

FUJITSU Software BS2000 StorMan

Version V8.0
January 2019

Release Notice

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1 General

StorMan (Storage Management) provides dynamic management of Storage Resources with Storage information and monitoring, Statistics and performance and Replication functions.

This Release Notice is a summary of the major extensions, dependencies and operating information with respect to StorMan V8.0.

- *1 The release level is that of: January 2019.
- *1 Changes to release level December 2017 are marked with *1
- *2 Changes to release level April 2018 are marked with *2
- *1 The contents have been modified with respect to the release level V8.0.0-0.
- *1 It corresponds to the correction level V8.0.1-0: April 2018
- *2 It corresponds to the correction level V8.0.2-0: January 2019

The Release Notice is shipped on the product delivery medium.

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

StorMan V8.0 is a component of

- the product SHC-OSD for integration in BS2000
 - the Management Unit (MU) on SE Series Business Server integrated as an Add-on pack
 - Server Management software (ServerView Operations Manager, openSM2)
 - customer specific projects
- and cannot be ordered separately.

1.2 Delivery

The StorMan V8.0 files are supplied on CD-ROM/DVD as part of the software delivery for the product SHC-OSD, SE Server or a Server Management Software.

1.3 Documentation

The documentation is available as part of the software delivery for the product SHC-OSD, SE Server or a Server Management Software.

The documentation is also available on the internet at <http://manuals.ts.fujitsu.com>. Manuals which are displayed 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:

- StorManReadme_en.pdf (file with English text)
- StorManReadme_de.pdf (file with English text)

The manuals are shipped as PDF files on the product medium.

2 Software extensions

Only the extensions and improvements over the previous version StorMan V7.0 are described in the following section.

2.1 Support of Storage Systems

2.1.1 Support of ETERNUS AF650

Support of the storage system ETERNUS DX AF650 with same features as supported for ETERNUS DX S3.

2.1.2 QuickOPC support for local replication

ETERNUS DX S3/S4 / AF models support Clones based on QuickOPC. Local copies of a unit generated by QuickOPC are available immediately.

A new value 'fullcopy' for parameter -mirrortype is introduced to support QuickOPC in StorMan CLI stormirror.

2.1.3 SnapOPC+ Extensions

ETERNUS DX S3/S4 / AF models support Thin Provisioning Volumes (TPV) and Flexible Tier Volumes (FTV) as target Snap-Volumes for SnapOPC+. They still have to be of same size.

This feature increases the flexibility of SnapOPC+ usage in configurations with Thin Provisioning and Automated Storage Tiering (AST) support.

No extensions are required on StorMan interfaces to support this extension.

2.1.4 Storage Cluster Option (SCO)

The Storage Cluster Option (SCO) combines two storage systems ETERNUS DX S3/S4 / AF into a fail-safe storage cluster.

CLI storcluster is used to manage storage clusters in StorMan.

SCO related information is provided by parameter -show in CLI storcluster, storcfg system, storcfg volume and stormirror.

In M2000 environments StorMan is aware of status changes of the Storage Cluster. These events are monitored in SE Event Logging.

2.1.5 Extended Information

StorMan V8.0 provides information about new HW components and additional information about SSD disks.

2.1.6 Statistics and performance tasks

For all ETERNUS DX S3/S4 / AF series StorMan uses SMI-S to provide statistical data. The SMI-S option "Performance Information" must be activated in the storage systems.

The output format and values of CLI storstat remain unchanged.

For compatibility reasons StorMan V8.0 continues to use PMCC to provide statistical data for the ETERNUS DX S2 models.

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2.1.7 Support of ETERNUS DX S4 / AF250

StorMan V8.0 supports ETERNUS DX60 S4 / DX100 S4 / DX200 S4 / AF250 storage systems based on FW V10L70 for support in Server Management Software.

2.1.8 Support of EMC VMAX All Flash

StorMan V8.0 supports storage systems EMC VMAX All Flash with the same feature set as EMC VMAX3.

***1 2.1.9 Support of ETERNUS DX S4 / AF650 S2**

*1 StorMan V8.0.1 supports ETERNUS DX500 S4 / DX600 S4 / AF650 S2 storage
*1 systems based on FW V10L80.

2.2 StorMan WebUI

2.2.1 List of extensions

New functions supported with StorMan V8.0 are reflected in WebUI

- Information about SSDs
- SnapOPC+ extensions
- QuickOPC support
- SCO support

3 Technical information

3.1 Resource requirements

StorMan V8.0 requires up to 350 MB disk space (including diagnostic files).

The minimum memory requirement amounts up to 400 MB (configuration with 2 ETERNUS DX).

3.2 Software configuration

Platforms

StorMan is released for use on servers with:

- Windows Server 2008
- Windows Server 2012
- Windows Server 2016
- SuSe Linux Enterprise Server (SLES) 11
- SuSe Linux Enterprise Server (SLES) 12
- Red Hat Enterprise Linux (RHEL) 6.x
- Red Hat Enterprise Linux (RHEL) 7.x
- M2000 as of V6.1

Browser for WebUI

Internet Explorer V11.0 and Microsoft Edge
Firefox as of V45 (ESR)

SMI-S Provider

ETERNUS DX Storage

The SMI-S Provider is 'embedded' and delivered as part of the firmware. It is enabled by default.

EMC Storage

Models Symmetrix VMAX, VMAX3, VMAX All Flash:
SMI-S Provider as of V8.4 from EMC Corporation. SMI-S Provider is part of the EMC Solutions Enabler.

For further details of supported Symmetrix models, please refer to the EMC Support Matrix (ESM) and to EMC Solutions Enabler as of Version 8.4 Release Notes, available at <https://support.emc.com/>.

The following operating systems are supported (as of EMC Support Matrix):

- Microsoft Windows Server 2008 (R2), 2012 (R2)
- Red Hat Enterprise Linux (RHEL) 5.x, 6.x, 7.x
- SuSe Linux Enterprise Server (SLES) 10 and 11

3.3 Product installation

The delivery of StorMan is made on DVD-ROM. On the DVD-ROM there are packages for installation on Linux and Windows environments.

For installation on Linux use the rpm command, on Windows execute the setup file (see Chapter 5 in the StorMan manual).
On SE Server StorMan Server and StorMan GUI are completely automatically installed as Add-on pack on the Management Unit (MU) by using the SE Manager.

3.4 Product use

All product use activities for StorMan V8.0 are described in the StorMan V8.0 manual and in the Help System.

3.5 Discontinued functions (and those to be discontinued)

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

Support of 32 bit platforms

The integration in the SQ Manager of the Management and Remote Service Console (MARS) on SQ Series Business Server

The provisioning functions storattach and stordetach
The parameter -access for pools

The parameter -discover of CLI storcfg cimom
The option -full of CLI storcfg system –discover

3.6 Incompatibilities

Output of speed information for ports is changed at CLI storcfg system –show ... - showports.

3.7 Restrictions

- *2 EMC storage systems VMAX, VMAX3, VMAX All Flash are not supported due to
- *2 an availability issue of EMC SMI-S provider.

3.8 Procedure in the event of errors

If an error occurs, the following error documents are needed for diagnostics (see chapter 8.5 "Diagnostic aids" in the StorMan V8.0 manual):

A detailed description of the error condition, indicating whether and how the error can be reproduced.

To have the best possible support in case of encountering problems during the usage of StorMan it is recommended to recreate the occurred problem if possible after setting the highest debug level on the StorMan server for the duration of recreation.

To provide the current configuration data please use the StorMan CLI
stormandb -dump.

Afterwards please collect the following files situated in the directory
/var/opt/SMAWstor/StorMan for Linux environments and in %PROGRAM-FILES%\...\StorMan for Windows environment and transmit them to your support organization:

- StorMan logging files stormanTraceyyyy-mm-dd.txt in the directory ./log for the concerned day(s).
- configuration file of the StorMan server smserver.ini in the directory ./config.
- Saved StorMan database files AddData.sql and AddTables.sql (created by stormandb –dump) in the directory ./backup.

On Linux and M2000 you may also get all diagnostic information as a g-zipped tar archive by using the StorMan CLI storadmin getlogs.

The resulting file is located at /tmp/StorManLogs.tar.gz for Linux and /home/service/StorManLogs.tar.gz for M2000.

On M2000 you may create the diagnostic information and download it directly to your local server via WebUI.

SMI-S Provider

For general diagnostic information support of SMI-S Provider please refer to the documentation of the specific vendor.

4 Hardware requirements

4.1 Server

StorMan V8.0 supports all current PRIMERGY servers and the Management Unit on SE Server.

4.2 Disk Storage

ETERNUS DX Storage

| Model | Function |
|--|---|
| DX60 S2, DX80 S2, DX90 S2 | Information and monitoring |
| DX410 S2, DX440 S2, DX8700 S2 | Information and monitoring, statistic and performance, replication |
| DX60 S3, DX100 S3, DX200 S3 | Information and monitoring |
| DX60 S4, DX100 S4, DX200 S4 AF250, AF650 | Information and monitoring |
| DX500 S3, DX600 S3, DX8700 S3 | Information and monitoring, statistic and performance, replication, storage cluster |
| DX500 S4, DX600 S4, AF650 S2 | Information and monitoring, statistic and performance, replication, storage cluster |

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ETERNUS JX Storage (SE Server only)

| Model | Function |
|---------------|----------------------------|
| JX40, JX40 S2 | Information and monitoring |

EMC Storage

| Model | Function |
|-------------------------------------|--|
| Symmetrix VMAX VMAX3 VMAX All Flash | Information and monitoring, statistic and performance, replication |

4.3 Tape Storage (SE Server only)

Fujitsu Storage

| Model | Function |
|-------------------------------------|----------------------------|
| ETERNUS LT40/60 S2 | Information and monitoring |
| ETERNUS CS HE / CS8000 / CS50/CS800 | Information and monitoring |

Quantum Storage

| Model | Function |
|---------------------|----------------------------|
| Scalar i500/i2k/i6k | Information and monitoring |

5 Firmware levels

ETERNUS DX Storage

| Model | Supported |
|--|---------------|
| DX60 S2 | V20L16 |
| DX80 S2, DX90 S2 | V10L64 |
| DX410 S2, DX440 S2, DX8700 S2 | V10L64 |
| DX60 S3, DX100 S3, DX200 S3, DX60 S4, DX100 S4, DX200 S4, AF250 | V10L70/V10L71 |
| DX500 S3, DX600 S3, DX8700 S3, AF650, DX500 S4, DX600 S4, AF650 S2 | V10L84/V10L85 |

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EMC Storage

| Model | Supported |
|-----------------------|------------------|
| Symmetrix VMAX | Enginuity 5876 |
| VMAX3, VMAX All Flash | HYPERMAX OS 5977 |