



iStor Networks, Inc.[®]

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iS512-08, iS512-10G, iS325, iS105,
GigaStorATX and GSC-408
Version 2.6.3 Release Notes

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1 Introduction

iStor Networks, Inc. is pleased to announce the newest general software release, version 2.6.3 for the iStor family of products, including all GigaStorATX and GSC-408 controllers and iS105, iS325, iS512-08 and iS512-10G systems. The v2.6.3 software release notes identify what is included and what limitations have been identified as part of this release.

1.1 Purpose

The purpose of this document is to communicate the contents of the v2.6.3 software release. This document identifies supported functionality, what was originally supported, but not part of this release and what errata and caveats that may affect the operation of the iStor product family. This document is a release note for the v2.6.3 software release. It is not a product spec, nor does it specify the total functionality of the iStor products.

1.2 Related Documents

- *iStor iS512 Primary Array Quick Start Guide (document number iS512QS)*. 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.
- *iStor iS512-SX Expansion Array Quick Start Guide (document number iS512SXQS)*. 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.
- *iStor iS512 Hardware Reference Guide (document number iS512HWRF)*. This guide provides the hardware information for installing the iStor iS512 storage system.
- *iStor iS325 Hardware Reference Guide (document number iS325HWRF)*. This reference guide provides the hardware details for installing, configuring, and using the iStor iS325 storage array.
- *iStor Management Center Software User's Guide (document number iSMCSWUG)*. This guide provides the information needed to configure and manage storage on the storage system using the iStor Management Center graphical user interface (GUI).
- *iStor Command Line Interface User's Guide (document number iSCLIUG)*. This guide provides the information needed to configure and manage storage on the storage system using the iStor Command Line Interface (CLI).
- *iStor Virtual Disk Services Guide (document number D000045)*. This guide describes how to use Microsoft Virtual Disk Services (VDS) to manage the iStor storage arrays.
- *iStor Terminology Guide (document number iSTG)*. This guide is designed to assist you in the understanding of storage and SAN terminology that may be used in relation to the iStor Management Center and the storage system. You may want to print this guide while reviewing the information and concepts in this document.

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1.3 Update and Installation Requirements

The v2.6.3 software release is available as an initial factory installation and a field upgrade for the following products:

- **GigaStorATX** or **GSC-408** that is running v1.6.x, v2.0.x, v2.5.x or v2.6.x software
- **iS105** system that is running v2.6.x software
- **iS325** system that is running v1.6.x, v2.0.x, v2.5.x or v2.6.x software
- **iS512-08** or **iS512-10G** system that is running v1.6.x, v2.0.x, v2.5.x or v2.6.x software

Any system that is running v1.5.1 software or earlier must first be upgraded to version 1.6.x, 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 iS512 Storage System Management Console”** in the iStor Software User’s Guide).



The v2.6.3 software release requires that the **Java Runtime Environment 6 (JRE 6) Release 1.6.0.0, or later** (<http://java.com>) is 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 iStor 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 iStor Management Center from a host system with Windows XP, Windows Server 2003, Windows Server 2008 or Windows Vista. Note that iStor products that are running v2.6.3 cannot be managed by earlier versions of the iStor Management Center. In addition, support for the 32-bit version of Microsoft Virtual Disk Service (“VDS”) is available for Windows 2003 Server only (VDS support for Windows Server 2008 is not yet available), 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 product. For more information, please refer to the appropriate Microsoft documentation.

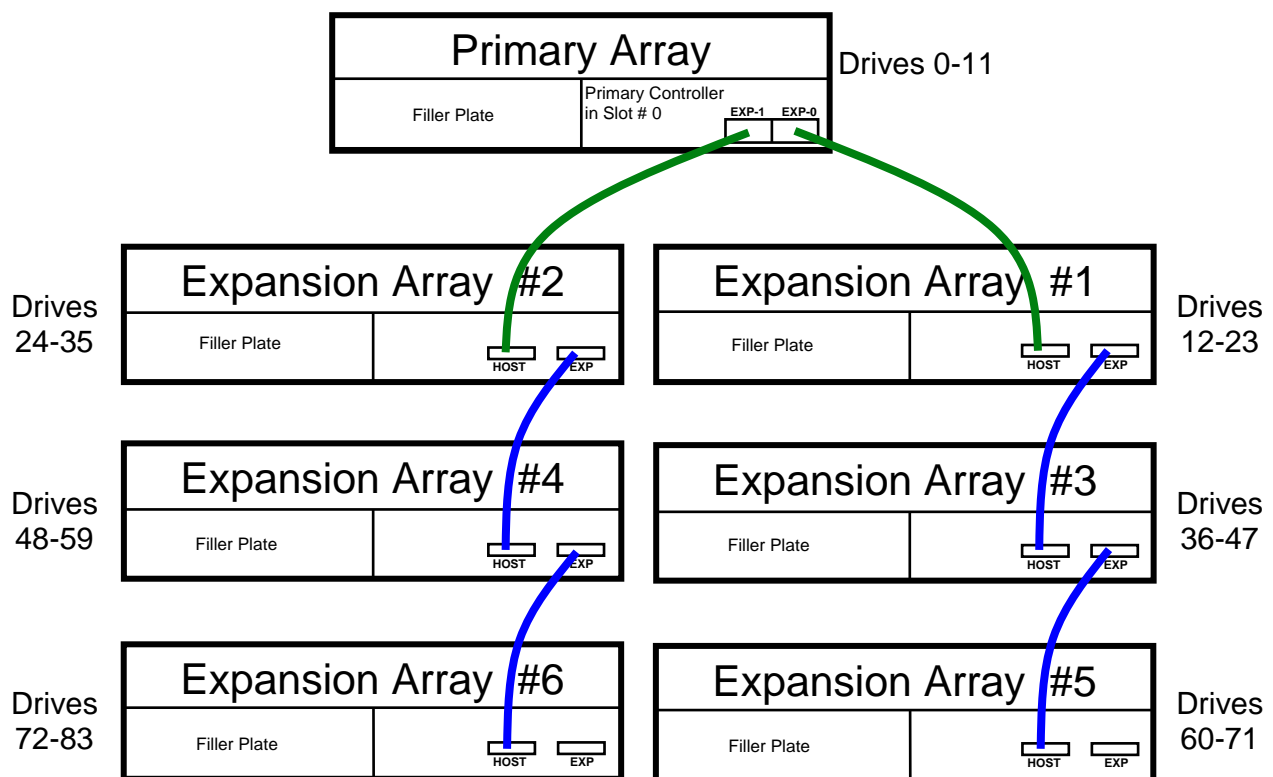
The following are new or updated features that have been added since the v2.5.1 general release.

2.1 Support For Up To 84 Drives

The iS512 system can now support up to 84 hard drives, including one Primary Array and up to six Expansion Arrays in both single-controller and dual-controller configurations. For dual-controller configurations, all Expansion Arrays must have dual I/O modules.

2.1.1 Single Controller Systems

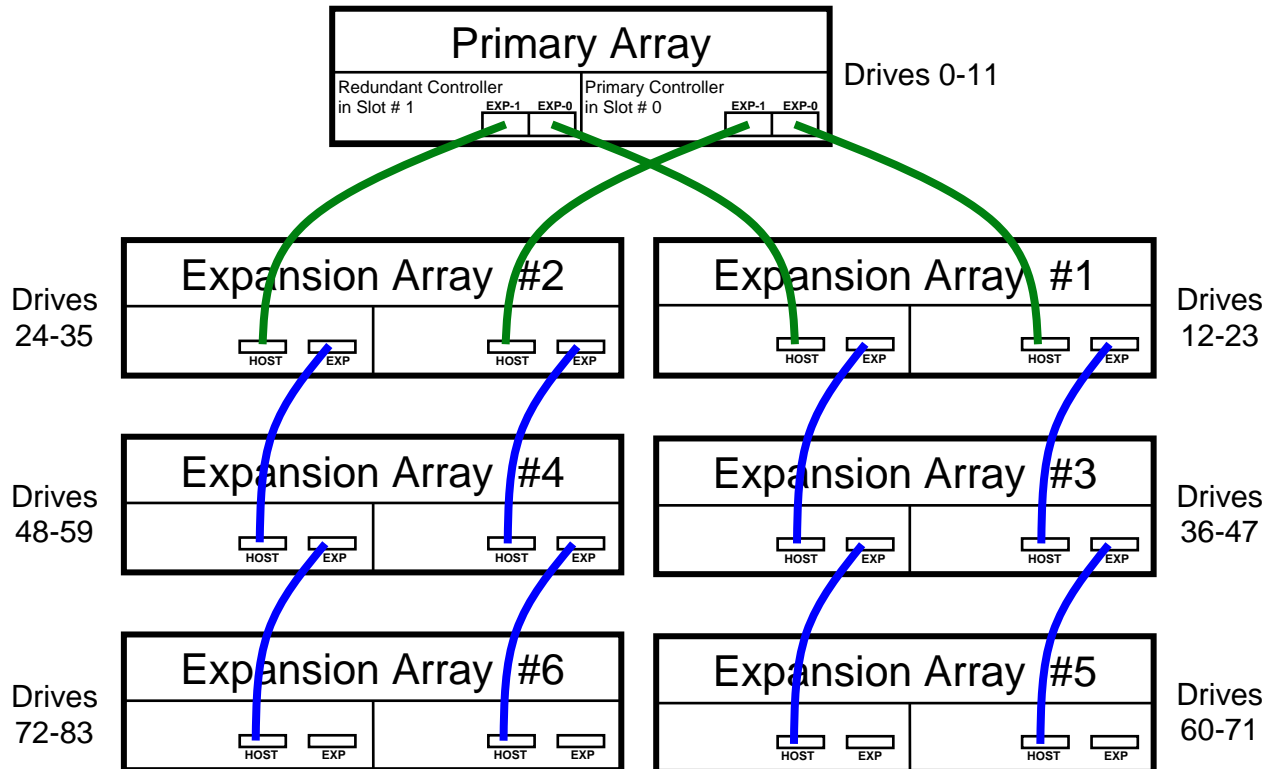
Use the following cabling diagram for an iS512 system that has a single controller in the Primary Array. Each Expansion Array must also have a single I/O module. Each green line represents a “mini-SAS to SAS” cable that is included with the Expansion Array, and each blue line represents a “SAS to SAS” cable that must be obtained separately from iStor Networks.




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2.1.2 Redundant Controller Systems

Use the following cabling diagram for an iS512 system that has redundant controllers in the Primary Array. Each of Expansion Array must also have redundant I/O modules. Each green line represents a “mini-SAS to SAS” cable that is included with the Expansion Array, and each blue line represents a “SAS to SAS” cable that must be obtained separately from iStor Networks (part number iS500-JJ).



 Redundant controllers will only operate with **SAS** drives. An iS512 system that is equipped with redundant controllers will not recognize any native SATA drives that are installed.

Field Upgrade Kits are available for single-controller iS512 systems to add a redundant controller to the Primary Array and a redundant I/O Module to the Expansion Array.

2.2 Performance Improvements

This release includes a variety of performance enhancements for throughput and transaction-based applications, including optimized sequential and random reads and writes.

A new CLI attribute has been added in the “**Volume**” context that provides the ability to override the default read-ahead cache size to support a very large number of data streams.

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2.3 Fixed Issues Since Version 2.5.1

The following issues from previous releases have been fixed in this release:

- ATX-based systems with more than 1GB of System Memory would hang during system startup
- Enabling NTP on an ATX-based platform caused intermittent system reboots
- The Event Log included messages about NTP time adjustments every hour
- The Event Log was not updated in the Survivor controller of a dual-controller system
- In the System Administration view, Controller-1 was always selected, even if it was not present
- The “iStor” vendor name and product-ID appeared in the System Administration Summary view of personalized versions that were created using the Personality Toolkit
- Rounding errors caused slightly different values to appear in the Physical Storage view and the Drive Properties view
- Volume Creation Wizard sometimes did not display the available capacity correctly
- The correct IP address was not always selected in the Connection View when launching the Management Center GUI from the default web page
- When no drives were installed, the Physical Storage view showed “**Getting Drives: 0%**”
- Right-mouse click in the Java GUI did not function on a Linux system
- A variety of bug-check conditions that caused a system restart have been corrected.

2.4 Fixed Issues Since Version 2.6.0

The following additional issues have been fixed in this release:

- Support for the iS105 desktop storage product
- Recurring Fan Fault/Clear messages occur with some non-iStor enclosure types
- Repeated link transitions (Link Down/Up) can result in a non-responsive data port
- Systems with 84 drives may not complete startup
- System with SATA drives can bugcheck under heavy I/O load when the Management Console is active
- Improved reliability of redundant-controller processing during a Failover



After a successfully upgrading your system to the v2.6.3 software release, it is recommended to save a new System Configuration File by using the following procedure:

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**”

3 Software Upgrade Procedure

For any existing system that is running software version 1.6.x, v2.0.x or v2.5.x, you should obtain one of the following binary files from iStor Networks or your reseller:


System Type	File Name	File Size	Comments
iS512-Series	FUFI_2_6_3_1.iStor_iS512	38,934,009 bytes	For iS512 systems only
iS325	FUFI_2_6_3_1.iStor_iS325	38,440,078 bytes	For iS325 systems only
iS105	FUFI_2_6_3_1.iStor_iS105	38,335,780 bytes	For iS105 systems only
GigaStorATX or GSC-408	FUFI_2_6_3_1.iStor_GigaStorATX	38,445,497 bytes	Generic, no enclosure services

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

3.1 Upgrade for systems that are running v1.6.x

Use the following procedure from the version 1.6.x iStor 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.

	<p>After upgrading from v1.6.x, 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 <i>Version 2 Upgrade Procedure Document</i>, which is available on the iStor Networks website. You must also install the Java 6 Run-Time Environment for your host system in order to use the new GUI.</p>
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3.2 Upgrade for systems that are running v2.0.x, v2.5.x or v2.6.x

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

1. Select **System Administration** in the upper-left frame
2. Select the **Settings** tab, and select the **General** leaf (if it is not already pre-selected)
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 4 minutes), launch your web browser at the Management Port IP address and download the new Management Center GUI.



If your iS512 system is equipped with dual controllers, the software upgrade process will automatically upgrade both controllers as the same time if they are in a “**Bound**” state.

3.3 Personality Toolkit Base Images

Resellers and system integrators who prepare customized software images for an iStor controller in their own enclosure should select one of the following base images in the Personality Toolkit, depending on the starting software version of the system you wish to upgrade:

System Type	File Name	File Size
iS105, iS325, GigaStorATX or GSC-408 Based Platforms	iStorOnlineImage.2.6.3.1-GigaStorATX	37,678,738 bytes
iS512-Based Platforms	iStorOnlineImage.2.6.3.1-GigaStorMFF	38,164,071 bytes

4 Known Issues and Limitations

4.1 iS512-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 one of the following items:

- Drive carrier with a hard disk drive installed
- 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 iS512 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 Expansion Array should contain either an I/O Module or a blank-off plate.

4.2 Maximum Buffer Memory Size for iS512

The maximum size of Buffer Memory for iS512-series controllers is currently limited to 2GB. This may be increased in a future release.

4.3 VDS Hardware Provider

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 iStor Management Center GUI. For more detailed information, refer to the *iStor Virtual Disk Services Guide* and the Microsoft documentation for DiskRaid and Storage Manager for SANs.

4.4 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.

4.5 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.

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 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 iStor Value-Added Reseller or contact iStor technical support directly at support@istor.com. For end-users within the United States or Canada, please call (800) 689-1409.

To obtain technical support for an iStor iS325 or iS512 system you must first register your system by filling out the iStor Product Registration form included in the shipping carton or available at <http://www.istor.com/support/TechnicalSupport.cfm>.

For the latest version of any documentation or software, including software release notes, please visit <http://www.istor.com/support/TechnicalSupport.cfm>.

For locations of our sales offices, please visit <http://www.istor.com/contact/contact.cfm>. For any other additional information regarding this product or other iStor products, please contact your local iStor Value-Added Reseller or Distributor.