

# Data Sheet

## FUJITSU ETERNUS SF V16.8

### Storage Management Software

Central console and advanced management functions for ETERNUS DX and ETERNUS AF storage environments.



#### ETERNUS SF Storage Management Software

The comprehensive and flexible data management for ETERNUS DX and ETERNUS AF storage systems offers convenient, consistent and powerful tools with enterprise class functionalities even for the entry class. Innovative and advanced functions increase operational efficiency and help to implement appropriate service levels. Complementing the integrated ETERNUS DX and ETERNUS AF hardware storage management the ETERNUS SF storage management software is used to support overall daily operations within the entire storage infrastructure. ETERNUS DX and ETERNUS AF embedded management, together with ETERNUS SF, serve as the overarching basis for Fujitsu's highly efficient Flexible Data Management. It offers the same usability for all operational workflows throughout the ETERNUS DX series, from entry-level systems up to the high-end models. Therefore, acquired management skills can be leveraged over sites and over time. A high degree of automation and an easy to learn, easy to handle graphical user interface reduces significantly administrator's training efforts with regards to cost and time. The customizable dashboard screen further eases all management tasks for the daily work. Storage resource optimization including implementation of policies for enhancing storage integration and operation, error discovery, health monitoring, capacity management, provisioning, local and remote replication and disaster recovery are presented with a consistent user friendly look and feel.

In addition to the cost savings given by the ergonomic and unified storage management ETERNUS SF also enables to eliminate unnecessary

maintenance cost as even complex storage management operations can be executed without high-level skills or expensive vendor's intervention.

A flexible and transparent license model guarantees that customers pay only needed functionalities and such can grow with rising requirements at foreseeable cost.

ETERNUS SF Express is the management console for ETERNUS DX entry systems and ETERNUS AF150. ETERNUS DX60, DX100 and DX200 disk storage systems and ETERNUS AF150 all-flash systems are shipped with a free-of-charge ETERNUS SF Express license. The Express software offers basic management features, as well as simple, wizard based configuration and can monitor multiple ETERNUS DX and ETERNUS AF systems with one centralized console. For advanced features ETERNUS SF Express can be easily upgraded to ETERNUS SF Storage Cruiser.



# Features & Benefits

Main Features	Benefits
<p><b>Configuration and Status Management</b></p> <ul style="list-style-type: none"> <li>■ Device detection, zoning and access path management</li> <li>■ Visualization of the entire SAN infrastructure – storage systems, switches and servers including virtual machines</li> <li>■ Wizard assisted setup of major features.</li> <li>■ Customizable dashboard view</li> <li>■ Streamlined interface for the most common configuration and snapshot operations</li> <li>■ Permanent status monitoring and health check of the entire infrastructure</li> <li>■ Local or remote deploy of failure event alerts</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduced operational cost through centralized management and uniform administrative tools. The comprehensive view of system status and system health reduces time for fault incident detection and error fix.</li> </ul>
<p><b>Disaster Recovery Management</b></p> <ul style="list-style-type: none"> <li>■ Setup and management of synchronous and asynchronous array-based replication</li> <li>■ Comprehensive functions for local and remote replication</li> <li>■ Non-stop backup for all major database systems</li> <li>■ Backup support for virtualized server environments</li> </ul>	<ul style="list-style-type: none"> <li>■ Comprehensive functions for snapshots, synchronous and asynchronous replication, local or remote, to prevent loss of data and to ensure continuous business operations and services under any circumstances</li> </ul>
<p><b>Business Continuity Management</b></p> <ul style="list-style-type: none"> <li>■ Transparent failover between storage systems</li> <li>■ Automatic and manual failover available, including for virtual server environments</li> </ul>	<ul style="list-style-type: none"> <li>■ Transparent failover allows 100% data insurance and non-stop operations, as well as a system availability of 99.9999%.</li> </ul>
<p><b>Performance Management</b></p> <ul style="list-style-type: none"> <li>■ Performance monitoring of storage devices and SAN infrastructure</li> <li>■ Setting of performance thresholds and alert policies</li> <li>■ Multiple performance graphs displayed on a customizable multi-tab screen to grasp the current performance flow at a glance.</li> <li>■ Automated Quality of Service management based on performance requirements</li> </ul>	<ul style="list-style-type: none"> <li>■ Helping to avoid, identify and eliminate performance bottlenecks results in significantly improved application data access, availability, performance and quality of service.</li> </ul>
<p><b>Automated Storage Tiering Management</b></p> <ul style="list-style-type: none"> <li>■ Setup of profiles, policies and tier pools for automatic data movement</li> </ul>	<ul style="list-style-type: none"> <li>■ Lower acquisition cost while increasing I/O performance leading to reduced total cost of ownership, energy consumption and system footprint</li> </ul>
<p><b>Energy Consumption Management</b></p> <ul style="list-style-type: none"> <li>■ Monitoring of power consumption and temperature</li> <li>■ Setting of thresholds and policies for disk spin-down</li> </ul>	<ul style="list-style-type: none"> <li>■ Decreases expenditures for power and cooling</li> </ul>

# Licenses and functions overview

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## ETERNUS SF Web GUI

- The standard browser based graphical user interface provides an intuitive single console for the entire ETERNUS DX family and enables administrators to implement storage environments with ease and without high-level skills. A customizable dashboard facilitates real-time and comprehensive information regarding the current system state.

## ETERNUS SF Express License

- Free-of-charge license for the ETERNUS DX entry systems that offers restricted functions for configuration, management and monitoring as well as basic snapshot capabilities

## ETERNUS SF Storage Cruiser (SC) Licenses

- ETERNUS SF SC Basic License: Offers functions to monitor and administrate multiple ETERNUS DX systems including unified (block and file) management, storage system configuration, thin provisioning, health and status overview, performance monitoring, Eco Mode settings, power consumption and temperature monitoring.
- ETERNUS SF SC Standard License: Enhanced license offering in addition to the basic license health, status and end-to-end relationship overview for 3rd party storage, switches, servers and VM's, SAN management with correlation and map view and a reporting function. Mandatory prerequisite for the Optimization, QoS and Storage Cluster licenses.
- ETERNUS SF SC Optimization License: Enables automated tiering by setting policies to automatically place data on the right media at the right time, achieving the best balance between maximizing performance and minimizing cost (available for ETERNUS DX S3/DX S4/DX S5 series except DX60 S3/S4/S5, DX80 S2, DX90 S2, DX400 S2 series, DX8700 S2 and ETERNUS AF series).
- ETERNUS SF SC QoS Management License: Enables the consolidation of multiple tiers of applications in single storage systems. The ETERNUS SF QoS automation feature enhances the array-based ETERNUS DX QoS feature and automates the process by dynamically maintaining, controlling and balancing the response times of the application-specific volumes (available for ETERNUS DX100 S3/S4/S5, DX200 S3/S4/S5, DX500 S3/S4/S5, DX600 S3/S4/S5, DX900 S5, DX8700 S3, DX8900 S3/S4 and ETERNUS AF series).
- ETERNUS SF SC Storage Cluster License: Transparent failover feature which ensures business continuity in case of planned or unplanned outage of a complete array (available for ETERNUS DX100 S3/S4/S5, DX200 S3/S4/S5, DX500 S3/S4/S5, DX600 S3/S4/S5, DX900 S5, DX8700 S3, DX8900 S3/S4 and ETERNUS AF series).

## ETERNUS SF AdvancedCopy Manager (ACM) Licenses

- ETERNUS SF ACM Local Copy License: Offers a comprehensive set of array-based snapshot, cloning and mirroring capabilities including wizard-assisted backup for Exchange and SQL Servers. Mandatory prerequisite for the Exchange Server and SQL Server licenses
- ETERNUS SF ACM Remote Copy License: Enables synchronous or asynchronous remote mirroring between arrays. Mandatory prerequisite for the Storage Cluster license (not available for ETERNUS DX60/DX60 S2/DX60 S3/DX60 S4/DX60 S5/DX80/DX80 S2).
- ETERNUS SF ACM for Exchange Server License: Restore wizard for Exchange Server
- ETERNUS SF ACM for SQL Server License: Restore wizard for SQL Server

## Feature Packs

- ETERNUS SF Replication Bundle: includes SC Standard License, ACM Local Copy, ACM Remote Copy, ACM for Exchange, ACM for SQL Server licenses (available for ETERNUS DX S3 / DX S4 / DX S5 series, for DX60 S3/S4/S5 without ACM Remote Copy and ETERNUS AF150 S3).
- ETERNUS SF Replication Bundle with Tiering: includes Replication Bundle and SC Optimization Option licenses (available for ETERNUS DX S3 / DX S4 / DX S5 series except DX60 S3/S4).
- ETERNUS SF Tiering Bundle: includes SC Standard and SC Optimization Option licenses (available for ETERNUS DX100 S3/S4/S5, DX200 S3/S4/S5, DX500 S3/S4/S5, DX600 S3/S4/S5, DX900 S5).
- ETERNUS SF Business Continuity Bundle: includes SC Standard, ACM Remote Copy and Storage Cluster Option licenses. (available for ETERNUS DX100 S3/S4/S5, DX200 S3/S4/S5, DX500 S3/S4/S5, DX600 S3/S4/S5, DX900 S5 and ETERNUS AF150 S3 ).
- All-in FlashPack: includes SC Standard, ACM Local & Remote Copy and SC Quality of Service Management Option . (included in ETERNUS AF series except ETERNUS AF150 S3).

More details for all features can be found on:

[www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/feature/](http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/feature/)

# Technical details

## ETERNUS SF Whitepapers and Details for Features

ETERNUS SF Technical Whitepaper	<a href="http://www.fujitsu.com/global/products/computing/storage/software/eternus-sf/index.html">http://www.fujitsu.com/global/products/computing/storage/software/eternus-sf/index.html</a>
Storage Cluster	<a href="http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/storage-cluster/">http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/storage-cluster/</a>
VMware VVOL	<a href="http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/eternusdx-vvol/">http://www.fujitsu.com/global/products/computing/storage/disk/eternus-dx/eternusdx-vvol/</a>

## ETERNUS SF Storage Cruiser- Supported Devices

Disk Storage Systems	ETERNUS DX60 S5, DX100 S5, DX200 S5, DX500 S5, DX600 S5, DX900 S5 ETERNUS DX60 S4, DX100 S4, DX200 S4, DX500 S4, DX600 S4 ETERNUS DX60 S3, DX100 S3, DX200 S3, DX500 S3, DX600 S3 ETERNUS DX8900 S4 ETERNUS DX8700 S3, DX8900 S3 ETERNUS DX60 S2, DX80 S2, DX90 S2 ETERNUS DX410 S2, DX440 S2 ETERNUS DX8700 S2 ETERNUS HB, ETERNUS HX series (Health monitoring only) Tintri VMstore series (can be monitored only by the management server for Windows) NetApp FAS series, NetApp V series, NetApp AFF A series
All Flash Arrays	ETERNUS AF150 S3, AF250 S3, AF650 S3 ETERNUS AF250 S2, AF650 S2 ETERNUS AF250, AF650 ETERNUS DX200F ETERNUS AB, ETERNUS AX series (Health monitoring only)
Tape Libraries	ETERNUS LT20 S2, LT40 S2, LT60 S2 ETERNUS LT140, LT200, LT210, LT220, LT230, LT270 S2
Data Protection Appliances	ETERNUS CS800, CS800 S2, CS800 S3, CS800 S4, CS800 S5 ETERNUS CS2000
Fibre Channel Switches	Brocade 12000, 24000, 48000 Brocade 8000, 7800, 7810, 7500, 6730, 6710, 6510, 6505, 5000, 5100, 5300, 5450 Brocade 4016, 4016 D4, 4100, 4900 Brocade 3250, 3850, 3014, 3200, 3800, 3900 Brocade G630, G620, G610 Brocade 200E, 300 Brocade DCX 8510-4/8, DCX, DCX-4S Brocade X6-4/8 Brocade AP7420 PRIMERGY Fibre Channel Switch Blade PRIMERGY BX600 Fibre Channel Switch Blade PRIMERGY Fibre Channel Switch Blade S26361-F3144-E1/L1, S26361-F3144-E2/L2, S26361-F3144-E4 S26361-F3144-E6, S26361-F3144-E14, S26361-F3144-E16 S26361-K1305-V14, S26361-K1305-V26, S26361-K1305-V126

## ETERNUS SF AdvancedCopy Manager - Supported Devices

Disk Storage Systems	ETERNUS DX60 S5, DX100 S5, DX200 S5, DX500 S5, DX600 S5, DX900 S5 ETERNUS DX60 S4, DX100 S4, DX200 S4, DX500 S4, DX600 S4 ETERNUS DX60 S3, DX100 S3, DX200 S3, DX500 S3, DX600 S3 ETERNUS DX8900 S4 ETERNUS DX8700 S3, DX8900 S3 ETERNUS DX60 S2, DX80 S2, DX90 S2 ETERNUS DX410 S2, DX440 S2 ETERNUS DX8700 S2
All Flash Arrays	ETERNUS AF150 S3, AF250 S3, AF650 S3 ETERNUS AF250 S2, AF650 S2 ETERNUS AF250, AF650 ETERNUS DX200F

**ETERNUS SF Express- Supported Devices**

Hybrid Storage Systems/Disk Storage Systems	ETERNUS DX60 S5, DX100 S5, DX200 S5 ETERNUS DX60 S4, DX100 S4, DX200 S4 ETERNUS DX60 S3, DX100 S3, DX200 S3 ETERNUS DX60 S2, DX80 S2, DX90 S2
All Flash Arrays	ETERNUS AF150 S3 ETERNUS DX200F

**Installation specification**

Manager Platforms	Microsoft Windows Server 2019 Microsoft Windows Server 2016 Microsoft Windows Server 2012, 2012 R2 Solaris 11 (11/11 or later), Solaris 10 (except ETERNUS SF Express) Red Hat Linux 8, 8.1, 8.2 Red Hat Enterprise Linux 7 Red Hat Enterprise Linux 6 Oracle Linux 6 VMware vSphere 6.0, 6.5, 6.7, 7.0 Microsoft Windows Server 2019 Hyper-V Microsoft Windows Server 2016 Hyper-V Microsoft Windows Server 2012 Hyper-V, 2012 R2 Hyper-V
Agent Platforms	Microsoft Windows Server 2019 Microsoft Windows Server 2016 Microsoft Windows Server 2012, 2012 R2 Solaris 11 (11/11 or later), Solaris 10 Red Hat Linux 8, 8.1, 8.2 Red Hat Enterprise Linux 7 Red Hat Enterprise Linux 6 Oracle Linux 6 SUSE Linux Enterprise Server 15 SUSE Linux Enterprise Server 12 HP-UX 11i v3, HP-UX 11i v3 (IPF) AIX 7.1 VMware vSphere 6.0, 6.5, 6.7, 7.0 Microsoft Windows Server 2019 Hyper-V Microsoft Windows Server 2016 Hyper-V Microsoft Windows Server 2012 Hyper-V, 2012 R2 Hyper-V KVM on RHEL 8 KVM on RHEL 7 KVM on RHEL 6
Client - Web Browser	Microsoft Internet Explorer 10, 11 Firefox ESR 60, ESR 68 Microsoft Edge 25, 42, 44 Google Chrome 60, 75
Client - Tablet (Dashboard Screens)	Safari 8, 9 (iOS) Chrome 47, 50 (Android)

### Fujitsu products, solutions & services

In addition to Fujitsu ETERNUS SF V16.8 Storage Management Software, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

#### Fujitsu Portfolio

Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

#### Computing Products

[www.fujitsu.com/global/products/computing/](http://www.fujitsu.com/global/products/computing/)

#### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

### More information

Learn more about Fujitsu ETERNUS SF V16.8 Storage Management Software, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. [www.fujitsu.com/eternus](http://www.fujitsu.com/eternus)

### Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.

Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.

Please find further information at <http://www.fujitsu.com/global/about/environment>



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