

FUJITSU Software BS2000 HSMS

Version V12.0A  
June 2020

Release Notice

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# 1 General

This Release Notice is a summary of the major extensions, dependencies and operating information with respect to HSMS V12.0A and ARCHIVE V12.0A under the B2000 operating system.

No separate release notice will be delivered to ARCHIVE. The contents of ARCHIVE are included in this Release Notice.

- \*1 The release level is that of June 2020.
- \*1 Changes to release level November 2019 are marked with \*1

The Release Notice is shipped on the product delivery medium.

This and other current Release Notices and are available online at <http://bs2manuals.ts.fujitsu.com>.

If one or more previous versions are skipped when this product version is used, the information from the Release Notices (and README files) of the previous versions must also be noted.

## 1.1 Ordering

HSMS V12.0A can be ordered from your local distributors.

HSMS V12.0A is supplied subject to a single payment or payment by installments.

ARCHIVE V12.0A is a component of the delivery unit HSMS V12.0A and cannot be ordered separately.

## 1.2 Delivery

The HSMS V12.0A files are supplied via SOLIS.

The following release units are part of the HSMS V12.0A delivery scope:

HSMS	V12.0A
ARCHIVE	V12.0A

The current file and volume characteristics are listed in the SOLIS2 delivery cover letter.

## 1.3 Documentation

The OSD/BC documentation is available in German and English on DVD with the title BS2000 SoftBooks.

The documentation is also available in the form of online manuals at <http://bs2manuals.ts.fujitsu.com>.

The following documentation is available for HSMS V12.0A:  
HSMS V12.0 Volume 1 Functions, Management and Installation

HSMS V12.0 Volume 2, Statements

The following documentation is available for ARCHIVE V12.0A:

ARCHIVE V12.0 User Guide

## 2 Software extensions

### 2.1 Extension of HSMS V11.0A to V12.0A

#### Introduction Version Backup

It introduces the new function version backup and thus the new archive type version backup archive (operand value: \*VERSIONBACKUP). The version backup archive is addressed with the symbolic name \*SYSVERSION. To use this new backup procedure, it is possible to specify file-specific how many versions of a file should at least be retained in the version backup archive. Those save files are protected from deletion that contain the last n versions of the file.

\*1 The version backup is only supported for files on public disk and files on Net-Storage, not for file generations, files on private disks, catalog entries of tape files, temporary files and job variables.

When creating a file, the user can specify the number of backup versions to be stored using the file attribute NUM-OF-BACKUP-VERS, or later with MODIFY-FILE-ATTRIBUTES. If the user does not make a determination when creating the file, this attribute will be supplied with the default value from the CLASS2OPTION NUMBACK.

When saving (statement BACKUP-FILE-VERSIONS) a file, its current version is noted in the archive directory (as with the conventional BACKUP-FILES), as well as its current NUM-OF-BACKUP-VERS value.

There are two new functions to support version backup: CHECK-CATALOGED-FILES (CCF) and REORGANIZE-VERSION-BACKUP (RVB). CCF updates the status of the backed up files noted in the archive directory. This concerns the number of backup versions of the files to be stored as well as the information about which files have been deleted on the pubset.

When reorganizing the archive (RVB), backup versions are copied to the archive, removing obsolete file versions from the archive; the valid file versions are transferred to the new save file. Obsolete file versions are older file versions that no longer need to be kept according to the file attribute NUM-OF-BACKUP-VERS. It also removes files that the HSMS administrator has cleared (marked) for deletion (statement MODIFY-ARCHIVE). The save files or save versions no longer required after copying are automatically deleted from the archive.

#### HSMS-Parameter KEEP-REQUESTS

The new parameter controls how long a request with status 'COMPLETED' is kept. This makes the optional rep A0398425 obsolete.

#### Further improvements

- Improvement in the use of disk or net storage as a backup medium: MOVE-SAVE-FILE is also possible on public disk or net storage for backup archives
- For SHP in OPS variable, the HSMS version is also output.

### 2.2 Hints for using Tape Encryption

In connection with BS2000 as of V10.0A and MAREN as of V12.0A and LTO4/5/6 tape drives a customer related tape encryption is possible to avoid illegal access to "stolen" tapes. Tape encryption can easily be used by declaring a special volume type (TAPE-U4E/U5E/U6E) within HSMS.

Further information concerning tape encryption can be obtained from the MAREN V12.0A user manuals.

## 3 Technical information

### 3.1 Resource requirements

The following storage space is required for ARCHIVE operation:

1. Virtual address space (memory class 5):	less than 1 MB
2. Static disk storage space:	less than 22 MB
3. Dynamic disk storage space:	not relevant
4. Special hardware/firmware/ processor/real main memory:	not relevant

### 3.2 Software configuration

- HSMS V12.0A and ARCHIVE V12.0A requires BS2000 OSD/BC as of V10.0A.
- HSMS V12.0A requires ARCHIVE V12.0A.
- optional MAREN for tape administration as of V12.0A

### 3.3 Product installation

Installation of the product HSMS with the IMON installation monitor is mandatory. You must follow the information concerning installation in the delivery cover letter and in the product documentation as well as the information in this Release Notice.

The necessary inputs and the sequence of the installation are described in the IMON documentation.

### 3.4 Product use

### 3.5 Discontinued functions (and those to be discontinued)

HSMS V12.0A and ARCHIVE V12.0A are no longer released for the S-Server hardware line.

### 3.6 Incompatibilities

This section lists the incompatibilities with the previous version of HSMS and ARCHIVE.

#### 3.6.1 General

Refer to the section on downgrading to earlier versions described in the HSMS user guide of HSMS V12.0A resp. ARCHIVE V12.0A.

The HSMS control file of the previous versions V6.0A to V11.0A is only compatible upwards for subsequent use while switching to HSMS V12.0A. The control file of the previous version has to be saved for an eventual later downgrade to the previous version. At loading time of the HSMS subsystem an invalid control file will produce the abortion of this loading instead of a switching to DEFINE-SHOW mode.

Generally an existing request file must be deleted before switching to a different HSMS and ARCHIVE-version.

### 3.6.2 HSMS V12.0A

The extensions in HSMS V12.0A entail an incompatibility in the layout of the HSMS control file. For any back step the control file of the previous HSMS version must be kept and saved.

Requests with the status 'COMPLETED' are kept by default for 40 days and are no longer deleted at subsystem startup by default (setting KEEP-REQUESTS). This setting can be adjusted with the HSMS statement //MODIFY-HSMS-PARAMETERS.

### 3.6.3 ARCHIVE V12.0A

ARCHIVE V12.0A is fully compatible to ARCHIVE V11.0A, regarding both operations and the directories and save files.

Forward compatibility is also assured. Backups made with ARCHIVE V12.0A can be restored with earlier ARCHIVE versions, apart from backups using large tape blocks and Net-Storage.

- Net-Storage files can only be used with ARCHIVE >= V9.0B and BS2000 OSD/BC as of V9.0A.
- Net-Storage files of file type \*NODE-FILE can only be used with ARCHIVE >= V10.0A and BS2000 OSD/BC as of V10.0A.
- SAM-Node-Files on Net-Storage (file type \*NODE-FILE) can only be used with ARCHIVE >= V11.0A and BS2000 OSD/BC as of V11.0A.

### 3.6.4 SYSPAR.ARCHIVE.120

No changes compared to the previous version.

## 3.7 Restrictions

- \*1 In case migration is used, it should be taken into account that currently for repairing a broken migration archive by REPAIR-CATALOG-BY-RESTORE only backup archives can be used. The function will also be available for using version backup archives from release of SP20.2.
- \*1 Therefore, until the introduction of SP20.2 it should be ensured that files saved in version backup archives are also saved in backup archives with the attribute ALLOWED-USAGE=\*BACKUP to be able to repair migration archives if necessary.
- \*! From introduction of SP20.2 repairing migration archives is possible with both archive types ALLOWED-USAGE=\*BACKUP and \*VERSIONBACKUP.
- \*1
- \*1 In this context, we would like to point out that, in general, when using migration, it must be ensured that backups of the migrated files are always available in the backup archives. To do this, make sure that the HSMS parameter BACKUP-MANDATORY=\*YES is set and that regular backups are also made with the SAVE-OPTION SAVE-DATA=\*S2-S1-S0. This recommendation applies generally. For details, see the manuals.
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## 3.8 Procedure in the event of errors

If an error occurs, the following error documents are needed for diagnostics:

### 3.8.1 General documents

- A detailed description of the error condition, stating whether and how the error can be reproduced.
- Dump (if available)
- CONSLOG
- SERSLOG file
- REP files for HSMS and ARCHIVE

### 3.8.2 ARCHIVE

- ARCHIVE statement log
- ARCHIVE report
- ARCHIVE checkpoint file in the case of PROCESS
- ARCHIVE directory file, if used and needed
- Input tapes in case of, for instance, ARC0180, ARC0777,ARC0778, ARC1001, ARC1002
- Console logging (CONSLOG)
- If necessary a trace can be ordered by the development department:  
/START-ARCHIVE-TRACE (\*ALL or list possible:  
\*DEVICE or \*MULTIPLEXING or \*PACKET or  
\*SYNCHRONIZATION or \*PLAM or \*MEMORY or \*DIRECTORY /  
default: \*ALL)  
/MODIFY-ARCHIVE-TRACE (\*ALL or list possible:  
\*DEVICE or \*MULTIPLEXING or \*PACKET or  
\*SYNCHRONIZATION or \*PLAM or \*MEMORY or \*DIRECTORY /  
default: \*ALL)  
/STOP-ARCHIVE-TRACE

### 3.8.3 HSMS

- Runtime logging (SYSOUT protocol)
- HSMS report file ("REPORT=FULL")
- DIRECTORY file, if there are write/read or SHOW-ARCHIVE errors
- ARCHIVE checkpoint file, if the error occurred during write or read jobs
- HSMS trace, if any

## **4 Hardware requirements**

HSMS V12.0A runs on all FUJITSU servers BS2000 of the SE series.