



Fujitsu Siemens Computers GmbH

ROBAR-SV (Solaris/Linux)

Version 6.0B

May 2008

Release Notice

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## Release Notice ROBAR-SV V6.0B

<b>1</b>	<b>General</b>	<b>2</b>
1.1	Ordering	2
1.2	Delivery	2
1.3	Documentation	3
<b>2</b>	<b>Software-extensions</b>	<b>4</b>
<b>3</b>	<b>Technical Information</b>	<b>5</b>
3.1	Resource requirements	5
3.2	Software configuration	5
3.2.1	Necessary environment	5
3.3	Product installation	6
3.3.1	Installation of Linux before the product installation	6
3.3.2	Installation of ROBAR on Linux systems	7
3.3.3	Installation for Solaris	8
3.4	Product application	8
3.4.1	ROBAR-SV Rule-Files	8
3.4.2	Firewall	9
3.4.3	Settings	9
3.4.4	Zoning for ROBAR-SV server	9
3.4.5	Migration from old ROBAR-SV versions to ROBAR-SV V6.0B	9
3.5	Discontinued functions	10
3.6	Incompatibilities	10
3.7	Restrictions	10
3.8	Error handling	11
<b>4</b>	<b>Hardware-information</b>	<b>12</b>

# 1 General

This Release Notice contains a summary of the major expansions, interdependencies and application notes pertaining to ROBAR-SV V6.0B (ABBA/1-Interface and SCSI-Interface with Solaris or Linux).

The release level is that of May 2008.

The release notice belongs to the CD delivery.

Customers will receive an updated version of this file, if any subsequent changes should be made.

ROBAR consists of a client part for BS2000 (ROBAR-CL) and a Server part for Solaris or Linux (ROBAR-SV).

Associated with the library systems Scalar i2000 and Scalar i500 is a new interface between ROBAR-SV and the library. It is based on the SCSI interface.

The interface ABBA/1 is used by CentricStor, AML/x, Scalar 1000 and Scalar 10K.

Refer to the ROBAR-CL Release Notice for more information on the client part of ROBAR.

This release notice contains the hardware support with the new PRIMERGY TX200 S4.

## 1.1 Ordering

ROBAR-SV can be ordered from your local distributors.

ROBAR-CL is subject to the general terms and conditions of the software product use and service agreement.

## 1.2 Delivery

The files for ROBAR-SV are delivered on a CD ROBAR-SV.

The Release Date is 05.05.2008 and contains the following:

### For Solaris:

ROBAR-SV_V6.0B04.SCSI.pkg	Solaris SCSI-interface
ROBAR-SV_V6.0B04.ABBA.pkg	Solaris ABBA/1-interface

### For Linux:

The directory on CD contains the following files:

Signitures and licenses:

- COPYING (GNU General Public License V2)
- COPYING.de (GNU General Public License V2 deutsch)
- COPYRIGHT (GNU Copying and Licenses)
- COPYRIGHT.de (GNU Copying and Licenses (German))
- LICENCE\_de.TXT (FSC Software License Agreement for End Users (German))
- LICENCE\_en.TXT (FSC Software License Agreement for End Users)

- gpg-pubkey-69cf1c4e-deadbeef.asc (public Key from Fujitsu Siemens Computers)

These are the subdirectories:

```

.../Linux/required_software:
  robar_ui-6.0B.1-4.i586.rpm          (safe access to the Robar-
                                     server)
  PCMX.6.0A70-01.i586.rpm
  SMAWlog3.3.0F20-11.i686.rpm

.../Linux/src:
  source rpm jta-2.6-0.3.src.rpm

.../Linux/SCSI:
  install_robar_s_mult
  same five RPM-packages:
  robar_s_<i>-6.0B.1-4.i586.rpm,      <i>=1,...5

.../Linux/ABBA:
  install_robar_a_mult
  same five RPM-packages:
  robar_a_<i>-6.0B.1-4.i586.rpm,      <i>=1,...5

```

The RPM-package robar\_ui uses the public Software from the GNU-Project. Therefore all needed GNU-licenses are also on the Robar-CD.

```

jta-2.6-0.3.src.rpm  (Source-RPM)
licence_gpl_v3      (GNU GENERAL PUBLIC LICENSE Version 3)
licence_lgpl_v3     (GNU LESSER GENERAL PUBLIC LICENSE Vers.3)

```

### 1.3 Documentation

The new ROBAR V6.0B manual is

ROBAR V6.0B Controlling MTC archive systems

Order No U5324-J-Z125-7-76

This Release Notice is available on CD and under

<http://manuals.fujitsu-siemens.com/> (mainframes)

These readme files contain the additional information for the use of the CD:

```

readme_de.html      README-file  (German)
readme_en.html      README-file  (English)

```

## 2 Software-extensions

### 1. Introducing a new HW/SW-Plattform for ROBAR-SV

The new ROBAR server plattform was ported with Version ROBAR V6.0 to the INTEL/AMD based Primergy product line from FSC. The operating system is Linux (SUSE SLES10). With this product the user will have maximum flexebility of an open modern operating system for the operation with ROBAR-SV. All archive systems running on PRIMEPOWER/Solaris-platform are now supported on PRIMERGY/Linux-platform.

### 2. Reduction of net traffic between ROBAR-CL and ROBAR-SV

The BS2000 messages to be submitted from ROBAR-CL to ROBAR-SV are now checked by ROBAR-CL, so that only the ROBAR-relevant messages are sent to ROBAR-SV. During the establishment of the connection between ROBAR-SV and ROBAR-CL, ROBAR-SV transmits the relevant devices (determined in the config file) and the relevant error codes (determined in RRF message\_file).

### 3. Additional windows for the ROBAR menu program

ROBAR supports four additional windows for the ROBAR menu program with restricted functionality. Thus the ROBAR actions can be monitored from different locations.

### 4. Improved user interface concerning error messages and warnings

As a new feature it is reported in the ROBAR menu program if the connection to ROBAR-CL is down or not possible. During the transformation of the config file various semantical checks are provided.

### 5. Support of MBK drive type LT0-U3

This device is released for use in QUANTUM libraries Scalar 10K, Scalar i2000 and Scalar i500 in connection with BS2000/OSD-BC as of V6.0B on S-servers.

For SX-Servers this device is released from X2000 V3.0 A09.

For the device type LT0-U3 the RRF message\_xref in the library ../../TYPE-1 must be used. The reference has to be configured in the config file.

The devices LT0-U4 are released with BS2000/OSD V8.0A.

### 6. ROBAR V6.0 supports for SCSI-interface the new library Scalar i500.

There is a remote access to the library Scalar i500 via the internet. Any browser program can be used entering the IP address.

The fibre channel connection for the control of the robotic is done by a drive connection in Scalar i500. If there is more than one drive in a partition, it has to be configured by which drive the control of the robotic is to be realized. According to this setting SAN has to be configured (zoning of the HBA of the ROBAR-SV computer to the selected drive).

## 3 Technical Information

### 3.1 Resource requirements

ROBAR-SV requires up to 30 Mbytes disk space (without trace files).

When operating a CentricStor system, the resource requirements for ROBAR-SV are higher. Please note the configuration regulations and special technical notes in the release notice of CentricStor system.

### 3.2 Software configuration

#### 3.2.1 Necessary environment

1. BS2000/OSD-BC as of V5.0A  
For the systems connected to the devices in the robot system and to the computer where ROBAR-SV is installed.  
LT0-U3 devices are supported as of BS2000/OSD V6.0B.  
LT0-U4 devices are supported as of BS2000/OSD V8.0A.
2. ROBAR-CL V6.0B on BS2000/OSD-BC
3. Linux  
SUSE SLES10; 32 bit;  
SUSE Linux Enterprise Server 10, Service Pack 1 for x86
4. Solaris  
Solaris Release V8.0, V9.0, V10.0 (PRIMEPOWER)
5. required software  
Log3 Supplement (Package Name: SMAWlog3)  
CMX >= V5.1E30 (Package Name: SMAWcmx)
6. QUANTUM Germany Software  
Die AML-software (AMU or Scalar DLC) is part of the AML robot systems and is supplied by QUANTUM Germany. The highest release version should be used in an AML system.

Please consult your local QUANTUM distributor for the related documentation and customer support.

For information on robot control, see README-file "Hardware information".

## 7. QUANTUM Germany software DAS > V3.00

### **ABBA/1-Interface**

For the usage of shared roboters between BS2000 computers and computers that use the DASA/ACI-Interface.

The DAS software is part of the AML robot systems and is supplied by QUANTUM Germany. Please consult your local ADIC distributor for the related documentation and information on customer support.

## **3.3 Product installation**

### **3.3.1 Installation of Linux before the product installation**

A standard installation of Linux SLES 10 (obtainable/subscription via Novell) on the hardware released or recommended for the ROBAR server is carried out; the 32-bit version is required which is currently known as

**„SUSE Linux Enterprise Server 10 Service Pack 1 for x86“ .**

Mirror disks should be configured on the ROBAR server. The set up must be performed in BIOS. The exact procedure is described in the PRIMERGY manual “Integrated Raid for SAS”.

<http://manuals.fujitsu-siemens.com/serverbooks/content/manuals/english/ir-sas-ug-en.pdf>

During disk partitioning, select system type “ext3” as the file type for the Linux partition(s). An adequately sized swap area (1 to 2 GB) must be reserved.

The network configuration must be set so that the processor can reach via LAN both the BS2000 hosts to be connected as well as reach the archive systems to be managed via the ABBA interface.

In order to operate archive systems via the SCSI interface, the lpfc driver must exist in Linux; check whether the lpfc driver is installed (if a host bus adapter exists in the ROBAR server, the lpfc driver is generally installed as a standard feature).

Providing there are no security aspects, it is recommended to permit the function “Administration from a remote processor” under “Network services” and to deactivate the firewall.

With “Network services (xinetd)”, it is also recommended that the following functions are activated (by clicking “Toggle status(On or Off)”):

```
ftp
login
printer
shell
telnet
vnc1
```

vnchttpd1

In order to operate the new ROBAR web user interface, apache2 must be installed on the ROBAR server. This can be done during installation by selecting the field "Web and LAMP server" under "Primary functions". This is subsequently possible using the "Yast" function „Software - Install or delete software". After setting the filter "Schemata" in the top left window, "Primary functions" appear with the field "Web und LAMP server". Select this and then press the button "Accept". Some Screens follow where you have to "continue" until a screen has to be finished. This setting results now in an automatic start for the Apache2-Server after system restart.

### 3.3.2 Installation of ROBAR on Linux systems

Before installation, read the license agreements in the Linux directory.

The installation steps are as follows:

1. Ensure that PCMX and SMAWlog3 are installed.  
Run a check on existing installations as follows:

```
rpm -qi PCMX
rpm -qi SMAWlog3
```

If one of these packages are not installed, install it as follows (root authorization required):

```
cd ../Linux/required_software
rpm -i PCMX.6.0A70-01.i586.rpm
rpm -i SMAWlog3.3.0F20-11.i686.rpm
```

After the installation, SMAWlog3 must be started:  
/etc/init.d/log3 start

2. If required, install ROBAR-SV with the required interface (SCSI or ABBA) on up to 5 userids (root authorization required). The userids must be set up before.

SCSI interface:  
cd ../Linux/SCSI  
install\_robar\_s\_mult

ABBA interface:  
cd ../Linux/ABBA  
install\_robar\_a\_mult

Both installation procedures (install\_robar\_a\_mult and install\_robar\_s\_mult) import the public key (located on the CD) before the actual installation (see above), which complies with the private code, with which the packages robar\_a\_<i>, robar\_s\_<i> (<i>=1,..5) and robar\_ui are signed. This is why robar\_ui should only be installed afterwards.

3. Installing robar\_ui  
The software products apache2 and apache2-mod\_php5 are prerequisites for robar\_ui. apache2 must be installed and started before the installation of robar\_ui (see "Installation of Linux").

```
robar_ui is installed as follows:  
rpm -i ../Linux/required_software/robar_ui-6.0B.1-4.i586.rpm
```

For deinstallation for packages use command:

```
rpm -e robar_a_i (<i>=1,...5) for ABBA/1-Interface  
rpm -e robar_s_i (<i>=1,...5) for SCSI-Interface  
(root authorization required)
```

Check signature validity

The validity of signatures can be checked with `rpm --checksig`, e.g.:

```
rpm --checksig ../Linux/required_software/robar_ui-6.0B.1-4.i586.rpm
```

### 3.3.3 Installation for Solaris

ROBAR-SV is delivered on CD-ROM. The CD has, in addition to the Scalar i2000 and Scalar i500 versions (attribute: SCSI), the versions for CentricStor and the AML/x and Scalar 1000, Scalar 10K archive systems (attribute: ABBA).

On Solaris platforms, the installation is via

```
pkgadd -d /cdrom/cdrom0/Solaris/ROBAR-SV_V6.0B04.SCSI.pkg  
SCSI-Interface  
pkgadd -d /cdrom/cdrom0/Solaris/ROBAR-SV_V6.0B04.ABBA.pkg  
ABBA/1-Interface
```

Root authorization is required for the installation. Installation information is available in the manual.

If ROBAR-SV has been installed several times on the Solaris system, ensure that the de-installation command 'pkgrm' cancels the installation of ROBAR (partially) under all user IDs.

## 3.4 Product application

### 3.4.1 ROBAR-SV Rule-Files

The rule files delivered with the current ROBAR-SV version support new functions and improved error recovery. Only the ROBAR rule files delivered with ROBAR-SV V6.0A are covered by the Fujitsu Siemens Computers maintenance warranty in the framework of the supported functions and hardware/software configuration.

Customers may modify ROBAR responses in the files "message\_file", "message\_resp" and "message\_xref" to suit their requirements according to the inline comments in these files. Such modifications are covered by Fujitsu Siemens Computers maintenance warranty.

Support of customized ROBAR Rule Files can be offered by Fujitsu Siemens Computers within the context of a consultancy contract or a dedicated project outside the standard Fujitsu Siemens maintenance support and product scope.

Malfunctions caused by modified rule files are neither diagnosed nor corrected in the framework of the standard Fujitsu Siemens Computers maintenance warranty. Only malfunctions that occur with the standard rule files are covered by the standard Fujitsu Siemens maintenance warranty. Other malfunctions must be diagnosed and corrected by the author of the modification.

If rule files of software suppliers other than Fujitsu Siemens Computers are installed, Fujitsu Siemens Computers has no liability for robot malfunctions caused by these rule files. The customer must make sure that the related warranties are included in the contract with the separate software suppliers.

Additional support can be offered by Fujitsu Siemens Computers for non-official rule files within the context of a dedicated customer project or consultancy contract.

### **3.4.2 Firewall**

If a firewall is located between ROBAR-SV and the archive system , the surveillance must be cancelled for this connection.

### **3.4.3 Settings**

1. The password for the ROBAR menu program at delivery time is „ROBAR“.
2. Most ROBAR-SV application messages are displayed with a unique message identification code (message key). If, for any particular reason, this message key should be suppressed, the environment variable ROBAR\_MICKEY must be assigned to the value N.
3. At parameterization, the environment variable LANG for the language support is set correctly. The first two characters must be 'de' or 'en'. If LANG ,C' is used, then the English language is chosen.

### **3.4.4 Zoning for ROBAR-SV server**

If Scalar i500 is zoned, the LUN=0 and the corresponding target are not allowed to be at the same time in the ST.CONF from another also zoned ROBOR-SV server.

### **3.4.5 Migration from old ROBAR-SV versions to ROBAR-SV V6.0B**

In general there must be a new installation for ROBAR-SV V6.0B software.

From present installations only the TNS-data (made by tnsxcom), which describe the cmx connection data to the BS2000 hosts and the ROBAR-SV config files can be transferred.

The ROBAR-SV config files must be adapted and in any case be again translated.

### 3.5 Discontinued functions

ROBAR-SV is no longer running on RM servers with reliant UNIX operating system.

### 3.6 Incompatibilities

none

### 3.7 Restrictions

1. ROBAR-SV is not suitable for running on a platform where real-time software has been installed or a heavy load is running.
2. The number of BS2000 systems is still limited to 24 when station interconnection is used.
3. The run of MBK devices with equal device types but different usage of media requires their assignment to different locations (BS2000 and MAREN). For that purpose ROBAR-SV has to be installed twice for one robot system (once for each location).
4. More than 99 devices cannot be defined by numeric reference ("numbered topologic form"). This leads to an undefined result.

If more than 99 devices are configured in ROBAR-SV, they must be defined in the AML host and in ROBAR with the mnemonic device name defined in BS2000.

5. Messages for ROBAR FREEPool (belongs to ABBA/1 interface)

The BS2000 console messages processed by ROBAR for the support of the FREEPool function are restricted to the messages described in the ROBAR User Guide.

The support of application-specific messages must be managed and programmed by the customer in the ROBAR Rule files. These extensions are not covered by the Fujitsu Siemens Computers in the framework of a customer-specific project.

6. Support of tape drives by ROBAR

Error of hardware and software components which are not –or cannot- be reported by BS2000 console messages, cannot be handled by ROBAR either. Such errors must be recovered by the operator and/or reported to Fujitsu Siemens Computers (e.g. tape subsystems, BS2000/OSD-BC software subsystems), if an applicable maintenance warranty exists.

The support of a device by ROBAR requires that the combination of the hardware, firmware and software components has reached the appropriate level of reliability to support continuous robot operation without interruption of the tape processing.

Therefore the Fujitsu Siemens Computers warranty only covers robot configuration with tape devices which are explicitly announced as supported by ROBAR.

### 7. Multiprocessing

The multiprocessing feature means that several cleaning operations can be performed simultaneously. To avoid problems with cleaning processing use as many cleaning cartridges as cleaning devices.

### 8. ROBAR features not supported for Scalar i2000 and i500

The functionality for ROBAR-SV procedures GEN\_VOL\_REPORT and QUERY\_ABBA\_DB is not supported.

## 3.8 Error handling

If an error occurs, it must be described precisely, including indication of whether the error is reproducible.

How to produce the documentation relevant for diagnosis is described in the ROBAR Manual Controlling MTC archive systems .

For errors which occur during device control, additional diagnostic information from BS2000 must be delivered (see Release notice of ROBAR-CL)

## 4 Hardware-information

### 1. Tape devices supported by ROBAR in AML systems (BS2000 terms):

- 3580, 3590, 3590E
- 3588-GL
- 3591-B1GL as TAPE-C5
- 3591-E1GL as TAPE-C6
- LT0-U1 and LT0-U2
- LT0-U3 in library Scalar 10K, Scalar i2000 and Scalar i500 in connection with BS2000/OSD-BC as of V6.0B with S-server.  
For SX-server >= X2000 V3.0A09
- LT0-U4 are supported in BS2000/OSD V8.0A

The devices are supported without stacker.

Tape drives with BS2000 device types LT0-U2 and LT0-U3 are released with Scalar i2000.

Tape drives with BS2000 device type LT0-U3 are released with Scalar i500.

### 2. Supported AML-Systems:

QUANTUM Germany Systems AML/2, AML/E, AML/J, Scalar 1000, Scalar 10K, Scalar i2000 and Scalar i500.

Please refer to QUANTUM Germany documentation and customer service to check which tape devices supported by ROBAR are supported by QUANTUM Germany robot systems.

### 3. ROBAR-Server (more informations see Product Facts)

Linux: PRIMERGY TX200 S3  
PRIMERGY TX200 S4 (is now released)

Solaris: PRIMEPOWER 250, 400 (PRIMEPOWER 250 recommended)

SAS: details see CentricStor Product Facts  
(Linux & Solaris)

### 4. Tested library and tape firmware

Scalar i2000 : library firmware: 540A-GS00601  
tape firmware LT0-U3 FW:73P5

Scalar i500 : library firmware: 410G.GS007  
tape firmware LT0-U3 FW: 64D0



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