Preface

Target group

This manual is directed at BS2000 system administration personnel (referred to as "system administration" in this manual).

This is a first edition for BS2000 V10.0A, comprising the system administrator commands in ISP format which were previously described in the *System Administrator's Guide* [1].
The commands contained in the present manual are used by the system administration to manage, control and monitor the operating system. For this purpose, the privileged system administration ID TSOS has access to a number of facilities at the command and utility routine levels.

The utility routines for system administration are described in detail in the manual *Computer Center Utility Routines* [2].

Besides special system administrator commands, which are reserved for the privileged caller, both the entire set of user commands and a subset of the operator commands can be used.
As far as the user commands are concerned, the privileged TSOS ID results in an extended functionality for system administration. In contrast to the previous *System Administrator's Guide* [1], the description of user command operands in the present manual is limited to the functions which are reserved for system administration under the TSOS ID or which deviate from those for the non-privileged user. A complete description of the non-privileged functions of the user commands can be found in the manual *User Commands (ISP Format)* [3].

Changes since the last version of the manual

General changes for BS2000 V10.0A

SDF

As of V10.0A, SDF is permanently available in the system and cannot be unloaded. As a consequence, the user and system administrator commands for controlling SDF (START-SDF, STOP-SDF and DISCONNECT-SDF) are no longer supported.

Data and information security

In the BS2000 basic configuration, the user is offered new security options for system generation (SECSTART) and new basic mechanisms for data access control (BACL). The software product SECOS expands these mechanisms by adding the following functions:

- enhanced system access control through improved user identification and authentication (chipcard, password lifetime, ...)
- new options for file access control
- introduction of user groups
- mechanisms for extended administration of rights and decentralization of system administration (assignment of system privileges)
- auditing and logging of security-oriented events (access to protected files, input of passwords, ...)

PVSID extension and shared pubset

The number of public volume sets that can be operated concurrently is greatly increased as a result of extending the PVSID (pubset identification) and CATID (catalog identifier) to up to 4 characters.
MSCF V10.0 additionally supports inter-processor file access via shared public volume sets. This function enables a shared pubset to be simultaneously accessed by up to 16 systems within an MSCF network, designating one of the participating processors as the pubset owner performing file access administration functions for all the systems involved.

TSN extension

The option of assigning alphanumeric task sequence numbers to user tasks considerably enlarges the number of jobs that can be concurrently processed by the job management system.

PAM key elimination

In line with the further development of the disk architecture, BS2000 now also formats and services disk storages without key fields (FBA format), which markedly improves utilization of the disk capacity. In addition to the conventional DMS access methods, BS2000 now offers the new non-key access methods NK-SAM and NK-UPAM. Non-key operation must be configured at pubset level, i.e. within the same pubset all disks must be operated according to the same principle (either with or without key).
V10.0A also supports "secondary keys" for NK-ISAM operation. This function permits several fields to be defined as key fields besides the primary key and enables records to be processed via multiple search keys.

Periodic accounting

This new function ensures that accounting data is acquired permanently and consistently. Accounting records are written at specified intervals to make sure, especially in the case of long-running programs, that data for virtually complete accounting is available even if unforeseeable events should occur. Up to 16 job classes can be defined for periodic accounting. For all tasks belonging to a monitored job class and running a program at the appropriate time, program consumption data is continuously logged and stored in the system’s accounting file.

Device support

As of V10.0A, card readers and punches are no longer supported, which eliminates the possibility of entering REPs or parameters via these devices during system initialization.

Changes in the ISP commands

V10.0A essentially involves the following command changes:

- The *AUDIT*, *FILE* and *VERIFY* commands have been included in the manual and the respective privileged functions
  - logging of the branch instruction addresses for all jobs in the system (AUDIT)
  - specification of a public volume set in the VOLUME operand (FILE)
  - release of file locks for files still being used (VERIFY)

  are described.
- The *CATM* command includes the new operands DIALWT, BATCHWT and SHARE. DIALWT and BATCHWT support the definition of waiting times for tasks awaiting pubset availability.
  The SHARE operand enables the system administration to define pubset shareability.
- The *CHANGE-SUBSYSTEM-PARAM* command includes the new CHANGE-STATE operand, which permits the system administration to restrict subsystem control during the session.
- The commands *CREATE-SS* (subsystem loading) and *DELETE-SS* (subsystem unloading) are merely supported for compatibility reasons and are replaced by the commands *START-SS* and *STOP-SS*.
- The *EXCAT* command no longer offers the QUIT operand, but includes the new TERMINATE operand. This function helps the system administration to define, in the context of pubset exportation, that termination of tasks still using the pubset is not to be awaited.
- The *FSTATUS* command includes the new operands BASIC-ACL and ACL, which define control mechanisms for file accesses.
- The commands *HOLD-JOB* and *RELEASE-JOB* include the new MONJV operand, which enables a job to be addressed via a specified monitoring job variable.
- The *HOLD-SS* command includes the new operands FORCED and SYNCH. FORCED permits the system administration to define whether, on suspending the subsystem, termination of the active tasks is to be awaited or their abortion initiated. SYNCH serves to choose either synchronous or asynchronous mode for command processing.
- The *IMCAT* command no longer offers the FORM and ACTNUM operands. FORM previously permitted a choice between importing the entire pubset or only the user/file catalog; this option is no longer supported. ACTNUM helped define the number of account numbers; this parameter has been permanently set at 60 as of V10.0A.
  New *IMCAT* operands are USE (for setting the pubset access mode) and SHARTYP (for defining ownership of a pubset shared by several processors).

- The *JOIN* command has been globally adjusted to the extended value ranges, and features the new operands LOCK and GROUP.
  LOCK permits the system administration to define whether a new user ID remains locked after being set up.
  GROUP enables a new user ID to be included in the hierarchy of BS2000 user groups, provided the software product SECOS is used.
- The commands *MODIFY-ACCOUNTING-PARAMETERS* and *START-ACCOUNTING* include the new operands ACCOUNTING-PERIOD and JOB-CLASS, which implement new accounting functions, i.e. the cyclical monitoring of job classes and the periodic collection of accounting records respectively.
- The following commands are no longer described in this version, since they do not offer any functional extensions apart from the general privileges assigned to the TSOS ID.
  - *MODIFY-JOB*
  - *MRSSTA*
  - *PRIORITY*
  - *SHOW-DEVICE-CONFIGURATION*
  - *SHOW-DISK-DEFAULTS*
  - *SHOW-MOUNT-PARAMETER*
  - *SHOW-RESOURCE-ALLOCATION*
  - *SHOW-TAPE-STATUS*
- The *RCARD* command for reading punched cards has been cancelled. As of V10.0A, card readers and punches are no longer supported.
- The *RESUME-SS* command includes the new operands RESET and SYNCH.
  RESET is used by the system administration to define whether the wait state for a subsystem is to be lifted regardless of any pending deinitialization process.
  SYNCH serves to choose between synchronous and asynchronous mode for command processing.
- The *SDVC* command includes the new operands TWOUP and TYPE=MAY/MUST.
  TWOUP enables the system administration to activate the TWO-UP-PROCESSING function for the HP54 printer, which makes it possible to print several print pages next to each other on one form page.
  TYPE=MAY and TYPE=MUST permit a list of printer types to be defined which may/must be taken into account by SPOOL during selection of the output device.
- New commands for system administration are *SET-PUBSET-ATTRIBUTES* and *SHOW-PUBSET-ATTRIBUTES*.
  The *SET-PUBSET-ATTRIBUTES* command helps define the pubset characteristics (shareability, ownership, system identification of the processor in the MSCF network). The *SHOW-PUBSET-ATTRIBUTES* command serves to query these definitions.

- The command *SET-REPLOG-READ-MARK* is also new in V10.0A. It permits the system administration to temporarily close the file $SYSAUDIT.SYS.REPLOG...., in which all correction data of the system initialization and of the dynamically loaded subsystems is logged.
- The *SHARE* command includes the new RUN-MODE operand, which enables the system administration to specify the operating mode for loading shareable object modules, i.e. to implicitly define whether only object modules or both object modules and link and load modules (LLMs) are to be supported.
- The commands *START-SDF* and *STOP-SDF* for controlling SDF have been cancelled, as SDF is permanently available in the system as of V10.0A.
- The *STAM* command includes the new operands HOST and SELECT, which serve to choose the processors/pubsets about which information is desired.

List of amendments

The following table summarizes all the changes made since the previous edition.

Page	Command	New	Modi-fied	De-leted
20	ADD-SUBSYSTEM		X	
21	AUDIT	X		
29	CATM		X	
39	CHANGE-SUBSYSTEM-PARAM		X	
41	CREATE-SS		X	
42	DELETE-SS		X	
48	EXCAT		X	
52	FILE	X		
56	FSTATUS		X	
61	HOLD-JOB		X	
65	HOLD-SS		X	
68	IMCAT		X	
76	JOIN		X	
94	MODIFY-ACCOUNTING-PARAMETERS		X	
	MODIFY-JOB			X
	MRSSTA			X
	PRIORITY			X
	RCARD			X
109	RELEASE-JOB		X	
116	RESUME-SS		X	

Page	Command	New	Modi-fied	De-leted
122	SDVC		X	
149	SET-DSSM-OPTIONS		X	
151	SET-PUBSET-ATTRIBUTES	X		
154	SET-REPLOG-READ-MARK	X		
158	SHARE		X	
	SHOW-DEVICE-CONFIGURATION			X
	SHOW-DISK-DEFAULTS			X
	SHOW-MOUNT-PARAMETER			X
175	SHOW-PUBSET-ATTRIBUTES	X		
	SHOW-RESOURCE-ALLOCATION			X
180	SHOW-SS-STATUS		X	
	SHOW-TAPE-STATUS			X
197	SPMGT		X	
199	SQUC		X	
203	STAM		X	
208	START-ACCOUNTING		X	
	START-SDF			X
221	START-SS	X		
227	STATUS		X	
	STOP-SDF			X
248	STOP-SS	X		
252	VERIFY	X		

Notational conventions

Command description metasyntax

In presenting the command format, use is made of certain characters (known as meta-characters) and conventions. These are described in the table below.

Formal representation	Explanation	Example
UPPERCASE	Uppercase characters are used for constants that the user must enter in precisely this form.	/FSTATUS ,LIST=(SYSLST) ..... Enter: /FSTATUS ,LIST=(SYSLST)
lowercase	Lowercase characters are used for variables which the user must replace with the actual values upon input, i.e. their contents may vary from case to case.	/FILE filename ..... Enter: /FILE FILE, /FILE XYZ, /FILE A.B-1, etc.
{ }	Braces are placed round alternatives, i.e. one of the values contained therein must be selected.	{FSTATUS} {FS} ..... Enter: FSTATUS or FS
|	The vertical line separates values that may be specified as alternatives.	NONE | password ..... Enter: NONE or C'XXX' (for example)
[ ]	Square brackets are placed round optional values, i.e. input that may be omitted. Commas inside brackets are only required if the option in the same brackets is used and may be omitted for the first operand in a command. Commas outside of brackets must always be used, even if none of the optional values is selected. (Round brackets must always be entered as such.)	password[,REL=YES] ..... Sample input: C'XXXX' or C'XXXX',REL=YES

Formal representation	Explanation	Example
———	Underlining is used to indicate the default value (presetting). This is the value used by the system if the user makes no specification.	[{ISAM / SAM}] ..... Enter: SAM or ISAM or nothing at all (= ISAM)
...	Series of dots mean repetition. They indicate that the preceding syntactical unit may be repeated several times in succession.	(vsn,...) ..... Enter: (PVT003) or (PVT003,PVT456) or (XY00AB,XY0012,XY0005) etc.
_	This character is used to show a space (X'40').	STD_ Enter: 'STD '

Wildcard characters

Wildcard	Meaning
*	Replaces any character string, including empty ones.
/	Replaces any single character.
<wildcard1,...>	Replaces all character strings that match one of the given wildcards.
<wildcard1:wildcard2>	Replaces any character string that satisfies the following: - it must be at least as long as the shortest wildcard string - it must be no longer than the longest wildcard string - in terms of alphabetical order, it must fall between "wildcard1" and "wildcard2"; numerals are sorted after letters - "wildcard1" may also be the empty string which comes first in the alphabetic sort.
<wildcard1:wildcard2,...>	Wildcards such as "wildcard1:wildcard2" may also be specified in list form. For any range entered in this way the rules outlined above apply. The system performs a logical OR operation, i.e. the wildcard list will replace all character strings for which one of the ranges applies. The length characteristics apply in pairs, i.e. for a single range "wildcard1:wildcard2", not for the whole list.
-wildcard	Replaces all character strings that do not satisfy the given wildcard. The minus sign may only be used at the beginning of a wildcard string.

Format for dates

Dates need to be specified in the commands ERASE and FSTATUS, in each of the operands CRDATE, EXDATE and LADATE. The user may choose between entering absolute and relative dates.

absolute dates

a real date in the form YYMMDD or [YY]YY-[M]M-[D]D
(YY = year, MM = month, DD = day)

relative dates

defined as the distance from today's date in the form -n for the past and +n for the future; or as Y[ESTERDAY] (≙ -1), T[ODAY] (≙ ±0) or TOM[ORROW] (≙ +1)

Abbreviation rules for command input

The commands listed in this manual can be abbreviated according to the rules governing the new "SDF" command language.
The following may be abbreviated during input:

- command names
- operand names
- keywords

The names/keywords can be shortened from right to left as long as they remain unique. This also includes subnames (starting with a hyphen) and may mean that the subname can be completely omitted.

Uniqueness with respect to command names refers to all commands contained in the (ISP) command list of the system; operand names and keywords need only be unique within the relevant command. Any ambiguities sensed by the system trigger an error message.

Many of the commands described here include square brackets [...]; this abbreviation option is still valid but does not necessarily represent the shortest form of command input.

System administration commands

System administration privileges

The system administration with the TSOS ID is always treated as the co-owner of all user files and job variables.
The system administration also has access to the entire set of user commands.
TSOS is entitled, even without specifying any passwords, to read or overwrite all entries in the file catalog or user catalog. Access to all files also includes temporary files, which the system administration can create under any catalog/user ID. Such files, however, are not automatically deleted upon LOGOFF; their deletion is the system administration's responsibility. When partially qualified file names are specified, temporary files are taken into account in accordance with their internal representation.

Overview of commands, sorted by function groups

Function group: Accounting system		Page
CHANGE-ACCOUNTING-FILE	Switch accounting file	34
MODIFY-ACCOUNTING-PARAMETERS	Select accounting records and record extensions	94
SHOW-ACCOUNTING-STATUS	Request information on accounting system	161
START-ACCOUNTING	Activate accounting system and open accounting file	208
STOP-ACCOUNTING	Terminate accounting system	243

Function group: Job and task management		Page
BIAS	Define size of resident main memory	23
CANCEL	Abort user job	24
CATEGORY	Control system workload	26
HOLD-JOB	Place user job in wait state	61
HOLD-JOB-CLASS	Place job class in wait state	62
HOLD-JOB-STREAM	Place job stream in wait state	63
MODIFY-JOB-CLASS	Modify job class characteristics	99
MODIFY-JOB-STREAM	Modify job stream characteristics	101
NCHOLD	Place batch task in wait state	106
NCREL	Cancel wait state for batch task	107
RELEASE-JOB	Cancel wait state for user job	109
RELEASE-JOB-CLASS	Cancel wait state for job class	111
RELEASE-JOB-STREAM	Cancel wait state for job stream	113
SHOW-JOB-CLASS	Request information on job classes	170
SHOW-JOB-STREAM	Request information on job streams	172
START-JOB-STREAM	Start job stream	218
STATUS	Request information on system and jobs	227
STOP-JOB-STREAM	Terminate job stream	245

Function group: Software error logging

		Page
CHANGE-SERSLOG	Switch error logging file	38
SHOW-SERSLOG	Request error logging information	179
START-SERSLOG	Activate error logging	220
STOP-SERSLOG	Terminate error logging	247

Function group: Device management

		Page
SHOW-DEVICE-STATUS	Request device allocation and monitoring information	166
SHOW-DISK-STATUS	Query allocation status and disk parameters	168
SHOW-RESOURCE-REQUESTS	Request information on device queue and collector task	177

Function group: RSO/SPOOL management

		Page
RDIR	Redirect output to other printer	108
RFD	Assign floppy disk device for waiting spoolin jobs	119
SDVC	Assign devices for waiting SPOOL jobs	122
SQUC	Repeat spoolout jobs	199

Function group: DAB (Disk Access Buffer)

		Page
SHOW-DAB	Output information on DAB storage units	165
START-DAB	Activate DAB	215
STOP-DAB	Deactivate DAB	244

Function group: Catalog directory management

		Page
CATM	Create entry in MRSCAT catalog directory	29
ERAM	Delete entry in home catalog directory	43
EXCAT	Export pubset	48
IMCAT	Import pubset	68
SET-PUBSET-ATTRIBUTES	Define pubset characteristics	151
SHOW-PUBSET-ATTRIBUTES	Request overview of pubset characteristics	175
STAM	Request information from home catalog directory	203

Function group: Subsystem management

		Page
ADD-SUBSYSTEM	Extend subsystem catalog	20
CHANGE-SUBSYSTEM-PARAM	Change subsystem characteristics	39
HOLD-SS	Place subsystem in wait state	65
RESUME-SS	Cancel wait state for subsystem	116
SET-DSSM-OPTIONS	Activate/deactivate logging	149
SHOW-SS-STATUS	Request subsystem information	180
START-SS	Activate subsystem	221
STOP-SS	Deactivate subsystem	248

Function group: User catalog management

		Page
JOIN	Create/update user entries	76
SEVER	Prohibit/permit user access to system; delete entries in user catalog	155
SHOW-USER-ATTRIBUTES	Request information from user catalog	187

Function group: File catalog management

		Page
ERASE	Delete files	44
FILE	Define file attributes / control file processing	52
FSTATUS	Request catalog information	56
IMPORT	Import files on private volumes	73
VERIFY	Restore files	252

Function group: Logging

		Page
AUDIT	Log branch instruction addresses	21
CHANGE-CONSLOG	Switch logging file	37
SET-REPLOG-READ-MARK	Close REPLOG file temporarily	154
SHOW-CONSLOG	Output information on logging file	164
SHOW-TRACE-STATUS	Output information on system traces	182
START-TRACE	Activate trace	225
STOP-TRACE	Deactivate trace	251

Function group: PCS (Performance Control Subsystem)		Page
HOLD-PCS	Place PCS in wait state	64
MODIFY-PCS-OPTION	Modify activated PCS option	102
RESUME-PCS	Cancel wait state for PCS	115
SHOW-PCS-OPTION	Output information on PCS parameter settings and monitored variables	174
START-PCS	Activate PCS	219
STOP-PCS	Deactivate PCS	246

Other commands		Page
LOADAID	Load AID	93
MSGCONTROL	Attach/detach message files during session	104
SHARE	Declare object module shareable	158
SPMGT	Manage storage space	197

Table 1: Overview of system administrator commands, sorted by function groups

ADD-SUBSYSTEM
Extend dynamic subsystem catalog

Function group: Subsystem management
User group: System administration

Command description

This command enables the system administration to exchange the current subsystem catalog during the session and to activate a catalog which contains additional subsystems.
The subsystem catalog to be specified must have been generated in a UGEN run (DSSM V2.0) and must correspond to the conventions of the old static subsystem catalog (generation notes can be found in the *System Installation* manual [4]). The subsystem catalog produced in this way includes all entries of its predecessor.

Format

Operation	Operands
ADD-SUBSYSTEM	CATALOG=name

Description of the operands

CATALOG=name

Name of the new subsystem catalog containing the dynamic subsystem catalog used up to this command.

Note:
The number of subsystems that can be added is limited.
A newly generated subsystem catalog may contain no more than **20** new subsystems and **100** additional CALL entries.

AUDIT
Log branch instruction addresses

Function group: Program control
User group: System administration, users

Command description

The AUDIT command is used to control monitoring of program execution. To this end, the branch instruction addresses are entered in a special table, the AUDIT table, which contains 64 word entries and, unless arranged otherwise, is cyclically overwritten.
This command can be issued for the entire task run, for a process within that task (e.g. contingency process) or - as a privileged system administration function - for all jobs in the system.
The AUDIT table is output by means of AID (Advanced Interactive Debugger) or the relevant operands of the AUDIT command (see the *AID* manual [5]).

Format

Operation	Operands
AUDIT	[ACTION={<u>ON</u> | OFF | DISC}] [,SCOPE={FUNCT | <u>TASK</u> | ALLTASK}][,STATE={{P1 | USER} {P2 | SYS}}] [,{TID=tid | TSN=tsn}] [,SAVE=n] [,DISPLAY=YES] [,DUMP=YES] [,GET=YES,TABLE=X'addr']

Description of the privileged operands

SCOPE

Defines the area to which the AUDIT function is to apply.

=ALLTASK

All branch instruction addresses of function state **TPR** are to be logged for all tasks. If TID or TSN is specified as well, an error message is output. Any SAVE=n entry is ignored. ALLTASK deactivates, for all tasks, any taskwide audit and then reactivates the taskwide audit without a save table.

STATE

Function state to which the area of validity specified in the SCOPE operand refers.

=P2
=SYS

The area of validity specified in the SCOPE operand refers to function state P2 or SYS (both terms designate the same status). This is the default value, which is mandatory for SCOPE=ALLTASK.

BIAS
Define size of resident main memory

Function group: Job and task management
User group: System administration

Command description

This command defines the maximum number of resident main memory pages shared by all users. This value must be chosen in accordance with the current load situation and job types. The specified value can be queried using the STATUS BIAS command.

Format

Operation	Operands
BIAS	COREBIAS=n

Description of the operands

COREBIAS=n

Maximum number of resident main memory pages for user jobs.

Value: $0 \leq n \leq w - x - y - 100$

where:

w	main memory size
x	size of class 1 memory
y	size of class 3 memory
100	saturation criterion

Default: 24

CANCEL
Abort user job

Function group: Job and task management
User group: System administration, users

Command description

The CANCEL command aborts a job (with the exception of the user's own job) which is waiting or has been started under any user ID.
As with the LOGOFF and ABEND commands, the resources allocated to the job (volumes and devices, storage space) are released as a result of the CANCEL command. Under the TSOS ID, the system administration can use the KILL operand to invoke a special function of the CANCEL command:
a user job referenced via its TSN or a monitoring job variable will then be immediately aborted without waiting for the execution of any privileged system routines used. As this approach may lead to inconsistencies in certain system tables, the KILL option is recommended only if the CANCEL command (without KILL) was unsuccessful. The following must be observed:

- CANCEL,KILL should only be used in exceptional cases (risk of deadlock).
- Wait 10 minutes between CANCEL and CANCEL,KILL.
- Check the status of the job (enter STA tsn at the operator terminal) before issuing the KILL option.
- Make sure that all outstanding messages have been answered at the operator terminal.
- Do not use CANCEL,KILL for jobs in a pass loop (Q13, pend code 04), since this would lead to abortion of the job waiting for a release of the lock situation instead of the job having caused this situation.

CANCEL,KILL for SPOOL jobs has the same effect as CANCEL without this operand.
Command execution leads to task abortion and the following message:

```
EXC0736 ABNORMAL TASK TERMINATION. ERROR CODE 'NRTKILL': /HELP-MSG NRTKILL
```

In the case of privileged applications a system dump is taken.

Format

Operation	Operands
[CANCEL] { } [CAN]	[tsn] { }[,[DUMP[,NOSPOOL]] [MONJV=jvname] [NOSPOOL[,DUMP]]] [KILL]

Description of the privileged operands

KILL

The user job is to be cancelled with special urgency, regardless of any inconsistencies. This operand is only permitted if a normal CANCEL command has no effect even after several repeats. Job abortion occurs together with a dump query.

Note:

- A job cannot be cancelled if:
  - it is waiting for an operator response (exception: KILL)
  - an NCHOLD command was issued for it
  - it is in "pended indefinitely" state
  - it is undergoing job termination
  - the specified TSN stands for a system task
  - it is temporarily excepted from abortion (e.g. SPEEDCAT task; job for which a system dump is being taken).

- Regarding job monitoring (see *Job Variables* manual [6]):
  - If the job is monitored by a job variable, the corresponding status indicator is set to $A.
  - If jvname is not used for job monitoring, the command is rejected.
  - If jvname cannot be accessed, the CANCEL MONJV= command is rejected.
  - If a program running within this job is monitored by a job variable, the status indicator in the job variable monitoring the program is likewise set to $A.

CATEGORY
Control system workload

Function group: Job and task management
User group: System administration

Command description

This command permits the system administration to specify the number of tasks per category which compete for CPU and memory resources (active tasks) and to determine the urgency of the respective categories.
The command, together with the PRIORITY command, serves as a task management interface enabling the system administration to define a strategy for distributing system resources (CPU and main memory) to the various tasks. Besides the four categories with the default names TP, DIALOG, BATCH and SYS, task management supports 12 additional categories whose names are defined using the JMU utility routine.

The task attribute which the user can additionally assign to his/her jobs is defined by the system administration in the user catalog and via the job classes allocated to the user.

The current resource distribution values can be queried using the STATUS CATEGORY command.

Format

Operation	Operands
{CATEGORY | CTGY}	CODE=name [,WT=m] [,MIN=n] [,MAX=r]

Description of the operands

CODE=name

Defines the name of the category where changes are being made.

The names of the standard categories are DIALOG, BATCH and TP. If further categories have been defined via the JMU statement DEFINE-JOB-CLASS, these names are permitted as well.

WT=m

This operand is used for category weighting, and controls task activation and initiation (CPU allocation). It influences the ratio with which tasks from the respective categories are activated and is used to form the internal task priority controlling CPU allocation. A high value stands for high urgency.

Value: $1 \leq m \leq 511$

Default: 1

MIN=n

Minimum number of tasks for the relevant category which task management is to keep active.
This is to ensure a minimum load per category.
If MIN=0 is specified for a category, the category will be disadvantaged.

Value: $0 \leq n \leq 999$

Default: 1

MAX=r

Defines the recommended upper limit up to which tasks are to be activated by task management for the specified category.
This operand results in load limitation in the event of an overload.

Value: $0 \leq r \leq 999$

Default: 999

Example

```
/STA CATEGORY

CATEGORY  MIN  MAX  WEIGHT  #EXIS  #ACTIVE  #READY  #RDY NOT
NAME      MPL  MPL          TING            INACT   ADMITTED
SYS       030  064  512     0100   0041     0000    0000
DIALOG    003  006  062     0107   0006     0000    0000
BATCH     006  007  078     0012   0004     0000    0000
TP        012  015  070     0024   0008     0000    0000
BATCHDB   000  003  066     0000   0000     0000    0000
BATCHF    001  004  126     0007   0000     0000    0000
DIALOG1   001  003  066     0001   0001     0000    0000
DIALOG2   001  003  106     0003   0003     0000    0000


/CATEGORY CODE=BATCHF,MIN=20,MAX=30,WT=100


/STA CATEGORY

CATEGORY  MIN  MAX  WEIGHT  #EXIS  #ACTIVE  #READY  #RDY NOT
NAME      MPL  MPL          TING            INACT   ADMITTED
SYS       030  064  512     0100   0041     0000    0000
DIALOG    003  006  062     0107   0006     0000    0000
BATCH     006  007  078     0012   0004     0000    0000
TP        012  015  070     0024   0008     0000    0000
BATCHDB   000  003  066     0000   0000     0000    0000
BATCHF    020  030  100     0007   0000     0000    0000
DIALOG1   001  003  066     0001   0001     0000    0000
DIALOG2   001  003  106     0003   0003     0000    0000
```

CATM
Create entry in MRSCAT catalog directory

Function group: Catalog directory management
User group: System administration

Command description

The CATM command creates or updates an entry in the user's own MRS catalog.
A newly entered catalog is assigned the status "inaccessible". If an entry exists already for the specified catalog ID, no entry is created and the option NEW is rejected.
The catalog IDs must be unique within the entire network, i.e. the disks have to be initialized accordingly by means of the VOLIN utility routine. In contrast to the MRSMOD, MRSSTART, IMCAT and EXCAT commands, the CATM command has no effect on catalog accessibility.

Format

Operation	Operands
CATM	catid[,STATE={N[EW] / U[PDATE]}] [,DEVICE=dtype][,HOST=bcamname] [,WAIT={YES / NO}][,DIALWT=waittime][,BATCHWT=waittime] [,BUFCLS={NONRES / RES}][,BUFNUM=number] [,SHARE={NO / YES}]

Description of the operands

catid

Catalog ID (1-4 characters) of the pubset for which an MRS catalog entry is to be created or updated.

STATE

Defines whether a new catalog entry is to be created or an existing entry is to be updated.

=NEW

The newly entered catalog is assigned the status "inaccessible". Catalog availability can be modified via an MRSSTART or IMCAT command.
If an entry already exists under the specified catalog ID, no new entry is created.

=UPDATE

An existing entry for a catalog is to be modified. The "HOST" and "DEVICE" values can only be updated in the "inaccessible" state. Catalog availability can be modified via an MRSSTART or IMCAT command.

If STATE=UPDATE is entered, only the specified operands are changed. Operands which are not specified are not affected.

HOST=bcamname

BCAM name of the processor for remote file access (RFA). This operand is only permitted if no MSCF link exists but remote file access is desired. For shared pubset operation, the name of the master processor is entered here.

DEVICE=dtype

Device type of the system disk containing the catalog identified by "catid". Specification of this operand is mandatory for locally imported pubsets.
The device types permissible for the system disk are listed in the *System Installation* manual [4]).

WAIT

Specifies whether tasks accessing a remote processor or a shared pubset are to be halted or aborted when the connection is interrupted.

=YES

When the connection is interrupted, tasks wait during the time period specified in the DIALWT/BATCHWT operand.
Via the command EXCAT catid,END the catalog can be assigned the status "inaccessible", i.e. the wait state of jobs is terminated.

=NO

When the connection is interrupted, batch tasks are aborted. Interactive tasks are continued after output of a message.

DIALWT=waittime

Waiting time (in seconds) during which interactive tasks are to wait for availability of a pubset inaccessible due to a connection breakdown. When this time period is exceeded, the interactive tasks is assigned an error code and continued.
Default: 30 seconds

BATCHWT=waittime

Waiting time as above, but for batch tasks. When this time period is exceeded, the batch task is aborted.
Default: 28800 seconds (= 8 hours)

BUFCLS

Defines the memory class for the CMS buffers of this pubset.

=NONRES

The CMS buffers are to be located in a non-resident area of memory.

=RES

The CMS buffers are to be located in a resident area of memory.

BUFNUM=number

Defines the number of CMS buffers to be created for this pubset.
Possible values: 1 ≤ number ≤ 255
Default: 32, minimum: 6

SHARE

Defines shareability of the pubset with respect to the local processor.

=NO

The pubset is not shareable.

=YES

The pubset is declared shareable.

Notes

– The BUFCLS and BUFNUM values are only interpreted when an IMCAT command is issued for the pubset. The following hierarchy applies:

  1. Explicit parameter entry in IMCAT command
  2. Specification via CATM command
     If only one of the parameters (BUFCLS, BUFNUM) is specified, the default value applies for the other. However, if none of these operands is explicitly specified, both values remain undefined.
  3. Definition according to CLASS2 options CATBUFR and BMTNUM.
  4. Default values (BUFCLS=NONRES, BUFNUM=32).

– Failure of a remotely connected processor due to a fault is only detected after a polling attempt. Failure of a locally connected processor due to a fault is not detected automatically. "Locally connected" refers to a BS2000 processor connected via DXC (data exchange control) or the nearest CCU (communications control unit). If BCAM issues a TIMEOUT message for such a processor, the operator must give a BCOUT command for it. As soon as the connection has been set up again, the operator must issue the commands "BCIN" and "MRSMOD IN" for the partner processor.

– For reasons of safety and performance, a minimum number of buffers is defined by the system. If a lower number is specified in the BUFNUM operand, the system will substitute the minimum value.

Example

Local generation of catalog entries and importation of pubsets (MPVS)

:A:, :BRD: and :DDR: are pubsets to be locally accessed via a processor. :A: is the home pubset.

The following commands have to be given:

```
/CATM BRD,DEVICE=D3480,SHARE=YES,DIALWT=30,BATCHWT=28800
/CATM DDR,DEVICE=D3480

/IMCAT BRD,USE=SHARE
/IMCAT DDR
/EXCAT DDR
```

The MRSCAT directory in the home pubset has the following contents:

```
PUBSET A   :LOCAL-HOME
PUBSET BRD :LOCAL-IMPORTED
            SHARED,MASTER-HOST=OWN-HOST
PUBSET DDR :INACC,DEVICE=D3480
```

Generation of catalog entries in a computer network (MSCF)

HOST1 and HOST2 are single systems with the catalog IDs A and B respectively. A computer network is to be established. The catalog directories have the following contents:

HOST1
A,HOST1,LOCAL

HOST2
A,INACC B,HOST2,LOCAL

HOST1

```
a) /MRSSTART
b) /CATM B
```

HOST2

```
c) /MRSSTART
```

If the commands are issued in the sequence

a) b) c)

HOST2 is accessible from HOST1, since the CATM command was given prior to establishing a connection between HOST1 and HOST2.

If the commands are issued in the sequence

a) c) b)

the connection between HOST1 and HOST2 exists before the CATM command is entered, which means HOST2 cannot be accessed from HOST1. This entry is not updated until the next MRSSTART command. However, if such a catalog needs to be accessed immediately, the following commands must be entered in addition:

```
/MRSMOD OUT,HOST=bcamname2
/MRSMOD IN,HOST=bcamname2
```

CHANGE-ACCOUNTING-FILE
Switch accounting file

Function group: Accounting system
User group: System administration

Command description

The current accounting file containing all the accounting data is closed and a new one is opened.
After the accounting file has been switched, the predecessor file can be analyzed during the same session, e.g. by means of the product RAV.

The default value *UNCHANGED in the various operands means that the existing definition is to be retained.

Format

Operation	Operands
CHANGE-ACCOUNTING-FILE CHANGE-ACC	[NAME={*NEXT / file / *STD}] [,SPACE={*UNCHANGED / (primary,secondary) / STD}] [,BLKSIZE={*UNCHANGED / (STD,n) / STD}] [,VOLUME={*UNCHANGED / vsn / STD}]

Description of the operands

NAME

Defines the name of the new accounting file.

=*NEXT

The name of the continuation file is assumed for the new accounting file.
The continuation file is determined

- via the START-ACCOUNTING command, if the ALTERNATE-FILES operand was used for specifying a list of alternative file names
- via automatic file name generation by incrementing the sequence number by 1
  (prerequisite: the old accounting file name must have been generated automatically).

=file

Explicit specification of a fully or partially qualified file name.
A partial qualification results in automatic generation of the file name.
Please note the following when entering a partially qualified file name:

- No more than 26 characters (excluding the user ID) can be used for partial qualification; if the catalog ID has more than one character, this value must be reduced by the number of additional positions.
- The user ID alone may also be used as partial qualification; the file name then automatically receives the suffix SYS.ACCOUNT.yy.mm.dd.xxx.nn
- If no user ID is specified, the file is cataloged under $TSOS.

=*STD

The new accounting file receives the standard file name $TSOS.SYS.ACCOUNT.yy.mm.dd.xxx.nn

where:

yy.mm.dd	date
xxx	session number
nn	sequence number of accounting file

SPACE

Defines the storage allocation for the new accounting file.

=(primary,secondary)

The accounting file is cataloged with the specified primary and secondary allocations.

=STD

The file is cataloged with a primary/secondary allocation of 48 PAM blocks each.

BLKSIZE

Determines the block size for the I/O buffer of the accounting file. This operand is only meaningful in the case of new files; otherwise it is ignored.

=(STD,n)

The buffer length is to be n PAM blocks.

=STD

Specifies a buffer of 2,048 bytes (one PAM block) for file input/output.

VOLUME

Defines that the new accounting file is to be created on a specific volume.

=vsn

The accounting file is to be created on the volume with the specified volume serial number. The VOLUME operand supports only volumes which do not require any device-specific information.

If the accounting file is to be created on **tape** or **private disk**, the system must be notified accordingly using a FILE command before switching the accounting file.
If a **public disk** does not belong to the default pubset of the relevant user ID, the catalog ID of the volume must be included in the file name.

=*STD

The Data Management System decides on which volume the accounting file is to be created.

CHANGE-CONSLOG
Switch logging file

Function group: Logging
User group: System administration

Command description

The current logging file of the system
is closed and a new one is opened. The closed logging files can be analyzed during the same session. While a CHANGE-CONSLOG command is being processed, any further CHANGE-CONSLOG commands are rejected. Up to 99 (999) CONSLOG files can be created per day. This limit can be defined via the system parameter NBKESNR at system generation time.
To print out the closed logging file it is advisable to specify the operand LAST-CHARACTER=252 in the PRINT-FILE command so that all records are output in their entirety.

Format

Operation	Operands
CHANGE-CONSLOG	

CHANGE-SERSLOG
Switch error logging file

Function group: Software error logging
User group: System administration

Command description

The current SERSLOG file for logging relevant software errors is closed and a new one is opened. In this file the switchable logging procedure SERSLOG enters a record for each event, which is automatically extended by the time of day, caller, and other identification criteria.
The command is only executed if the Software Error Logging function is active. It enables an analysis of the collected information during the same session.
If the new SERSLOG file cannot be opened due to a DMS error, the operator receives a message to this effect on the operator terminal. The old SERSLOG file remains current. A renewed CHANGE-SERSLOG command would then attempt to open the **next** SERSLOG file **but one**; in this case, the file name $TSOS.SYS.SERSLOG.yy.mm.dd.xxx.nn shows an nn value incremented by 2 in order to identify the file sequencing error.

Format

Operation	Operands
[CHANGE-SERSLOG] { } [CHAN-SE]	

CHANGE-SUBSYSTEM-PARAM
Change subsystem characteristics

Function group: Subsystem management
User group: System administration

Command description

This command enables the system administration to modify the subsystem start attribute (CREATIM) defined during generation of the subsystem catalog. At the same time, access to the subsystem can be blocked for test purposes
until the parameters have been fully corrected. If another subsystem version already has the ON-CALL-REQUEST attribute, this characteristic is transferred to the new subsystem version no later than at termination of the old subsystem version. If the command is used in batch jobs or procedures and an error occurs, a branch is made to the next STEP.

Format

Operation	Operands
CHANGE-SUBSYSTEM-PARAM	SS-NAME=name,VERSION='version' [,CREATION-TIME=ON-CALL-REQUEST] [,CHANGE-STATE={NO | YES}]

Description of the operands

SS-NAME=name

Name of the subsystem whose characteristics are to be changed.

VERSION='version'

Version number of the above subsystem; the format specified here must coincide with the format used at subsystem definition. The version number may consist of 4 or 7 characters.

Format:
nn.m version identification
nn.mxyy version identification and update status
(nn, m and yy are numerals, x is a letter)

CREATION-TIME=ON-CALL-REQUEST

Changes the CREATION-TIME generation parameter of the specified subsystem to ON-CALL-REQUEST, i.e. the subsystem is started on the first SVC call. However, the change is only effected for subsystems that can be called via SVC.

CHANGE-STATE

Restricts subsystem control or lifts this restriction.

=NO

The commands HOLD-SS/RESUME-SS/START-SS/STOP-SS for subsystem control are locked until their release.

=YES

Releases the implicit lockout and thus permits unrestricted control of the subsystem in question.

CREATE-SS
Activate subsystem

Function group: Subsystem management
User group: System administration

Note

This command is only supported for compatibility reasons in V10.0A. Command description, format, functionality and operand description: see START-SS command, page 221.

DELETE-SS
Deactivate subsystem

Function group: Subsystem management
User group: System administration

Note

This command is only supported for compatibility reasons in V10.0A.
Command description, format, functionality and operand description:
see STOP-SS command, page 248.

ERAM
Delete entry in home catalog directory

Function group: Catalog directory management
User group: System administration

Command description

The relevant pubset must be in the "inaccessible" state, otherwise the command is rejected.
After deletion of the entry, the pubset can no longer be identified. The system administration may use the CATM command to incorporate a new catalog ID.

Format

Operation	Operands
ERAM	catid

Description of the operands

catid

Catalog ID (1-4 characters) whose entry is to be deleted.

ERASE
Delete files

Function group: File catalog management
User group: System administration, users

Command description

The ERASE command deletes temporary or permanent files, file generations, or file generation groups.
If a file residing on a private disk is to be deleted, the device providing this disk is requested for the job. Following deletion, the device is returned to the system.

If MOUNT=ALL-DISKS has been specified for files on private disks, all volumes of the file must be ready at the time of command execution.
Otherwise, only the first volume needs to be available; all subsequent volumes are then requested in the course of execution.

This rule also applies if a partially qualified file name addresses several files in the ERASE command. Here, too, not all the volumes for all files have to be readied at the same time. The system requests only the number of devices necessary for the file occupying the most volumes.

"Deletion", regardless of how the volume is used, comprises the following actions, which can be performed using the options shown in parentheses:

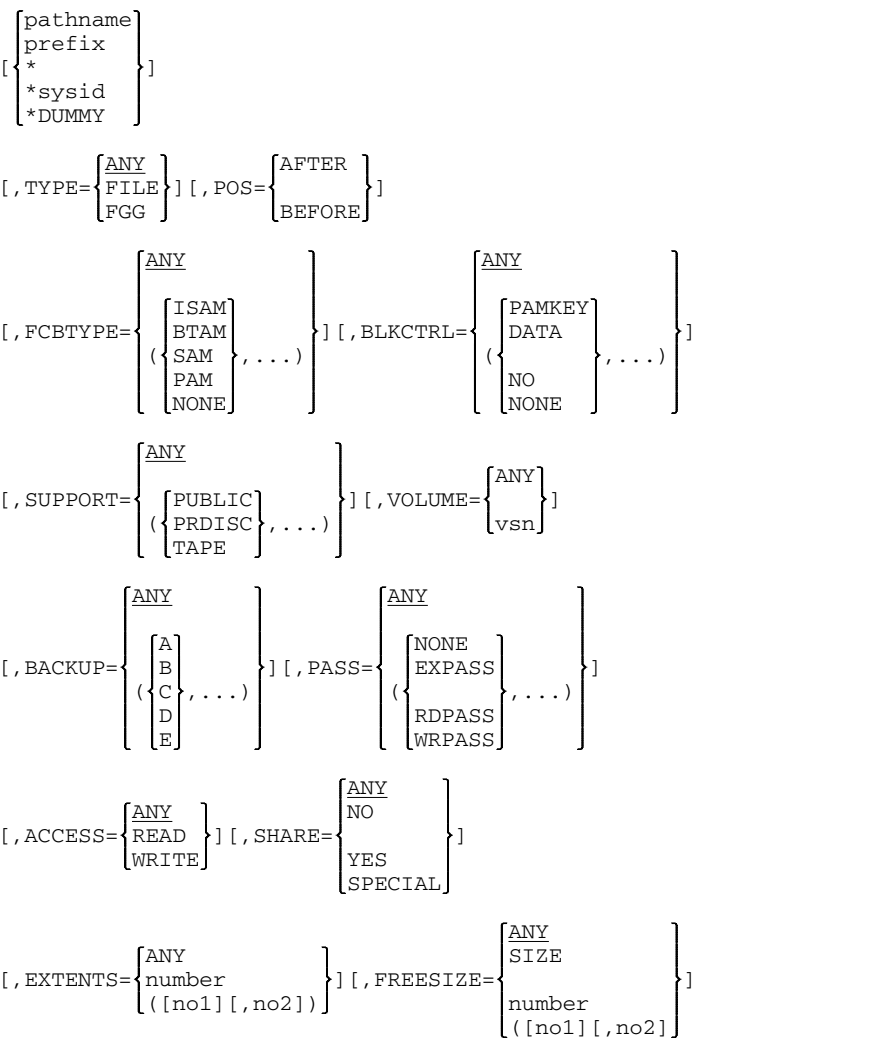
- Delete file name and release storage space (SPACE-CATALOG).
- Release storage space (SPACE).
- File data is logically deleted and then no longer available (DATA).
- Delete file name, release storage space and overwrite data with binary zeros (DESTROY).

Apart from specification of temporary or cataloged files of any user ID, the system administration is offered the following privileged functions:

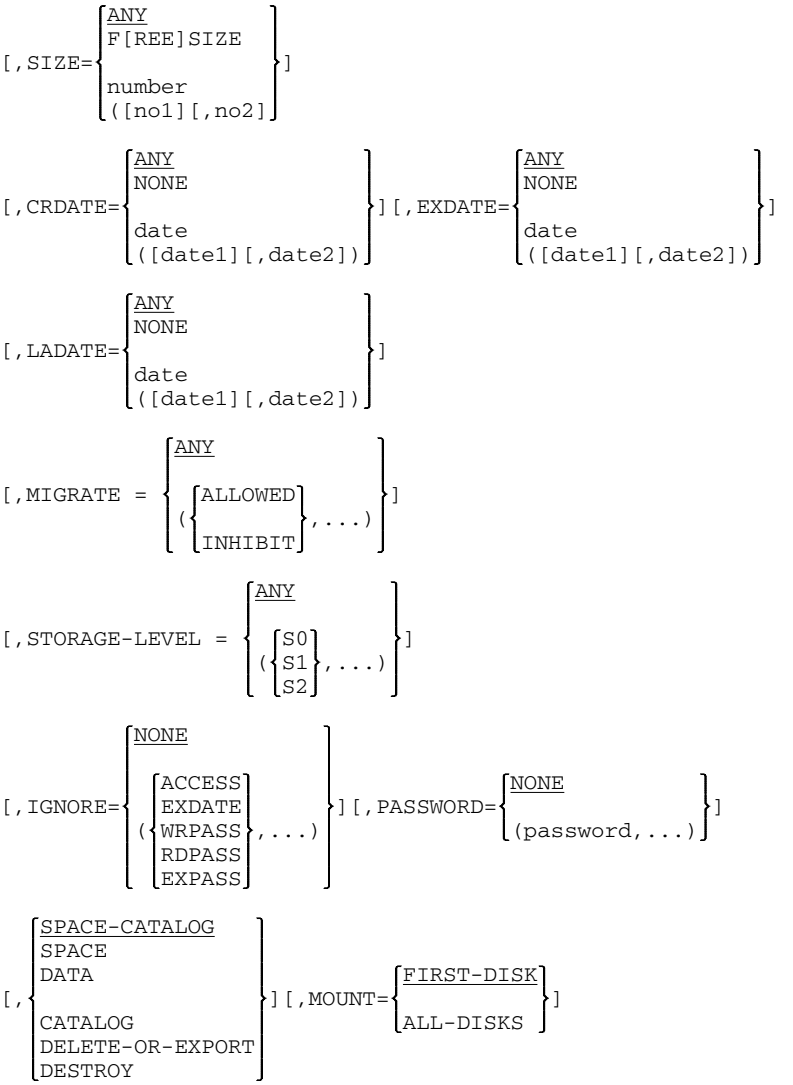
- The protection attributes of files to be deleted can be ignored.
- The control parameter CHECK includes the additional operand USERID: upon every change of user ID, the command branches to guided dialog and offers various options of intervening during execution.

Operands which can be assigned a list of operand values have been shown in a simplified way in the following command format. The corresponding representation `operand = (element,...)` is to be interpreted as follows:
- Multiple operand values can be specified in the form of a list: `(element1, element2, etc.)`
- If only one operand value is specified, i.e. the list consists of one element only, the parentheses may be omitted: `element` or `(element)`.

Format

Operation	Operands
ERASE	

continued →

Operation	Operands
ERASE (cont.)	

continued →

Operation	Operands
ERASE (cont.)	[,CHECK={STD / NO / MULTIPLE / ERROR / PVS / SINGLE / USERID}][,LIST={NO / YES}][,NOSTEP={NONE / (errcode,...)}]

Description of the privileged operands

CHECK

Control parameter: in interactive mode (also in dialog procedures), the user can employ the ERASE command in guided dialog. The CHECK operand enables the type of dialog guidance to be selected. In batch mode, the default setting CHECK=NO cannot be changed.

=USERID

Whenever the user ID changes, the command sequence for the system administration branches to a query dialog offering the responses "YES", "NO", "TERMINATE" (abort command) or a change of the CHECK mode.

IGNORE

File protection parameter: the system administration can determine whether certain protection attributes are to be ignored. Thus, the specification IGNORE in the ERASE command eliminates the need for CATALOG commands to reset the protection attributes prior to deletion of the files.

=WRPASS

Files protected by a write password may be deleted.

=RDPASS

Files protected by a read password may be deleted.

=EXPASS

Files protected by an execute password may be deleted.

Note

By using the operands VOLUME and CATALOG/DELETE-OR-EXPORT it is possible in the file catalog TSOSCAT to delete the catalog entries of all user files stored on a private volume (this can also be achieved by using the utility routine PDPOOLS, with its EXPORT function; see the *Computer Center Utility Routines* manual [2]).

EXCAT
Export pubset

Function group: Catalog directory management
User group: System administration

Command description

The EXCAT command generates a separate new task under control of the calling task. EXCAT processing is effected by the new task asynchronously to the calling task. Successful generation of the EXCAT task and the messages of that task are logged on the operator terminal. The home pubset and all pubsets containing paging areas must not be exported with this command. Exportation of these pubsets is carried out automatically during system shutdown.
During exportation a message is output showing how many tasks are still using the pubset. The TSNs of these tasks can be obtained via a STAM command and then selectively urged to terminate
their activities.

Format

Operation	Operands
EXCAT	catid[,{END / CANCEL / FORCE / TERMINATE}][,MONJV=jvname][,JVPASS=password]

Description of the operands

catid

Catalog ID (1-4 characters) of the pubset to be exported.

END

The pubset with the specified catalog ID is set to the "inaccessible" state; any access attempts are rejected.
A remote catalog with the status "temporarily inaccessible" is switched to the "inaccessible" state.

This operand is permitted if:

- the pubset has been imported
- the pubset is in QUIET state.

CANCEL

Lifts the wait state (due to files being accessed) of a running EXCAT job. A wait state is reported by the following message:

```
DMS039B ON HOST WITH SYSTEM ID '(&00)' (&01) TASKS ARE USING
PUBSET WITH PUBSET ID '(&02)'
```

The referenced EXCAT job acknowledges the CANCEL with the message:

```
DMS0371 COMMAND PROCESSING ABORTED BECAUSE OF (&00)
```

and terminates. This has no effect on pubset availability. The CANCEL must have been preceded by an EXCAT command with the operand END or TERMINATE.

FORCE

Lifts the wait state (due to files being accessed, messages DMS0378 and DMS0379) of a running EXCAT job.
The referenced EXCAT job acknowledges the FORCE with the message:

```
DMS0370 WAIT STATE TERMINATED BECAUSE "/EXCAT FORCE" HAS BEEN
RECEIVED
```

and exports the specified pubset *regardless* of any open files. These files cannot be restored until the next session, since the relevant pubset must not be imported before SHUTDOWN. The FORCE must have been preceded by an EXCAT command with the operand END and an EXCAT command with the operand TERMINATE.

TERMINATE

In contrast to the END option, EXCAT processing does not wait for termination of the accessing tasks. An attempt is made to abort the jobs and to close files that are still open.
The EXCAT processing sequence is continued as soon as no more tasks are accessing this pubset. The wait state of a previously initiated EXCAT job with the END operand is also lifted when all task accesses have stopped.

MONJV=jvname

Defines a monitoring job variable, which is set to the following values during exportation:

- $E at the beginning of exportation
- $T after pubset exportation
- $A if exportation was aborted due to an error or EXCAT was stopped with the CANCEL operand.

Note:
The job variable must have been cataloged, otherwise it is not supplied with the respective values. EXCAT processing continues, however, even if the job variable is undefined.

This operand is only available if the JOB VARIABLES software product is used.

JVPASS=password
Password of the monitoring job variable (if write protection applies).

Notes

– Wait states that cannot be cancelled by means of FORCE are subject to a time limit; the processing time for an EXCAT FORCE command may be within the minutes range.
Exportation with FORCE is admissible in exceptional cases only. A pubset that was exported with FORCE cannot be imported again in the same session.
A pubset exported with FORCE may contain files that have not been properly closed. These files must be repaired with the VERIFY command in the next session.

– During system shutdown all imported pubsets are exported in the following sequence:

1. Exportation of all imported pubsets except the home pubset:
   – EXCAT END for each of these pubsets
   – Wait until all pubsets have been exported (up to about one minute)
   – EXCAT TERMINATE for those pubsets which have not yet been exported
   – Wait until all pubsets have been exported (up to about one minute)
   – EXCAT FORCE for those pubsets which have not yet been exported
   – Wait until all pubsets have been exported (up to about one minute)
2. Exportation of the home pubset:
   – EXCAT END for the home pubset
   – Wait until the home pubset has been exported (up to about one minute)
   – EXCAT TERMINATE if the home pubset has not yet been exported
   – Wait until the home pubset has been exported (up to about one minute)
   – EXCAT FORCE if the home pubset has not yet been exported
   – Wait until the home pubset has been exported (up to about one minute).

– Successful creation of the EXCAT task triggers the following operator terminal message:

```
DMS035D THE EXCAT-TASK '(&00)' FOR THE PUBSET '(&01)' WAS STARTED
```

– Execution of the EXCAT task may be divided into 2 phases:

Wait until all files of the pubset have been closed

This wait state does not occur unless files other than the user catalog are open on this pubset. Implicitly this refers also to any private files addressed via this pubset. If just the user catalog is open, no wait state occurs.
The user catalog is open on every imported pubset and is closed only during exportation proper.

The wait state can be terminated by any of the following events:

– Standard case
When all files except the user catalog have been closed, the wait state ends and the second phase, exportation proper, is initiated.

– EXCAT command with CANCEL operand
The wait state is aborted and the EXCAT task terminates with an appropriate error message. The pubset remains available.

– EXCAT command with FORCE operand
The wait state is aborted. The EXCAT task acknowledges the command. The second phase, pubset exportation, is initiated although not all files of this pubset have been closed.

Pubset exportation

The pubset is set to "inaccessible" and can no longer be accessed. SPOOL is notified and all spoolout jobs whose files to be output are cataloged on the relevant pubset are transferred from TYPE5/AC to TYPE5/KP.
The user catalog is closed and all resources are released.

In this phase, wait states of up to about 10 minutes may occur. In the case of EXCAT FORCE the wait state is limited to 1 minute.

FILE
Define file attributes / control file processing

Function group: File catalog management
User group: System administration, users

Command description

The FILE command is used to process permanent and temporary files (no EAM files) and file generations. It can be employed to create new files / catalog entries, to modify file attributes, or to transfer files from private volumes.

Unlike the CATALOG command, the FILE command does not support the definition or modification of file protection attributes such as passwords, access types etc. (exception: retention period). When a catalog entry is created using FILE, the system default values for the file protection attributes apply. If they are to be changed, the CATALOG command has to be issued afterwards.

The FILE command uses the task file table (TFT) to establish a link between program and file, i.e. between the file attributes specified in the FILE command (catalog entry) and the file definition in the program.

The FILE command supports the following main functions:

- Create a catalog entry for new files / file generations and for files / file generations on private volumes
- Request devices and volumes
- Manage storage space for disk files
- Create a TFT entry with specifications on file processing (data structure, open mode etc.)
- Define data organization on tapes

The system administration under the TSOS ID is regarded as the owner of all files and is thus entitled to specify any user ID and catalog ID. The system administration can therefore

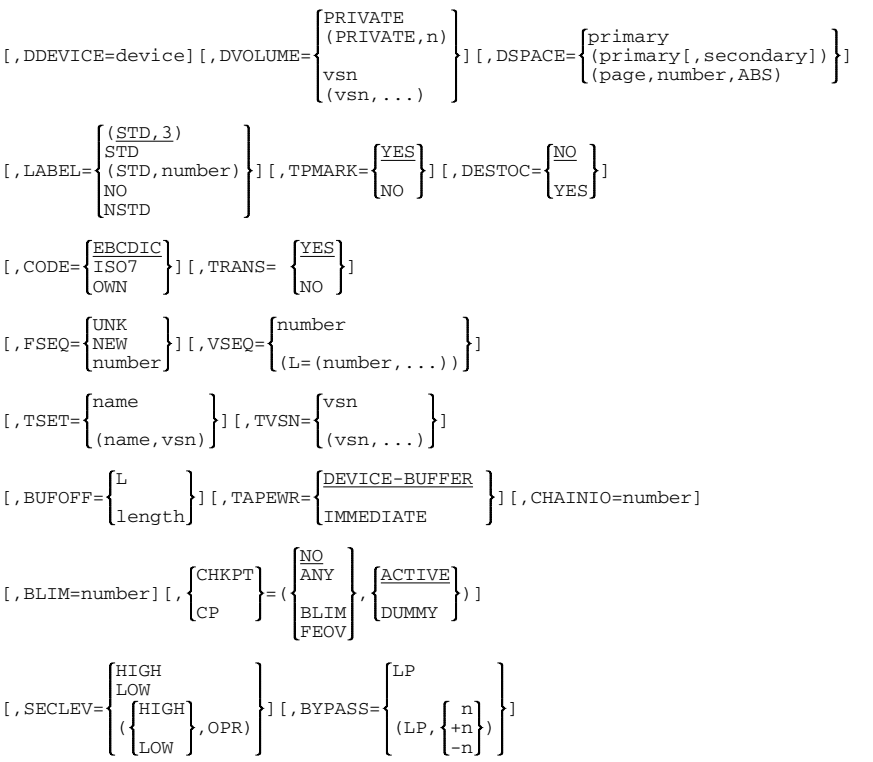
- define file attributes for any user file
- release disk storage space not occupied by users.

The FILE command offers the caller under TSOS the additional option of specifying a public volume via the VOLUME operand. This enables the system administration to create files on specific public volumes and to effect absolute space allocations on these public disks.

Format

Operation	Operands
FILE	[{pathname / *DUMMY}][,LINK=name][,POOLLNK=name][,STATE=FOREIGN] [,DEVICE={device / WORK}][,VOLUME={PRIVATE / (PRIVATE,n) / vsn / (vsn,...)}][,MOUNT={number / (number,..)}] [,SPACE={primary / (primary[,secondary]) / (page,number,ABS)}] [,OPEN={INPUT / EXTEND / INOUT / OUTIN / OUTPUT / REVERSE / SINOUT}][,FCBTYPE={ISAM / BTAM / PAM / SAM}][,BLKCTRL={PAMKEY / DATA / NO}] [,RETPD=days][,SHARUPD={NO / YES}][,CLOSMSG={NO / YES}][,WRCHK={NO / YES}] [RECFORM={{V / F / U} / ({V / F / U}[,{N / M / A}])}][,RECSIZE={length / reg}][,BLKSIZE={STD / (STD,number) / length}] [,KEYPOS=number][,KEYLEN=length][,DUPEKY={NO / YES}] [,LOGLEN=length][,VALLEN=length][,VALPROP={MIN / MAX}] [,OVERLAP={NO / YES}][,PAD=number][,WROUT={NO / YES}]

continued →

Operation	Operands
FILE (cont.)	

Description of the privileged operands

VOLUME

Designates the volumes on which the file is to be stored.
The system administration can specify public volumes here.

SPACE

Reserves storage space for the file.

=(page,number,ABS)

As a privileged caller under the TSOS ID, the system administration can effect absolute space allocations even on public volumes.

FSTATUS
Request catalog information

Function group: File catalog management
User group: System administration, users

Command description

The FSTAT command outputs attributes of files, file generations or file generation groups which are stored in the catalog.
The information can be selected by file attributes and type of file/volume or restricted to currently opened or temporary files of any user ID.

The operands CATALOG, STANDARD, TRAITS, PASSWORD and ALL can be specified in any order and simultaneously (up to 4). As a privileged caller under the TSOS ID, the system administration can call down the passwords of user files in interactive mode.

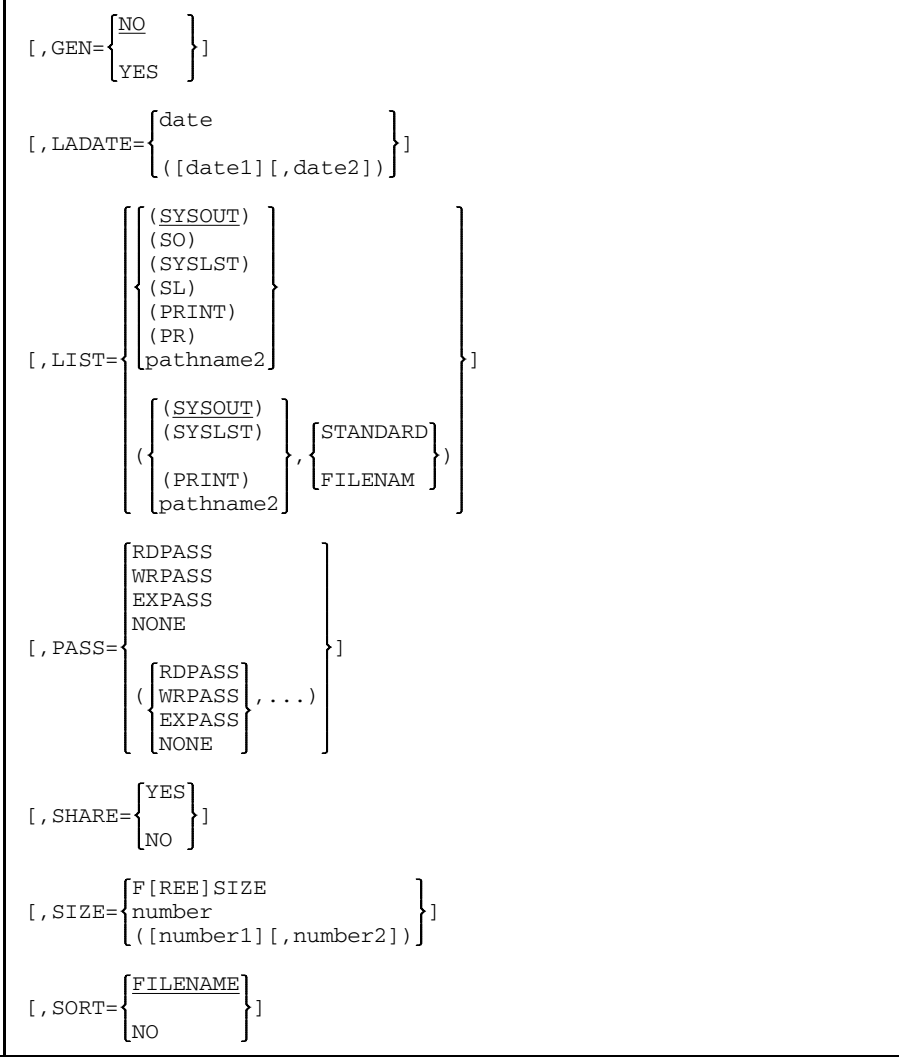
Format

Operation	Operands
FSTATUS FSTAT	[pathname1 prefix] [[STANDARD][,CATALOG][,TRAITS][,PASSWORD][,ALL] RESERVED] [,ACCESS]=READ WRITE] [,BACKUP=A B C D E (A B C D E,...)]

continued →

Operation	Operands
FSTATUS (cont.)	

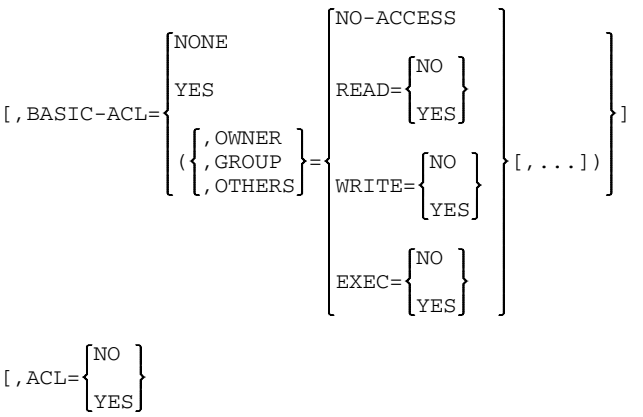
continued →

Operation	Operands
FSTATUS (cont.)	

continued →

Operation	Operands
FSTATUS (cont.)	[,STATE={NOCLOS / PCLOSE}]
	[,SUPPORT = {PUBLIC / PRDISC / TAPE / (PUBLIC / PRDISC / TAPE ,...)}]
	[,TYPE=FGG]
	[,VOLUME=vsn]
	[,VTOC={NO / YES}]
	[,MIGRATE = {ALLOWED / INHIBIT / (ALLOWED / INHIBIT ,...)}]
	[,STORAGE-LEVEL = {S0 / S1 / S2 / (S0 / S1 / S2 ,...)}]
	[,LASTPAGE={value / ([value1][,value2])}]

continued →

Operation	Operands
FSTATUS (cont.)	

Description of the privileged operands

PASSWORD

Outputs the passwords protecting the file. This function is supported in interactive mode only.

HOLD-JOB
Place user job in wait state

Function group: Job and task management
User group: System administration

Command description

The relevant job, which can be identified via its TSN or a defined job variable, is skipped by the job scheduler during selection of the jobs to be started. The wait state of the halted job must be cancelled explicitly using the RELEASE-JOB command. The STATUS command shows the system administration which jobs are in wait state (TYPE1/HO). Successful processing of the command is reported on the operator terminal.

The command is rejected if

- the job scheduler has already started the job; such jobs are halted by means of the NCHOLD command
- the job to be halted is an interactive or transaction job (categories DIA or TP).

Format

Operation	Operands
{ HOLD-JOB | HOLD-J }	{ tsn | MONJV=jvname }

Description of the operands

tsn

Task sequence number (4 alphanumeric characters) of the job to be placed in wait state.

MONJV=jvname

The job to be halted is identified via a job variable monitoring the job.

HOLD-JOB-CLASS
Place job class in wait state

Function group: Job and task management
User group: System administration

Command description

Batch jobs for the halted job class
are placed in the job queue of the relevant job scheduler, but not started. This command influences only job classes comprising batch jobs; the system job class $SYSJC is also permitted. The HOLD status is temporary and must be cancelled using the RELEASE-JOB-CLASS command. Successful processing of the command triggers an appropriate message on the operator terminal. An overview of the halted job classes can be obtained via the STATUS command (JOB-CLASS operand).

Format

Operation	Operands
{HOLD-JOB-CLASS / HOLD-J-C}	NAME=name

Description of the operands

NAME=name

Name of the job class to be placed in wait state. The system administration defines this name using the JMU statement DEFINE-JOB-CLASS.

HOLD-JOB-STREAM
Place job stream in wait state

Function group: Job and task management
User group: System administration

Command description

The job scheduler which was active
in the halted job stream suspends its activities until the HOLD status is lifted via the RELEASE-JOB-STREAM command. During this time period, jobs for the subordinate job classes are accepted but not started.
This command is also permitted for the system job stream $SYSJS, for which up to 16 jobs can be managed.

If stream termination occurs within the HOLD phase, the job stream terminates normally and an appropriate message is output on the operator terminal. The job streams in HOLD state can be called down by means of the STATUS command (JOB-STREAM operand).

Format

Operation	Operands
{HOLD-JOB-STREAM / HOLD-J-S}	NAME=name

Description of the operands

NAME=name

Name of the job stream to be placed in wait state. The system administration defines this name using the JMU statement DEFINE-JOB-STREAM.

HOLD-PCS
Place PCS in wait state

Function group: PCS
User group: System administration

Command description

The activated subsystem PCS is halted,
remains loaded, and is kept in wait state until the system administration explicitly cancels the wait state by issuing the RESUME-PCS command and restarts the subsystem with the same or an updated parameter set.
As long as PCS is in wait state, task management is switched exclusively to PRIOR operation. The parameters for PRIOR control are saved automatically by PCS when the START-PCS and RESUME-PCS commands are executed.

Format

Operation	Operands
HOLD-PCS	

Note

PCS can also be placed in wait state by means of the HOLD-SS command (see the *PCS* manual [7]).

HOLD-SS
Place subsystem in wait state

Function group: Subsystem management
User group: System administration

Command description

No new connection to the specified subsystem is admitted; the necessary resources (holder task, address space) remain available. The FORCE option makes it possible to wait for termination of all accessing tasks or to initiate their immediate abortion. After going through the deinitialization phase, the subsystem is in wait state. The wait state can be lifted by issuing the RESUME-SS command.

Format

Operation	Operands
HOLD-SS	SS-NAME=name [,VERSION='versno'] [,STRING=C'string'] [,FORCED={NO / YES}] [,SYNCH={NO / YES}]

Description of the operands

SS-NAME=name

Name of the subsystem to be placed in wait state.

VERSION='versno'

Version number of the above subsystem; the format specified here must coincide with the format used at subsystem definition.
The version number may consist of 4 or 7 characters.

Format
nn.m version identification
nn.mxyy version identification and update status
(nn, m and yy are numerals, x is a letter)

Default
If just **one** subsystem version exists and it is loaded, this version is selected.
If **several** versions exist, specification of the version number is mandatory.

STRING=C'string'

Defines special parameters which are analyzed by the appropriate subsystem only.

FORCED

Defines the behavior and urgency of command processing.

=NO

The system waits for normal termination of all tasks accessing this subsystem.

=YES

Initiates immediate abortion of all accessing tasks. In the case of a privileged subsystem, this may result in a system dump; tasks connected to a nonprivileged subsystem can exit via the STXIT error handling facility offered by DSSM.

SYNCH

Offers a choice between synchronous and asynchronous processing.

=NO

The command is to be processed asynchronously, i.e. without the user having to wait for its execution before further input is possible. No error messages on command execution are output.

=YES

Command execution must be awaited.
Error messages on command execution are output.

Notes:

- Subsystems are usually characterized by a multitude of interrelations (dependencies, load relationships, etc.) with other subsystems. These interrelations have to be taken into account if the performance of a subsystem is to be guaranteed.
  DSSM attempts to avoid possible conflicts arising from user requirements and therefore rejects problematic commands. Actions such as the installation of missing subsystems or the unloading of dependent subsystems are thus not performed.
  However, if the user generates complex subsystems and issues the statement CHECK=NO (see the *System Installation* manual [4]), DSSM will execute the desired functions **despite** possible conflicts:
  - The START-SS command loads the specified subsystem, even if a subsystem to which defined relationships exist has not yet been completely loaded.
  - The commands RESUME-SS / STOP-SS / HOLD-SS are executed by DSSM without checking any dependencies or interrelations.
- To ensure a high degree of parallelism and data integrity, time-consuming administrative activities are not performed under the control of the calling task but handled by a DSSM task.
  As a rule, only checking of the requested function is effected **synchronously**, i.e. with a wait state for the calling task. The actual processing sequence is executed by DSSM **asynchronously**, independent of the calling task.
- Following the START-SS command, HOLD-SS is rejected if DSSM has not yet fully loaded the subsystem. The operand RESET=YES can be used by the system administration, however, to halt the subsystem unconditionally; it is then not necessary to wait for complete execution of the START-SS command.
  In this case the deinitialization routine is initiated and the relevant subsystem, which is notified of the RESET, can autonomously define the scope of this routine.

IMCAT
Import pubset

Function group: Catalog directory management
User group: System administration

Command description

Under control of the calling task, this command creates a separate task which carries out IMCAT processing asynchronously to the calling task. This asynchronous task requests all the resources. The F5 labels are read in and reconstructed if necessary. The user catalog is opened and the specified pubset switched to "accessible". Access to this pubset is then possible. The class 2 system parameter AUTOSCA (see the *System Installation* manual [4]) determines whether or not SPEEDCAT is automatically started. SPOOL is notified and the spoolout jobs are included in TYPE5/KP or TYPE4.

During importation with ACTJOIN=FIRST all files and job variables of the TSOS ID are retained, whereas files and job variables of all other users are deleted.

The change in pubset availability is reported to all active processors of a computer network.

A number of different pubsets can be imported to a processor; however, once a pubset has been imported it cannot be imported again.

Format

Operation	Operands
IMCAT	catid[,ACTJOIN={ {STD / ZIP}[,RESET=NO] / FIRST,RESET=YES }] [,MONJV=jvname][,JVPASS=password] [,BUFCLS={NONRES / RES}][,BUFNUM=number] [,USE={*STD / SHARE / EXCL}] [,SHAR-TYP={*STD / MASTER / SLAVE}]

Description of the operands

catid

Catalog ID (1-4 characters) of the pubset to be imported.

ACTJOIN

Defines how the user catalog is treated during importation.

=STD

Opens the existing user catalog.

=ZIP

This operand may only be given in the case of storage space problems in order to avoid creation of the SYSPBN file.

=FIRST

A new user catalog is created.
This operand is only permitted when a pubset is imported for the first time after generation.
In addition the operand RESET=YES must be specified.

Note
After an IMCAT command with ACTJOIN=FIRST and RESET=YES, any existing user files of this pubset can *no longer* be accessed.

RESET

Defines whether an existing user catalog is to be reset.

=NO

The existing user catalog is not reset.

=YES

The existing user catalog is reset.

MONJV=jvname

Declares a monitoring job variable, which is set to the following values during importation:

$I at the beginning of importation
$R at the end of importation, if the entire pubset has been successfully imported
$A if importation is aborted due to an error
$W if a shared pubset was imported and the master processor has not yet confirmed availability

Note:
The job variable must have been cataloged, otherwise it will not be supplied with values. IMCAT processing, however, continues even if the job variables are undefined.

This operand is only supported if the "Job Variables" software product is used.

JVPASS=password

Password of the job variable, if write protection applies.

BUFCLS

Defines the memory class for the CMS buffers.
If the parameter is not specified, the value in the MRSCAT entry applies.

=NONRES

The CMS buffers are to be located in a non-resident memory area.

=RES

The CMS buffers are to be located in a resident memory area.

BUFNUM=number

Defines the number of CMS buffers to be created for this pubset.
If the parameter is omitted, the value in the MRSCAT entry applies.
Possible values: 1 ≤ number ≤ 255
Default: 32, minimum: 6 (see Notes).

USE

Defines the mode of access to the imported pubset.
Please note the necessary conditions and prerequisites (see *MSCF* manual [8]).

=*STD

The value in the MRSCAT entry applies.

=SHARE

The pubset is to be imported as a shared pubset.

=EXCL

The pubset is imported for exclusive access.

SHAR-TYP

Defines pubset ownership.
Please note the respective conditions and prerequisites (see *MSCF* manual [8]).

=*STD

The entry defined in the SET-PUBSET-ATTRIBUTES command applies.

=MASTER

The local system is to assume ownership of the pubset to be imported (no previous ownership specifications have been made).

=SLAVE

The local system is to become a slave sharer, regardless of the specifications made in the SET-PUBSET-ATTRIBUTES command.

Notes

– After successful creation of the IMCAT job the following operator terminal message is issued:

```
DMS035B THE IMCAT-TASK (&00) FOR THE PUBSET (&01) WAS STARTED
```

– If the pubset to be imported is still occupied due to an earlier system breakdown (message NKVD019) the operator can release it by means of the /UNLOCK-DISK command. If this pubset's disks are mounted on SPD devices, the operator must make sure that the pubset is not occupied by any other system.

– If an IMCAT command is issued but no device of the device type defined in the CATM command has been assigned to the system, the message
`ACQUIRE ERROR DURING IMCAT`
is output. The operator has to allocate a device of the requested type before the IMCAT command can be repeated successfully.

– Specifications via BUFCLS and BUFNUM may have an indirect impact on the installation's working set or paging rate. If, for instance, a large number of memory-resident buffers is set up on smaller installations, then catalog operations will be accelerated but the paging rate for all other applications will increase. On the other hand, with non-resident buffers there is a risk of a class 4 memory bottleneck occurring.

  If no buffers are specified, the system defaults take effect. These are in the form of the following four-level hierarchy:

  1. Explicit specification of parameters in the IMCAT command.
  2. Specification through the CATM command.
     If only one of the parameters (BUFCLS, BUFNUM) is given, the default value applies for the other. The default value is only set, however, if at least one of the operands is specified explicitly.
  3. Definition according to class 2 system parameters CATBUFR and BMTNUM.
  4. Default values (BUFCLS=NONRES, BUFNUM=32).

– For reasons of safety and performance, a minimum number of buffers (6) is defined by the system. If a lesser number is specified in the BUFNUM operand, the system will substitute the minimum value.

IMPORT
Import private files

Function group: File catalog management
User group: System administration, users

Command description

The IMPORT command creates an entry in the file catalog of a pubset for files on private disks. This entry can be deleted using the ERASE command (CAT operand). The system administration, as a privileged caller, can use the NUSERID operand to specify a user ID under which the files are to be held in the TSOSCAT file catalog.

Format

Operation	Operands
IMPORT	[pathname,]VOLUME=vsn,DEVICE=device [,REPLACE={<u>NO</u> | ABS | YES}] [,LIST={{<u>YES</u> | NO | ONLY} | ({<u>YES</u> | NO | ONLY},{<u>SYSLST</u> | SYSOUT | BOTH})}] [,GEN={<u>YES</u> | NO}] [,PVSID=catid] [,NUSERID=new-userid]

Description of the privileged operands

pathname

If the path name is not specified, the entire F1 label of the private disk is imported (which is not possible for the non-privileged caller).

NUSERID=new-userid

Changes the user ID for the relevant file both in the file catalog and in the F1 label of the private disk. The operand REPLACE=YES must be specified if any catalog entries existing under the old user ID are to be deleted and then transferred to the new user ID.

Return information / messages

Code on SYSOUT	Message on SYSLST	Meaning
0	FILE DID NOT EXIST	The file was newly cataloged; a file with the same name did not exist beforehand.
1	FILE HAS BEEN ERASED	A file with the same name did exist beforehand and has been overwritten; in combination with LIST=ONLY: a file with this name already existed; the protection attributes were not checked.
2	FILE EXISTS / REPLACE=NO	A file with the same name already exists; it was not overwritten, the operand REPLACE had the value NO.
3	FILE IS PROTECTED (ERASE ERROR OR FILE IS IN USE)	A file of the same name already exists and could not be erased on account of active protection functions (ACCESS=READ, WRPASS, etc.) or the file is locked because it is currently being processed.
4	ERROR ON CATALOG ACCESS	System error during access to the catalog.
5	FILE ALREADY ON PRIVATE	The file is already cataloged and is stored on the private disk specified in the VOLUME operand.
6	ERROR ON VTOC ACCESS	System error on access to the private disk’s F1 label.

Code on SYSOUT	Message on SYSLST	Meaning
7	GENERATION OUT OF RANGE	Unauthorized import of a file generation: the absolute generation number of the generation to be imported is incompatible with the limits set in the group entry.
8	C.E. HAS BEEN REPLACED	The catalog entry already existed for the specified disk; it was replaced.
9	C.E. IS PROTECTED (ERASE ERROR OR C.E. IS IN USE)	The catalog entry already existed for the specified disk; however, the file is locked.
A	INVALID FILENAME	The path name of the file to be imported (including catalog ID and user ID) is longer than 54 characters.

JOIN
Create/update user entries

Function group: User catalog management
User group: System administration

Command description

When an entry for the user catalog
of the home pubset is created, it must contain definitions of the basic system access rights (e.g. user ID, account number, password of the user ID) and the assignment of a default pubset for the user. Observation of these specifications by the user is only chekked in the user catalog of the home pubset.

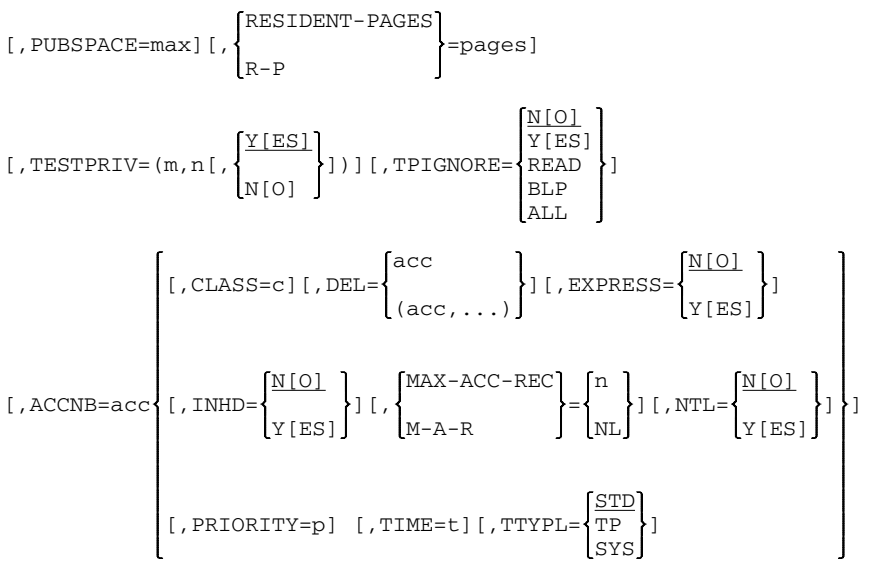
All the necessary pubset-specific information must be stored in the user catalog of the default pubset.
The system administration has to define a limit up to which the user can reserve storage space on this pubset. The system administration may also allow the user to exceed this limit.

The operand LOCK=YES enables access for a new user ID to be locked until all its necessary attributes and the group assignment have been completely specified.
This temporary lock is not released until the SEVER command (RESET operand) has been issued.

Format

Operation	Operands
JOIN	userid [,ADDRSPACE=mb][,AUDIT={N[O] Y[ES]}] [,COMMANDS={*NO profile-id}][,{CSTMP-MACRO C-M}={N[O] Y[ES]}] [,DEFAULT-MSG-LANGUAGE={*STD m}] [,DEFAULT-MSG-SEARCH={TASK *ALL}] [,{DEFAULT-PUBSET DEFCAT}={*STD catid}][,ENF={N[O] Y[ES]}] [,{ENCRYPT-PASSWORD E-P}={Y[ES] N[O]}][,MAIL={C'text' X'text'}] [,PASS={NONE C'text' X'text'}][,PSWORD={Y[ES] N[O] MOD[IFY]}] [,LOCK={N[O] Y[ES]}] [,GROUP={*OWN *UNIVERSAL group}] [,{PUBLIC-VOLUME-SET PVSID}={*HOME catid}]

continued →

Operation	Operands
JOIN (cont.)	

Description of the operands

userid

Specifies the user ID for which an entry is to be created or whose entry is to be updated.
Up to 8 alphanumeric characters may be specified, the first of which must be a letter, $, # or @. The user IDs TSOS, SERVICE (maintenance), SYSSPOOL, SYSSNAP, SYSGEN, SYSDUMP, SYSAUDIT, SYSHSMS, SYSNAC, SYSUSER and SYSPRIV are likewise addressed via the JOIN command.

ADDRSPACE

Defines the maximum size of the user address space (class 6 memory) in megabytes.

Value: 1 ≤ mb ≤ 2016 megabytes

Default: 16 megabytes

The UGEN statement MEM enables the system administration to define the actual size of the virtual user address space for all users. In the case of user address space saturation, this value represents the absolute limit, regardless of the specifications for individual users.

AUDIT

Defines whether the user may activate the AUDIT mode.
This mode serves to monitor DMS accesses to files or file generations through system exit routines or, if the software product SECOS is used, through the component SAT.

=NO

The user is not allowed to activate the AUDIT mode in the CATALOG command.

=YES

The user is allowed to activate the AUDIT mode in the CATALOG command.

COMMANDS

Defines whether the user ID is to be assigned to an SDF profile ID. This profile ID functions as a synonym for a group syntax file. The system administration can assign a profile ID to a group syntax file by making an appropriate entry in the SDF parameter file.

=*NO

No profile ID, i.e. no group syntax file, is defined for the user.

=profile-id

Profile ID of the group syntax file.

CSTMP-MACRO

Defines whether the CSTMP macro is permitted in user programs. The CSTMP macro enables the user to establish write protection for a memory pool (class 6 memory area shared by several users) or to explicitly cancel this protection. For details refer to the *Executive Macros* manual [9].

=NO

The user is not allowed to use the macro function.

=YES

The user is allowed to use the macro function.

DEFAULT-MSG-LANGUAGE

Specifies the language in which the messages are normally output.

=*STD

The language defined via the class 2 system parameter MSGLPRI is used.

=m

1-character identifier for the language desired.

DEFAULT-MSG-SEARCH

Specifies the message files in which message texts in the language selected are normally sought.

=TASK

Message texts in the selected language are normally searched for in the message files of the task.

=*ALL

Message texts in the selected language are normally searched for in the message files of the system.

DEFAULT-PUBSET

The user ID is assigned a standard pubset on which the user can store files and request space. The operand value is used to complement the path name for user files. The system administration can change the DEFAULT-PUBSET operand in any user catalog of an imported pubset. Only the user catalog of the home pubset is used, however, to determine the user default pubset. For the system administration's ID, the value of DEFAULT-PUBSET must be identical to that of PUBLIC-VOLUME-SET.

=*STD

Declares the home pubset as the user default pubset.

=catid

Declares the pubset with the specified catalog ID (1-4 characters) as the user default pubset.

ENCRYPT-PASSWORD

After the password of the user ID has been input, it can be stored in plaintext or in encrypted form.
A prerequisite for password encryption is that the control system was generated using the class 2 system parameter ENCRYPT, value **Y** (see *System Installation* manual [4]) or that this option was chosen in the parameter file (see *System Administrator's Guide* [10]).

If the SJMSAVE or SRPSAVE program is used in the session, the ENCRYPT-PASSWORD operand in the ENTER job created by the pro-

gram should be set to NO for all user IDs, as otherwise a double encryption may result during execution of this ENTER job:

SYSGEN JOIN	PARAM ENCRYPT,Y	PARAM ENCRYPT,N
E-P=YES	Encryption	No encryption
E-P=NO	No encryption	No encryption

=YES

The password will be stored in the user catalog in encrypted form.

=NO

The password will be stored in the user catalog in plaintext format.

ENF

Specifies whether the user may exceed the space limit set in the PUBSPACE operand for the pubset assigned via the PUBLIC-VOLUME-SET operand.

=NO

The user must not exceed the specified limit of public storage space. If this is attempted nonetheless, the space request is rejected with the message

```
"....... NO ADDITIONAL PUBLIC SPACE ALLOWED FOR USERID xxx".
```

=YES

The user is entitled to reserve more space on public volumes than has been assigned.
This right, however, is restricted to those user jobs at the start of which the specified limit was not yet reached. Any transgression is reported on the operator terminal with the message

```
".........PUBSPACE LIMIT EXCEEDED FOR USER xxx ON PVS y".
```

The user only receives a corresponding message upon LOGOFF, and only if the space limit is still exceeded at that point.

MAIL

Specifies a mailing address for spoolout listings.

=C'text'

The mailing address can have no more than 64 alphanumeric characters.

=X'text'

The mailing address can have no more than 128 hexadecimal characters.

PASS

Defines a password to protect the specified user ID or cancels existing password protection.

=NONE

Deletes the password in the user catalog.

=C'text'

Specifies a password in character format of up to 8 characters.

=X'text'

Specifies a password in hexadecimal format of up to 8 characters.

PSWORD

Controls user rights with respect to modification of the user password.

=YES

The user may define, modify or delete his/her own password.

=NO

The user is not allowed to define a new password for his/her user ID or to modify or delete the password.

=MOD

The user may define and modify his/her password but is not allowed to delete it.

LOCK

Defines whether the user ID remains locked following its creation.

=NO

The user ID is not locked.
After the appropriate user ID has been entered, the user is given free access to the system.

=YES

The user ID is locked.
This enables the system administration to assign all the necessary attributes to the user ID and to prevent premature access by the user.
If the product SECOS is used, the system administration can thus incorporate the user ID in the group structure and implement password protection without permitting a LOGON for the user ID in question.

The lockout can only be released explicitly via a SEVER,RESET command issued by the system administration.

GROUP

Identifies the user group to which the new user ID is assigned.
Using SECOS as of BS2000 V10.0A, it is possible to set up a hierarchy of user groups, each of which can in turn be assigned a number of user IDs. Without this software product, all user IDs are subordinated to the system dummy group *UNIVERSAL.

=*OWN

The user ID is assigned to the user group of the command issuer. If the command issuer does not belong to any user group or if SECOS is not installed, *UNIVERSAL is assumed.

=*UNIVERSAL

The user ID is explicitly assigned to the group *UNIVERSAL. If SECOS is used, this value permits a user ID to be created outside of group hierarchies.

=group

Existing user group to which the new user ID is assigned. This value can only be specified if the SECOS product is installed.

PUBLIC-VOLUME-SET

Defines the pubset whose user catalog is to be modified.

=*HOME

The modifications are to be effected in the user catalog of the home pubset.

=catid

Catalog ID (1-4 characters) of the pubset whose user catalog is to be modified.

PUBSPACE

Allocates the maximum storage space available to the user for files on public volumes of the pubset assigned by means of the PUBLIC-VOLUME-SET operand.

Value: $0 \leq max \leq 2{,}147{,}483{,}647$ PAM blocks

Default: 16,777,215 PAM blocks

RESIDENT-PAGES

Controls use of the resident part of main memory by the user ID. Resident pages can be reserved up to the specified limit.

=pages

Defines the number of resident main memory pages.

Value: 0 ≤ pages ≤ 32,767

Default: 32,767

=MAX

Permits the maximum number of 32,767 resident main memory pages.

TESTPRIV

Defines the maximum test privilege, which ensures that not every user can access any desired system/user programs and modules.
This function is implemented, for example, when the software product AID is employed.

Possible values: 1 - 9 Default: (1,1,YES)

The following applies for the SERVICE ID:
Possible values: 1 - 9 Default: (3,1,YES)
(See tables 2a and 2b under Notes)

The following applies for the TSOS ID:
Possible values: 1 - 9 Default: (9,9,YES)

=(m,n)

The user is given read privilege (m) and write privilege (n), where m ≥ n, i.e. the read privilege must not be less than the write privilege.

=(m,n,YES)

If the user wants to change the read/write privilege values by means of the OPTION command (see the manual *User Commands (ISP Format)* [3]), the operator has to permit this by answering the corresponding operator terminal message.

=(m,n,NO)

The user may change the privilege values without operator acknowledgment.

TPIGNORE

Specifies whether error messages for tape label checks may be ignored by the operator for the user in question.

=NO

Error messages during tape label checks must not be ignored.

=YES

The following error messages for input/output files may be ignored by the tape owner or the system administration:

- invalid VSN
- tape is write protected
- invalid file set ID in HDR1 label

=READ

The user may ignore error messages referring to input files; the label check is not deactivated.
The following errors during tape processing may trigger corresponding messages:

- invalid VSN
- invalid file name
- invalid label on tape
- invalid access method
- invalid file sequence number on tape
- tape mark instead of EOF label
- double tape mark instead of EOF label

=BLP

The label check is deactivated for tapes processed in INPUT or REVERSE mode.
This privilege includes the TPIGNORE=READ function.

=ALL

All error messages may be ignored.
This privilege includes the TPIGNORE=YES and TPIGNORE=BLP functions.

ACCNB=acc

Defines an account number for the user ID. This number may consist of up to 8 alphanumeric characters. This operand is mandatory if

- a new entry for a user ID is created
- values referring to this account number are changed.

No more than 60 account numbers are permissible per user ID.

CLASS

Spoolout class for the user's account number.

Value: $0 \leq c \leq 255$

Default: 0 (no spoolout class)

DEL=acc

Deletes 1 to 10 account numbers in the user catalog. One account number, however, must always remain assigned to the user ID.

EXPRESS

Defines whether the user is allowed, under the specified account number, to start batch jobs immediately even if the class limit of the job classes assigned to the user has already been reached. This applies even if the job classes assigned to the user do not admit this start attribute.
If the user is denied the EXPRESS function both in the user catalog and in the assigned job classes, the batch job is accepted but not started as an EXPRESS job.

=NO

The user is not given EXPRESS authorization.

=YES

The user is granted EXPRESS authorization.

The EXPRESS function can be employed both by the user and by the system administration and operator for the respective commands (see the LOGON, ENTER-JOB, PRIORITY commands).
This applies even if the start attribute IMMEDIATE is not permitted in the job classes assigned to the user.

INHD

Defines whether an account number is entitled to use the "inhibit deactivation" function.
Such a deactivation inhibition exempts user jobs from the PRIOR function which places jobs in subordinate queues following system service requests (macro time-slice).

=NO

Tasks under the specified account number are **not** allowed to use the "inhibit deactivation" function.

=YES

Tasks under the specified account number are allowed to use the "inhibit deactivation" function.

MAX-ACC-REC

Defines how many user-specific accounting records per job/program can be written to the system's accounting file.

=n

Designates the number of user-specific accounting records which can be written to the accounting file per job/program. User-own accounting records are not admitted.

Value: 0 ≤ n ≤ 32,767

Default: 100

=NL

The user can write any number of user-specific **and** user-own accounting records to the accounting file.

NTL

Defines whether the user, under the specified account number, is allowed to start batch jobs without a time limit. This applies even if the job classes assigned to the user do not admit this start attribute.
If the user is denied this function both in the user catalog and in the assigned job classes, the batch job is rejected with an error message if the user specifies the CPU-LIMIT=NO operand in the LOGON or ENTER command.
Tasks without a time limit are not debited to the user's CPU account.

=NO

The user is not given NTL authorization.

=YES

The user is granted the authorization to specify the operand TIME=NTL in the LOGON or ENTER command.

PRIORITY=p

Defines the task scheduling priority for the user under the specified account number.

Value: 30 - 255

Please note that 30 is the best and 255 the worst priority (see point 1 under Notes).

TIME

Total CPU time in seconds available to user jobs under the specified account number.

Value: 1 ≤ t ≤ 2,147,483,647

Default: 65,535

The value specified for TIME is included in the user catalog whenever a user ID and/or account number is newly entered or modified. If the account number exists already, the newly specified CPU time is added to the existing value in the user catalog. The CPU time used by a user job is subtracted from the CPU value in the user catalog. The system administration must ensure that the users are offered sufficient CPU time. Unless important reasons speak against it, the default value of 65,535 CPU seconds is accorded.

TTYPL

Task attribute which the user may assign to his/her jobs.
If the TINF macro is used in user programs, a check is performed both in the assigned job classes and in the user catalog as to whether the user, under the specified account number, has the right assign the attribute TP or SYS to tasks.

=STD

The task attributes BATCH and DIALOG are permitted for the user's jobs.

=TP

The task attributes BATCH, DIALOG and TP are permitted for the user's jobs.

=SYS

All task attributes are permitted for the user's job.

Notes

1. The task scheduling priorities 30-255 are defined
   - in the user catalog (JOIN command, PRIORITY operand)
   - during job class definition (JMU statement DEFINE-JOB-CLASS, operand RUN-PRIO; a maximum priority may be defined in addition to the default priority).

   If the user specifies a task scheduling priority in the LOGON or ENTER-JOB command, this priority is checked both in the user catalog and in the job class assigned to the user (see example below).

Priority in LOGON or ENTER-JOB command	Priority in job class		Priority in user catalog	Priority with which the job is started
	Default	Maximum		
200	190	150	180	200
150	190	150	180	150
130	190	150	180	190
-	190	150	180	190
130	190	150	130	130
130	190	150	200	200
200	190	NO	180	200
170	190	NO	180	190
130	190	NO	180	190
-	190	NO	180	190

If the priority specified by the user in the LOGON or ENTER-JOB command is *worse* than the best priority in the job class and user catalog (i.e. it is permitted either in the job class or in the user catalog), the job is started with the user-specified priority.

If the priority specified by the user in the LOGON or ENTER-JOB command is *better* than the priorities in the job class and user catalog (i.e. it is neither permitted in the job class nor in the user catalog), the job is started with a priority corresponding to the worst of two values: the default priority of the job class and the priority in the user catalog.

If the user has omitted the priority entry in the LOGON or ENTER-JOB command, the job is started with the default priority.

2a. The following table shows which test activities are permitted for privilege levels 1 and 2. Each level automatically incorporates all the activities of lower levels. It is recommended to assign "normal" users a read and write privilege of 1.

Level	Permitted activities	Access by other tasks
1	Read and write access to: - class 6 memory - non-privileged class 5 memory - P1 register - P1 program counter - P1 program mask - P1 condition code - P1 audit table - AMODE (P1 PCB) - PCB listing	Tasks under the same user ID
2	Read access to: - P1 process control block (PCB) - P1 PCBs - task control block (TCB) - job control block (JCB) - job-to-be-processed block (JTPB) - interrupt flag register - interrupt mask register - interrupt status register - trace table (shows only the user's own task)	

No privileges are required for access to dump files.

2b. The table below shows the privilege levels for the SERVICE ID.

Protection level	Definition
1 - 3	Safe with respect to data privacy and data protection: - Only the user's own data patterns are used. - Only the maintenance cylinder of magnetic disks is accessed. - Data is suppressed via "Skip Data" during reading. - Data from tape is not read but overwritten after special customer authorization.
4	The test routine reads data from the customer area.
5	Not used.
6	The routine can overwrite customer data.
7 - 8	Not used.
9	The routine reads customer data or can overwrite customer data. The inputs/outputs to be effected are not checked by WARTOPT for possible damage to the system. In the case of abuse or negligence, the system may be destroyed.

The system administration should normally set the test privilege value to 1. Temporary assignment of a higher level should be a well-founded exception.

Example

```
/JOIN USERID1,ACCNB=123456

/SH-U-A USER=USERID1

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                  NO       SPACE-LIMIT       :      16777215
PASS       :                  NO       ADDRSPACE         :            16
PSWORD     :                 MOD       RES-PAGES         :         32767
DEFCAT     :               N           MAXAREC           :           100
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO       ENF    :    NO    TPIGNORE :   NO
AIDRD      :   1    AIDWR  :   1       TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-------------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-------------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-------------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N


/JOIN USERID1,PUBSPACE=1000,ENF=Y,TPIGNORE=READ,MAX-ACC-REC=200

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                  NO       SPACE-LIMIT       :          1000
PASS       :                  NO       ADDRSPACE         :            16
PSWORD     :                 MOD       RES-PAGES         :         32767
DEFCAT     :               N           MAXAREC           :           200
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO       ENF    :   YES    TPIGNORE : READ
AIDRD      :   1    AIDWR  :   1       TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-------------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-------------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-------------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N
```

LOADAID
Load AID

Function group: System diagnostics
User group: System administration

Command description

The Advanced Interactive Debugger AID consists of a system-independent part (AID) and a system-dependent part (AIDSYS).
Both parts are implemented as dynamically loadable subsystems of BS2000 and run in the TPR function state.
The AIDSYS component for handling AID commands is loaded automatically.

Format

Operation	Operands
LOADAID	

Note

If the LOADAID command is used in a procedure, there must be no blank between the slash and the command.

MODIFY-ACCOUNTING-PARAMETERS
Define system accounting parameters

Function group: Accounting system
User group: System administration

Command description

The following accounting system parameters,
preset via the START-ACCOUNTING command, can be modified:

- accounting records and record extensions to be included in the accounting file
- the list of continuation files for file switching
- the job classes to be monitored
- the monitoring cycle

Neither during definition of the accounting records and their extensions nor during specification of the job classes is there a logical check of the ACCOUNT function as to correctness of the entries, i.e. agreement with defined accounting records or job classes.
The default value *UNCHANGED in the various operands means that the existing value is to be retained.

Format

Operation	Operands
MODIFY-ACCOUNTING-PARAMETERS MOD-ACC	[SET-RECORD-TYPE=*UNCHANGED / *ALL / record / (record,...)] [,ADD-RECORD-TYPE / ADD=*NONE / record / (record,...)] [,REMOVE-RECORD-TYPE / REMOVE=*NONE / record / (record,...)] [,ALTERNATE-FILES / ALT=*UNCHANGED / *NONE / file / (file,...)]

continued →

Operation	Operands
MOD-ACC (cont.)	[,ACCOUNTING-PERIOD={*UNCHANGED / *STD / period}] [,JOB-CLASS={*UNCHANGED / *NONE / *ALL / job-class / (job-class,...)}]

Description of the operands

SET-RECORD-TYPE

Specifies the accounting records and record extensions to be written to the accounting file.

=*ALL

All accounting records and implicitly activated record extensions are to be written to the accounting file. The ADD operand cannot be specified in addition.

=record

Only the specified accounting record or extension is to be written to the accounting file (see Note). Additional specification of the ADD and REMOVE operands is not permitted.

=(record,...)

Only the specified accounting records or extensions are to be written to the accounting file.
Up to 64 accounting records / record extensions can be specified (see Note). Additional specification of the ADD and REMOVE operands is not permitted.

ADD-RECORD-TYPE

Defines any additional accounting records or record extensions to be included in the list of records/extensions to be written.

=*NONE

No additional accounting records / record extensions are written.

=record

Identifies the accounting record or extension to be written in addition (see Note).

=(record,...)

Identifies the accounting records or extensions to be written in addition.
Up to 64 accounting records / record extensions can be specified (see Note).

REMOVE-RECORD-TYPE

Defines any accounting records or record extensions which are no longer to be written.

=*NONE

No records/extensions are to be removed from the list of accounting records and record extensions to be written.

=record

Identifies the accounting record or extension which is no longer to be written (see Note).

=(record,...)

Identifies the accounting records or extensions which are no longer to be written.
Up to 64 records/extensions can be specified.

ALTERNATE-FILES

Replaces the list of continuation file names specified via the START-ACCOUNTING command.
Specification of such a list is only meaningful if the name of the current accounting file has not been automatically generated.

=*NONE

Deletes the list of continuation file names.

=file

Name of the continuation file which is to replace the file names in the list of continuation files.

=(file,...)

Names of the continuation files which are to replace the file names in the list of continuation files.
Up to 5 file names can be specified. The name of the continuation file or the last name in the list of continuation files may be a partially qualified file name; this activates automatic file name generation following an accounting file switchover.

ACCOUNTING-PERIOD

Changes the cycle of the periodic accounting interval.
Certain records of the accounting system (see *System Administrator's Guide* [10]) and job classes are periodically scanned to obtain

averages.
To avoid overloads, the frequency of periodic monitoring should not normally be too close to the lower limit of the value range. The maximum is one day, the minimum 10 minutes.

=*STD
The default value (20 minutes) applies.

=period
Value (in minutes) defining the frequency with which accounting records and job classes are periodically scanned.

JOB-CLASS
List of job classes which are to be periodically monitored by the accounting system.

=NONE
No job classes are to be monitored.

=*ALL
All job classes are to be monitored.

=job-class
Only one particular job class is to be monitored.

=(job-class,...)
List of up to 16 job classes to be monitored within the specified period.

Note

– The accounting records are addressed via the record identifier (field 1 of the record definition). When the accounting record is activated, all record extensions are activated implicitly.
If only certain extensions are to be activated/suppressed, these extensions must be addressed explicitly. The record extension is identified by appending the extension identifier to the record identifier.
Deactivation of one or more record extensions means that the accounting record is written with the remaining extensions.

For example, the operand *ADD-RECORD-TYPE=(DALC,TASKCA,TASKTI)*
means that the storage allocation record DALC plus two record extensions of the task accounting record (TASKCA and TASKTI) are activated in addition.

Example

```
/SHOW-ACC INF=FILES

ACCOUNTING STATUS INFORMATION
=============================

CURRENT ACCOUNTING FILE:
------------------------

 :C:$TSOS.ACCOUNTING1
 OPENED AT : 88-11-10, 10:29:41

ALTERNATE FILENAMES:
--------------------

 ACC2

/MOD-ACC-PAR ALTER-FILES=(ACCOUNTING2,ACCOUNTING3),-
 ADD=(DALC,JOBSJD),REMOVE=SPLO

/SHOW-ACCOUNTING-STATUS INF=ALL

ACCOUNTING STATUS INFORMATION
=============================

CURRENT ACCOUNTING FILE:
------------------------

 :C:$TSOS.ACCOUNTING1
 OPENED AT : 88-11-10, 10:29:41

ALTERNATE FILENAMES:
--------------------

 ACCOUNTING2
 ACCOUNTING3

ACCOUNTING RECORD INFORMATION:
------------------------------

 RECORD IDS TURNED OFF:
  DRFA  PACC  RCPU  RSRV  SPLI  SPLO  TATR

 RECORD EXTENSIONS TURNED ON:
  UACC: ID

 RECORD EXTENSIONS TURNED OFF:
  JOBS: JP JR
  PRGS: CA ID PC TI
  PRGT: CA ID PC TI
  TASK: CA ID PC TI
  TDEV: ID VU

 <**** NOT LISTED RECORD IDS ARE TURNED ON *****

 ACCOUNTING PROCESSING PARAMETERS:
 ---------------------------------

 ACCOUNTING PERIOD : 20

 JOB-CLASSES :
  ** NONE SPECIFIED **
```

MODIFY-JOB-CLASS
Modify job class characteristics

Function group: Job and task management
User group: System administration

Command description

The JMU statement DEFINE-JOB-CLASS is used to define the job limits and to weight the job classes. Any changes, which apply until the next MODIFY-JOB-CLASS command or until the end of the session, influence only jobs which have not yet been started.

If at all, CLASS-LIMIT=0 should only be specified for a short period after startup if it is necessary to prevent any jobs being started which might impede activation of the job schedulers at this stage.
Command execution is acknowledged with a message on the operator terminal.
If any of the operands is omitted, its previously specified value remains intact.

Format

Operation	Operands
{MODIFY-JOB-CLASS | MOD-J-C}	NAME=name [,C-LIMIT=n] [,WEIGHT=m] [,C-OPTIMUM=k]

Description of the operands

NAME=name

Name of the job class whose characteristics are to be modified.

C-LIMIT=n

Defines the maximum number of jobs which may execute simultaneously in the specified job class. n must not exceed the upper limit defined via the class 1 system parameter ETMTSKNR. When the class scheduler receives a job for starting, it rejects the job if the C-LIMIT value has been reached. As soon as the number of jobs in the class is below this limit again, the scheduler managing this job class is informed accordingly.
The only exception are express jobs: they can be started even when

the class limit has been reached.

WEIGHT=m

Defines the respective weights of the job classes.
This operand influences selection of the job class from which a job is to be started.
Value: $1 \leq m \leq 9$
The higher the WEIGHT value, the higher the necessity to start a job of the selected class.

C-OPTIMUM=k

Defines the number of jobs which should ideally run in the job class so that a specific job mix is achieved in the system.
Value: $0 \leq k \leq$ C-LIMIT

MODIFY-JOB-STREAM
Modify job stream characteristics

Function group: Job and task management
User group: System administration

Command description

The MODIFY-JOB-STREAM command enables the system administration to modify the run priority of the stream task as well as specific parameters defined with the JMU statement DEFINE-JOB-STREAM. The changes then remain valid until the next MODIFY-JOB-STREAM command or until the end of the session.

Format

Operation	Operands
MODIFY-JOB-STREAM MOD-J-S	NAME=name [,RUN-PRIO=p] [,S-PAR=*NO / C'string']

Description of the operands

NAME=name

Specifies the name of the job stream whose characteristics are changed.

RUN-PRIO=p

The various job schedulers are implemented through special stream tasks. This operand can improve or deteriorate the run priority of the stream task.

Value: 30 ≤ p ≤ 255

S-PAR

Specifies a character string which is interpreted by the associated job scheduler.

=*NO

Specifies an empty string.

=C'string'

Specifies a string of up to 127 characters.

MODIFY-PCS-OPTION
Modify activated PCS parameter set

Function group: PCS
User group: System administration

Command description

The PCS parameters are created using the PCSDEFINE utility routine and stored as a parameter set (option) in the **P**erformance **C**ontrol **S**ystem **D**efinition **F**ile PCSDF.
The PCSDF may contain a number of such options. An option essentially represents the factors utilization, throughput and response time behavior, which are relevant to system optimization.
The START-PCS command activates one of these options. Each option comprises global system parameters as well as parameters for 1...n categories.
The MODIFY-PCS-OPTION command is used to change the global system parameters of the currently active option.

The operand values UNCHANGED mean that the existing definitions are to be retained.

Format

Operation	Operands
MODIFY-PCS-OPTION	[SYSTEM-PARAMETER=([REQUEST-DELAY-MAX={UNCHANGED / <integer 1..100>}] [,THROUGHPUT-QUOTA={UNCHANGED / <integer 0..100>}])] [,USER-INFORMATION={UNCHANGED / YES / NO}]

Description of the operands

SYSTEM-PARAMETER=

Specifies the operands to be changed.

REQUEST-DELAY-MAX

Helps select the optimum multiprogramming factor. The default value depends on the value of the THROUGHPUT-QUOTA operand and is calculated according to the formula:

```
5 + (THROUGHPUT-QUOTA)/20
```

THROUGHPUT-QUOTA

Defines the percentage determining the ratio between response time and throughput optimization of the system.
The value THROUGHPUT-QUOTA = **100** results in totally throughput-oriented operation, while the value **0** achieves an operating mode which is exclusively geared to response time minimization.
Default: 20%

USER-INFORMATION

Defines whether information on PCS is to be output to the user.
Default: NO

MSGCONTROL
Define message files

Function group: Message processing
User group: System administration, users

Command description

The specified message files, which are created using the MSGEDIT utility routine (see *Computer Center Utility Routines* manual [2]), are placed - in the form of extent allocations - at the beginning of the extent allocation list in the system module for message output.
Up to 255 message files, which can be listed via the SHOW-MSG-DEFAULTS command, may be activated for the overall system.

A return to the default extent allocation list (class 2 parameters MSGFIL01 - MSGFIL15 at system generation) can be
effected using the STD operand.

Format

Operation	Operands
MSGCONTROL MC	[FILE=STD ([ADD=file / (file,...)][,DEL[ETE]=file / (file,...)]) [,SCOPE=SYSTEM / TASK]]

Description of the privileged operands

FILE

Designates the file name.

=STD

The system's extent allocation list is reset to the values defined at system generation time.

SCOPE

Defines in which extent allocation list the specified changes are to be carried out.

=SYSTEM

The changes are to be performed in the system's extent allocation list.
The changes thus become valid for the global system and are not restricted to the calling task.

Notes

– The message primary file is accessed by the HELP command.

– The files to be attached must have been cataloged and made shareable. Moreover, ACCESS=READ without additional specification of a read password should apply.

NCHOLD
Place batch task in wait state

Function group: Job and task management
User group: System administration

Command description

The task remains in wait state until it is explicitly released with the NCREL command. Only then can the job be aborted using the CANCEL command if necessary. The NCHOLD command is rejected for interactive and transaction tasks as well as jobs connected with other tasks in the form of common memory areas, files in SHARED UPDATE mode, task serialization, or conditional job control.
However, the devices reserved by the task remain assigned during the wait state.

Format

Operation	Operands
NCHOLD	tsn

Description of the operands

tsn

Specifies the job number (4 alphanumeric characters) of the batch task to be halted.

NCREL
Cancel wait state for batch task

Function group: Job and task management
User group: System administration

Command description

A batch job halted as a result of a previous NCHOLD command is released via the NCREL command.
Only then can the job be aborted using the CANCEL command if required.

Format

Operation	Operands
NCREL	tsn

Description of the operands

tsn

Specifies the job number (4 alphanumeric characters) of the batch task to be released.

RDIR
Redirect output to other printer

Function group: RSO/SPOOL management
User group: System administration, RSO device administrators

Command description

The RDIR command
causes spoolout jobs

- for an RBP station to be redirected to a local printer
- for an RSO printer to be redirected to another RSO printer or to a local printer.

Format

Operation	Operands
RDIR	{station-name / device1[,device2]}

Description of the operands

station-name

Name of the RBP station whose spoolout is to be redirected.

device1

The output of this RSO printer is redirected.

device2

The spoolout is to be redirected to this printer.
Default: local printer (CENTRAL)

RELEASE-JOB
Cancel wait state for user job

Function group: Job and task management
User group: System administration

Command description

The job suspended with the HOLD-JOB command can now be taken into account again, in accordance with its attributes, by job management.

The wait state of started tasks is released using the NCREL command.

As soon as the user job has been released, a message to this effect is output on the operator terminal.

Format

Operation	Operands
RELEASE-JOB REL-J	tsn MONJV=jvname

Description of the operands

tsn

Job number (4 alphanumeric characters) of the job whose wait state is to be cancelled.

MONJV=jvname

The job is identified via a monitoring job variable defined for it.

Example

```
/STA L,TYPE=1

NAME      TSN TYPE   PRI      CPU-USED CPU-MAX ACCOUNT#
USER     0C43 1 HO   5 210       0.0      20000 ADMINSTR
USER     0C44 1 DO   5 210       0.0      20000 ADMINSTR


/STA JOB-CLASS

JCLASS   CLIM OPTM W STATE JSTREAM  DORM ANCD WAIT STRT HOLD
$SYSJC    255    0 9 ACT   $SYSJS      0    0    0    3    0
JCBSTD     50    0 8 ACT   JSSTD1      0    0    0    0    0
JCBTSOS     1    0 1 ACT   JSTSOS      1    0    0    1    1
JCDSTD     20    0 2 ACT   JSSTD1      0    0    0    0    0
JCDTSOS    10    0 1 ACT   JSTSOS      0    0    0    2    0


/REL-J 0C43
%  JMS0022 /REL-J COMMAND ACCEPTED


/STA L,TYPE=1

NAME      TSN TYPE   PRI      CPU-USED CPU-MAX ACCOUNT#
USER     0C43 1 WT   5 210       0.0      20000 ADMINSTR
USER     0198 1 DO   5 210       0.0      20000 ADMINSTR
```

RELEASE-JOB-CLASS
Cancel wait state for job class

Function group: Job and task management
User group: System administration

Command description

This command is used by the system administration to lift the wait state for a job class which was halted via the HOLD-JOB-CLASS command.
The batch jobs which had to be placed in the job class queue can now be started.

Command execution is acknowledged with a message on the operator terminal.
The system administration can obtain an overview of the status of the various job classes by issuing the STATUS command (JOB-CLASS operand).

Format

Operation	Operands
RELEASE-JOB-CLASS REL-J-C	NAME=name

Description of the operands

NAME=name

Name of the job class to be released.

Example

```
/STA JOB-CLASS

JCLASS   CLIM OPTM W STATE JSTREAM  DORM ANCD WAIT STRT HOLD
$SYSJC    255    0 9 ACT   $SYSJS     0    0    0    3    0
JCBSTD     50    0 8 ACT   JSSTD1     0    0    0    0    0
JCBTSOS    10    0 5 HOLD  JSTSOS     1    0    0    0    1
JCDSTD     20    0 2 ACT   JSSTD1     0    0    0    0    0
JCDTSOS    10    0 1 ACT   JSTSOS     0    0    0    2    0


/REL-J-C NAME=JCBTSOS
%  JMS0022 /REL-J-C COMMAND ACCEPTED


/STA JOB-CLASS

JCLASS   CLIM OPTM W STATE JSTREAM  DORM ANCD WAIT STRT HOLD
$SYSJC    255    0 9 ACT   $SYSJS     0    0    0    3    0
JCBSTD     50    0 8 ACT   JSSTD1     0    0    0    0    0
JCBTSOS    10    0 5 ACT   JSTSOS     1    0    0    0    1
JCDSTD     20    0 2 ACT   JSSTD1     0    0    0    0    0
JCDTSOS    10    0 1 ACT   JSTSOS     0    0    0    2    0
```

RELEASE-JOB-STREAM
Cancel wait state for job stream

Function group: Job and task management
User group: System administration

Command description

The job scheduler can resume selecting jobs to be started from an assigned set of job classes.
Batch jobs that had to be placed in the job class queues can now be passed to the class scheduler for starting. This command is also permitted for the system job stream $SYSJS.

Resumption of the scheduling activity is reported through a message on the operator terminal.

Format

Operation	Operands
RELEASE-JOB-STREAM REL-J-S	NAME=name

Description of the operands

NAME=name

Name of the job stream whose wait state is to be cancelled.

Example

```
/STA JOB-STREAM

JSTREAM  STATE DORM ANCD WAIT STRT HOLD START  STOP    LIFETIME
$SYSJS   ACT      0    0    0    3    0 ATLOAD ATSHUTD
JSSTD1   HOLD     0    0    0    0    0 ATLOAD ATSHUTD
JSTSOS   ACT      1    1    0    2    1 ATLOAD ATSHUTD


/REL-J-S NAME=JSSTD1
%  JMS0022 /REL-J-S COMMAND ACCEPTED


/STA JOB-STREAM

JSTREAM  STATE DORM ANCD WAIT STRT HOLD START  STOP    LIFETIME
$SYSJS   ACT      0    0    0    3    0 ATLOAD ATSHUTD
JSSTD1   ACT      0    0    0    0    0 ATLOAD ATSHUTD
JSTSOS   ACT      1    1    0    2    1 ATLOAD ATSHUTD
```

RESUME-PCS
Cancel wait state for PCS

Function group: PCS
User group: System administration

Command description

The wait state defined for the PCS subsystem via the HOLD-PCS command is lifted. PCS can be restarted with the same or a different parameter set and can thus resume its activity, i.e. implementing the system optimization strategies specified in the parameter set.

The previously active PRIOR mode for task management is deactivated and the PRIOR parameters are automatically saved by PCS.

Format

Operation	Operand
RESUME-PCS	[OPTION-NAME={*STD / optname}][,FILE-NAME={*STD / filename}]

Description of the operands

OPTION-NAME

Name of the PCS parameter set.
Default: STDOPT

FILE-NAME

Name of the PCS definition file containing the specified parameter set.
Default: SYSPAR.PCS

Note

The wait state for PCS may also be lifted using the RESUME-SS command (see *PCS* manual [7]).

RESUME-SS
Cancel wait state for subsystem

Function group: Subsystem management
User group: System administration

Command description

After successful command execution, connections can be set up again to the specified subsystem, provided the subsystem was placed in a defined wait state by means of a HOLD-SS command and all the necessary resources (holder task, address space) are thus still available, the initialization routine being able to execute.

Format

Operation	Operands
RESUME-SS	SS-NAME=name [,VERSION='versno'] [,STRING=C'string'] [,RESET={NO / YES}] [,SYNCH={NO / YES}]

Description of the operands

SS-NAME=name

Name of the subsystem whose wait state is to be cancelled.

VERSION='versno'

Version number of the specified subsystem. The format used here must coincide with the format employed at subsystem definition.
The version number may consist of either 4 or 7 alphanumeric characters.

Format

nn.m	version identification
nn.mxyy	version identification and update status

(nn, m and yy are numerals, x is a letter)

Default

If just **one** subsystem version in wait state exists, the default value for this version applies.
If **several** such versions exist, specification of the version number is mandatory.

STRING=C'string'

Defines special parameters to be analyzed by the relevant subsystem only.

RESET

Influences the behavior and urgency of command processing.

=NO

If the relevant subsystem is not yet in a defined wait state, the command is rejected until such a wait state has been reached.

=YES

The command is accepted regardless of any outstanding deinitialization process and the subsystem or certain components are initialized immediately.
For this operand, the version parameter is mandatory.

SYNCH

Permits a choice between synchronous and asynchronous processing.

=NO

The command is to be processed asynchronously, i.e. without the user having to wait for command execution before further input is possible.
No error messages on command execution are output.

=YES

Command execution must be awaited.
Error messages on command execution are output.

Notes

- Subsystems are usually characterized by a multitude of interrelations (dependencies, load relationships, etc.) with other subsystems. These interrelations have to be taken into account if the performance of a subsystem is to be guaranteed. DSSM attempts to avoid possible conflicts arising from user requirements and therefore rejects problematic commands. Actions such as the installation of missing subsystems or the unloading of dependent subsystems are thus not performed.
  However, if the user generates complex subsystems and issues the statement CHECK=NO (see the *System Installation* manual [4]), DSSM will execute the desired functions **despite** possible conflicts:
  - The START-SS command loads the specified subsystem, even if a subsystem to which defined relationships exist has not yet been completely loaded.
  - The commands RESUME-SS / STOP-SS / HOLD-SS are executed by DSSM without checking any dependencies or interrelations.
- To ensure a high degree of parallelism and data integrity, time-consuming administrative activities are not performed under the control of the calling task but handled by a DSSM task.
  As a rule, only checking of the requested function is effected **synchronously**, i.e. with a wait state for the calling task. The actual processing sequence is executed by DSSM **asynchronously**, independent of the calling task.
- Following the HOLD-SS command, RESUME-SS is rejected if DSSM has not yet fully halted the subsystem. The operand RESET=YES can be used by the system administration, however, to lift the subsystem's wait state unconditionally; it is then not necessary to wait for complete execution of the HOLD-SS command.
  In this case the initialization routine is initiated and the relevant subsystem, which is notified of the RESET, can autonomously define the scope of this routine (full/partial/no initialization).

RFD
Assign floppy disk device for waiting spoolin jobs

Function group: SPOOL management
User group: System administration

Command description

The RFD (Read Floppy Disk) command is used to allocate/deallocate a floppy disk I/O device to/from a spoolin job.

Besides jobs, which must start with LOGON and end with LOGOFF, simple data records can be read in with the "userid" operand.

Format

Operation	Operands
{RFD / RF}	[UNIT=mn,USE=NO [UNIT=mn][,USE=INPUT][,FILE={filename / (filename,...)}] [,userid[,ACC=acc][,'ownerid']] [,EX={filename / (filename,...)}][,AFTER=filename][,VOL[UME]=vsn]]

Description of the operands

UNIT=mn

Specifies the mnemonic device name of the floppy disk unit to be used as an input device or deallocated. This operand is mandatory if USE=NO is specified, but is otherwise optional. If the operand is omitted, the operator receives a message as to which device (namely the first free one) has been selected.

USE
=INPUT

The device is to be assigned as the input unit.

=NO

The device is to be deallocated once the current file has been read or as soon as the device is no longer being used. If USE=NO is speci-

fied, the FILE operand is illegal.

FILE

=filename

The specified file is read in.

If the operand is missing, all files on the floppy disk are read in.

=(filename,...)

The specified files are read in. Up to 10 files may be specified.

Note
Each time a file is read in correctly, the operator receives a message to this effect.
Before a new RFD FILE=filename command is entered, RFD UNIT=mn,USE=NO must have been given.

userid

User ID which must be specified in order to read in a floppy disk; the file is then created under this ID. The floppy disk contains data only. Any commands on it are not interpreted as such, but regarded as data records. The complete contents are stored in the file unchanged. No check for the presence of a LOGON/LOGOFF command takes place.

If this operand is omitted, no records are read in. The system then checks whether a job, i.e. a command sequence starting with LOGON and ending with LOGOFF, has been provided. If so, the job is read in and executed.

ACC=acc

Specifies an account number under "userid". This number may consist of up to 8 alphanumeric characters. The operand is optional, but it may only be entered if the "userid" operand is specified. If no account number is given, the job log is output in accordance with the spool-out class of the first account number entered under "userid". If the specified account number is invalid, the spoolin job S.IN.tsn is aborted.

ownerid

Specifies the floppy disk's owner ID.
May comprise up to 8 characters. If "ownerid" contains special characters, it must be enclosed in inverted commas; any inverted commas or & within "ownerid" must be entered twice. This operand is **mandatory** if an owner ID is entered in the VOL1 label, and is **valid** only if "userid" is specified as well. If "ownerid" is specified but "userid" is missing, the RFD command is rejected. If the VOL1 label contains blanks in place of the owner ID, this operand may be omitted.

EX

Specifies the file *not* to be read in during spoolin.

=filename

The specified file is skipped.

=(filename,...)

The specified files are skipped.
Up to 10 files may be specified.

AFTER=filename

The spoolin process begins with the file following the one specified here. This operand should be given if an aborted spoolin process is resumed or if files at the end of the floppy disk are to be selected.

VOL[UME]=vsn

Specifies the volume serial number of the floppy disk with which spoolin begins. If this floppy disk contains a file which is continued on another floppy disk, SPOOL continues reading in. Otherwise spoolin is terminated (implicit USE=NO).

SDVC
Direct spoolout jobs to specific device

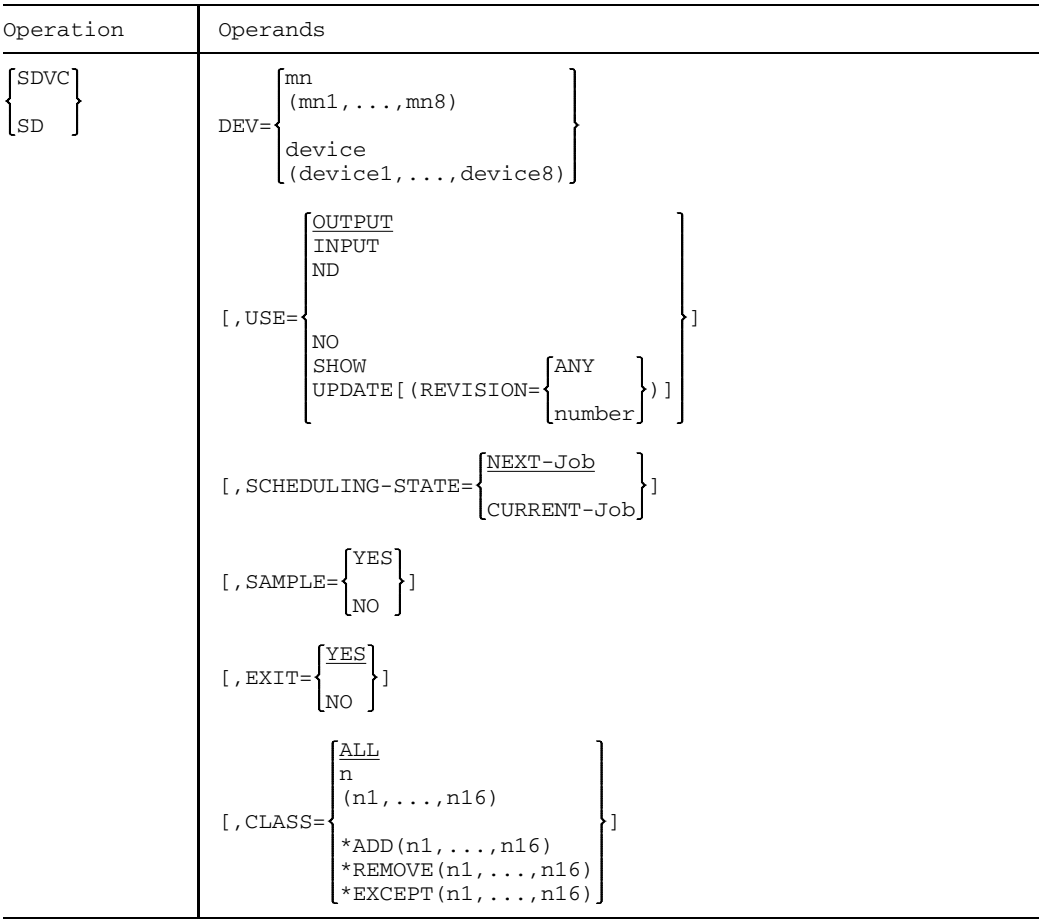
Function group: RSO/SPOOL management
User group: System administration, RSO device administrators

Command description

The SDVC command is used to control
the activities of all SPOOL devices (including tape devices).

The SDVC command can be used to
- activate SPOOL devices as output devices
- redirect laser printer output to line printer
- activate SPOOL devices as input devices (replay tapes)
- deactivate active SPOOL devices
- update scheduling operand values
- output the current scheduling operand values.

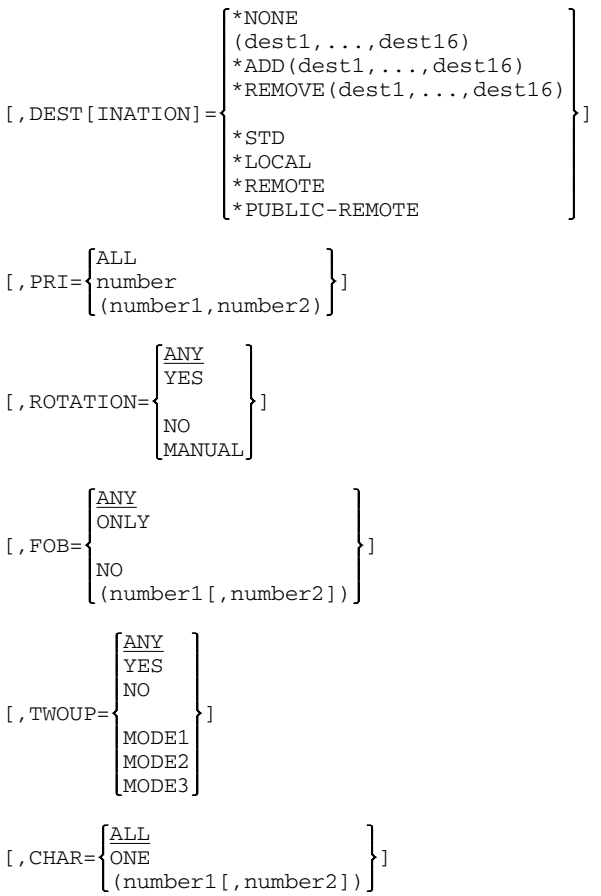
Format



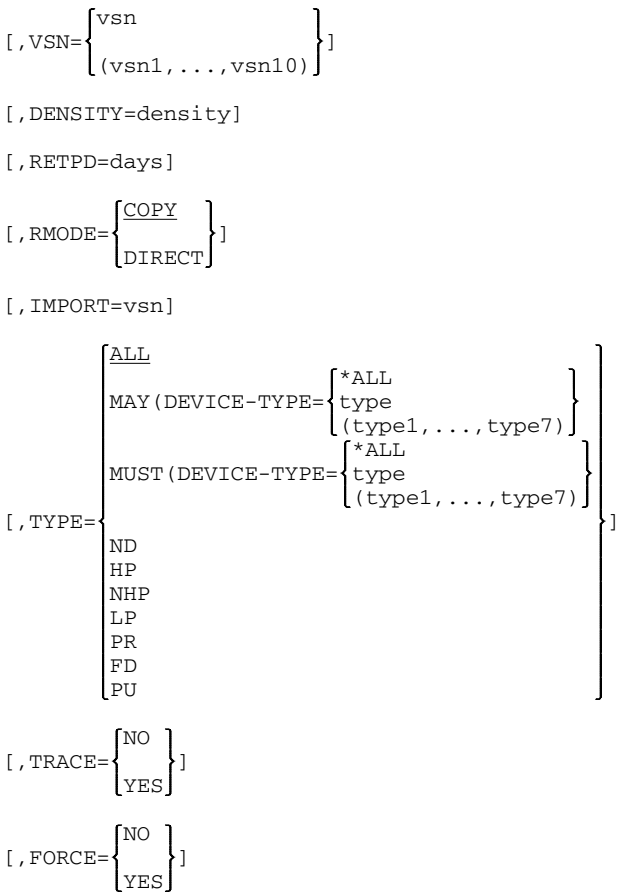
continued →

Operation	Operands
[SDVC] {SD } (cont.)	[,USERID={ALL userid (userid1,...,userid16) *ADD(userid1,...,userid16) *REMOVE(userid1,...,userid16) *EXCEPT(userid1,...,userid16)}] [,FORM={ALL *STD form (form1,...,form16) ((form1,...,form16)) ((ALL)) *ADD(form1,...,form16) *REMOVE(form1,...,form16) *EXCEPT(form1,...,form16) *EQUIVALENT-EXCEPT(form1,...,form16)}] [,DIA={ALL ovly (ovly1,...,ovly16) *ADD(ovly1,...,ovly16) *REMOVE(ovly1,...,ovly16) *EXCEPT(ovly1,...,ovly16)}] [,PNAME={ALL name (name1,...,name16) *ADD(name1,...,name16) *REMOVE(name1,...,name16) *EXCEPT(name1,...,name16)}] [,ACCOUNT={ALL number (number1,...,number16) *ADD(number1,...,number16) *REMOVE(number1,...,number16) *EXCEPT(number1,...,number16)}]

continued →

Operation	Operands
{SDVC / SD} (cont.)	

continued →

Operation	Operands
SDVC SD (cont.)	

Description of the operands

DEV

Devices to be processed.

If USE=SHOW is specified at the same time,

- DEVICE may be omitted
- the DESTINATION operand may be given instead of DEVICE
- wildcards may be used for device name specification (e.g. SD DEV=*6,USE=SHOW causes information on all devices whose names end with the digit 6 to be output); if wildcards are used, the default value *LOCAL is set for the DESTINATION operand
- full information on each specified device is output if several complete device names are entered
- any further operand (except STATE) is rejected if a complete device name is given
- a device name may be specified instead of a mnemonic code; in this case the SPOOL parameter file is searched for the name and the associated mnemonic code for this local printer is used (otherwise the SPOOL parameter file and the printer information contained in it will be ignored). If a device name is specified, all subsequent commands referring to this printer must use the same name. The link between device name and printer is not cancelled until the command SDVC,USE=NO is issued.

=mn

Specifies the mnemonic code of the device
- to be activated
- to be deactivated
- on which information is to be output on the screen
- whose scheduling parameters are to be changed.

Note

If DEV=mn is specified, the highest recording density for the tape is assumed as the default value.
Replay tape processing is terminated by entering DEV=mn and USE=NO.

=(mn1,...,mn8)

Up to 8 devices can be entered for which identical attributes, as specified in further operands of this command, are to apply.
The following spoolout devices are possible:
printers, RSO printers, floppy disk units, tape devices. However, RSO printers must not be specified together with other devices.

=device

Specifies an RSO printer or a local printer.

=(device1,...,device8)

Specifies a list of (local SPOOL or RSO) printers.
Wildcards are permitted in conjunction with the USE=SHOW operand.

USE

One or more devices (up to 8) are to be:

- activated as an output device (OUTPUT)
- activated as an input device (INPUT)
- deactivated (NO)
- selected for displaying device information (SHOW)
- selected for updating scheduling operand values (UPDATE)
- selected for redirecting laser printer output to a line printer (ND)

Compatibility of device types with the USE operand

	Operand values of USE					
Device types	OUTPUT	ND	INPUT	SHOW	UPDATE	NO
Printer	x	x		x	x	x
Floppy disk / output	x			x	x	x
Tape / output	x			x	x	x
Tape / input			x	x		x

x: permissible values; in all other cases the command is rejected.

Compatibility of operand types with the USE operand

	Operand values of USE				
Operand types	OUTPUT / ND	INPUT	SHOW	UPDATE	NO
Scheduling operands	x	x	x	x	
Printer operands	x			x	
Tape operands	x	x			
STATE operand			x		

x: permissible values; in all other cases the command is rejected.

Scheduling operands include: CLASS, FORM, USERID, DIA, PNAME, ACCOUNT, DESTINATION, PRI, ROTATION, FOB, CHAR, TWOUP, TYPE.

Printer operands include: SAMPLE, EXIT.

Tape operands include: DENSITY, RETPD, RMODE, IMPORT, VSN.

USE

Defines how the devices are to be used.

=OUTPUT

The devices identified via the DEV operand are to be used as output devices.

=INPUT

The replay tape identified via the DEV operand is to be used as an input device.

Note

- If USE=INPUT applies, only one single volume serial number (VSN) can be specified.
- The scheduling operand values cannot be changed for an input device (tape / floppy disk), i.e. the REVISION operand is rejected in this case.

=NO

The devices identified via the DEV operand are no longer to be used as I/O devices once current processing is concluded, but returned to the system.

=ND

Laser printer output (3350/3352 or 3351/3353) is to be redirected to the line printer specified in the DEV operand.
This is not possible, however, if CONTROL=PHYS was entered in the corresponding PRINT job.

=SHOW

Information on the devices named under DEV is to be output to SYSOUT.

The spinoff mechanism (see the PROCEDURE command in the manual *User Commands (ISP Format)* [3]) is triggered if USE=SHOW is specified in a procedure or in batch mode and the specified device cannot be found.

=UPDATE

Scheduling operand values are to be modified.
The number of the processing status (REVISION) of an active device is incremented by 1 for each SDVC command if the UPDATE operand

has been specified. When the counter has reached the value 255, it is reset to 1. If the specified device is not active, the command is rejected.

Operand values of the scheduling operands CLASS, FORM, USERID, DIA, PNAME, ACCOUNT, DESTINATION, PRI, ROTATION, FOB, CHAR, TWOUP, TYPE not specified in SDVC...USE=UPDATE remain unchanged. Operands where a list of values may be specified (CLASS, FORM, USERID, DIA, PNAME, ACCOUNT, DESTINATION) are treated as follows:
If no constant is given, or if the constant *ALL or *EXCEPT is specified together with a list, the specified list replaces any previous list. If the constant *ADD or *REMOVE is specified, the associated list is added to or removed from the existing list, respectively. If *REMOVE is specified with a name which has not been entered, the SDVC command is rejected.

=UPDATE[(REVISION=ANY)]

The scheduling operand values for the specified output device are to be changed irrespective of the processing state (REVISION).

=UPDATE[(REVISION=number)]

The scheduling operand values are to be changed for the processing state identified by "number" (REVISION = number). If the specified number does not match the number currently contained in the table, the SDVC command is rejected.

SCHEDULING-STATE

Can only be entered together with USE=SHOW and determines the status of the device on which information is to be output. If the scheduling operand values are changed (SDVC USE=UPDATE) while a PRINT job is being processed, the scheduling criteria for this device before the update (current values) and after the update (valid for the subsequent job) can be output prior to completion of that job.

=NEXT-JOB

The values for the next scheduling operation are output by default, i.e. if a job is being processed on the specified device, the new scheduling values applying to the subsequent job will be output.

=CURRENT-JOB

The scheduling values for the current job are output even if they have already been changed via SDVC USE=UPDATE for the subsequent job. If no job is currently processed on the specified device, the valid scheduling criteria for the subsequent job are output on the screen.

SAMPLE

In the case of a printout on forms the system administration can request a sample print in order to be able to correct the paper position, if necessary, before the actual printout. The type of stationery is defined in the FORM operand, which can be specified in the PRINT command or, by the operator or system administration, in the SDVC command. The print output is thus directed to the printer with the specified stationery.

The sample printout is performed using the original file. In order to protect the sample copies against misuse the data is modified in the process, i.e. all letters are replaced with "X" and all digits with "0".

To add a dynamic element to the SAMPLE function, the user receives message SPS0224 via SYSOUT. A response is required stating whether a sample printout is desired and, if yes, for how many pages.

Note
The SAMPLE operand is rejected for LP65 printers.

EXIT

Defines whether the EXIT routines are to be called during spoolout.

=YES

The EXIT routines are called if they are active for any devices.

=NO

The EXIT routines are not called, even if they are active.

CLASS

Defines which jobs can be processed on the specified devices (depending on the spoolout class). Both positive and negative lists may be specified. One spoolout class per account number may be entered for each user in the user catalog.

If the operand is omitted,
- *ALL is assumed if no scheduling values have yet been changed during the current session
- the previously valid value is retained for all other processing states:
  1 ≤ REVISION ≤ 255.

=ALL

All spoolout classes are admitted.

=n

Only one spoolout class is admitted.
Possible values: 1 ≤ n ≤ 255.

=(n1,...,n16)

Up to 16 spoolout classes may be specified. A job with a spoolout class which is not contained in this positive list cannot be processed on the specified devices. This list replaces any existing positive list for the specified devices.

=*ADD(n1,...,n16)

The members specified here (up to 16) are to be added to an existing list of spoolout classes for the specified devices. The list can have no more than 16 members. The specified devices must be active.

=*REMOVE(n1,...,n16)

The members specified here are to be removed from an existing list of spoolout classes for the specified devices. If a member is specified which is not contained in the list, the SDVC command is rejected. The specified devices must be active.

=*EXCEPT(n1,...,n16)

A job can only be processed on the specified devices if it is not associated with one of the spoolout classes (up to 16) specified here (negative list). This list replaces any existing negative list for the specified devices.

USERID

Defines which jobs can be processed on the specified devices (depending on the user identification). Positive and negative lists can be specified.

If the operand is omitted,

- *ALL is assumed if no scheduling values have yet been changed during the current session
- the previously valid value is retained for all other processing states:
  1 ≤ REVISION ≤ 255.

=ALL

All user identifications are admitted.

=userid

Only the specified user identification is admitted. Jobs from other user IDs cannot be processed on the specified devices.

=(userid1,...,userid16)

Up to 16 user IDs can be specified. A job from a user ID which is not contained in this list cannot be processed on the specified devices. This list replaces any existing positive list for the specified devices.

=*ADD(userid1,...,userid16)

The members specified here (up to 16) are to be added to an existing list of user IDs for the specified devices. The list can have no more than 16 members. The specified devices must be active.

=*REMOVE(userid1,...,userid16)

The members specified here are to be removed from an existing list of user IDs for the specified devices. If a member is specified which is not contained in the list, the SDVC command is rejected. The specified devices must be active.

=*EXCEPT(userid1,...,userid16)

A job can only be processed on the specified devices if it is not started under one of the user IDs specified here. This list replaces any existing negative list of user IDs for the specified devices.

FORM

Defines which jobs can be processed on the specified devices (depending on the form to be used). Positive and negative lists with or without a MOUNT message to the operator can be specified. The length of the form must be set on the printer.

=ALL

All forms are permitted.
For RSO: see *RSO* manual [11].

=*STD

Assigns a standard form for RSO and local SPOOL. In this case the list of forms defined in the SPOOL parameter file is used.

=form

Only the specified form is permitted.

=(form1,...,form16)

Up to 16 forms can be specified. Only jobs using one of these forms will be processed. This list replaces any existing positive list of forms for the specified devices.

Note:

Not for RSO. For RSO devices, only a list of equivalent forms can be specified (in double brackets).

=((form1,...,form16))

Up to 16 equivalent forms can be specified. The operator does *not* receive a message requesting a form change if the current job requires a form other than the one mounted. The job will then be processed with one of the forms specified in this list. This list replaces any existing list of equivalent forms for the specified devices.

=((ALL))

All forms are permitted. No MOUNT message appears at the operator terminal.

=*ADD(form1,...,form16)
The specified forms are added to the existing list of equivalent or non-equivalent forms. The list may contain up to 16 members.

=*REMOVE(form1,...,form16)
The specified forms are removed from the existing list of equivalent or non-equivalent forms.
If a member is specified which is not contained in the list, the SDVC command is rejected.

=*EXCEPT(form1,...,form16)
The specified forms must not be used (job is aborted). This list replaces any existing negative list of forms for the specified devices.

=*EQUIVALENT-EXCEPT(form1,...,form16)
The specified forms are not used. The operator does *not* receive a message requesting a form switch. The job will be processed with a form which is not contained in this negative list. This list replaces any existing negative list of equivalent forms for the specified devices.

DIA
Defines which jobs can be processed on the specified devices (depending on the specified overlays). Both positive and negative lists can be specified. The operand is rejected for RSO printers.
If the operand is omitted,
- *ALL is assumed if no scheduling values have yet been changed during the current session
- the previously valid value is retained for all other processing states:
  1 ≤ REVISION ≤ 255.

=ALL
All overlays are permitted.

=ovly
Only the specified overlay is permitted.

=(ovly1,...,ovly16)
Up to 16 overlays can be specified. The specified overlays can be used for printout. This list replaces any existing positive list of overlays for the specified devices.

=*ADD(ovly1,...,ovly16)
The specified overlays are added to the existing list. The specified devices must be active.

=*REMOVE(ovly1,...,ovly16)
The specified overlays are removed from the existing list. If a member is specified which is not contained in the list, the SDVC command is rejected. The specified devices must be active.

=*EXCEPT(ovly1,...,ovly16)
The specified overlays must not be used. This list replaces any existing negative list of overlays for the specified devices.

PNAME
Defines which jobs can be processed on the specified devices (depending on the job name). Both positive and negative lists can be specified.

If the operand is omitted,
- *ALL is assumed if no scheduling values have yet been changed during the current session
- the previously valid value is retained for all other processing states:
  1 ≤ REVISION ≤ 255.

=ALL
All job names are permitted.

=name
Only the specified job name is permitted. Jobs with other names cannot be processed on the specified devices.

=(name1,...,name16)
List with up to 16 job names. Only jobs using these names will be executed. This list replaces any existing positive list of job names for the specified devices.

=*ADD(name1,...,name16)
The specified job names are added to the existing list. The specified devices must be active.

=*REMOVE(name1,...,name16)
The specified job names are removed from the existing list. If a member is specified which is not contained in the list, the SDVC command is rejected. The specified devices must be active.

=*EXCEPT(name1,...,name16)
The specified job names must not be used (negative list). This list replaces any existing negative list of job names for the specified devices.

ACCOUNT
Defines which jobs can be processed on the specified devices (depen-

ding on the account number). Both positive and negative lists can be specified.

If the operand is omitted,
- *ALL is assumed if no scheduling values have yet been changed during the current session
- the previously valid value is retained for all other processing states:
  1 ≤ REVISION ≤ 255.

=ALL

All account numbers are permitted.

=number

Only the specified account number is permitted. Jobs with other account numbers cannot be processed on the specified devices.

=(number1,...,number16)

Up to 16 account numbers may be specified. A job with an account number which is not contained in this list cannot be processed on the specified devices. This list replaces any existing positive list of account numbers for the specified devices.

=*ADD(number1,...,number16)

The members specified here (up to 16) are to be added to an existing list of account numbers for the specified devices. This list can have no more than 16 members. The specified devices must be active and the following processing state must apply:
REVISION ≠ INITIAL.

=*REMOVE(number1,...,number16)

The members specified here are to be removed from an existing list of account numbers for the specified devices. If a member is specified which is not contained in the list, the SDVC command is rejected. The specified devices must be active and the processing state REVISION ≠ INITIAL must apply.

=*EXCEPT(number1,...,number16)

A job associated with one of these account numbers cannot be processed on the specified devices (negative list). This list replaces any existing negative list of account numbers for the specified devices.

DESTINATION

Designates one or more pools to be assigned to the specified SPOOL devices. Each pool name given in the SDVC command must have been entered in the SPOOL parameter file (see ADD-PRINTER-POOL) and all started devices must belong to the specified pools (entry in SPOOL parameter file).

=*NONE

Default setting if USE=OUTPUT is specified at the same time. No list of output pools is to be defined for the specified devices, which can thus only be referenced via the device name (not the name of a pool) in the PRINT command, by means of the DEVICE or DESTINATION operand.

=dest

Only jobs to be output via the pool specified here can be processed on the specified devices.

=(dest1,...,dest16)

Jobs to be output via a pool contained in this positive list can be processed on the specified RSO devices. If a device is active, any existing positive list of pools for this device is replaced by the list of pools given here.
If one of the specified pool names has not been defined for the specified devices in the SPOOL parameter file (A-P-P or M-P-P), the command is rejected.

=*ADD(dest1,...,dest16)

The elements specified here are to be added to an existing list of pools for the specified devices.
This operand value is valid only in conjunction with USE=UPDATE (for modifying the pool entries for printout). The specified devices must be active at this time.
If the list given here results in the activation of more than 100 pools for the specified devices, the SDVC command is rejected.

=*REMOVE(dest1,...,dest16)

The elements specified here are to be removed from an existing list of pools for the specified devices.
This operand value is valid only in conjunction with USE=UPDATE (for modifying the pool entries for printout). An element not already contained in the list must not be specified here, otherwise the SDVC command is rejected.
The specified devices must be active at this time.
If all pools are removed from the list, another SDVC command must be issued to assign at least one pool to the specified devices.

=*STD

This operand value is valid only in conjunction with USE=OUTPUT or USE=UPDATE (for initializing or modifying the pool entries for printout). A list of standard pools is taken from the SPOOL parameter file. This list contains all the pools assigned to the specified devices (see ADD-PRINTER-POOL). If the specified devices are active, any existing

list is replaced by this list of standard pools.
Up to 100 pools can be activated for a device. If the list of standard pools contains more than 100 pools, only the first 100 pools are activated for the specified devices and a message to that effect is output for the user.

=*LOCAL
Default value if USE=SHOW is specified. Information on all local SPOOL devices is to be output to SYSOUT.

=*REMOTE
Can only be specified in conjunction with USE=SHOW. Information on all RSO devices is to be output to SYSOUT.

=*PUBLIC-REMOTE
Can only be specified in conjunction with USE=SHOW. Information on all RSO devices defined as public devices is to be output to SYSOUT.

PRI
Defines the priorities jobs must have in order to be processed on the specified devices. Values from 30 (highest priority) to 255 (lowest priority) are permitted.

=ALL
Jobs with any priority can be processed on the specified devices.

=number
All jobs with a priority > "number" can be processed on the specified devices.

=(number1,number2)
All jobs with "number1" ≤ priority ≤ "number2" can be processed on the specified devices.

ROTATION
For HP laser printers only. This determines whether jobs with or without page rotation can be output on the specified device.

=ANY
All jobs (with or without page rotation) can be output.

=YES
Only jobs making use of the page rotation module can be output.

=NO
Only jobs not requiring the page rotation module can be output.

=MANUAL
In contrast to *NO, this entry enables the operator to address the

page rotation module manually via a hardware switch. All pages are then rotated.

FOB

For HP laser printers only.
This defines which jobs can be output on the device (depending on the FOB size).
The size of the FOB is determined by the number of sublines (see the manual *SPOOL Part 1, System Description* [12]).

=NO

Jobs addressing an FOB cannot be output on the specified device.
The value *NO corresponds to the value (0,0).

=ONLY

Only jobs addressing an FOB can be output.

=ANY

Any job (with or without FOB) can be output.

=(number1[,number2])

Only jobs using an FOB whose size is within the specified value range (number1,number2) can be output.
Permissible values:
0 ≤ number1 ≤ number of sublines permitted for the device
0 ≤ number2 ≤ 672

In order to speed up loading, the operand value should correspond to the number of actual sublines (e.g. 100 for an FOB with 100 sublines).

During initialization of a device, SPOOL checks the buffer size for an FOB.
If the buffer is smaller than the values given in SDVC, either a message is sent to the operator terminal and the values are adjusted (if number1 ≤ number of sublines permitted for the device), or the command is rejected (if number1 > number of sublines permitted for the device). The operator may either accept or reject the deviating values for the device. If they are rejected, this amounts to an implicit SDVC USE=NO.

The input (372) is interpreted as (372,), i.e. as the lower limit.

CHAR

For HP laser printers only.
This defines which jobs can be output on a device (depending on the number of character sets they use). During initialization of a device via SDVC a check is made as to how many character sets can be

loaded on the device. If this value is smaller than one of the two specified in SDVC, either a message is sent to the operator terminal and the value for number2 is adjusted (if number1 ≤ number of the character sets which can be loaded on the device), or the command is rejected (if number1 > number of the character sets which can be loaded on the device).

=ALL

All jobs can be output on the specified device.

=ONE

Only jobs using just one character set can be output on the specified device (for SPOOL devices on which jobs with the operand CONTROL=NO in the PRINT command are to be processed).

=(number1[,number2])

Only jobs using a number of character sets within the specified value range (number1,number2) can be output.
Possible values:
1 ≤ number1 ≤ number of character sets which can be loaded on the device
1 ≤ number2 ≤ 64
The input (4) is interpreted as (4,), i.e. as the lower limit.

TWOUP

Defines the printer attribute TWO-UP-PROCESSING for spoolout jobs on HP54 printers, i.e. whether and in which sequence two adjacent pages are to be output on paper with a width of 17 inches. HP54 printers support this function, which prints two pages with a width of up to 8.5 inches next to each other, in three different modes.
TWO-UP printing is controlled via the operator terminal. In any case, the start position of the page to be output on the right-hand side of the form can be selected from the operator terminal.

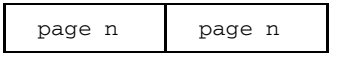
Mode 1 (operand MODE-1 in the SPSERVE statement ADD-SPOOL-FORM)

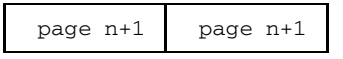
Two **subsequent** pages are always printed on one form page:

.
.
.

Mode 2 (operand MODE-2 in the SPSERVE statement ADD-SPOOL-FORM)

Two **identical** pages are always printed on one form page:

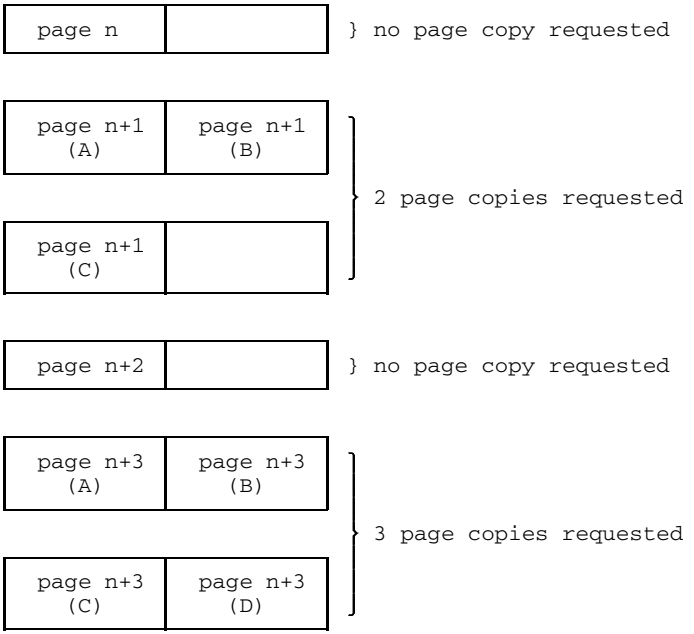




.
.
.

Mode 3 (operand MODE-3 in the SPSERVE statement ADD-SPOOL-FORM)

Printout is controlled via special records in the form definition:



TWO-UP processing is supported via a new operand in the form record for the HP54 printer (see SPSERVE manual, statement ADD-SPOOL-FORM). Possible operand values are NO, MODE-1, MODE-2 and MODE-3.
With the request to insert a particular form, the operator is also asked to set the TWO-UP mode defined in the form entry on the printer.

=ANY

All jobs for the appropriate form (with or without TWO-UP processing) can be output.

=YES

Jobs with TWO-UP processing are supported; the form/mode assignment is to be effected implicitly via the corresponding specifications during form definition.

=NO

Jobs with TWO-UP processing are not supported.

=MODE1

All jobs for the appropriate form are to be output in mode 1 (see above).

=MODE2

All jobs for the appropriate form are to be output in mode 2 (see above).

=MODE3

All jobs for the appropriate form are to be output in mode 3 (see above).

VSN

The volume serial number of one or more replay tapes used as input/output tape(s) for the printer is specified.

=vsn

Volume serial number (up to 6 alphanumeric characters).

=(vsn1,...,vsn10)

No more than 10 volume serial numbers can be specified. The first VSN is used to form the file name of the directory file containing all the jobs required for reprocessing the replay tape (SR.vsn1).
Once the replay tape has been generated, the directory file is copied to the tape in order to enable the tape to be exported from one computer center to another. When a replay tape is exported, the system administration must erase the directory file in public space.

Replay tape generation is terminated using SD DEV=mn, USE=NO. No more spoolout jobs will then be written to the replay tape. The tape unit mn is released. The job being written is finished.

Note

If the operand USE=INPUT is specified, only one volume serial number can be entered. The volume serial numbers of further tapes are taken over from the directory file. The correct sequence of the tapes is thus ensured.

DENSITY

Designates the recording density of the magnetic tape to be used.

=T9P/T1600

A tape with a recording density of 1600 bpi is to be used as the spoolout device.

=T9G/T6250

A tape with a recording density of 6250 bpi is to be used as the spoolout device.

Note

The operand is not valid for replay tape reprocessing (input). The operand is also illegal if USE=NO is specified.

RETPD=days

The retention period for files on replay tapes is specified in days.
Possible values: 0 to 999.
Default: 10

RMODE

Specifies the type of replay tape reprocessing.

=COPY

The files are to be copied from the replay tape to a temporary (EAM) file before output.
The temporary files are deleted after spoolout.

=DIRECT

The files are to be output directly to an appropriate volume.

Note

If a replay file is to be printed and either COPIES or FROM=negative-value is specified in the PRINT command, or if it is a multi-volume file, RMODE=COPY is assumed, even if RMODE=DIRECT was specified.
The same happens when a replay file is to be output with the PUNCH command and the COPIES operand is specified or the file extends over several volumes.

COPY mode is used when an input file is processed more than once, because there is then the possibility of dispensing with a large part of tape processing, including the mounting and dismounting of multi-file tapes.

IMPORT=vsn

If a replay tape is to be processed by a different computer center, the appropriate directory file must be imported prior to tape spoolout. For this purpose the volume serial number of the tape containing the directory file must be specified. If the directory file (SR.vsn) cannot be located, the tape cannot be processed.

This operand is only valid for replay tape input processing, otherwise it is ignored.

TYPE

Specifies the print or floppy disk jobs to be written to or read from replay tape.
This operand is not applicable unless a replay tape has been assigned either as output device (USE=OUTPUT) or as input device for reprocessing (USE=INPUT).

=ALL

All jobs are to be written to or read from replay tape.

=MAY(DEVICE-TYPE=(type1,..type7))

This operand enables a printer type or a list of printer types to be defined which are to be used for job processing.
MAY means that SPOOL **can** select a printer type from the list; no specific printer type is declared (see example).
The following entries are permitted for "type":

```
LP     for line printers of type 3337, 3338 or 3339
LP48   for line printers of type 3348 or 3349
LP65   for line printers of type 3365
ND     for ND laser printers of type 3350 or 3352
HP54   for HP laser printers of type 2040 or 2190
HP     for HP laser printers of type 3351 or 3353
```

=MUST(DEVICE-TYPE=(type1,...type7))

This operand enables a printer type or a list of printer types to be defined which are to be used for job processing.
MUST means that SPOOL **has to** select a printer type from the list; the jobs must not be processed on any other type of printer (see example).

Example

A number of jobs are to be processed on different types of printer:

Job number:	Printer type:
1	LP
2	ND
3	HP
4	ND, HP
5	LP, ND
6	LP, HP
7	LP, ND, HP

The following jobs are then selected by means of the operands TYPE=MAY or TYPE=MUST:

Operand value:	Jobs:	
TYPE=MAY(DEVICE-TYPE=(ND,HP))	2, 3, 4, 5, 6, 7	(a)
TYPE=MUST(DEVICE-TYPE=(ND,HP))	2, 3, 4	(b)

(a)

All those jobs are selected which can be processed in a computer center with ND and HP printers.

(b)

All those jobs are selected which **cannot** be processed in a computer center which has neither an ND nor an HP printer.

=LP

All jobs for line printers 3337, 3338 or 3339 are to be written to or

read from replay tape.

=ND

All jobs for ND laser printers 3350 or 3352 are to be written to or read from replay tape.

=HP

All jobs for HP laser printers are to be written to or read from replay tape.

=NHP

All jobs for ND and HP laser printers are to be written to or read from replay tape.

=PR

All printer jobs are to be written to or read from replay tape.

=FD

All jobs for floppy disk devices are to be written to or read from replay tape.

=PU

All jobs for floppy disk devices are to be written to or read from replay tape.

Note

– Input tapes and output tapes are processed differently.

– The values of the TYPE operand and the corresponding items displayed by the STATUS command are not 100% identical.

TRACE

For RSO only (see the *RSO* manual [11]).

FORCE

For RSO only (see the *RSO* manual [11]).

Notes

– A maximum of 16 classes, user IDs, spoolout names, account numbers or form numbers may apply to each output device.

– If a sample printout was performed and printing was suspended, the sample printout remains the same upon restarting.

– The operands TYPE, FORM, EXIT, SAMPLE, VSN and RETPD are not valid for floppy disks. Although they will not be rejected, no processing will take place.

– Tape processing

  a) Spoolout jobs originating from a replay tape are output normally, even if the

jobs on tape require different device types (printer, floppy disk device) or different forms.

b) Replay tapes can be printed out by any BS2000 computer center running the appropriate SPOOL version.
The validity check for PRINT jobs is carried out taking into account the system configuration of the computer center where the replay tape was created.
If this replay tape is also to be used in another computer center, the system configuration of that other computer center must also be taken into account when the replay tape is created.

c) During generation of a replay tape (USE=OUTPUT) the system administration can issue additional SD commands, specifying the same tape device, in order to modify the selection criteria (CLASS, FORM, USERID, PRI, DIA, PNAME, ACCOUNT, DESTINATIONS), but cannot alter the list containing the VSNs.

d) During replay tape printout (USE=INPUT) the system administration must not alter the selection of jobs. However, the replay run may be stopped (by means of USE=NO) and restarted with new selection operands.

e) A temporary catalog entry with the name TP.<tsn>.<date and time> is generated for replay tape processing. The user must ensure when starting processing that no file with this name already exists ("tsn" is the task sequence number of the job).

– The RETPD, RMODE and IMPORT operands are only valid for SPOOL tape processing and are ignored when specified for any other device.

– If the exit routines are not active when spoolout is initiated, the entire process is executed without the exit call. This applies even if the exit routines become active during the process.

– If the exit routines are active and if EXIT=Y is specified, spoolout takes the exit routines into account.
If, however, the exit routines are deactivated during the spoolout process, the operator receives a message inquiring whether the process is to be aborted or continued without the exit interface.

– For 8414/8415 remote stations only:
If the exit routines are deactivated during spoolout, the spoolout process continues as usual.

Operand interdependencies

Operands	Line printer	Laser printer	Floppy disk device	Tape devices Input	Tape devices Output	RSO printer	
DEV	M	M	M	M	M	M	
USE							
INPUT	R	R	R	M	R	R	
OUTPUT	A	A	A	R	A	A	
NO	A	A	A	A	A	A	
ND	A	A	R	R	R	R	
DESTINATION	A	A	I	A	A	A	dependent on the scheduler
CLASS	A	A	A	A	A	A	
FORM	A	A	I	A	A	M	
USERID	A	A	A	A	A	A	
DIA	R	A	R	A	A	R	
PNAME	A	A	A	A	A	A	
ACCOUNT	A	A	A	A	A	A	
EXIT	A	A	I	R	R	A	
SAMPLE	A	A	I	R	I	A	
PRI	A	A	A	A	A	A	
TWOUP	R	A	R	A	A	R	
ROTATION	I	A	I	A	A	R	
FOB	I	A	I	A	A	R	
CHAR	I	A	I	A	A	R	
VSN	I	I	I	M	A	R	tape processing parameters
IMPORT	R	R	R	A	R	R	
RETPD	I	I	I	R	A	R	
TYPE	I	I	I	A	A	R	
RMODE	R	R	R	A	R	R	
DENSITY	R	R	R	R	A	R	

A: Operand is accepted
I: Operand is ignored
M: Operand is mandatory
R: Operand is rejected

SET-DSSM-OPTIONS
Activate/deactivate DSSM logging

Function group: Subsystem management
User group: System administration

Command description

Logging to the DSSMLOG file strains performance. This function should therefore only be activated in the case of actual errors. The command can be issued regardless of the status of subsystem management. At system startup, logging is always inactive, but can be activated via the parameter service statement LOGGING=ON. If the SET-DSSM-OPTIONS command is part of a procedure and an error occurs during command execution, the procedure does not branch to the next STEP but continues with the next command.

Format

Operation	Operands
SET-DSSM-OPTIONS	[LOG=<u>OFF</u> / ON] [,TITLE='text']

Description of the operands

LOG

Determines whether DSSM-specific logging for error diagnosis is carried out.

=<u>OFF</u>

No DSSM-specific logging takes place.

=ON

All the DSSM-specific data relevant to error diagnosis is written to the DSSMLOG.date.time file.

TITLE='text'

Defines a header line to be included in the logging file. The specified text is written to the logging file as the first data record. If the logging file is already open, no new file is created, but the existing one is extended from the current position.
When the logging function is inactive, this operand is ignored.

SET-PUBSET-ATTRIBUTES
Define characteristics of a pubset

Function group: Catalog directory management
User group: System administration

Command description

This command helps define the following pubset characteristics:

- shareability
- owner
- system identification (SYSID) of the processor using this pubset as the home pubset

Only the PUBRES of the relevant pubset needs to be available
for command execution.
When assigning a SYSID, which internally serves as a synonym for the processor's BCAM name, a distinction must be made as to the type of catalog identifier.

- One-digit catalog identifier in accordance with PUBxyy naming convention

```
PUB = differentiation to private disks                    }
x   = catalog identifier, 1 character                     } 6-character
yy  = number within the pubset, 2 characters              } VSN
```

  The SYSID must be **identical** with the catalog identifier (x).

- Multi-digit catalog identifier in accordance with xxx.yy naming convention

```
xxx = catalog identifier, 2-4 characters                  }
.   = separator between catalog identifier and number     }
      within the pubset, differentiation to private       } 6-character
      disks                                               } VSN
yy  = number within the pubset, 1-3 characters            }
```

  The SYSID must be an integer in the range **65...192**.

Note that two processors of an MSCF network or two processors sharing an SPD must not be assigned the same SYSID. Otherwise, in the case of SPD operation, it is no longer possible to determine which sharer system is holding a file lock.

Newly defined characteristics do not take effect dynamically for imported pubsets, but only after another IMCAT command.

Format

Operation	Operands
SET-PUBSET-ATTRIBUTES SET-P-A	PUBLIC-VOLUME-SET=catid [,DEVICE-TYPE=device] [,SYSID={*UNCHANGED / sysid}] [,MASTER={*UNCHANGED / *NONE / sysid}] [,SHARE={*UNCHANGED / NO / YES}]

Description of the operands

PUBLIC-VOLUME-SET=catid

Pubset (1-4 characters) for which the subsequent definitions are to apply.

DEVICE-TYPE=device

Device type of the PUBRES of the pubset concerned.
This operand may be omitted if an MRSCAT entry with device type exists for this pubset.

SYSID

Assigns a SYSID for the pubset.

=sysid

If the pubset with naming convention PUBxyy is used as the home pubset, the one-character identification specified here (corresponding to the catalog identifier) is to be employed as the SYSID for the processor. In the case of a catalog identifier comprising 2-4 characters, an integer from the range 65 to 192 must be assigned as the processor's SYSID.

MASTER

Defines pubset ownership.

=*NONE

Ownership is not explicitly defined; it is assumed by the system executing the first IMCAT.

=sysid

SYSID of the processor which is to assume ownership of the pubset.

SHARE

Determines if the pubset is to be shareable.

=NO

Shareability is excluded for this pubset.

=YES

The pubset can be shared, provided the necessary prerequisites and conditions are observed (see *MSCF* manual [8]).

SET-REPLOG-READ-MARK
Close REPLOG file temporarily

Function group: System correction management
User group: System administration

Command description

All the correction data (REPs) entered for system initialization and for the dynamically loaded subsystems is logged in the $SYSAUDIT.SYS.REPLOG.<date>.<sessno>.01 file.
The SET-REPLOG-READ-MARK command enables the system administration under TSOS - or, if SECOS is used, the security administrator under the SYSAUDIT identification - to close this file temporarily. All data logged up to that point can be analyzed and/or copied to a file. Correction data collected in the REPLOG file after the command was issued cannot be accessed by the system administration until another SET-REPLOG-READ-MARK has been given.

Format

Operation	Operands
SET-REPLOG-READ-MARK	

SEVER
Prohibit/permit user access to the system

Function group: User catalog management
User group: System administration

Command description

The SEVER command offers the following three functions:

- SET operand

A user lockout is entered in the user catalog of the specified pubset.
If this entry is given for the home pubset in which logon validation is effected, the user is thus denied access to the system.
If the entry is made for a data pubset, the lockout is stored there and evaluated only when that pubset assumes the role of
the home pubset.

- RESET operand

The temporary prohibition of access to a pubset (specified for a user ID via the SET operand) is revoked and the corresponding user catalog entry revised.
If the lockout affected the home pubset in which logon validation is effected, the user is thus able to access the system again.

- REMOVE operand

The entry for a user is deleted in the user catalog. The following sequence of operations applies:

First, the user's files and job variables are logically deleted.
– If errors occur during deletion, the user ID is locked instead of being deleted. All necessary measures must be taken to ensure the files can be deleted. Then the SEVER command with the REMOVE operand is to be repeated.
– Once the files have been successfully deleted, the user entry in the catalog is removed as well.
– If jobs of the user ID are still active, the user ID cannot be deleted. Instead, it is merely locked and the command has to be repeated later.

The command is rejected if an attempt is made to lock/delete any of the following system IDs:

SYSAUDIT, SYSDUMP, SYSGEN, SYSHSMS, SYSNAC, SYSPRIV, SYSSNAP, SYSSPOOL, SYSUSER, TSOS.

Format

Operation	Operands
SEVER	userid,{SET | RESET | REMOVE} [,{PUBLIC-VOLUME-SET | PVSID}={*HOME | catid}]

Description of the operands

userid

Specifies the user ID.

SET

Locks access to a pubset for the specified user ID.
The following message must be answered:
`"DO YOU WANT TO LOCK USER ID '(&00)' ON PVS '(&01)' "`

RESET

Releases the lockout activated with the SET operand.

REMOVE

Deletes a user entry in the user catalog.
The following message must be answered:
`"DO YOU REALLY WANT TO DELETE USER ID '(&00)' ON PVS '(&01)' "`

PUBLIC-VOLUME-SET

Defines the desired pubset, i.e. the user catalog for which one of the above functions is to take effect.

=*HOME

Designates the user catalog of the home pubset.
This means the user ID can no longer access the system in the case of a lockout.

=catid

Designates the user catalog of the pubset identified via the specified catalog ID (1-4 characters).

Example

```
/S-U-A USER=USERID1

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                 NO        SPACE-LIMIT       :      16777215
PASS       :                 NO        ADDRSPACE         :            16
PSWORD     :                MOD        RES-PAGES         :         32767
DEFCAT     :              N            MAXAREC           :           100
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO        ENF    :    NO    TPIGNORE :   NO
AIDRD      :   1    AIDWR  :   1        TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-----------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-----------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-----------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N


/SEVER USERID1,SET
%  SJM0203 DO YOU WANT TO LOCK USER ID 'USERID1' ON PVS 'N'  REPLY (Y=YES; N=NO)'
Y
/S-U-A USER=USERID1

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                YES        SPACE-LIMIT       :      16777215
PASS       :                 NO        ADDRSPACE         :            16
PSWORD     :                MOD        RES-PAGES         :         32767
DEFCAT     :              N            MAXAREC           :           100
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO        ENF    :    NO    TPIGNORE :   NO
AIDRD      :   1    AIDWR  :   1        TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-----------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-----------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-----------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N
```

SHARE
Declare object module shareable

Function group: Program control
User group: System administration

Command description

This command permits object modules to be loaded into non-privileged class 3/4 memory and declared shareable there.
Object modules frequently required by different users at the same time then exist only once at a well-defined memory location. Loading time and memory space are thus saved.
The relevant modules must be reentrant. The requisite user-specific data areas have to be created in a dynamically requested class 6 memory area. Up to 32 SHARE commands can be issued in one session. The validity of the various commands is limited to the duration of the session.

The command offers two operating modes: STD and ADV[ANCED]. In STD mode, which is compatible with BS2000 V9.5, only object modules (OMs) can be specified. In ADV mode, not only OMs but also link and load modules (LLMs) can be specified (see *BLS* manual [13]).
The following applies for LLMs whose *slices* (ordered sequence of CSECTs) are formed according to attributes:

- If there is no slice with the attribute PUBLIC, the entire LLM is loaded into the shared code area.
- If there are slices with the attribute PUBLIC, only these are loaded into the shared code area. The remaining slices are loaded into the user address space using EXEC/LOAD or the BIND macro instead of the SHARE command.

Since the SHARE command does not activate the autolink mechanism, all modules referenced by loaded modules must be loaded to the shared code area of the address space by means of the same command. If this is not done, an error message is output and both the load process and the calling task are aborted.
Loaded modules **cannot** be unloaded any more.

An alternative possibility of administering shared products is the treatment of shared programs as subsystems (see the *System Installation* manual [4]).

Format

Operation	Operands
SHARE	{modname / (modname,...)} [,libname] [,PRODNAME=progname] [,RUN-MODE={STD / ADV}]

Description of the operands

modname

Up to 8 or 32 characters specifying the name of the object module, the entry point, or the control section (CSECT). If the name of an entry point is given, all entry points relating to the corresponding module are shareable.

(modname,...)

Depending on the operating mode, up to 64 names can be specified (see RUN-MODE operand).

libname

Specifies the name of the object module library containing the above modules.
The library may be either an object module library (OML) or a PLAM library.
If this operand is omitted and RUN-MODE=STD the library named TASKLIB is used as the source; if RUN-MODE=ADV the standard library with the link name BLSLIB is used.
The file name must always be fully qualified. The library under the system administration ID must not be abbreviated by $. Creation of an object module library is supported by the LMR and LMS utility routines.

PRODNAME=progname

Designates the program name under which all the object modules specified via modname/(modname,...) are invoked.
If this operand is missing, the first module name entered for modname is used as the program name for the EXEC and LOAD commands or the BIND macro.

RUN-MODE

Identifies the operating mode.

=STD

Only object modules (OMs) are supported.
The system administration can specify up to 64 names of 8 characters each in the modname operand.

=ADV

Both object modules (OMs) and link and load modules (LLMs) are supported.
The system administration can specify up to 16 names of 32 characters each in the modname operand.

SHOW-ACCOUNTING-STATUS
Request information on accounting system

Function group: Accounting system
User group: System administration

Command description

The command outputs the following information on the accounting system:

- status of the accounting system
- name of the current accounting file
- time when the file was opened
- names of continuation files
- list of accounting records and record extensions which were explicitly switched on/off
- frequency of periodic scanning of accounting records
- names of cyclically monitored job classes

Format

Operation	Operands
SHOW-ACCOUNTING-STATUS SHOW-ACC	[INFORMATION INF =SUMMARY FILES PARAMETERS ALL]

Description of the operands

INFORMATION

Specifies the type of information desired.

=SUMMARY

If the accounting system is active, the information 'ACCOUNTING ACTIVE' plus the name of the current accounting file are output. If the accounting system is not active, the following is output: ACCOUNTINGNOTACTIVE.

=FILES

Provides information about the:

- activity/inactivity of the accounting system
- name of the current accounting file
- time when the file was opened
- continuation file names

=PARAMETERS

Outputs all the accounting records and record extensions that have been explicitly activated or deactivated. The output also includes the parameters for periodic scanning of particular accounting records and the names of the job classes which undergo special monitoring by the accounting system.

=ALL

The entire information is output.

Example

```
/SHOW-ACC
ACCOUNTING ACTIVE, FILENAME= SYS.ACCOUNT.90.11.24.007.01


/SHOW-ACC INF=FILES

ACCOUNTING STATUS INFORMATION
=============================

CURRENT ACCOUNTING FILE:              (AUTOMATIC)
------------------------

 SYS.ACCOUNT.90.11.24.007.01
 OPENED AT : 90-11-24, 10:37:04

ALTERNATE FILENAMES:
--------------------

 ACC1
 ACC2
 ACC3


/SHOW-ACC INF=PARAMETERS

ACCOUNTING STATUS INFORMATION
=============================

ACCOUNTING RECORD INFORMATION:
------------------------------

 RECORD IDS TURNED OFF:
  DALC  DRFA  PACC  RCPU  RSRV SPLI  TATR

 RECORD EXTENSIONS TURNED ON:
  UACC: ID
```

```
 RECORD EXTENSIONS TURNED OFF:
  JOBS: JD JP JR
  PRGS: CA ID PC TI
  PRGT: CA ID PC TI
  TASK: CA ID PC TI
  TDEV: ID VU

 ***** NOT LISTED RECORD IDS ARE TURNED ON *****

ACCOUNTING PROCESSING PARAMETERS:

 ACCOUNTING PERIOD : 20

 JOB-CLASSES :
  ** NONE SPECIFIED **


/SHOW-ACC INF=ALL

ACCOUNTING STATUS INFORMATION
=============================

CURRENT ACCOUNTING FILE:              (AUTOMATIC)

 SYS.ACCOUNT.90.11.24.007.01
 OPENED AT : 90-11-24, 10:37:04

ALTERNATE FILENAMES:

 ACC1
 ACC2
 ACC3

ACCOUNTING RECORD INFORMATION:

 RECORD IDS TURNED OFF:
  DALC  DRFA  PACC RCPU  RSRV  SPLI  TATR

 RECORD EXTENSIONS TURNED ON:
  UACC: ID

 RECORD EXTENSIONS TURNED OFF:
  JOBS: JD JP JR
  PRGS: CA ID PC TI
  PRGT: CA ID PC TI
  TASK: CA ID PC TI
  TDEV: ID VU

 ***** NOT LISTED RECORD IDS ARE TURNED ON *****

ACCOUNTING PROCESSING PARAMETERS:

 ACCOUNTING PERIOD : 20

 JOB-CLASSES :
  ** NONE SPECIFIED **
```

SHOW-CONSLOG
Request information on logging

Function group: Logging
User group: System administration

Command description

The SHOW-CONSLOG command provides information on whether logging is active or inactive and outputs the name of the current logging file.
The class 2 system parameter NBKESNR enables the system administration to define whether the CONSLOG file is to be cataloged under the TSOS or SYSAUDIT ID and whether the file sequence number is to have two or three digits.

Format

Operation	Operands
SHOW-CONSLOG	

Examples

```
/SHOW-CONSLOG
% EXC0990 CONSLOG = ACTIVE. FILE : ':K   :$TSOS.SYS.CONSLOG.90.10.28.018.01'

/SHOW-CONSLOG
% EXC0990 CONSLOG = ACTIVE. FILE : ':K   :$SYSAUDIT.SYS.CONSLOG.90.10.28.018.001'
```

SHOW-DAB
Output information on DAB storage units

Function group: DAB storage management
User group: System administration

Command description

The SHOW-DAB command enables the system administration to monitor DAB storage units assigned to the subsystem
via the START-DAB command.

Format

Operation	Operands
SHOW-DAB	[B[UFFER]-ID={*ALL / name / number}]

Description of the operands

BUFFER-ID

Defines the DAB storage unit for which characteristic values are to be output in edited form.

=*ALL

The characteristics of all active DAB storage units are to be listed.

=name

Name of the desired DAB storage unit.

=number

Number of the desired DAB storage unit (0 ≤ number ≤ 255).
The complete name of the DAB storage unit then reads:
BUFFER#number.

SHOW-DEVICE-STATUS
Request information on device allocation and monitoring

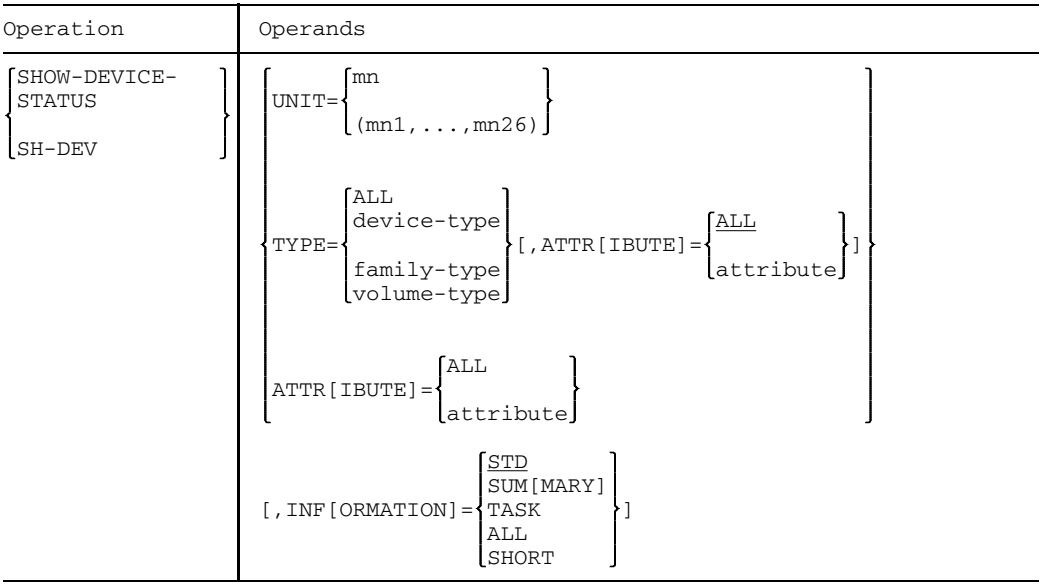
Function group: Device management
User group: System administration, users

Command description

The SHOW-DEVICE-STATUS command supplies information on the data volumes which are physically online
(in contrast to the SHOW-DISK-STATUS command).

If no volume is online, the output indicates the volume to be mounted on the device. Unlike the user, the system administration can obtain an overview of the occupying or reserving tasks for a selected device type.

Format



Description of the privileged operands

INFORMATION

Specifies the type of information desired (if UNIT is entered, only the values STD and SHORT are admitted for INF). For the meaning of the output fields see table in appendix, page 260.

=TASK

An overview of the occupying or reserving tasks is output for the specified device type.

SHOW-DISK-STATUS
Query allocation status and disk parameters

Function group: Device management
User group: System administration, users

Command description

The SHOW-DISK-STATUS command provides information on the allocation status, disk parameters and volume monitoring for the specified
disks.
Unlike the user, who is limited to task-specific information, the system administration under the TSOS ID can obtain an overview of all TSNs or systems using a disk.

Format

Operation	Operands
SHOW-DISK-STATUS SH-DISK	UNIT=mn / (mn1,...,mn26) VOL[UME]=vsn / (vsn1,...,vsn10) [,INF[ORMATION]=STD / PAR[AMETER] / TASK / SYS[TEMS] / ALL] ATTRIBUTE=ALL / attribute

Description of the privileged operands

INFORMATION

Specifies the type of information desired. This operand is only valid when UNIT or VOLUME is entered as well. If ATTRIBUTE is specified, only INFORMATION=STD is permitted. For the meaning of the output fields see table in appendix, page 260.

=TASK

A list of the TSNs using this disk in DMS mode is output.

=SYSTEMS

This operand supplies 2 output lines per VSN and designates a list of systems using this disk.
The second header line is only output for privileged callers.

Output format:

Header line 1:

```
MNEM    VSN  VTOC-SYS  TIME-STAMP  SVL-RECORDING-MODE  PAMKEY
```

Header line 2:

```
MNEM    VSN  SVL-ALLOC  SYSTEMS
```

=ALL

Provides all 4 output records for the specified disks (STD, PARAMETER, TASK and line 2 of SYSTEMS).

SHOW-JOB-CLASS
Request information on job classes

Function group: Job and task management
User group: System administration, users

Command description

The SHOW-JOB-CLASS command enables the system administration to request a description of all job classes that were defined using the JMU statement DEFINE-JOB-CLASS.
As a privileged caller under the TSOS ID, the system administration also obtains, along with the individual job class descriptions, a list of all user IDs authorized to access these job classes. Output is either to SYSOUT or to SYSLST.

Format

Operation	Operands
SHOW-JOB-CLASS SHOW-J-C	[NAME=*ALL / *ALL-NAMES / name / (name,...)] [,OUTPUT=SYSOUT / SYSLST]

Description of the privileged operands

NAME

Determines the scope of the requested information.
Regardless of the operand value (*ALL, *ALL-NAMES, name, (name,...)) the system administration receives, after a description of the desired job class, a list of all user IDs authorized to access the relevant job class.

Example

```
/SHOW-J-C NAME=*ALL-NAMES

REQUESTED JOB CLASS NAMES
JCBSTD
JCBTSOS
JCDSTD
JCDTSOS


/SHOW-J-C NAME=JCBSTD

REQUESTED DETAILS OF JOB CLASS: JCBSTD
NAME.........:JCBSTD
STREAM.......:JSSTD1
CLASS LIMIT...:50
CLASS OPTIMUM.:0
WEIGHT.......:1
JOB PRIORITY..:DEFAULT=9            MAXIMUM= 1
JOB ATTRIBUTES:JOBTYPE=BATCH        ST-ATTR= BATCH
BATCH ALLOWED.:BATCH
DIALOG ALLOWED:NO
TP ALLOWED....:TP
RUN PRIORITY..:DEFAULT=220          MAXIMUM= 180
NO CPU LIMIT..:YES
CPU LIMIT.....:DEFAULT=32000        MAXIMUM= 32767
SYSLST LIMIT..:DEFAULT=NO-LIMIT     MAXIMUM= NO-LIMIT
SYSOPT LIMIT..:DEFAULT=NO-LIMIT     MAXIMUM= NO-LIMIT
START........:DEFAULT=SOON          ALLOWED= SOON EARLY AT LATE IN IMM
REPEAT JOB....:DEFAULT=NO           ALLOWED= NO STUP DAILY WEEKLY PERIOD
V-SPACE-LIMIT.:0
JOB PARAMETER.:UNDEFINED
JCBSTD   IS AVAILABLE TO:
ALL USERS
JCBSTD   IS A SYSTEM DEFAULT
```

SHOW-JOB-STREAM
Request information on job streams

Function group: Job and task management
User group: System administration

Command description

The SHOW-JOB-STREAM command is used by the system administration to obtain a description of all job streams in the system or a detailed summary of the definitions specified for a job stream by means of the JMU statement DEFINE-JOB-STREAM. Output is either to SYSOUT or to SYSLST.

Format

Operation	Operands
SHOW-JOB-STREAM SHOW-J-S	[NAME=*ALL / *ALL-NAMES / name / (name,...)] [,OUTPUT=SYSOUT / SYSLST]

Description of the operands

NAME

Determines the scope of information.

=*ALL

Outputs descriptions for all job streams.

=*ALL-NAMES

Outputs only the names of all job streams.

=name

Specifies the name of the job stream on which information is desired.

=(name,...)

Specifies the names of the job streams on which information is desired.

OUTPUT

Defines whether the information is to be output to SYSOUT or SYSLST.

=SYSOUT

Output is to the display terminal at which the command was issued.

=SYSLST

Output is to SYSLST. This option is recommended for comprehensive outputs.

Example

```
/SHOW-J-S

REQUESTED DETAILS OF JOB STREAM: JSSTD1
NAME.........:JSSTD1
FILE.........:SYS.E.JOBSCHED
RUN PRIORITY..:130
DEFAULT.......:YES
START........:AT-LOAD
STOP.........:AT-SHUTDOWN
STREAMPARAM   :JOB-PRIORITY=Y,CPU-TIME=Y,WAIT-TIME=Y,JOB-QUOTA=30,LOGGING=NO


REQUESTED DETAILS OF JOB STREAM: JSTSOS
NAME.........:JSTSOS
FILE.........:SYS.E.JOBSCHED
RUN PRIORITY..:120
DEFAULT.......:NO
START........:AT-LOAD
STOP.........:AT-SHUTDOWN
STREAMPARAM   :JOB-PRIORITY=Y,CPU-TIME=Y,WAIT-TIME=Y,JOB-QUOTA=50,LOGGING=NO


/SHOW-J-S NAME=*ALL-NAMES

REQUESTED JOB STREAM NAMES
JSSTD1
JSTSOS
```

SHOW-PCS-OPTION
Output information on PCS parameter settings and monitored variables

Function group: PCS
User group: System administration, users

Command description

The ordinary user likewise has the possibility of requesting an overview of the current PCS parameter settings (current option) and monitored variables.
However, the system administration must authorize the user accordingly by means of the PCS command MODIFY-PCS-OPTION, USER-INFORMATION=YES.
If the command is entered without operands, only the global system parameters of the current option are output.

Format

Operation	Operands
SHOW-PCS-OPTION	[CATEGORY={*ALL / catname / (catname1,catname2,...)}][,TSN={*OWN / tsn}]

Description of the operands

CATEGORY

Name of the category on whose PCS parameter settings an overview is to be output.

TSN

Task sequence number of the job on whose PCS parameter settings an overview is to be output.

SHOW-PUBSET-ATTRIBUTES
Request overview of pubset characteristics

Function group: Catalog directory management
User group: System administration

Command description

This command enables the system administration to obtain the values and characteristics defined for a pubset by means of the SET-PUBSET-ATTRIBUTES command.

Only the PUBRES of the relevant pubset needs to be available for command execution.

Format

Operation	Operands
SHOW-PUBSET-ATTRIBUTES SHOW-P-A	PUBLIC-VOLUME-SET=catid [,DEVICE-TYPE=device]

Description of the operands

PUBLIC-VOLUME-SET=catid
Pubset (1-4 characters) on which information is desired.

DEVICE-TYPE=device
Device type of the PUBRES of the relevant pubset.
This operand can be omitted if an MRSCAT entry with device type exists for this pubset.

Note on output:

Column	Meaning	Value
PVSID	PVS identifier of pubset	1-4 chars
SYSID	Identifier for the system using this pubset as the home pubset	1-3 chars / ?
SHARABILITY	Shared pubset operation possible?	YES/NO
CURRENT MASTER	SYSID of the current master processor	1-3 chars / NONE / ?
DESIGNATED MASTER	SYSID of the processor predefined via command SET-PUBSET-ATTRIBUTES	1-3 chars / NONE / ?

Note:
The character "?" means that no correct entry exists.

SHOW-RESOURCE-REQUESTS
Request information on secure queue and collector task

Function group: Device management
User group: System administration

Command description

Output comprises either the attributes of all tasks waiting for successive reservation of requested resources, or is restricted to information on the collector task. In addition, however, the parameters for system-specific selection of the collector task (defined by the system operator via the
resource collection commands) may be queried as well.

Format

Operation	Operands
SHOW-RESOURCE-REQUESTS SH-RES-REQ	[ID[ENTIFICATION]=(JOB[-NAME] USER[-IDENTIFICATION])] [,INF[ORMATION]=(ALL-TASKS COLL[ECTOR]-TASK COLL[ECT]-PAR[AMETER])]

Description of the operands

IDENTIFICATION
Controls assignment of the output field NAME/ID.

=JOB-NAME
The job name is entered in the NAME/ID field.

=USER-IDENTIFICATION
The user ID is entered in the NAME/ID field.

INFORMATION
Defines the scope of information.
For the meaning of the output fields see table in appendix, page 260.

=ALL-TASKS
Information on all tasks in the secure queue is output.

=COLLECTOR-TASK
Information output is restricted to the collector task.

=COLLECT-PARAMETER

Output comprises information on the collect parameters defined by means of resource collection commands.

SHOW-SERSLOG
Request information on software error logging

Function group: Software error logging
User group: System administration

Command description

This command produces a message on the status of software error logging (active or inactive).
If the SERSLOG function for logging relevant software errors is active,
the name of the current SERSLOG file is output.

Format

Operation	Operands
[SHOW-SERSLOG] {SHOW-SE }	

Example

```
/SHOW-SERSLOG
%  EXC0990 SERSLOG = ACTIVE. FILE : ':K   :$TSOS.SYS.SERSLOG.90.10.28.018.01'
```

SHOW-SS-STATUS
Request subsystem information

Function group: Subsystem management
User group: System administration, users

Command description

The following
is output:

- which tasks have a connection to the specified subsystem (TSN and TID)
- the status/versions of the specified subsystems
- the number of connections to a designated subsystem since startup
- "class 5" for all subsystems loaded in this memory class

During command execution, further jobs may be setting up or clearing down a connection to the subsystem; the list of jobs obtained is therefore not necessarily a reflection of the current situation. If the SHOW-SS-STATUS command is part of a procedure and an error occurs during command execution, the procedure does not branch to the next STEP but continues with the next command.

Format

Operation	Operands
SHOW-SS-STATUS	SS-NAME=<u>*ALL</u> / name / *NON-PRIV-SS / *ADDR-REGION [,VERSION='versno' / *ALL]

Description of the privileged operands

SS-NAME

Designates the subsystem.

=<u>*ALL</u>

Outputs the status of all subsystems of the dynamic subsystem catalog.

=name

Name of the subsystem on which information is desired.

VERSION=

Specifies the version number.

='versno'

Version number of the above subsystem; the format used here must coincide with the format employed during subsystem definition. The version number may consist of 4 or 7 characters.

Format
nn.m version identification
nn.mxyy version identification and update status
(nn, m and yy are numerals, x is a letter)

Default
If the version is not specified explicitly, the following assignment mechanism applies:

1. Information is provided on the subsystem which deviates from the "Not Created" status.
2. If all versions have "Not Created" status, no version is included in the output text.

=*ALL

Information on all available versions of the relevant subsystem is to be output.

Notes

- A combination of the operands SS-NAME=*ALL and VERSION=*ALL produces the same amount of information as SS-NAME=*ALL alone.
- For subsystems declared with the attributes CONSCOP=FREE and CLASS=4 no information is output by SHOW-SS-STATUS.
  Subsystems with the attributes CONSCOP=FREE and CLASS=5, however, are taken into account for output.

SHOW-TRACE-STATUS
Request information on system traces

Function group: Program control
User group: System administration

Command description

This command provides an overview of all system traces.
Standard output comprises a list of permanent, non-switchable traces and of those temporary traces which the system administration can explicitly attach/detach using the START-TRACE and STOP-TRACE commands.

Format

Operation	Operands
SHOW-TRACE-STATUS	[TRACE-IDENTIFICATION={*ALL / name / (name1,...,name50)}] [,SELECT={ALL / BY-ATTRIBUTES([STATUS={ANY / ON / OFF / UNKNOWN}] [,TYPE={ANY / PERMANENT / TEMPORARY}])}] [,INFORMATION={ID-AND-STATUS / ALL-ATTRIBUTES}] [,OUTPUT={SYSOUT / SYSLST([SYSLST-NUMBER={0 / number}])}]

Description of the operands

TRACE-IDENTIFICATION

Defines the traces on which information is desired.

=*ALL

Information on all traces is to be output.

=name
=(name1,...,name50)

Information on the specified trace(s) is to be output.
"name" (1-8 characters) is the ID of a trace. Up to 50 traces may be specified. For possible values see the following table.

Trace ID	Description
AIDSYS	AIDSYS trace
ASTRA	ASAM trace
CMSTRACE	CMS trace
EMMIO	PAGE-FIXING trace
IDIASFTT	IDIAS trace
MRSCAT	MRSCAT occupation trace
NDVMTRAC	BAVOLMON I/O trace
PAGING	PAGING trace
RECTRACE	Reconfiguration trace
SNAPTRC	Snapshot trace
SYNTRACE	ETMSYNCH trace
TBOURSE	ETMBOWK trace
TDCM	Not used
TDISAM	K-ISAM trace
TDISAMNK	NK-ISAM trace
TDJCTRL	DJCTRL trace
TDRSRLER	DRSRL error trace
TDRSRLSY	DRSRL system trace
TEIA	Not used
TEMMPPM	EMMPPM trace
TEMMREQM	EMMREQM trace
TEMMSLT	EMMSLT trace
TEMMWSMG	Not used
TIOTRACE	Not used
TJLOGLOW	JMS trace
TLOCK	Task lock management trace
TNBCONS	NBCONS trace
TNBCADB	NBCADS character trace
TNBCADG	NBCADS big trace
TNBCCER	NBCCER character trace
TNBCCNT	NBCCNT character trace
TNBCCS	NBCCNTS character trace
TNBCCSG	NBCCNTS I/O trace
TNBCREC	NBCRECK I/O trace
TNBROUTE	NBROUTE trace
TNDIDARM	NDIDARM trace
TNKGTRAC	Not used
TPRIOR	Not used
TRFA	Remote file access trace
TRSOADM	RSO trace
TSDVINT	SDV and interrupt trace
TSSVADM	SSVADM trace
UTATRACE	User table access trace
UTLTRACE	User table load trace

SELECT
=ALL
Information on all traces, regardless of their status and type, is to be output.

=BY-ATTRIBUTES
Only information on the traces selected via the following entries is to be output.

STATUS
=ANY
All traces, irrespective of their status, are to be covered.

=ON
Only active traces are to be output.

=OFF
Only inactive traces are to be output.

=UNKNOWN
Only traces whose current status is undefined are to be output.

TYPE
=ANY
All traces are to be output, no matter whether they are permanently active or switchable via command/macro.

=PERMANENT
Only permanently active traces are to be output.

=TEMPORARY
Only traces which can be switched on/off by means of a command/macro are to be output.

INFORMATION
=ID-AND-STATUS
Lists the names and current status of the selected traces in alphabetical order.

=ALL-ATTRIBUTES
Outputs the entire information available from trace management for the selected traces.

OUTPUT
=SYSOUT
Output in tabular form is to be directed to SYSOUT.

=SYSLST(SYSLST-NUMBER='number')

Output in tabular form is to be directed to SYSLST.
"number" is the number of the SYSLST file (0 to 99) to which the output is written.

Description of the output fields:

Field	Meaning / contents
GENERAL INFORMATION	Global information characterizing the trace:
IDENTIFICATION	Name of the trace
SCOPE	Validity of a trace: SYSTEM Global system trace TASK Local task trace
STATE	Current status of the trace: ON The trace is active. OFF The trace is inactive. UNKNOWN The trace status is not known to the trace manager.
TYPE	Indicates whether the trace is permanent or temporary: PERMANENT Permanently active trace TEMPORARY Switchable trace
BUFFER INFORMATION	Information regarding the trace buffer:
SIZE	Size of the trace buffer in bytes
CLASS	Memory class of the trace buffer: 1 Class 1 memory 2 Class 2 memory 3 Class 3 memory 4 Class 4 memory 5 Class 5 memory
RECFORM	Record format of the trace records: VARIABLE The trace records have a variable record format. FIXED The trace records have a fixed record format.
RECSIZE	Length of the trace records in bytes

SHOW-USER-ATTRIBUTES
Request information from user catalog

Function group: User catalog management
User group: System administration, users

Command description

The system administration can request the data, including the LOGON password, of all user IDs that were defined by means of the JOIN command. Output is to SYSLST or SYSOUT.
The INFORMATION and OUTPUT operands may be combined arbitrarily.

Format

Operation	Operands
SHOW-USER-ATTRIBUTES	[USER-IDENTIFICATION={*OWN / *ALL / userid / (userid,...)}] [,INFORMATION={*ATTRIBUTES[(PASSWORD-INF=SUMMARY/FULL)] / *USER-LIST / *SUMMARY}] [,PUBLIC-VOLUME-SET={*HOME / *ALL / catid / (catid,...)}] [,OUTPUT={SYSOUT / (SYSOUT,SYSLST(NUMBER=n,PAGE-SIZE=n)) / SYSLST(NUMBER=n,PAGE-SIZE=n) / (SYSLST(NUMBER=n,PAGE-SIZE=n),SYSOUT)}]

Description of the privileged operands

USER-IDENTIFICATION

Defines the user ID on which information is to be output.

=*ALL

Outputs information on all user IDs.

=userid

Outputs information on the specified user ID.

=(userid,...)

Outputs information on the specified user IDs.
Up to 127 user IDs can be specified.

INFORMATION

Controls the type and scope of output.

=*ATTRIBUTES

Outputs the entire information available for a user ID.
The output format depends on the OUTPUT operand.

Output is to SYSOUT

Column	Meaning	Value	Specified via command/operand
ACCT-NB	Account number	8 chars	JOIN/ACCNB
ADDRSPACE	User address space	1-2016	JOIN/ADDRSPACE
AIDRD,AIDWR	Test privileges	1-9	JOIN/TESTPRIV
AUDIT	Permission to use the AUDIT function	YES/NO	JOIN/AUDIT
CLASS	Spoolout class	0-255	JOIN/CLASS
CPU-TIME	Maximum CPU time available	0-2147483647	JOIN/TIME
CSTMP	Permission to use the CSTMP macro	YES/NO	JOIN/CSTMP-MACRO
DEFCAT	Default catalog ID	1-4 chars	JOIN/DEFAULT -PUBSET
ENF	Permission to exceed the storage space on the assigned pubset	YES/NO	JOIN/ENF
EXP	Permission to start express jobs	YES/NO	JOIN/EXPRESS
GROUP-ID	Group identification	*UNIVERSAL or, if SECOS is used, 8 chars	JOIN/GROUP
INHD	Task deactivation inhibited	YES/NO	JOIN/INHD
JOB-CLASS	List of assigned job classes	8 chars	———
MAIL-ADDR	Mailing address	64 chars / *NONE	JOIN/MAIL

Column	Meaning	Value	Specified via command/operand
MAXAREC	Maximum number of user-specific accounting records	0-32767 NL	JOIN/MAX-ACC-REC
MES-LANG	Language for message output	1 char	JOIN/DEFAULT-MSG -LANGUAGE
MES-SEARCH	Message files	TASK/ALL	JOIN/DEFAULT-MSG -SEARCH
NTL	Permission to start jobs with no time limit	YES/NO	JOIN/NTL
PASS	User password	C'8 chars' X'16 chars' YES/NO	JOIN/PASS PSWORD command
PRI	Task scheduling priority	30-255	JOIN/PRIORITY
PROFILE-ID	Profile ID of the group syntax file	54 chars 1) /*NONE	JOIN/COMMANDS
PSWORD	Authorization for PSWORD command	YES/NO/MOD	JOIN/PSWORD
RES-PAGES	Number of resident main memory pages	0-32767	JOIN/RESIDENT -PAGES
SEVER	Access lockout	YES/NO	SEVER/SET
SPACE-LIMIT	Maximum storage space available on the assigned pubset	0-2147483647	JOIN/PUBSPACE
SPACE-USED	Storage space used on the assigned pubset	0-2147483647	———
TPIGNORE	IGNORE authorization for label check in tape processing	YES/READ/ BLP/ALL/NO	JOIN/TPIGNORE

1) The field is output with a length of 54 characters. The profile ID, however, only has a maximum length of 30 characters.

Column	Meaning	Value	Specified via command/operand
TPRIV	The user needs the operator's permission to change the AID privilege values	YES/NO	JOIN/TESTPRIV
TTL	Specifies the valid job types	STD/TP/SYS	JOIN/TTYPL
USER-ID	User identification	8 chars	JOIN/userid

Output is to SYSLST

Column	Meaning	Value	Specified via command/operand
ACCOUNT-NUMBER	Account number	8 chars	JOIN/ACCNB
ADDRSPACE	User address space	1-2016	JOIN/ADDRSPACE
ARD,AWR	Test privileges	1-9	JOIN/TESTPRIV
AUD	Permission to use the AUDIT function	Y/N	JOIN/AUDIT
CATID	Default catalog ID	1-4 chars	JOIN/DEFAULT-PUBSET
CLA	Spoolout class	0-255	JOIN/CLASS
CPU-TIME	Maximum CPU time available	0-2147483647	JOIN/TIME
CST	Permission to use the CSTMP macro	Y/N	JOIN/CSTMP-MACRO
DEFL	Default message language	1 char	JOIN/DEFAULT-MSG-LANGUAGE
DMSGS	Message files	T/A	JOIN/DEFAULT-MSG-SEARCH
ENF	Permission to exceed the storage space on the assigned pubset	Y/N	JOIN/ENF
EXP	Permission to start express jobs	YES/NO	JOIN/EXPRESS
GROUP-ID	Group identification	*UNIVERSAL or, if SECOS is used, 8 chars	JOIN/GROUP
IHD	Task deactivation inhibited	Y/N	JOIN/INHD

Column	Meaning	Value	Specified via command/operand
JOB-CLASS ALLOWED	List of assigned job classes	8 chars	———
MAIL	Mailing address	64 chars *NONE	JOIN/MAIL
MAX-ACC-REC	Maximum number of user-specific accounting records	0-32767 NL	JOIN/MAX-ACC-REC
NTL	Permission to start jobs with no time limit	YES/NO	JOIN/NTL
PASS	User password	C'8 chars' X'16 chars' YES/NO	JOIN/PASS PSWORD command
PRI	Task scheduling priority	30-255	JOIN/PRIORITY
PROF-ID	Profile ID of the group syntax file	54 chars 1) / *NONE	JOIN/COMMANDS
PSW	Authorization for PSWORD command	Y/N/M	JOIN/PSWORD
RES-PAGES	Number of resident main memory pages	0-32767	JOIN/RESIDENT -PAGES
SEV	Access lockout	Y/N	SEVER/SET
SPA-LIMIT	Maximum storage space available on the assigned pubset	0-2148483647	JOIN/PUBSPACE
SPACE-USED	Storage space used on the assigned pubset	0-2147483647	———
TPI	IGNORE authorization for the label check in tape processing	Y/R/B/A/N	JOIN/TPIGNORE

Column	Meaning	Value	Specified via command/operand
TPR	The user needs the operator's permission to change the AID privilege values	Y/N	JOIN/TESTPRIV
TTL	Specifies the valid job types	STD/TP/SYS	JOIN/TTYPL
USER-ID	User identification	8 chars	JOIN/userid

1) The field is output with a length of 54 characters. The profile ID, however, only has a maximum length of 30 characters.

INFORMATION

=*ATTRIBUTES(PASSWORD-INFO=SUMMARY)

Specifies that the above output format shall merely contain an indication as to **whether** or not a password has been defined.

=*ATTRIBUTES(PASSWORD-INFO=FULL)

Specifies that the above output format shall **interactively** display the password to the system administration under the TSOS ID.

=*USER-LIST

Merely outputs the various user IDs having an entry in the user catalog.
Output is separate according to pubsets.

=*SUMMARY

Outputs the following information:

`NUMBER OF USERS`
Number of user IDs entered in the catalog.

`NUMBER OF USERS SEVERED`
Number of user lockouts.

`NUMBER OF USERS WITH PASSWORD`
Number of users having protected their IDs with a password.

`TOTAL OF SPACE AVAILABLE`
Storage space on public volumes made available to the users via the JOIN command. Specification is in PAM blocks.

`TOTAL OF SPACE USED`
Storage space on public volumes which has already been used by the users. Specification is in PAM blocks.

NUMBER OF ACCOUNT-NB
Total number of all account numbers of all users.

Example

```
/S-U-A USER=USERID1

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                  NO       SPACE-LIMIT       :      16777215
PASS       :                  NO       ADDRSPACE         :            16
PSWORD     :                 YES       RES-PAGES         :         32767
DEFCAT     :               N           MAXAREC           :           100
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO       ENF    :    NO    TPIGNORE :   NO
AIDRD      :   1    AIDWR  :   1       TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-----------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-----------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-----------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N


/S-U-A USER=USERID1,INF=ATTRIBUTES(PASSWORD-IN=FULL)

USER-ID    :            USERID1        SPACE-USED        :             0
GROUP-ID   :          *UNIVERSAL
SEVER      :                  NO       SPACE-LIMIT       :      16777215
PASS       :         C'$HE%12&6'       ADDRSPACE         :            16
PSWORD     :                 YES       RES-PAGES         :         32767
DEFCAT     :               N           MAXAREC           :           100
MES-SEARCH :               TASK        MES-LANG          :

CSTMP      :  NO    AUDIT  :  NO       ENF    :    NO    TPIGNORE :   NO
AIDRD      :   1    AIDWR  :   1       TPRIV  :   YES

MAIL-ADDR  : *NONE
PROFILE-ID : *NONE
+---------+---+---+----+---+---+-----+-----------+
!ACCT-NB !NTL!EXP!INHD!TTL!PRI!CLASS! CPU-TIME  !
+---------+---+---+----+---+---+-----+-----------+
!123456  ! NO! NO!  NO!STD!210!    1! 2147483647!
+---------+---+---+----+---+---+-----+-----------+
LIST OF JOB-CLASS ALLOWED :
JCBSTD   JCDSTD
END OF DISPLAY FOR USER-ID = USERID1 , PVS = N
```

```
/S-U-A INF=*SUMMARY
```

```
SUMMARY ON JOIN FILE OF PVS  N       91-01-28 AT 14:14:50

 NUMBER OF USERS                 :           44
 NUMBER OF USERS SEVERED         :            2
 NUMBER OF USERS WITH PASSWORD   :           44
 TOTAL OF SPACE AVAILABLE        :   2147483647
 TOTAL OF SPACE USED             :      2151200 (  0%)
 NUMBER OF ACCOUNT-NB            :          159
```

SPMGT
Manage storage space

Function group: Storage space management
User group: System administration

Command description

When a public volume set is imported,
the values defined at system installation time apply.
The relevant class 2 system parameters

- DMPRALL, DSMCALL and DMMAXSC (primary/secondary allocation)
- L1SPDEF, L2SPDEF...L5SPDEF (saturation levels)

are described in the *System Installation* manual [4].
When defining the saturation levels, note the following condition:

level1 > level2 > level3 > level4 > level5 > 66

The value 66 (PAM blocks) represents the absolute minimum of storage space required by the system for a subsequent ZIP startup (see the *System Operator's Guide* [14]) and must therefore not be reduced. The system administration should choose the level5 value large enough in order to avoid serious bottlenecks.
The operands PRIMARY and SECONDARY are analyzed if files without SPACE entries in the FILE command are cataloged. The SPMGT command supports a dynamic change of these values, separately for each pubset, and thus avoids renewed generation or the incorporation of REP records.

Format

Operation	Operands
SPMGT	[{PVSID / PID} = {* / catid}] [,PRIM[ARY]=p] [,SEC[ONDARY]={s / (s,m)}] [,SAT[URATION]=(level1,level2,level3,level4,level5)]

Description of the operands

PVSID

Defines the pubset whose space allocation is to be changed.

=*

The changes refer to the home pubset.

=catid

Catalog identifier (1-4 alphanumeric characters) of the pubset to which the changes apply.

PRIMARY=p

Controls the default space allocation for newly created files.
p stands for the number of PAM blocks available to the files as the primary allocation.
If this operand is omitted, the current values remain valid.

SECONDARY

Controls the default space allocation for file extension.
If this operand is omitted, the current values remain valid.

=s

Number of PAM blocks assigned to the files for the first extension (secondary allocation).

=(s,m)

Same as above, but the number of PAM blocks is doubled on each further space request until the maximum m is reached.

SATURATION

=(level1,level2,level3,level4,level5)

Defines saturation levels 1 through 5 for space allocation.
Specification is in PAM blocks.

Note the following condition:

```
level1 > level2 > level3 > level4 > level5 > 66
```

A saturation level is reached when fewer PAM blocks are free than specified for the appropriate level.

SQUC
Repeat spoolout jobs

Function group: RSO/SPOOL management
User group: System administration, RSO device administrators

Command description

The SQUC command causes a device
to repeat the current spoolout process or to hold it until later.
The **restart** point for a specific printer after a printer error must not be confused with the **checkpoint interval** value from the SPOOL parameter file (the latter is used for restarting after a SPOOL/system crash).

Note

When printing multiple copies (PRINT...,COPIES=(,n)) the restart point is calculated by multiplying the number of file pages by the number of copies.

Format

Operation	Operands
{SQUC / SQ}	RESPL= {mn / sta}[,[,TYPE={B / L / [-]n / P / S}]] {SUSP=({mn / sta}[,p]) / KEEP={mn / sta}}[,TYPE={B / L / [-]n / P / S}] REL=(tsn[,p])[,TYPE={B / [-]n}]

Description of the operands

RESPL=mn/sta

This operand causes output to be repeated immediately via the device with the mnemonic device name "mn" (2 alphanumeric characters) or the station name "sta" (up to 8 alphanumeric characters).

In the case of replay tape processing in direct mode (RMODE=DIRECT in the SDVC command) the tape containing the output file is positioned at the point desired and output continued immediately via the device "mn".

SUSP
=(mn)/(sta)

This operand causes output to be repeated after a delay via the device with the mnemonic device name "mn" (printer or floppy disk) or the station name "sta". The job is returned to the device queue and selected for processing according to its priority.

The sequence of further job processing can be influenced by specifying a new priority.

=(mn[,p])
=(sta[,p])

Specifies the new job priority. If no new priority is specified, the old priority retains its validity.
Possible values: $30 \leq p \leq 255$.

In the case of replay tape processing in direct mode current output is stopped. All SPOOL jobs are written back to the file SR.vsn and provided with information relevant for continuation of the interrupted output. Continuation may only be initiated by means of a new SDVC command.

KEEP=mn/sta

This operand causes output via the device with the mnemonic device name "mn" or the station name "sta" to be suspended. The job is held until it is released by the operator or system administration using SQ REL (see below). Only then is it transferred from the TYPE 5/KP queue to the TYPE 4 queue (or the TYPE 7 queue for RSO devices).

In the case of replay tape processing in direct mode the current job is stopped. The SPOOL job is written back to the file SR.vsn and provided with information relevant for continuation of the interrupted output. Continuation may only be initiated by means of a new SDVC command. Further REPLAY jobs are executed as normal.

REL

=(tsn)

This operand causes the job with the task sequence number "tsn", which is being held in the TYPE 5/KP queue, to be released and moved to the TYPE 4 queue (or TYPE 7 queue for an RSO device), i.e. reactivated. The printer concerned must have status "S".

=(tsn,p)

Specifies the new job priority. If no new priority is specified, the old priority retains its validity.
Possible values: $30 \leq p \leq 255$

TYPE

=B

This operand specifies that the spoolout job has to be restarted from the beginning of the file. For output to floppy disk the spoolout job must always start from the beginning of the file.
Note:
SQUC REL does not have a default value for the TYPE operand.

=L

This operand specifies that the spoolout job is to be restarted at the penultimate checkpoint.
Punch jobs: checkpoints are normally set by the system after every 26 punched cards.

If the job is to be spooled out to a laser printer, the spoolout job is restarted from the beginning of the last file page output by SPOOL. The laser printer can only print complete pages, but several pages are in an undefined state between file page and print page at the same time. Thus for ND laser printers (3350/3352) a maximum of 20 pages may be printed out twice, and for HP laser printers (3351/3353) a maximum of 45 pages may be printed out twice.

=n

Printout is to be repeated as of page n.
$n \leq 10^7$.

=-n

Restart point as of which printout is to be repeated:
-n = n pages before the current position in the file.
If the specified value is greater than the distance (in pages) to the beginning of the file, printout restarts from the beginning of the file.
$n \leq 10^7$.

=P

For laser printers:
same as TYPE = L;
for non-laser printers:
the spoolout job is to be restarted from the third last checkpoint.

=S

The spoolout job is to be resumed 2 pages before the page that was being spooled out when the interruption occurred. SPOOL notes this point automatically.

For laser printers, the spoolout job is restarted as for the TYPE=L operand.

If spoolout is to floppy disk, the spoolout job is restarted at the beginning of the file that was being processed when the interruption occurred.

If the file extends over several floppy disks, the spoolout job is restarted at the beginning of the floppy disk that was being processed when the interruption occurred.

Note

Treatment of a specific file has no influence on other files of the same family, even if they are to be printed out via the same device.

STAM
Request information from home catalog directory

Function group: Catalog directory management
User group: System administration, users

Command description

This command provides information on the status of a pubset, i.e. the accessibility of its catalog. The system administration is also shown which tasks (if any) are accessing the specified pubsets.
The scope of information is described in a detailed example following the operand description.

Format

Operation	Operands
STAM	[{catid | # }][,REF={NO | YES | ALL}] [,HOST={*LOCAL | *ALL | host}] [,SELECT={ALL | LOCAL | REMOTE | ACCESSIBLE | PAGING | SHARED | EXCLUSIVE | LOCAL-ACCESSIBLE | REMOTE-ACCESSIBLE}]

Description of the privileged operands

REF

Defines the scope of information about the specified pubset.

=YES

The *privileged user* obtains, for each specified pubset, the following information apart from the MRS catalog entry:

- number of existing file locks
- number of jobs using the pubset
- number and location (memory class) of the CMS buffers (current values and defaults)

=ALL

Output for the system administration contains detailed information on the accessing tasks.
This operand is only valid if the pubset is specified explicitly (catid or #).

HOST

In conjunction with REF=ALL this operand supports output of information on tasks of a particular processor.

=*LOCAL

Only local tasks using the pubset are listed.

=*ALL

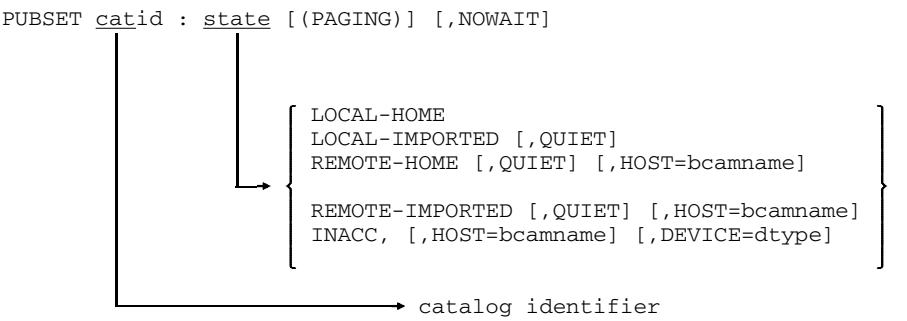
If the specified pubset is shareable and the local processor acts as master, all accessing tasks are listed. Otherwise the output is limited to local use.

=host

Lists all tasks of the connected slave processor which use the defined, shareable pubset if the call is issued from the master processor.

Notes

– The following text is displayed for each entry:



For local and inaccessible shared pubsets another line is output:

```
SHARED, MASTER-HOST= OWN-HOST / bcamname
```

Any non-key pubset is identified as such in an additional line.

Finally, if the pubset was not specified, the number of entries found is output:

```
1 ENTRY FOUND or
int ENTRIES FOUND
```

The various text portions have the following meanings:

`(PAGING)`
: Is output if a paging area exists on the pubset.

`LOCAL`
: The catalog can be accessed locally, i.e. it is administered by the processor from which the command was issued.

`REMOTE`
: The catalog cannot be accessed locally, i.e. it is not administered by the processor from which the command was issued.

`INACC`
: The catalog is inaccessible to MSCF. However, it may be accessible via RFA, for example.

`HOME`
: The catalog is the home catalog of a local or remote processor.

`IMPORTED`
: The catalog has been imported to a local or remote processor.

`QUIET`
: The connection is temporarily interrupted.

NOWAIT
: A connection breakdown has resulted in status "inaccessible".

bcamname
: BCAM name of the processor

  – on which the catalog is being administered or
  – on which the catalog has last been administered or
  – which was specified in the HOST operand.

dtype
: Device type or "(UNUSED)"

– If REF=YES is entered, the following is output in addition:

  If WAIT=YES the information DWT=time, BWT=time is added in line 1. In the case of NOWAIT the following message is output in a new line:

```
DIALOG WAIT TIME = time, BATCH WAIT TIME = time
```

```
⎧THE STATIC BUFFERS ARE UNDEFINED                                  ⎫
⎪                                                                  ⎪
⎪      ⎧IS ⎫                          ⎧(NON-RESIDENT) ⎫           ⎪
⎨THERE ⎨   ⎬ xxx STATIC BUFFER[S]      ⎨               ⎬           ⎬
⎪      ⎩ARE⎭                          ⎩(RESIDENT)     ⎭           ⎪
⎩                                                                  ⎭
```

```
⎧THE ACTUAL BUFFERS ARE UNDEFINED                                  ⎫
⎪                                                                  ⎪
⎪      ⎧IS ⎫                          ⎧(NON-RESIDENT) ⎫           ⎪
⎨THERE ⎨   ⎬ xxx ACTUAL BUFFER[S]      ⎨               ⎬           ⎬
⎪      ⎩ARE⎭                          ⎩(RESIDENT)     ⎭           ⎪
⎩                                                                  ⎭
```

```
xxx = number of static or current CMS buffers
```

```
⎧THE PUBSET MAY BE IMPORTED SHARED     ⎫
⎨                                      ⎬
⎩THE PUBSET MUST BE IMPORTED EXCLUSIVE ⎭
```

```
⎧NO TASK IS OCCUPYING THE PUBSET                  ⎫
⎪                                                 ⎪
⎪             ⎧IS ⎫                               ⎪
⎩nnn TASK[S]  ⎨   ⎬ OCCUPYING THE PUBSET          ⎭
              ⎩ARE⎭
```

```
nnn = number of accessing tasks
```

– If REF=ALL is specified, the following additional information is output:

```
PUBSET catid : ..., DWT=time , BWT=time

                              ⎧ BY LOCAL TASKS          ⎫
DETAILS OF THE OCCUPATION     ⎨ FROM HOST: (UNKNOWN)    ⎬
                              ⎩ FROM HOST: <bcamname>   ⎭

<tsn> <userid>   <tsn> <userid>   <tsn> <userid>   <tsn> <userid>
```

START-ACCOUNTING
Activate accounting system and open accounting file

Function group: Accounting system
User group: System administration

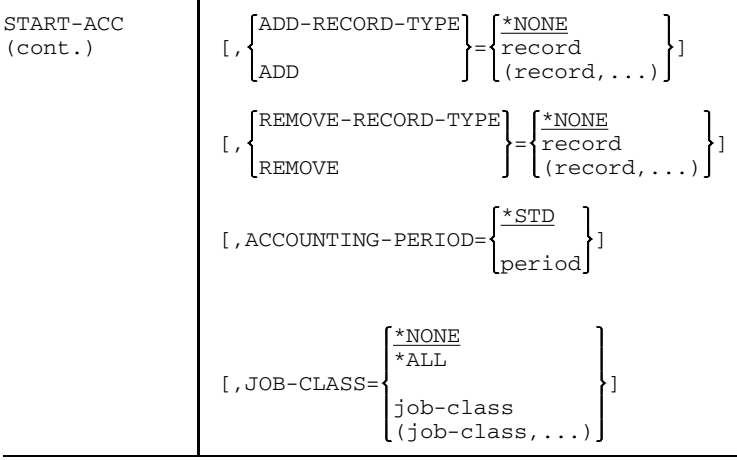
Command description

This command is used by the system administration to define the name of the accounting file, the accounting records and record extensions to be logged, as well as the job classes to be cyclically monitored.
Note, however, that the accounting system does not check the specifications with respect to accounting records and job classes: the input of undefined accounting records or job classes is accepted
and **not** acknowledged with an error message.

Format

Operation	Operands
{ START-ACCOUNTING | START-ACC }	[NAME={ *STD | file }]
	[,SPACE={ STD | (primary,secondary) }]
	[,BLKSIZE={ STD | (STD,n) }]
	[,VOLUME={ *STD | vsn }]
	[, { ALTERNATE-FILES | ALT } ={ *NONE | file | (file,...) }]
	[, { SET-RECORD-TYPE | SET } ={ *STD | *ALL | record | (record,...) }]

continued →

Operation	Operands
START-ACC (cont.)	

Description of the operands

NAME

Defines the name of the accounting file.

=*STD

The new accounting file receives the default name $TSOS.SYS.ACCCOUNT.yy.mm.dd.xxx.nn

where:

yy.mm.dd	date
xxx	session number
nn	sequence number of accounting file

=file

Explicit specification of a fully or partially qualified file name.
If a partial qualification is entered, automatic file name generation is activated when the accounting file is switched (see CHANGE-ACCOUNTING-FILE command).
Please note the following when entering a partially qualified file name:

- No more than 26 characters (excluding the user ID) can be used for partial qualification; if the catalog ID has more than one character, this value must be reduced by the number of additional positions.

- The user ID alone may also be used as partial qualification; the file name then automatically receives the suffix SYS.ACCOUNT.yy.mm.dd.xxx.nn
- If no user ID is specified, the file is cataloged under $TSOS.

SPACE

Defines the storage space allocation for the newly created file.

=STD

The file is assigned 48 PAM blocks as primary allocation and 48 PAM blocks as secondary allocation.

=(primary,secondary)

The accounting file is cataloged in accordance with the primary/secondary allocation specified.

BLKSIZE

Defines the block size for the input/output buffer of the accounting file.
This operand is only meaningful if the accounting file is newly created. If the specified file exist already, the operand is ignored.

=STD

A buffer of 2048 bytes is used for file input/output.

=(STD,n)

The buffer length corresponds to n PAM blocks.

VOLUME

Specifies that the accounting file is to be created on a specific data volume.

=*STD

The Data Management System decides on which volume the accounting file is created.

=vsn

The accounting file is created on the volume with the specified serial number. The VOLUME operand only supports volumes which do not require any device-specific information.
If the accounting file is to be created on a **tape** or **private disk** the system must be notified accordingly by means of a FILE command prior to accounting file switchover. If a **public disk** is to be used which does not belong to the default pubset of the relevant user ID, the catalog ID of the volume must be included in the file name.

ALTERNATE-FILES

Defines names of continuation files to be opened automatically in the case of accounting file switchover or in the event of a DMS error. A list of continuation files is only meaningful here if the name of the current accounting file has not been automatically generated.

=*NONE

No continuation files are defined.

=file

Fully or partially qualified name of the continuation file.

=(file,...)

Fully/partially qualified names of the continuation files.
This specification is only meaningful if the current name of the accounting file has not been generated automatically.
If a partially qualified name is included in the list, it must be at the end of the list, since any file names following it (no matter whether partially or fully qualified) will be ignored.

SET-RECORD-TYPE

Defines the accounting records and record extensions to be written to the accounting file.

=*STD

The system decides which accounting records and extensions are to be written. The system-defined default selection is as follows:

- deactivated records: DALC, DRFA, PACC, RCPU, RSRV, SPLI and TATR
- deactivated extensions:

```
JD, JP, JR       in  JOBS record
CA, ID, PC, TI   in  PRGS record
CA, ID, PC, TI   in  PRGT record
CA, ID, PC, TI   in  TASK record
ID, VU           in  TDEV record
```

- activated extensions:

  ID in UACC record

=*ALL

All accounting records and implicitly activated extensions are written to the accounting file.

=record

ID of the accounting record/extension to be written.

=(record,...)

IDs of the accounting records/extensions to be written.

Up to 64 accounting records/extensions can be specified (see Note).

ADD-RECORD-TYPE

Defines accounting records and/or record extensions to be written in addition to the default selection.

=*NONE

No additional records/extensions are written.

=record

ID of the accounting record/extension to be written in addition.
This operand is illegal if SET-RECORD-TYPE=*ALL was specified.

=(record,...)

IDs of the accounting records/extensions to be written in addition.
Up to 64 accounting records/extensions can be specified (see Note).

REMOVE-RECORD-TYPE

Defines that the specified accounting records/extensions are no longer to be written to the accounting file.
This option is only valid if *STD or *ALL was specified for the SET-RECORD-TYPE operand.

=*NONE

No accounting records/extensions are deleted in the list of records/extensions to be written.

=record

ID of the accounting record/extension to be removed (see Note).

=(record,...)

IDs of the accounting records/extensions to be removed.
Up to 64 accounting records/extensions can be specified (see Note).

ACCOUNTING-PERIOD

Defines the cycle of the periodic accounting interval.
Certain records of the accounting system (see the *System Administrator's Guide* [10]) and job classes are periodically scanned to obtain averages.
To avoid overloads, the frequency of periodic monitoring should not normally be too close to the lower limit of the value range. The maximum is one day.

=*STD

The default value of 20 minutes applies.

=period

Value (in minutes) defining the frequency of periodic monitoring for accounting records and job classes.

JOB-CLASS

List of job classes to be periodically monitored by the accounting system.

=NONE

No job classes are to be monitored.

=*ALL

All job classes are to be monitored.

=job-class

Only one specific job class is to be monitored.

=(job-class,...)

List of up to 16 job classes to be monitored within the specified period.

Note

The accounting records are addressed via the record ID (field 1 in the record definition), the record extensions via the record ID and the extension ID.
If the accounting record is activated, all extensions of this record are activated implicitly. If only particular extensions are to be switched on/off, they must be entered explicitly. The accounting record is then written with the remaining extensions.
Certain records/extensions must not be deactivated. Observation of this rule is checked in the relevant commands, i.e. the accounting system issues a corresponding message upon an illegal attempt at deactivation.
The SET/ADD/REMOVE-RECORD-TYPE operands support a maximum of 64 records and/or extensions. Note that the accounting system can internally manage no more than 30 records with 10 extensions each.

Example

```
/START-ACC ALT=(ACC1,ACC2,ACC3)
%  NAM0001 NEW ACCOUNTING FILE SYS.ACCOUNT.90.12.09.007.01 OPENED
           WITH 'SPACE=(48,48)'

/SHOW-ACC
ACCOUNTING ACTIVE, FILENAME= SYS.ACCOUNT.90.12.09.007.01


/SHOW-ACC INF=FILES

ACCOUNTING STATUS INFORMATION
============================

CURRENT ACCOUNTING FILE:              (AUTOMATIC)
------------------------

 SYS.ACCOUNT.90.12.09.007.01
 OPENED AT : 90-12-09, 12:17:49

ALTERNATE FILENAMES:
--------------------

 ACC1
 ACC2
 ACC3
```

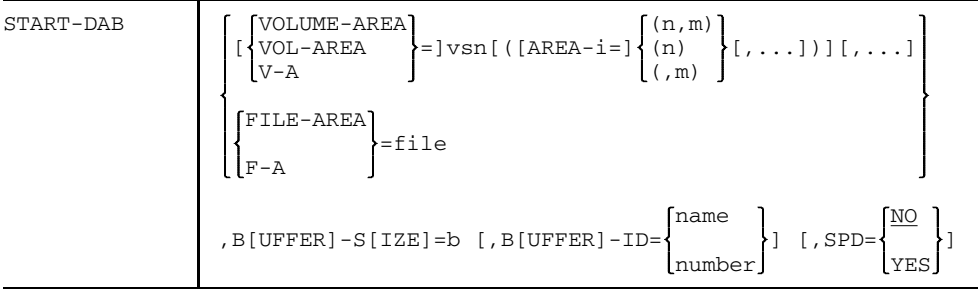
START-DAB
Activate DAB

Function group: DAB storage management
User group: System administration

Command description

This command is used by the system administration to assign to the DAB subsystem the data areas on external storage to be serviced, the primary storage areas, and the DAB storage unit in which these areas are administered.
The first START-DAB command causes the DAB subsystem to be initialized.

Format

Operation	Operands
START-DAB	

Description of the operands

VOLUME-AREA

Assigns data areas on external storage to be serviced by DAB.

=vsn

Volume serial number of the volume containing the data areas.
Up to 16 serial numbers per START-DAB command can be specified.
If more than one number is specified, the entire operand list must be enclosed in parentheses.

AREA-i

Assigns areas on the volume.
Value: i = 1 - 32; i.e. up to 32 areas per volume can be assigned.
If no areas are assigned, the entire volume is serviced by DAB.

=(n,m)

DAB is to service the PAM blocks from block number n through block number m.

=(n)

DAB is to service the PAM blocks from block number n to the end of the volume.

=(,m)

DAB is to service the PAM blocks from the beginning of the volume to block number m.

FILE-AREA=file

As of immediately, DAB is to service the files specified here. Up to 16 files can be specified per START-DAB command. If more than one file is specified, the entire operand list must be enclosed in parentheses. If the file name is specified without user ID or catalog ID, $TSOS or the default catalog ID of the system administration is assumed.

BUFFER-SIZE=b

Size of the primary storage area in which the data areas assigned in the VOLUME-AREA operand are buffered.
Value: size in kilobytes (integer); is rounded up to a multiple of 16 kb in order to optimize utilization of the DAB storage space. The value for b must not exceed the upper limit of the address space for class 6 memory. This limit depends on the size of the user address space which is defined at system generation time (see the *System Installation* manual [4]).

BUFFER-ID

Identifies the DAB storage unit in which the primary storage areas are managed.

=name

Name of the DAB storage unit (up to 32 characters).
Default: BUFFER#iii
(iii = lowest unassigned internal number for DAB storage units).

=number

Number of the DAB storage unit.
Value: 1 - 255.
The complete name of the storage unit then reads: BUFFER#number

SPD

Specifies whether disks operated in shared private disk mode are supported.

=NO

SPD disks are not supported.

=YES

SPD disks are supported.

START-JOB-STREAM
Start job stream

Function group: Job and task management
User group: System administration

Command description

This command can be used if

- the job stream was previously terminated via the STOP-JOB-STREAM command
- the start attribute "BY-OPERATOR" was assigned at job stream definition
- the job stream is to be started earlier than stated in the definition.

An additional message on successful execution of the command is output on the operator terminal.

Format

Operation	Operands
START-JOB-STREAM START-J-S	NAME=name

Description of the operands

NAME=name

Name of the job stream to be started. Starting the job stream implies starting the associated job scheduler.

Example

```
/START-J-S NAME=JSSTD1
%  JMS0022 /START-J-S COMMAND ACCEPTED.

/STA JOB-STREAM

JSTREAM  STATE DORM ANCD WAIT STRT HOLD START  STOP    LIFETIME
$SYSJS   ACT      0    0    0    3    0 ATLOAD ATSHUTD
JSSTD1   ACT      0    0    0    0    0 ATLOAD ATSHUTD
JSTSOS   ACT      1    0    0    4    0 ATLOAD ATSHUTD
```

START-PCS
Activate PCS

Function group: PCS
User group: System administration

Command description

On the first call, the PCS subsystem running under the administration of DSSM is initialized and the necessary resources (holder task, address space) are made available.
The specified parameter set, created by means of the PCSDEFINE utility routine and stored in the definition file, is activated. The PRIOR parameters are automatically saved and the task management and system optimization strategies defined in the PCS parameter set are implemented. These strategies remain in effect until the subsystem is unloaded, but can be corrected during the same session via the MODIFY-PCS-OPTION command.

Format

Operation	Operands
START-PCS	[OPTION-NAME={*STD | optname}][,FILE-NAME={*STD | filename}]

Description of the operands

OPTION-NAME

Name of the PCS parameter set defined in the PCSDEFINE utility routine.
Default name: STDOPT

FILE-NAME

Name of the PCS definition file containing the parameter set.
Default name: SYSPAR.PCS

Note

PCS can also be activated using the START-SS command (see *PCS* manual [7]).

START-SERSLOG
Activate software error logging

Function group: Software error logging
User group: System administration

Command description

The system function SERSLOG for logging of software errors is automatically activated during the startup phase. The START-SERSLOG command is therefore only necessary if error logging has not been started due to a startup error, or has been aborted due to a system error or disabled via the STOP-SERSLOG command.

Format

Operation	Operands
{START-SERSLOG {STAR-SE	

START-SS
Activate subsystem

Function group: Subsystem management
User group: System administration

Command description

The following information from the dynamic subsystem catalog is used for subsystem activation:

- data on subsystem loading and linking
- data on initialization/deinitialization and termination of job relationships
- data on call locations, subcomponents and operational dependencies (see UGEN statements in the *System Installation* manual [4]).

The command is rejected if

- the subsystem is not found in the dynamic subsystem catalog
- another version of the subsystem exists already
- subsystems on which the subsystem to be activated depends have not been loaded
- a requisite file (e.g. message file, library) is missing.

The operator and the system administration are informed by an appropriate message as to whether the command has been accepted or rejected.
The operand RESET = YES can be used to force renewed subsystem initialization even for subsystems undergoing deinitialization.
Any number of START-SS commands can be issued in different tasks under the TSOS ID, except in cases where the parameters specified during subsystem definition prohibit this.

Format

Operation	Operands
START-SS	SS-NAME=name [,VERSION='versno'] [,STRING=C'string'] [,RESET={NO / YES}] [,SYNCH={NO / YES}]

Description of the operands

SS-NAME=name

Name of the subsystem to be activated.

VERSION='versno'

Designates the version of the subsystem to be started. This version number format must coincide with the format used at subsystem definition.
"versno" may consist of either 4 or 7 alphanumeric characters.

Format
nn.m version identification
nn.mxyy version identification and update status
(nn, m and yy are numerals, x is a letter)

Default
If several versions exist for the specified subsystem and no version is specified explicitly, the subsystem declared with the start attribute CREATIM=ONCALL (see *System Installation* manual [4]) is loaded. Otherwise the lowest version number created for this subsystem in the static subsystem catalog is chosen.

Exception:
If a version of a subsystem is to be activated automatically on the first SVC call, this version is considered as the default version.

STRING=C'string'

Specifies special parameters to be analyzed by the appropriate subsystem only.

RESET

Influences the behavior and urgency of command processing.

=NO

If the relevant subsystem is being deinitialized, the command is rejected until this inhibiting process terminates.

=YES

The command is accepted regardless of any outstanding deinitialization process, and the subsystem or certain components are initialized. The version parameter is mandatory for this operand.

SYNCH

Permits a choice between synchronous and asynchronous processing.

=NO

The command is to be processed asynchronously, i.e. without the user having to wait for command execution before further input is possible.
No error messages on command execution are output.

=YES

Command execution must be awaited.
Error messages on command execution are output.

Notes

- Subsystems are usually characterized by a multitude of interrelations (dependencies, load relationships, etc.) with other subsystems. These interrelations have to be taken into account if the performance of a subsystem is to be guaranteed. DSSM attempts to avoid possible conflicts arising from user requirements and therefore rejects problematic commands. Actions such as the installation of missing subsystems or the unloading of dependent subsystems are thus not performed.
  However, if the user generates complex subsystems and issues the statement CHECK=NO (see the *System Installation* manual [4]), DSSM will execute the desired functions **despite** possible conflicts:
  - The START-SS command loads the specified subsystem, even if a subsystem to which defined relationships exist has not yet been completely loaded.
  - The commands RESUME-SS / STOP-SS / HOLD-SS are executed by DSSM without checking any dependencies or interrelations.
- To ensure a high degree of parallelism and data integrity, time-consuming administrative activities are not performed under the control of the calling task but handled by a DSSM task.
  As a rule, only checking of the requested function is effected **synchronously**, i.e. with a wait state for the calling task. The actual processing sequence is executed by DSSM **asynchronously**, independent of the calling task.
- Following the DELETE-SS command, START-SS is rejected if DSSM has not yet fully unloaded the subsystem. The operand RESET=YES can be used by the system administration, however, to force unconditional loading of the subsystem; it is then not necessary to wait for complete execution of the DELETE-SS command.
  In this case the initialization routine is initiated and the relevant subsystem, which is notified of the RESET, can autonomously define the scope of this routine (full/partial/no initialization).

  Exception:

  If the relevant subsystem is in the "In Delete" state and deinitialization has already taken place, subsystem unloading is not aborted (despite RESET=YES). The START-SS command is then rejected until the subsystem has reached the "Not Created" state and has released all resources.

START-TRACE
Activate trace

Function group: Program control
User group: System administration

Command description

The traces are used to document specific process developments independent of a problem situation. Trace results are stored in memory and overwritten using a wraparound algorithm.
Both temporary and permanent traces are supported. The temporary, switchable traces can be activated to diagnose problems during a development or test phase.
The traces in BS2000 operation are administered by a trace manager, which supports the provision (for CDUMP) and evaluation (for SODA and DAMP) of diagnostic data from all connected traces and the
sign-on of subsystem traces via a program interface.

Format

Operation	Operands
START-TRACE	[TRACE-IDENTIFICATION=]{*ALL / name / (name1,...,name50)}

Description of the operands

TRACE-IDENTIFICATION
Defines the traces to be activated.

=*ALL
All switchable traces are to be activated.

=name
=(name1,...,name50)
The specified trace is to be activated.
"name" (1-8 characters) stands for the trace ID. Up to 50 traces may be specified. For possible values see the following table.

Trace ID	Description
EMMIO	PAGE-FIXING trace
MRSCAT	MRSCAT occupation trace
SNAPTRC	Snapshot trace
TBOURSE	ETMBOWK trace
TDISAM	K-ISAM trace
TDISAMNK	NK-ISAM trace
TLOCK	Task lock management trace
TRFA	Remote file access trace

STATUS
Request information on system and jobs

Function group: Job and task management
User group: System administration, users

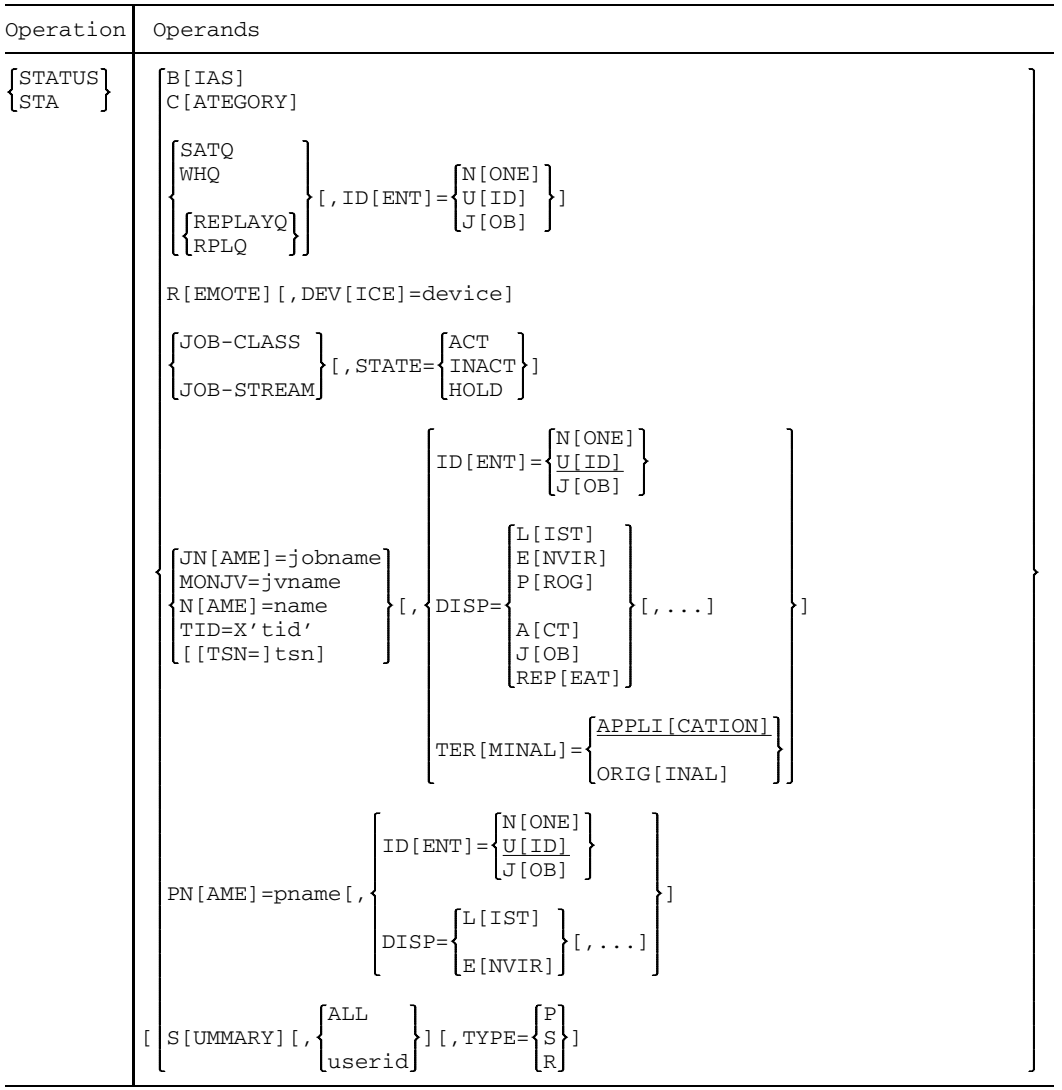
Command description

The STATUS command enables the system administration to obtain a summary of all active user jobs (arranged according to job types) for one or all user IDs, and of the respective category limits.
An additional function, for the privileged caller only, is the possibility to request a list of all tasks in the system queues, an overview of the status and utilization of the job streams, and to select jobs on the basis of particular categories or by their task identifier (TID).

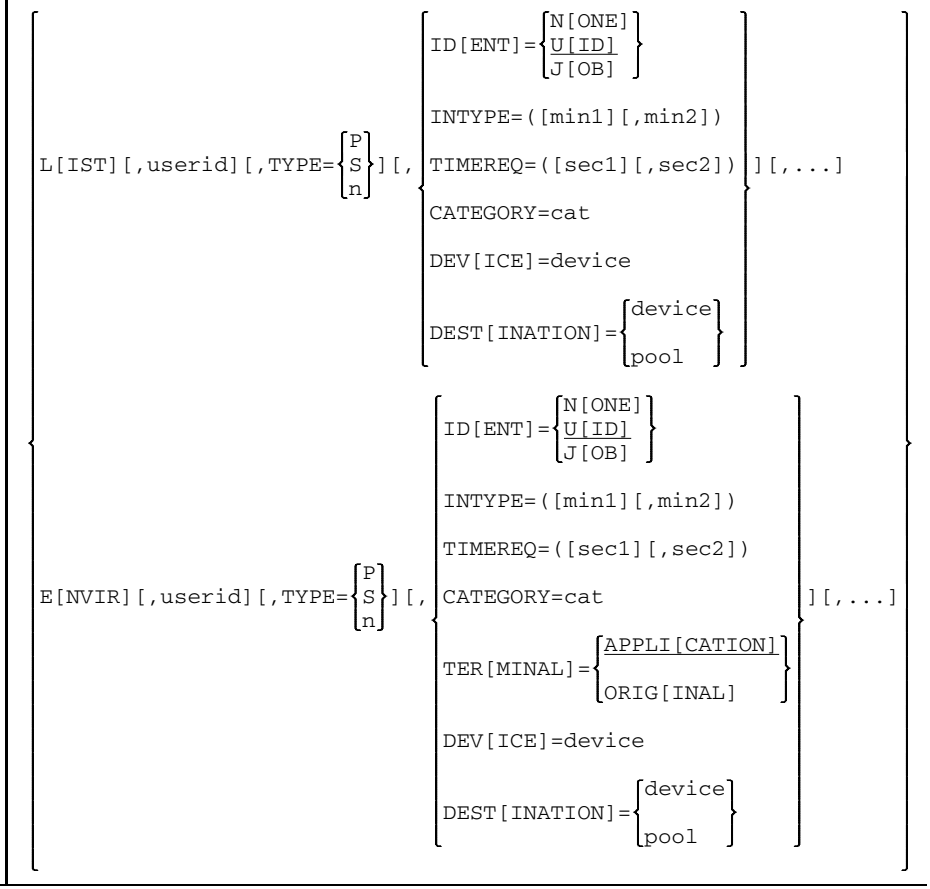
The operands of the STATUS command can be subdivided into three groups, depending on the type of information supplied:

1. Information on the system: operands BIAS, CATEGORY, SATQ, WHQ, REPLAYQ, REMOTE, JOB-CLASS, JOB-STREAM
2. Information on a group of jobs: operands SUMMARY, LIST, ENVIR, PROG, JOB, REPEAT
3. Information on a specific job: operands TSN, JNAME, PNAME, NAME, MONJV, TID

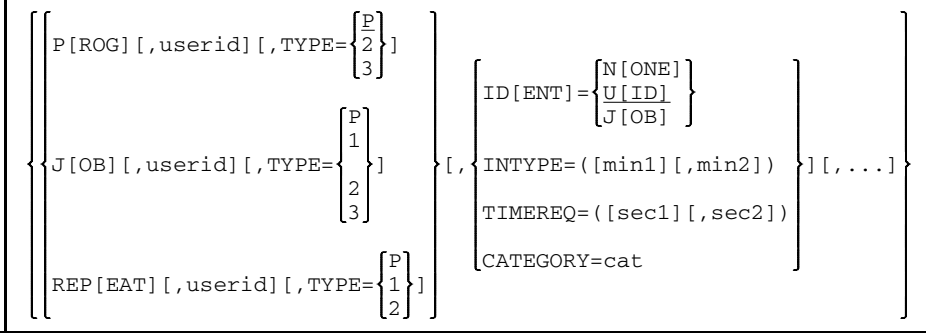
Format



continued →

Operation	Operands
STATUS (cont.)	

continued →

Operation	Operands
STATUS (cont.)	

Description of the privileged operands

The operands are described in alphabetical order.
The output fields are explained in the table following the operand description.

CATEGORY=cat

Selection of the jobs (operands LIST, ENVIR, PROG, JOB, REPEAT) on which information is requested is to be restricted to the tasks executing in the specified category.

JOB-STREAM

Provides information on job streams, i.e. also on the job schedulers. If a user job was started with the REPEAT option, it is shown in the "DORM" column. The associated job scheduler is active.

JSTREAM Name of the job stream
Status of the job stream (ACT/INACT/HOLD)

Relative to the relevant job stream:
DORM Number of jobs which are dormant because the appropriate job scheduler is not yet active
ANCD Total number of jobs available
WAIT Number of waiting jobs
HOLD Number of halted jobs

START	"ATLOAD"	The stream was started during system initialization
	"BYOPER"	The stream was started by the operator or system administration via the START-JOB-STREAM command
	"hh:mm"	The stream was started at a defined time (JMU statement DEFINE-JOB-STREAM)
STOP	"ATSHUTD"	The stream is terminated during system shutdown
	"BYOPER"	The stream is terminated by the operator or system administration via the STOP-JOB-STREAM command
	"hh:mm"	The stream is terminated at a defined time (JMU statement DEFINE-JOB-STREAM)

LIFETIME

Refers to the contents of the STOP column and means the job stream is terminated after expiration of the indicated time period.

STATE

Identifies the job stream on the basis of its state.

=ACT

Outputs information on active job streams.

=INACT

Outputs information on inactive job streams.

=HOLD

Outputs information on halted job streams.

REPLAYQ

Provides information on all tasks in the REPLAY queue. If the queue is empty, the message "NO TASK ON REPLAY QUEUE" is output.

NAME	User ID, job name, or blanks (depending on what was specified in the IDENT operand)
TSN	Job number
SESSID	Volume ID of the first replay tape
CLASS	Spoolout class according to entry in user catalog
FORM	Form name
DIA	Name of form overlay
SIZE	Size of the original file written to tape (in PAM blocks)
DEV	Desired output device, where:

LP3	High-speed printer (132/136 characters)
LP6	High-speed printer (160 characters)
SD	High-speed printer with loadable VFB
ND	3350/3352 Laser Printer
NSD	High-speed printer with loadable VFB or 3350/3352 Laser Printer or line printer
HP	3351/3353 or 2040/2190 Laser Printer
NHS	3350/3352 Laser Printer or 3351/3353 or 2040/2190 Laser Printer or high-speed printer with loadable VFB or line printer
NHP	3350/3352 Laser Printer or 3351/3353 or 2040/2190 Laser Printer
HSD	3351/3353 Laser Printer or high-speed printer with loadable VFB
SD7	3337, 3338, 3339 or 3348, 3349 or 3365 or 9xxx Line Printer
PR	Any printer
FD	Floppy disk drive

SATQ

Provides information on the five saturation queues.

TID
=X'tid'

The system administration is entitled to identify the job on which information is desired by means of its internal task ID.

WHQ

Provides information on all tasks in the WHEN queue.

TSN	Task sequence number of a job waiting for a condition to be met
NAME	User ID, job name, or blanks (depending on what was specified in the IDENT operand)
DATE	Date on which the job was entered in the WHEN queue
TIME	Time at which the job was entered in the WHEN queue
MINLIMIT	Time period (in minutes) during which the job may remain in the queue

If the WHEN queue is empty, message `EXC0354` is output instead of the individual fields.

The following table explains the individual output fields.

Output field	Operand	Meaning
#ACTIVE	CATEGORY	Number of active tasks in this category
#RDYINACT	CATEGORY	Number of executable, inactive tasks in this category
#RDYNTADM	CATEGORY	Number of executable, inactive but disabled tasks in this category (only in conjunction with the software product PCS)
A	REMOTE	State of the individual devices RSO printer: A - SDVC command issued but not active I - no spoolout possible at the moment M - a message for this device is expected at the console (public device) R - spoolout S - spoolout not possible T - spoolout operation started W - 9025 or 9645 Printer inaccessible at the moment, as an administration program is using the printer D - status in the period after an SDVC command is issued and before it is performed by the SRAM task RBP printer: Y - station is active N - station is not active (see Note 3)
ACCNB ACCOUNT#	TSN LIST	Account number
ANCD	JOB-CLASS JOB-STREAM	Jobs not yet released by the job scheduler
CGY-NAME	CATEGORY	Name of a category
CHARS	TSN	Name of the character set pool; if none was specified: name of the (first) character set; index, if specified } for TYPE 4 and 5 only

Output field	Operand	Meaning
CHARS#	TSN	Number of character sets specified } for TYPE 4 and 5 only
CLAS CLASS	ENVIR TSN	Spoolout class as specified in the user catalog
CLIM	JOB-CLASS	Limited number of jobs per job class
CMD	TSN	Command currently being executed
CONTROL	TSN	PHYS or NO, depending on whether the file contains laser-printer-specific control characters
COPIES	LIST TSN	Number of copies still to be printed
CORE	BIAS	Limited number of pages in main memory for resident user programs
CORE PRERE- SERVE	SATQ	Queue for main memory prereservation
CPU-MAX	LIST	HOLD - job suspended by NCHOLD command NTL - TIME=NTL operand specified in LOGON or ENTER command t - TIME=t operand specified in LOGON or ENTER command (t = CPU time)
CPU-USED	LIST TSN	Amount of CPU time used (in seconds). This output is of relevance only for active batch and dialog tasks and for active spoolout tasks.
CURR-CMD	PROG	Command currently being executed (max. 8 characters)
DATE	WHQ	Date of task inclusion in the WHEN queue
DEV	RPLQ ENVIR	Desired output device

Output field	Operand	Meaning
DEVICE	REMOTE TSN LIST ENVIR NAME PNAME	Device name (up to 8 characters, with wildcards) or pool name The following applies to TSN, NAME and PRINT: if the DESTINATION operand was specified in the PRINT command, the field remains empty
DI DIA	RPLQ ENVIR TSN	Overlay used for laser printer
DORM	JOB-CLASS JOB-STREAM	Number of jobs which are dormant because the associated job scheduler is not yet active (see Note 4)
E	REMOTE	Activation of exit routines (see SDVC); empty for RBP devices
ERCOD	REMOTE ENVIR	Return code from DCAM, PDN or printer
ERMSG	REMOTE ENVIR	Error message (ACT=S); empty for RBP devices
FAMILY	TSN	Number of files belonging to a group (family)
FILE FILENAME	TSN NAME PNAME	Name of the file to be output
FLUSH	JOB TSN	YES or NO, depending on whether FLUSH was specified in the LOGON or ENTER command
FOB	TSN	For jobs of types 4 and 5 only: name of the FOB used
FOBSIZE	TSN	For jobs of types 4 and 5 only: size of the FOB used

Output field	Operand	Meaning
FORM	RPLQ ENVIR TSN	Form number of stationery to be used for printing
HOLD	JOB-CLASS JOB-STREAM ENVIR	Number of suspended jobs Time period during which the job was placed in wait state due to an NCHOLD command, or NO
INTYPE	JOB TSN	Time period for which the job has been in the relevant processing state
JCLASS	JOB-CLASS JOB TSN	Name of the job class Job class assigned to the user
JOBNAME	TSN	Job name
JSTREAM	JOB-CLASS JOB-STREAM	Name of the responsible job stream Name of the job stream
LIFETIME	JOB-STREAM	Used in connection with the contents of the STOP column; means that the job stream is terminated when the indicated amount of time has elapsed
LOGON	TSN	LOGON time
M	REMOTE	I - RBP spoolin O - RBP spoolout R - remote printer
MAXMPL	CATEGORY	Maximum number of tasks in this category which task management is to keep active
MINLIMIT	WHQ	Length of time that the task is allowed to spend in the queue
MINMPL	CATEGORY	Minimum number of tasks in this category which task management is to keep active

Output field	Operand	Meaning
MRSCAT	ENVIR	Catalog ID and QUIET if the catalog is in quiet state Catalog ID and HOLD if the catalog is in hold state Blanks in all other cases
NAME	ENVIR JOB LIST PROG REPEAT RPLQ WHQ	User identification (UID), job name (JOB) or blanks (NONE, default value), as requested in IDENT operand
NOW	TSN	Current date and time of day
NSTART	REPEAT	Calculated start time for repetition of job
NTSN	REPEAT	Job number reserved for repetition of job
OPT	ENVIR LIST RPLQ	Optional output: "*" if a FOB, page rotation or more than 4 character sets are used
P	JOB	Job scheduling priority
PD HOLD	SATQ	HOLD queue for a paging device
PD PRERE- SERVE	SATQ SATQ	Queue for paging area prereservation
PNAME	TSN	Job name for a spoolout job
PND	DISP	PEND code of job
PRI	LIST TSN	Job and task priority * identifies the job express function
PROC PROCESS	TSN ENVIR REMOTE	BCAM name of the communication computer
PROGRAM-NAME PROG	PROG	Name of the loaded program

Output field	Operand	Meaning
PRSIZE	LIST	Only for jobs of type 4, 5, 6 or 7, and only when the SPOOL parameter is SPOOLOUT-SIZE=*LINES: number of lines, records or blocks already output at time of query; the value is set to zero at the start of each copy if the COPIES operand is specified in the PRINT command (see Note 5)
PVS	ENVIR TSN	Catalog ID of the pubset on which the output file is stored
REP REPEAT	JOB REPEAT TSN	Entry for job repetition in accordance with LOGON or ENTER command: STUP - for AT-STREAM-STARTUP DAIL - for DAILY WEEK - for WEEKLY hhmm - for PERIOD NO - for "no repetition"
REPCNT	REPEAT	Job repetition counter
RER RERUN	JOB TSN	Indicates whether the RERUN operand was specified in the LOGON or ENTER command
ROT	TSN	Page rotation (degrees) given in PRINT command
RTSN	LIST TSN	For jobs of types 4, 5, 6 and 7 only: TSN of the job that created the spoolout job
SESSID	RPLQ	VSN of the first replay device
SIZE	LIST TSN PROG	Length or size of the spoolout file (see Note 6) Size of the program file in virtual class 6 memory (in 4-Kb pages)
SPOOLIN	TSN	Time of spoolin

Output field	Operand	Meaning
START	JOB	Entry for job start time in LOGON or ENTER command: "Eyymmdd.hhmm" for EARLIEST "Lyymmdd.hhmm" for LATEST "Ayymmdd.hhmm" for AT "Whhmm" for WITHIN "BYOPER" "BYUSER" "SOON" "IMMED" "STUP" for AT-STREAM-STARTUP
	JOB-STREAM	ATLOAD - The stream was started in the course of system initialization BYOPER - The stream was started via the START-JOB-STREAM command hh:mm - The stream was started at a predefined time
STATE	JOB-CLASS JOB-STREAM	State of the job class/stream (ACT/INACT/HOLD)
STATION	ENVIR REMOTE TSN	Station name
STOP	JOB-STREAM	ATSHUTD - The stream will be terminated in the course of system shutdown BYOPER - The stream will be terminated via the STOP-JOB-STREAM command hh:mm - The stream will be terminated at a predefined time
STRT	JOB-CLASS JOB-STREAM	Number of jobs started
T1/DO	LIST SUMMARY	Jobs which are dormant because the associated job scheduler is not yet active, or repeat jobs
T1/HO	LIST SUMMARY	Suspended jobs
T1/WT	LIST SUMMARY	Waiting jobs

Output field	Operand	Meaning
T2	LIST SUMMARY	Active batch jobs
T3	LIST SUMMARY	Interactive jobs
T4	LIST REPLAYQ	Waiting spoolout jobs LP3 Line printer (132/136 characters) LP6 Line printer (160 characters) SD Printer with loadable VFB (3343) SD7 3337/3338/3339/3348/3365 Printers ND 3350/3352 Laser Printer NSD Printer with loadable VFB or 3350/3352 Laser Printer HP 3351/3353 Laser Printer NHS 3350/3352 Laser Printer or 3351/3353 Laser Printer or printer with loadable VFB NHP 3350/3352 Laser Printer or 3351/3353 Laser Printer HSD 3351/3353 Laser Printer or printer with loadable VFB PR Any printer PU Floppy disk device FD Floppy disk device F70 3170 Floppy Disk Device F71 3171 Floppy Disk Device T9P Magnetic tape device with 1600 bpi T9G Magnetic tape device with 6250 bpi TP Any magnetic tape device
T4/FD	SUMMARY	Waiting spoolout jobs (floppy disk)
T4/PR	SUMMARY	Waiting spoolout jobs (printer)
T4/PU	SUMMARY	Waiting spoolout jobs (floppy disk)
T4/TP	SUMMARY	Waiting spoolout jobs (tape)
T5/AC	SUMMARY	Active spoolout jobs

Output field	Operand	Meaning
T5/KP	SUMMARY	Suspended spoolout jobs which can still be output in the same session
T6/AC	SUMMARY	Active RBP spoolout jobs
T6/WT	SUMMARY	Waiting RBP spoolout jobs
T7/AC	SUMMARY	Active RSO spoolout jobs
T7/KP	SUMMARY	Suspended RSO spoolout jobs
T7/WT	SUMMARY	Waiting RSO spoolout jobs
T8	SUMMARY	Generated RBP devices and allocated RSO devices
TID	TSN	Internal task number
TIME	WHQ	Time at which the task was entered in the queue
TSN	LIST REMOTE TSN ENVIR PROG JOB	Job number
TYPE	LIST PROG TSN JOB	Processing status
UNP/Q#	TSN	Task queue number
USERID	REMOTE TSN	User identification
W	JOB-CLASS	Weight (urgency) of the job class
WAIT	JOB-CLASS JOB-STREAM	Number of waiting jobs
WEIGHT	CATEGORY	Weight (urgency) of the respective categories

Notes

1. The HOLD indicator may occur in the "CURR-CMD" and "CMD" columns if the batch task was suspended.
   The "PROGRAM-NAME" and "PROG" columns may contain the first 17 bytes of the program name. If the name is longer, it is automatically written in an additional output line.
2. The fields "T4PR" up to and including "T8" will be empty if SPOOL has not been loaded.
3. If the remote batch station is inactive, the columns STATION, PROCESSOR, USERID, TSN and MODE will contain blanks.
4. If a user job was started with the REPEAT option, the job will be displayed in the "DORM" column. The relevant job scheduler is active.
5. At the end of the spoolout job, the value for "PRSIZE" may differ from the value calculated for "SIZE" because the effects of, say, the variable record length or the operands of the PRINT command cannot be taken into account until execution time. Another cause of different values is when a spoolout job was halted or suspended as a result of the SQUC command.

   The following should be noted:

   – With /SQSUSP or /SQKEEP or /SQRESPL
     the "PRSIZE" value is set to zero.
6. The value output in the "SIZE" column depends on the entries given in the MODIFY-SPOOL-PARAMETERS command.
   The file size is indicated in:

   – PAM blocks
     (/MODIFY-SPOOL-PARAMETERS SPOOLOUT-SIZE=*PAM-PAGES)
   – an approximate number (for variable record length) of output lines (printer), records (floppy disk) or blocks (tape)
     (/MODIFY-SPOOL-PARAMETERS SPOOLOUT-SIZE=*LINES(LINES-FACTOR=nn))
     For files with RECFORM=F, the value is calculated on the basis of the real record lengths.
   – logical print lines, if the files involved were created by SYSFILE management. When the file is created, SYSFILE management calculates the approximate size of the spoolout file; this value is then output (marked with a P) for /STATUS LIST.

STOP-ACCOUNTING
Terminate accounting system

Function group: Accounting system
User group: System administration

Command description

Collection of the selected accounting records is terminated and the current accounting file closed.
All the values defined at accounting system activation or upon accounting file switchover, such as

- accounting file attributes
- selection of accounting records
- list of continuation file names
- cycle of the periodic accounting interval
- selection of monitored job classes

must be redefined using the START-ACCOUNTING command (provided they deviate from the default settings) if the accounting file is reactivated later on.

Format

Operation	Operands
STOP-ACCOUNTING STOP-ACC	

STOP-DAB
Deactivate DAB

Function group: DAB storage management
User group: System administration

Command description

Releases the DAB
storage unit (buffer).
After successful execution of this command, the system administration can reassign these storage areas using a START-DAB command.

Format

Operation	Operands
STOP-DAB	B[UFFER]-ID={*ALL / name / number}

Description of the operands

BUFFER-ID

Defines the DAB storage unit which is to be released.

=*ALL

All DAB storage units are to be deactivated.

=name

Name of the DAB storage unit to be deactivated.

=number

Number of the DAB storage unit (0 ≤ number ≤ 255) to be deactivated.
The complete name then reads: BUFFER#number.

STOP-JOB-STREAM
Terminate job stream

Function group: Job and task management
User group: System administration

Command description

This command is normally only necessary if, in the JMU statement DEFINE-JOB-STREAM for this job stream,

- the STOP operand has the value BY-OPERATOR
- a time for stream termination was defined which the system administration wants to alter.

Job stream termination implies termination of the job scheduler. Jobs are still accepted, but no longer started; they are placed in the so-called "dormant queue".

Format

Operation	Operand
STOP-JOB-STREAM STOP-J-S	NAME=name

Description of the operands

NAME=name

Name of the job stream to be terminated. This implicitly terminates the associated job scheduler.

Example

```
/STOP-J-S NAME=JSSTD1
%  JMS0022 /STOP-J-S COMMAND ACCEPTED.

/STA JOB-STREAM

JSTREAM  STATE DORM ANCD WAIT STRT HOLD START  STOP    LIFETIME
$SYSJS   ACT      0    0    0    2    0 ATLOAD ATSHUTD
JSSTD1   INACT    0    0    0    0    0 ATLOAD ATSHUTD
JSTSOS   ACT      1    0    0    4    0 ATLOAD ATSHUTD
```

STOP-PCS
Deactivate PCS

Function group: PCS
User group: System administration

Command description

The PCS subsystem is halted and unloaded, the requested storage space is returned as far as possible, and all resources are released. This explicit unloading of the subsystem results in a switchover to pure PRIOR operation for process control. The parameters for PRIOR operation are automatically saved on
execution of the START-PCS command.

Format

Operation	Operands
STOP-PCS	

Note

PCS may also be deactivated via the STOP-SS command (see *PCS* manual [7]).

STOP-SERSLOG
Deactivate error logging

Function group: Software error logging
User group: System administration

Command description

The software error logging function is deactivated and the current SERSLOG file $TSOS.SYS.SERSLOG.yy.mm.dd.xxx.nn closed.
Relevant errors can no longer be logged until the function is restarted using the START-SERSLOG command.

Format

Operation	Operands
{STOP-SERSLOG {STOP-SE	

STOP-SS
Deactivate subsystem

Function group: Subsystem management
User group: System administration

Command description

Command sequence
and functions:

- The relevant subsystem is locked for all new callers.
- The subsystem is deactivated once all jobs accessing it have terminated; the operand FORCED=YES deactivates the subsystem regardless of any tasks using it.
- The subsystem is unloaded.
- All reserved resources are released.

Forced deactivation, i.e. abortion of the accessing tasks, is only accepted if an attempt at task termination via FORCED=NO has failed.

The command is rejected if:

- the subsystem is not found in the dynamic subsystem catalog
- activated subsystems, or subsystems being initialized, depend on the subsystem to be deactivated
- activated subsystems, or subsystems being initialized, have link relationships with the subsystem to be deactivated.

Format

Operation	Operands
STOP-SS	SS-NAME=name [,VERSION='versno'] [,STRING=C'string'] [,FORCED={NO / YES}] [,SYNCH={NO / YES}]

Description of the operands

SS-NAME=name

Name of the subsystem to be deactivated.

VERSION='versno'

Designates the version of the subsystem to be unloaded.
The format used here must coincide with that employed at subsystem definition.
"versno" may consist of 4 or 7 alphanumeric characters.

Format

nn.m version identification
nn.mxyy version identification and update status
(nn, m and yy are numerals, x is a letter)

Default

If only **one** version of the subsystem exists and is loaded, this version is selected.
If **several** versions exist, the VERSION operand is mandatory.

STRING=C'string'

Specifies special parameters to be analyzed by the appropriate subsystem only.

FORCED

Defines behavior and urgency of command processing.

=NO

Processing continues, i.e. normal termination of all tasks using this subsystem is awaited.

=YES

All accessing tasks are aborted immediately. In the case of a privileged subsystem, this may result in a system dump; tasks connected to a non-privileged subsystem may exit via the STXIT error handling facility offered by DSSM.

SYNCH

Permits a choice between synchronous and asynchronous processing.

=NO

The command is to be processed asynchronously, i.e. without the user having to wait for its execution before further input is possible. No error messages on command execution are output.

=YES

Command execution must be awaited.
Error messages on command execution are output.

Notes

– Subsystems are usually characterized by a multitude of interrelations (dependencies, load relationships, etc.) with other subsystems. These interrelations have to be taken into account if the performance of a subsystem is to be guaranteed.
DSSM attempts to avoid possible conflicts arising from user requirements and therefore rejects problematic commands. Actions such as the installation of missing subsystems or the unloading of dependent subsystems are thus not performed.
However, if the user generates complex subsystems and issues the statement CHECK=NO (see the *System Installation* manual [4]), DSSM will execute the desired functions **despite** possible conflicts:

  – The START-SS command loads the specified subsystem, even if a subsystem to which defined relationships exist has not yet been completely loaded.

  – The commands RESUME-SS / STOP-SS / HOLD-SS are executed by DSSM without checking any dependencies or interrelations.

– To ensure a high degree of parallelism and data integrity, time-consuming administrative activities are not performed under the control of the calling task but handled by a DSSM task.
As a rule, only checking of the requested function is effected **synchronously**, i.e. with a wait state for the calling task. The actual processing sequence is executed by DSSM **asynchronously**, independent of the calling task.

– STOP-SS with the operand FORCED=YES is only accepted if the command has previously been issued with FORCED=NO and the subsystem is merely waiting for deactivation of the accessing tasks.
The FORCED function cannot guarantee "normal" behavior of tasks connected to a privileged subsystem.
Tasks connected to a non-privileged subsystem can activate an error routine enabling them to continue the program.
The FORCED function is implemented via a contingency routine for each task connected to the subsystem. Task deactivation is concluded once the task is undergoing the contingency routine.
As DSSM does not wait for completion of this routine, however, these tasks may still be registered as connected to the subsystem after an intermediate START-SS command.

STOP-TRACE
Deactivate trace

Function group: Program control
User group: System administration

Command description

The switchable, temporary traces are used to store brief information on each executed operation of a functional unit in chronological order. An activated trace registered as "active" in the trace address list is switched off as a result of the STOP-TRACE command
and identified as "initialized".

Format

Operation	Operands
STOP-TRACE	[TRACE-IDENTIFICATION=]{*ALL / name / (name1,...,name50)}

Description of the operands

TRACE-IDENTIFICATION
Defines the traces to be deactivated.

=*ALL
All switchable traces are to be deactivated.

=name
=(name1,...,name50)
The specified trace is to be deactivated.
"name" (1-8 characters) is a trace ID. Up to 50 traces can be specified.

Trace ID	Description
EMMIO	PAGE-FIXING trace
MRSCAT	MRSCAT occupation trace
SNAPTRC	Snapshot trace
TBOURSE	ETMBOWK trace
TDISAM	K-ISAM trace
TDISAMNK	NK-ISAM trace
TLOCK	Task lock management trace
TRFA	Remote file access trace

VERIFY
Restore file

Function group: File catalog management
User group: System administration, users

Command description

The VERIFY command restores files (also file generations or file generation groups) which were not closed properly as a result of a system crash or a job abortion.

This command can be used to

- unlock a tape or disk file so that it is generally available again
- restore a disk file (for this purpose the catalog entry is updated and the file closed if necessary; for ISAM files, the file is reconstructed on the basis of the existing data records)
- check an NK-ISAM file for consistency.

The system administration, as a privileged caller, can interactively force the release of file locks even for files being used (this is not possible, however, if the file was reserved as "exclusive").

Format

Operation	Operands
VERIFY	pathname1[,pathname2] [,REPAIR={YES / ABS / NO / CHECK}] [,SUPPORT={PUBLIC / PRDISC}]

Note on command execution

The system administration can also unlock, in guided dialog, any user files which are still open, i.e. being used.

Appendix

Device table

```
1. = family code
2. = device channel class
3. = device type code
```

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Operator terminals	CONSOLE	00	S	02	CON3027	3027-1, -2 3027-101, -102
				03	CON3027C	3027-11, -21 3027-111, -121 3027-LRC
			I	04	CON04	Emulated 3027 Console for CPUs with bus peripherals
				0A	CON38	3809/3886 75407-3, -4, -5
				0B	CON3803	75407-1, 3886-2, -3 (hardcopy unit on SVP)
				0C	CON3888	3888-3 Hardcopy Unit (for 3886 Subconsole) on 3803-90 Cluster Controller 75407-1

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Printers	PRINTER	20	S	24	PRPND	3350-1 3352-1
				26	PRLS333	3337-51, 3338-51, -511, -512, -521, -522 3339-51, -512, -52, -522
				27	PRPSHP	3351-21, -211 3353-21, -211
				2C	PRL3365	3365-11
			I	28	PRPIXH	2090-2, 2140-2
				29	PRL29	Bus printer for CPUs with bus peripherals
				2A	PRLI333	3338-531, -53, -532 3339-53, -532
				2B	PRPIHP	3351-23, -231 3353-23, -231
				2C	PRL3365	3365-12
				2F	PRL3348	3348-120, 3349-120
Special devices	FAM50	50	S/I	51	DSVP1	SVP hard disk
			I	52	DSVP2	SVP hard disk on the C40
			S	53	TD8170	8170-21 LCC (Local Cluster Controller)

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Tele-processing	TD	60	S	61	TD960	9631-1,-2,-3
				62	ZAS-DUMP	9631-50,-51,-52,-55
				63	ZAS-BCAM	
				6C	ZAS-SIN	TRANSDATA mainframe interface controller with connection to SINIX
				6D	ZAS-LAN	9632-100
				6E	DAST	3612
			I	61	TD960	9631-1,-2,-3
				62	ZAS-DUMP	9631-60,-61,-62,-65
				63	ZAS-BCAM	
				64	SKP	
				6D	ZAS-LAN	9632-200
				6E	DAST	3801-B
Physically supported devices				71 . . . 7F	"name of exotic device"	The names are defined by ADAM. The device type code assignment takes place via the UGEN statement ADT.
Floppy disk devices	DISKETTE	90	S	92	FD30243	3171 [1)]
				93	FD3171	3171 with 31712 [1)] Option
			I	9B	FD75407	75407-2 (C40)

1)

For these devices, one CTL and two DVC statements (with addresses in ascending order) must be issued at system generation time (see the *System Installation* manual [4]).

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Disk storage devices [1]	DISK	80/ A0				
		80	I	8F	D3475-8F	74305-12,-13,-140,-141, -150,-151 (C30)
		A0	S/I	A1	D3439-10	3439-10,-12
				A2	D3436	3436, 3436-2,-10,-12
				A3	D3437	3437, 3437-2
			I	A5	D3435	3435 (C40)
				A7	D3490-10	3490-1A4,-1A8,-1B4, -1B8,-1BC
			S/I	AB	D3475	3475-1,-2,-3
			I	AC	D3480	3410 [2] (external high-speed storage unit)
			S/I	AC	D3480	3480-1,-2,-11,-12,-111,-112 3848-A4,-B4,-AD4,-BD4
				AD	D348E	3480-21,-22 3848-AE4,-BE4
			I	AE	D348F	3480-131,-132
				AF	D3490-20	3490-2A4,-2A8,-2B4, -2B8,-2BC

1)

For disk storage devices, one DVC statement per drive must be issued at system generation time (see the *System Installation* manual [4]).

2)

For the 3410 High-Speed Storage Unit, the DYNREC=NO operand must be given in the CTL statement (see the *System Installation* manual [4]).

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Tape devices	TAPE	B0/ C0/ E0				Control unit + tape unit Tape subsystem +
Unimodal tape devices	UNMTAPE	B0	S	B2	UM1600	3570 + 3530 3571 + 3531
				B4	UM6250	3513 [1] + 3557, 3559
			I	B4	UM6250	3514 [1] + 3557, 3559
			S	B7	UM1600-1	3534
			I	B9	UMVID-1	MTC, 2.1 Gbytes, Video 8
				BA	UMSC-1	MTC, 155 Mbytes (for SIR and ARCHIVE only)
Magnetic tape cartridge devices	MBK	C0	I	C1	3580	3580-A10 + 3580-B10 3580-A20 + 3580-B20 3590-D31 3590-D32
				C2	3590	3580-A10 [2] + 3580-B10 3580-A20 [2] + 3580-B20 3590-D31 [3] 3590-D32 [3] 3590-A01 + 3590-B02/-B04 3590-A02 + 3590-B04/-B04
				C4	3590E	3590-D41 3590-D42 3590-A10 + 3590-B20/-B40 3590-A20 + 3590-B20/-B40

1)

For these devices, the value MBS must be specified for the "type" operand in the CTL statement (see the *System Installation* manual [4]).

2)

with 35830 Option for IDRC (Improved Data Recording Capability)

3)

with 35930 Option for IDRC (Improved Data Recording Capability)

Device family	Family name	1.	2.	3.	Device type	Device name / product number
Tape devices	TAPE	B0/ C0/ E0				Control unit + tape unit Tape subsystem +
Bimodal tape devices	BIMTAPE	E0	S	E2	BM1662	3513 [1] + 3557, 3559
			I	E2	BM1662	3514 [1] + 3557, 3559
			S	E2	BM1662	3515 + 3525 3516 + 3526 3517-1 + 3527-1 3519 + 3529 3535 + 3525 3536 + 3526 3537-1 + 3527-1
			I	E2	BM1662	3517-3 + 3527-3 3519-3 + 3529
			S	E3	BM1662S	3518 + 3528 3538 + 3528
			I	E4	BM1662S1	3506 (C40)
				E8	BM1662FS	3504-625

1)

For these devices, the value MBS must be specified for the "type" operand in the CTL statement (see the *System Installation* manual [4]).

Device channel classes

S: block multiplexer channel type 1 (SBL) or
byte multiplexer channel type 1 (SBY)

I: block multiplexer channel type 2 (IBL) or
byte multiplexer channel type 2 (IBY) or
emulation of multiplexer channel type 2 (bus channel)

Disk storage devices are always connected to block multiplexer channels.
Magnetic tape devices may be connected to either block or byte multiplexer channels.

Volume type table

Vol. type	Meaning
T1600	Tapes with a recording density of 1600 bpi (device type codes: B2, E2, E3, E4, E8)
T6250	Tapes with a recording density of 6250 bpi (device type codes: B4, E2, E3, E4, E8)
WORK TAPE	Tapes with a recording density of 1600 or 6250 bpi
TAPE-C1	Magnetic tape cartridge, 18 tracks (device type codes: C1, C2)
TAPE-C2	Magnetic tape cartridge, 18 tracks, compressed (device type code: C2)
TAPE-C3	Magnetic tape cartridge, 36 tracks (device type code: C4)
TAPE-C4	Magnetic tape cartridge, 36 tracks, compressed (device type code: C4)
TAPE-V1	Magnetic tape cartridge, 2.1 Gbytes, Video 8 (device type code: B9)
TAPE-CS1	Magnetic tape cartridge, 155 Mbytes (device type code: BA)

Device management output

Meaning of the output columns for the SHOW device management commands:

Keyword	Meaning
ACTION	Indicates which (re)allocation operation is running for a volume from the volume monitor, activated by: - operator intervention (accidental dismounting of a volume which was being used) - commands (DETACH-DEVICE, MOVE-DISK,...) - Device Error Recovery (DER), e.g. for INOP - user request (MOUNT message for unmounted volumes) The following states may occur: CANCELLED: use of a tape or disk is permanently locked; the interrupt will not be retracted DISMOUNT: a REMOUNT message for the same volume is pending on another device, or a REMOUNT or MOUNT message for another volume is pending for the same device INOP: the device is not available (inoperable) MOUNT: the response to a MOUNT message is still pending for the volume NO ACTION: no interrupt NO DEVICE: no device allocation exists for a volume due to a preceding reconfiguration command (DETACH-DEVICE, REMOVE-DEVICE-CONNECTION) POSITION: a tape currently in use is being repositioned PREMOUNT: the response to a PREMOUNT message for the volume in question is still pending RECOVER: an unspecified interrupt handling operation is taking place for the volume currently in use REMOUNT: remounting is taking place for the volume SNATCHED: the allocation was passed to another task; the allocation was retracted by the device owner SVL-UPDATE: the system occupancy log is currently being stored on the disk UNLOCK: an UNLOCK job is being executed to extract a system ID stored in the SVL WP-MISSING: the write-enable ring must be mounted (tape) or the write lock must be cancelled (disk)

Keyword	Meaning
ACCESS	PPD: determines the use of the private disk in PPD mode (PPD: Protected Private Disk; PPD's STATUS information can be used to inquire whether the disk has read and/or write access; chargeable product) WRITE: no PPD monitoring has been reported for the private disk ALL: not until the disk has been allocated is the final ACCESS value determined, depending on the generation attribute of the device on which the private disk is mounted: POOL=NO|SH sets ACCESS=WRITE POOL=SW sets ACCESS=PPD This value is not dependent on the setting of the "WRITE INHIBIT" switch.
ADMISSION-TIME	Date and time at which the task was entered in the SECURE queue (yyyy-mm-dd hh:mm:ss)
ALLOC	Indicates whether or not the relevant disk has been allocated YES: Disk is allocated NO: Disk is not currently allocated
ALLOCATE-TAPE	Indicates whether the system will allocate tapes currently online without operator support (i.e. without MOUNT message). YES: PREMOUNT, MOUNT and REMOUNT messages are automatically answered by the system when the tape is recognized to be online. NO: PREMOUNT, MOUNT and REMOUNT messages must be answered by the operator.
ASS-TIME/ ASSIGN-TIME	SH-DISK (INF=PAR) defines the time at which a private disk with mode USE=DMS will be allocated or deallocated SH-DISK-DEF defines the time of disk allocation or deallocation for all disks which do not have an explicit setting for this value USER: Allocation requests or returns made by the user OPERATOR: If the disk is online and not yet allocated by the system, allocation is activated immediately The suffix "(D)" indicates that the data was taken from the values set via the SET-DISK-DEFAULTS command.

Keyword	Meaning
ATT	Number of devices in the "ATTACHED" state which belong to the device type specified in the output (regardless of the allocation)
AVAIL	Number of available devices of the device type specified in the output
CONF-STATE	Configuration state of the specified device, indicating whether or not it is available ATTACHED: the device can be used by the system for input/output ATT-PENDING: the device is not yet available to the system for input/output DETACHED: the device cannot be used by the system for input/output DET-PENDING: the device will be declared detached for the system when it is no longer being used INVALID: the device cannot be used or reconfigured (attached)
CTL-CHN-IOP	Inner virtual connection of the device to the I/O processor (IOP) via controller (CTL) and channel (CHN)
DET	Number of generated devices of the specified type which are not available due to configuration state "DETACHED"
DET-P	Number of devices of the relevant type which are still required for user requests and which will be DETACHED following deallocation; reallocation of these devices is no longer possible

Keyword	Meaning
DEV-A	Type of device allocation: FREE: the device has not yet been allocated, and is freely available DMS: the relevant device is implicitly allocated by a DMS application on the private disk which is mounted on it PUBLIC: the device is implicitly allocated by a public disk which is mounted on it tsn: TSN of the job to which the device has been exclusively allocated; it was requested via the SECURE command (UNIT= operand), or, in the case of disk storage devices, the occupying job is using the allocated disk for a USE-SPECIAL application (PHASE=IN-USE or MOUNT) DRV: the device is explicitly allocated due to an action initiated by DRV DMS-DRV: the device is implicitly allocated by a DMS application on the private disk (DRV disk) mounted on it PUB-DRV: the device is implicitly allocated by an active (in terms of DRV) public disk (DRV disk) mounted on it
DEV-TYPE	Device code (D3465,T1600,...)
DISK-MOUNT	Indicates whether the operator is ready to mount disks. YES: The operator is ready to satisfy disk mount requests. NO: Allocation requests for private disks to be newly mounted will be automatically rejected by the system.
DVC	Mnemonic device name of a specified hardware unit.
ICUU	Path address (IOP, CHN, CTL, DVC) for a device.
INNER CONNECTION	Describes the availability of the connections generated from the specified unit to all inner units directly connected to it (seen in the CPU/IOP direction). The following states may occur: INCLUDED: the connection (path) is available to the system for I/O operations REMOVED: the path is not available to the system for I/O operations REM-PENDING: the path will be declared unavailable when no longer used by the system

Keyword	Meaning
I/O-PATH-STATE	Availability of a complete I/O path (from IOP via CHN, CTL to the device). AVAILABLE: path is available NOT AVAILABLE: path is not available
LABEL	Type of volume label STD: volume with standard labels BS1000: disk with BS1000 labels TAPE-MARK: tape starts with a tape mark NON-STD: the label does not have any of the above attributes
MNEM	Shows the mnemonic device name defined at generation time
NAME/ID	Provides information on the job name of the addressed job, or on the user ID under which the job is running
OP-CTL/ OPERATOR- CONTROL	Indicates whether the operator wants to be kept informed of initial disk allocations of tasks (with the option of rejecting these allocation requests): SHARE, EXCL, ALL, NO The suffix "(D)" indicates that the data was taken from the values set via the SET-DISK-DEFAULTS command.
OUTER CONNECTION	Describes the configuration state of the connections generated from the specified unit to all external units directly connected to it (seen in the peripheral direction). INCLUDED: the connection (path) is available to the system for I/O operations REMOVED: the path is not available to the system for I/O operations REM-PENDING: the path will be declared unavailable when no longer used by the system

Keyword	Meaning
PHASE	Provides information on the tape and disk monitoring modes. ONLINE: the volume is mounted but not allocated PREMOUNT: the volume is allocated; a device allocation exists for it for previous or future use MOUNT: the volume is already allocated but still has to be made available by the operator IN-USE: the volume is released for use (exception: ACTION=CANCELLED) Volume monitoring takes place for the allocation states IN-USE and PREMOUNT (a volume will always be monitored if a valid allocation exists for it). The tasks of volume monitoring are as follows: - it guarantees a device allocation for tapes in the PREMOUNT state; - it requests the operator to remount a volume which is considered allocated but is currently not accessible (INOP); - it takes care of cancellation of the NO-DEVICE state as soon as a device of the requisite type becomes available; - it initiates automatic repositioning of tapes if the operator has made a mistake (e.g. unloaded the wrong tape device)

Keyword	Meaning
POOL	Defines the availability of a device in relation to two or more systems NO: the device is only available from the home system; it is not possible to access a volume mounted there from another system SH[AREABLE]: the device is generated as a rule for two or more systems (device with multiprocessor interface); any disk mounted on a device with this generation attribute is operated by default as an SPD disk. SW[ITCHABLE]: this device is generated as a rule for two or more systems; for disk storage devices: - device with multiprocessor interface: private disks mounted on it are operated system-exclusively by default (non-SPD mode); - PPD mode: only read access is permitted for other devices: - parallel operation is impossible or impractical due to lack of hardware support (tape devices); for devices with this generation attribute, the operators of the participating systems must ensure that they are ATTACHED in one system only.
PRE-/IN-USE	Number of devices of the defined type which are allocated implicitly by volumes of the corresponding phase (PREMOUNT, MOUNT(ing), IN-USE)
RES-BY-MN	Number of devices of the relevant type which were reserved by a user with the command SEC-RES UNIT=mn

Keyword	Meaning
RES-BY-TYPE	Indicates how many free devices of the specified type are required to deal with reservation and allocation requests which have already been granted
RESOURCES REQUESTED/ COLLECTED	List of devices or volumes specified with /SEC or list of devices or volumes already reserved by the collector task
SVL-ALLOC	Actual allocation mode of the disk (system-shareable or system-exclusive). This need not be identical to the entry made by the operator using the command SET-DISK VOL=vsn,SYS=...
SVL-RECORDING-MODE	Indicates the recording mode (DRV / SRV) in which the disk is allocated, and whether the indicator for a registered inconsistency is set in the SVL SRV: the disk is allocated in SRV mode (single recording by volume) DRV: the disk is allocated in DRV mode (dual recording by volume), i.e. data may be recorded in parallel on two disks SRV(INCONS): the disk is allocated in SRV mode and the inconsistency indicator in the SVL is set (for disk formatting/initialization) DRV(INCONS): the disk is allocated in DRV mode and the inconsistency indicator in the SVL is set (if one of the DRV disks fails or use is cancelled by command)
SYSTEMS	System IDs of the systems occupying the disk. The allocation is stored in the SVL of the disk.

Keyword	Meaning
SYS-ALLOC	Determines the mode in which a private disk with USE=DMS is to be used by the home system with reference to other systems. Permissible operating modes: EXCL[USIVE]: other systems are excluded from using the disk SHARE[ABLE]: other system may access the disk (SPD mode); synchronization with other systems takes place with regard to space and file utilization; catalog locks appear in the F1 label of the disk ALL: the system allocation mode is derived from the generation attribute of the device The suffix "(A)" denotes the generation attribute (ALL) for the device.
TAPE-MOUNT	Indicates whether the operator is ready to perform tape mount operations YES: the operator is ready to perform tape mount operations; allocation requests for unmounted tapes cause a MOUNT message to be issued NO: allocation requests for tapes to be newly mounted are automatically rejected by the system
TASKS-WITH-RESERVATIONS	List of tasks with the number of devices of the specified type which have been reserved or allocated
TIME-STAMP	Date and time at which the SVL of the disk last registered an initial allocation (= date/time of the chronologically first system ID in the SVL). This time stamp is used together with the VSN to identify a disk.
TIME-WEIGHT	Provides information on the wait period which was set via /START-RES and which has an effect on the calculation by the system of the urgency (weight) for the collector task
TSK-PRIO	Priority of the job in question

Keyword	Meaning
TSK-TYPE	Provides information on whether a batch task, an interactive task or an RFA-created task on the remote processor (SECURE requests sent from a different system) is involved
TSN	Task sequence number (job number)
TYPE	Describes the device type of the volume on which information is being queried; the device type can be influenced, not only by a user request (SECURE, FILE, ...), but also by the following events: online event: the activation interrupt allocates the volume to a device, whose type then determines the device type of the volume in a VSN request SET-DISK command: the device type is predefined prior to volume allocation
UN-CLASS	Device class to which the specified unit belongs: DVC: denotes a peripheral (disk, tape, printer, etc.) -S: denotes a magnetic tape cartridge device (streamer) CHN: denotes a channel CTL: denotes a controller IOP: denotes an input/output processor CPU: denotes a central processing unit
UN-TYPE	Generic term for "DEVICE-TYPE". It includes not only the set of possible device types, but also the values of all CTL, CHN, IOP and CPU types.
UNLOAD-RELEASED-TAPE	Specifies whether tapes are to be unloaded when deallocated, provided they have not been unloaded by the user. YES: tapes will be unloaded following deallocation if they were in use (PHASE=IN-USE) NO: tapes will not be unloaded following deallocation

Keyword	Meaning
USE	Provides information on - the allocation mode of a mounted volume - the degree of monitoring - the scope of monitoring during allocation by the monitors Permissible values: DMS: The volume is occupied by one or more DMS applications. Only readable volumes are accepted for allocation, i.e. only STD label disks can be processed whereas tapes with or without STD label can be processed provided they can be identified uniquely. By default, the task allocation mode for USE=DMS is task-shareable for private disks and task-exclusive for tapes. Any operator intervention during PHASE=IN-USE leads to a REMOUNT-RECOVER and causes tapes to be repositioned. The system ensures that only one volume with a given VSN is allocated in DMS mode. SPECIAL: The volume is occupied by a special application (privileged application, e.g. VOLIN, INIT, debugging routines, FDDRL, etc.). The task and system allocation mode is EXCLUSIVE. The special application can switch off checking operations in connection with the allocation (VOLIN, INIT) or monitoring functions such as repositioning or MOVE (online FDDRL organizes this itself). The VSN is not checked for uniqueness. WORK: The mounted tape is used as a work tape (it is made available to the DMS user for processing WORK files).
USER-ALLOC/ USER- ALLOCATION	Indicates which allocation requests are permitted for a user (task-shareable, task-exclusive, ALL) for a private disk operated with USE=DMS. The suffix "(D)" indicates that the data was taken from the values set via the SET-DISK-DEFAULTS command.

Keyword	Meaning
VOL-A	Provides information on attributes of public disks or allocation modes of private disks for public disks: PAGING: the disk is part of the occupied pubset and is used for paging purposes PUBLIC: the disk is part of the occupied pubset CANCEL: work with the disk was aborted for private volumes: FREE: no user is accessing the volume at the moment EXCL: the private volume is allocated exclusively to a user job SHARE: the private disk is occupied by one or more jobs; additional requests are permitted
VSN	Volume serial number, the "name" of a volume; it is defined when a volume is initialized (VOLIN, INIT). If the volume does not have a readable label, or if no VSN was given in the volume request, synonyms may be output. Permissible values: <vsn>: the VSN of a volume as defined in VOLIN or INIT UNKNO[WN]: the volume does not have a BS2000 standard label SCRAT[CH]: the volume request was issued without a VSN (e.g. FILE command without VOLUME operand for tapes) WORK: the tape in question was requested with /FILE.....,DEVICE=WORK

Keyword	Meaning
VTOC-LOCK	Software lock on a private disk, which prevents the following actions: - allocation or deallocation of the disk by a system (entry or removal of a system ID in the SVL) - access to the F1 label (directory of files stored on the disk) - access to the F5 label (overview of occupied and free pages on the private disk)
VTOC-SYS	System ID of the system which currently holds the VTOC lock for the disk and thus temporarily excludes other systems from SPACE and catalog operations on this disk. The VTOC system ID is stored in the SVL of the disk.
VTOC-TSN	Job of the home system, causing the VTOC lock to be allocated to the home system
WAIT-TIME	Period of time that the specified task has been waiting for deallocation of the requested resources (hh:mm:ss)

References

[1] BS2000
System Administrator's Guide V9.5A
User Guide

Target group
BS2000 system administrators.
Contents
Options and responsibilities of the system administrator for the control and management of the operating system; all commands required for this purpose.
Applications
System management, computer center.

[2] BS2000
Computer Center Utility Routines
User Guide

Target group
BS2000 system administrators.
Contents
Utility routines available under the system administrator ID for the purpose of controlling and monitoring the operating system.
Applications
System administration, computer center.

[3] BS2000
User Commands (ISP Format)
User Guide

Target group
BS2000 users (non-privileged).
Contents
All BS2000 system commands in alphabetical order with detailed explanations and examples.
The following products are dealt with:
BS2000-GA, MSCF, JV, FT, TIAM.
Applications
BS2000 interactive/batch mode, procedures.

[4] BS2000
System Installation
User Guide

Target group
BS2000 system administrators.
Contents
New installation; version changeover; generation of a new public volume set; generation of a subsystem catalog; statements for SIR and UGEN.
Applications
System administration, computer center.

[5] **AID** (BS2000)
Advanced Interactive Debugger
Debugging on Machine Code Level
User's Guide

Target group
BS2000 programmers.
Contents
Description of all the AID commmands available for debugging on machine code level; messages.
Applications
Debugging of programs in interactive/batch mode.

[6] BS2000
Job Variables
User Guide

Target group
BS2000 users.
Contents
Applications for job variables in controlling and monitoring jobs and program runs; conditional job control; all the necessary commands and macros; application examples.
Applications
BS2000 timesharing mode.

[7] **PCS** (BS2000)
User Guide

Target group
BS2000 system administrators.
Contents
Optimal fine-tuning and operation of a computer system with PCS (Performance Control Subsystem); statements for PCS.
Applications
System management, computer center.

[8] **MSCF** (BS2000)
Multiprocessor System
User Guide

Target group
BS2000 system administrators, operators, end users.
Contents
Generation, operation, management and application of MSCF for processors to be included in a computer network.
Applications
System management, computer center, network participation.

[9] BS2000
Executive Macros
User Guide

Target group
BS2000 assembly language programmers (non-privileged); system administrators.
Contents
All Executive macros in alphabetical order with detailed explanations and examples; selected macros for DMS and TIAM; macro overview according to application areas; comprehensive training section dealing with eventing, serialization, inter-task communication, contingencies.
Applications
BS2000 application programs.

[10] BS2000
System Administrator's Guide
User Guide

Target group
BS2000 system administration.
Contents
Description of the options and responsibilities of the system administration for the control and management of the operating system.
The manual contains the following chapters:
- System administration (user and file administration, accounting, system diagnostics, corrections to the system, parameter service)
- System control and optimization (job, task and memory management, DSSM, MPVS)
- Data security (SRPM, FACS, SAT)
- Data protection (protection strategies, software products for data protection, file reconstruction)
- Automation of system operation
- Commands in SDF format

Applications
System administration, computer center.

[11] **RSO** (BS2000)
User Guide

Target group
System administrators, device administrators, end users.
Contents
Descriptions of
- the user and administrator commands for performing remote SPOOL jobs (without SPOOL parameter commands);
- installation of the software product RSO;
- generation of RSO printers;
- the RSOSERVE utility routine;
- operation of the 9025 Electronic Page Printer;
- the RSO messages.

[12] BS2000
SPOOL Part 1, System Description
User Guide

Target group
SPOOL users.
Contents
Description of printer output control, SPOOL commands, SPOOL macros, laser printer functions, remote batch processing.

[13] BS2000
Binder-Loader-Starter (BLS)
User Guide

Target group
Software developers.
Contents
The binder-loader-starter (BLS) system consists of the following functional units:
– linkage editor BINDER
– dynamic binder loader DBL
– static loader ELDE
The various sections contain functional descriptions and examples, plus a reference section with statements, commands and, where applicable, macros.

[14] BS2000
System Operator's Guide
User Guide

Target group
BS2000 operators.
Contents
Responsibilities of the operator for a BS2000 installation, including:
– system initialization and termination
– operator commands
– device management
– dump routines.
Applications
Computer center.

Contents

Preface **1**
Target group 1
Changes since the last version of the manual 2
General changes for BS2000 V10.0A 2
Changes in the ISP commands 4
List of amendments 7
Notational conventions 9
Command description metasyntax 9
Wildcard characters 11
Format for dates 12
Abbreviation rules for command input 12

System administration commands **13**
System administration privileges 13
Overview of commands, sorted by function groups 14
ADD-SUBSYSTEM
Extend dynamic subsystem catalog 20
AUDIT
Log branch instruction addresses 21
BIAS
Define size of resident main memory 23
CANCEL
Abort user job 24
CATEGORY
Control system workload 26
CATM
Create entry in MRSCAT catalog directory 29
CHANGE-ACCOUNTING-FILE
Switch accounting file 34
CHANGE-CONSLOG
Switch logging file 37
CHANGE-SERSLOG
Switch error logging file 38
CHANGE-SUBSYSTEM-PARAM
Change subsystem characteristics 39
CREATE-SS

Activate subsystem 41
DELETE-SS
Deactivate subsystem 42
ERAM
Delete entry in home catalog directory 43
ERASE
Delete files 44
EXCAT
Export pubset 48
FILE
Define file attributes / control file processing 52
FSTATUS
Request catalog information 56
HOLD-JOB
Place user job in wait state 61
HOLD-JOB-CLASS
Place job class in wait state 62
HOLD-JOB-STREAM
Place job stream in wait state 63
HOLD-PCS
Place PCS in wait state 64
HOLD-SS
Place subsystem in wait state 65
IMCAT
Import pubset 68
IMPORT
Import private files 73
JOIN
Create/update user entries 76
LOADAID
Load AID 93
MODIFY-ACCOUNTING-PARAMETERS
Define system accounting parameters 94
MODIFY-JOB-CLASS
Modify job class characteristics 99
MODIFY-JOB-STREAM
Modify job stream characteristics 101
MODIFY-PCS-OPTION
Modify activated PCS parameter set 102
MSGCONTROL
Define message files 104
NCHOLD
Place batch task in wait state 106
NCREL

Cancel wait state for batch task 107
RDIR
Redirect output to other printer 108
RELEASE-JOB
Cancel wait state for user job 109
RELEASE-JOB-CLASS
Cancel wait state for job class 111
RELEASE-JOB-STREAM
Cancel wait state for job stream 113
RESUME-PCS
Cancel wait state for PCS 115
RESUME-SS
Cancel wait state for subsystem 116
RFD
Assign floppy disk device for waiting spoolin jobs 119
SDVC
Direct spoolout jobs to specific device 122
SET-DSSM-OPTIONS
Activate/deactivate DSSM logging 149
SET-PUBSET-ATTRIBUTES
Define characteristics of a pubset 151
SET-REPLOG-READ-MARK
Close REPLOG file temporarily 154
SEVER
Prohibit/permit user access to the system 155
SHARE
Declare object module shareable 158
SHOW-ACCOUNTING-STATUS
Request information on accounting system 161
SHOW-CONSLOG
Request information on logging 164
SHOW-DAB
Output information on DAB storage units 165
SHOW-DEVICE-STATUS
Request information on device allocation and monitoring 166
SHOW-DISK-STATUS
Query allocation status and disk parameters 168
SHOW-JOB-CLASS
Request information on job classes 170
SHOW-JOB-STREAM
Request information on job streams 172
Output information on PCS parameter settings and monitored variables 174
SHOW-PUBSET-ATTRIBUTES

Request overview of pubset characteristics 175
SHOW-RESOURCE-REQUESTS
Request information on secure queue and collector task 177
SHOW-SERSLOG
Request information on software error logging 179
SHOW-SS-STATUS
Request subsystem information 180
SHOW-TRACE-STATUS
Request information on system traces 182
SHOW-USER-ATTRIBUTES
Request information from user catalog 187
SPMGT
Manage storage space 197
SQUC
Repeat spoolout jobs 199
STAM
Request information from home catalog directory 203
START-ACCOUNTING
Activate accounting system and open accounting file 208
START-DAB
Activate DAB 215
START-JOB-STREAM
Start job stream 218
START-PCS
Activate PCS 219
START-SERSLOG
Activate software error logging 220
START-SS
Activate subsystem 221
START-TRACE
Activate trace 225
STATUS
Request information on system and jobs 227
STOP-ACCOUNTING
Terminate accounting system 243
STOP-DAB
Deactivate DAB 244
STOP-JOB-STREAM
Terminate job stream 245
STOP-PCS
Deactivate PCS 246
STOP-SERSLOG
Deactivate error logging 247
STOP-SS

Deactivate subsystem 248
STOP-TRACE
Deactivate trace 251
VERIFY
Restore file 252

Appendix 253
Device table 253
Volume type table 259
Device management output 260

References 273

User Guide - English

FUJITSU

BS2000/OSD-BC V1.0

System Administrator Commands (ISP Format)

Edition April 1993

Information on this document

On April 1, 2009, Fujitsu became the sole owner of Fujitsu Siemens Computers. This new subsidiary of Fujitsu has been renamed Fujitsu Technology Solutions.

This document from the document archive refers to a product version which was released a considerable time ago or which is no longer marketed.

Please note that all company references and copyrights in this document have been legally transferred to Fujitsu Technology Solutions.

Contact and support addresses will now be offered by Fujitsu Technology Solutions and have the format *...@ts.fujitsu.com*.

The Internet pages of Fujitsu Technology Solutions are available at *http://ts.fujitsu.com/*...
and the user documentation at *http://manuals.ts.fujitsu.com*.

Hinweise zum vorliegenden Dokument

Zum 1. April 2009 ist Fujitsu Siemens Computers in den alleinigen Besitz von Fujitsu übergegangen. Diese neue Tochtergesellschaft von Fujitsu trägt seitdem den Namen Fujitsu Technology Solutions.

Das vorliegende Dokument aus dem Dokumentenarchiv bezieht sich auf eine bereits vor längerer Zeit freigegebene oder nicht mehr im Vertrieb befindliche Produktversion.

Bitte beachten Sie, dass alle Firmenbezüge und Copyrights im vorliegenden Dokument rechtlich auf Fujitsu Technology Solutions übergegangen sind.

Kontakt- und Supportadressen werden nun von Fujitsu Technology Solutions angeboten und haben die Form *...@ts.fujitsu.com*.

Die Internetseiten von Fujitsu Technology Solutions finden Sie unter *http://de.ts.fujitsu.com/*..., und unter *http://manuals.ts.fujitsu.com* finden Sie die Benutzerdokumentation.