

FUJITSU Software BS2000 openNet Server

Version 4.0A  
July 2017

Release Notice



[www.ipv6ready.org](http://www.ipv6ready.org)

All rights reserved, including intellectual property rights. Technical data subject to modifications and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

© 2017 Fujitsu Technology Solutions GmbH

Fujitsu and the Fujitsu logo are brand names or registered trademarks of Fujitsu Limited in Japan and other countries. BS2000 is a trademark of Fujitsu Technology Solutions GmbH in Europe and in other countries.

<b>1 General</b>	<b>3</b>
1.1 Ordering	3
1.2 Delivery	4
1.3 Documentation	4
<b>2 Software extensions</b>	<b>5</b>
<b>3 Technical information</b>	<b>6</b>
3.1 Resource requirements	6
3.2 SW configuration	6
3.3 Product installation	7
3.4 Product use	7
3.5 Discontinued functions (and those to be discontinued)	8
3.6 Incompatibilities	8
3.7 Restrictions	8
3.8 Procedure in the event of errors	9
<b>4 Hardware requirements</b>	<b>11</b>

# 1 General

This Release Notice is a summary of the major extensions, dependencies and operating information with respect to openNet Server V4.0A under the BS2000 operating system.

The release level is that of: July 2017.

This and other current Release Notices are shipped on the SoftBooks DVD and are available online at <http://manuals.ts.fujitsu.com/>.

openNet Server provides the basic BS2000 communication services. A list of the release units contained in delivery unit openNet Server V4.0A is provided in chapter "1.2 Delivery".

PLUS, VTSU-B and XHCS-SYS have separate, dedicated Release Notices (SYSFGM.PLUS.091.E, SYSFGM.VTSU-B.133.E, and SYSFGM.XHCS-SYS.022.E).

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

openNet Server V4.0A can be ordered from your local distributors.

This software product is made available to the customer subject to the general terms and conditions of the software product use and service agreement in return for regular payments.

## 1.2 Delivery

The openNet Server V4.0A files are supplied via SOLIS.

The following release units belong to the delivery scope of openNet Server V4.0A:

BCAM	V24.0A	BCAM-DIAG	V01.0A
BCAM-GEN	V01.1A	CMX(BS2000)	V01.4A
DCAM	V13.3A	DCM-DIAG	V01.1A
IPSEC	V01.4A	LWRESD	V01.3A
ONETSERV	V04.0A	PLUS	V09.1B
PRNGD	V01.1A	SOCKETS	V02.7A
VTSU-B	V13.3A	VTSUTRAC	V13.3A
XHCS-SYS	V02.2A		

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

## 1.3 Documentation

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

The documentation is also available in the Internet at <http://manuals.ts.fujitsu.com>. Manuals shown with an order number can also be ordered in printed form.

The manuals may be supplemented with README files. These contain changes and extensions to the manual of the product concerned. The file names are made up as follows:

SYSRME.<product>.<version>.E (file with English text)  
 SYSRME.<product>.<version>.D (file with German text)

When printing the files, you should specify the CONTR-CHAR=EBCDIC operand in the PRINT-FILE command.

The documentation of PRNGD is in the Administrator Guide interNet Services.

## 2 Software extensions

Only the enhancements and improvements over the previous version openNet Server V3.6A are described below.

- Supplementing of live migration support on the SE server  
A further change has been made to BCAM, enabling the uninterruptible migration (Live Migration LM) of a BS2000-host system.

Only the migration of a VM2000 host system is supported for SU /390, while the migration of a native system is also possible for SU x86.

Prerequisites for LM are VM2000 V11.5, a uniform I/O generation of the participating systems and X2000/M2000/HNC V6.2A

- Improved maintainability
  - Elimination of support for NEA hardware (maintenance ended since BS2000/OSD V8.0)
  - Elimination of support for NEA addresses and corresponding parameters
  - Elimination of old, no longer described commands (e.g. BCDISP, BCASP)
  - Ignore the WAN parameter in the commands, as well as in a RDF
  - No support for NEA options in SOF
- Support of FQDN names on the program interface (interface expansions for openUTM and openFT)
  - BASR interface for ICONAMS and ICOINFO
  - New ICONAMS call "get PROCESSOR NAME by FQDN NAME"
  - New ICONAMS call "get FQDN NAME by PROCESSOR NAME"
- Measures to improve performance in BCAM
  - Further optimization of "receive processing"
  - Error recovery improvements
  - Paths shortened in SIH

### 3 Technical information

#### 3.1 Resource requirements

The following resources are required for BCAM V24.0A:

Static requirement per generated LAN connection: ca. 2MB.

Dynamic requirement:

- dependent on communication load
- dependent on operating option Dynamic Right Sizing (if the option is enabled, more memory may be required)

Memory classes 1-5 are used.

It is recommended not to change the system-dependent size of resident memory selected by BCAM for data communications. In other words, it is not necessary to specify RESMEM in the DCSTART, DCOPT and BCMOD commands. Increasing the size of the BCAM pool is an option to improve performance if a memory bottleneck was diagnosed.

LWRESD requires minimum virtual memory of 32 MB.

#### 3.2 SW configuration

The runtime environment for openNet Server V4.0A is as follows:

S server	BS2000/OSD-BC:	V11.0	V10.0
SE server	BS2000 OSD/XC	V11.0	V10.0
SQ server	BS2000 OSD/XC		V10.0

When certain functions are used, openNet Server V4.0A also requires the following products:

Product	Version	
JV	as of 15.1A	if job variables are used
SDF-P	as of 2.5A	if S variables are used
SECOS	as of 5.4A	if SAT is used with RSC
openCRYPT	2.0A	if IPSec is used (as of OSD V11)

#### **ASTI**

LWRESD V1.3A and IPSec V1.4A require ASTI V2.0 of the BS2000-GA.

#### **SNMP connection**

The product SNMP-Basic-Agent BS2000 is required as of V6.0 for the SNMP connection to an Enterprise Management platform.

### 3.3 Product installation

Installation of the product openNet Server 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.

Before calling IMON, you must carry out the actions listed in the delivery cover letter as installation requirements.

After these actions have been executed you have to install the product with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

### 3.4 Product use

#### Configuration files:

When upgrading from older openNet Server versions ensure that the version number is included in the names of the configuration files of some of the components (e.g. LWRES and IPSEC). Thus the new configuration files have to be adapted before using the products, because existing settings are not automatically transferred.

#### Subsystems:

The following subsystems exist in connection with openNet Server V4.0A:

BCAM	BCAM-CMD	BCAM-COS
BCAM-SM2	DCAM	DCAM-COS
DCM-DIAG	CMX-TU	CMX-TP
CMX-11	IPSEC	PRNGD
SOC-TP	SOC6	SOC6-X8 (only xX86)
VTSU	VTSUTRAC	XHCS-SYS

CMX-11 is the TU subsystem for CMX applications. CMX-TU exists to ensure compatibility with existing TU applications.

#### SE server:

When used on a SE server the following BCAM Options must not be changed, otherwise there may be problems in the internal control LAN (MCNPR; Management Control Network Private):

IPV6-SUPPORT  
IPV6-PREFIX-LEN-CTRL  
MULTICAST

#### SOCKETS:

SOCKETS V2.7A, which is included in openNet Server V4.0A, is shipped with the subsystem SOC6.

The entries used by the SOCKETS V2.7A subsystem remain open during linking. They are only satisfied by the subsystem when the application is started.

The SOC6 subsystem is always loaded into the address space above 16 MB, i.e. all user programs that use it must be executable in 31-bit address mode and advance run mode (AMODE/RMODE).

**SAT:**

Quantity problems may occur when logging BCAM events (memory bottlenecks) if applications do not function according to specification and thereby create a flood of SAT messages. For example, if BCAM is restarted without first stopping POSIX, the BCAM-EVENT BAO (open TSAP) is written constantly into the SATLOG file as a failure entry.

**System Exit:**

The system exit function 02 offers the option of controlling use of the BCAM transport system. BCAM reports opening of TSAPs and active/passive attempts to start communication relationships, regardless of the interface functionality.

The exit routine is called if the following two conditions are true:

- System exit function 02 was enabled in BCAM with MODIFY-BCAM-OPTIONS.
- A TSAP is opened in BCAM or BCAM detects a communication request.

**LINK-AGGREGATION:**

LINK-AGGREGATION support in BCAM requires the HNC software V2.0A02.

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

As support of all NEA hardware has stopped since BS2000/OSD V8.0, support for NEA addresses is now also being eliminated.

**3.6 Incompatibilities**

None

**3.7 Restrictions****IPSec:**

NAT Traversal in IKEv1 and IKEv2 cannot be used in this version.



### 3.8 Procedure in the event of errors

SYSLNK.BCAM-DIAG.010 is supplied with the delivery unit openNet Server V4.0 and this also contains the main modules of older versions. SYSLNK.BCAM-DIAG.010 is copied by SOLIS to SYSLNK.BCAM.DUMP.

If ASTRID is to run under an ID other than TSOS, test privileges 8,1 must be entered in the user entry of the ID concerned. This is necessary because ASTRID uses AIDSYS and issues the OPTION TESTPRIV=(8,1), DUMP=YES command internally.

In the event of an error, the following information is required for diagnostics purposes depending on the nature of the problem:

- Detailed problem description
- System environment:
  - BS2000 computer:
    - Computer name, computer address (IP address, Ethernet address)
    - BS2000: version, loader
    - BCAM, DCAM, CMX, SOCKETS: version, loader or correction level
    - Application: name, version, port number (TCP)
    - Protocols used: TCP, ISO
  - Partner computer:
    - Computer name, computer address
    - System: BS2000 / SINIX / PC
    - Operating system version, correction level
    - Application: name, version, port number (TCP)
  - Hardware:
    - LAN (Gigabit/10Gigabit)
    - HNC use
    - Firmware level
    - Router in use?
- Environment:
  - Prior software upgrade?
  - Prior hardware upgrade?
  - Prior loader change?
  - Prior use of new reps?
- Documentation:
  - ASTRID (BCAM), DIANA (DCAM), IPSECDIA (IPSec): always
  - Rep file: if possible
  - RDF source: as required
  - CONSLOG: as required
  - SERSLOG: as required
  - HERSLOG: as required
  - System or DCS dumps that are required under the TSN BCAM, BCAT, BCAF, BCAC, BCA0, BCAA, BCAS or under the user task.

With reproducible problems, you should turn on the DCM traces via DCDIAG command before the problem occurs (see the BCAM manual for a description).

You can use the /BCSET command to change diagnostics maintenance parameters. It may only be used by the personnel specified in the manual since wrong usage may cause errors.

With SLEDs the class 4 memory is absolutely necessary.

You can use the PING4 and PING6 programs to check the accessibility of partner systems over IP routes (see the BCAM manual for a description).

The possible options for the new programs PING4, PING6, DIG and NSLOOKUP can be read in the online help (ping4/ping6/dig/nslookup -h).

## 4 Hardware requirements

### S servers:

All business servers of the S model range (/390) that have not yet reached the end of maintenance (MEK90) at the time of the customer release of openNet Server V4.0A are supported.

### SQ servers:

The business servers of the SQ model range (x86) that have not yet reached the end of maintenance (MEK90) at the time of the customer release of openNet Server V4.0A are supported.

### SE servers:

The SE models with the integrated management unit (MU) for joint administration of the server units (SU) are supported.

BS2000 SE700 / BS2000 SE700B  
 BS2000 SE500 / BS2000 SE500B  
 BS2000 SE300 / BS2000 SE300B

### Peripheral devices:

Type	Connections on the network side				Connections on the host side	Version
	Ethernet	Fast Ethernet	Gigabit	10 GBit Ethernet	FibreChannel	
HNC-V 91854	x	x	x	-	x	V2.1A
HNC-VI 91855	x	x	x	-	x	V2.1A
HNC *)	x	x	x	x	x	as of V6.0A

\*) The /390 systems are connected on a SE server by means of a HNC, which is part of the Net Unit (NU) of the SE server.