



VessRAID-1846i, iS512-Series, iS325, iS316,
iS105, GigaStorATX and GSC-408

Software Version 2.9.1 Release Notes

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1 Introduction

We are pleased to announce the newest release of software for the iStor/Promise family of storage products and the equivalent storage products for D-Link Systems. Version 2.9.1 is not a mandatory upgrade, although it is highly recommended. However, version 2.8.0 was a **mandatory** upgrade for all existing customers, because of the number of new features and fixes in that version. These release notes identify what is included and what limitations have been identified as part of this new software release.

1.1 Purpose

This document identifies supported functionality in the version 2.9.1 software release, and what errata and caveats that may affect the operation of the products. This document is not a product specification, nor does it specify the total functionality of the iStor/Promise product family.

1.2 Related Documents

- ***VessRAID-1846i Quick Start Guide*** - this guide provides the information needed to get the VessRAID-1846i storage system out of the box and operational with a connection to a host computer.
- ***VessRAID-1846i Hardware Reference Guide*** - this guide provides the hardware information for installing the VessRAID-1846i storage system.
- ***iS512 Primary Array Quick Start Guide*** - this guide provides the information needed to get the iS512 Primary Array out of the box and operational with a connection to a host computer.
- ***iS512-SX Expansion Array Quick Start Guide*** - this guide is shipped with an iS512-SX expansion array and describes how to install and configure the Expansion Array for operation with the iS512 Primary Array.
- ***iS512 Hardware Reference Guide*** - this guide provides the hardware information for installing the iS512 storage system.
- ***iS325 Quick Start Guide*** - this guide provides the information needed to get the iS325 storage system out of the box and operational with a connection to a host computer.
- ***iS325 Hardware Reference Guide*** - this reference guide provides the hardware details for installing, configuring, and using the iS325 storage system.
- ***iS316 Quick Start Guide*** - this guide provides the information needed to get the iS316 storage system out of the box and operational with a connection to a host computer.
- ***iS316 Hardware Reference Guide*** - this reference guide provides the hardware details for installing, configuring, and using the iS316 storage system.
- ***iS105 Quick Start Guide*** - this guide provides the information needed to get the iS105 storage system out of the box and operational with a connection to a host computer.
- ***iS105 Hardware Reference Guide*** - this reference guide provides the hardware details for installing, configuring, and using the iS105 storage system.
- ***Management Center Software User's Guide*** - this guide provides the information needed to configure and manage storage on the storage system using the Management Center Graphical User Interface (GUI).
- ***Command Line Interface User's Guide*** - this guide provides the information needed to configure and manage storage on the storage system using the Command Line Interface (CLI).
- ***Virtual Disk Services Guide*** - this guide describes how to use Microsoft Virtual Disk Services (VDS) to manage the storage systems.
- ***Terminology Guide*** - this guide is designed to assist you in the understanding of storage and SAN terminology that may be used in relation to the Management Center and the storage system. You may want to print this guide while reviewing the information and concepts in this document.

1.3 Update and Installation Requirements

The version 2.9.1 software release is available as an initial factory installation or a field upgrade for the following products:

- **VessRAID-1846i** with version 2.9.0 software
- **GigaStorATX** or **GSC-408** with version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0
- **iS105** system with version 2.6, 2.7, 2.8 or 2.9.0
- **iS316** system with version 2.6, 2.7, 2.8 or 2.9.0
- **iS325** system with version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0
- **iS512-08**, **iS512-04** or **iS512-10G** system with version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0
- **D-Link DSN-1100** system with version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0
- **D-Link DSN-2XXX/3XXX/5XXX** systems with version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0
- **D-Link DSN-4XXX** systems with version 2.9.0

Any system that is running version 1.5.1 software or earlier must first be upgraded to version 1.6, and then upgraded to this new version. For more information about the software upgrade process, please refer to your existing system documentation (**Chapter 4 “Launching the GigaStor Management Console”** in the GigaStor Functional Guide or **Chapter 5 “Launching the Management Console”** in the Software User’s Guide).



The version 2.9.1 software release requires the **Java Runtime Environment 6 (JRE 6) Release 1.6.0.0, or later** (<http://java.com>) to be installed on the system that will serve as the management host. The Java Runtime Environment software must be installed prior to the first connection to the Management Center.

2 Product Features and Enhancements

All of the existing product features from previous versions are included in this release, including support for running the Management Center from a host system with Windows XP, Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, Windows Vista or Windows 7. Note that any products that are running the version 2.9.1 software cannot be managed by earlier versions of the Management Center.

Below are the new or updated features that have been added since the version 2.8.0 general release.

2.1 New VessRAID-1846i

This release includes support for the new VessRAID-1846i hardware platform, which is available through our OEM customers. This new system is a single-controller RAID system that supports SATA or SAS drives, and any combination of external VessJBOD enclosures (2U/12 or 3U/16) for dynamic storage capacity expansion.

2.2 Replaced “iStor” branding with “Promise” branding

Since iStor Networks was acquired by Promise Technology, the text and graphics for all existing products have been updated to show “Promise” instead of “iStor”. The SCSI inquiry strings have also been updated. However, the target names for any existing volumes (“iqn.2000-03.com.istor”) will remain intact, to avoid any connection issues after installing this new version of software.

2.3 RS-232 Serial Port Baud-Rate Change for GigaStorATX and GSC-408

All newly-manufactured controllers that have version 2.9 firmware installed at the factory will have the baud rate set to 115,200 bps instead of 9600 bps. Existing ATX and GSC-408 boards that were originally manufactured with an earlier version of software will continue to operate at 9600 bps.

2.4 New Volume Types in the Volume Creation Wizard

The following new volume types have been added to the Volume Creation Wizard, both of which will create a Parity (RAID-5) volume:

- IP Surveillance
- Virtual Disk Storage

2.5 Fixes in Version 2.9.0

The following issues that existed in version 2.8.2.2 (and earlier) have been fixed in this release:

- Unable to create a Stripe-Mirror (RAID-10) volume with a stripe width larger than 8 using the Java GUI (although it was possible to create such a volume through the CLI)
- No alert e-mail message was sent when a battery failure occurred
- Inserting a new disk into the same slot where a previous disk had failed due to "**SMART Threshold Exceeded**" would also be reported as "**Failed**", even though the new disk was good
- The "**Advanced Features for Windows**" installation link did not appear on the Default Web Page when using the **FireFox** browser on a Windows host system
- Various software instabilities resulted in a "**bug-check**" condition and caused the system to restart, which caused temporary loss of access to volumes

2.6 New Features and Fixes in Version 2.9.1

2.6.1 Event Log Entry with Battery Register Values When a Battery Fails

A new Event Log entry will be added when a battery fails, to provide more detailed information about the cause of the battery failure.

2.6.2 Increased Timeout Duration for the VessRAID 1836i Battery Charging

The timeout duration for charging a battery has been increased from six (6) hours to eight (8) hours, to prevent a battery from being incorrectly reported as “Failed”.

2.6.3 Installation of “Advanced Features for Windows” on Windows 7

The InstallShield tools have been upgraded to allow the Advanced Features for Windows to be installed on Windows 7 platforms (specifically the VDS Hardware Provider).

2.6.4 Updated Link on the “Get Java” web page

The URL link for downloading the Java Run-Time Environment has been changed to reflect the new website location (<http://java.com> instead of <http://java.sun.com>)

2.6.5 Changed the Firmware File Name for DSN-4100/4200

The file name for the firmware image was changed from `FUFI_2_9_X_X.DLink_DSN4000` to `FUFI_2_9_X_X.DLink_DSN4100_4200`.

2.6.6 Fixes

The following issues that existed in version 2.9.0.11 (and earlier) have been fixed in this release:


- When using iS512 or DSN-5XXX controllers with different MAC address ranges, the controllers would fail to bind with an error message of “**Slam Dunk**”
- Extraneous fan speed changes occurred on a VessRAID 1846i and DSN-4100/4200 when an invalid temperature reading was received from an Expansion Array
- Invalid temperature warnings were generated on a VessRAID 1846i and DSN-4100/4200 when a temperature value of 44 degrees C was obtained from an Expansion Array, even though the maximum temperature for that enclosure is 51 degrees C
- Some minor spelling errors appeared in some of the messages on the RS-232 serial console
- The queue depth for SATA drives that support NCQ was incorrectly set to zero in version 2.9.0.11
- Changing the password for a user or administrative account did not get validated correctly in the **System Administration** → **User Accounts** tab
- Excessive Event Logs entries for “**Persistent Reserve In**” and “**Persistent Reserve Out**” filled-up the Event Log when using VMware or Hyper-V clustered environments
- The system did not shutdown when a JBOD enclosure exceeded its maximum temperature threshold

3 Software Upgrade Procedure

For any existing systems that are running software version 1.6, 2.0, 2.5, 2.6, 2.7, 2.8 or 2.9.0, you should download one of the following files from: http://www.istor.com/support/tools_resources/ or <http://www.dlink.com/>:

System Type	File Name	File Size	Comments
iS512-Series	FUFI_2_9_1_16.iStor_iS512	40,664,706 bytes	iS512-04, -08, -10
iS325	FUFI_2_9_1_16.iStor_iS325	40,442,481 bytes	iS325-04, -08, -10
iS316	FUFI_2_9_1_16.iStor_iS316	40,441,600 bytes	iS316-04, -08, -10
iS105	FUFI_2_9_1_16.iStor_iS105	40,311,500 bytes	iS105 only
GigaStorATX or GSC-408	FUFI_2_9_1_16.iStor_GigaStorATX	40,280,738 bytes	GigaStorATX and GSC-408 controllers without enclosure svcs.
D-Link	FUFI_2_9_1_16.DLink	39,603,337 bytes	DSN-2100/3200/3400
D-Link DSN-1100	FUFI_2_9_1_16.DLink_DSN1100	39,716,579 bytes	DSN-1100
D-Link DSN-4XXX	FUFI_2_9_1_16.DLink_DSN4100_4200	39,602,384 bytes	DSN-4100 & 4200
D-Link DSN-5XXX	FUFI_2_9_1_16.DLink_DSN5210	39,826,988 bytes	DSN-5110 & 5210


Note: If your host system is running Windows XP, be sure to temporarily disable the Windows Firewall before starting the software upgrade.

	<p>After a successfully upgrading your system to the version 2.9.1 software release, it is recommended to save a new System Configuration File by using the following procedure:</p> <ol style="list-style-type: none"> 1. From within the Management Center GUI, click on the “System Administration” item for your specific system in the View panel 2. Click on the “Settings” tab 3. Click on the “General” leaf (if it is not already selected) 4. Click on the “Save” button below the “System Configuration” heading 5. Navigate to where you wish to save the configuration file and enter the filename 6. Click on “Save”
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3.1 Upgrade for systems that are running version 2.x

Use the following procedure from the Management Center to install this new software image:

1. Select **System Administration** in the upper-left frame
2. Select the “**Control**” tab
3. Click on the **Upgrade** button
4. Browse for the software image file that you wish to upload, then click **Open**.
5. In response to the prompt “**After new software is uploaded, the remote system will be shutdown and restarted. Are you sure you want to do this?**”, click **OK** to proceed.
6. A progress bar will appear to show the progress of the software upload process.
7. After the software image is uploaded, a message prompts you to restart the system so that the new software image can take effect, and you should click **OK**.
8. After the system restarts (approximately four minutes), launch your web browser at the Management Port IP address and download the new Management Center GUI.

	<p>If your iS512 or DSN-5XXX system is equipped with dual controllers, the software upgrade process will automatically upgrade both controllers as the same time if they are already in a “Bound” state. However, you should not attempt to perform a software upgrade if the controllers are not in a Bound state.</p>
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3.2 Upgrade for systems that are running version 1.6

Use the following procedure from the version 1.6 Management Center to install this new software image:

1. Select the **Physical Resources** tab in the left-most frame
2. Select the **System** item under Physical Resources
3. In the menu bar, select **View**, then select **Software Upgrade**
4. In response to the prompt “**Upgrading the software will require a restart of your system; Do you want to continue?**”, click **OK**
5. Browse for the software image file that you wish to upload, then click **Open**.
6. A progress bar will appear to show the progress of the software upload process.
7. After the software image is uploaded, a message prompts you to restart the system so that the new software image can take effect, and you should click **OK**.
8. When the system restarts, the Management Console GUI will be closed, and you would wait approximately 4 minutes for the system to complete the restart process without interruption.



After upgrading from version 1.6, your system will present the new Graphical User Interface and new Target Creation paradigm that were implemented in version 2.0.0. For more information, please refer to the *Version 2 Upgrade Procedure Document*, which is available on our website. You must also install the Java 6 Run-Time Environment for your host system in order to use the new GUI.

3.3 Upgrade for systems that are running version 1.5

All systems that are running version 1.5.x (or earlier) must first be upgraded to version 1.6. That software image can be downloaded from http://www.istor.com/support/tools_resources/. After the software has been upgraded to version 1.6, you can then upgrade directly to version 2.9.1.

3.4 Upgrade for systems that are running version 1.4 or earlier

All systems that are running software version 1.4.x must first be upgraded to version 1.5, so please contact iStor/Promise Technical Support for information about that upgrade. After you have upgraded your system to version 1.5, you can then upgrade to version 1.6 as describe in the previous paragraph. Finally, after the software has been upgraded to version 1.6, you can then upgrade directly to version 2.9.1.

4 Known Issues and Limitations

4.1 iS512 and DSN-5XXX Series Airflow Optimization

To ensure proper airflow and cooling of the system, every drive slot in the primary enclosure and any expansion enclosure must contain either a drive carrier with a hard disk drive installed or a drive filler with no hard drive installed. There should be no empty drive slots or empty drive carriers installed. Both of the controller bays on the rear of the iS512 or DSN-5XXX Primary Array should contain either a controller or a blank-off plate. Similarly, both of the controller bays on the rear of the iS512-SX or DSN-5000 Expansion Array should contain either an I/O Module or a blank-off plate.

4.2 VDS Hardware Provider

Support for the 32-bit version of Microsoft Virtual Disk Service (“VDS”) is available for Windows 2003 Server only, which allows you to use any VDS-based applications (such as Microsoft’s **DiskRaid** utility or **Storage Manager for SANs**) to configure and manage any iStor/Promise storage system.

Microsoft’s VDS subsystem does not support the creation of Network Portals. Therefore the iSCSI network configuration must be performed using the Startup Wizard or the Management Center GUI. For more detailed information, refer to the *Virtual Disk Services Guide* and the related Microsoft documentation for DiskRaid and Storage Manager for SANs.

4.3 iSCSI Initiator Support for Windows 2000

We no longer provide iSCSI initiator support for Windows 2000, since Microsoft no longer provides support for that version. However, it is still possible to run the Management Console GUI from a Windows 2000 client.

4.4 Reverting to Earlier Versions

If you must return your system to an earlier version of software, you can click on the “**Use Alternate Version**” button, and the system will restart using the earlier version. However, be sure that all background tasks (such as parity volume initialization, volume reconfiguration or volume scan) have completed before clicking on the “**Use Alternate Version**” button. If the system does not restart automatically, you may need to restart the system manually.



IMPORTANT: For iS512 or DSN-5XXX systems that were manufactured with version 2.8.0 software (or later), it is not possible to install an earlier version of software. Attempting to do so may cause your system to become unusable.

4.5 Reconfiguring the Volume Chunk Size through the CLI

The ability to change the chunk size of a volume when using the CLI “**reconfigure**” command in the **volume** context is not supported in this version.

4.6 Micro-Rebuild Feature is Disabled for SATA Drives

The Micro-Rebuild feature is disabled for SATA drives in this release due to instabilities that exist with that feature. This feature may be re-activated in some future software release.

4.7 Browser Incompatibility with Google Chrome & Apple Safari

The Default Web Page does not function correctly with the Chrome and Safari browsers due to some known bugs in those browsers. In particular, the Default Home Page will always jump to the “**Need Java**” page, even if the latest Java Run-Time Environment (JRE) is installed. Therefore we do not recommend using the Google Chrome or Apple Safari browsers with these storage system products. Instead, you should use Internet Explorer or any other Mozilla-based browser.

5 Communication and Support

This section outlines the support procedure and where you can get help if a problem exists.

For systems that do not bear the iStor/Promise brand, contact the reseller from whom you purchased the system.

Please read the Quick Start Guide(s) and User's Guide documentation before attempting to set up the system.

For immediate installation support questions please contact your local Value-Added Reseller or contact our Technical Support staff directly at **istor_support@promise.com**. For end-users within the United States or Canada who purchased products directly from iStor Networks, please call (949) 753-8999.

D-Link customers should contact D-Link Systems for technical support.

Before requesting technical support, please upgrade to the latest software version.

For the latest version of end-user documentation, software, or software release notes, please visit: **http://www.istor.com/support/tools_resources/** or **<http://www.dlink.com/>**