMINAL = *PARAMETERS(...)

Subdividing data display terminals by processor and terminal names.

PROCESSOR-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <alphanum-name 1..8>

Specifying the logical processor names. Specifying *NONE (the default) means the operand is ignored.

The permitted specifications depend on the users' access rights. See “Access rights”, [page 411](#).

STATION-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / list-poss(16): *OWN / <alphanum-name 1..8>

Specifying the terminal names. Specifying *NONE (the default) means the operand is ignored.

The permitted specifications depend on the users' access rights. See “Access rights”, [page 411](#).

FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> / list-poss(16): <alphanum-name 1..6>

Device entries with the specified form name are not taken into account. Specifying *NONE (the default) means the operand is ignored.

BAND-IDENTIFICATION = *NONE / <alphanum-name 1..4 with-wild(24)> / list-poss(16): <alphanum-name 4..4>

Device entries with the specified type bands are not taken into account. Specifying *NONE (the default) means the operand is ignored.

RECOVERY-RULES = *NONE / <composed-name 1..16 with-wild(24)> / list-poss(16): <composed-name 1..16>

Devices having this suffix for their recovery rule file are not 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 not taken into account.

RESOURCE-FILE-PREFIX = *NONE / <composed-name 1..8 with-wild(16)> / list-poss(16): <composed 1..8>

The PROLOG/EPILOG/DIA/MEMBER files with the specified prefix are not taken into account.

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

Specifies the servers for which information is to be output. *STD is assumed to mean *HOME.

For Distributed Print Services only (see the [Distributed Print Services \(BS2000/OSD\)](#) manual).

INFORMATION = *SUMMARY / *ALL / *list-possible(7):

***DEVICE-ACCESS / *TWIN-DEVICE-DEF / *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 the lines are specified for each element.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SPM0411	No device present
2	0	SPM0518	No authorization
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command

Access rights

The settings

```
SELECT=*PAR(OWNER=... / USER-IDENTIFICATION=... /
            TERMINAL=*PAR(PROCESSOR-NAME=.../STATION-NAME=...))
```

and

```
EXCEPT=*PAR(OWNER=... / USER-IDENTIFICATION=... /
              TERMINAL=*PAR(PROCESSOR-NAME=.../STATION-NAME=...))
```

are special settings. They allow users to specify or reject devices according to their own rights. The settings for each device are hidden from those users who do not have access authorization for it.

In order to prevent the specification of contradictory entries, use of these operand values is strictly controlled.

There are three user categories:

- Systems support
Systems support is allowed to assign every device (local or RSO) and to see the users' own settings for the respective devices.
- RSO device administrator
The RSO device administrator may only assign such devices as he/she manages, and may also only view the corresponding settings. The RSO device administrator may use the following combinations of operand values:

```
SELECT = *PAR(...,USER-IDENTIFICATION=*OWN,TERMINAL=*PAR(
            STATION-NAME=( *OWN/*ANY ),PROCESSOR-NAME=( *OWN/*ANY ) ),
            ...)
```

If inadequately precise specifications are made, they are expanded automatically, if permitted (warning SPM0518 is also output). If expansion is not permitted, they are rejected (and error message SPM0405 is output).

- Other users
Users who are not authorized to assign any devices are likewise not authorized to view any settings. Corresponding commands are rejected or ignored.

Output 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               : @@@
SUPP-FORMAT-NAMES  :
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
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```

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-COMPRESSION : @@@
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

All the INFORMATION types described above are displayed, i.e. the following three first lines are displayed, then all the other display information described above, then the last four lines are displayed.

```

DEVICE-NAME      : @@@@@@@@
DEVICE-TYPE      : @@@@@@@@@@@@@@@@@@
ACCESS-DATE      : ####-##-##
----- MISCELLANEOUS -----
REDIRECTION-DEVICE : @@@@@@@@
LANGUAGE-EXT-TYPE : @@@@@@@@
LINE-SIZE        : @@@
CHARACTER-IMAGE  : @@@@@@@@

```

Meanings of the output fields

Output field	Meaning / contents
SUMMARY/any information	
DEVICE-NAME	Device name
DEVICE-TYPE	Device type
ACCESS-DATE	Date of the last modification or use
DEVICE-ACCESS	
DEVICE-ACCESS	Access type to printers
ACCESS-TYPE	Printer connection: <ul style="list-style-type: none"> - With DEVICE-ACCESS = *NEA-ACCESS(...): Printer connection: *STD/*DIRECT/*HARDCOPY/*APPLICATION/*HDLC/*PC/*HARDCOPY-9751 - With DEVICE-ACCESS = *TCP-ACCESS(...): Printer connection: *STD/*TACLAN/*LPD/*IPP - With DEVICE-ACCESS = *LOCAL-ACCESS(...): Printer connection: *STD/*CHANNEL-TYPE-1/*CHANNEL-TYPE-2/*BUS-TYPE-1 - With DEVICE-ACCESS = *SCSI-ACCESS(...): Printer connection: *STD/EMULATED-CHANNEL-TYPE-2
PROCESSOR-NAME	Processor name as part of the device address
STATION-NAME	RSO device: station name as part of the device address
MNEMONIC-NAME	Device mnemonic for the twin printer or the "master" twin printer
PROGRAM-NAME	Name of the supervisor LOGON procedure
INTERNET-ADDRESS	Internet address of the TACLAN, IPP, LPD, DOS PC or LAN controller card
PORT-NAME	Port name of the TACLAN, IPP, LPD, DOS PC or LAN controller card
LPD-PRINTER-NAME	Printer name as defined in '/etc/printcap' of the host to which the printer is connected
FROM-PORT-NUMBER	Minimum value for the number of local ports to which the printer is connected
TO-PORT-NUMBER	Maximum value for the number of the local port to which the printer is connected
TWIN-DEVICE-DEF	
SLAVE-MNEMONIC-NAME	Device mnemonic for the "slave" twin printer
ESD-SIZE	Size of the external data storage of the twin printer
DEVICE-INFORMATION	
FORMS-OVERLAY-BUFFER	Size of the graphics buffer

Output field	Meaning / contents
CHARACTER-SET-NUMBER	Number of character sets
ROTATION	Page rotation module
DUPLEX-PROCESSING	Specifies whether paper is printed on both sides
FORMS-OVERLAY	Specifies whether form overlays can be processed on the device
RASTER-PATTERN-MEM	Specifies the size of the RPM that contains the FOB overlays and character sets (raster pattern memory)
TRANSMISSION	Format of the transfer protocol
FONT-TYPE	Specifies whether fonts with 7-bit or 8-bit format are used
FACE-PROCESSING	Specifies whether the printer is able to lay the paper "print image up" or "print image down" as required: YES/NO
MAX-INPUT-TRAY	Maximum number of input trays
MONJV	Determines whether a monitor job variable is created to control the sequence of the asynchronous part of the START-PRINTER-OUTPUT command (only from SPOOL V4.1A)
SUPP-FORMAT-NAMES	Document format that the printer can print
ADMINISTRATOR	
USER-IDENTIFICATION	<ul style="list-style-type: none"> – If the S-S-D statement was issued under TSOS or under an RSO device administrator, up to 8 user IDs which have been defined as RSO device administrators. – If no RSO device administrator was defined (i.e. for public devices), the value *NONE is obtained under TSOS. – If the S-S-D is issued by a non-privileged user ID, blanks are output.
IDENTIFICATION	Character string of up to 16 characters. Facilitates the contact to 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).
PROCESSOR-NAME	Processor name as part of the RSO device administrator address
STATION-NAME	Station name as part of the RSO device administrator address
SPOOL-CONTROL	
SHIFT	Default value for SHIFT if the LEFT-MARGIN operand is not specified in the PRINT-DOCUMENT command (0...31)
LINE-FEED-COMPRESS	Conversion of line feed control characters into the corresponding printer control characters: YES/NO
BLANK-COMPRESSION	Conversion of a sequence of blanks into specific printer control characters: *YES/*NO
START-FORM-FEED	Automatic page feed at the start of each spoolout: YES/NO

Output field	Meaning / contents
FORM-FEED	Paper feed: continuous forms or single-sheet feed
DEFAULT-TRAY-NUMBER	Number of the paper feed tray from which the paper is to be taken on single-sheet printers
OUTPUT-TRAY-NUMBER	Number of the paper output tray
SKIP-TO-CHANNEL	Behaviour in the case of two skips to the vertical tabulator character "channel 1", one after the other
SKIP-TO-NEXT-PAGE	Page feed is activated <ul style="list-style-type: none"> – BY-FORM-FEED: via the corresponding control character – BY-LINES: by counting down the line feeds
ESCAPE-VALUE	Escape character identifying the printer commands contained in a print file (for printer types 9025 and 9026-RENO)
PROCESSING-CONTROL	
CONTROLLER-RESERVED	One controller is reserved exclusively to support this printer: *YES/*NO
FORM-NAME	Forms which are assigned to the printer by FORM-NAME = *STD
DISCONNECTION	The DCAM connection to this printer will be cleared if there are no further print requests for it: YES/NO/FORCE
BUFFER-SIZE	Maximum buffer size (in bytes) of the blocks sent to the printer via DCAM
RESET	The printer switches are to be reset before each file is printed: YES/NO
REPEAT-MESSAGE	
TYPE	Type of error response <ul style="list-style-type: none"> – SYS: page feed and output of message SRO1001 – DUM: page feed and possible repeat of last page
LIMIT	Specifies whether the error response is executed and, if so, how often
RETRY-TIME	Waiting time (in seconds) between two attempts to print the file
RESTART-ACTION	
LIMIT	Specifies whether SPOOL attempts to set up the connection and, if so, how often
RETRY-TIME	Waiting time (in seconds) between two attempts to set up the connection
SYNCHRONIZATION	Printing is synchronized after every transferred buffer <ul style="list-style-type: none"> – PRINTER: with the printer acknowledgement – NETWORK: with the network acknowledgement
TIMEOUT-MAX	Maximum time allowed for a buffer transfer

Output field	Meaning / contents
PAGE-EJECT-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.
BAND-IDENTIFICATION	Identifier for the type band of a 9645, LP or LP48 printer
LOAD	An RSO printer equipped with a loadable VFB (loop) can be operated with this function: YES/NO
MODULO2	A second buffer is sent to the printer while the first buffer is being printed: YES/NO
RECOVERY-RULES	Logical name of the recovery rules file: *STD/SYSTEM/1..16
POLLING	Printer status inquiry possible: YES/NO
PRINTER-PARAM-FILE	Suffix for printer parameter file
RESOURCE-FILE-PREFIX	Prefix for files PROLOG/EPILOG/DIA/MEMBER
CONTROLLER-START	Time and mode for start of RSO controller
CHARACTER-SET-POS	
POSITION-1... POSITION-16	Hardware position of character sets in the character set memory of the printer with printer types 9001-31, 9001, 9012, 9013, 9014
MISCELLANEOUS	
REDIRECTION	Specifies whether RSO jobs for the device are to be automatically redirected and, if so, to where.
LANGUAGE-EXT-TYPE	Identifies the device type for "exotic" output with the product DSEM V3.0
LINE-SIZE	Maximum number of characters that can be printed in one line on the specified device (see description under A-S-D)
CHARACTER-IMAGE	Character conversion tables

Output in S variables

The INFORMATION operand of the command defines which S variables are supplied with values. The values of the INFORMATION operand can be specified as follows:

Notation in the command	Abbreviated notation (in the Condition column)
INFORMATION = *ALL	1
INFORMATION = *SUMMARY	2
INFORMATION = *DEVICE-ACCESS	3
INFORMATION = *TWIN-DEVICE-DEF	4
INFORMATION = *DEVICE-INFORMATION	5
INFORMATION = *ADMINISTRATOR	6
INFORMATION = *SPOOL-CONTROL	7
INFORMATION = *PROCESSING-CONTROL	8
INFORMATION = *CHARACTER-SET-POS	9

Output information	Name of the S variable	T	Contents	Condition
Connection type of the printer	var(*LIST).ACCESS	S	*APPLICATION *BUS-TYPE-1 *CHAN-TYPE-1 *CHAN-TYPE-2 *DIRECT *HARDCOPY *HARDCOPY-9751 *HDLC *PC *TACLAN *IPP	1, 3
Time stamp	Var(*LIST).LAST-ACCESS	S	*NONE <YYYY-MM-DD>	1, 3, 4, 5, 6, 7, 8, 9
Identification (e.g.name or phone number) of the RSO device administrator	var(*LIST).ADM.ID	S	<user-id> *ANY *NONE	1, 6
Name of the processor to which the terminal is assigned in the network; the RSO device administrator performs his or her functions from this terminal	var(*LIST).ADM.PROCESSOR-NAME	S	' ' <proc-name>	1, 6

Output information	Name of the S variable	T	Contents	Condition
Name of the station (terminal) from which the RSO device administrator performs his or her functions	var(*LIST).ADM.STATION-NAME	S	' ' <stat-name>	1, 6
User ID of the RSO device administrator	var(*LIST).ADM.USER-ID(*LIST)	S	' ' <user-id> *'NONE'	1, 6
Name of the type band used for printing	var(*LIST).BAND-ID	S	*NONE <band-id>	1, 8
Blank compression activated	var(*LIST).BLANK-COMPRESSION	S	' ' *NO *YES	1, 7
Maximum buffer size of the data blocks (in bytes) which are sent to the printer via DCAM	var(*LIST).BUF-SIZE	S	<user-id> *'ANY' *NONE	1, 8
Name of the conversion table of the printer (*NONE = no conversion table is used)	var(*LIST).CHAR-IMAGE(*LIST)	S	*NONE <char-image>	1
Number of character sets that can be loaded on the printer	var(*LIST).CHAR-SET	S	0, 1, 4, 6, 23, 36, 46, 64	1, 5
Hardware position of the character set in the character set memory	var(*LIST).CHAR-SET-POS(*LIST)	S	COURIER DATA FONT-1 FONT-10 FONT-11 FONT-12 FONT-13 FONT-14 FONT-15 FONT-2 FONT-3 FONT-4 FONT-5 FONT-6 FONT-7 FONT-8 FONT-9 GOTHIC GRAPHIC NONE N-U OCR-A OCR-B	1, 9
Reservation of an exclusive controller to support the specified printer	var(*LIST).CONTR-RESERVED	S	*NO *YES ' '	1, 8

Output information	Name of the S variable	T	Contents	Condition
Start of the RSO controller: when and how it is started	var(*LIST).CONTROLLER-START	S	' *AT-PRINTER-START *AT-JOB-START	1, 8
Device name	var(*LIST).DEV-NAME	S	' <dev-name>	1, 2, 3, 4, 5, 6, 7, 8, 9
Device type	var(*LIST).DEV-TYPE	S	' <dev-type>	1, 2, 3, 4, 5, 6, 7, 8, 9
Access type to printers	var(*LIST).DEVICE-ACCESS	S	*NEA-ACCESS *TCP-ACCESS *LOCAL-ACCESS *SCSI-ACCESS	1, 3
Releasing of DCAM connection if no more print requests are waiting	var(*LIST).DISCONN	S	' *FORCE *NO *YES	1, 8
DUPLEX printing (double-sided) possible	var(*LIST).DUPLEX-PROCESS	S	' *NO *YES	1, 5
ESCAPE characters	var(*LIST).ESCAPE	S	' *NONE <escape-value>	1, 7
Memory size of the twin printer	var(*LIST).ESD-SIZE	S	0..128	1, 4
Pages can be stored face up or face down	var(*LIST).FACE-PROCESS	S	' *NO *YES	1, 5
Size of the FOB data overlay that is processed on the device	var(*LIST).FOB	S	*NO 0..32767	1, 5
Character set type	var(*LIST).FONT-TYPE	S	' *7BIT *8BIT *IGNORE	1, 5
Number of the input tray	var(*LIST).FORM-FEED.IN-TRAY	S	1..99 *IGNORE	1, 7
Number of the output tray	var(*LIST).FORM-FEED.OUT-TRAY	S	0..99 *IGNORE	1, 7
Form feed of the printer (continuous paper or single sheets)	var(*LIST).FORM-FEED.TYPE	S	*LIST *SINGLE-SHEET	1, 7
Form name	var(*LIST).FORM-NAME(*LIST)	S	<form-name>	1, 8
Processing of film overlays possible on this device	var(*LIST).FORM-OVERLAY	S	' *NO *YES	1, 5
Minimum value for the LOCAL-PORT-NUMBER	var(*LIST).FROM-PORT-NUMBER	S	0..1024	1, 3

Output information	Name of the S variable	T	Contents	Condition
Internet address of the TACLAN, IPP the DOS PC or the LAN controller card	var(*LIST).INTERNET-ADDR	S	' ' *NONE <internet-add>	1, 3
Device type for an "exotic" output with the product DSEM V3.0	var(*LIST).LANG-EXT-TYPE	S	*NONE <lang. ext.-type> *SYSTEM	1
Line feed compression activated	var(*LIST).LINE-FEED-COMPRESS	S	' ' *NO *YES	1, 7
Maximum number of characters per line	var(*LIST).LINE-SIZE	S	*IGNORE 3..255 0	1
Loop record for RSO printer	var(*LIST).LOAD	S	' ' *NO *YES	1, 8
Printer which can be accessed via a BSD line printer daemon	var(*LIST).LPD-PRINTER-NAME	S	' ' <lpd-name>	1, 3
Maximum number of paper input trays	var(*LIST).MAX-INPUT-TRAY	S	0..99	1, 5
Device mnemonic for the twin printer or for the "master device" of the twin printer at the local host	var(*LIST).MNEM-NAME	S	' ' <mnemo-name>	1, 3
Loading of a second buffer during printing of the first buffer	var(*LIST).MODULO	S	' ' *NO *YES	1, 8
Creation of a monjv to control the asynchronous part of the /START-PRINTER-OUTPUT command	var(*LIST).MONJV	S	*YES *NO	1, 5
Maximum time that the printer is inactive	var(*LIST).PAGE-EJECT-TIMEOUT	S	' ' *NO 1..255	1, 8
Query of the printer status or the errored printer function by RSO	var(*LIST).POLLING	S	' ' *NO *YES	1, 8
Port name of the TACLAN, IPP, the DOS PC or the LAN controller card	var(*LIST).PORT-NAME	S	' ' <port-name>	1, 3
Name of the printer parameter file (suffix)	var(*LIST).PRINTER-PARAM-FILE	S	' ' *SYSTEM <pr-param-filename>	1, 8
Processor name	var(*LIST).PROCESSOR-NAME	S	' ' *NONE *HOST <proc-name>	1, 3

Output information	Name of the S variable	T	Contents	Condition
Name of the procedure associated to the virtual device	var(*LIST).PROGRAM-NAME	S	' *NONE <file-name>	1, 3
Size of the raster pattern memory	var(*LIST).RAST-PAT-MEM	S	' *NONE 4096..65535	1, 5
Recovery rules	var(*LIST).REC-RULE	S	' *SYSTEM <rec-rules>	1, 8
Redirection RSO device	var(*LIST).REDIRECT	S	' *NONE <redir-name>	1
Maximum number of message repetitions in the event of an error (printer error, paper end,...)	var(*LIST).REPEAT-MSG.LIM	S	*NO 1..255 0	1, 8
Wait time (in seconds) between two attempts to print the file in the event of an error (printer error, paper end,...)	var(*LIST).REPEAT-MSG.RETRY-TIME	S	*GLOBAL 1..600 0	1, 8
Form feed (*DUMMY,*SYS) and printout of message SRO1001 (*SYS) in the event of an error (printer error, paper end,...)	var(*LIST).REPEAT-MSG.TYPE	S	' *DUMMY *NO *SYSTEM	1, 8
Resetting of the printer switch before each file is printed	var(*LIST).RESET	S	' *NO *YES	1, 8
File name prefix for the files PROLOG/EPILOG/DIA/MEMBER, which are used for the printer	var(*LIST).RESOURCE-FILE-PREFIX	S	' *SYSTEM <prefix-filenames>	1, 8
Number of repeat attempts to establish the connection (in the case of errors during connection setup and/or printer errors)	var(*LIST).RESTART-ACTION.LIM	S	*NO 1..255 0	1, 8
Wait time (in seconds) between two attempts to establish the connection (in the case of errors during connection setup and/or printer errors)	var(*LIST).RESTART-ACTION.RETRY-TIME	S	*GLOBAL 1..600 0	1, 8
Page-rotation module function is supported by the printer	var(*LIST).ROT	S	*NO *YES	1, 5
Number of columns by which the output text is indented	var(*LIST).SHIFT	S	0..31	1, 7
Behavior in the case of two consecutive skips to channel 1	var(*LIST).SKIP-TO-CHAN	S	*NORMAL *OPTIM	1, 7

Output information	Name of the S variable	T	Contents	Condition
Triggering of the form feed	var(*LIST).SKIP-TO-NEXT	S	' ' *BY-FORM-FEED *BY-LINE	1, 7
Mnemonic name of the "slave device"	var(*LIST).SLAVE-MN	S	' ' *NONE <mnemo-name>	1, 4
Automatic form feed at the start of a spoolout job	var(*LIST).START-FORM-FEED	S	' ' *NO *YES	1, 7
Station name	var(*LIST).STATION-NAME	S	' ' <stat-name>	1, 3
Synchronization of printing via printer acknowledgment (*PRINTER) or network acknowledgment (*NETWORK)	var(*LIST).SYNCH	S	' ' *NETWORK *PRINTER	1, 8
Maximum print time (in minutes) for each transferred buffer	var(*LIST).TIMEOUT-MAX	S	2..30 0	1, 8
Maximum value for the LOCAL-PORT-NUMBER	var(*LIST).TO-PORT-NUMBER	S	0..1024	1, 3
Code translation table	var(*LIST).TRANS	S	' ' *7BIT *8BIT *IGNORE	1, 5
Supported format name	var(*LIST).SUPP-FORMAT-NAME	S	<supp-fo-na>	1, 5

SHOW-SPOOL-FILTERS

Request information on filter definitions

Domain: SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES

User group: Nonprivileged users

Privileges: HARDWARE-MAINTENANCE,
PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION,
SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION,
STD-PROCESSING

Function

The SHOW-SPOOL-FILTERS command provides information on the filter definitions in the SPOOL parameter file.

Format

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** / ***PCL** / ***PLAIN-TEXT** /
<c-string 1..63 with-low>

,OUTPUT-FORMAT-NAME = ***ALL** / list-poss(16): ***TEXT** / ***HP** / ***SPDS** / ***PCL** / ***PLAIN-TEXT** /
<c-string 1..63 with-low>

,REDIRECTION = ***ALL** / ***NO** / ***REMOTE(...)**

***REMOTE(...)**

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

,OBJECT-NAME = ***ALL** / <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>

,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** / ***PCL** / ***PLAIN-TEXT** /
<c-string 1..63 with-low>

,OUTPUT-FORMAT-NAME = ***NONE** / list-poss(16): ***TEXT** / ***HP** / ***SPDS** / ***PCL** / ***PLAIN-TEXT** /
<c-string 1..63 with-low>

,REDIRECTION = ***NONE** / ***NO** / ***REMOTE(...)**

***REMOTE(...)**

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

,OBJECT-NAME = ***NONE** / <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 to be used for selecting the filters about which information is to be output. Specifying *ALL (default value) causes information about all filters entered to be output.

SELECT = *PARAMETERS(...)

Initiates 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 / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

The selection criterion is the input format, i.e. the document format which can be converted by the filter.

OUTPUT-FORMAT-NAME = *ALL / list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

The selection criterion is the output format, i.e. the format into which the filter converts the document.

REDIRECTION = *ALL / *NO / *REMOTE(...)

The selection criterion is the remote printer to which spoolout jobs which use the filter must be redirected.

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

Name of the printer.

OBJECT-NAME = *ALL / <alphanum-name 1..8 with-wild(24)> / <alphanum-name 1..8>

The selection criterion is the filter object module name (library element of type R).

ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)

Date of the last change or last usage within the framework of the print process. This date can be used as an additional criterion for displaying the character set. Either a special date or a date interval may be specified.

The date can be entered 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 positions, the following rule applies:

All numbers (XY) less than or equal to 60 are interpreted as 20XY, and all numbers greater than 60 are interpreted as 19XY.

ACCESS-DATE = *ANY

The access date is not used as a selection criterion for a character set to be displayed.

ACCESS-DATE = *TODAY

Selects and displays any character set that was created or modified on the current date.

ACCESS-DATE = *INTERVAL(...)

Specifies a date interval as a selection criterion for displaying 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 value is the current date (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(...)

Initiates a list of exclusion 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 modules are excluded.

INPUT-FORMAT-NAME = *NONE / list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

Filter entries with the specified input formats are excluded.

OUTPUT-FORMAT-NAME = *NONE / list-poss(16): *TEXT / *HP / *SPDS / *PCL / *PLAIN-TEXT / <c-string 1..63 with-low>

Filter entries with the specified output formats are excluded.

REDIRECTION = *NONE / *NO / *REMOTE(...)

Filter entries are excluded if the spoolout jobs using them must be redirected to the specified remote printers.

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

Specifies the name of the printer.

OBJECT-NAME = *NONE / <alphanum-name 1..8 with-wild(24)> / <alphanum-name 1..8>

Filter entries with the specified filter object module names (library element of type R) are excluded.

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

Specifies the cluster for which information is to be output.

*STD is taken to mean *LOCAL-CLUSTER (for more details, see SERVER-NAME below).

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

Specifies the servers for which information is to be output.

*STD is taken to mean *HOME.

The value *STD is supported for reasons of compatibility. Which parameter file is used by default as the information source for this command depends on the operating mode (static, dynamic, on-configuration or command).

If a SPOOL parameter file is specified (statically or dynamically), this is the default source.

If no parameter file is specified (mode: on-configuration or command), the default source is the SPOOL parameter file of the home system.

INFORMATION = *SUMMARY / *ALL

Specifies which information is output.

INFORMATION = *SUMMARY

Only the first line of each element is output.

INFORMATION = *ALL

All the lines of each element are output.

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
2	0	SPM0412	No filter present
2	0	SPM0518	No authorization
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command

Output formats

(1) INFORMATION = *SUMMARY

```
FILTER-NAME  FILTER-LOCATION
@@@@@@@@@  @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
```

(2) INFORMATION = *ALL

```
FILTER-NAME  FILTER-LOCATION
@@@@@@@@@  @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
ACCESS-DATE : @@@@-@@-@@
INPUT-FORMAT-NAMES
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
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@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
OUTPUT-FORMAT-NAME
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
REDIRECTION = @@@@@@ (DEVICE-NAME = @@@@@@)
OBJECT-NAME = @@@@@@
```

Meanings of the output fields

Output field	Meaning / contents
ACCESS-DATE	Date of the last change or usage
FILTER-LOCATION	Library containing the filter and the SDF-P logon procedure which allows the loading and executing of the filter
FILTER-NAME	Symbolic name of the filter
INPUT-FORMAT-NAMES	Name of the list of input 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

Output in S variables

The INFORMATION operand of the command defines which S variables are supplied with values. INFORMATION can take the values *ALL and *SUMMARY.

Output information	Name of the S variable	T	Contents	Condition
Time stamp	var(*LIST).LAST-ACCESS	S	*NONE <YYYY-MM-DD>	INF=*ALL
Name of the remote printer	var(*LIST).DEVICE-NAME	S	' ' <device-name>	INF=*ALL
Library containing the filter and the SDF-P-LOGON procedure which allows the loading and executing of the filter	var(*LIST).FILTER-LOCATION	S	*SYSTEM <filter-location>	INF=*ALL/ *SUM
Symbolic name of the filter	var(*LIST).FILTER-NAME	S	' ' <filter-name>	INF=*ALL/ *SUM
Name of the list of input formats	var(*LIST).INPUT-FORMAT-NAME(*LIST)	S	' ' <input-format-name>	INF=*ALL
Name of the object module	var(*LIST).OBJECT-NAME	S	' ' <object-name>	INF=*ALL
Output formats	var(*LIST).OUTPUT-FORMAT-NAME	S	' ' <output-format-name>	INF=*ALL
Option to redirect SPOOL jobs to remote printers	var(*LIST).REDIRECTION	S	*REMOTE *YES	INF=*ALL

SHOW-SPOOL-FORMS

Request information on forms entries

Domain:	SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES
User group:	Nonprivileged users
Privileges:	HARDWARE-MAINTENANCE, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING,

Function

The SHOW-SPOOL-FORMS command provides information on data from the forms entry for the specified form or the form assigned to the specified type of printer. When a form and a printer type are specified the information is output in full, otherwise only the important data is selected, sorted by form name. The number of forms listed can be freely limited by selection criteria. Those forms are selected whose forms entry includes the values specified for the respective operands (logical ANDing).

The SHOW-SPOOL-FORMS operands have the same names and meanings as the operands of the SPSEIVE statement ADD-SPOOL-FORM. The operand value *ALL (usually the default) means that the respective operand will not be used as a selection criterion.

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
SELECT =	X	X	X	X
PRINTER-RESOURCES = *ALL / *NONE	X	X	X	
PRINTER-RESOURCES = *APA(...)				X
PRINTER-RESOURCES = *LP65(...)	X		X	
EXCEPT =	X	X	X	X
PRINTER-RESOURCES = *NONE	X	X	X	X
PRINTER-RESOURCES = *APA(...)	X			X
CLUSTER-NAME =	X			
SERVER-NAME =	X			
INFORMATION =	X	X	X	X

Format

(part 1 of 4)

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> /
 list-poss(53):*ALL-LOCAL-PRINTERS / *ALL-REMOTE-PRINTERS /
 *HP-PRINTER / *HP90-PRINTER / *LP-PRINTER /
 *LP-EMULATED-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *VIRTUAL /
 *2050-APA-PRINTER / *2090-APA-PRINTER / *PCL-PRINTER /
 *2090-TWIN-PRINTER / *DJET-REMOTE-PRINTER /
 *2030-PCL-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 / *8121-REMOTE-PRINTER /
 *4830-PCL-REMOTE-PRINTER / *4850-PCL-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

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>

continued ➔

```

,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(...)
    |   *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>

```

continued →

(part 3 of 4)

```

,CHARACTER-SET = *ALL / <alphanum-name 1..3 with-wild(24)> / list-poss(16): *NONE /
    <alphanum-name 1..3>
,ROTATION-CHARACTER-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(...)
*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>

```

continued ➔

```

,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>
    ,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 = *HOME / <alphanum-name 1..8>
    ,CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
    ,INFORMATION = *SUMMARY / *ALL

```

Operands

SELECT = *ALL / *PARAMETERS(...)

Specifies the criteria to be used for selecting the forms about which information is to be output. Specifying *ALL (default value) causes information about all forms entered to be output.

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 selection criterion is the type of printer.

OWNER = *ALL / <alphanum-name 1..8 with-wild(24)> /

list-poss(16): *OWN / <name 1..8>

The selection criterion is the user ID of the user who created the form entry.

Nonprivileged users may only specify *ALL or *OWN.

ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...)

Date of the last change or last usage within the framework of the print process. This date can be used as an additional criterion for displaying the character set. Either a special date or a date interval may be specified.

The date can be entered 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 positions, the following rule applies:

All numbers (XY) less than or equal to 60 are interpreted as 20XY, and all numbers greater than 60 are interpreted as 19XY.

ACCESS-DATE = *ANY

The access date is not used as a selection criterion for a character set to be displayed.

ACCESS-DATE = *TODAY

Selects and displays any character set that was created or modified on the current date.

ACCESS-DATE = *INTERVAL(...)

Specifies a date interval as a selection criterion for displaying 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 value is the current date (today).

LINE-SIZE = *ALL / <integer 30..180> / *RANGE(...)

The selection criterion is the maximum form width (in 1/10 of an inch).

LINE-SIZE = *RANGE(...)

Specification of a range of values that contains the maximum form width.

LOW = <integer 30..180>

Lower range limit.

HIGH = <integer 30..180>

Upper range limit.

PAGE-SIZE = *ALL / <integer 1..250> / *RANGE(...)

The selection criterion is the height of the form (in 1/10 of an inch).

PAGE-SIZE = *RANGE(...)

Specification of a range of values that includes the maximum form height.

LOW = <integer 1..250>

Lower range limit.

HIGH = <integer 1..250>

Upper range limit.

HEADER-PAGE = *ALL / list-poss(4): *YES / *NO / *RESPOOL / *ONE

The selection criterion is the entry specifying whether a header page is to be printed.

TRAILER-PAGE = *ALL / list-poss(3): *YES / *NO / *INFO

The selection criterion is the entry specifying whether a trailer page is to be printed.

VERTICAL-CONTROL = *ALL / *NONE / *LOOP(...) / *SPACING(...)

The selection criterion is the entry specifying the type of feed control.

VERTICAL-CONTROL = *LOOP(...)

Feed control via loop record.

LOOP-NAME = *ALL / <alphanum-name 1..3 with-wild(24)> /

list-poss(16): <alphanum-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 selection criterion is the line density, specified by the number of lines (LINES) and the 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 the position.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

ROTATION-CONTROL = *ALL / *NONE / *LOOP(...) / *SPACING(...)

The selection criterion is whether rotated page feed is controlled by a loop record or an additional line feed controller.

ROTATION-CONTROL = *LOOP(...)

Feed is controlled by 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 controlled by an additional line feed controller.

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 the number of lines (LINES) and the length of the form (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 in the simulated loop on which the "channel 1" vertical tabulator is defined.

CHANNEL1-POSITION = *RANGE(...)

Specification of a range of values for the line number.

LOW = <integer 1..255>

Lower range limit.

HIGH = <integer 1..255>

Upper range limit.

CHARACTER-SET = *ALL / <alphanum-name 1..3 with-wild(24)> /

list-poss(16): *NONE / <alphanum-name 1..3>

The selection criterion is the name of the character set.

ROTATION-CHARACT-SET = *ALL / <alphanum-name 1..3 with-wild(24)> /

list-poss(16): *NONE / <alphanum-name 1..3>

The selection criterion is the name of the character set used for rotated pages.

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.

PREFORM = *ALL / <alphanum-name 1..24 with-wild> /

list-poss(16): *NONE / <alphanum-name 1..4>

The selection criterion is the entry specifying the printer control character sequence that must be sent at the start of a job. Only for LP-EMULATED-PRINTER.

CHARACTER-IMAGE = *ALL / <alphanum-name 1..3 with-wild(24)> /

list-poss(16): *NONE / <alphanum-name 1..3>

The selection criterion is the name of the conversion table.

TWO-UP-PROCESSING = *ALL / list-poss(3): *NO / *MODE-1 / *MODE-2

The selection criterion is the entry specifying whether and which two-up mode is to be used for printing. (Only for HP90 printers.)

DIA-PROCESSING = *ALL / *PARAMETERS(...)

The selection criteria are the default settings for forms when using overlays.

DIA-PROCESSING = *PARAMETERS(...)

Specifies 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 selection criterion is the description of the EFO data overlay.

FORMS-OVERLAY-BUFFER = *ALL / <alphanum-name 1..4 with-wild(24)> /

list-poss(16): <alphanum-name 1..4>

The selection criterion is the description of the FOB data overlay.

PRINTER-RESOURCES = *ALL / *NONE / *LP65(...) / *APA(...)

The selection criterion is the entry specifying whether particular printer functions are to be used.

PRINTER-RESOURCES = *LP65(...)

Designates the printer functions for LP65 printers.

PAGE-DEFINITION = *ALL / <integer 1..50000> / *RANGE(...)

The selection criterion is the number of the default PCL file.

PAGE-DEFINITION = *RANGE(...)

Specification of a range of values that contains the number.

LOW = <integer 1..50000>

Lower range limit.

HIGH = <integer 1..50000>

Upper range limit.

STACKER-OFFSET = *ALL / *YES / *NO

The selection criterion is the agreement whether the individual spoolout jobs are to be separated by offset stacking. This operand is ignored for LP65 continuous-paper printers of types 2090-LIP and 2140-LIP.

SEPARATOR-PAGE-TRAY = *ALL / <integer 1..3> / *RANGE(...)

The selection criterion is the number of blank pages between the individual spoolout jobs. This operand is ignored for LP65 continuous-paper printers of types 2090-LIP and 2140-LIP.

SEPARATOR-PAGE-TRAY = *RANGE(...)

Specification of a range of values for the number of blank pages.

LOW = <integer 1..3>

Lower range limit.

HIGH = <integer 1..3>

Upper range limit.

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 forms entries to be excluded from the selection (negative list). If *NONE is specified, no forms are excluded from the selection.

EXCEPT = *PARAMETERS(...)

Initiates a list of selection criteria.

FORM-NAME = *NONE / <alphanum-name 1..6 with-wild(24)> /
list-poss(16): <alphanum-name 1..6> / *STD

The forms with the specified names are not to be taken into account.

OWNER = *NONE / <alphanum-name 1..8 with-wild(24)> /
list-poss(16): *OWN / <name 1..8>

Forms entries created by users with the specified user ID are not taken into account.



Nonprivileged users can only specify values other than *NONE if they have specified SELECT=PARAMETERS(OWNER=*OWN) above.

VERTICAL-CONTROL = *NONE / *LOOP(...)

Forms entries with the specified loop record are not taken into account.

LOOP-NAME = <alphanum-name 1..3 with-wild(24)> /
list-poss(16): <alphanum-name 1..3>
 Name of the loop record.

ROTATION-CONTROL = *NONE / *LOOP(...)

Forms entries with the specified loop record for rotation are not taken into account.

LOOP-NAME = <alphanum-name 1..3 with-wild(24)> /
list-poss(16): <alphanum-name 1..3>
 Name of the loop record.

CHARACTER-SET = *NONE / <alphanum-name 1..3 with-wild(24)> /
list-poss(16): <alphanum-name 1..3>

Forms entries with the specified character set are not taken into account.

ROTATION-CHARACTER-SET = *NONE / <alphanum-name 1..3 with-wild(24)> /
list-poss(16): <alphanum-name 1..3>

Forms entries with the specified character set for pages to be printed rotated are not taken into account.

BAND-IDENTIFICATION = *NONE / <alphanum-name 1..4 with-wild(24)> /
list-poss(16): <alphanum-name 4..4>

Forms entries with the specified type band are not taken into account.

PREFORM = *NONE / <alphanum-name 1..4 with-wild(24)> /
list-poss(16): <alphanum-name 1..4>

Forms entries with the specified printer control character sequence are not taken into account. Only for LP-EMULATED-PRINTER.

CHARACTER-IMAGE = *NONE / <alphanum-name 1..3 with-wild(24)> /
list-poss(16): <alphanum-name 1..3>

Forms entries with the specified conversion table are not taken into account.

DIA-PROCESSING = *NONE / *PARAMETERS(...)

The specified settings for forms when using overlays are ignored.

DIA-PROCESSING = *PARAMETERS(...)

Specifies the settings for EFO and FOB data overlays to be ignored.

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 ignored.

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 ignored.

PRINTER-RESOURCES = *NONE / *APA(...)

Forms entries with the specified printer attributes are not taken into account. For APA printers only.

FORM-DEFINITION = *NONE / <alphanum-name 1..8 with-wild(24)> /

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

Name of the FORMDEF.

PAGE-DEFINITION = *NONE / <alphanum-name 1..8 with-wild(24)> /

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

Name of the PAGEDEF.

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Specifies the cluster for which the information is to be output. Only BS2000 clusters can be specified.

SERVER-NAME = *HOME / <alphanum-name 1..8>

Specifies the servers for which information is to be output.

INFORMATION = *SUMMARY / *ALL

Specifies which information is output. The output format depends on the contents of the VERTICAL-CONTROL and ROTATION-CONTROL fields.

INFORMATION = *SUMMARY

Only the first line of each element is output.

INFORMATION = *ALL

All the lines of each element are output.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SPM0412	No form present
2	0	SPM0518	No authorization
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command

Outputs

There are various output formats, depending on the device type and values for VERTICAL-CONTROL and ROTATION-CONTROL. The output formats shown below are output when INFORMATION=*ALL; if INFORMATION=*SUMMARY, only the first line appears in each case.

Output when line densities are not 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-0  S-P-T  T-UP-P  CH-IM F-OV  F-O-B
@@@@    @@@@    @@@@@@@@@ @@@@@@@@@ @@@      # @@@@@@  @@@@@  @@@@@  @@@@@
ACCESS-DATE : @@@@-@@-@@
```

Output when line densities are 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-0  S-P-T  T-UP-P  CH-IM F-OV  F-O-B
@@@@    @@@@    @@@@@@@@@ @@@@@@@@@ @@@      # @@@@@@  @@@@@  @@@@@  @@@@@
ACCESS-DATE : @@@@-@@-@@
```

Output when line densities are only defined for VERTICAL-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-N/LPI/C-P/C-S
@@@@@@  #####@@@@@  ###  ### @@@ @@@  ###/###  ### @@@ @@@ ###  ### @@@ @@@@@@@@
BAND-ID  PREFORM PAGE-DEF FORM-DEF S-0  S-P-T  T-UP-P  CH-IM F-OV  F-O-B
@@@@    @@@@    @@@@@@@@@ @@@@@@@@@ @@@      # @@@@@@  @@@@@  @@@@@  @@@@@
ACCESS-DATE : @@@@-@@-@@
```

Output when line densities are only defined for 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-P-I /C-P/C-S
@@@@@@  #####@@@@@  ###  ### @@@ @@@  @@@ ###  ### @@@ ###/###  ### @@@ @@@@@@@@
BAND-ID  PREFORM PAGE-DEF FORM-DEF S-0  S-P-T  T-UP-P  CH-IM F-OV  F-O-B
@@@@    @@@@    @@@@@@@@@ @@@@@@@@@ @@@      # @@@@@@  @@@@@  @@@@@  @@@@@
ACCESS-DATE : @@@@-@@-@@
```

Note the following points concerning the values for line density:

- The asterisk (*) before the value in the LPI field indicates that it is the calculated value for line density and not a defined value (DENSITY(...) operand for ADD-/MODIFY-SPOOL-FORM).
- If the field is labeled L-P-I (instead of LPI), the line density has been defined by means of the DENSITY(...) operand and is displayed in the form lines/inches. The loop name (L-N field) is not displayed.

Meanings of the output fields

The name in parentheses is the corresponding operand for the SPSEIVE statement ADD-SPOOL-FORM. The fields L-N (LOOP-NAME) and LPI are mutually exclusive; in other words, one of the two is always empty.

Output field	Meaning / contents
ACCESS-DATE	Date of last change or usage
BAND-ID	Name of the BAND-ID (type band)
CH-IM (CHARACTER-IMAGE)	Specifies whether a CHARACTER-IMAGE table was defined for a specific device type
FORM-NAM (FORM-NAME)	Form name
DEV-TYPE (DEVICE-TYPE)	Device type: only one device type is output per group; In the case of groups ##### stands for: LP-PRINT (3337, 3338, 3339) HP-PRINT (3351, 3353) HP90-PR (2090, 2140) LP65-PR (3365) LP48-PR (3348, 3349) PCL PRINTER (Pagestream 55, Pagestream 75 and Pagestream 88 with EM-SRA emulation) The remaining devices are not combined into groups
LI-S (LINE-SIZE)	Line length in 1/10 of an inch
PA-S (PAGE-SIZE)	Page size in 1/10 of an inch
PREFORM	Control character sequence for LP-EMULATED-PRINTER
H-P (HEADER-PAGE)	SPOOL header page: 2 header pages (YES), no header page (NO), 1 header page (ONE), 2 header pages after a restart (RESPOOL)
T-P (TRAILER-PAGE)	SPOOL trailer page: Of the three parts of the trailer page either 2 (YES) or 3 (INFO) are printed, or no trailer page is printed (NO)

Output field	Meaning / contents
VERT-CONTROL (VERTICAL-CONTROL): L-N (LOOP-NAME) LPI (LINES-PER-INCH) L-P-I (LINES-PER-INCH) C-P (CHANNEL1-POSITION) C-S (CHARACTER-SET)	Page feed: Name of the loop assigned to the form by default; Line spacing (RSO mode only); Line spacing specified as break (lines/inch) Line number of the simulated loop on which the "channel 1" vertical tabulator is defined; Name of the character set assigned to the form by default
ROT-CONTROL (ROTATION-CONTROL): L-N (LOOP-NAME) LPI (LINES-PER-INCH) L-P-I (LINES-PER-INCH) C-P (CHANNEL1-POSITION) C-S (CHARACTER-SET)	Page feed for pages to be output rotated for HP laser printers and RSO printers 9021, 9022, 9022-200, 9025, 9026-RENO, 9026-LJ and LJII; Name of the rotation loop which is assigned to the form by default; Line spacing (in RSO operation only); Line spacing, specified as a fraction (lines per inch); Line number of the simulated rotation loop on which channel 1 is defined; Name of the character set with which, by default, rotated pages to be output are to be printed with this form.
OWNER	Under TSOS: User ID of the form owner who created the form (systems support/RSO device administrator); nonprivileged users: The output field always contains blanks.
PAGE-DEF (PAGE-DEFINITION)	Standard PCL file for controlling print output to the LP65 device
FORM-DEF	Standard form definition for APA printers
S-O (STACKER-OFFSET)	Separation of the jobs by offset output of the paper stacks on the stacker (single page printers)
S-P-T (SEPARATOR-PAGE-TRAY)	Additional blank page between spoolout jobs; addition blank page between copies of the same job if a header page is printed before each copy
T-UP-P (TWO-UP-PROCESSING)	Output in pairs of adjacent pages with HP90 laser printers and APA printers

Output in S variables

Two output layouts - a complete one and a full one - are available. The INFORMATION operand of the command defines which S variables are supplied with values. INFORMATION can take the value *ALL or *SUMMARY.

INFORMATION = *ALL produces the complete output layout.

INFORMATION = *SUMMARY produces a reduced output layout.

Output information	Name of the S variable	T	Contents	Condition
Time stamp	var(*LIST).LAST-ACCESS	S	*NONE <YYYY-MM-DD>	INF=*ALL
Type band identifier	var(*LIST).BAND-ID	S	*NONE <band-id>	Complete layout
Name of the CHARACTER-IMAGE table	var(*LIST).CHAR-IMAGE	S	*NONE <char-image>	Complete layout
Name of the character set	var(*LIST).CHAR-SET	S	' ' <char-set-name>	Reduced/com plete layout
Device type	var(*LIST).DEV-TYPE	S	' ' <dev-type>	Reduced/com plete layout
Forms overlay buffer	var(*LIST).FOB	S	*NONE <fob>	Complete layout
Standard form definition for APA printers	var(*LIST).FORM-DEF	S	*NONE <form-def>	Complete layout
Form name	var(*LIST).FORM-NAME	S	' ' <form-name>	Reduced/com plete layout
Forms overlay buffer	var(*LIST).FORM-OVERLAY	S	*NONE <form. overlay>	Complete layout
Printing of a header page *NO: no header page *ONE: 1 header page *RESPOOL: 2 header pages after RESPOOL *YES: 2 header pages	var(*LIST).HEAD-PAGE	S	*NO *ONE *RESPOOL *YES	Reduced/com plete layout
Line length in 1/10 inch	var(*LIST).LINE-SIZE	S	30..180	Reduced/com plete layout
User ID of the form owner	var(*LIST).OWNER	S	' ' *NONE <user-id>	Reduced/com plete layout
Number of the standard PCL file for controlling the print output	var(*LIST).BAND-ID	S	*NONE <band-id>	Complete layout
Page size in 1/10 inch	var(*LIST).CHAR-IMAGE	S	*NONE <char-image>	Reduced/com plete layout

Output information	Name of the S variable	T	Contents	Condition
Sequence of control characters for LP-EMULATED-PRINTER	var(*LIST).PREFORM	S	*NONE <preform>	Complete layout
Character set used for pages printed after being rotated	var(*LIST).ROT-CHAR-SET	S	' ' <char-set-name>	Reduced/com plete layout
Line number of the simulated rotation loop on which channel 1 is defined (selection criterion for the feed for rotated pages)	var(*LIST).ROT-CONTR.CHAN-1-POS	S	0..255	Reduced/com plete layout
Form length in inches (selection criterion for the feed of rotated pages)	var(*LIST).ROT-CONTR.INCHES	S	0..999	Reduced/com plete layout
Number of lines (selection criterion for the feed of rotated pages)	var(*LIST).ROT-CONTR.LINES	S	0..999	Reduced/com plete layout
Line density, number of lines per inch (selection criterion for the feed for rotated pages)	var(*LIST).ROT-CONTR.LPI	S	0..999	Reduced/com plete layout
Name of the rotation loop (selection criterion for the feed for rotated pages)	var(*LIST).ROT-CONTR.LOOP	S	' ' <loop-name>	Reduced/com plete layout
Number of blank pages between spoolout jobs	var(*LIST).SEPAR-PAGE-TRAY	S	*NONE 1..3	Complete layout
Offset stacking of spoolout jobs	var(*LIST).STACKER-OFFSET	S	*NO *YES	Complete layout
Output of the 3 trailer pages: *INFO: 3 pages are printed *NO: no trailer page is printed *YES: 2 pages are printed	var(*LIST).TRAIL-PAGE	S	*INFO *NO *YES	Reduced/com plete layout
Output of two adjacent pages	var(*LIST).TWO-UP-PROCESS	S	*MODE-1 *MODE-2 *NO	Complete layout
Feed control via LOOP record (position of the line containing channel 1)	var(*LIST).VERT-CONTR.CHAN-1-POS	S	0..255	Reduced/com plete layout
Form length in inches (selection criterion for form feed)	var(*LIST).VERT-CONTR.INCHES	S	1..999 0	Reduced/com plete layout
Number of lines (selection criterion for form feed)	var(*LIST).VERT-CONTR.LINES	S	1..999 0	Reduced/com plete layout
Line density, number of lines per inch (selection criterion for form feed)	var(*LIST).VERT-CONTR.LPI	S	0..999	Reduced/com plete layout
Name of the LOOP record (selection criterion for form feed)	var(*LIST).VERT-CONTR.LOOP	S	' ' <loop-name>	Reduced/com plete layout

SHOW-SPOOL-PARAMETERS

Request information on global SPOOL parameters

Domain: SPOOL-PRINT-ADMINISTRATION, SPOOL-PRINT-SERVICES

User group: Nonprivileged users

Privileges: PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The SHOW-SPOOL-PARAMETERS command requests the values of the global SPOOL defaults and scheduling criteria for local SPOOL and RSO from the current SPOOL parameter file to be output to SYSOUT.

Format

SHOW-SPOOL-PARAMETERS

```

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>
, SERVER-NAME = *HOME / <alphanum-name 1..8>
, INFORMATION = *ALL / list-possible(11):
    *VERSIONS / *HEADER-PAGE / *PRINT-CMD-DEFAULTS /
    *SPOOLOUT-OPTIONS / *SPOOLOUT-SIZE / *SPOOLIN-OPTIONS / *RSO-OPTIONS /
    *OLTP-OPTIONS / *DPRINT-OPTIONS / *CENTRAL-SCHEDULING / *RSO-SCHEDULING

```

Operands

CLUSTER-NAME = *LOCAL-CLUSTER / <alphanum-name 1..8>

Relevant for Distributed Print Services only.

Specifies the cluster for which information is to be output. Only BS2000 clusters can be specified.

SERVER-NAME = *HOME / <alphanum-name 1..8>

Relevant for Distributed Print Services only.

Specifies the servers for which information is to be output.

INFORMATION = *ALL / list-poss(11):

***VERSIONS / *HEADER-PAGE / *PRINT-CMD-DEFAULTS / *SPOOLOUT-OPTIONS /
*SPOOLOUT-SIZE / *SPOOLIN-OPTIONS / *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, *VERSIONS provides the caller with the versions of the different Spool&Print subsystems.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SPM0431	Conversion in progress
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected

Output

Different kinds of layouts are provided, depending on the INFORMATION value.

Output with INFORMATION = *VERSIONS

```
----- VERSIONS -----
SPOOL           : @@@@@@
RSO             : @@@@@@@@@@@@@@
SPS             : @@@@@@@@@@@@@@
DPRINTCM       : @@@@@@@@@@@@@@
DPRINTCL       : @@@@@@@@@@@@@@
DPRINTSV       : @@@@@@@@@@@@@@
SCSIPCL        : @@@@@@@@@@@@@@
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 : ####
RBP-STATION-LIMIT : 0
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 : ND-PRINTER : NO
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 : @@@

```

Output with INFORMATION = *SPOOLOUT-SIZE

```

----- SPOOLOUT-SIZE -----
UNIT : @@@@
LINES-FACTOR : ###
MIN-LINES-PER-PAGE : ##### (@@@)

```

Output with INFORMATION = *SPOOLIN-OPTIONS

```
----- SPOOLIN-OPTIONS -----
LOGGING-DISKETTE      : @@@
```

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

For compatibility reasons, *ALL is the default value.

The concatenation of all preceding INFORMATION types is displayed.

Meanings of the output fields

Output field	Contents
VERSIONS:	
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
HEADER-PAGE:	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 (partially qualified) spoolout group (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)
PRINT-CMD-DEFAULTS:	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. Default value for the SHIFT operand in the PRNTDOC macro or LEFT-MARGIN in the PRINT-DOCUMENT command (0...30).
DESTINATION	Default destination of the spoolout job: <ul style="list-style-type: none"> – *CENTRAL: pool of all devices administered from the local server. – *REMOTE: specified non-distributed device. – *POOL: specified non-distributed device pool.
DEVICE-NAME	Name of the non-distributed printer.
POOL-NAME	Name of the non-distributed printer pool.

Output field	Contents
DPRINT-DESTINATION	Default destination for Distributed Print Services: <ul style="list-style-type: none"> – *DESTINATION: local DESTINATION is used. – *CENTRAL: pool of all distributed printers. – *POOL: specified distributed printer pool.
POOL-NAME	Name of the distributed 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 (DELETE-AFTER-PRINT), in which lines are truncated during processing of the SPOOL job.
RESOURCES-LOCATION	Specification of the host whose print resources are to be used: <ul style="list-style-type: none"> – *HOME: the host on which the command was issued. – *SERVER: the host on which the print job is processed.
SPOOLOUT-OPTIONS:	Spoolout control criteria
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 START-SPOOL=n operand 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	Default form for SYSLST output if the user does not make any specification.
DEFAULT-SYSOUT-FORM	Default form for SYSOUT output if the user does not make any specification.
REC-RULES-PREFIX	Prefix part of recovery rules files
PRINTER-PARAM-PREFIX	Prefix part of the individual printer parameter files

Output field	Contents
FILTER-TASK-LIMIT	Number of possible filter tasks
PRIORITY:	
REPLAY-SESSION	For local SPOOL only: Task priority for outputs to replay tapes (60...200).
FROM-POSITIONING	For local SPOOL only: 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)
CHECKPOINT-INTERVAL:	
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).
DEVICE-TYPE:	
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)
RASTER-PATTERN-MEM	Size of the shared HP90 memory area for character sets and FOB data overlays

Output field	Contents
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)
SPOOLOUT-SIZE:	
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.
SPOOLIN-OPTIONS:	
LOGGING DISKETTE	Specifies whether a log of the spoolin job is to be output (YES/NO).
RSO-OPTIONS:	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).
OLTP-OPTIONS:	Defaults for OLTP operation
TASK-LIMIT	Maximum number of OLTP tasks permitted during a session (1..200).

Output field	Contents
TASK-DEVICE-LIMIT	Maximum number of printers that can be operated during an OLTP task (1..1024).
DPRINT-OPTIONS:	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 remote processor
DFTM-WAITING-TIME	Waiting time for the DFTM task check loop
[NEXT-]CENTRAL-SCHEDULING / [NEXT-]RSO-SCHEDULING	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.
DEVICE-WEIGHT:	“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 CHARACTER-SET-NUMBER CLASS FORMS-OVERLAY-BUFFER FORM-NAME FORMS-OVERLAY PRIORITY ROTATION SPOOL-OUT-NAME USER-IDENTIFICATION	Weight for the ACCOUNT parameter Weight for the CHARACTER-SET-NUMBER parameter Weight for the SPOOL-OUT-CLASS parameter Weight for the FORMS-OVERLAY-BUFFER parameter Weight for the FORM-NAME parameter Weight for the FORMS-OVERLAY parameter Weight for the PRIORITY parameter Weight for the ROTATION parameter Weight for the SPOOL-OUT-NAME operand Weight for the USER-IDENTIFICATION operand
JOB-SEQUENCE	Fields according to which the various waiting and active jobs are to be sorted.
JOB-PRIORITY	Order in which equivalent jobs are to be processed (waiting time of the spoolout job).

Output in S variables

The INFORMATION operand of the command defines which S variables are supplied with values. The values of the INFORMATION operand can be specified as follows:

Notation in the command	Abbreviated notation (in the Condition column)
INFORMATION = *ALL	1
INFORMATION = *VERSIONS	2
INFORMATION = *HEADER-PAGE	3
INFORMATION = *PRINT-CMD-DEFAULT	4
INFORMATION = *SPOOLOUT-OPTIONS	5
INFORMATION = *SPOOLOUT-SIZE	6
INFORMATION = *SPOOLIN-OPTIONS	7
INFORMATION = *RSO-OPTIONS	8
INFORMATION = *OLTP-OPTIONS	9
INFORMATION = *DPRINT-OPTIONS	10
INFORMATION = *CENTRAL-SCHEDULING	11
INFORMATION = *RSO-SCHEDULING	12

Output information	Name of the S variable	T	Contents	Condition
Weight for the scheduling parameter ACCOUNT (for the current SPOOL run)	var(*LIST).CURR-SCHED.ACCOUNT	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter CHAR-SET-NUM (for the current SPOOL run)	var(*LIST).CURR-SCHED.CHAR-SET-NUM	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter FORMS-OVERLAY-BUFFER (for the current SPOOL run)	var(*LIST).CURR-SCHED.FOB-SIZE	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter FORM-NAME (for the current SPOOL run)	var(*LIST).CURR-SCHED.FORM-NAME	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter FORMS-OVERLAY (for the current SPOOL run)	var(*LIST).CURR-SCHED.FORM-OVERLAY	S	<integer 0,1,2,4,8,16,32,64,128>	1, 11
Sequence in which equivalent jobs are processed (for the current SPOOL run)	var(*LIST).CURR-SCHED.JOB-PRIO	S	*AGE *PRIO	1, 11

Output information	Name of the S variable	T	Contents	Condition
Fields according to which the various pending and active jobs are sorted (for the current SPOOL run)	var(*LIST).CURR-SCHED.JOB-SEQ	S	*ACCOUNT *CHAR-SET *CLASS *FOB-NAME *FORM *FORM-OVERLAY *NONE *SPOOL-OUT-NAME *SEQUENCE *USER-ID	1, 11
Weight for the scheduling parameter PRINT-JOB-CLASS (for the current SPOOL run)	var(*LIST).CURR-SCHED.PRINT-JOB-CLASS	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter PRINT-JOB-NAME (for the current SPOOL run)	var(*LIST).CURR-SCHED.PRINT-JOB-NAME	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter PRINT-JOB-PRIO (for the current SPOOL run)	var(*LIST).CURR-SCHED.PRINT-JOB-PRIO	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter ROTATION (for the current SPOOL run)	var(*LIST).CURR-SCHED.ROT	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter USER-ID (for the current SPOOL run)	var(*LIST).CURR-SCHED.USER-ID	S	0,1,2,4,8,16,32,64,128	1, 11
Maximum time (in minutes) for setting up the connection to the partner processor (condition for Distributed Print Services)	var(*LIST).DPRINT-OPT.CONN-TIME	S	1..255	1, 10
Maximum wait time for the loop check of the DFTM task	var(*LIST).DPRINT-OPT.DFTM-WAITING-T	S	20..1800	1, 10
Maximum priority for a remote print job (condition for Distributed Print Services)	var(*LIST).DPRINT-OPT.REM-JOB-PRIO	S	30..255	1, 10
Maximum number of jobs for administration of the resource containers (condition for Distributed Print Services)	var(*LIST).DPRINT-OPT.RESOURCE-TASK-LIM	S	1..32	1, 10
Maximum number of jobs for processing remote requests (condition for Distributed Print Services)	var(*LIST).DPRINT-OPT.SERVER-TASK-LIM	S	1..255	1, 10
Character set used to print the header page	var(*LIST).HEAD-PAGE.CHAR-SET	S	*DEFAULT *FILE	1, 3

Output information	Name of the S variable	T	Contents	Condition
Header page for each print copy of a spoolout job	var(*LIST).HEAD-PAGE.COP-HEAD	S	*NO *YES	1, 3
Header page for each individual spoolout of a spoolout group	var(*LIST).HEAD-PAGE.FAM-MEMB-HEAD	S	*NO *YES	1, 3
Account number output on the header page	var(*LIST).HEAD-PAGE. PRINT-ACCOUNT-NUM	S	*NO *YES	1, 3
Branch to channel 1 after output of the header page	var(*LIST).HEAD-PAGE. SPACE-AFTER-HEAD	S	*NO *YES	1, 3
Weight for the scheduling parameter ACCOUNT (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.ACCOUNT	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter FORM-NAME (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.FORM-NAME	S	0,1,2,4,8,16,32,64, 128	1, 12
Sequence in which equivalent RSO jobs are processed (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.JOB-PRIO	S	*AGE *PRIO	1, 12
Fields according to which the various pending and active RSO jobs are sorted (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.JOB-SEQ	S	*ACCOUNT *CLASS *FORM *SPOOLOUT-NAME *USER-ID	1, 12
Weight for the scheduling parameter PRINT-JOB-CLASS (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.PRINT-JOB-CLASS	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter PRINT-JOB-NAME (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.PRINT-JOB-NAME	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter PRINT-JOB-PRIORITY (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.PRINT-JOB-PRIO	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter USER-ID (for the next RSO job)	var(*LIST).NEXT-RSO-SCHED.USER-ID	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter ACCOUNT (for the next RSO job)	var(*LIST).NEXT-SCHED.ACCOUNT	S	0,1,2,4,8,16,32,64, 128	1, 11
Weight for the scheduling parameter CHAR-SET-NUM (for the next SPOOL run)	var(*LIST).NEXT-SCHED.CHAR-SET-NUM	S	0,1,2,4,8,16,32,64, 128	1, 11
Weight for the scheduling parameter FORMS-OVERLAY-BUFFER (for the next SPOOL run)	var(*LIST).NEXT-SCHED.FOB-SIZE	S	0,1,2,4,8,16,32,64, 128	1, 11

Output information	Name of the S variable	T	Contents	Condition
Weight for the scheduling parameter FORM-NAME (for the next SPOOL run)	var(*LIST).NEXT-SCHED.FORM-NAME	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter FORMS-OVERLAY (for the next SPOOL run)	var(*LIST).NEXT-SCHED.FORM-OVERLAY	S	0,1,2,4,8,16,32,64,128	1, 11
Sequence in which equivalent jobs are processed (for the next SPOOL run)	var(*LIST).NEXT-SCHED.JOB-PRIO	S	*AGE *PRIO	1, 11
Fields according to which the various pending and active jobs are sorted (for the next SPOOL run)	var(*LIST).NEXT-SCHED.JOB-SEQ	S	*ACCOUNT *CHAR-SET *CLASS *FOB-NAME *FORM *FORM-OVERLAY *NONE *SPOOL-OUT-NAME *SEQUENCE *USER-ID	1, 11
Weight for the scheduling parameter PRINT-JOB-CLASS (for the next SPOOL run)	var(*LIST).NEXT-SCHED.PRINT-JOB-CLASS	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter PRINT-JOB-NAME (for the next SPOOL run)	var(*LIST).NEXT-SCHED.PRINT-JOB-NAME	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter PRINT-JOB-PRIO (for the next SPOOL run)	var(*LIST).NEXT-SCHED.PRINT-JOB-PRIO	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter ROTATION (for the next SPOOL run)	var(*LIST).NEXT-SCHED.ROT	S	0,1,2,4,8,16,32,64,128	1, 11
Weight for the scheduling parameter USER-ID (for the next SPOOL run)	var(*LIST).NEXT-SCHED.USER-ID	S	0,1,2,4,8,16,32,64,128	1, 11
Maximum number of OLTP tasks during a session	var(*LIST).OLTP-OPT.TASK-LIMIT	S	1..200	1, 9
Maximum number of devices managed by an OLTP task	var(*LIST).OLTP-OPT.TASK-DEV-LIMIT	S	1..1024	1, 9
Acceptance of empty SAM files (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.ACCEPT-EMPTY-F	S	*NO *YES	1, 4
Destination of the spoolout job (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.DEST	S	*CENTRAL *POOL *REMOTE	1, 4

Output information	Name of the S variable	T	Contents	Condition
Name of the RSO printer (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.DEV-NAME	S	' ' <dev-name>	1, 4
Destination for Distributed Print Services (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.DPRINT-DEST	S	*CENTRAL *DEST *POOL	1, 4
Pool name for Distributed Print Services (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.DPRINT-POOL-NAME	S	' ' <pool-name>	1, 4
Error recovery (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.ERROR-HAND	S	*IGNORE *KEEP-FILE	1, 4
Allocation of a common TSN for local spoolout jobs (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.FAM-PROCESS.LOC	S	*NO *YES	1, 4
Allocation of a common TSN for RSO jobs (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.FAM-PROCESS.REM	S	*NO *YES	1, 4
Number of columns by which the output text is indented (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.LEFT-MARGIN	S	0..31	1, 4
Number of characters after which a print line is truncated (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.LINE-SIZE	S	132,136	1, 4
The print file is locked until printing is finished (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.LOCK-F	S	*NO *YES	1, 4
Name of the pool (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.POOL-NAME	S	' ' <pool-name>	1, 4
Utilization of the client or server resources for printing the document (default value for the PRINT-DOCUMENT command)	var(*LIST).PRINT-CMD-DEF.RESOURCE-LOC	S	' ' *HOME *SERVER	1, 4
Period (in minutes) at which printers are checked for timeout (default value for RSO operation)	var(*LIST).RSO-OPT.CHECK-PRINT-TIME	S	2..10	1, 8
Maximum number of printers served by one controller (default value for RSO operation)	var(*LIST).RSO-OPT.CONTR-DEV-LIM	S	1..1024	1, 8

Output information	Name of the S variable	T	Contents	Condition
Maximum number of job RSO controllers permitted during the session	var(*LIST).RSO-OPT.JOB-CONTR-LIM	S	1..200	1, 8
Maximum number of RSO controllers permitted during the session (default value for RSO operation)	var(*LIST).RSO-OPT.CONTR-LIM	S	1..200	1, 8
Release of DMS I/O areas if no more jobs are waiting for the output device (default value for RSO operation)	var(*LIST).RSO-OPT.REL-MEM	S	*NO *YES	1, 8
Period of time (in seconds) between two attempts to send a new message to the printer (default value for RSO operation)	var(*LIST).RSO-OPT.RETRY-TIME	S	1..600	1, 8
Weight for the scheduling parameter ACCOUNT (for the current RSO job)	var(*LIST).RSO-SCHED.ACCOUNT	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter FORM-NAME (for the current RSO job)	var(*LIST).RSO-SCHED.FORM-NAME	S	0,1,2,4,8,16,32,64, 128	1, 12
Sequence in which equivalent RSO jobs are processed (for the current RSO job)	var(*LIST).RSO-SCHED.JOB-PRIO	S	*AGE *PRIO	1, 12
Fields according to which the various pending and active RSO jobs are sorted (for the next RSO job)	var(*LIST).RSO-SCHED.JOB-SEQ	S	*ACCOUNT *CLASS *FORM *SPOOL-OUT-NAME *USER-ID	1, 12
Weight for the scheduling parameter PRINT-JOB-CLASS (for the current RSO job)	var(*LIST).RSO-SCHED.PRINT-JOB-CLASS	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter PRINT-JOB-NAME (for the current RSO job)	var(*LIST).RSO-SCHED.PRINT-JOB-NAME	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter PRINT-JOB-PRIORITY (for the current RSO job)	var(*LIST).RSO-SCHED.PRINT-JOB-PRIORITY	S	0,1,2,4,8,16,32,64, 128	1, 12
Weight for the scheduling parameter USER-ID (for the current RSO job)	var(*LIST).RSO-SCHED.USER-ID	S	0,1,2,4,8,16,32,64, 128	1, 12

Output information	Name of the S variable	T	Contents	Condition
Indicator whether the minimum number of lines per print page is set by SPOOL (*STD) or the SPOOL administrator	var(*LIST).SPOOL-SIZE.INDICATOR	S	' ' *STD	1, 6
Average number of records in a PAM page	var(*LIST).SPOOL-SIZE.LINE-FACT	S	8..100	1, 6
Minimum number of lines per print page	var(*LIST).SPOOL-SIZE.MIN-LPP	S	1..255	1, 6
Size of spoolout (in PAM pages or lines)	var(*LIST).SPOOL-SIZE.UNIT	S	*LINE *PAM	1, 6
Output of a spoolin job log	var(*LIST).SPOOLIN-OPT.LOG-DISK	S	*NO *YES	1, 7
Output to an APA printer is possible (criterion for spoolout control)	var(*LIST).SPOOLOUT-OPT.APA-PRINTER	S	*NO *YES	1, 5
Distance between the spoolout checkpoints for line printers and printers with a loadable VFB	var(*LIST).SPOOLOUT-OPT.CHECK. LINE-PRINT	S	0..32767	1, 5
Distance between the spoolout checkpoints for page printers (laser printers)	var(*LIST).SPOOLOUT-OPT.CHECK. PAGE-PRINT	S	0..32767	1, 5
Distance between the spoolout checkpoints for remote printers	var(*LIST).SPOOLOUT-OPT.CHECK. REM-PRINT	S	0..32767	1, 5
Name of the standard form for SYSLST outputs	var(*LIST).SPOOLOUT-OPT. DEF-SYSLST-FORM	S	' ' <form-name>	1, 5
Name of the standard form for SYSOUT output	var(*LIST).SPOOLOUT-OPT. DEF-SYSOUT-FORM	S	' ' <form-name>	1, 5
Maximum number of filter tasks	var(*LIST).SPOOLOUT-OPT. FILTER-TASK-LIMIT	S	1..32	1, 5
Number of characters in the form name which SPOOL observes for scheduling	var(*LIST).SPOOLOUT-OPT. FORM-NAME-LEN	S	1..6	1, 5
Output to HP printers is possible	var(*LIST).SPOOLOUT-OPT.HP-PRINTER	S	*NO *YES	1, 5
Number of character sets in character memory (for output to HP printers)	var(*LIST).SPOOLOUT-OPT.HP-PRINT. CHAR-SET	S	4/36/64	1, 5
Maximum size of the forms overlay that can be loaded in the HP printer buffer	var(*LIST).SPOOLOUT-OPT. HP-PRINT.FOB	S	0/672/1344	1, 5
Printout to HP printers with page rotation module is possible	var(*LIST).SPOOLOUT-OPT.HP-PRINT.ROT	S	*NO *YES	1, 5

Output information	Name of the S variable	T	Contents	Condition
Output to HP90 printers is possible	var(*LIST).SPOOLOUT-OPT.HP90-PRINTER	S	*NO *YES	1, 5
Number of character sets in character memory (for output to HP90 printers)	var(*LIST).SPOOLOUT-OPT.HP90-PRINT.CHAR-SET	S	1..64	1, 5
Maximum size of the forms overlay that can be loaded in the HP90 printer buffer	var(*LIST).SPOOLOUT-OPT.HP90-PRINT.FOB	S	1..32767	1, 5
EFO for HP90 printers	var(*LIST).SPOOLOUT-OPT.HP90-PRINT.FORM-OVERLAY	S	*NO *YES	1, 5
Size of the common HP90 memory area for character sets and forms overlays	var(*LIST).SPOOLOUT-OPT.HP90-PRINT.RAST-PAT-MEM	S	*NONE 4096..65535	1, 5
Output to HP90 printers with page rotation module is possible	var(*LIST).SPOOLOUT-OPT.HP90-PRINT.ROT	S	*NO *YES	1, 5
Output to LP printers is possible	var(*LIST).SPOOLOUT-OPT.LP-PRINTER	S	*NO *YES	1, 5
Output to LP65 printers is possible	var(*LIST).SPOOLOUT-OPT.LP65-PRINTER	S	*NO *YES	1, 5
Output to PCL printer is possible	var(*LIST).SPOOLOUT-OPT.PCL-PRINTER	S	*NO *YES	1, 5
Maximum number of message tasks that can be active simultaneously	var(*LIST).SPOOLOUT-OPT.MAX-MSG-TASK	S	0..200	1, 5
Output to ND printers is possible	var(*LIST).SPOOLOUT-OPT.ND-PRINTER	S	*NO *YES	1, 5
Prefix part of the printer parameter files	var(*LIST).SPOOLOUT-OPT.PRINTER-PARAM-PREFIX	S	' ' <printer-param-prefix>	1, 5
Number of pages or lines by which the job is moved back for a restart (for local SPOOL)	var(*LIST).SPOOLOUT-OPT.PRIO.FROM-POS	S	60..200	1, 5
Task priority for output to replay tapes	var(*LIST).SPOOLOUT-OPT.PRIO.REPLAY-SESSION	S	60..200	1, 5
Number of sections in a file by which the job is moved back for a restart	var(*LIST).SPOOLOUT-OPT.PRIO.SECT-POS	S	60..200	1, 5
Maximum number of RBP tasks	var(*LIST).SPOOLOUT-OPT.RBP-STAT-LIM	S	0..255	1, 5
Prefix section of the recovery rules files	var(*LIST).SPOOLOUT-OPT.REC-RULES-PR	S	' ' <rec-rules-pr>	1, 5
Buffer size (Kbytes) available to the printer	var(*LIST).SPOOLOUT-OPT.REM-BUF-SIZE	S	4,8,16, 32	1, 5

Output information	Name of the S variable	T	Contents	Condition
Maximum number of RSO printers that can be active simultaneously	var(*LIST).SPOOL-OUT-OPT.REM-DEV-LIM	S	0..9999	1, 5
Maximum number of pseudo controllers for SECTION-PRINT jobs that can be active simultaneously	var(*LIST).SPOOL-OUT-OPT.SECT-TASK-LIM	S	1..255	1, 5
Smallest value for logical pages after which printout of a system file is started automatically	var(*LIST).SPOOL-OUT-OPT.START-SPOOL-LOW-VAL	S	1..32767	1, 5
Output to TWIN printers is possible	var(*LIST).SPOOL-OUT-OPT.TWIN-PRINTER	S	*NO *YES	1, 5
Output to VIRTUAL printers is possible	var(*LIST).SPOOL-OUT-OPT.VIRTUAL-PRINTER	S	*ALLOWED *NOT-ALLOWED	1, 5
Version of the DPRINTCL subsystem	var(*LIST).VERSION.DPRINT-CLI	S	<version> *NOT-LOADED	1, 2
Version of the DPRINTCM subsystem	var(*LIST).VERSION.DPRINT-COMM	S	<version> *NOT-LOADED	1, 2
Version of the DPRINTSV subsystem	var(*LIST).VERSION.DPRINT-SERVER	S	<version> *NOT-LOADED	1, 2
Version of IDOM subsystem	var(*LIST).VERSION.IDOM	S	<version> *NOT-LOADED	1, 2
RSO version of the current session	var(*LIST).VERSION.RSO	S	<version> *NOT-LOADED	1, 2
Version of SPCONV subsystem	var(*LIST).VERSION.SPCONV	S	<version> *NOT-LOADED	1, 2
SPOOL version of the current session	var(*LIST).VERSION.SPOOL	S	<version> *NOT-LOADED	1, 2
SPS version of the current session	var(*LIST).VERSION.SPS	S	<version> *NOT-LOADED	1, 2
Version of the SCSIPCL subsystem	var(*LIST).VERSION.SCSIPCL	S	<version> *NOT-LOADED	1, 2

START-DPRINT-LOGGING

Activate Dprint logging

Domain: SPOOL-PRINT-ADMINISTRATION
User group: SPOOL administrators
Privileges: PRINT-SERVICE-ADMINISTRATION

Function

The START-DPRINT-LOGGING command is used by a SPOOL administrator or cluster administrator to activate logging of the Dprint processing during a Dprint session. The command is available with DPRINTCL and/or DPRINTSV.

This command can only be used for Dprint.

Format

START-DPRINT-LOGGING

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed message: SDD1102
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDD0801	Invalid operand value Guaranteed messages: SDD1100, SDD1101

Notes

- The logging file receives the standard name:
 \$SYSDPRNT.SYSTRC.DPRINT.<yyyy-mm-dd>.<hh.mm>
 (<yyyy-mm-dd> = date, <hh.mm> = time).
 The name of the opened file is output in the message SDD1102 once the command has been processed successfully.

2. In a Dprint environment, synchronization between the hosts is a critical point. It may be necessary to record certain items of information in order that these can be used to trace the passage of the requests through the network. Since the main aim of this tracing is to provide simple error elimination and also to offer an aid when setting the configuration during the installation phase, it is a good idea to keep the logging file at a reasonable size.

Instead of allowing the file to grow continually, it is closed and a new file opened which observes the same naming conventions.

During the switchover, message EXC098E or NCL0002 with DMS error '0BB2' is sent to the console. This is merely a warning and can therefore be ignored.

In the event of memory saturation occurring under the user ID SYSDPRNT, those files which are no longer required can then be deleted since the trace steps are split up over a number of files.

START-PRINTER-OUTPUT

Assign printers for spoolout jobs

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	Device administrators
Privileges:	OPERATING, PRINT-SERVICE-ADMINISTRATION, TSOS, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

The START-PRINTER-OUTPUT command assigns printers for spoolout jobs.

Notes

- For the print sample the data is modified as follows: all letters are replaced by “X”, all digits by “0”.
- To execute a spoolout request for a printer, all of the scheduling operands must apply to the device. If this is not the case, the spoolout request remains in the queue.
- To execute an RSO request for a printer, at least one of the specifications for each of class, form name and user ID must apply to the device. If this is not the case, the RSO request remains in the queue.
- If the specifications for form name, class or user ID are omitted, any output for a specified device can be executed. But if values are specified for these categories, only those RSO requests which match all the specifications can be executed.
- The hierarchy of the operands for controlling spoolout is described in the section on scheduling (see the “[SPOOL \(BS2000/OSD\)](#)” manual).
- If a print sample has been completed and printout has been delayed, the print sample remains the same on restart.
- The following operands can only be used with the OPERATING or PRINT-SERVICE-ADMINISTRATION privilege:
ROTATION
TWO-UP-PROCESSING
FORMS-OVERLAY-BUFFER
CHARACTER-SET-NUMBER
- If a printer is defined with ACCESS-TYPE=TACLAN, the START-PRINTER-OUTPUT command is rejected with message SRO0369 if the SOCKETS subsystem is not loaded or not defined in the subsystem catalog.

In the case of other printers (not defined with ACCESS-TYPE=TACLAN), the command is rejected with message SRO0369 if the DCAM subsystem is not loaded. This is checked only on systems with DCM V11 (with DCAM as DSSM subsystem).

The following table shows which operand can be used for which subsystem.

Operand	Subsystem			
	Dprint	RSO	SPOOL	SPS
DEVICE-NAME = *ANY-LOCAL-PRINTER(...)	X		X	X
FORMS-OVERLAY =	X		X	
PAGE-PRINTER-OUTPUT =	X		X	
PRINT-SAMPLE =	X		X	
TRACE = *YES	X	X	X	X
DEVICE-NAME = *RSO-PRINTER(...)		X		
USER-IDENTIFICATION =	X	X	X	X
SPOOL-CLASS =	X	X	X	X
SPOOL-NAME =	X	X	X	X
ACCOUNT =	X	X	X	X
ROTATION =	X	X	X	
TWO-UP-PROCESSING =	X	X	X	
FORMS-OVERLAY-BUFFER =	X	X	X	
PRIORITY =	X	X	X	X
CHARACTER-SET-NUMBER =	X	X	X	
REVISION-NUMBER =	X	X	X	X
EXIT-ROUTINES =	X	X	X	X

Format

(part 1 of 3)

START-PRINTER-OUTPUT

DEVICE-NAME = ***ANY-LOCAL-PRINTER(...)** / ***RSO-PRINTER(...)*****ANY-LOCAL-PRINTER(...)** **NAME** = list-poss(8): <alphanum-name 1..8>, **DESTINATION** = ***NONE** / ***STD** / list-poss(16): ***CENTRAL** / <alphanum-name 1..8>, **FORM-NAME** = ***ALL** / ***STD** / ***EQUIVALENT(...)** / ***EXCEPT(...)** / ***EQUIVALENT-EXCEPT(...)** /
 list-poss(16): <alphanum-name 1..6> ***EQUIVALENT(...)** | **EQUIVALENT-FORMS** = ***ALL** / list-poss(16): <alphanum-name 1..6> ***EXCEPT(...)** | **FORMS-LIST** = list-poss(16): <alphanum-name 1..6> ***EQUIVALENT-EXCEPT(...)** | **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>, **FORMS-OVERLAY** = ***ALL** / ***NONE** / ***ONLY** / ***EXCEPT(...)** / list-poss(16): <alphanum-name 2..2> ***EXCEPT(...)** | **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>, **HOST-NAME** = ***ALL-CLUSTERS** / ***HOME** / ***LOCAL-CLUSTER** / ***EXCEPT(...)** /

list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

***EXCEPT(...)** | **HOST-LIST** = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>, **PAGE-PRINTER-OUTPUT** = ***NO** / ***ALLOWED**, **PRINT-SAMPLE** = ***NO** / ***YES**, **TRACE** = ***NO** / ***YES(...)** ***YES(...)** | **LEVEL** = ***COMPLETE** / ***STATUS** / ***BLOCK-CONTROL**

continued ➔

```

*RSO-PRINTER(...)
  | NAME = list-poss(8): <alphanum-name 1..8>
  | ,DESTINATION = *NONE / *STD / list-poss(16): <name 1..8>
  | ,FORM-NAME = *STD / *EQUIVALENT(...) / *EQUIVALENT-EXCEPT(...) / <alphanum-name 1..6>
  |   *EQUIVALENT(...)
  |     | EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>
  |   *EQUIVALENT-EXCEPT(...)
  |     | FORMS-LIST = list-poss(16): <alphanum-name 1..6>
  | ,PRINT-SAMPLE = *NO / *YES
  | ,TRACE = *NO / *YES
  | ,ALLOWED-ACCESSES = *STD / list-poss(4): <-c-string 1..4>
,USER-IDENTIFICATION = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8> /
  <-c-string 1..8 with-low>
  | *EXCEPT(...)
  |   | USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> / <-c-string 1..8 with-low>
,SPOOLOUT-CLASS = *ALL / *EXCEPT(...) / list-poss(16): <integer 1..255>
  | *EXCEPT(...)
  |   | SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>
,SPOOLOUT-NAME = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8> / <-c-string 1..8 with-low>
  | *EXCEPT(...)
  |   | SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <-c-string 1..8 with-low>
,ACCOUNT = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8>
  | *EXCEPT(...)
  |   | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>
,ROTATION = *ANY / *YES / *NO / *MANUAL
,TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

```

continued ➔

```
,FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)
    *RANGE(...)
        | LOW = 0 / <integer 0..32767>
        | ,HIGH = 4032 / <integer 0..32767>
,PRIORITY = *ALL / *RANGE(...)
    *RANGE(...)
        | FROM = 30 / <integer 30..255>
        | ,TO = 255 / <integer 30..255>
,CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)
    *RANGE(...)
        | LOW = 1 / <integer 1..32767>
        | ,HIGH = 64 / <integer 1..32767>
,EXIT-ROUTINES = *ACTIVE / *NOT-ACTIVE
```

Operands

DEVICE-NAME =

Type of the printers which are assigned.

DEVICE-NAME = *ANY-LOCAL-PRINTER(...)

Local printers are assigned.

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

Logical names of devices, defined in the SPOOL parameter file (up to 8 alphanumeric characters), or device mnemonics (2 alphanumeric characters) which are assigned to waiting spoolout jobs.

If a device was activated with a specific name (START- or MODIFY-PRINTER-OUTPUT), it can be addressed only by this name until it is deactivated (STOP-PRINTER-OUTPUT).

DESTINATION =

Specifies whether the assignment of the specified local printer to a pool is changed and, if so, how.

The PRINT validation checks whether a specified pool is defined in the SPOOL parameter file and the specified device name is present in the pool.

DESTINATION = *NONE

The list of the local pools for the specified printers is deleted, i.e. spoolout jobs for these pools are no longer processed.

DESTINATION = *STD

Default pools for local printers.

The list of the assigned pools for local printers is replaced by a list of default pools containing the specified local printers (SPOOL parameter file).

DESTINATION = list-poss(16): *CENTRAL / <name 1..8>

List of the local pools to which the spoolout jobs for the specified printers can be directed.

FORM-NAME =

Forms with which spoolout jobs can be processed on the specified printers.

FORM-NAME = *ALL

Spoolout jobs can be processed on the specified printers with all forms.

FORM-NAME = *STD

Spoolout jobs can be processed on the specified printers with all forms that are permitted in the SPOOL parameter file for the respective printers.

If the printer is not entered in the SPOOL parameter file, FORM-NAME = *STD is automatically used.

FORM-NAME = *EQUIVALENT(...)

Equivalent forms with which spoolout jobs can be processed on the specified printers. Print output is not interrupted when a form is changed.

EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>

All or the specified list of equivalent forms are permitted.

FORM-NAME = *EXCEPT(...)

Forms with which spoolout jobs cannot be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded forms.

FORM-NAME = *EQUIVALENT-EXCEPT(...)

List of the equivalent forms with which spoolout jobs cannot be processed on the specified printers.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of excluded equivalent forms.

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

List of the forms with which spoolout jobs can be processed on the specified printers. Print output is interrupted with a message at the console each time a form is changed.

FORMS-OVERLAY =

Names of the film overlays with which spoolout jobs can be processed on the specified laser printers.

FORMS-OVERLAY = *ALL

Spoolout jobs can be processed on the specified printers with any film overlays.

FORMS-OVERLAY = *NONE

Only spoolout jobs which do not use film overlays can be processed on the specified printers.

FORMS-OVERLAY = *ONLY

Only spoolout jobs which use a (random) film overlay can be processed on the specified printers.

FORMS-OVERLAY = *EXCEPT(...)

Names of the film overlays with which spoolout jobs cannot be processed on the specified printers.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded film overlays.

FORMS-OVERLAY = list-poss(16): <alphanum-name 2..2>

List of the film overlays with which spoolout jobs can be processed on the specified printers.

HOST-NAME = *ALL-CLUSTERS / *LOCAL-CLUSTER / *HOME / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Specifies for a printer the hosts from which print jobs are processed.

HOST-NAME = *ALL-CLUSTERS

Print jobs from all hosts in all clusters are processed on the specified printer.

HOST-NAME = *LOCAL-CLUSTER

Print jobs from all hosts in the local cluster are processed on the specified printer.

HOST-NAME = *HOME

Only print jobs from the local host are processed on the specified printer.

HOST-NAME = *EXCEPT(...)

Print jobs from all hosts except those in the EXCEPT list are processed on the specified printer.

HOST-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

BCAM names of the hosts to be excluded.

HOST-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

Only hosts from the ACCEPT list are processed on the specified printer.

PAGE-PRINTER-OUTPUT = *NO / *ALLOWED

Specifies whether spoolout jobs for laser printers can also be output on line printers.

PRINT-SAMPLE = *NO / *YES

Specifies whether a print sample is to be produced for the spoolout jobs which are printed in accordance with the assignment operand. For type-LP65 printers for PCL and SPS printers, PRINT-SAMPLE=*YES is rejected.



For a print sample on HP or HP90 printers, no proportional spaced character sets may be used. The characters of the file to be output are replaced by '*' and '0' and have different widths in proportional spacing.

TRACE = *NO / *YES (...)

Switches tracing on or off. Name of the trace file:

- for SPOOL:
\$SYSSPOOL.SYSTRC.SPOOL.<dev-mnemonic>.<yyyy-mm-dd>.<hh-mm>
- for SPS:
\$SYSSPOOL.SYSTRC.SPS.<dvcname>.<yyyy-mm-dd>.<hhmmss>.<W/S>
(W for winter/S for summer)

LEVEL = *COMPLETE / *STATUS / *BLOCK-CONTROL

Specifies what data is to be written to the tracer listing. For a description of the data, see also the "[SPOOL \(BS2000/OSD\)](#)" manual.

LEVEL = *COMPLETE

All data is to be logged.

LEVEL = *STATUS

For SPS printers only: runtime and status data are to be logged.

LEVEL = *BLOCK-CONTROL

For SPS printers only: runtime, status and block control data are to be logged.

DEVICE-NAME = *RSO-PRINTER(...)

RSO printers are to be assigned.

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

Names of RSO printers to be assigned to waiting spoolout jobs.

DESTINATION = *NONE / *STD / list-poss(16): <name 1..8>

Defines whether the specified RSO printers are to be assigned to one or more pools and, if so, which ones.

DESTINATION = *NONE

Spoolout jobs which are to be output on RSO pools cannot be processed on the specified RSO printers.

DESTINATION = *STD

The list of assigned pools consists of all standard pools which contain the specified RSO printers.

FORM-NAME =

Forms with which spoolout jobs can be processed on the specified RSO printers.

FORM-NAME = *STD

Spoolout jobs can be processed on the specified printers with all equivalent forms that are defined in the SPOOL parameter file for the relevant RSO printer.

FORM-NAME = *EQUIVALENT(...)

Spoolout jobs can be processed on the specified RSO printers with equivalent forms.

EQUIVALENT-FORMS = *ALL / list-poss(16): <alphanum-name 1..6>

All or the specified list of equivalent forms are permitted.

FORM-NAME = *EQUIVALENT-EXCEPT(...)

Spoolout jobs cannot be processed on the specified RSO printers with certain equivalent forms.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of excluded equivalent forms.

FORM-NAME = <alphanum-name 1..6>

Form with which spoolout jobs can be processed on the specified RSO printers.

PRINT-SAMPLE = *NO / *YES

Specifies whether a print sample is to be produced.

In RSO operation, a print sample can be requested for public devices which print on continuous paper (not single-sheet printers).

TRACE = *NO / *YES

Specifies whether a trace file is to be created when the document is output to the specified RSO printers. The trace file is cataloged under the name \$SYSSPOOL.SYSTRC.RSO.<device>.<yy-mm-dd>.<ss.mm> (...year-month-day.hour.minute).

ALLOWED-ACCESSES = *STD / list-poss(4): <c-string 1..4>

This operand specifies which accesses are allowed. It can be used for all RSO printers.

ALLOWED-ACCESSES = *STD

The value C'RSO' is set.

ALLOWED-ACCESSES = list-poss(4): <c-string 1..4>

List of permitted accesses. The following can be specified:

C'RSO' RSO print jobs can be assigned to the started printer.

C'UTM' UTM print jobs can be assigned to the started printer.

USER-IDENTIFICATION =

User IDs under which spoolout jobs can be processed on the specified printers.

USER-IDENTIFICATION = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the user ID.

USER-IDENTIFICATION = *EXCEPT(...)

Spoolout jobs cannot be processed on the specified printers under the user IDs indicated here.

**USER-IDENT-LIST = list-poss(16): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of excluded user IDs.

USER-IDENTIFICATION = list-poss(16): <alphanum-name 1..8> /

<c-string 1..8 with-low>

List of user IDs under which spoolout jobs can be processed on the specified printers.

SPOOLOUT-CLASS =

Spoolout classes from which spoolout jobs can be processed on the specified printers.

SPOOLOUT-CLASS = *ALL

Spoolout jobs from all spoolout classes can be processed on the specified printers.

SPOOLOUT-CLASS = *EXCEPT(...)

Spoolout classes from which spoolout jobs cannot be processed on the specified printers.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of excluded spoolout classes.

SPOOLOUT-CLASS = list-poss(16): <integer 1..255>

List of spoolout classes from which spoolout jobs can be processed on the specified printers.

SPOOLOUT-NAME =

Job names with which spoolout jobs can be processed on the specified printers.

SPOOLOUT-NAME = *ALL

Spoolout jobs with any job name can be processed on the specified printers.

SPOOLOUT-NAME = *EXCEPT(...)

Job names with which spoolout jobs cannot be processed on the specified printers.

**SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> /
<c-string 1..8 with-low>**

List of excluded job names.

SPOOLOUT-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of job names with which spoolout jobs can be processed on the specified printers.

ACCOUNT =

Account numbers with which spoolout jobs can be processed on the specified printers.

ACCOUNT = *ALL

Spoolout jobs with any account number can be processed on the specified printers.

ACCOUNT = *EXCEPT(...)

Account numbers with which spoolout jobs cannot be processed on the specified printers.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of excluded account numbers.

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

List of account numbers with which spoolout jobs can be processed on the specified printers.

ROTATION =

Determines whether spoolout jobs which require the page rotation module can be processed on the specified printers.

ROTATION = *ANY

Spoolout jobs can be processed on the specified printers whether they require the page rotation module or not.

ROTATION = *NO

Only spoolout jobs which do not require the page rotation module can be processed on the specified printers.

ROTATION = *YES

Only spoolout jobs which require the page rotation module can be processed on the specified printers.

ROTATION = *MANUAL

In contrast to NO, the operator can address the page rotation module via hardware switches. In this case all the pages are printed out in rotated format.

TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

For local SPOOL only.

Specifies the printer-specific feature TWO-UP-PROCESSING for spoolout jobs on an HP90-PRINTER. It specifies whether and in which sequence two adjacent pages are to be printed out side by side. For a detailed description of the different 'TWO-UP' modes see the "[SPOOL \(BS2000/OSD\)](#)" manual.

FORMS-OVERLAY-BUFFER =

For local SPOOL only.

Determines whether spoolout jobs which require an FOB data overlay can be processed on the specified printers.

FORMS-OVERLAY-BUFFER = *ANY

Spoolout jobs with and without FOB data overlays can be processed on the specified printers. The maximum possible FORMS-OVERLAY-BUFFER is taken from the corresponding standard device entry.

FORMS-OVERLAY-BUFFER = *ONLY

Only spoolout jobs which use an FOB data overlay can be processed on the specified printers. The maximum possible FORMS-OVERLAY-BUFFER is taken from the corresponding standard device entry.

FORMS-OVERLAY-BUFFER = *NO

Spoolout jobs which use an FOB data overlay cannot be processed on the specified printers.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Only spoolout jobs which use an FOB data overlay the size of which falls within the specified range can be processed on the specified printers.

LOW = 0 / <integer 0..32767>

Lower limit of the range (in sublines).

HIGH = 4032 / <integer 0..32767>

Upper range limit for HP90 printers: 4032 sublines. Upper range limit for HP printers: 672 sublines.

PRIORITY =

Priorities of the spoolout jobs which can be processed on the specified printers.

PRIORITY = *ALL

Spoolout jobs with any priority can be processed on the specified printers.

PRIORITY = *RANGE(...)

Spoolout jobs with priorities within the specified range can be processed on the specified printers.

FROM = 30 / <integer 30..255>

Lower range limit.

TO = 255 / <integer 30..255>

Upper range limit.

CHARACTER-SET-NUMBER =

Number of character sets required with which spoolout jobs can be processed on the specified printers. This operand is only valid for SPOOL printers (local or distributed).

CHARACTER-SET-NUMBER = *ALL

Spoolout jobs can be processed on the specified printers irrespective of the number of character sets required. The maximum possible number of required character sets is taken from the corresponding standard device entry.

CHARACTER-SET-NUMBER = *ONE

Only spoolout jobs which require no more than one character set can be processed on the specified printers.

CHARACTER-SET-NUMBER = *RANGE(...)

Spoolout jobs which require a number of character sets which falls within the specified range can be processed on the specified printers. During initialization of a device, a check is made as to how many character sets can be loaded on the device.

If this value is less than one of the two values specified, either a message is sent to the operator terminal and the value for HIGH is adapted (if $LOW \leq$ number of character sets that can be loaded on the device), or the command is rejected (if $LOW >$ number of character sets that can be loaded on the device).

LOW = 1 / <integer 1..32767>

Lower range limit.

HIGH = 64 / <integer 1..32767>

Upper range limit.

EXIT-ROUTINES = *ACTIVE / *NOT-ACTIVE

Specifies whether exit routines are to be called during spoolout.

Command return codes for SPOOL, Dprint or SPS

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed message: SPS0B06
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value Guaranteed messages: SCP0944, SCP0951, SCP0957, SCP0967, SCP1010, SPS0168
	128	SCP0911	RSO subsystem in dump creation or restart phase
	128	SCP0992	SPS subsystem not loaded or not supported
	128	SCP1008	DPRINTSV subsystem not loaded Guaranteed message: SCP1008
	128	SPS0420	Subsystem not loaded/ready

Command return codes for RSO

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No error
	1	CMD0202	Syntax error
	1	SRO0173	Semantic error
	32	SRO0174	System error. Command rejected
	64	SRO0175	No authorization for command
	64	SRO0176	Invalid operand value
2	0	SRO0357	Too many pools
	128	SRO0364	Form not accepted

Job variables (only applicable to RSO printers)

In the case of printers that were defined with MONJV=*YES in the SPOOL parameter file, a monitoring job variable is created to monitor the asynchronous portion of the START-PRINTER-OUTPUT command. This job variable is created by the RSO system task during the asynchronous portion of the START-PRINTER-OUTPUT command and subsequently monitors the printer status (as indicated in the SHOW-SYSTEM-STATUS command) on the running device.

The monitoring job variable is created - as defined by conventions - under the user ID \$SYSSPOOL with the predefined name PRT.RSO.<device-name>. This job variable is shared and cannot be protected by a password. SPOOL 4.1A and the JV subsystem are needed to use this function.

The job variable is constructed as follows:

Sta	TSN	Proc.	Reserved	Device	ERCOD	ERMSG
0	3	8	16	37	46	55

The first three fields of the job variable are reserved for ENTER jobs. The following fields are assigned to SPOOL and indicate the various states that can occur in a print session. The "Status" and "Processor" fields are left-aligned. All other fields are right-aligned. The contents of a job variable can be displayed with the SHOW-JV command.

Description of fields

Field	Contents	Meaning
Sta	\$R \$T \$A	The printer is ready or is currently processing a print job (see ERMSG and ERCOD for more information). The printer was terminated normally. The printer was not correctly started (see ERMSG and ERCOD for more information).
TSN	Tsn	TSN of the task that is managing the printer. This may be either the TSN of the RSO controller task that is managing the printer or the TSN of the RSO system task ("RSO"). The TSN of the RSO system task is output if an error has occurred on processing the command with the RSO system task or if the controller was started for a print job. The TSN is padded to the left with the padding character "0".
Proc.	Catid	Catalog ID of the system (home pubset) on which the printer is running.
Reserved		
Device	@@@@@@@@	Printer name
ERCOD	@@@@@@@@	(BCAM) error code for an error that has occurred for an active print job.
ERMSG	@@@@@@@@	RSO error message. The meaning depends on the value of the status field: \$R: This means that an error occurred when processing a print job and that the processing was therefore aborted. The value of ERMSG corresponds to the value displayed in the SHOW-SYSTEM-STATUS command. \$A: This means that an error occurred before the printer was ready. The value of ERMSG is the ID number of the RSO error message that is output at the console. The operation to stop the printer was aborted.

Application notes

- The job variable cannot be protected by a password.
- The job variable is not created on executing the synchronous portion of the START-PRINTER-OUTPUT command, but during the asynchronous portion, which is executed by the RSO system task and the controller task.
 - The RSO system task creates or updates a job variable whenever an error occurs on processing the print job. The job variable is then set to \$SA and will contain an error code and/or an error message that describes the error. In the case of printers that are started for a print job, the job variable is set to the status \$R, in which case the controller task is not really created. This is indicated in the job variable by the TSN “RSO”.
 - The controller task creates or updates a job variable to indicate errors that have occurred on initializing the controller. The job variable is then set to \$A and contains an error code and/or an error message that describes the error. If the printer is initialized correctly and is ready, the job variable is set to the status \$R. This status remains in effect even if the printer is temporarily disabled due to an error when processing a print job, but an error code and/or error message are added to describe the error. These details can also be output with the SHOW-SYSTEM-STATUS command. When the printer is subsequently released with a STOP-PRINTER-OUTPUT command, the status of the job variable is set to \$T.
- All created job variables remain visible until the next time that the RSO is loaded. When this occurs, all printer job variables are reset.
- Attention!
Since the job variables are updated under the control of the RSO system task and RSO controller task, the use of too many job variables could have a negative impact on performance.

Notes

1. User responsibilities:
The SPOOL administrator can start any printer in the configuration that is connected to his or her host. Although the cluster administrator can start, suspend or modify any printer in the configuration, it is advisable to leave the responsibility for device management to the SPOOL administrators in the cluster.
2. Checking the user ID:
Changing the user ID in the user ID catalog has no effect if the active printer is defined in the configuration file. If, however, the printer is defined in the local SPOOL parameter file, a change does take effect.
3. Printer name conventions:
When a printer is started, the command can include a printer name from the local SPOOL parameter file or from the configuration file.

If there is a suitable name in the configuration file, the printer is started and becomes available to every host that belongs to the cluster. The command must be issued by a cluster administrator or a SPOOL administrator. The SPOOL administrator must issue the command at the host to which the printer is connected.

If there is no suitable name in the configuration file, the local SPOOL parameter file is searched. If there is a suitable printer, it is started, but it is only available to the local host.
4. Distributed and nondistributed printer pools:
A printer cannot be connected to distributed and nondistributed printer pools at the same time. If the printer is distributed, it can only be connected to distributed printer pools. If it is not distributed, it can only be connected to nondistributed printer pools.
5. Use of logical names:
If a printer is started by means of its logical name in the SPOOL parameter file, it must be suspended before it can be started again by means of its logical name in the configuration file. The same applies in the reverse case.
6. Supported format names (\equiv file attribute 'content type'):
In the static definition of a printer in the SPOOL parameter file, the administrator must specify a list of supported format names. These format names then belong to the started printer. The print job scheduler uses this information to assign print jobs to this printer.
7. Use of virtual printers:
The command processing supports virtual printers. Format names are not checked for validity if they were specified in the command and the command refers to a virtual printer. The format names allow a group of print jobs to be selected for processing by the supervisor task.

8. The virtual devices controller tasks linked to IDOM servers (i.e. for which the field IDENTIFICATION of the device record is filled with *IDOM:@<server-name>) are connected to the IDOM subsystem during their implicit activation (START-IDOM-SERVER, START-IDOM-SERVER-ENTRY or START-IDOM-SERVER-PROCESS). They will be automatically disconnected and released during the stop/hold of the IDOM or SPOOL subsystem, or during the associated STOP-IDOM-SERVER, STOP-IDOM-SERVER-ENTRY or STOP-IDOM-SERVER-PROCESS.

Examples

1. /START-PRINTER-OUTPUT DEVICE-NAME=*ANY-LOCAL-PRINTER(NAME=L1,
HOST-NAME=*ALL),USER-ID=HELLO

The printer L1 processes print jobs from all hosts that go to the local server and are issued by the user ID HELLO (on any host).

2. /START-PRINTER-OUTPUT DEVICE-NAME=*ANY-LOCAL-PRINTER(NAME=L1,
HOST-NAME=*HOME),USER-ID=HELLO

The printer L1 processes print jobs from the local host that go to the local server and are issued by the user ID HELLO (on the local host).

3. /START-SPSERVE
//OPEN-PARAMETER-FILE PARAMETER-FILE=*SPOOL-PARAMETERS
//ADD-SPOOL-DEVICE DEVICE-NAME=DVCASYNC,
DEVICE-TYPE=*VIRTUAL,
DEVICE-ACCESS=*LOC-ACCESS(MNEMONIC-NAME=*V)

//END
/START-PRINTER-OUTPUT DEVICE-NAME=*ANY-LOCAL-PRINTER(NAME=DVCASYNC),
USERID=HELLO

An asynchronous virtual printer is started, and all local jobs issued by the user ID "HELLO" are processed on it.

START-TAPE-OUTPUT

Assign tape devices for spoolout jobs

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

Function

The START-TAPE-OUTPUT command assigns tape devices for spoolout jobs.

This command can only be used for local SPOOL.

Notes

1. SPOOL uses the first volume ID to form the name of a "directory" file (SR.vsn). This file contains all jobs that are necessary for the reprocessing of the replay tape. Once the replay tape has been created, the directory file is copied to the tape to allow the tape to be exported to another computer center. If the replay tape is exported, the directory file on the disk can be deleted.
2. While a replay tape is being generated, systems support can use the MODIFY-TAPE-OUTPUT-STATUS command to change the selection criteria for the spoolout jobs to be output. The volume labels must not be modified.
3. During generation of a replay tape a catalog entry is created for the TP.tsn file (tsn = task sequence number of the spoolout job). This entry is temporary and is deleted when the STOP-TAPE-OUTPUT command has been processed. Systems support should check before processing starts that no file with this name already exists.
4. Replay tapes can only be processed in other computer centers if these computer centers have implemented the same version of SPOOL.
5. To execute a spoolout request for a tape, all of the scheduling operands must apply to the device. If this is not the case, the spoolout request remains in the queue.
6. If no scheduling operands are specified, any spoolout for a specified device can be executed. If, however, scheduling operands are specified, only spoolout requests which match all the specifications can be executed.

The hierarchy of operands for controlling spoolout is described in the section on scheduling (see the "[SPOOL \(BS2000/OSD\)](#)" manual).

Format

(part 1 of 2)

START-TAPE-OUTPUT

UNIT = list-poss(8): <alphanum-name 2..2>

,**DEVICE-TYPE** = ***TAPE** / <structured-name 1..8>

,**DESTINATION** = ***NONE** / list-poss(16): ***CENTRAL** / <alphanum-name 1..8>

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

***EXCEPT(...)**

 | **FORMS-LIST** = list-poss(16): <alphanum-name 1..6>

,**USER-IDENTIFICATION** = ***ALL** / ***EXCEPT(...)** / list-poss(16): <name 1..8>

***EXCEPT(...)**

 | **USER-IDENT-LIST** = list-poss(16): <name 1..8>

,**SPOOLOUT-CLASS** = ***ALL** / ***EXCEPT(...)** / list-poss(16): <integer 1..255>

***EXCEPT(...)**

 | **SPOOLOUT-CLASS-LIST** = list-poss(16): <integer 1..255>

,**SPOOLOUT-NAME** = ***ALL** / ***EXCEPT(...)** / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

***EXCEPT(...)**

 | **SPOOLOUT-NAME-LIST** = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

,**ACCOUNT** = ***ALL** / ***EXCEPT(...)** / list-poss(16): <alphanum-name 1..8>

***EXCEPT(...)**

 | **ACCOUNT-LIST** = list-poss(16): <alphanum-name 1..8>

,**FORMS-OVERLAY** = ***ALL** / ***NONE** / ***ONLY** / ***EXCEPT(...)** / list-poss(16): <alphanum-name 2..2>

***EXCEPT(...)**

 | **FORMS-OVERLAY-LIST** = list-poss(16): <alphanum-name 2..2>

,**FORMS-OVERLAY-BUFFER** = ***ANY** / ***ONLY** / ***NO** / ***RANGE(...)**

RANGE(...)

 | **LOW** = **0** / <integer 0..32767>

 | **HIGH** = **4032** / <integer 0..32767>

continued →

(part 2 of 2)

```

,PRIORITY = *ALL / RANGE(...)
    RANGE(...)
        | FROM = 30 / <integer 30..255>
        | ,TO = 255 / <integer 30..255>
,CHARACTER-SET-NUMBER = ALL / ONE / RANGE(...)
    RANGE(...)
        | LOW = 1 / <integer 1..32767>
        | ,HIGH = 64 / <integer 1..32767>
,SPOOLOUT-TYPE = ALL / HP-PRINTER / PRINTER / PAGE-PRINTER /
    BUFFER-LINE-PRINTER / LIST(...)
    LIST(...)
        | SELECTION-TYPE = MAY / MUST
        | ,DEVICE-TYPE = list-poss(9): HP-PRINTER / LP-PRINTER / LP48-PRINTER /
            LP65-PRINTER / HP90-PRINTER / LP-EMULATED-PRINTER / PCL-PRINTER /
            2050-APA-PRINTER / 2090-APA-PRINTER / 2090-TWIN-PRINTER
,VOLUME = *ANY / list-poss(16): <alphanum-name 1..6>
,RETENTION-PERIOD = 10 / <integer 0..999>
,ROTATION = ANY / YES / NO
,TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

```

Operands

UNIT = list-poss(8): <alphanum-name 2..2>

Mnemonic device names of the tape devices to be assigned for the output of spoolout jobs.

DEVICE-TYPE = *TAPE / <structured-name 1..8>

Device type of the tape.

DESTINATION = *NONE / list-poss(16): *CENTRAL / <alphanum-name 1..8>

Jobs for the specified local device pools can be processed on the specified tape devices.

FORM-NAME =

Forms with which spoolout jobs can be processed on the specified tape devices.

FORM-NAME = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the form required.

FORM-NAME = *STD

Only jobs for which FORM=STD has been specified can be processed on the specified tape devices.

FORM-NAME = *EXCEPT(...)

Forms with which spoolout jobs cannot be processed on the specified tape devices.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of excluded forms.

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

List of forms with which spoolout jobs can be processed on the specified tape devices.

USER-IDENTIFICATION =

User IDs under which spoolout jobs can be processed on the specified tape devices.

USER-IDENTIFICATION = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the user ID.

USER-IDENTIFICATION = *EXCEPT(...)

User IDs under which spoolout jobs cannot be processed on the specified tape devices.

USER-IDENT-LIST = list-poss(16): <name 1..8>

List of excluded user IDs.

USER-IDENTIFICATION = list-poss(16): <name 1..8>

List of user IDs under which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-CLASS =

Spoolout classes from which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-CLASS = *ALL

Spoolout jobs from all spoolout classes can be processed on the specified tape devices.

SPOOLOUT-CLASS = *EXCEPT(...)

Spoolout classes from which spoolout jobs cannot be processed on the tape devices.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of excluded spoolout classes.

SPOOLOUT-CLASS = list-poss(16): <integer 1..255>

List of spoolout classes from which spoolout jobs can be processed on the tape devices.

SPOOLOUT-NAME =

Job names under which spoolout jobs can be processed on the specified tape devices.

SPOOLOUT-NAME = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the job name.

SPOOLOUT-NAME = *EXCEPT(...)

Job names under which spoolout jobs cannot be processed on the specified tape devices.

SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of excluded job names.

SPOOLOUT-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
List of job names under which spoolout jobs can be processed on the tape devices.

ACCOUNT =

Account numbers with which spoolout jobs can be processed on the specified tape devices.

ACCOUNT = *ALL

Spoolout jobs with any account number can be processed on the specified tape devices.

ACCOUNT = *EXCEPT(...)

Account numbers with which spoolout jobs cannot be processed on the specified tape devices.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of excluded account numbers.

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

List of account numbers with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY =

Names of the film overlays with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY = *ALL

Spoolout jobs can be processed on the specified tape devices with any film overlay.

FORMS-OVERLAY = *NONE

Only spoolout jobs which do not use film overlays can be processed on the specified tape devices.

FORMS-OVERLAY = *ONLY

Only spoolout jobs which use (any) film overlays can be processed on the specified tape devices.

FORMS-OVERLAY = *EXCEPT(...)

Spoolout jobs which use one of the specified film overlays cannot be processed on the specified tape devices.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded film overlays.

FORMS-OVERLAY = list-poss(16): <alphanum-name 2..2>

List of film overlays with which spoolout jobs can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER =

Determines whether spoolout jobs which require an FOB data overlay can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *ANY

Spoolout jobs can be processed on the specified tape devices, regardless of whether or not they require an FOB data overlay.

FORMS-OVERLAY-BUFFER = ONLY

Only spoolout jobs which use an FOB data overlay can be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *NO

Spoolout jobs which use an FOB data overlay cannot be processed on the specified tape devices.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Only spoolout jobs which use an FOB data overlay the size of which falls within the specified range can be processed on the specified tape devices.

LOW = 0 / <integer 0..32767>

Lower range limit.

HIGH = 4032 / <integer 0..32767>

Upper range limit for HP90 printers: 4032 sublines. Upper range limit for HP printers: 672 sublines.

PRIORITY =

Priorities of the spoolout jobs which can be processed on the specified tape devices.

PRIORITY = *ALL

Spoolout jobs with any priority can be processed on the specified tape devices.

PRIORITY = *RANGE(...)

Spoolout jobs with priorities within the specified range can be processed on the specified tape devices.

FROM = 30 / <integer 30..255>

Lower range limit.

TO = 255 / <integer 30..255>

Upper range limit.

CHARACTER-SET-NUMBER =

Number of character sets required with which spoolout jobs can be processed on the specified tape devices.

CHARACTER-SET-NUMBER = *ALL

Spoolout jobs can be processed on the specified tape devices irrespective of the number of character sets required.

CHARACTER-SET-NUMBER = *ONE

Spoolout jobs which require no more than one character set can be processed on the specified tape devices.

CHARACTER-SET-NUMBER = *RANGE(...)

Spoolout jobs which require a number of character sets which falls within the specified range can be processed on the specified tape devices.

LOW = 1 / <integer 1..32767>

Lower range limit.

HIGH = 64 / <integer 1..32767>

Upper range limit.

SPOOLOUT-TYPE =

Spoolout jobs for certain types of output device can be processed on the specified tape devices.

SPOOLOUT-TYPE = *ALL

Spoolout jobs for all device types can be processed on the specified tape devices.

SPOOLOUT-TYPE = HP-PRINTER

Only spoolout jobs for HP printers (3351, 3353) can be processed on the specified tape devices.

SPOOLOUT-TYPE = *PRINTER

Only spoolout jobs for printers can be processed on the specified tape devices.

SPOOLOUT-TYPE = *PAGE-PRINTER

Only spoolout jobs for laser printers can be processed on the specified tape devices.

SPOOLOUT-TYPE = *BUFFER-LINE-PRINTER

Spoolout jobs for line printers with loadable VFBs (3337, 3338, 3339, 3348, 3349) can be processed on the specified tape devices.

SPOOLOUT-TYPE = LIST(...)

Spoolout jobs for the specified list of device types can be processed on the specified tape devices.

SELECTION-TYPE = *MAY / *MUST

Selection of spoolout jobs is restricted to those which at least may be output on one of the specified device types (MAY) or to those which must be output on one of the specified device types, i.e. on no other device type than the ones specified (MUST).

DEVICE-TYPE = list-poss(9): HP-PRINTER / LP-PRINTER / LP48-PRINTER / LP65-PRINTER / HP90-PRINTER / LP-EMULATED-PRINTER / PCL-PRINTER 2050-APA-PRINTER / 2090-APA-PRINTER / 2090-TWIN-PRINTER

List of device types. For the symbolic names see the chapter dealing with high-performance printers in the “[SPOOL \(BS2000/OSD\)](#)” manual.

VOLUME =

Volume labels of the tapes which are to be assigned for spoolout jobs for output to tape (WRITE-SPOOL-TAPE) (see note 1 on [page 490](#)).

VOLUME = *ANY

Accepts the volume label of the mounted tape.

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

Volume labels of the tapes to be used.

RETENTION-PERIOD = 10 / <integer 0..999>

Period in days during which the files are to be stored on tape.

ROTATION =

Determines whether spoolout jobs which require the page rotation module can be processed on the specified tape devices.

ROTATION = *ANY

Spoolout jobs can be processed on the specified tape devices, regardless of whether or not they require the page rotation module.

ROTATION = *NO

Only spoolout jobs which do not require the page rotation module can be processed on the specified tape devices.

ROTATION = *YES

Only spoolout jobs which require the page rotation module can be processed on the specified tape devices.

TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

Specifies TWO-UP processing for spoolout jobs on an HP90 printer, i.e. whether and in which sequence two pages are to be printed out side by side. For a detailed description of the different 'TWO-UP' modes see the "[SPOOL \(BS2000/OSD\)](#)" manual.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value

START-TAPE-REPLAY

Assign tape devices for replay

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

Function

The START-TAPE-REPLAY command assigns tape devices for replay jobs. The files read in are either entered in the queue or output directly (OUTPUT-MODE operand).

This command can only be used for local SPOOL.

Notes

1. OUTPUT-MODE=FROM-DISK-COPY is used in the following cases, even if OUTPUT-MODE=DIRECT has been specified:
 - if one of the following operands has been specified in the PRINT-DOCUMENT command:
 - ADDITIONAL-COPIES=...
 - DOCUMENT-PART=*P(OUTPUT-PART=LAST())
 - DOCUMENT-FORMAT=*PAGE-FORMAT(CONTROL-MODE=*APA)
the file can only be printed on an APA printer
 - DOCUMENT-FORMAT=*SPECIAL-FORMAT(FORMAT-NAME=*PCL)
 - the file extends over several tapes
2. During output of a replay tape the selection of jobs must not be changed by issuing further START-TAPE-REPLAY commands. The only option is to disconnect the tape device from SPOOL using the STOP-TAPE-REPLAY command and then assign the terminal for spoolout by means of a new START-TAPE-REPLAY command and other selection operands.
3. To execute a spoolout request for a tape device, all of the scheduling operands must apply to the device. If this is not the case, the spoolout request remains in the queue.
4. If no scheduling operands are specified, any spoolout for a specified device can be executed. If, however, scheduling operands are specified, only spoolout requests which match all the specifications can be executed.
5. The hierarchy of operands for controlling spoolout is described in the section on scheduling (see the [“SPOOL \(BS2000/OSD\)”](#) manual).

Format

(part 1 of 2)

START-TAPE-REPLAY

```

UNIT = <alphanum-name 2..2>

,DESTINATION = *NONE / list-poss(16): *CENTRAL / <alphanum-name 1..8>

,FORM-NAME = *ALL / *STD / *EXCEPT(...) / list-poss(16): <alphanum-name 1..6>
  *EXCEPT(...)
    | FORMS-LIST = list-poss(16): <alphanum-name 1..6>

,USER-IDENTIFICATION = *ALL / *EXCEPT(...) / list-poss(16): <name 1..8>
  *EXCEPT(...)
    | USER-IDENT-LIST = list-poss(16): <name 1..8>

,SPOOLOUT-CLASS = *ALL / *EXCEPT(...) / list-poss(16): <integer 1..255>
  *EXCEPT(...)
    | SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

,SPOOLOUT-NAME = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>
  *EXCEPT(...)
    | SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

,ACCOUNT = *ALL / *EXCEPT(...) / list-poss(16): <alphanum-name 1..8>
  *EXCEPT(...)
    | ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

,FORMS-OVERLAY = *ALL / *NONE / *ONLY / *EXCEPT(...) / list-poss(16): <alphanum-name 2..2>
  *EXCEPT(...)
    | FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

,FORMS-OVERLAY-BUFFER = *ANY / *ONLY / *NO / *RANGE(...)
  RANGE(...)
    | LOW = 0 / <integer 0..32767>
    | HIGH = 4032 / <integer 0..32767>

```

continued ➔

```

,PRIORITY = *ALL / *RANGE(...)
    *RANGE(...)
        |
        | FROM = 30 / <integer 30..255>
        |
        | ,TO = 255 / <integer 30..255>
,ROTATION = *ANY / *YES / *NO
,TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2
,CHARACTER-SET-NUMBER = *ALL / *ONE / *RANGE(...)
    *RANGE(...)
        |
        | LOW = 1 / <integer 1..32767>
        |
        | ,HIGH = 64 / <integer 1..32767>
,SPOOL-OUT-TYPE = *ALL / *HP-PRINTER / *PRINTER / *PAGE-PRINTER /
    *BUFFER-LINE-PRINTER / *LIST(...)
    *LIST(...)
        |
        | SELECTION-TYPE = *MAY / *MUST
        |
        | ,DEVICE-TYPE = list-poss(9): *HP-PRINTER / *LP-PRINTER / *LP65-PRINTER / *HP90-PRINTER /
        | *LP48-PRINTER / *LP-EMULATED-PRINTER / *2050-APA-PRINTER / *PCL-PRINTER /
        | *2090-APA-PRINTER / *2090-TWIN-PRINTER
,VOLUME = list-poss(16): <alphanum-name 1..6>
,OUTPUT-MODE = *FROM-DISK-COPY / *DIRECT
,DIRECTORY-VOLUME = *STD / <alphanum-name 1..6>

```

Operands

UNIT = <alphanum-name 2..2>

Mnemonic device name of the tape device from which spoolout jobs are to be processed.

DESTINATION = *NONE / list-poss(16): *CENTRAL / <alphanum-name 1..8>

Jobs for the specified local device pools can be processed from the specified replay tape.

FORM-NAME =

Only the spoolout jobs on the specified tape device for which these forms have been specified can be processed.

FORM-NAME = *ALL

All the spoolout jobs on the replay tape can be processed.

FORM-NAME = *STD

Only spoolout jobs on the specified tape for which FORM=STD has been specified can be processed.

FORM-NAME = *EXCEPT(...)

Forms with which spoolout jobs on the specified tape device cannot be processed.

FORMS-LIST = list-poss(16): <alphanum-name 1..6>

List of excluded forms.

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

List of forms with which spoolout jobs on the specified tape device can be processed.

USER-IDENTIFICATION =

User IDs of spoolout jobs on the specified tape device which can be processed.

USER-IDENTIFICATION = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of the user ID.

USER-IDENTIFICATION = *EXCEPT(...)

User IDs of spoolout jobs on the specified tape device which cannot be processed.

USER-IDENT-LIST = list-poss(16): <name 1..8>

List of excluded user IDs.

USER-IDENTIFICATION = list-poss(16): <name 1..8>

Spoolout jobs on the specified tape device with the specified user IDs cannot be processed.

SPOOLOUT-CLASS =

Spoolout jobs on the specified tape device can be processed according to the spoolout classes specified here.

SPOOLOUT-CLASS = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of the spoolout class.

SPOOLOUT-CLASS = *EXCEPT(...)

Spoolout classes with which spoolout jobs on the specified tape device cannot be processed.

SPOOLOUT-CLASS-LIST = list-poss(16): <integer 1..255>

List of excluded spoolout classes.

SPOOLOUT-CLASS = list-poss(16): <integer 1..255>

List of spoolout classes with which spoolout jobs on the specified tape device can be processed.

SPOOLOUT-NAME =

Job names with which spoolout jobs on the specified tape device can be processed.

SPOOLOUT-NAME = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of the job name.

SPOOLOUT-NAME = *EXCEPT(...)

Job names with which spoolout jobs on the specified tape device cannot be processed.

SPOOLOUT-NAME-LIST = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of excluded job names.

SPOOLOUT-NAME = list-poss(16): <alphanum-name 1..8> / <c-string 1..8 with-low>

List of job names with which spoolout jobs on the specified tape device can be processed.

ACCOUNT =

Account numbers with which spoolout jobs on the specified tape device can be processed.

ACCOUNT = *ALL

Spoolout jobs on the specified tape device can be processed with all account numbers.

ACCOUNT = *EXCEPT(...)

Account numbers with which spoolout jobs on the specified tape device cannot be processed.

ACCOUNT-LIST = list-poss(16): <alphanum-name 1..8>

List of excluded account numbers.

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

List of account numbers with which spoolout jobs on the specified tape device can be processed.

FORMS-OVERLAY =

Spoolout jobs on the specified tape device can be processed according to the film overlays they require.

FORMS-OVERLAY = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of the film overlays they require for output.

FORMS-OVERLAY = *NONE

Only spoolout jobs on the tape device which do not use a film overlay can be processed on the specified tape.

FORMS-OVERLAY = *ONLY

Only spoolout jobs on the tape device which use (any) film overlays can be processed on the specified tape.

FORMS-OVERLAY = *EXCEPT(...)

Spoolout jobs on the specified tape device which require the specified film overlays cannot be processed.

FORMS-OVERLAY-LIST = list-poss(16): <alphanum-name 2..2>

List of excluded film overlays.

FORMS-OVERLAY = list-poss(16): <alphanum-name 2..2>

List of film overlays with which spoolout jobs on the specified tape device can be processed.

FORMS-OVERLAY-BUFFER =

The spoolout jobs on the specified tape device can be processed according to the FOB data overlays they require for output.

FORMS-OVERLAY-BUFFER = *ANY

Spoolout jobs on the specified tape device can be processed irrespective of the FOB data overlays they require for output.

FORMS-OVERLAY-BUFFER = *ONLY

Only those spoolout jobs on the specified tape which use an FOB data overlay can be processed.

FORMS-OVERLAY-BUFFER = *NO

The spoolout jobs on the specified tape device which use an FOB data overlay can be processed.

FORMS-OVERLAY-BUFFER = *RANGE(...)

Only spoolout jobs on the specified tape device which use an FOB data overlay within the specified size range can be processed.

LOW = 0 / <integer 0..32767>

Lower range limit.

HIGH = 4032 / <integer 0..32767>

Upper range limit for HP90 printers: 4032 sublines. Upper range limit for HP printers: 672 sublines.

PRIORITY =

Priorities of the spoolout jobs which can be processed on the specified tape device.

PRIORITY = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of their priority.

PRIORITY = *RANGE(...)

Only spoolout jobs on the tape device with priorities within the specified range can be processed.

FROM = 30 / <integer 30..255>

Lower range limit.

TO = 255 / <integer 30..255>

Upper range limit.

ROTATION =

Determines whether spoolout jobs on the tape device can be processed if they need the page rotation module function.

ROTATION = *ANY

Spoolout jobs on the tape device can be processed, regardless of whether or not they require the page rotation module.

ROTATION = *NO

Only spoolout jobs on the tape device which do not require the page rotation module can be processed.

ROTATION = *YES

Only spoolout jobs on the tape device which require the page rotation module can be processed.

TWO-UP-PROCESSING = *ANY / *YES / *NO / *MODE-1 / *MODE-2

Specifies TWO-UP processing for spoolout jobs on an HP90-PRINTER, i.e. whether and in which sequence two adjacent pages are to be printed out side by side on 17" wide paper. For a detailed description of the different 'TWO-UP' modes see the "[SPOOL \(BS2000/OSD\)](#)" manual.

CHARACTER-SET-NUMBER =

Spoolout jobs on the specified tape device can be processed according to the number of character sets required.

CHARACTER-SET-NUMBER = *ALL

Spoolout jobs on the specified tape device can be processed irrespective of the number of character sets required.

CHARACTER-SET-NUMBER = *ONE

Only spoolout jobs on the specified tape device which require no more than one character set can be processed.

CHARACTER-SET-NUMBER = *RANGE(...)

Only spoolout jobs on the specified tape device which require a number of character sets within the specified range can be processed.

LOW = 1 / <integer 1..32767>

Lower range limit.

HIGH = 64 / <integer 1..32767>

Upper range limit.

SPOOLOUT-TYPE =

Only spoolout jobs on the specified tape device for the specified type of output device can be processed.

SPOOLOUT-TYPE = *ALL

Spoolout jobs on the specified tape device for all device types can be processed.

SPOOLOUT-TYPE = *HP-PRINTER

Only spoolout jobs on the specified tape device for HP printers (3351, 3353) can be processed.

SPOOLOUT-TYPE = *PRINTER

Only spoolout jobs on the specified tape device for printers can be processed.

SPOOLOUT-TYPE = *PAGE-PRINTER

Only spoolout jobs on the specified tape device for laser printers can be processed.

SPOOLOUT-TYPE = *BUFFER-LINE-PRINTER

Only spoolout jobs on the specified tape device for line printers with loadable VFBs (3337, 3338, 3339, 3348, 3349) can be processed.

SPOOLOUT-TYPE = *LIST(...)

Spoolout jobs on the tape device for the specified list of device types can be processed.

SELECTION-TYPE = *MAY / *MUST

Selection of spoolout jobs is restricted to those either which at least may be output on one of the specified device types (*MAY) or to those which must be output on one of the specified device types, i.e. on no other device type than the ones specified (*MUST).

DEVICE-TYPE = list-poss(9): *HP-PRINTER / *LP-PRINTER / *LP48-PRINTER / *LP65-PRINTER / *HP90-PRINTER / *LP-EMULATED-PRINTER / *PCL-PRINTER / *2050-APA-PRINTER / *2090-APA-PRINTER / *2090-TWIN-PRINTER

List of device types. For the symbolic names see the chapter dealing with high-performance printers in the “[SPOOL \(BS2000/OSD\)](#)” manual.

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

VSN of the replay tape which is assigned to process (i.e. output) the files stored on it.

OUTPUT-MODE =

Specifies whether the files read in from the replay tape are to be entered in the queue (*FROM-DISK-COPY) or output directly (*DIRECT).

OUTPUT-MODE = *FROM-DISK-COPY

The files are first copied from tape to disk. The jobs are then entered in the normal spoolout queue (type 4).

OUTPUT-MODE = *DIRECT

The jobs are entered in the “replay queue”, i.e. the printer task reads the data direct from the tape. This saves disk memory space but takes longer.

DIRECTORY-VOLUME = *STD / <alphanum-name 1..6>

Specifies the volume containing the catalog of replay jobs.

If the specified tape is to be processed on another computer the directory of the replay tape must first be imported into the file catalog of the appropriate computer.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value

STOP-DPRINT-LOGGING

Terminate Dprint logging

Domain: SPOOL-PRINT-ADMINISTRATION
User group: SPOOL administrator
Privileges: PRINT-SERVICE-ADMINISTRATION

Function

The STOP-DPRINT-LOGGING command is used by a SPOOL administrator or cluster administrator to terminate logging of the Dprint processing during a Dprint session. The command is available with DPRINTCL and/or DPRINTSV.

This command can only be used for Dprint.

Format

STOP-DPRINT-LOGGING

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed message: SDD1103
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDC0801	Invalid operand value Guaranteed messages: SDD1100, SDD1101

Notes

1. The logging file which was opened at START-DPRINT-LOGGING is closed and can be evaluated. For detailed information on the logging, see the ["Distributed Print Services \(BS2000/OSD\)"](#) manual, section "Tracing and logging".
2. The name of the logging file is output as an insert in message SDD1103.

STOP-PRINTER-OUTPUT

Cancel printer assignment

Domain: SPOOL-PRINT-ADMINISTRATION

User group: Device administrators

Privileges: OPERATING, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING,

Function

The STOP-PRINTER-OUTPUT command cancels the assignment of printers.

Note

For the DEVICE-NAME operand, the ANY-LOCAL-PRINTER suboperand, including all its operand values, may only be used with the privilege TSOS.

Format

STOP-PRINTER-OUTPUT
<pre> DEVICE-NAME = *ANY-LOCAL-PRINTER(...) / *RSO-PRINTER(...) *ANY-LOCAL-PRINTER(...) UNIT = list-poss(8): <alphanum-name 1..8> ,STOP = *STD / *IMMEDIATE *RSO-PRINTER(...) NAME = list-poss(8): <alphanum-name 1..8> ,STOP = *STD / *IMMEDIATE </pre>

Operands

DEVICE-NAME =

Types of printer to be disconnected.

DEVICE-NAME = *ANY-LOCAL-PRINTER(...)

Local printers are to be disconnected.

UNIT = list-poss(8): <alphanum-name 1..8>

Mnemonic device names or device names of the local printers which are to be disconnected.

STOP = *STD / *IMMEDIATE

Defines whether printing is to be stopped immediately or whether any currently active job should be first completed.

DEVICE-NAME = *RSO-PRINTER(...)

RSO printers are to be disconnected.

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

Names of the RSO printers which are to be disconnected.

STOP = *STD / *IMMEDIATE

Specifies whether printout is to be terminated immediately or a currently active job is to be completed first.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Guaranteed message: SPS0B06 Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value
	128	SCP0896	Subsystem not loaded/ready Guaranteed message: SCP0896

RSO command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	01	CMD0202	Syntax error
	32	SRO0174	System error. Command rejected
	64	SRO0175	No authorization for command
	64	SRO0176	Invalid operand value

STOP-TAPE-OUTPUT

Cancel assignment of tape devices

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

Function

The STOP-TAPE-OUTPUT command cancels the assignment of a tape device at the end of the current spoolout job.

This command can only be used for local SPOOL.

Format

STOP-TAPE-OUTPUT

UNIT = list-poss(8): <alphanum-name 2..2>
--

Operands

UNIT = list-poss(8): <alphanum-name 2..2>

Mnemonic names of the tape devices to be deactivated.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value

STOP-TAPE-REPLAY

Cancel assignment of tape devices after replay tape processing

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

Function

The STOP-TAPE-REPLAY command cancels the assignment of tape devices (for replay tape processing) at the end of the current spoolout job.

This command can only be used for local SPOOL.

Format

STOP-TAPE-REPLAY

UNIT = list-poss(8): <alphanum-name 2..2>

Operands

UNIT = list-poss(8): <alphanum-name 2..2>

Mnemonic names of the tape devices for replay tape processing to be deactivated.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
	1	CMD0202	Syntax error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value

VERIFY-DPRINT-CONSISTENCY

Check configuration file and set new master

Domain: SPOOL-PRINT-ADMINISTRATION
User group: SPOOL administrators
Privileges: PRINT-SERVICE-ADMINISTRATION

Function

The VERIFY-DPRINT-CONSISTENCY command is used by a SPOOL administrator or cluster administrator to have the configuration file checked and a new master set.

A special control request is sent to each host in the sequence of the recovery hierarchy. The first host which confirms this request becomes the new master host of the cluster.

This command can only be used for Dprint.

Format

VERIFY-DPRINT-CONSISTENCY

Command return codes

(SC2)	SC1	Maincode	Meaning / guaranteed messages
	0	CMD0001	No errors Guaranteed message: SDD1103
	32	CMD0221	System error. Command rejected
	64	CMD0216	No authorization for command
	64	SDD0801	Invalid operand value

Notes

1. The command defines a new master host, taking account of the recovery hierarchy which has been defined by means of the CREATE-DPRINT-CLUSTER command or the MODIFY-DPRINT-CONFIGURATION command.
2. The command should be used with care. Its use is advantageous when the master host is no longer available due to a system crash because it provides the local cluster with a new master host.

3. If the master host is no longer available because of connection problems and if connection errors occur repeatedly between the hosts, multiple VERIFY-DPRINT-CONSISTENCY commands within the cluster may result in multiple master hosts being set for the cluster.

In this case, each time a connection is re-established the configuration is updated. In this process, the configuration of the old master is overwritten by the configuration of the temporary master, taking account of the recovery hierarchy which is defined in the configuration file of the old master host.

4. If the successor of the master host is not equipped with the DPRINTCL subsystem, the cluster configuration remains unchanged. The configuration file can, however, be updated using the program SPSEIVE. But the special DPRINTCL commands are still not available and the SPOOL commands with the special Dprint operands are rejected (except for START-/STOP-/MODIFY-PRINTER-OUTPUT).
5. If the VERIFY-DPRINT-CONSISTENCY command is issued on the master host of the cluster, a complete consistency check is performed for the cluster. Communications are established with each accessible host in the cluster and information about their status is fetched.

If the addressed host no longer belongs to the cluster, it is automatically “logically” removed from the cluster (see the MODIFY-DPRINT-CLUSTER command, notes on the operand ACTION=*REMOVE, [page 43](#)).

If the addressed host no longer belongs to the cluster but is “addable” (the master host is defined in the checked configuration), it is first logically removed from the cluster and then added to it again.

Should an inconsistency be discovered, a restoration of the checked host will be forced.

If the addressed host belongs to the cluster, the status of the server is checked and updated.

Example

A cluster comprises 4 hosts having the recovery hierarchy H1, H2, H3, H4. If H1 (master host) fails, the VERIFY-DPRINT-CONSISTENCY command causes H2 to become the new master host. This presupposes that H2 has confirmed the control request, and that the communication between H2, H3 and H4 continues to function.

When the availability of H1 is restored, it once again becomes master host of the cluster. The other hosts receive the new configuration file of the master and a recovery action is performed for each of them, i.e. their respective configuration files are overwritten by that of the new master. For further information refer to the “[Distributed Print Services \(BS2000/OSD\)](#)“ manual, section 5.6, “Recovery processing”.

WRITE-SPOOL-TAPE

Output files to tape

Domain:	SPOOL-PRINT-ADMINISTRATION
User group:	Nonprivileged users
Privileges:	HARDWARE-MAINTENANCE, PRINT-SERVICE-ADMINISTRATION, SAT-FILE-EVALUATION, SAT-FILE-MANAGEMENT, SECURITY-ADMINISTRATION, STD-PROCESSING

Function

This command can only be used for local SPOOL.

The system creates a separate spoolout job which runs independently of the job issuing the command (own TSN). A SAM tape file with standard labels is generated as the output file and is assigned the following name:

$$\left. \begin{array}{l} \{ \text{S.tsn.} \\ \text{S.pname.} \} \right\} \left\{ \begin{array}{l} [\text{hhmmss.}] \text{filename} \\ \text{EAMno} \end{array} \right\}$$

where:

S.tsn.	tsn is the task sequence number of the SPOOL job
S.pname.	job name if the SPOOLOUT-NAME operand is specified
filename	name of the cataloged input file
hhmmss.	time of day if several files are output under the same job and file names
EAMno	EAM file number if SYSLST or SYSOUT has been specified as the input file.

SPOOL creates an MF set (multifile tape) if

- a tape containing more than one file
- file generations
- partially qualified file names

are to be output. This tape file can be output to a printer by means of PRINT-DOCUMENT - it cannot be output to tape.

Format

WRITE-SPOOL-TAPE

FILE-NAME = ***LIBRARY-ELEMENT**(...) / list-poss(16): ***OMF** / ***SYSLST** / ***SYSLST-NUMBER**(...) / ***SYSDOUT** / <filename 1..54 with-wild(80)> / <integer 1..65535>

***LIBRARY-ELEMENT**(...)

LIBRARY = <filename 1..54 without-vers>

ELEMENT = <composed-name 1..64 with-under with-wild(80)>(…)

 <composed-name 1..64 with-under with-wild(80)>(…)

VERSION = ***HIGHEST-EXISTING** / ***UPPER-LIMIT** /

 <composed-name 1..24 with-under with-wild(40)>

TYPE = <alphanum-name 1..8 with-wild(12)>

CREATION-DATE = ***LATEST** / ***RANGE**(…) / <date>(…)

 ***RANGE**(…)

FROM = ***FIRST** / <date>

TO = ***LAST** / <date>

 <date>(…)

FROM = ***FIRST** / <time>

TO = ***LAST** / <time>

***SYSLST-NUMBER**(…)

SYSLST-NUMBER = <integer 1..99>

,**MONJV** = ***NONE** / ***STD** / <filename 1..49 without-gen>

,**JV-PASSWORD** = ***NONE** / <c-string 1..4> / <x-string 1..8> / ***SECRET**

,**START-SPOOL** = ***IMMEDIATE** / ***CLOSE** / ***NO**

,**LOCK-FILE** = ***STD** / ***YES** / ***NO**

,**DELETE-FILE** = ***NO** / ***YES** / ***DESTROY**

,**SPOOL-OUT-NAME** = ***STD** / <alphanum-name 1..8> / <c-string 1..8>

,**SPOOL-OUT-PRIORITY** = ***JOB-PRIORITY** / <integer 30..255>

,**DEVICE-TYPE** = ***ANY** / <structured-name 1..8>

,**VOLUME** = ***ANY** / list-poss(4): <alphanum-name 1..6>

,**RETENTION-PERIOD** = ***STD** / <integer 0..999>

Operands

FILE-NAME = *LIBRARY-ELEMENT(...)/list-poss(16): *SYSLST-NUMBER(...)/ *OMF / *SYSLST / *SYSOUT / <filename 1..54 with-wild(80)> / <integer 1..65535>

Names of the files to be output.

FILE-NAME = *LIBRARY-ELEMENT(...)

The specified element is to be output from a PLAM library. An element is fully defined by its name, its type and its version number.

Notes

- The syntax of library elements:
The LMS syntax rules for element names are not the same as the ISP/SDF syntax rules, except for the data type TEXT. PLAM library element names must, of course, be specified in accordance with the BS2000 syntax.
- The element name and the version may be specified in wildcard format in both cases (WRITE-SPOOL-TAPE and LMS). The wildcard format for specification of the date in LMS makes it possible to combine all elements before or after a specific creation date into one printout. In WRITE-SPOOL-TAPE, this option is supported by the operand RANGE. The abbreviation of the date in LMS is covered functionally in WRITE-SPOOL-TAPE by the facility for specifying the first or last day of the month:
The specification >1988* (in LMS) has the same effect as the input *RANGE(1988-01-01,) in WRITE-SPOOL-TAPE.
- Access to the directory of the library is executed via command validation, i.e. you must have access authorization for the library at this time; otherwise, the command is rejected.
- A file with library elements cannot be locked until the spoolout job is executed. A global setting LOCK-FILE = YES in the SPOOL parameter file (MODIFY-SPOOL-PARAMETERS) is ignored.
- Records of the type PLAM TYPE B as components of a library element cannot be processed.

LIBRARY = <filename 1..54 without-gen>

Name of the PLAM library from which an element is to be output.

ELEMENT = <composed-name 1..64 with-under with-wild(80)>(…)

Name of the element from the specified PLAM library that is to be output.

VERSION = *HIGHEST-EXISTING / *UPPER-LIMIT / <composed-name 1..24 with-under with-wild(40)>

Version number of the element to be output. If this operand is omitted SPOOL selects *HIGHEST-EXISTING, i.e. the last element in alphabetical order.

If the version is specified with wildcards and if library elements of the same name exist in versions which are affected by the wildcard specification, all these library elements are output.

LMS also allows library elements which have no version number to be created.

These elements are printed with the default value *HIGHEST-EXISTING. Various wildcards (*, ' / etc.) also allow the output of these library elements. In messages which refer to these library elements as well on the trailer page, the version is replaced by the '@' character.

TYPE = <alphanum-name 1..8 with-wild(12)>

The type of the library element to be output.

The name consists of either an alphabetic character (A..Z) or, if the type is specified in wildcard format, of up to 12 alphanumeric characters.

CREATION-DATE =

The creation date with which one or more (wildcard format) elements are selected for output.

CREATION-DATE = *LATEST

By default, the last library element created is output.

CREATION-DATE = *RANGE(...)

Library elements created within the specified time range are to be output.

FROM = *FIRST / <date 8..10>

Specifies the first day of the possible creation period for the library element.

By default, FIRST is assumed, i.e. the creation date of the library element which was created first.

TO = *LAST / <date 8..10>

Specifies the last day of the possible creation period for the library element.

By default, LAST is assumed, i.e. the creation date of the library element which was created last.

Note

If the two digits for the century are not specified, the following defaults are used:

- 19 if the last two digits of the year number lie between 50 and 99;
- 20 in all other cases.

CREATION-DATE = <date>(…)

The date on which the desired library elements were created.

FROM = *FIRST / <time>

The earliest time of day at which elements in the specified library must have been created in order to be printed.

The default is *FIRST, i.e. 00:00:00 hours.

TO = *LAST / <time>

The latest time of day at which elements in the specified library must have been created in order to be output.

The default is *LAST, i.e. 23:59:59 hours.

FILE-NAME = *SYSLST-NUMBER(...)

Specifies system file SYSLST-nn.

SYSLST-NUMBER = <integer 1..99>

Two-digit number nn to be used to form the SYSLSTnn file name. A maximum of 11 different SYSLSTnn system files can be specified in a list (in parentheses and separated by commas). All the specified operand values then apply to each of these system files.

FILE-NAME = *OMF

Specifies the temporary EAM object module file of the current job. The following defaults apply to this job:

- OMF is not locked (LOCK-FILE=NO)
- OMF is deleted after execution of the output (DELETE-FILE=YES).

The temporary EAM object module file *OMF may be combined in any manner with the system files SYSLST and SYSOUT in one WRITE-SPOOL-TAPE command, for example: WRITE-SPOOL-TAPE (*OMF,*SYSLST,*SYSOUT). It must not, however, be combined with an EAM file number or a cataloged file.

FILE-NAME = *SYSLST(...)

Outputs the SYSLST system file. Unless otherwise specified, the following points apply to output:

- SYSLST is not locked (LOCK-FILE=NO)
- SYSLST is deleted at the end of output (DELETE-FILE=YES).

System file SYSLST may be combined in any sequence with the temporary EAM object module file *OMF and system file SYSOUT in a WRITE-SPOOL-TAPE command, e.g. WRITE-SPOOL-TAPE (*OMF,*SYSLST,*SYSOUT). It must not, however, be combined with an EAM file number or a cataloged file.

FILE-NAME = *SYSOUT

Outputs system file SYSOUT.

System file SYSOUT may be combined in any sequence with the temporary EAM object module file *OMF and system file *SYSLST in a WRITE-SPOOL-TAPE command, e.g. WRITE-SPOOL-TAPE (*OMF,*SYSLST,*SYSOUT).

It must not, however, be combined with an EAM file number or a cataloged file.

FILE-NAME = <filename 1..54 with wild(80)>

Name of the file to be output to tape.

Input format:

```
:cat:$user. {
  file
  file[no]
  group
  group={ (*abs)
           (+rel)
           (-rel) } ] }
```

Character set:

A...Z, 0...9, \$, #, @, hyphen, period.

:cat:

Catalog identifier (catid) of the subset on which the file is stored. The catalog identifier comprises a maximum of 4 characters from sets A...Z and 0...9 (no special characters) and must be enclosed in colons.

The catalog identifier assigned to the user ID (userid) (entry in user catalog) is the default value.

\$user.

User ID (userid) to which the file is assigned. The user ID comprises a maximum of 8 characters from the set (A...Z, 0...9, \$, #, @), must not begin with a digit, and must be enclosed by the characters '\$' and '.'.

The user ID from the SET-LOGON-PARAMETERS command (i.e. the user's own user ID) is the default value.

file

A file name comprises a maximum of 41 characters; the first character must be a digit or a letter; the last character must not be a hyphen or period; a file name must not consist exclusively of digits and/or special characters.

PAM files must not be specified in batch mode.

The WRITE-SPOOL-TAPE command is rejected if the specified file

- is a newly cataloged file to which no data has yet been written
- has already been opened in output mode

If the file does not belong to the user's own user ID, it must be shareable (MODIFY-FILE-ATTRIBUTES command).

The following points should be noted in connection with the output of cataloged files:

- A spoolout job is generated even if the file to be output is reserved by a SECURE-RESOURCE-ALLOCATION command. However, this reservation must be canceled before the spoolout job is processed, otherwise the job cannot be executed.

The file to be output is locked until the end of the session the operand LOCK-FILE=YES was specified in the WRITE-SPOOL-TAPE command and the job could not be executed because of the reservation.

- The *OMF, *SYSLST and *SYSOUT files cannot be specified together with a cataloged file in a spoolout job.

group

Name of a file generation group from which a file (generation) is to be printed. The name must not be more than 34 characters long and must not be partially qualified. The first character must be a digit or a letter; the last character must not be a hyphen or a period; a file name must not consist exclusively of digits and/or special characters.

$$\text{group} \left\{ \begin{array}{l} (*\text{abs}) \\ (+\text{rel}) \\ (-\text{rel}) \end{array} \right\}$$

Name of a file generation group from which a file (generation) is to be printed. The name must not be more than 34 characters long and must not be partially qualified. The first character must be a digit or a letter; the last character must not be a hyphen or a period; a file name must not consist exclusively of digits and/or special characters.

(*abs)

Absolute generation number of the file generation to be printed out; abs is an element from the set (1, 2, ..., 9999).

(+rel)

(-rel)

Relative generation number of the file generation to be printed out.

The sign must be included. rel is an element of the set (1, 2, ..., 99).

'rel' relates to a base value (see BASE field in the output of the SHOW-FILE-ATTRIBUTES command).

The formula is: rel = abs - base value.

FILE-NAME = <integer 1..65535>

Number of the EAM file to be output. See also the PRINT-DOCUMENT command.

START-SPOOL =

Determines when the *SYSLST file is to be output before the end of the job.

START-SPOOL = *IMMEDIATE

The spoolout job is to be generated and processed immediately after the command is entered.

START-SPOOL = CLOSE

The spoolout job is to be processed immediately after the system file is closed.
A system file is closed:

- by means of LOGOFF or CANCEL-JOB (from another identifier) for primary assignment, i.e. at the end of the job
- if assigned to a cataloged file:
 - by means of LOGOFF or CANCEL-JOB (from another identifier), i.e. at the end of the job
 - by means of a new SYSFILE command (change assignment) issued for the same system file
 - in a procedure run after procedure level 0 has been reached.

START-SPOOL = *NO

Any previously defined CLOSE option is canceled. Any other operands are rejected.

MONJV =

Specifies the job variable in which information on job processing is to be stored. See also [page 163](#).

MONJV = *NONE

No job variable is to be linked to the job.

MONJV = *STD

The job variable will be given the name of the file to be printed (without catalog ID and without user ID). It is created under the user ID and catalog ID of the caller.

MONJV = <filename 1..49 without-gen>

The job variable should contain the specified name. If the job contains several files, the following suffix is added to the name of the job variable:

- a consecutive number <1..9999> if FAMILY=YES is also specified;
- the TSN of the spoolout job if FAMILY=NO or START-SPOOL=<integer 1..2147483639> is also specified.

JV-PASSWORD = *NONE / <c-string 1..4> / <x-string 1..8>

Specifies the password with which the job variable is protected. See also [page 163](#).

LOCK-FILE = *STD / *YES / *NO

Locks the files so that changes cannot be made until the end of output. This protection remains in force while the spoolout job is in the job queue (T4); the file is automatically protected during output (T5) (even if LOCK-FILE=*NO is specified).

LOCK-FILE = *STD

The value defined at system generation applies (*YES or *NO).

DELETE-FILE =

Specifies whether the file is to be deleted at the end of output and if so, whether its catalog entry and data are to be overwritten with X'00'.

Default: the file is not deleted after printing and not overwritten with binary zeros. The user must have write access to the file.

If the file to be output belongs to a file generation group (see FILE-NAME operand), the DELETE-FILE operand is ignored. This operand must not be specified in conjunction with *SYSLST, *SYSLSTnn or *SYSOUT.

DELETE-FILE = *NO

The file is not to be deleted after printing (unless it is an EAM or system file).

DELETE-FILE = *YES

The file is to be deleted as soon as output has been completed.

DELETE-FILE = *DESTROY

Specifies that once the file has been printed both its catalog entry and its data are to be overwritten with binary zeros. This operand value is invalid for EAM and cataloged system files.

SPOOLOUT-NAME = *STD / <alphanum-name 1..8> / <c-string 1..8>

Job name for the spoolout job.

The job name can be formed from a maximum of 8 characters from the set (A,...,Z,0,...,9,@,#,\$,..,-) but must not start with a hyphen or end with a period. It may only start with a period if this is followed by an alpha character; in this case, the period itself as part of the job name is not printed on the header page.

The job name is printed in the third line of oversized characters on the header page and also appears in the output of the SHOW-JOB-STATUS command. If no job name is specified, the job name from the SET-LOGON-PARAMETERS command is used.

SPOOLOUT-NAME = *STD

No separate job name for the spoolout job. If a job name has been assigned to the job issuing the command (in the SET-LOGON-PARAMETERS command) this name is printed in the third outside line on the header page.

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

Job name which is to be assigned to the spoolout job (and which will overwrite any job name already assigned to the job issuing the command).

SPOOLOUT-PRIORITY =

Specifies the priority (urgency) with which this spoolout job is started relative to other spoolout jobs.

SPOOLOUT-PRIORITY = *JOB-PRIORITY

The spoolout job is to have the same priority as the job issuing the command; default value.

SPOOLOUT-PRIORITY = <integer 30..255>

Priority to be assigned to the spoolout job.

The highest priority you can assign is defined in the user catalog and can be displayed by means of the SHOW-USER-ATTRIBUTES command.

If an invalid operand is specified (or if the operand is omitted), the spoolout job is assigned the same priority as the job issuing the command.

DEVICE-TYPE = *ANY / <structured-name 1..8>

Device type to which the required tapes are assigned.

DEVICE-TYPE = *ANY

Any device type. The highest available recording density is used for output.

VOLUME = *ANY / list-poss(4): <alphanum-name 1..6>

Volume labels of the required tapes.

VOLUME = *ANY

Scratch tapes supplied by the operator are used for output.

RETENTION-PERIOD = *STD / <integer 0..999>

Specifies the period in days during which the output file cannot be updated or deleted.

Command return codes

(SC2)	SC1	Maincode	Meaning
	0	CMD0001	No error
2	0	SCP0829	Command registered
2	0	SCP0862	Not file owner. ERASE ignored
2	0	SCP0863	FGG file. ERASE ignored
2	0	SCP0864	File protected by read access. ERASE ignored
2	0	SCP0865	File protected by write access. ERASE ignored
2	0	SCP0866	File protected by EXDATE. ERASE ignored
2	0	SCP0930	HP/SPOOLFILE not available
2	0	SCP0971	RECORD-CLASS 164 not accessible (PLAM)
2	0	SCP1000	JV procedure error. MONJV ignored
	1	CMD0202	Syntax error
	1	SCP0973	Semantic error
	32	SCP0974	System error. Command rejected
	64	SCP0975	No authorization for command
	64	SCP0976	Invalid operand value
	128	SPS0266	SPOOL administrator task not available
	128	SCP0896	Subsystem not loaded/ready
	128	SCP0996	JV subsystem not loaded/ready

3 Appendix

SDF syntax representation

The following figure gives an example of the representation of the syntax of a command in a manual. The command format consists of a field with the command name. All operands with their legal values are then listed. Operand values which introduce structures and the operands dependent on these operands are listed separately.

HELP-SDF	Alias: HPSDF
GUIDANCE-MODE = <u>*NO</u> / *YES	
,SDF-COMMANDS = <u>*NO</u> / *YES	
,ABBREVIATION-RULES = <u>*NO</u> / *YES	
,GUIDED-DIALOG = <u>*YES</u> (...)	
<u>*YES</u>(...)	
SCREEN-STEPS = <u>*NO</u> / *YES	
,SPECIAL-FUNCTIONS = <u>*NO</u> / *YES	
,FUNCTION-KEYS = <u>*NO</u> / *YES	
,NEXT-FIELD = <u>*NO</u> / *YES	
,UNGUIDED-DIALOG = <u>*YES</u> (...) / *NO	
<u>*YES</u>(...)	
SPECIAL-FUNCTIONS = <u>*NO</u> / *YES	
,FUNCTION-KEYS = <u>*NO</u> / *YES	

Representation of the syntax of the user command HELP-SDF

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: Metasyntax (notational conventions)

The meanings of the special characters and the notation used to describe command and statement formats are explained in [table 1](#).

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 [table 2](#).

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 (command, statement or operand names, keyword values) and constant operand values. Keyword values begin with *	HELP-SDF SCREEN-STEPS = *NO
UPPERCASE LETTERS in boldface	Uppercase letters printed in boldface denote guaranteed or suggested abbreviations of keywords.	GUIDANCE-MODE = *YES
=	The equals sign connects an operand name with the associated operand values.	GUIDANCE-MODE = *NO
< >	Angle brackets denote variables whose range of values is described by data types and suffixes (see table 2 and table 3).	SYNTAX-FILE = <filename 1..54>
<u>Underscoring</u>	Underscoring denotes the default value of an operand.	GUIDANCE-MODE = *NO
/	A slash serves to separate alternative operand values.	NEXT-FIELD = *NO / *YES
(...)	Parentheses denote operand values that initiate a structure.	,UNGUIDED-DIALOG = *YES (...)/ *NO
[]	Square brackets denote operand values which introduce a structure and are optional. The subsequent structure can be specified without the initiating operand value.	SELECT = [*BY-ATTRIBUTES](...)
Indentation	Indentation indicates that the operand is dependent on a higher-ranking operand.	,GUIDED-DIALOG = *YES (...) *YES(...) SCREEN-STEPS = *NO / *YES

Table 1: Metasyntax (part 1 of 2)

Data types

Data type	Character set	Special rules
alphanum-name	A...Z 0...9 \$, #, @	
cat-id	A...Z 0...9	Not more than 4 characters; must not begin with the string PUB
command-rest	freely selectable	
composed-name	A...Z 0...9 \$, #, @ hyphen period catalog ID	Alphanumeric string that can be split into multiple substrings by means of a period or hyphen. 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 Structure identifier: hyphen	Input format: yyyy-mm-dd yyy: year; optionally 2 or 4 digits mm: month dd: day
device	A...Z 0...9 hyphen	Character string, max. 8 characters in length, corresponding to a device available in the system. In guided dialog, SDF displays the valid operand values. For notes on possible devices, see the relevant operand description.
fixed	+, - 0...9 period	Input format: [sign][digits].[digits] [sign]: + or - [digits]: 0...9 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 0...9 \$, #, @ hyphen period	<p>Input format:</p> $[:cat:][\$user.] \left\{ \begin{array}{l} \text{file} \\ \text{file(no)} \\ \text{group} \\ \text{group} \left\{ \begin{array}{l} (*abs) \\ (+rel) \\ (-rel) \end{array} \right\} \end{array} \right\}$ <p>:cat: optional entry of the catalog identifier; character set limited to A...Z and 0...9; maximum of 4 characters; must be enclosed in colons; default value is the catalog identifier assigned to the user ID, as specified in the user catalog.</p> <p>\$user. optional entry of the user ID; character set is A...Z, 0...9, \$, #, @; maximum of 8 characters; first character cannot be a digit; \$ and period are mandatory; default value is the user's own ID.</p> <p>\$. (special case) system default ID</p> <p>file file or job variable name; may be split into a number of partial names using a period as a delimiter: name₁[.name₂[...]] name_i does not contain a period and must not begin or end with a hyphen; file can have a maximum length of 41 characters; it must not begin with a \$ and must include 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 (continued)		<p>#file (special case) @file (special case) # or @ used as the first character indicates temporary files or job variables, depending on system generation.</p> <p>file(no) tape file name no: version number; character set is A...Z, 0...9, \$, #, @. Parentheses must be specified.</p> <p>group name of a file generation group (character set: as for "file")</p> <p>group $\left\{ \begin{array}{l} (*abs) \\ (+rel) \\ (-rel) \end{array} \right\}$</p> <p>(*abs) absolute generation number (1-9999); * and parentheses must be specified.</p> <p>(+rel) (-rel) relative generation number (0-99); sign and parentheses must be specified.</p>
integer	0...9, +, -	+ or -, if specified, must be the first character.
name	A...Z 0...9 \$, #, @	Must not begin with 0...9.

Table 2: Data types (part 3 of 6)

Data type	Character set	Special rules
partial-filename	A...Z 0...9 \$, #, @ hyphen period	<p>Input format: [:cat:][$\\$user.][partname.]</p> <p>:cat: see filename $\\$user. see filename</p> <p>partname optional entry of the initial part of a name common to a number of files or file generation groups in the form: name₁. [name₂. [...]] name_i (see filename). The final character of “partname” must be a period. At least one of the parts :cat:, $\\$user. or partname must be specified.</p>
posix-filename	A...Z 0...9 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 ^ A distinction is made between uppercase and lowercase.</p>
posix-pathname	A...Z 0...9 special characters structure identifier: slash	<p>Input format: [/]part₁/.../part_n where part_i is a posix-filename; max. 1023 characters; 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 0...9 period single quote	<p>Input format: <code>[[C]'][V][m]m.naso[']</code></p> <div style="text-align: right; margin-right: 20px;"> $\begin{array}{c} \\ \\ \\ \hline \text{correction status} \\ \text{release status} \end{array}$ </div> <p>where m, n, s and o are all digits and a is a letter. 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).</p> <p>product-version may be enclosed within single quotes (possibly with a preceding C). The specification of the version may begin with the letter V.</p>
structured-name	A...Z 0...9 \$, #, @ hyphen	Alphanumeric string which may comprise a number of substrings separated by a hyphen. First character: A...Z or \$, #, @
text	freely selectable	For the input format, see the relevant operand descriptions.
time	0...9 structure identifier: colon	<p>Time-of-day entry:</p> <p>Input format: $\left. \begin{array}{l} \text{hh:mm:ss} \\ \text{hh:mm} \\ \text{hh} \end{array} \right\}$</p> <p>hh: hours mm: minutes ss: seconds $\left. \begin{array}{l} \\ \\ \end{array} \right\}$ Leading zeros may be omitted</p>
vsn	<p>a) A...Z 0...9</p> <p>b) A...Z 0...9 \$, #, @</p>	<p>a) Input format: pvsid.sequence-no max. 6 characters pvsid: 2-4 characters; PUB must not be entered sequence-no: 1-3 characters</p> <p>b) Max. 6 characters; PUB may be prefixed, but must not be followed by \$, #, @.</p>

Table 2: Data types (part 5 of 6)

Data type	Character set	Special rules
x-string	Hexadecimal: 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: 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”. <i>x</i> is an (optionally signed) integer.</p> <p><i>y</i> maximum value permitted for “integer”. <i>y</i> is an (optionally signed) integer.</p> <p><i>unit</i> with “integer” only: additional units. The following units may be specified:</p> <p><i>days</i> <i>byte</i> <i>hours</i> <i>2Kbyte</i> <i>minutes</i> <i>4Kbyte</i> <i>seconds</i> <i>Mbyte</i></p>
<i>x..y special</i>	<p>With the other data types: length specification 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> <p><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)</p>
<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> <p> 20<i>yy-mm-dd</i> if <i>yy</i> < 60 19<i>yy-mm-dd</i> if <i>yy</i> ≥ 60</p>
<i>-low</i>	Uppercase and lowercase letters are differentiated.
<i>-path-compl</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 (<i>_</i>) 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. However, as not all commands support POSIX wildcards, their use for data types other than posix-filename and posix-pathname can lead to semantic errors. 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><s_x:s_y></td> <td> Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (s_x or s_y) – It is not longer than the longest string (s_x or s_y) – It lies between s_x and s_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – s_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – s_y 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><s₁,...></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_x:s_y” (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 _x :s _y >	Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (s_x or s_y) – It is not longer than the longest string (s_x or s_y) – It lies between s_x and s_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – s_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – s_y 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 ₁ ,...>	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 _x :s _y ” (see above).
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<s _x :s _y >	Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (s_x or s_y) – It is not longer than the longest string (s_x or s_y) – It lies between s_x and s_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – s_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – s_y 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 ₁ ,...>	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 _x :s _y ” (see above).												

Table 3: Data type suffixes (part 2 of 7)

Suffix	Meaning														
with-wild(n) (continued)	<p>-s</p> <p>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 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 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> <table border="1"> <thead> <tr> <th>POSIX wildcards</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>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.</td> </tr> <tr> <td>?</td> <td>Replaces any single character; not permitted as the first character outside single quotes.</td> </tr> <tr> <td>[c_x-c_y]</td> <td>Replaces any single character from the range defined by c_x and c_y, including the limits of the range. c_x and c_y must be normal characters.</td> </tr> <tr> <td>[s]</td> <td>Replaces exactly one character from string s. The expressions [c_x-c_y] and [s] can be combined into [s₁c_x-c_ys₂].</td> </tr> <tr> <td>[!c_x-c_y]</td> <td>Replaces exactly one character not in the range defined by c_x and c_y, including the limits of the range. c_x and c_y must be normal characters. The expressions [!c_x-c_y] and [!s] can be combined into [!s₁c_x-c_ys₂].</td> </tr> <tr> <td>[!s]</td> <td>Replaces exactly one character not contained in string s. The expressions [!s] and [!c_x-c_y] can be combined into [!s₁c_x-c_ys₂].</td> </tr> </tbody> </table>	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 _x -c _y]	Replaces any single character from the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters.	[s]	Replaces exactly one character from string s. The expressions [c _x -c _y] and [s] can be combined into [s ₁ c _x -c _y s ₂].	[!c _x -c _y]	Replaces exactly one character not in the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters. The expressions [!c _x -c _y] and [!s] can be combined into [!s ₁ c _x -c _y s ₂].	[!s]	Replaces exactly one character not contained in string s. The expressions [!s] and [!c _x -c _y] can be combined into [!s ₁ c _x -c _y s ₂].
POSIX wildcards	Meaning														
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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 also 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; 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><n></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: All wildcards in the selector are numbered from left to right in ascending order (global index). Identical wildcards in the selector are additionally numbered from left to right in ascending order (wildcard-specific index). Wildcards can be specified in the constructor by one of two mutually exclusive methods:</p> <ol style="list-style-type: none"> 1. Wildcards can be specified via the global index: <n> 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 	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; 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.
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<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 (continued)	<p>The following rules must be observed when specifying a constructor:</p> <ul style="list-style-type: none"> – The constructor can only contain wildcards of the selector. – If the string selected by the wildcard <...> or [...] is to be used in the constructor, the index notation must be selected. – 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<n><n>” must be specified instead of “A//”. – 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 “**//*”. – Valid names must be produced by the constructor. This must be taken into account when specifying both the constructor and the selector. – 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. – If the constructor ends with a period, the selector must also end with a period. The string selected by the period at the end of the selector cannot be specified by the global index in the constructor specification.

Table 3: Data type suffixes (part 5 of 7)

Suffix	Meaning																				
with-wild-constr (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 AB2 A.B.C</td> <td>D<3><2></td> <td>D1 D2 D.CB</td> </tr> <tr> <td>C.<A:C>/<D,F></td> <td>C.AAD C.ABD C.BAF C.BBF</td> <td>G.<1>.<3>.XY<2></td> <td>G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB</td> </tr> <tr> <td>C.<A:C>/<D,F></td> <td>C.AAD C.ABD C.BAF C.BBF</td> <td>G.<1>.<2>.XY<2></td> <td>G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB</td> </tr> <tr> <td>A/B</td> <td>ACDB ACEB AC.B A.CB</td> <td>G/XY/</td> <td>GCXYD GCXYE GCXY.¹⁾ G.XYC</td> </tr> </tbody> </table>	Selector	Selection	Constructor	New name	A/*	AB1 AB2 A.B.C	D<3><2>	D1 D2 D.CB	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<3>.XY<2>	G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<2>.XY<2>	G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB	A/B	ACDB ACEB AC.B A.CB	G/XY/	GCXYD GCXYE GCXY. ¹⁾ G.XYC
	Selector	Selection	Constructor	New name																	
	A/*	AB1 AB2 A.B.C	D<3><2>	D1 D2 D.CB																	
	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<3>.XY<2>	G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB																	
C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<2>.XY<2>	G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB																		
A/B	ACDB ACEB AC.B A.CB	G/XY/	GCXYD GCXYE GCXY. ¹⁾ G.XYC																		
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[']] 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[']] 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).																				

Table 3: Data type suffixes (part 6 of 7)

Suffix	Meaning
without (contd.) -user -vers -wild	Specification of a user ID is not permitted. Specification of the version (see “file(no)”) is not permitted for tape files. The file types posix-filename and posix-pathname must not contain a pattern (character).
mandatory -corr -man -quotes	Certain specifications are necessary for a data type. Input format: [[C]'][V][m]m.naso['] Specifications for the data type product-version must include the correction status and therefore also the release status. Input format: [[C]'][V][m]m.na[so]['] 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. 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)

Job identification in a Dprint environment

In a Dprint environment based on a client/server architecture, a print job can be issued on a client and processed on a remote server. Each print job therefore has two identifiers (a copy of the print job is kept on both the client and the server):

- a local TSN on the client
- a partner TSN on the server

If the selected server is the client's local server (on a host), the partner TSN is the same as the local TSN (this is the current situation with SPOOL).

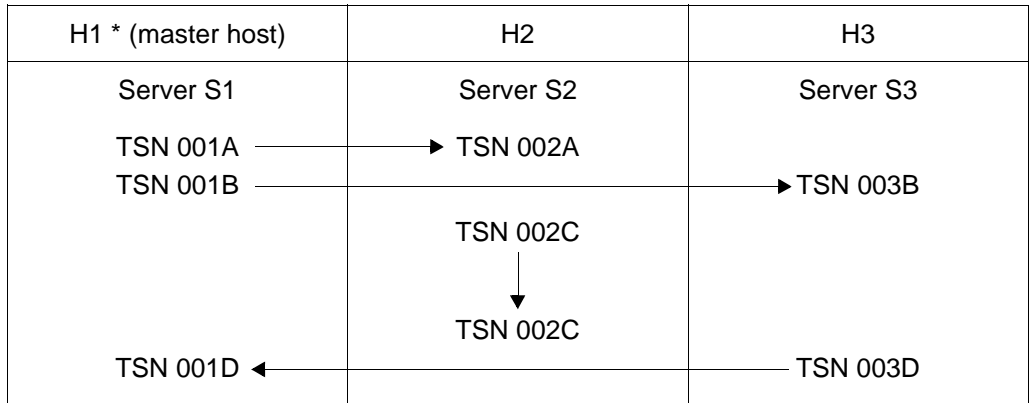
Thus, a print job can be addressed by means of a TSN alone or a TSN and a server name. If only a TSN is used, there must be a copy of the print job on the host at which the command was issued (e.g. CANCEL-..., MODIFY-..., SHOW-...). This means either that the print job has been issued from the local client or that it has been issued from a remote client to the local server. If a TSN and a server name are used, the TSN is always the TSN on the server.

These rules apply to print jobs within a BS2000 cluster. When a print job is sent to a different BS2000 cluster, no local copy of the print job is kept on the client. In this case, the print job must be identified by means of the TSN (local identification) and the cluster name at the gateway. For more information, refer to the "[Distributed Print Services \(BS2000/OSD\)](#)" manual.

Thus, a print job can be addressed from a BS2000 cluster by means of the following identifiers:

1. TSN:
The local TSN on the client for print jobs processed inside the cluster, or the local TSN at the gateway for print jobs processed in a different BS2000 cluster
2. TSN and server name:
The TSN on the server and the name of the server. Only print jobs within the local cluster can be processed.
3. MONJV:
Only print jobs processed within the local cluster can be addressed by means of a MONJV. In addition, the MONJV must be accessible.

Example of identification within a BS2000 cluster



User1 on H1, who created the print jobs 1A and 1B, can issue the following commands:

```
CANCEL-JOB TSN(1A)
          TSN(1B)
```

```
CANCEL-PRINT-JOB TSN(1A)
                  TSN(1B)
                  SERVER-TSN(2A,SERVER-NAME=S2)
                  SERVER-TSN(3B,SERVER-NAME=S3)
```

```
SHOW-JOB-STATUS TSN(1A)
                 TSN(1B)
```

```
SHOW-PRINT-JOB-ATTRIBUTES
                   TSN(1A)
                   TSN(1B)
                   SERVER-TSN(2A,SERVER-NAME=S2)
                   SERVER-TSN(3B,SERVER-NAME=S3)
```

```
MODIFY-PRINT-JOB-ATTRIBUTES
                       TSN(1A)
                       TSN(1B)
                       SERVER-TSN(2A,SERVER-NAME=S2)
                       SERVER-TSN(3B,SERVER-NAME=S3)
```

The SPOOL administrator of H2 can issue the following commands:

```
CANCEL-JOB TSN(2A)
          TSN(2C)
```

```
CANCEL-PRINT-JOB TSN(2A)
                  SERVER-TSN(2A,SERVER-NAME=S2)
                  TSN(2C)
                  SERVER-TSN(2C,SERVER-NAME=S2)
```

```
SHOW-PRINT-JOB-ATTRIBUTES
                  TSN(2A)
                  SERVER-TSN(2A,SERVER-NAME=S2)
                  TSN(2C)
                  SERVER-TSN(2C,SERVER-NAME=S2)
```

The cluster administrator of H1 can issue the following commands:

```
CANCEL-JOB TSN(1A)
           TSN(1B)
           TSN(1D)
```

```
CANCEL-PRINT-JOB TSN(1A)
                  TSN(1B)
                  TSN(1D)
                  SERVER-TSN(1D,SERVER-NAME=S1)
                  SERVER-TSN(2A,SERVER-NAME=S2)
                  SERVER-TSN(2C,SERVER-NAME=S2)
                  SERVER-TSN(3B,SERVER-NAME=S3)
```

```
SHOW-PRINT-JOB-ATTRIBUTES
                  TSN(1A)
                  TSN(1B)
                  TSN(1D)
                  SERVER-TSN(2A,SERVER-NAME=S2)
                  SERVER-TSN(2C,SERVER-NAME=S2)
                  SERVER-TSN(1D,SERVER-NAME=S1)
                  SERVER-TSN(3B,SERVER-NAME=S3)
```

The following commands of the cluster administrator are rejected:

```
CANCEL-PRINT-JOB TSN(2A)
                  TSN(3B)
                  TSN(2C)
                  TSN(3D)
                  SERVER-TSN(3D,SERVER-NAME=S3) (3D is a client TSN)
```

```
MODIFY-/SHOW-PRINT-JOB-ATTRIBUTES TSN=2A
                  TSN(3B)
                  TSN(2C)
                  TSN(3D)
```

Related publications

Ordering manuals

Please apply to your local office for ordering the manuals.

BS2000/OSD
Softbooks English
CD-ROM

Target group

BS2000/OSD users

Contents

The CD-ROM "BS2000/OSD SoftBooks English" contains almost all of the English manuals and README files for the BS2000 system software of the latest BS2000/OSD version and also of the previous versions, including the manuals listed here.

These Softbooks can also be found in the Internet on our manual server. You can browse in any of these manuals or download the entire manual.

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<http://manuals.fujitsu-siemens.com>

BS2000/OSD-BC Commands, Volume 1 - 5

User Guide

Target group

This manual is addressed to nonprivileged users and systems support staff.

Contents

Volumes 1 through 5 contain the BS2000/OSD commands ADD-... to WRITE-... (basic configuration and selected products) with the functionality for all privileges. The command and operand functions are described in detail, supported by examples to aid understanding. An introductory overview provides information on all the commands described in Volumes 1 through 5.

The Appendix of Volume 1 includes information on command input, conditional job variable expressions, system files, job switches, and device and volume types.

The Appendix of Volumes 4 and 5 contains an overview of the output columns of the SHOW commands of the component NDM. The Appendix of Volume 5 contains additionally an overview of all START commands.

There is a comprehensive index covering all entries for Volumes 1 through 5.

BS2000/OSD-BC Commands, Volume 6, Output in S Variables and SDF-P-BASYS

User Guide

Target group

This manual is addressed to programmers and users who write procedures.

Contents

Volume 6 contains tables of all S variables that are supplied with values by the SHOW commands in conjunction with structured output. Further chapters deal with:

- introduction to working with S variables
- SDF-P-BASYS

BS2000/OSD-BC Executive Macros

User Guide

Target group

The manual addresses all BS2000/OSD assembly language programmers.

Contents

The manual contains a summary of all Executive macros, detailed descriptions of each macro with notes and examples, including job variable macros, and a comprehensive general training section.

BS2000/OSD-BC
Introductory Guide to DMS
User Guide*Target group*

This manual is addressed to nonprivileged users and systems support staff.

Contents

It describes file management and processing in BS2000.

Attention is focused on the following topics:

- volumes and files
- file and catalog management
- file and data protection
- OPEN, CLOSE and EOVS processing
- DMS access methods (SAM, ISAM,...)

BS2000/OSD-BC
Introductory Guide to Systems Support
User Guide*Target group*

This manual is addressed to BS2000/OSD systems support staff and operators.

Contents

The manual covers the following topics relating to the management and monitoring of the BS2000/OSD basic configuration: system initialization, parameter service, job and task control, memory/device/system time/user/file/pubset management, assignment of privileges, accounting and operator functions.

BS2000/OSD-BC
System Exits
User Guide*Target group*

The manual addresses systems support.

Contents

The manual contains an introduction to the system exits with a description of the base mechanism. The main section comprises descriptions of all system exits, e.g. exits for the BS2000/OSD basic configuration, SPOOL, DCAM, SDF and PLAM.

BS2000/OSD-BC System Installation User Guide

Target group

This manual is intended for BS2000/OSD system administration.

Contents

The manual describes the generation of the hardware configuration with UGEN and the following installation services: disk organization with MPVS, the installation of volumes using the SIR utility routine, and the IOFCOPY subsystem.

Distributed Print Services (BS2000/OSD) Printing in Computer Networks User Guide

Target group

This manual is intended for nonprivileged users, device administrators and systems support of BS2000/OSD.

Contents

The manual provides descriptions of the principles, use and administration of Distributed Print Services for each of these user groups. Possible uses of Distributed Print Services are illustrated by examples.

DSSM/SSCM Subsystem Management in BS2000/OSD User Guide

Target group

This manual addresses systems support staff and software consultants of BS2000/OSD.

Contents

The following are described: BS2000/OSD subsystem concept, dynamic subsystem management (DSSM), subsystem catalog management (SSCM) and the associated commands and statements.

IDOM (BS2000/OSD) Integrated Document & Output Management User Guide

Target group

The manual addresses SPOOL users and systems support.

Contents

This manual describes the SPOOL subsystem IDOM, which offers document and output management in BS2000/OSD.

JV (BS2000/OSD)**Job Variables**

User Guide

Target group

The manual addresses both nonprivileged users and systems support.

Contents

The manual describes management and possible uses of job variables. The command descriptions are divided according to function areas. The macro calls are described in a separate chapter.

LMS (BS2000)**Subroutine Interface**

User Guide

Target group

LMS users and programmers

Contents

Overview of the possible applications, call preparations and a description of the subroutine functions. The subroutine interface is offered for COBOL, C and Assembler. For each of these programming languages, the parameter structure is described and an example provided.

PRISMAproduction/BS2000**SPS**

Benutzerhandbuch

GERMAN ONLY

Target group

The manual addresses SPOOL users and systems support.

Contents

This manual describes printing on APA printers with the SPOOL subsystem SPS. Installation of SPS and APA printers, creation and provision of print file and print resources, printing and page presentation methods, and error handling are described.

PRM (BS2000/OSD)

User Guide

Target group

The manual addresses SPOOL users, systems support and RSO device administrators.

Contents

This manual describes the PRM utility routine for creating and managing print resources for BS2000 SPOOL. The manual deals with the description of the two PRM user interfaces: the SDF statements for interactive and batch mode, and the FHS-based menu interface for interactive mode.

RSO (BS2000/OSD)
Remote SPOOL Output
User Guide

Target group

This manual is directed at nonprivileged users, RSO device administrators, SPOOL administrators and systems support of BS2000/OSD.

Contents

The manual describes the functions and options of the user groups with respect to utilizing and controlling decentralized printers (RSO printers) and deals with the technical characteristics of all RSO printers.

SDF (BS2000/OSD)
Introductory Guide to the SDF Dialog Interface
User Guide

Target group

BS2000/OSD users

Contents

This manual describes the interactive input of commands and statements in SDF format. A Getting Started chapter with easy-to-understand examples and further comprehensive examples facilitates use of SDF. SDF syntax files are discussed.

SDF-P (BS2000/OSD)
Programming in the Command Language
User Guide

Target group

The manual addresses BS2000/OSD users and systems support.

Contents

SDF-P is a structured procedure language in BS2000. The introduction is followed by a detailed description of commands, functions and macros.

SNS (BS2000/OSD)
SPOOL Notification Service
User Guide

Target group

The manual addresses nonprivileged users and systems support of BS2000/OSD.

Contents

This manual describes the SNS subsystem, which provides a tool for sending and managing notifications in the frame of BS2000/OSD.

SPCONV (BS2000/OSD)

User Guide

Target group

This manual is intended for systems support staff and RSO device administrators.

Contents

The manual describes the SPCONV subsystem. Use of SPCONV is mandatory when working with SPOOL as of Version 3.2A. The manual describes the structure of the filter system and the use of filters.

Spool & Print - Macros and Exits (BS2000/OSD)

User Guide

Target group

The manual is intended for programmers who wish to address the Spool & Print Services in their programs directly.

Contents

The manual describes the macros and exits of the Spool & Print Services, including the macros for virtual printers. The description of the macros is arranged according to functions.

Spool & Print - Messages

User Guide

Target group

This manual addresses systems support, RSO device administrators and nonprivileged users.

Contents

Messages for SPOOL, RSO, SPSEVER, PRM, SCSIPCL, SPCONV, SPS, SPOOLSYS, IDOM and Distributed Print Services. The English message texts and meaning and response texts are included in the manual. Guaranteed messages are marked.

SPOOL (BS2000/OSD)

User Guide

Target group

This manual is intended for nonprivileged users, Spool & Print administrators, RSO device administrators and systems support staff.

Contents

The manual describes the operation of SPOOL.

SPSERVE (BS2000/OSD)

User Guide

Target group

This manual is addressed to nonprivileged users, RSO device administrators, Dprint cluster administrators and those responsible for BS2000/OSD system operation.

Contents

The manual describes the SPSERVE utility routine with all its statements. It takes account of all extensions to SPOOL, RSO, SPCONV, PRM, Distributed Print Services, and SPS.

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Spool & Print – Commands (BS2000/OSD)

User Guide

Target group

This manual is intended for nonprivileged users, device administrators, cluster administrators, SPOOL administrators and system support staff.

Contents

The commands available for SPOOL, Dprint, RSO, SCSIPCL and SPS are described, but not those for subsystem management and job control.

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User Guide



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