

FUJITSU Software BS2000 X2000

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Release Notice

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1 General information

This Release Notice is a summary of the major extensions, dependencies and operating information about the delivery components of the FUJITSU software BS2000 X2000 V6.1A.

Together with the Linux operating system, X2000 V6.1 serves on the Intel x86_64 architecture based Server Units SU300 as the carrier system for BS2000.

X2000 is running on the Server Unit in a SE300 as well as on the optional additional Server Units in SE300, SE500 or SE700.

On this Server Units X2000 V6.1A offers the functions for operation and administration of the hardware for the BS2000 OSD/XC operating systems.

The contents correspond to the release level of May 2016.

The current release corresponds to the following first delivery releases:

X2000 V6.1A0107 Release 04.2016

The following Release Notices must also be taken into consideration for X2000 V6.1A:

- M2000 V6.1A
- OSD/XC V10.0, OSD/XC V9.5, OSD/XC V8.5
- VM2000 V11.0A, VM2000 V10.0A

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

If one or more previous upgrades are skipped when this product version is used, then the information from the Release Notices (and README files) for these previous versions must also be taken into account.

1.1 Ordering

The software X2000 V6.1A is supplied preinstalled as a component of a SE Server with SU x86 and cannot be ordered separately.

1.2 Delivery

The software X2000 is part of a SE Server with SU x86 and is either supplied pre-installed on the Server Units or will be installed on an already delivered SU x86 by a FUJITSU service technician.

The X2000 V6.1A files are delivered in line with the hardware delivery as DVD media.

1.3 Documentation

The following manuals are part of the SE server documentation:

- Operating Manual SE700 / SE500 / SE300 (comprising several modules)
 - FUJITSU Server BS2000 SE700 / SE500 / SE300
Basic Operating Manual
 - FUJITSU Server BS2000 SE700 / SE500 / SE300
Server Unit x86
 - FUJITSU Server BS2000 SE700 / SE500
Server Unit /390
 - FUJITSU Server BS2000 SE700 / SE500 / SE300
Additive Components, edition November 2015
- FUJITSU Server BS2000 SE700 / SE500 / SE300
Operation and Administration, edition November 2015
- FUJITSU Server BS2000 SE700 / SE500 / SE300
Quick Start Guide
- FUJITSU Server BS2000 SE700 / SE500 / SE300
Security Manual

The documentation is also available on the internet under:

<http://manuals.ts.fujitsu.com>.

Manuals displayed with an order number can be ordered as printed versions.

The current versions of this and other Release Notices are also available under

<http://manuals.ts.fujitsu.com>.

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

The corresponding HW documentation is required in order to use the HW peripheral devices.

2 Software extensions

X2000 V6.1A is a further development of the version V6.0A and offers the following extensions and enhancements compared to the previous version:

- Linux operating system basis rebased to SLES 11 SP4
- Connection of the Server Units x86 to a 10 Gbit/s switch of the Net Unit (optional)
- Support of a copper based 10 Gbit/s ethernet connection (RJ45) as network interconnection to the customer LAN additionally to the optical connection technology
- Extension of the role concept in the SE Manager by the role BS2000-Administrator for managing the BS2000/VM2000 configuration
- In addition to the terminals for BS2000 operating which are integrated in the SE Manager, there are commands available in the Linux shell of the Management Unit for the connection to BS2000 console, BS2000 dialog and SVP console.
See release notice M2000 V6.1A for further information.
- The supported configuration maximum has been extended to 8192 disks, 16384 disk paths and 2048 LUNs per raid controller port.

3 Technical information

3.1 Ressource requirements

Main memory requirements:

The standard main memory depends on the Server Unit x86 model and is listed in the following table.

SU x86 Model	Processors / cores	Main memory (GB) basic configuration / guest systems / BS2000 without JIT	PCIe slots
SU300-10A	2 / 24	32 / 24 / 14,4	4
SU300-10B	2 / 24	32 / 24 / 14,4	4
SU300-10C	2 / 24	32 / 24 / 14,4	4
SU300-10D	2 / 24	32 / 24 / 14,4	4
SU300-10E	2 / 24	32 / 24 / 14,4	4
SU300-10F	2 / 24	32 / 24 / 14,4	4
SU300-20A	4 / 48	64 / 48 / 28,8	10
SU300-20F	4 / 48	64 / 48 / 28,8	10
SU300-30F	4 / 48	64 / 48 / 28,8	10
SU300-40F	4 / 48	64 / 48 / 28,8	10
SU300-50F	4 / 48	64 / 48 / 28,8	10
SU300-60F	4 / 48	64 / 48 / 28,8	10
SU300-80F	4 / 48	64 / 48 / 28,8	10
SU300-100F	4 / 48	96 / 80 / 48	10
SU300-120F	4 / 48	96 / 80 / 48	10
SU300-160F	4 / 48	96 / 80 / 48	10

The required main memory depends on the customer's configuration, especially for the used applications and the number of guest systems.

Calculation base for computing the main memory needed for BS2000 guest systems:

Approximately 25% of the memory, limited by a maximum of 16 GB is occupied by the firmware of the SU x86. The remaining memory can be used for BS2000 guest systems, whereof approx. 40% is required by JIT. Thus the net memory available for BS2000 is about 45% of the total memory.

3.2 SW configuration

- BS2000:
 - OSD/XC V10.0
 - OSD/XC V9.5
 - OSD/XC V8.5 (as guest system under VM2000)
- VM2000 V11.0, V10.0 (in VM2000 V10.0 the new functions for the SE Server are not available)
- The following Xen guest systems are released for running on a SU x86:
 - SUSE Linux Enterprise Server 11 and 12
 - RedHat Enterprise Linux 6.5, 6.6 and 7.0
 - Windows Server 2008 R2, 2012 and 2012 R2

Linux is not released for use on X2000

The Linux appliance X2000 is a scaled-down Linux system. This is why the use of Linux on X2000 is not released for customer applications. Instead, Xen virtual machines can be configured in parallel with BS2000 on a SU x86.

3.3 Product installation

The SE Server is delivered with X2000 pre-installed on the Server Units x86. Any new correction versions of X2000 that may be required are provided as part of the hardware service contract and are installed by the service technician responsible for you.

3.4 Product use

- Swapping from SX- or SQ-servers: it is advisable to export the configuration of the external BS2000 disks and tapes on the SX/SQ server and to import it on the SU x86 of the SE Server (commands `export_bs2conf` and `import_bs2conf`; support by a service technician is necessary).
- Operation takes place via a web-based GUI called SE Manager running on the Management Unit of the SE Server. Remote operation and administration takes place via PC workplaces that can access the SE Manager on the Management Unit via a web browser.

For information about supported browsers see release notice M2000 V6.1A.

- Additionally to the terminals integrated in SE Manager, the connection to BS2000 console, BS2000 dialog and SVP console for accounts of the roles operator and BS2000 administrator is possible via the commands `bs2Console`, `bs2Dialog` and `svpConsole`. This commands are intended to be executed as "remote command" in the SSH client PuTTY. Please consult your service technician for additional information.
- BS2000 hostname:
The minimum length for the bs2000 hostname is 4 characters (letters or digits without special characters).

- The following maximum configuration is supported for a SU x86 in a SE Server:
 - a maximum of 2048 LUNs on one HBA port
 - a maximum of 2048 LUNs on one RAID controller port
 - a maximum of 8192 BS2000 disks
 - a maximum of 16384 paths may be visible
 - a maximum of 128 MTC devices
 - a maximum of 8 tape devices emulated on file/CD/DVD
 - a maximum of 2048 virtual devices for Linux / Windows guest systems
 - an overall maximum of 16384 SCSI LUNs per sever unit

Hints:

- In order to avoid the maximum of 8192 BS2000 disks or 16384 visible paths respectively being exceeded, disks that are not required should be made invisible in the ETERNUS DX or Symmetrix system by LUN masking / LUN mapping.
- Using BS2000 disks of an ETERNUS DX disk storage system needs the host response profile "BS2000" being activated. Additional information can be found in the document " ETERNUS DX Disk Storage Systems User's Guide – BS2000/OSD Business Server Connection" which is available under <http://sp.ts.fujitsu.com/dmsp/Publications/public/dp-eternus-dx-scg-bs2-em-en.pdf>.

3.5 Obsolete (and discontinued) functions

- MTC switching is not supported any more for Server Units x86. Therefore MTC-Devices at a SU x86 are not locked against parallel use in different systems. We strongly recommend to implement physical measurements or to configure LUN masking / LUN mapping or SAN zoning accordingly in order to prevent a parallel usage by other systems.

3.6 Incompatibilities

None

3.7 Restrictions

None

3.8 Procedure in the event of errors

For successful diagnostics and elimination of software problems, sufficient error documentation must be created or saved as soon as possible.

If possible, error report documentation should be supplied in the form of files so that it can be analyzed with diagnostic tools. For reproducible errors the user should include detailed information on how to generate the error condition.

Creating diagnostic data

in X2000:

If an error situation occurs, the generation of diagnostic data can be initiated by the administrator or operator via the SE manager on the Management Unit by way of the "Diagnostics" tab.

Hardware -> Server (SE<model>) -> <Name> (SU300) -> Service -> Diagnostics

The administrator may download the diagnostic data archive to his PC in order to send it via email.

in BS2000:

- SLED (in case of BS2000 system crash or if the BS2000 system locks up)
- for input/output problems or device error messages HERSFILE and possibly IOTRACE

4 Hardware requirements

X2000 V6.1A is released for the x86 core technology based Server Units SU300 of the SE Server series.

5 Firmware levels

The following minimum firmware levels should be used on the Server Units x86 in BS2000 SE Servers. They are installed during system installation in the factory.

Any new firmware levels that may be required are provided as part of the hardware service contract and installed by the service technician responsible for you.

SU300	FW-Version
BIOS	Version 5.0.0.8 Release 1.30.0
iRMC Firmware	7.82F
RAID-Controller PRAID EP400i (Cougar4)	4.210.70-3365
RAID-Controller SAS 6G 8Port ext (9286CV-8e)	3.220.125-2420
SAS-Controller LSI SAS 9200-8e	16.00.00.00
FibreChannel LPe12002	v2.01A12
FibreChannel LPe16002	FV1.1.21.106