

# Hitachi Protection Platform S-Series V7.3 Software Release Notes

RN-S2500-7.3-02

Hitachi Data Systems acquired Sepaton, Inc. in August of 2014. Version 7.3 transitions the Sepaton S2100 Series software to the HDS S-Series software and management console. All references to the S2100 are now cited as S-Series systems. Furthermore, HDS has transitioned some of the S2100 terminology into generic backup storage server terminology.

While the transition to HDS is in full-swing, the Sepaton customer support portal will continue to be the primary point of reference for S-Series support until the customer support transition is complete later in 2015.

This release includes a significant number of issues fixed to address stability, scalability, and performance optimizations for OST work flow handling and system start up.

These customer software release notes cite enhancements, issues fixed, known issues and vendor-specific considerations.

## Installing the Software Update

Follow these steps to limit the required restarts to one, after installing the V7.3 software update:

1. Clear your browser cache and bring up the console manager.
2. Software update to version 7.3 (System > Chassis: MAINTENANCE TASKS > Software Update).
3. OST users: Install the appropriate OST V7.3 plug-in for your environment (System > Chassis > OST > OST Plug-ins Downloads); there are several fixes in the V7.3 OST plug-ins so you should upgrade as soon as is operationally feasible.

## Enhancements

V7.3 introduces the Hitachi Data Systems branded console manager and includes generic storage terminology where Sepaton had registered and trademarked terminology. Refer to [Table 6 on page 7](#) for specifics.

This release recommends updates to the DeltaView Manager node with DVM V6.1.6 software, Hi-Track software V6.9, and HSNM2 with V28.00 software. Sep-19463

S-Series V7.3 introduces new Brocade 6510, 48-port, 16-Gbps Fiber Channel switches. Only the first 24 ports are licensed and use small form-factor pluggables (SFPs).

This release also introduces new Brocade 6450, 24-port Ethernet switches.

S2100 OST plug-ins are now backward compatible. This release allows the existing S2100 OST plug-in to be compatible with the V7.3 OST S-Series. Sep-19488

This release supports the newly introduced OST Symantec Appliance plug-in. Sep-19502

## Issues Fixed in V7.3

This release includes issues fixed ranging from performance optimizations, OST-over-Fibre Channel connection management improvements, and runtime delta differencing deduplication database maintenance to optimize database query access.

### **Rapid 7 security Vulnerabilities Fixed**

This release has fixes for critical and severe software vulnerabilities identified by the Rapid 7 scanning process. Sep-19440

### **Database Recovery Issue Fixed**

An issue that was preventing the ability to properly recover from a failed database has been fixed. Sep-19491

### **Fixed Storage Pool Issue**

An issue that may have caused delta differencing deduplication to consider less than the optimal amount of data for deduplication has been resolved. Deduplication ratios may improve slightly with the addition of this fix. Sep-19589

## Composite of Issues Fixed in V7.x.x

This release rolls-up several minor releases and patches into the Hitachi Protection Platform S-Series V7.3 software.

### **Many Improvements Incorporated to Improve OST Workloads**

These releases provided improvements to reduce processing latencies in critical code paths. The improvements enable the system to better handle timeout and retry situations; improve message layer buffer and message handling for sustained peak loads of ingest; and improve deduplication and replication that are specific to OST workloads. Seps-19300, 19321, 19339

### **Fix Addresses Unnecessary NetBackup Error 87 Messages**

A fix was put in place that prevents OST Fibre Channel backups from failing when certain SCSI commands were retried. These failures occurred because the system's device driver returned an I/O error and initiated NetBackup status code 87: media close errors. Sep-19191

### **Significant Improvements to OST Master Server Performance Statistics Collection**

- This release contains several major enhancements intended to improve the performance of the OST master server that contributes to the NetBackup status code 2106: Disk storage server is down. Seps-19216, 19212
- Gathering Disk Volume information has been streamlined by reducing the number of database calls being performed, including no longer counting the number of images in a logical storage unit (LSU) since NetBackup doesn't use the information.
- LSU capacity information is now cached within the master server and when NetBackup queries LSU information the S2100 returns the cached values. The cache is now only updated once every 10 minutes per storage pool.

### **The Number of Filling Volumes Reduced**

A code change was made to optimize the use of "filling" containers for OST backups. Sep-19223

### **OST Master Was Unresponsive Due To Attempted Replication of Subimages**

The OST master server became unresponsive while attempting to unnecessarily process a large number of subimages. Accordingly, safeguards were added to prevent this. Sep-19334

## Known Issues and Considerations

### **OST I/O Server Module Can Fail To Properly Shut Down in Configurations where OST-over-Fibre Channel Functionality Is Licensed But Not All Configured Devices Are Used**

During system shutdown, OST-over-FC devices that were *not* activated and used during the appliance operation will cause the corresponding OST I/O server processes to fail and produce a core file. These failures have no impact on the integrity of backups or replicated data. Sep-19613

### **Attempting To Delete Hundreds of Backups at One Time Can Cause a Service Disruption**

Deleting large numbers of backups using the console manager can impact system performance and can cause a service disruption. If you encounter this situation, contact Customer Support for assistance in performing the operation safely using the CLI. Sep-19632

### **Setting the Appropriate OST Storage Server Plug-In Name Type**

As part of the HDS branding, the S-Series supports a new device name "HPP-S". This is a first step toward getting the S-Series name to be recognized by backup application vendors. While configuring new OST storage servers, existing deployments must continue to specify the previously identified device string "SEPATON." Customers who want to use the new device name "HPP-S" must first consult with customer support for compatibility with the existing deployment. SEP-19655

## Browser Certificate Considerations with the S-Series

### **X.509 Certificate Subject Common Name (CN) Does Not Match the Entity Name**

A known S-Series security vulnerability is that its X.509 Certificate Subject Common Name (CN) does not match the Entity Name rendering a certificate-common-name-mismatch.

### **Self-Signed TLS/SSL Certificate Generates Browser Security Warnings**

Your S-Series appliances comes by default with a self-signed Transport Layer Security and Secure Sockets Layer (TLS/SSL) protocol certificate. Self-signed certificates cannot be trusted by default, especially because TLS/SSL man-in-the-middle attacks typically use self-signed certificates to eavesdrop on TLS/SSL connections. If you want to install your own certificate, contact Customer Support for assistance.

### **Manually Disabling SSLv3 in the tomcat configuration file**

SSLv3 is enabled by default. Contact Customer Support to disable this service. Sep-19595

## V7.3 Compatibility Matrices

These tables list the backup applications, and the backup server and client operating systems that are supported by V7.3. Contact HDS Customer Support for information about other backup applications, such as NetWorker or Data Protector.

The maximum number of supported virtual devices is 192.

**Table 1: TSM Compatibility Matrix**

Backup Applications	Tivoli Storage Manager 5.3, 5.4, 5.5, 6.1, 6.1.1, 6.1.2, 6.1.3, 6.2, 6.2.1, 6.2.2, 6.3, 7.1
Backup Server Host Operating Systems	Windows Server 2003 SP2 Windows Server 2008 SP1 Windows Server 2008 R2 (AMD64) Windows 2012 R2 (AMD64) Red Hat Enterprise and CentOS Linux 6, 5, 4 Solaris 9 and 10 AIX 5.3, 6.1
Client Operating Systems	Windows Server 2003 SP2 Windows Server 2008 SP1 Windows Server 2008 R2 (AMD64) Windows 2012 R2 (AMD64) Red Hat Enterprise Linux 5 and 4 and CentOS Linux 6, 5 SUSE Linux 10 Solaris 9 and 10 AIX 5.3, 6.1, 6.3

**Table 2: NetBackup Compatibility Matrix**

Backup Applications	NetBackup 5.5, 6.0, 6.5.1, 6.5.3, 6.5.4, 6.5.5, 7.0, 7.1, 7.5, 7.6, 7.6.1, 7.6.1.1
Backup Server Host Operating Systems	Windows Server 2003 SP2 Windows Server 2008 SP1 Windows Server 2008 R2 (AMD64) Windows 2012 R2 (AMD64) HP-UX 11 Red Hat Enterprise and CentOS Linux 6, 5, and 4 AIX 5.3, 6.1 Solaris 9 and 10
Client Operating Systems	Windows Server 2003 SP2 Windows Server 2008 SP1 Windows Server 2008 R2 (AMD64) Windows 2012 R2 (AMD64) HP-UX 11 Red Hat Enterprise Linux 5, and 4 and CentOS Linux 6, 5 AIX 5.3, 6.1 SUSE Linux 10 Solaris 9 and 10

## Supported OST Media Servers and Operating Systems

**Table 3: OST Media Servers and Operating Systems**

Supported OST Media Servers and OS Versions	Windows 2012 R2 (AMD64) Windows Server 2008 R2 (AMD64) RHEL5 and RHEL6, CentOS 5 and CentOS 6x (x86_64) Solaris 10 and 11 (SPARC64) AIX 6.1 and 7.1 (PPC) SUSE ES10 and ES11 (x86_64) Symantec 5xxx appliances
---	--

## Multinode Support

**Table 4: Multinode Support**

Supported Backup Applications	Eight nodes (non-OST environments)
-------------------------------	------------------------------------

## Virtual Machine Deduplication Support

**Table 5: Virtual Machine Deduplication Support**

VMware ESX4 NetBackup 6.5 agent on the VMware Service Console	VM DKs as a flat file Fixed and dynamic disks VM SS Configuration Logs
---	--

# New Terminology Mapping

**Table 6: New Terminology Mapping**

Legacy Name	New Name
Septon	Hitachi Protection Platform
S2100-ES3	S-Series
DeltaStor®	delta differencing deduplication technology
DeltaRemote™	tape image replication
OST AIR	OST AIR replication
OST Optimized Duplication	OST Optimized Duplication replication
DeltaView™ Manager	Hitachi Protection Platform service console
Secure Erasure	data erasure
SRE®	processing node(s)
ContentAware™	content aware deduplication

## Accessing Product Documentation

This section lists documents related to installation, hardware, software, configuration, monitoring, troubleshooting, best practices, and updates for the S-Series Data Protection platform. You can access the Hitachi Data Protection platform documentation from the DeltaView Portal, <https://deltaview.sepaton.com> or <http://www.HDS.com>.

## Related Documents

- *Hitachi Protection Platform S-Series V7.3 User Manual* (MK-95HPP001-01)
- *Hitachi Protection Platform S-Series Software Installation Instructions* (FE-95HPP002-00)
- *Hitachi Protection Platform S-Series Software Update Instructions* (MK-95HPP003-00)

## Contact Information

### Technical Support

If your unit does not offer a function described in this document, please open a Customer Support case by visiting the DeltaView Portal located at <https://deltaview.sepaton.com>, or call +1.866.657.8400. Be prepared to provide your company name, serial number, contact information, and a detailed description of your issue.

### Web Site

For more information about HDS and HDS products, please visit the HDS Web site at:

<http://www.hds.com>

### Comments

Our goal is to provide accurate, useful, and easy-to-understand documentation. If you have any comments about this manual or have noticed any errors, we would appreciate your feedback. You may provide your comments by opening a Customer Support case by visiting the DeltaView Portal located at <https://deltaview.sepaton.com>. You may also contact us directly at:

Sepaton, Inc.  
400 Nickerson Road  
Marlborough, MA 01752 USA

Phone: 1.508.490.7900  
+1.866.657.8400  
Fax: 1.508.490.7908

#### Hitachi Data Systems

##### Corporate Headquarters

2845 Lafayette Street  
Santa Clara, California 95050-2639  
U.S.A.  
[www.hds.com](http://www.hds.com)

#### Regional Contact Information

##### Americas

+1 408 970 1000  
[info@hds.com](mailto:info@hds.com)

##### Europe, Middle East, and Africa

+44 (0)1753 618000  
[info.emea@hds.com](mailto:info.emea@hds.com)

##### Asia Pacific

+852 3189 7900  
[hds.marketing.apac@hds.com](mailto:hds.marketing.apac@hds.com)