

FUJITSU Software BS2000 SPOOL

Version 4.9A
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Release Notice

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1 General

*05 This Release Notice is a summary of the major extensions, dependencies and operating infor-
 *07 mation with respect to SPOOL V4.9, SPSEERVE V2.9, SPSRVMAN V2.4, PRM V1.4, SPCONV
 *09 V1.2A, SNS V2.0, BS2ZIP V1.2, SPOOLSYS V3.0 and CONV2PDF V1.0 under the operating sys-
 *07 tem BS2000/OSD-BC >= V9.0 and OSD/XC >= V9.0.

*09 The contents correspond to release status: June 2019.

*02 Changes to version 1 have been marked at the left margin with *02.

*03 Changes to version 2 have been marked at the left margin with *03.

*04 Changes to version 3 have been marked at the left margin with *04.

*05 Changes to version 4 have been marked at the left margin with *05.

*06 Changes to version 5 have been marked at the left margin with *06.

*07 Changes to version 6 have been marked at the left margin with *07.

*08 Changes to version 7 have been marked at the left margin with *08.

*09 Changes to version 8 have been marked at the left margin with *09.

*10 Changes to version 9 have been marked at the left margin with *10.

*09 This and other current Release Notices are shipped on the SoftBooks DVD and are available online
 *09 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

*07 SPOOL V4.9, SPSEERVE V2.9, SPSRVMAN V2.4, PRM V1.4, SPOOLSYS V3.0, SPCONV V1.2,
 *07 SNS V2.0, BS2ZIP V1.2 and CONV2PDF V1.0 are available through your local sales organization.

*07 The general conditions of the Contract for the Use and Maintenance of Software Products ap-
 *07 ply for these products.

1.2 Delivery

*07 The files for SPOOL V4.9, SPOOLSYS V3.0, SPSEERVE V2.9, SPSRVMAN V2.4, PRMMAN V1.4,
 *07 and PRMPRES V1.2, SPCONV V1.2, SNS V2.0, BS2ZIP V1.2 and CONV2PDF V1.0 are delivered
 *07 through the SOLIS system.

The valid file and volume attributes are listed in the SOLIS2 delivery statement.

The distribution information is presented per subsystem.

1. SPOOL

The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.SPOOL.049	Restricted macro library
SYSLIB.SPOOL.049	User macro library
SYSMES.SPOOL.049	Complete message file
SYSSDF.SPOOL.049	SPOOL syntax file
SYSSSC.SPOOL.049	SSCM catalog declaration for SPOOL subsystem
SYSNRF.SPOOL.049	NO-reference symbol file
*09 SYSPRC.SPOOL.049	Library for command SHOW-PRINT-JOB-INFORMATION
SYSPRC.SPOOL.049.NOTIF	Spool registration procedure for Notification Service

SYSRMS.SPOOL.049	RMS delivery set
SYSSII.SPOOL.049	IMON installation information
SYSSSI.SPOOL.049	SPOOL subsystem information file
SYSLIB SPOOL.049.BARC	template library for barcodes support (content is HSI dependent)

The following release items are only needed on /390 hardware:

Release Item	Description
SYSLNK.SPOOL.049	Load module library
SYSOML.SPOOL.049	Runtime for SPL API

The following release items are only needed on X86 hardware:

Release Item	Description
SKMLNK.SPOOL.049	Load module library

2. SPOOLSYS

Delivery includes the following files, from BS2000/OSD-BC V7.0 and OSD/XC >= V2.0:

The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.SPOOLSYS.030	Restricted macro library
SYSMES.SPOOLSYS.030	Complete message file
SYSRMS.SPOOLSYS.030	RMS delivery set
SYSSII.SPOOLSYS.030	IMON installation information
SYSSSC.SPOOLSYS.030	SSCM catalog declaration for SPOOLSYS subsystem
SYSSSI.SPOOLSYS.030	SPOOLSYS parameter file
SYSSDF.SPOOLSYS.030	SPOOLSYS syntax file

The following release items are only needed on /390 hardware:

Release Item	Description
SrYSLNK.SPOOLSYS.030	Load module library

The following release items are only needed on X86 hardware:

Release Item	Description
SKMLNK.SPOOLSYS.030	Load module library

3. SPSEERVE

The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.SPSEERVE.029	Restricted macro library
SPSEERVE	SPSEERVE phase
SYSLIB.SPSEERVE.029	User macro library

SYSLNK.SPSERVE.029	Load module library
SYSMES.SPSERVE.029	Complete message file
SYSRMS.SPSERVE.029	RMS delivery set
SYSSDF.SPSERVE.029	Syntax file
SYSSII.SPSERVE.029	IMON installation information

4. SPSRVMAN

The following release items are needed independent of the HSI:

Release Item	Description
SYSMES.SPSRVMAN.024	Complete message file
SYSSII.SPSRVMAN.024	IMON installation
SYSRMS.SPSRVMAN.024	RMS delivery set information
SYSSSC.SPSRVMAN.024	SSCM catalog declaration

The following release items are only needed on /390 hardware:

Release Item	Description
SYSLNK.SPSRVMAN.024	Load module library

The following release items are only needed on X86 hardware:

Release Item	Description
SKMLNK.SPSRVMAN.024	Load module library

5. PRM

PRM V1.4 is composed of 2 parts:

- *02 (1) a TPR subsystem PRMMAN V1.4 which manages all resources collected in container.
- (2) a TU subsystem PRMPRES V1.2 which provides a command language and screen interface and is thus the visible part of the product.

5.1 PRMMAN

Delivery includes the following files:

The following release items are needed independent of the HSI:

Release Item	Description
SYSMES.PRMMAN.014	Complete message file
SYSPRT.PRMMAN.014	Standard print resources library
SYSRMS.PRMMAN.014	RMS delivery set
SYSSII.PRMMAN.014	IMON installation information
SYSSSC.PRMMAN.014	SSCM catalog declaration

The following release items are only needed on /390 hardware:

Release Item	Description
SYSLNK.PRMMAN.014	Load module library

The following release items are only needed on X86 hardware:

Release Item	Description
SKMLNK.PRMMAN.014	Load module library

5.2 PRMPRES

The following release items are needed independent of the HSI:

Release Item	Description
SYSFHS.PRMPRES.012	Screen library for alphascreen interface
SYSLNK.PRMPRES.012	Load module library
SYSMES.PRMPRES.012	Message file
SYSPRC.PRMPRES.012.LP-EMUL	Procedure to add standard preform objects
SYSPRC.PRMPRES.012.EURO	Procedure to add a EURO glyph into a HP font object
SYSRMS.PRMPRES.012	RMS delivery set
SYSSDF.PRMPRES.012	Syntax file
SYSSII.PRMPRES.012	IMON installation information
SYSSSC.PRMPRES.012.120	SSCM catalog declaration
SYSPRC.PRMPRES.012.MIGRATE	Procedure to migrate totally/partially HP Resources from a PRFILE into PCL equivalent ones
SYSPRG.PRMPRES.012.MIGRATE	Executable for the migration of HP resources into PCL equivalent.
SYSSDF.PRMPRES.012.MIGRATE	Syntax file associated to the MIGRATE-PRINT-RESOURCES command
SYSPRC.PRMPRES.012.EXTRACT	Procedure to extract HP & PCL resources from a PRFILE for refinement purposes on Windows
SYSPRG.PRMPRES.012.EXTRACT	Executable for the extraction of HP & PCL resources
SYSSDF.PRMPRES.012.EXTRACT	Syntax file associated to the EXTRACT-PRINT-RESOURCES command
SPCDAT.PRMPRES.012.EXTRACT	A self-extractable compressed file Containing Windows programs for image conversion (BMP files to PCL macroes and PCL macroes to BMP files).

6.SPCONV

The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.SPCONV.012	Restricted macro library
SYSMES.SPCONV.012	Complete message file
SYSNRF.SPCONV.012	No-reference symbol file
SYSRMS.SPCONV.012	RMS delivery set
SYSSII.SPCONV.012	IMON Installation information
SYSSSC.SPCONV.012	SSCM Catalog declaration

The following release items are only needed on /390 hardware:

Release Item	Description
SYSLIB.SPCONV.012	User macro and filter/converter library
SYSLNK.SPCONV.012	Load module library

The following release items are only needed on x86:

Release Item	Description
SKMLIB.SPCONV.01	User macro and filter/converter library
SKMLNK.SPCONV.012	Load module library

7. SNS

The files for SNS V2.0 are delivered through the SOLIS system.
 The valid file and volume attributes are listed in the SOLIS2 delivery statement.

The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.SNRTP.020	Restricted macro library
SYSLIB.SNRTP.020	User macro library
SYSLIB.SNRTP.020.METHOD.DUMMY	System library containing all the notification methods
SYSMES.SNRTP.020	Complete message file
SYSSDF.SNRTP.020	SNRTP syntax file
SYSSSC.SNRTP.020	SSCM catalog declaration for SNRTP subsystem
SYSNRF.SNRTP.020	NO-reference symbol file
SYSRMS.SNRTP.020	RMS delivery set
SYSSII.SNRTP.020	IMON installation information
SYSSSI.SNRTP.020	SNRTP subsystem information file
SYSLNK.SNRTP.020.TU	Load module library for SNRKERN TU subsystem
SYSSPR.SNRTP.020	Library for the CHANGE-FILE-NOTIFICATION command (used by MTHFILE method)
SYSPRC.SNRTP.020.UPDLIB	Procedure automatically activated during SNRTP installation, that builds the permanent \$SYSSNS.SYSLIB.SNRTP.METHOS library, from the library SYSLIB.SNRTP.020.METHOD.DUMMY

The following release items are only needed on /390 hardware:

Release Item	Description
SYSLNK.SNRTP.020	Load module library for SNRTP TPR subsystem
SYSLIB.SNRTP.020.PRIV	System library containing specific product privileges module

The following release items are only needed on X86 :

Release Item	Description
SKMLNK.SNRTP.020 SKMLIB.SNRTP.020.PRIV privileges module	Load module library System library containing specific product

8. BS2ZIP

The following release items are needed independent of the HSI:

Release Item	Description
-	
SYSDOC.BS2ZIP.012.OSS	Open Source information
SYSLNK.BS2ZIP.012.RTE	API and runtimes necessary for BS2ZIP
SYSLNK.BS2ZIP.012	BS2ZIP load module library
SYSMES.BS2ZIP.012	Complete message file
SYSPRC.BS2ZIP.012	Procedure for /START-SAM-PAM-CONVERTER
SYSRMS.BS2ZIP.012	RMS delivery set
SYSSDF.BS2ZIP.012	BS2ZIP syntax file
SYSSII.BS2ZIP.012	IMON installation information

*08 9. CONV2PDF

*07 The following release items are needed independent of the HSI:

Release Item	Description
SIPLIB.CONV2PDF.010	Restricted macro library
SYSDOC.CONV2PDF.010.OSS	Open Source information
SYSLIB.CONV2PDF.010	User macros library
SYSLNK.CONV2PDF.010.TU	Library containing the TU converter program
SYSLNK.CONV2PDF.010.RTE	Run time library for TU API
SYSTEMS.CONV2PDF.010	Complete message file
SYSNRF.CONV2PDF.010	NO-reference symbol file
SYSPAR.CONV2PDF.010	Parameter file sample
SYSPRC.CONV2PDF.010	Library containing procedure implementing the CONVERT-FILE-TO-PDF command
SYSRMS.CONV2PDF.010	RMS delivery set
SYSSDF.CONV2PDF.010	Syntax file
SYSSII.CONV2PDF.010	IMON installation information
SYSSSC.CONV2PDF.010	DSSM definition file

*07 The following release items are only needed on /390 hardware:

Release Item	Description
SYSLNK.CONV2PDF.010.TPR	Load module library for CONV2PDF TPR subsystem

*07 The following release items are only needed on X86 :

Release Item	Description
SKMLNK.CONV2PDF.010.TPR	Load module library for CONV2PDF TPR subsystem

1.3 Documentation

The BS2000 documentation is available in German and English on DVD with the title BS2000 Softbooks.

*09 The documentation is also available on the internet at <http://bs2manuals.ts.fujitsu.com> .

*07 The documentation of the BS2000 standard configuration is also necessary for the use of SPOOL, SPSEVE, SPSRVMAN, SPOOLSYS, PRMMAN, PRMPRES, SPCONV, SNS , BS2ZIP and CONV2PDF. The appropriate hardware documentation is required for use of the hardware peripherals.

*07 The manuals may be supplemented with README files. These contain changes and extensions to the manual of the product concerned.

*09 The README files are available on the SoftBooks-DVD or online under <https://bs2manuals.ts.fujitsu.com>.

2 Software extensions

1. SPOOL

*09 With the new command SHOW-PRINT-JOB-INFORMATION you can
 *09 select print jobs by their creation date.
 *09 The command is described in the current README of SPOOL V4.9.

2. SPOOLSYS

*09 SPOOLSYS V02.3F includes the adaptation to the new DMS end of file processing

*02 SPOOLSYS V02.3C includes extensions of the CONVERT-FILE-TO-PDF user
 *02 command that allows converting BS2000 text files into PDF files.

*02 These following new features are included:

- *02 - Support of library elements
 *02 The PRINT-DOCUMENT command allows to print PLAM library elements without the
 *02 need to extract them beforehand. This same feature is now also implemented for
 *02 CONVERT-FILE-TO-PDF.
- *02 - Support of line breaks.
 *02 CONVERT-FILE-TO-PDF now allows for an input record too long to fit into a single
 *02 output line to be broken up into several output lines (instead of being truncated).
- *02 - Support of overlays.
 *02 CONVERT-FILE-TO-PDF now supports the placement of an image in JPEG format as
 *02 an overlay onto all pages of the target PDF document.
- *02 - Generate PDF in PAM format.
 *02 CONVERT-FILE-TO-PDF now provides for a choice of the target PDF's FCBTYPE:
 *02 SAM(RECFORM=U) or PAM. The new command /START-SAM-PAM-CONVERTER al-
 *02 lows to convert between these formats.

*02 Furthermore, there is the possibility to define a default value for all the users or for a
 *02 specific user thanks to a global or a local parameter file.

*08 Until SPOOLSYS V2.3 the name of the parameter file is SYSPAR.SPOOLSYS, with
 *08 SPOOLSYS V3.0 und CONV2PDF V1.0 the name was changed to
 *08 SYSPAR.CONV2PDF.

- *02 - Application Programming Interface extensions.
 *02 The API is extended with all the features added in the command but the library element
 *02 support. The support of the overlay in API provides more possibilities than in command.
 *02 It is for example possible to apply several overlays on one page or to apply a different
 *02 overlay on each page.

*03 SPOOLSYS V02.3D includes various bug fixing for CONVERT-FILE-TO-PDF.

*05 SPOOLSYS V02.3E includes bug fixing for CONVERT-FILE-TO-PDF.

*06 SPOOLSYS V02.3F includes the adaptation to the new DMS end of file processing

*07 SPOOLSYS V03.0A no longer contains CONV2PDF that is released as a distinct
 *08 Spool&Print release unit. There is no functional change in SPOOLSYS but the name of
 *08 the parameter file of CONV2PDF has changed. The new file name is
 *08 SYSPAR.CONV2PDF.

3. SPSEVERE

None.

4. SPSRVMAN

None.

5. PRM

None.

6. SPCONV

None.

7. SNS

The following section describes the functionalities dedicated to SNS V2.0.

1. Objective

The Notification Service (SNS) is a BS2000 product providing a general mechanism for the notification delivery on any type of objects. Every BS2000 products and applications can implement the notification support by anchoring raise event calls at appropriate places in their workflow.

2. Concepts

(1) Objects: They are abstract objects for which notifications can be generated. Ex.Printjob in the frame of Spool&Print domain.

(2) Events: they describe the object state changes that could trigger a notification

(3) Methods: these are the delivery ways used for the notification. The following methods are released in this version:

- the MTHMAIL method (version = 002)using interNet Services Edition V2.0A as mail client.
- the MTHMAIL method (version = 003)using the SEND-MAIL command contained in interNet Services Edition V2.2A.
- the OPGMAIL method using OPG Mailer of OPG Company as mail client
- the MTHPROC method that launches the related procedure
- the MTHFILE method that writes into the related file

(4) Subscriptions: these are user requests specifying which events of which objects must be notified on and how they must be notified on.

A TU program named Notification Manager provides the management of all these objects. It can be started by the command /START-NOTIFICATION-MANAGER.

8. BS2ZIP

BS2ZIP V1.2A introduces the following new functionalities:

- support of the Zip 2.0 encryption
- structured output of the SHOW-FILE-ATTRIBUTES statement into S variables.

- conversion of PAM containers from PAM to SAM-U (SAM with RECORD-FORMAT=U) and vice-versa via a statement, with the possibility to use standard names

1. New statements

Two new statements have been added:

(1) MODIFY-ZIP-OPTIONS: this statements allows to specify if the encryption must be used and with which password.

(2) CONVERT-ZIP-CONTAINER: this statement allows creating a SAM-U copy of a PAM container, or a PAM copy of a SAM-U container. This function was previously done by a separate utility program.

2. New operands

The SHOW-FILE-ATTRIBUTES statement is extended with the TEXT-OUTPUT and STRUCTURED-OUTPUT operands.

*02 BS2ZIP V1.2D introduces the following new functionalities:

- *02 - Individual PLAM library elements can be added to the container using //ADD-FILE.
- *02 o The FILE operand has been compatibly renamed to FROM-FILE.
- *02 o The new operand value *LIBRARY-ELEMENT enables library elements to be specified.
- *02 o The TO-FILE operand has been extended: In the case of a library element, a name which is explicitly specified is extended by a suffix consisting of the type and version of the element. The suffix can optionally also be suppressed.
- *02 o The PLAM file information is stored in the container.
- *02 - PLAM file information is evaluated when extraction takes place using //EXTRACT-FILE.
- *02 - The START-ZIP-CONVERTER command has been renamed START-SAM-PAM-CONVERTER.

*02 BS2ZIP V1.2E introduces the following new functionalities:

- *02 - Original files or PLAM library elements can optionally be deleted after being added using the //ADD-FILE statement.

*03 BS2ZIP V1.2F introduces the following improvement:

- *03 - Ability for a zip container to contain more than 65534 items.

*04 BS2ZIP V1.2G introduces the following improvement:

- *04 - The ADD-FILE command is modified to improve the selection of files to zip. It will be possible to specify a list of files in a SAM text files or a library element (type S) and eventually restrict the input files via an exception file / library element (type S).
- *04 - Possibility to control the volume of the message output for //ADD-FILE and //EXTRACT-FILE.

*06 BS2ZIP V1.2H introduces the following improvement:

- *06 - Adaptation to the new DMS end of file processing

*07 BS2ZIP V1.2I introduces the following improvement:

- *07
*07
- Corrections for encrypted files

BS2ZIP V1.2K introduces the following improvement:

- Several corrections

*10 9. CONV2PDF

*10

*10 CONV2PDF V1.0C introduces the following new functionalities:

*10

*10 - As an alternative to a file or file list or library element, you can now also
*10 specify a list file or csv file from which the names of the files to be
*10 converted are read.

*10 - The MACIDs of the CONV2PDF macros (PDFCVT, PDFDIR, PDFSPO,
*10 PDFTMP) have been adjusted so that they now have the same Functional
*10 ID SDF (s. readme file of manual SPOOL&Print Macros for Converting to
*10 PDF). Programs are still executable. Only programs that are newly com-
*10 piled have to be adapted.

3 Technical information

3.1 Resource requirements

1. Virtual Address Space

(1) SPOOL

- 3,6 Mbyte Class 4 for subsystem loading(390)
- Class 4 tables depending on number of waiting print-jobs,
number of started printers, ...

(2) SPOOLSYS

- 250 Kbyte Class 4 for subsystem loading

(3) SPSEVERE

- 1 Mbyte Class 6 for program loading

(4) SPSRVMAN

- 44 Kbyte Class 4 for subsystem loading

(5) PRM

- 600 Kbyte Class 4 for subsystem PRMMAN loading
- 1.6 Mbyte Class 4 for subsystem PRMPRES loading

When using PRM via the FHS interface, an amount of 2 Mbyte class 6 is requested. This is needed to handle the print resource objects list onto the Desktop.

(6) SPCONV

- 600 Kbyte Class 6

(7) SNS

- 160 KByte Class 4 memory for SNRTP subsystem loading (/390), 320 KByte Class 4 memory for x86 platforms.

(8) BS2ZIP

- 1 Mbyte Class 6 for program loading

*07 (9) CONV2PDF

- 1.2 Mbyte Class 4 for subsystem CONV2PDF loading (/390)
- 2.4 Mbyte Class 4 for subsystem CONV2PDF loading (X86)
- 3.4 Mbyte Class 6 for CONV2PDF runtime
- 3.8 Mbyte Class 6 for CONV2PDF TU program
- additional Class 5/6 necessary depending on the size of the data to convert

2. Static Disc Space

(1) SPOOL

- 13500 PamPages for the Release Items
- 2 PamPages per print job for EQUISAMQ file

(2) SPOOLSYS

- 720 PamPages for Release Items

(3) SPSEERVE

- 1970 PamPages for Release Items

(4) SPSRVMAN

- 110 PamPages for Release Items

(5) PRM

- 2810 PamPages for PRMMAN Release Items
- 1110 PamPages for PRMPRES Release Items

(6) SPCONV

When using the standard filter HP2PCL, enough disk space must be provided on the SYSSPOOL user identification for the filtered documents until filtering and spoolout completion. The needed storage depends on the number of jobs to be filtered and the original document size as well as the print resources originally used. The original document grows with a 1:2 ratio. However, according to the print resource environment established for the original document, the produced document can grow strongly since the filter inserts the converted PCL resources (fonts/softfonts and overlay/macro) into it.

(7) SNS

- 4000 PamPages for release items

- (8) BS2ZIP
 - 4500 PamPages for release items

*07
*07
*07
*07

- (9) CONV2PDF
 - 6800 PamPages for release items

3. Dynamic Disc Space

- (1) SPOOL
 - \$\$SYSSPOOL.SPOOL.PARAMETERS: 600 PamPages as basic size, additional size depending on number of defined SPSEVE objects (printers, forms, character-sets, ...)
 - \$\$SYSSPOOL.SPOOL.PARAMETERS.COPY: idem
\$SYSSPOOL.SPOOL.PARAMETERS
 - \$TSOS.EQUISAMQ: size depending on the maximum number of waiting print-jobs ever reached
(more or less 1.5 to 2 Pam Pages per print-job)
- (2) SPOOLSYS
 - Not relevant
- (3) SPSEVE
 - Not relevant
- (4) SPSRVMAN
 - Not relevant
- (5) PRM
 - The size of the PRFILE can considerably grow up when migrating HP resources into its PCL counterparts. Indeed the conversion of forms overlay buffers can generate huge PCL macroses.
- (6) SPCONV
 - Not relevant
- (7) SNS
 - \$\$SYSSNS.NOTIFICATION.PARAMETERS: Minimum 200 Pam Page
 - \$\$SYSSNS.NOTIFICATION.PARAMETERS.COPY: Same size as
\$SYSSNS.NOTIFICATION.PARAMETERS

- *07 (8) BS2ZIP
- *07
- *07 - Compressed ZIP file size depends on the number and size of the files to
- *07 compress.
- *07
- *07 (9) CONV2PDF
- *07
- *07 - Generated PDF file size depends on the size of the original text file.
- *07

4. Special Hardware/Firmware/Processor/Real Memory

(1) SPOOL

*07 SPOOL V4.9 also runs on /390 and X86 machines.

(2) SPOOLSYS

*07 SPOOLSYS V3.0 runs on /390 and X86 machines.

(3) SPSERVE

- Not applicable

(4) SPSRVMAN

*07 SPSRVMAN V2.3 runs on /390 and X86 machines.

(5) PRM

*07 PRMMAN V1.4 runs on /390 and X86 machines.

PRMPRES V1.2: not applicable

(6) SPCONV

- SPCONV V1.2 runs on /390 and X86 machines.

(7) SNS

*07 SNS V2.0 also runs on /390 and X86 machines.

(8) BS2ZIP

- Not relevant

90) CONV2PDF

*07 - CONV2PDF V1.0 privileged part runs on /390 and X86 machines

3.2 Software configuration

1. SPOOL

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0

(2) Other necessary product(s)

*09 If you use RSO you may use RSO from V3.6.

*09 If you use DPRINT you need DPRINT V1.2 or higher.

(3) For special functions, necessary product(s)

If you use the SPOOL and Print Explorer V2.0A, you need: on the PC side:
DESK2000 >= V04.0

on the BS2000 side:
RSO from V3.4A (optional but requested for remote objects management)
DPRINT from V1.0J (optional but requested for distributed objects management)

*09 The spoolout on RSO IPP printers via URL addressing is only available with RSO V03.6.

*09 Unicode:
BS2000/OSD >= V9.0, openNet Server V3.6A, RSO V3.6.

2. SPOOLSYS

(1) Necessary environment

*09 - From BS2000/OSD-BC V9.0

(2) Other necessary product(s)

None

(3) For special functions, necessary product(s)

None.

3. SPSERVE

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0.

(2) Other necessary product(s)

None

(3) For special functions, necessary product(s)

None.

4. SPSRVMAN

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0.

(2) Other necessary product(s)

None.

(3) For special functions, necessary product(s)

None.

5. PRM

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0.

(2) Other necessary product(s)

For PRMPRES FHS-interface, VTSU V11.0 or greater is a prerequisite. The message file of VTSU must be activated before using PRM via the FHS interface. If OMNIS is used, it is necessary to install OMNIS V6.3 (or up) and pay attention that VTSU V11.0 must be installed (message file activated before OMNIS is started) also on the system where OMNIS is running.

(3) For special functions, necessary product(s)

*07 None

6. SPCONV

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0

(2) Other necessary product(s)

*07 - SPOOL V4.9
 *07 - SPSERVE V2.9
 *07 - PRM V1.4
 *09 - RSO V3.6 when redirection occurs on RSO printers
 *09 - DPRINT V1.2 when usage of local filters as interoperability filters should be provided.

7. SNS

(1) Necessary environment

*09 From BS2000/OSD-BC V9.0

(2) Other necessary product(s)

None

(3) For special functions, necessary product(s)

- SECOS V4.0B, (for NOTIFICATION-ADMINISTRATION privilege) or higher
 - InterNet Value V2.0 or higher (for MTHMAIL 002 method)
 - InterNet Value V3.2 or higher (for MTHMAIL 003 method)
 - OPG MAIL V3.2 or higher (for OPGMAIL method)

8. BS2ZIP

(1). Necessary environment

*04 - From BS2000/OSD-BC V7.0

(2). Other necessary product(s)

- SDF as of V4.1B
 - XHCS as of V1.3A
 - LMS as of V3.4A
- (LMS is used internally by BS2ZIP, pay attention that LMS product is a chargeable product)

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9. CONV2PDF

(1) Necessary environment

BS2000/OSD-BC >= V7.0 (/390 and X86 platforms)

(2) Other necessary product(s)

SPOOLSYS V3.0

3.3 Product installation

In all versions installation of the product with the installation monitor IMON is mandatory, as the execution of the product requires a consistent Software Configuration Inventory (SCI).

The information concerning installation in the delivery cover letter and in the product documentation must be followed as well as the information given below.

1. SPOOL

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) After IMON installation

After successful installation, the following actions should be done:

A. Support of notification

If the SNS product (>= 1.0) is present, you can be notified on the main events occurring during the print job life and the printer session. In order to make the notifications for print jobs and printers available, some notification resources must be defined, that are specific to SPOOL. At first, check if the subsystem SNRTP is ready. If not, start it. Then, run the procedure SYSPRC.SPOOL.049.NOTIF under TSOS in order to register the spool objects and events in the notification service.

B. The PRMMAN subsystem has to be installed.

C. The SPOOL subsystem can be created using the command

```
/START-SUBSYSTEM SPOOL, VERSION='<spoolver>',
[SUBSYSTEM-PARAMETER='[START=<start>],
[RSO=<rso-ver>],
```

where:

<start> : warm (default value) or cold

<rsover> : none (default value) or std or the version defined in 4 or 7 characters

Remarks:

Several other files are released on the SPOOL product tape:

SYSLIB.SPOOL.049 (user macros),
SYSOML.SPOOL.049 (IPEXEC10)

The backward migration of the SPOOL PARAMETER file is not possible.

The dynamic update of the installation information (SYSSII definitions) is not allowed.

2. SPOOLSYS

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) After IMON installation, the following actions have to be performed:

SPOOLSYS is automatically started during the System Startup or by issuing the
/START-SU SPOOLSYS, VERSION=..., VERSION-PARALL=*EXCHANGE

3. SPSERVE

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) After IMON installation, the following must be done:

The Spool Parameters must be migrated, under the Print Services Administrator:

```
/START-SPSERVE  
//OPEN-PARAMETER-FILE *SPOOL-PARAMETERS  
//END
```

The backward migration of the SPOOL PARAMETER file is not possible. The migrated SPOOL PARAMETER file cannot be used by a previous version of SPSERVE. The old SPOOL PARAMETER file must be saved before migration if you want to use it again with a previous SPSERVE version.

The dynamic update of the installation information (SYSSII definitions) is not allowed.

4. SPSRVMAN

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) After IMON installation, SPSRVMAN is automatically started by SPOOL.

5. PRM

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

Library of standard print resources:

The standard print resources library (PRFILE) must be installed and named according to IMON parameters. Make it share (/MODIFY-FILE-ATTRIBUTES <prfile>, USER-ACCESS=*ALL-USERS). If this file is to be protected, catalogue it with a WRITE PASSWORD but ACCESS=WRITE in order to achieve time stamp update as well as to avoid start-stop, when printing out occurs. This PRFILE can be a copy of the delivered library of standard print resources (SYSPRT.PRMMAN.014), a copy from the previous installation, or can be issued from the migration of the HPFILE and SPOOLFILE.

(2) After IMON installation, the subsystems PRMMAN and PRMPRES can be activated by issuing the START-SUBSYSTEM PRMMAN (resp. PRMPRES) or PRMMAN can be automatically started at SPOOL activation, or PRMPRES activation.

6. PRM Add-on functions

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) After IMON installation

After successful installation, the following actions have to be performed:

For the Migration function:

(SYSSDF.PRMPRES.012.MIGRATE)

The syntax file must be activated as a subsystem syntax file with the command /MODIFY-SDF-PARAMETERS with subsystem pattern as PRMMIG. It provides the MIGRATE-PRINT-RESOURCES command that is implemented by the SYSPRC.PRMPRES.012.MIGRATE procedure file.

For the Extraction function:

(SYSSDF.PRMPRES.012.EXTRACT)

The syntax file must be activated as a subsystem syntax file with the command /MODIFY-SDF-PARAMETERS with subsystem pattern as PRMEXT. It provides the EXTRACT-PRINT-RESOURCES command that is implemented using the procedure file SYSPRC.PRMPRES.012.EXTRACT.

Windows Utility (SPCDAT.PRMPRES.012.EXTRACT)

This file must be transferred in binary on a Windows environment using openFT. It must be renamed into a file with a .EXE extension. Run the .EXE file to extract the Windows application and DLL. As this utility has no setup program, it is recommended to create a dedicated directory where the extraction could occur. This program is a 16-bit Windows application.

7. SPCONV

(1) IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

(2) As regards installation without SOLIS, pay attention that the files must be installed on the standard user identification \$TSOS.

*09 Special hints or manipulations: SPOOL V4.9 must be correctly installed before the installation of the SPCONV product.

The following rules must be respected before loading the SPCONV subsystem:

1. The SPCONV catalog declaration must be added to the system catalog declaration.
2. The delivery items must be stored under the corresponding user identification.
3. The message file must be activated.
4. The filters library must be stored under the corresponding user identification.

*09 The SPCONV subsystem is loaded implicitly during the SPOOL V4.9 loading. Nevertheless, in order to allow a modification of the loaded filters/converters, the subsystem can be explicitly unloaded with the /STOP-SUBSYSTEM SUBSYSTEM-NAME=SPCONV command and then reloaded with the /START-SUBSYSTEM SUBSYSTEM-NAME=SPCONV command.

8. SNS

The information concerning installation in the delivery cover letter and in the product documentation must be followed as well as the information given below.

1. Before IMON installation

Before IMON is started, the following actions have to be performed:

- Name of the product files:

SNS V2.0 is compliant to the IMON installation conventions.

- Exchange of product:

Not relevant.

- Coexistence with other version of the product: Impossible.
- Necessary privileges:

Update of the notification data repository i.e. objects, events and methods definitions is only allowed to TSOS or any user with the NOTIFICATION-ADMINISTRATION privilege provided SECOS V4.0B is available.

- Create the userid SYSSNS on your system. This userid must be located on a non share PVS volume. The notification data repository file NOTIFICATION.PARAMETERS will be saved at this place.- If the customer already had a previous SNRTP version, he should bring his previous configuration files (and own written methods, if any) from the SYSLIB.SNRTP.020.METHOD library and from the SYSLIB.SNRTP.020.OPGMAIL library to the \$SYSSNS.SYSLIB.SNRTP.METHOD library, using LMS.

2. IMON installation

After these actions have been executed, the product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation

3. After IMON installation

- Now, subsystem SNRTP can be activated by issuing the /START-SUBSYSTEM SNRTP command. SNRKERN TU subsystem will be automatically started.

This start command should be included in your CMD file before the start of all the subsystems using it.

9. BS2ZIP

1. Before IMON installation

Before IMON is started, there are no special actions to be performed.

Name of the product files: BS2ZIP V1.2 is compliant to the IMON installation conventions.

Exchange of product: Not relevant.

Coexistence with other version of the product: Impossible.

Necessary privileges: Not relevant

2. IMON installation

The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

3. After IMON installation

Not relevant

*07 10. CONV2PDF

*07 1. Before IMON installation

*07 Before IMON is started, there are no special actions to be performed.

*07 Exchange of product: Not relevant.

*07 Coexistence with other version of the product: Impossible.

*07 Necessary privileges: Not relevant

*07 2. IMON installation

*07 The product has to be installed with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

*07 3. After IMON installation

*07 It is mandatory to reboot the system so that SPOOLSYS V3.0 is installed and activated. At a first installation of CONV2PDF an eventually already existing parameter file SYSPAR.SPOOLSYS should be renamed to SYSPAR.CONV2PDF.
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3.4 Product use

- SPSEERVE V2.9 is started using the command /START-SPSERVE.
- For PRM, once the product has been installed and the subsystem PRMPRES started, the PRM V1.4 product may be invoked by entering the following command :

with SDF /MODIFY-JOB-SWITCHES ON=1 /START-PRM [,MONJV=xxx] ... SDF interface ... //END /	OR	with FHS /START-PRM ... PRM desktop ... F3 key /
---	----	--

Note: Printing DMS PAM files can produce undesired and uncontrolled results.

- BS2ZIP is started using the command /START-ZIP-MANAGER.

3.5 Discontinued functions

The following functions are no longer supported as of this version:

- The product CRHP2AFP is not distributed any more. Its functionality is available in the Océ product TRANSCON that is distributed to all concerned customers.

The following functions are supported in this version for the last time:

- None

3.6 Incompatibilities

SPOOL V4.9 is fully compatible with SPOOL V4.8.

SPSERVE V2.9 is fully compatible with V2.8.

PRM V1.4 is fully compatible with V1.3.

SNS V2.0A

From SNRTP 2.0A, all the data related to all notification methods are stored in a permanent library \$SYSSNS.SYSLIB.SNRTP.METHOD, instead of SYSLIB.SNRTP.020.METHOD and SYSLIB.SNRTP.020.OPGMAIL libraries.

*07 CONV2PDF V1.0 is incompatible with SPOOLSYS < V3.0.

*08 The parameter file of CONV2PDF was renamed as CONV2PDF became an own release
 *08 unit. The new file name is SYSPAR.CONV2PDF.

*10 With CONV2PDF the MACIDs have been adjusted (s. Chap. 2 Software Extensions).

3.7 Restrictions

1. SPOOL

None

2. SPOOLSYS

None

3. SPSERVE

None

4. SPSRVMAN

None

5. PRM

Special restriction : The conversion of a HP forms overlay buffer into its PCL counterpart resource (macro) does not consider the sub-fob capabilities of the HP resource, since there exists no equivalence in the PCL language. Therefore, a sub-fob is considered as a forms overlay buffer and converted as one entity.

6. SPCONV

The HP2PCL converter is able to produce PCL4 documents ready to be printed from specific HP documents only. Those HP documents are often referred to in the PRINT-DOCUMENT command as DOC-FORMAT=*PAGE-FORMAT() documents.

Additionally to this, several HP printer capabilities do not have any PCL counterparts. Although some of them can easily be simulated with more or less fidelity, others could hardly or even cannot be simulated at all. Refer to the SPCONV V1.0 manual. The user cannot process own filter with the new filter system.

7. SNS

None

8. BS2ZIP

- GZIP archives can only be read and only files can be extracted from. BS2ZIP does not create GZIP containers.

- It is not possible to decompress with BS2ZIP V1.0, PAM-files that that have been added in a BS2ZIP V1.2 (FORMAT=*BS2000) container.

*03 - A zip container containing more than 65534 entries created as of BS2ZIP 1.2F cannot
 *03 be read and used correctly by a BS2ZIP of lower version.

*07 9. CONV2PDF

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 *07 None

3.8 Procedure in the event of errors

1. SPOOL

If SPOOL V4.9 error occurs, the following error information is required for diagnosis:

- /SHOW-SUBSYSTEM-STATUS SPOOL
- /SHOW-SPOOL-PARAMETERS
- SLED, system dump or user dump of the affected SPOOL task.
- Console log or CONSLOG file
- Listings of the PRINT and SHOW commands and the device, form and character-set definitions
- /SHOW-PRINT-RESOURCES with INFORMATION=*ALL for errors related to loop, character-image, or translation table.
- For reproducible print error conditions, use the TRACE function that is available from the /START-PRINTER-OUTPUT (SDVC) command interface.
- If PRINT-DOCUMENT is rejected or accepted on an unexpected printer type, re-execute the same command with the operand TRIAL-MODE=*YES. A list of more explicit messages will be displayed.
- If customized system pages are to be used, provide the corresponding template file (\$SYSSPOOL.*.HEADER.* or \$SYSSPOOL.*.TRAILER.* files)

2. SPOOLSYS

If during usage of SPOOLSYS error conditions occur, please prepare the following documentation:

- system dump or user dump of the affected task
- Console log or CONSLOG file
- the entered SDF statements if possible
- if possible the concerned EQUISAMQ file(s)

3. SPSERVE

If SPSERVE V2.9 error occurs, the following error information is required for diagnosis:

- System dump or user dump of the affected task.
- Console log or CONSLOG file
- Corresponding SPOOL PARAMETER file or Dprint Configuration file
- SPOOL PARAMETER file History: creation mode (SPOOL or SPSERVE), migration mode (SPOOL or SPSERVE), if any

4. PRM

If during usage of PRM, (i.e. PRMPRES and PRMMAN subsystems) error conditions occur, please prepare the following documentation:

- system dump or user dump of the affected task
- Console log or CONSLOG file
- if possible the concerned PROFILE
- in case of import or migration the involved spool control file (HPFILE, FGSFILE, PCLFILE, SPOOLFILE, or TRANSFILE)
- the entered SDF statements if possible

- error code returned by FHS if any, and implied panel name or FHS DM variable name.
- The VTSU version used.
- If usage of PRM is done via OMNIS, give the parameters and settings of OMNIS. (i sys,ty=pa and i sys,ty=set)

5. SPCONV

If an error occurs, the following error information is required for diagnosis:

Detailed description of the situation. Is error reproducible (yes/no) ?

- /SHOW-SUBSYSTEM-STATUS SPCONV
- /SHOW-SPOOL-PARAMETERS
- Sled, system dump or user dump of the affected filter task.
- Console log or CONSLOG file.
- The filter definition from the SPOOL PARAMETER file.

When an error occurs using the HP2PCL filter:

- Source HP (model 2) file.
- The configuration file of the HP2PCL file (\$SYSSPOOL.SPCONV.HP2PCL.CFG)
- A sample printout of the concerned document on a HP printer.

6. SNS

If SNS V2.0 error occurs, the following error information is required for diagnosis:

- /SHOW-SUBSYSTEM-STATUS SNRTP
- /SHOW-SUBSYSTEM-STATUS SNRKERN
- SLED, system dump or user dump of the affected task.
- Console log or CONSLOG file
- \$SYSSNS.NOTIFICATION.PARAMETERS file
- /SHOW-INSTALLATION-PATH SNRTP('02.0')

7. BS2ZIP

If BS2ZIP V1.2 errors occur, the following error information is required for diagnosis:

- the trace file
- the container for which there is a problem (Add, Extract, List)
- the file which gives problem (Add)

9. CONV2PDF

If during usage of SPOOLSYS error conditions occur, please prepare the following documentation :

- system dump or user dump of the affected task
- Console log or CONSLOG file
- the entered SDF statements if possible
- the file which gives problem if possible

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4 Hardware requirements

1. New Hardware support

*07 None

2. Hardware supported for the last time

None

3. Hardware no longer supported

*07 SPARC