

ISILON SUPPORTABILITY & COMPATIBILITY GUIDE

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INTRODUCTION

This guide provides supportability and compatibility information for Isilon software and hardware. For certification and compatibility information for OneFS and third-party software and hardware products, see the [Isilon Third-Party Software and Hardware Compatibility Guide](#).

EMC Isilon recommends that customers run the Target Code version of OneFS. A OneFS release is designated as Target Code after it satisfies specific criteria, which includes production time in the field, deployments across all supported node platforms, and other quality metrics. To ensure that your clusters are running the most stable and reliable version of OneFS, upgrade to the latest Target Code available for the OneFS family that meets your business needs.

Target Code represents minimum OneFS release recommendations and does not take into account unique storage workflows. When considering which version of OneFS to adopt, be sure to review your business needs with your EMC Isilon account representative. You may also want to install a later version of OneFS to take advantage of new or improved functionality.

For the list of Target Code versions of OneFS, see the [Current Isilon Software Releases](#) document.

SOFTWARE

ONEFS UPGRADE COMPATIBILITY

The table below lists the simultaneous upgrade options for the supported versions of OneFS. You can download the latest version of OneFS for your cluster from the [EMC Online Support](#) website.

For information about support for simultaneous and rolling upgrades, refer to the release notes for the version of OneFS that you are installing.

You can only upgrade directly to OneFS 7.2.1 from OneFS 7.1.1.4 or later, or OneFS 7.2.0.2 or later. See [Upgrade Paths to OneFS 7.2.1.0](#) for complete information.

To successfully plan for and perform a OneFS upgrade, you must follow the procedures detailed in the *OneFS Upgrade Planning and Process Guide*. See the [OneFS Upgrades - Isilon Info Hub](#) for complete information.

For more information about OneFS 7.2, the newest release of OneFS that addresses the convergence of Big Data and Enterprise IT, visit the [Isilon OneFS Operating System](#) webpage.

ISILON ONEFS

OneFS is the operating system that powers Isilon's end-to-end scale-out storage solutions. OneFS creates a single file system that spans all nodes in a cluster.

Upgrade from	Upgrade to OneFS						
	5.5*	6.0*	6.5*	7.0*	7.1	7.2	7.2.1
OneFS 5.0*	•	•					
OneFS 5.5*		•	•				
OneFS 6.0*			•	•			
OneFS 6.5*				•	•		
OneFS 7.0					•	•	
OneFS 7.1						•	•
OneFS 7.2							•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

ISILON SYNCIQ

The table below shows the versions of OneFS that can be synchronized using SyncIQ. In versions of OneFS prior to 7.0, when synchronizing files between clusters, the target cluster must be running a version of OneFS that is the same or newer than the version of OneFS that is running on the source cluster. For example, SyncIQ can synchronize files if the source cluster is running OneFS 6.5 and the target cluster is running OneFS 6.5 or later.

Beginning with OneFS 7.0, a source cluster running OneFS 7.0 can synchronize with a target cluster running OneFS 6.5 or later.

For information about SyncIQ, see the [Isilon SyncIQ](#) webpage.

ISILON SYNCIQ

SyncIQ delivers extremely fast replication of millions of files and terabytes of data over the WAN and LAN. SyncIQ enables replication jobs to be parallelized and evenly distributed across all sending and all receiving nodes in the Isilon storage clusters.

Source Cluster	Target Cluster running OneFS			
	6.5.x	7.0.x	7.1.x	7.2.x
OneFS 6.5	•	•	•	•
OneFS 7.0	•	•	•	•
OneFS 7.1	•	•	•	•
OneFS 7.2	•	•	•	•

Customers who are running MigrationIQ on their Isilon cluster are encouraged to upgrade to SyncIQ. MigrationIQ has been discontinued, and its functionality has been incorporated into SyncIQ. Contact Isilon Technical Support if you want to make this transition.

ISILON INSIGHTIQ

To use InsightIQ, a cluster must be running OneFS 5.5.3 or later. Depending on the version of OneFS that the monitored cluster is running, certain InsightIQ features might not be available. For information about InsightIQ, see the [Isilon InsightIQ](#) webpage.

You can access the InsightIQ application through any current web browser that supports sophisticated graphics. For more information about supported browsers, see the “[Web browsers](#)” section in this document.

ISILON INSIGHTIQ

InsightIQ is an off-cluster performance and analytics tool that identifies performance bottlenecks in a cluster.

INSIGHTIQ and ONEFS COMPATIBILITY

Insight IQ	7.0.x*	7.1.x	7.2.x
Insight IQ 2.0.x			
Insight IQ 2.1.x	•		
Insight IQ 2.5.x	•	•	•
Insight IQ 3.0.x	•	•	•
Insight IQ 3.1.x	•	•	•
Insight IQ 3.2.x	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

INSIGHTIQ UPGRADE PATHS

The following table lists the upgrade options for InsightIQ. To upgrade to InsightIQ 3.2, you must upgrade to InsightIQ 3.1 first.

Upgrade from	Upgrade to Insight IQ				
	2.1.x	2.5.x	3.0.x	3.1.x	3.2.x
Insight IQ 2.0.x	•	•			
Insight IQ 2.1.x		•			
Insight IQ 2.5.x			•		
Insight IQ 3.0.x				•	
Insight IQ 3.1.x					•

ONEFS/VMWARE ESXi COMPATIBILITY

The following table lists the compatible versions of OneFS and VMware ESXi.

The Isilon for vCenter plugin is supported only up to the VMware ESXi 5.1. The VMware ESXi 5.1 environment is storage certified and supported up to OneFS 7.1.1.

For information about how to configure the Isilon for vCenter plug-in, see the Isilon for vCenter product documentation that is available from the [EMC Online Support](#) website.

ISILON for vCENTER

Isilon for vCenter is a plug-in for VMware vCenter that enables you to back up and manage virtual machines that exist on Isilon clusters.

OneFS Storage Certification				
	7.0.x*	7.1	7.1.1	7.2
ESXi 5.0	•	•		
ESXi 5.1	•	•	•	
	vCenter 1.3.1	vCenter 1.3.1	vCenter 1.3.1	
ESXi 5.5	•	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

ISILON SRA for VMware SRM

Before you can install the Isilon Storage Replication Adapter (SRA) for VMware vCenter Site Recovery Manager (SRM), you must setup two VMware servers, these are referred to as the primary and secondary sites. You must then pair the primary and secondary sites through VMware SRM and create a VMware datastore on the primary site that resides on an Isilon cluster.

For more information, see the [Isilon SRA for VMware SRM Release Notes](#).

Note: Where provided, an exact OneFS version number indicates the minimum version of OneFS that is required.

VMware - SRM 2.0	7.0.x*	7.1.x	7.2.x
ESXi 5.0			
ESXi 5.1		7.1.1	
ESXi 5.5		7.1.1	7.2.0 only

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

ISILON SRA for VMWARE SRM

Isilon Storage Replication Adapter (SRA) enables VMware vCenter Site Recovery Manager (SRM) to manage the replication of VMware ESX server virtual machines running on Isilon clusters.

VMware SRM facilitates the migration and disaster recovery of virtual machines stored on Isilon clusters. Isilon SRA enables VMware vCenter SRM to automatically manage the setup, testing, and failover components of the disaster recovery processes for Isilon clusters. You can manage the replication of virtual machines (VMs) stored on one Isilon cluster to another Isilon cluster;

EMC SECURE REMOTE SERVICES (ESRS)

The following table lists the compatible versions of OneFS and EMC Secure Remote Services (ESRS).

ESRS	OneFS			
	7.1.0	7.1.1	7.2.0	7.2.1
ESRS Gateway 2.x	•	•	•	•
ESRS Gateway 3.x (VE)	•	•	•	•

EMC Secure Remote Services (ESRS) provides remote support capability for your EMC systems. ESRS enables EMC Technical Support personnel to remotely manage your Isilon cluster to troubleshoot an open support case with your permission.

ESRS is a proactive, IP-based, bi-directional remote servicing capability for customer EMC products. ESRS is secure, high speed, and operates 24x7.

See the ESRS section in the [OneFS 7.1 FAQ](#) for more information.

ISILON SUPPORTIQ

The following table lists the compatible versions of OneFS and the Isilon SupportIQ remote support module.

	7.0.*	7.1.x	7.2.x
SupportIQ	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

The Isilon SupportIQ module allows Isilon Technical Support personnel to gather diagnostic data about the cluster with your permission. It is included with the OneFS operating system through OneFS 7.2.x. EMC ESRS is the preferred remote support service.

The SupportIQ module is deprecated as of OneFS 8.0.

VAAI NAS PLUG-IN for OneFS

To install the VMware vSphere API for Array Integration (VAAI) plug-in for OneFS, your cluster must be running OneFS 7.0 or later. VAAI 1.1, VAAI 1.2 and VAAI 1.2.1 are functionally equivalent.

VAAI 1.0 requires VMware ESXi 5.0, or any updated version of 5.0. VAAI 1.2 requires VMware ESXi 5.5. VAAI 1.2.1 requires VMware ESXi 5.5 or VMware ESXi 6.0.

For more information, see the [Isilon Plug-ins for VMWare](#) webpage on the EMC Online Support website.

ESX Version	OneFS Versions		
	7.0.x*	7.1.x	7.2.0
ESXi 5.0	VAAI 1.0		
ESXi 5.1		VAAI 1.1	
ESXi 5.5		VAAI 1.2	VAAI 1.2.1

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

VAAI NAS PLUG-IN FOR ONEFS

The VMware vSphere API for Array Integration (VAAI) integrates VMware vSphere with an Isilon cluster to clone virtual disks, to create thick virtual disk files, and to monitor disk space.

The EMC Isilon OneFS operating system uses VAAI to perform certain storage and management operations for VMware ESXi hypervisors. VAAI increases the speed at which virtual machine (VM) operations are performed for VMs that are stored on Isilon clusters.

AUTHENTICATION PROVIDERS

OneFS supports the following remote authentication providers to verify that users attempting to access the cluster are who they claim to be. For information about how to connect OneFS to an authentication provider, see the [OneFS Administration Guide](#). For information about how to connect OneFS to LDAP and Active Directory in combination, see [How to connect Isilon OneFS 7.x to LDAP and Active Directory](#).

Authentication Provider	Application	Notes
Kerberos	MIT Kerberos 1.7 and later	OneFS supports the following Kerberos encryption types : <ul style="list-style-type: none">• DES-CBC-CRC• DES-CBC-MD5• RC4-HMAC OneFS does not support Kerberos AES256 encryption.
LDAP	Open LDAP 2.4.x Oracle DSADM 11.1.1.7.0 and later Microsoft LDAP, Windows 2003 R2 and later	
NIS	NIS ypserv 2.19 and later	
Windows Active Directory	Windows 2003 R2 and later	OneFS does not support security identifier (SID) history in Active Directory environments.

WINDOWS VERSIONS

OneFS supports the following versions of Microsoft Windows. Where provided, an exact OneFS version number indicates the minimum version of OneFS that is required.

Windows	7.0.x*	7.1.x	7.2.x
Windows 10	•	•	•
Windows Server 2012/R2	•	•	•
Windows 8	•	•	•
Windows 7	•	•	•
Windows Server 2008, R2	•	•	•
Windows Server 2008	•	•	•
Windows Vista	•	•	•
Windows Server 2003	•	•	•
Windows XP	•	•	•
Windows 2000	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

OS X VERSIONS

OneFS supports the following versions of OS X. Clients running OS X can connect to an Isilon cluster using the NFS or SMB protocol.

OS X	7.0.x*	7.1.x	7.2.x
10.4 (Tiger)**	•	•	•
10.5 (Leopard)	•	•	•
10.6 (Snow Leopard)	•	•	•
10.7 (Lion)	•	•	•
10.8 (Mountain Lion)	•	•	•
10.9 (Mavericks)	•	•	•
10.10 (Yosemite)	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

** OS X 10.4 (Tiger) is compatible with OneFS only over NFS. OS X 10.4 over SMB is not supported.

WEB BROWSERS

The OneFS and InsightIQ web interfaces support most modern web browsers with JavaScript, cookies, and SSL enabled. Adobe Flash is required to view charts.

The OneFS and InsightIQ web interfaces were tested with the following web browsers. OneFS and InsightIQ might work with different browsers or newer browser versions that have not been tested for compatibility. You should exercise caution before using an unsupported browser.

Browser	OneFS Compatibility
Chrome	Use the latest stable version of Chrome
Firefox	Use the latest stable version of Firefox
Internet Explorer	Internet Explorer 8 (works with OneFS 6.5, 7.0) Internet Explorer 9, 10 (works with OneFS 7.0, 7.1, 7.2)
Safari (Mac OS X)	Safari 4 (works with OneFS 6.5) Safari 5.1, 6 (works with OneFS 6.5, 7.0, 7.1, 7.2)

Browser	InsightIQ Compatibility
Chrome	Use the latest stable version of Chrome
Firefox	Use the latest stable version of Firefox
Internet Explorer	Internet Explorer 8 (works with IIQ 2.0, 2.1) Internet Explorer 9 (works with IIQ 2.5) Internet Explorer 10 (works with IIQ 3.0, 3.1) Internet Explorer 11 (works with IIQ 3.2)
Safari (Mac OS X)	Safari 4 (works with IIQ 1.0, 1.5, 2.0, 2.1) Safari 5 (works with IIQ 2.5, 3.0, 3.1) Safari 8 (works with IIQ 3.2)

Note: To access InsightIQ 2.5 and earlier through Internet Explorer, you must first install the Google Chrome Frame plug-in. If InsightIQ cannot detect the plug-in, an installation prompt appears the first time that you attempt to access InsightIQ through Internet Explorer.

Google is discontinuing support for Chrome Frame. Later versions of InsightIQ will allow you to access InsightIQ through Internet Explorer without requiring the Chrome Frame plug-in.

APACHE HTTP SERVER

OneFS supports Apache HTTP Server. Version 2.2.x is recommended. Support for Apache HTTP Server 1.3.x was removed in OneFS 6.0.

Apache Version	7.0.x*	7.1.x	7.2.x
Apache HTTP Server 2.2.x	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

ASPERA ENTERPRISE SERVER

Each version of the OneFS operating system might require a different version of Aspera Enterprise Server. The following table lists the versions of Aspera Enterprise Server that are compatible with OneFS. For information see the [Aspera Enterprise Server for EMC Isilon](#) webpage.

Aspera Version	7.0.x*	7.1.x	7.2.x
Aspera 2.7			
Aspera 3.0	•		
Aspera 3.1		•	•
Aspera 3.4.6		•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

MIGRATION TOOLS

OneFS supports migrating data onto Isilon clusters through built-in data migration tools. You can migrate data from NetApp storage systems through the `isi_vol_copy` tool and you can migrate data from EMC VNXs through the `isi_vol_copy_vnx` tool. The following tables list the compatible versions of the OneFS `isi_vol_copy` command and NetApp Data ONTAP® and the OneFS `isi_vol_copy_vnx` command and EMC DART, and VNXOE systems.

Note: The `isi_vol_copy` command is not supported for migration from NetApp Clustered Data ONTAP (CDOT)® systems. The `isi_vol_copy_vnx` command is not supported for migration from EMC VNXe systems.

Where provided, an exact OneFS version number indicates the minimum version of OneFS that is required.

NetApp Data ONTAP®	OneFS Compatibility		
	7.0.x*	7.1.x	7.2.x
7.0.x	•	•	•
7.1.x	•	•	•
7.2.x	•	•	•
7.3.x	•	•	•
8.0.x 7-mode: 32-bit volumes	•	•	•
8.0.x 7-mode: 64-bit volumes	7.0.1.11	7.1.0.3	•
8.1.x 7-mode 32-bit volumes	•	•	•
8.1.x 7-mode 64-bit volumes	7.0.1.11	7.1.0.3	•
8.2.x 32-bit volumes	•	•	•
8.2.x 64-bit volumes	7.0.1.11	7.1.0.3	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

MIGRATION TOOLS (CONTINUED)

EMC VNX	OneFS Compatibility		
	7.0.x*	7.1.x	7.2.x
DART 5.6	7.0.2	•	•
DART 6.0		•	•
VNXOE for File 7.x		•	•
VNXOE for File 8.x		•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

FILE TRANSFER APPLICATIONS

OneFS supports rsync, an open source utility that provides incremental file transfers between Unix-based systems via an SSH connection. rsync is supported as a standard Unix-level program.

Where provided, an exact OneFS version number indicates the minimum version of OneFS that is required.

rsync Version	7.0.x*	7.1.x	7.2.x
rsync 3.0.2	•	•	•
rsync 3.0.9	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

rsync

rsync is a software application for Unix systems that synchronizes files and directories from one location to another while minimizing data transfer using delta encoding when appropriate.

PROTOCOLS

FILE SYSTEM PROTOCOLS

OneFS supports the Network File System (NFS) and Server Messenger Block (SMB) file system protocols. For information about how to configure NFS and SMB for OneFS, see the [OneFS Administration Guide](#).

Note: Where provided, an exact OneFS version number indicates the minimum version of OneFS that is required.

NFS

NFS	7.0.x*	7.1.x	7.2.x
NFS 2	•	•	
NFS 3	•	•	•
NFS 4	•	•	•

SMB

SMB	7.0.x*	7.1.x	7.2.x
SMB 1	•	•	•
SMB 2	•	•	•
SMB 2.1	•	•	•
SMB 3		7.1.1	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

NFS AND SMB

NFS – A client and server application that lets users view and optionally store and update files on a network as if the files were saved in a local file directory. The NFS protocol is designed to be independent of the computer, operating system, network architecture, and transport protocol.

SMB – An Internet protocol used by Windows computers to share files, printers, and serial ports.

HDFS (HADOOP)

OneFS supports many distributions of the Hadoop Distributed File System (HDFS). These distributions are updated independently of OneFS and on their own schedules.

For the latest information about Hadoop distributions that OneFS supports, see [Supported Hadoop Distributions in OneFS](#) on the [EMC Community Network \(ECN\)](#).

For information about how Isilon Scale-out NAS can be used to support a Hadoop data analytics workflow, see [Hadoop on Isilon Scale-out NAS](#).

HADOOP

Hadoop is an open source software project that enables distributed processing of large data sets—Big Data—across clusters of servers. Hadoop is perfect for situations where you want to quickly and cost-effectively run analytics that are deep and computationally extensive.

SNMP

OneFS supports the Simple Network Management Protocol (SNMP). For information about how to configure SNMP for OneFS, see the [OneFS Administration Guide](#).

SNMP	7.0.x*	7.1.x	7.2.x
SNMP 1			
SNMP 2c	•	•	•
SNMP 3	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

SNMP

Simple Network Management Protocol (SNMP) is a popular protocol for network management. You can use SNMP to remotely monitor hardware components (for example, fans, hardware sensors, power supplies, and disks) and software or subsystems for network-connected devices (for example, network interfaces, servers, switches, and CPU use). You can enable SNMP monitoring on individual nodes on your cluster. You can also monitor cluster information from any node.

ISILON with iSCSI

The following table lists the iSCSI initiators that are supported by the OneFS implementation of iSCSI. These limitations apply:

- MC/S (Multiple Connections per Session) is not supported.
- iSCSI host bus adapters (HBAs) are not supported.
- iSNS (Internet Storage Name Service) protocol is supported on Microsoft Windows for use by the Microsoft iSNS Server service only.

Operating System and iSCSI Initiator		7.0.x*	7.1.x	7.2.x
Microsoft Windows 2003	Microsoft iSCSI Initiator	•	•	•
Microsoft Windows 2008	Microsoft iSCSI Initiator	•	•	•
Microsoft Windows 2008 R2	Microsoft iSCSI Initiator	•	•	•
Red Hat Enterprise Linux 5	Linux Open-iSCSI Initiator	•	•	•
VMware ESX 4.0 and ESX 4.1	iSCSI Initiator	•	•	•
VMware ESXi 4.0 and ESXi 4.1	iSCSI Initiator	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

HARDWARE

ONEFS and NODE COMPATIBILITY

The tables below list the versions of OneFS that are compatible Isilon nodes. Where provided, an exact version number indicates the minimum version of OneFS that is required.

Note: Creating new clusters that include S210 or X410 node types is not supported with versions earlier than OneFS 7.1.1.4. S210 and X410 nodes have internal components not supported in earlier versions of OneFS.

Isilon EX nodes are capacity extension nodes that do not run OneFS.

ISILON S-SERIES AND X-SERIES NODES

Node	7.0.x*	7.1.x	7.2.x
S200	•	•	•
S210		7.1.1.4**	•
IQ 5000S-SSD	•	•	•
IQ 5400S	•	•	•
X200	•	•	•
X210			7.2.1.0
X400	•	•	•
X410		7.1.1.4**	•
IQ 1920X	•	•	
IQ 3000X	•	•	
IQ 6000X	•	•	
IQ 9000X	•	•	
IQ 10000X-SSD	•	•	•
IQ 12000X	•	•	
IQ 32000X-SSD	7.0.1	•	•
IQ 36000X	•	•	•
IQ 72000X	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

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ISILON PLATFORMS

- S-Series – The answer for ultra-performance primary storage, purpose-built for high-transactional and IOPS-intensive applications.
- X-Series – Strikes the right balance between large capacity and high-performance, an ideal solution for high throughput and high concurrency applications.
- NL- and HD-Series – Designed to provide cost-effective, highly-scalable nearline storage.

ONEFS and NODE COMPATIBILITY (CONTINUED)

** OneFS 7.1.1.3 is not supported on S210 or X410 nodes. For more information, see article [201217](#) on the EMC Online Support site.

ISILON NL-SERIES AND HD-SERIES NODES

Node	7.0.x*	7.1.x	7.2.x
HD 400			•
NL400	•	•	•
NL410			7.2.1.0
IQ 108NL	•	•	•
IQ 36NL	•	•	
IQ 72NL	•	•	

ISILON BACKUP AND PERFORMANCE ACCELERATOR NODES

Where provided, an exact version number indicates the minimum version of OneFS that is required. For example, the A100 accelerator nodes are compatible with OneFS 7.0.2.1 and later.

Node	7.0.x*	7.1.x	7.2.x
A100 Backup Accelerator	7.0.2.1	•	•
A100 Performance Accelerator	7.0.2.1	•	•
IQ Backup Accelerator-x	•	•	•
IQ Performance Accelerator-x	•	•	•

* This version of OneFS is no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

NODE CLASS COMPATIBILITY

The following table lists compatible Isilon node classes in OneFS 7.2.1. Node class compatibility enables you to deploy a newer-generation node to a cluster that contains nodes from an earlier generation. For example, if your cluster already has a node pool made up of Isilon X200 nodes, you can define a compatibility that enables you to add an X210 node to the same node pool. Compatibilities for S200/ S210, X200/X210, X400/X410, and NL400/ NL410 nodes are supported. Compatible node generations must have identical HDD and SSD layouts and must have a compatible memory configuration.

Note: The node class compatibilities apply to OneFS 7.2.1.

S200/S210 Compatibility		X200/X210 Compatibility		X400/X410 Compatibility		NL400/NL410 Compatibility	
S200 RAM	S210 RAM	X200 RAM	X210 RAM	X400 RAM	X410 RAM	NL400 RAM	NL410 RAM
24 GB	32 GB	6 GB	Not available	24 GB	32 GB	12 GB	Not available
48 GB	64 GB	12 GB		48 GB	64 GB	24 GB	24 GB
96 GB	128 GB	24 GB	24 GB	96 GB	128 GB	48 GB	48 GB
	256 bGB	48 GB	48 GB	192 G B	256 GB	-	-

MIXED-NODE CLUSTER COMPATIBILITY (PRE-ONEFS 7.0)

The following tables list Isilon nodes that can be combined in a cluster without running Isilon SmartPools.

To improve the performance and stability of a cluster using mixed nodes without Isilon SmartPools, the following limitations apply:

- OneFS 5.0.4 or later is required.
- The cluster cannot include more than two different kinds of Isilon nodes.
- Not all nodes are supported on all versions of OneFS. Check the “[OneFS and node compatibility](#)” section of this document first before mixing nodes in a cluster.

For more information, see the [EMC Isilon SmartPools](#) webpage.

ISILON S-SERIES COMPATIBLE NODES

S-Series Nodes	Compatible Nodes
S200	S200
IQ 5000S-SSD	IQ 5000S-SSD
IQ 5400S	IQ 5400S

ISILON S-SERIES COMPATIBLE ACCELERATORS

S-Series Nodes	Compatible Accelerators
S200	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 5000s-SSD	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 5400S	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x

MIXED-NODE CLUSTER COMPATIBILITY (PRE-ONEFS 7.0)(CONTINUED)

ISILON X-SERIES COMPATIBLE NODES

X-Series Nodes	Compatible Nodes
X200-6 TB	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X
X200-12 TB	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X
X200-24 TB	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X
X400-36 TB	X400-36 TB, X400-SSD-72 TB, IQ 32000X-SSD, IQ 36000X
X400-72 TB	X400-72 TB, IQ 72000X
X400-SSD-32 TB	X400-SSD-32 TB
IQ 1920X	IQ 1920X, IQ 3000X
IQ 3000X	IQ 1920X, IQ 3000X
IQ 6000X	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X, EX6000, EX9000, EX12000
IQ 9000X	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X, EX9000, EX12000
IQ 12000X	X200-6 TB, X200-12 TB, X200-24 TB, IQ 6000X, IQ 9000X, IQ 12000X, EX12000
IQ 32000X-SSD	X400-36 TB, X400-SSD-72 TB, IQ 32000X-SSD, IQ 36000X
IQ 36000X	X400-36TB
IQ 72000X	X400-72 TB, IQ 72000X

MIXED-NODE CLUSTER COMPATIBILITY (PRE-ONEFS 7.0)(CONTINUED)

ISILON X-SERIES COMPATIBLE ACCELERATORS

X-Series Nodes	Compatible Accelerators
X200-6 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
X200-12 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
X200-24 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
X400-SSD-32 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
X400-72 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 1920X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 3000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 6000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 9000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 12000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 32000X-SSD	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 36000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 72000X	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x

MIXED-NODE CLUSTER COMPATIBILITY (PRE-ONEFS 7.0)(CONTINUED)

ISILON NL-SERIES COMPATIBLE NODES

NL-Series Nodes	Compatible Nodes
NL400-36 TB	NL400-36 TB, IQ 36NL
NL400-72 TB	NL400-72 TB, IQ 72NL
NL400-108 TB	NL400-108 TB, IQ 108NL
IQ 36NL	NL400-36 TB, IQ 36NL
IQ 72NL	NL400-72 TB, IQ 72NL
IQ 108NL	NL400-108 TB, IQ 108NL

ISILON NL-SERIES COMPATIBLE ACCELERATORS

NL-Series Nodes	Compatible Accelerators
NL400-36 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
NL400-72 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
NL400-108 TB	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 36NL	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 72NL	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x
IQ 108NL	A100 Backup Accelerator, A100 Performance Accelerator, IQ Backup Accelerator-x, IQ Performance Accelerator-x

MIXED-NODE CLUSTER COMPATIBILITY (PRE-ONEFS 7.0)(CONTINUED)

ISILON EX-SERIES COMPATIBLE NODES

EX-Series Nodes	Compatible Nodes
EX6000	IQ 6000X
EX9000	IQ 6000X, IQ 9000X
EX12000	IQ 6000X, IQ 9000X, IQ12000X

NODE PROVISIONING (ONEFS 7.x)

OneFS 7.0

Beginning in OneFS 7.0, Isilon nodes are automatically assigned to node pools in the cluster based on node type. This autoprovisioning optimizes the performance and reliability of the file system. Nodes are not autoprovisioned until at least three nodes of an equivalence class are added to the cluster. If you have added only two nodes of an equivalence class to your cluster, there is no communication between the nodes until a third node of the same equivalence class is added.

For information about node pools and autoprovisioning, see the [OneFS Administration Guide](#) for your version of OneFS.

OneFS 7.2

In OneFS 7.2, you can specify compatibilities between nodes of different generations; specifically, between Isilon S200 and similarly configured Isilon S210 nodes, and between X400 and similarly configured X410 nodes. Compatibilities allow newer generation nodes to be joined to existing node pools made up of older generation nodes. After you add three or more newer generation nodes, you can delete the compatibility between the older and newer node types so that OneFS can autoprovision the new nodes into their own node pools. This enables you to take advantage of the speed and efficiency characteristics of the newer node types in their own node pools.

Non-CTO and CTO equivalence-class nodes

The following table shows the non-CTO and CTO (configure-to-order) nodes that are equivalent, arranged by equivalence class. The nodes in the same equivalence class are provisioned into the same node pool. For example, IQ 36000X (non-CTO) and X400-36 TB (CTO)—the nodes in Equivalence Class 3—are provisioned into the same node pool.

Equivalence Class	Non-CTO Nodes	CTO Nodes
Class 1	X200-6 TB, IQ 6000X	X200-6 TB, 6 GB RAM
Class 2	X200-12 TB, IQ 12000X	X200-12 TB, 6 GB RAM
Class 3	IQ 36000X	X400-36 TB, 24 GB RAM
Class 4	IQ 72000X	X400-72 TB, 24 GB RAM
Class 5	IQ 32000X-SSD*	X400-SSD-32 TB, 24 GB RAM
Class 6	IQ 36NL	NL400-36 TB, 12 GB RAM
Class 7	IQ 72NL	NL400-72TB, 12 GB RAM
Class 8	IQ 108NL	NL400-108 TB, 12 GB RAM

CTO NODES

For configure-to-order (CTO) nodes, customers select a base chassis model and then specify the number of SSD drives, the amount of memory, and the NIC card that they want to include. CTO nodes are available for the NL400, S200, S210, X200, X400, and X410 platforms.

DRIVE, NODE, and ONEFS COMPATIBILITY

The following tables list the types and brands of drives that are compatible with Isilon nodes and OneFS. For information about how drives are arranged in a node, or how to replace a drive, refer to the hardware documentation for your brand of node. Hardware documentation is available from the [EMC Online Support](#) website.

Note: OneFS 6.5.x and OneFS 7.0.x are no longer supported. For information about the support and service life cycle dates for EMC Isilon hardware and software products, see the [Isilon Product Availability Guide](#).

SSD DRIVE STORAGE

If the **OneFS Reqs** column contains a **Yes** for a drive, see the following section titled **OneFS Requirements** for additional compatibility requirements that apply to the drive.

Drive Information	Compatible Nodes	Latest Firmware Revision	OneFS Reqs
HGST, 100 GB, HUSSL4010BSS600	S200, S210, X200, X400, X410, IQ 5000S-SSD, IQ 10000X-SSD, IQ 32000X-SSD	A1D0 (OneFS 6.5, 7.0, 7.1, 7.2)	No
HGST, 100 GB, HUSSL4010ASS600	S200, X200, X400, IQ 5000S-SSD, IQ 10000X-SSD, IQ 32000X-SSD	A182 (OneFS 6.5, 7.0, 7.1, 7.2)	No
HGST, 200 GB, HUSMM1620ASS200	S200, S210, X200, X400, X410	A204 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 200 GB, HUSMM8020ASS200	S200, S210, X200, X400, X410	A210 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 200 GB, HUSSL4020BSS600	S200, S210, X200, X400, X410	A1D0 (OneFS 6.5, 7.0, 7.1, 7.2)	No
HGST, 200 GB, HUSSL4020ASS600	S200, S210, X200, X400, X410	A182 (OneFS 6.5, 7.0, 7.1, 7.2)	No
HGST, 400 GB, HUSMM1640ASS200	S200, S210, X200, X400, X410	A204 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 400 GB, HUSMM8040ASS200	SS200, S210, X200, X400, X410	A210 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 400 GB, HUSSL4040BSS600	S200, S210, X200, X400, X410	A1D0 (OneFS 6.5, 7.0, 7.1, 7.2)	No

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

SSD DRIVE STORAGE

If the **OneFS Reqs** column contains a **Yes** for a drive, see the following section titled **OneFS Requirements** for additional compatibility requirements that apply to the drive.

Drive Information	Compatible Nodes	Latest Firmware Revision	OneFS Reqs
HGST, 400 GB, HUSSL4040ASS600	S200, S210, X200, X400, X410	A182 (OneFS 6.5, 7.0, 7.1, 7.2)	No
HGST, 800 GB, HUSMM1680ASS200	S200, S210, X200, X400, X410, NL400	A204 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 800 GB, HUSMM8080ASS200	S200, S210, X200, X400, X410, NL400	A210 (OneFS 6.5, 7.0 7.1, 7.2)	Yes
HGST, 800 GB SED, HUSMM1680ASS205	HD400, NL400, X200, X400, X410	D252 (OneFS 7.2.0.2 or later)	No
HGST 1.6 TB, HUSMM1616ASS200	S200, S210, X200, X400, X410	A204 (OneFS 6.5, 7.0, 7.1, 7.2)	Yes
HGST, 800GB SED, HUSMM8080ASS205	S210, X200, X400, X410, NL400	D254 (OneFS 6.5, 7.0 7.1, 7.2)	Yes
HGST, 800GB SED, HUSMM1680ASS205	S200, S210, X200, X210, X400, NL400, NL410, HD400	D252 (OneFS 7.1, 7.2)	Yes
Micron, 200 GB, P300-MTFDDAC200SAL	S200, S210, X200, X400, X410	0001 (OneFS 6.5, 7.0, 7.1, 7.2)	No
STEC, 200 GB, M8ISB2B-200UC	S200, S210, X200, X400, X410	2832 (OneFS 6.5, 7.0, 7.1, 7.2)	No

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

OneFS Requirements

For drives with OneFS requirements, your cluster must either be running the required version of OneFS or have a patch installed that enables that drive type. Your cluster is compatible with this SSD model if it is running one of the following versions of OneFS or later:

- 7.0.1.11
- 7.0.2.9
- 7.1.0.3

If you are running an older version of OneFS, your cluster is compatible if one of the following patches are installed:

OneFS version	Patch name
7.0.1.0 – 7.0.1.10	patch-123321
7.0.2.0 – 7.0.2.7	patch-123322
7.1.0.0 – 7.1.0.1	patch-123323

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

BOOT FLASH SSD

Drive Information	Compatible Nodes	Latest Supported Drive Firmware
Netlist, 8 GB, SSD 8GB-001	S200, X200, X400, X410, NL400, IQ 108NL, IQ 108000X	S5FAM017, S5FAM018 (OneFS 7.0, 7.1, 7.2)
Netlist, 8 GB, SSD 8GB-002	S200, X200, X400, X410, NL400, IQ 108NL, IQ 108000X	S9FM01.6 (OneFS 7.0, 7.1, 7.2)
SanDisk, 8 GB, SSD P4 8GB	S200, X200, X400, X410, NL400, IQ 108NL, IQ 108000X	SSD 8.00, SSD 8.10 (OneFS 7.0, 7.1, 7.2)
Smart Modular, 8 GB, iSATA SGSLM3E8GBM01ISI	S200, X200, X400, X410, NL400, IQ 108NL, IQ 108000X	Ver7.02k (OneFS 7.0, 7.1, 7.2)
Smart Modular, 8GB, iSATA SG9SLM3B8GBM11ISI	S200, X200, X400, NL400, IQ 108NL	Ver7.02k, Ver7.02w (OneFS 7.1.1.8, 7.2.0.4)
Smart Modular, 8 GB, iSATA SG9SLM3E8GBM11ISI	S200, X200, X400, X410, NL400, IQ 108NL, IQ 108000X	Ver7.02w, Ver7.02k (OneFS 7.0, 7.1, 7.2)
SmartModular, 32 GB, mSATA SG9MST3D32GBM01	S210, X410	Ver7.02w (OneFS 7.0, 7.1, 7.2)
SmartModular, 32 GB, mSATA SGMST3D32GBM11ISI	S210, X410	Ver7.02w (OneFS 7.0, 7.1, 7.2)
SmartModular XP+, 32GB mSATA SHMST6D032GHM11MC 118000100	HD400, NL410, S210, X210, X410	S8FM08.2 (OneFS 7.0, 7.1, 7.2)

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

SAS HARD DISK DRIVES

Drive Information	Compatible Nodes	Latest Firmware Revision
HGST, 300 GB, HUC106030CSS600	S200	A430 (OneFS 7.0, 7.1, 7.2)
HGST, 600 GB, HUC106060CSS600	S200	A430 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC109030CSS600	S200	A5B0 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC10603 CLAR300	A100	C330 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC106030CSS600	S200	A430 (OneFS 7.0, 7.1, 7.2)
HGST, 600 GB, HUC106060CSS600	S200	A430 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC109030CSS600	S200	A5B0 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC10603 CLAR300	A100	C330 (OneFS 7.0, 7.1, 7.2)
HGST, 300 GB, HUC10903 CLAR300	A100	C600 (OneFS 7.1, 7.2)
HGST, 600 GB, HUC109060CSS600	S200	A5B0 (OneFS 7.0, 7.1, 7.2)
HGST, 900 GB, HUC109090CSS600	S200	A5B0 (OneFS 7.0, 7.1, 7.2)
HGST, 1.2 TB, HUC101212CSS600	S200	A469 (OneFS 7.0, 7.1, 7.2)
HGST, 1.2 TB, HUC101812CSS200	S200, S210	A703 (OneFS 7.0, 7.1, 7.2)
HGST, 450 GB, HUS156045VLS600	5000S-SSD	A760 (OneFS 7.0, 7.1, 7.2)
HGST, 6 TB, HUS726060ALA640	NL400, HD400	AHIST1EZ (OneFS 7.0, 7.1, 7.2)

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

SAS HARD DISK DRIVES

Drive Information	Compatible Nodes	Latest Firmware Revision
Seagate, 300 GB, ST9300605SS	S200	IS00 (OneFS 7.0, 7.1, 7.2)
Seagate, 300 GB, ST300MM0006	S200, S210	0003 (OneFS 7.0, 7.1, 7.2)
Seagate, 300 GB, ST930060 CLAR300	A100	CS18, S19 (OneFS 7.0, 7.1, 7.2)
Seagate, 300 GB, ST300MM0 CLAR300	A100	LS17 (OneFS 7.1, 7.2)
Seagate, 600 GB, ST9600205SS	S200	IS00 (OneFS 7.0, 7.1, 7.2)
Seagate, 600 GB, ST600MM0006	S200, S210	0003 (OneFS 7.0, 7.1, 7.2)
Seagate, 900 GB, ST9900805SS	S200	IS00 (OneFS 7.0, 7.1, 7.2)
Seagate, 900 GB, ST900MM0006	S200, S210	0003 (OneFS 7.0, 7.1, 7.2)

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

SATA HARD DISK DRIVES

Drive information	Compatible Nodes	Latest Firmware Revision
HGST, 500 GB, HDS725050KLA360	X200, X400, NL400, IQ 6000X, IQ 12000X, IQ Performance Accelerator-x	K2A0AD1A (OneFS 7.0, 7.1, 7.2)
HGST, 500 GB, HUA722050CLA330	X200, X400, NL400, IQ 6000X, IQ Performance Accelerator-x	JP2OA3PA (OneFS 7.0, 7.1, 7.2)
HGST, 1 TB, HUA722010CLA330	X200, X400, NL400, IQ 36NL, IQ 10000X-SSD, IQ 12000X, IQ 32000X-SSD, IQ 36000X	JP4OA3PA (OneFS 7.0, 7.1, 7.2)
HGST, 2 TB, HUA722020ALA330	X200, X400, NL400, IQ 72NL, IQ 72000X	JKA0A3PA (OneFS 7.0, 7.1, 7.2)
HGST, 2 TB, HUA723020ALA640	X200, X400, NL400, IQ72NL, IQ 72000X	MK7OAA50 (OneFS 7.0, 7.1, 7.2)
HGST, 2 TB, HUS724020ALA640	X200, X400, NL400, IQ 72000X, IQ 72NL	MF6OABW0 (OneFS 7.0, 7.1, 7.2)
HGST, 3 TB, HUA723030ALA640	X200, X400, NL400, IQ 108NL, IQ 108000X,	MKA0AA50 (OneFS 7.0, 7.1, 7.2) MKA0A580 (OneFS 7.2.0.3, 7.2.1.1)
HGST, 3 TB, HUS724030ALA640	X200, X400, NL400, IQ 108NL	MF8OABW0 (OneFS 7.0, 7.1, 7.2)
HGST, 4 TB, HUS724040ALA640	X400, NL400	MFAOABW0 (OneFS 7.0, 7.1, 7.2)
Seagate, 3 TB, ST33000650NS	X200, X400, NL400, IQ 108NL	0002 (OneFS 7.0, 7.1, 7.2) 0006 (OneFS 7.0, 7.1, 7.2)
Seagate, 1 TB, ST1000NM0033-9ZM173	X200, X400, NL400, IQ 36NL, IQ 36000X, IQ 10000X-SSD, IQ 12000X, IQ 32000X-SSD	SNG4 (OneFS 7.0, 7.1, 7.2)
Seagate, 2 TB, ST2000NM0033-9ZM175	X200, X400, NL400, IQ 72NL, IQ 72000X	SNG4 (OneFS 7.0, 7.1, 7.2)

DRIVE, NODE, and ONEFS COMPATIBILITY (CONTINUED)

SATA HARD DISK DRIVES

Drive information	Compatible Nodes	Latest Firmware Revision
Seagate, 3 TB, ST3000NM0033-9ZM178	X200, X400, NL400, IQ 108NL, IQ 108000X	SNG4 (OneFS 7.0, 7.1, 7.2)
Seagate, 4 TB, ST4000NM0033-9ZM170	X400, NL400	SNG4 (OneFS 7.0, 7.1, 7.2)
STEC, 100 GB, MACH8 IOPS	5000S-SSD, 32000X-SSD	2828 (OneFS 7.0, 7.1, 7.2)
Western Digital, 1 TB, WD1002FBYS-02A6B0	IQ 36NL, IQ 36000X	03.02C06 (OneFS 7.0, 7.1, 7.2)

SED HARD DISK DRIVES

Drive Information	Node Compatibility	Latest Firmware Revision
Seagate, 3 TB, ST3000NM0063	X200, X400, X410, NL400	0004 (OneFS 7.1, 7.2)
Seagate, 3 TB, ST33000652SS	X200, X400, X410, NL400	A006 (OneFS 7.1, 7.2)
Seagate, 4 TB, ST4000NM0063	X400, X410, NL400	0004 (OneFS 7.1, 7.2)

NODE FIRMWARE PACKAGE UPDATES

The table below lists the Node Firmware Packages that are compatible with Isilon nodes. For example, Node Firmware Package 9.1 is compatible with the X-Series, S-Series, NL-Series, and I-Series nodes.

Node Firmware Packages are provided by Isilon Technical Support. For information about Node Firmware Packages, see the product documentation that is available from the [EMC Online Support](http://bit.ly/isi-docfeedback) website.

Firmware	Nodes							
	E-Series	I-Series	EX-Series	S-Series	X-Series	NL-Series	A100	HD400
1.0	•	•			•			
2.0	•	•		•	•	•		
3.0	•	•		•	•	•		
5.0	•	•	•	•	•	•		
5.1	•	•	•	•	•	•		
6.0	•	•	•	•	•	•		
6.1	•	•	•	•	•	•		
7.1		•	•	•	•	•		
8.0		•	•	•	•	•		
8.1		•	•	•	•	•		
8.2		•	•	•	•	•		
8.3		•	•	•	•	•		
9.0.1*		•	•	•	•	•	•	
9.2.2			•	•	•	•	•	•
9.2.3			•	•	•	•	•	•
9.3.1			•	•	•	•	•	•
9.3.2			•	•	•	•	•	•

* The S210, X210, X410, and NL410 nodes are compatible with Node Firmware Package 9.0.1 and later.

DRIVE FIRMWARE PACKAGE UPDATES

The following table lists the drives that are updated by the Isilon Drive Firmware Packages. (If your cluster is running OneFS 7.1.1 or later, update the drive firmware of nodes with bootflash drives by installing the latest [Drive Support Package](#).) Drive Firmware Package updates are cumulative; all the drives in this table are compatible with Isilon software and hardware. Drive Firmware Packages are provided by Isilon Technical Support. Depending on the version of OneFS you are running, the Drive Firmware Package might also include:

- A patch to add support to OneFS for new drives. This patch enables nodes containing the specified drives to pass the On-site Verification Test (OVT).
- A patch required on some older versions of OneFS to add support for the drive firmware update installer.

For information about installing and applying Drive Firmware Packages—as well as information about preparing OneFS prior to updating drive firmware—see the [Isilon Drive Firmware Package Release Notes](#).

Updated Drives	Drive Firmware Packages						
	1.5	1.6	1.7	1.8	1.9	1.10	1.11
HGST, 100 GB, HUSSL4010ASS600	•	•	•	•	•	•	•
HGST, 100 GB, HUSSL4010BSS600	•	•	•	•	•	•	•
HGST, 100 GB, HUSSL4020ASS600	•	•	•	•	•	•	•
HGST, 200 GB, HUSMM1620ASS200						•	•
HGST, 200 GB, HUSMM8020ASS200			•	•	•	•	•
HGST, 200 GB, HUSSL4020BSS600		•	•	•	•	•	•
HGST, 300 GB, HUC106030CSS600		•	•	•	•	•	•
HGST, 300 GB, HUC109030CSS600	•	•	•	•	•	•	•
HGST, 400 GB, HUSMM1640ASS200						•	•
HGST, 400 GB, HUSMM8040ASS200			•	•	•	•	•
HGST, 400 GB, HUSSL4040ASS600	•	•	•	•	•	•	•
HGST, 400 GB, HUSSL4040BSS600		•	•	•	•	•	•
HGST, 450 GB, HUS156045VLS600		•	•	•	•	•	•
HGST, 500 GB, HDS725050KLA360		•	•	•	•	•	•
HGST, 500 GB, HUA722050CLA330	•	•	•	•	•	•	•

DRIVE FIRMWARE PACKAGE UPDATES (CONTINUED)

Updated Drives	Drive Firmware Packages						
	1.5	1.6	1.7	1.8	1.9	1.10	1.11
HGST, 600 GB, HUC106060CSS600		•	•	•	•	•	•
HGST, 600 GB, HUC109060CSS600	•	•	•	•	•	•	•
HGST, 800 GB, HUSMM1680ASS200							•
HGST, 800 GB, HUSMM8080ASS200			•	•	•		•
HGST, 800 GB, HUSMM8080ASS205							
HGST, 900 GB, HUC109090CSS600	•	•	•	•	•	•	•
HGST, 1 TB, HUA722010CLA330	•	•	•	•	•	•	•
HGST, 2 TB, HUA722020ALA330	•	•	•	•	•	•	•
HGST, 2 TB, HUA723020ALA640	•	•	•	•	•	•	•
HGST, 2 TB, HUS724020ALA640		•	•	•	•	•	•
HGST, 3 TB, HUA723030ALA640	•	•	•	•	•	•	•
HGST, 3 TB, HUS724030ALA640		•	•	•	•	•	•
HGST, 4 TB, HUS724040ALA640		•	•	•	•	•	•
HTST, 6 TB, HUS726060ALA640						•	•
Seagate, 1 TB, ST1000NM0033 9ZM173			•	•	•	•	•
Seagate, 2 TB, ST2000NM0033 9ZM175			•	•	•	•	•
Seagate, 3 TB, ST3000NM0033 9ZM178			•	•	•	•	•
Seagate, 3 TB, ST3000NM0063			•	•	•	•	•
Seagate, 3 TB, ST33000652SS					•	•	•
Seagate, 4 TB, ST4000NM0033 9ZM170		•	•	•	•	•	•

DRIVE FIRMWARE PACKAGE UPDATES (CONTINUED)

Updated Drives	Drive Firmware Packages						
	1.5	1.6	1.7	1.8	1.9	1.10	1.11
Seagate, 4 TB, ST4000NM0063			•	•	•	•	•
STEC, 100 GB, MACH8 IOPS	•	•	•	•	•	•	•
STEC, 200 GB, M8ISB2B-200UC		•	•	•	•	•	•
Western Digital, 1 TB, WD1002FBYS	•	•	•	•	•	•	•

DRIVE SUPPORT PACKAGES

The following table lists the drives that are updated by the Isilon Drive Support Packages. Drive support packages contain drive configuration updates for EMC Isilon clusters. Installing the latest drive support package allows you to update your drive firmware to the latest supported revisions.

You can install a drive support package only if your cluster meets the following system requirements:

- Your cluster must be running OneFS 7.1.1 or later.
- Your cluster includes nodes that contain bootflash drives. Nodes from the following series contain bootflash drives: HD400,108NL, NL400, NL410, S200, S210, X200, X210, X400, X410.

For information about installing and applying Drive Support Packages—as well as information about preparing OneFS prior to updating drive firmware—see the [Isilon Drive Support Package Release Notes](#).

Note: Drive Support Packages are not supported on SSDs.

Updated Drives	Drive Support Packages							
	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.8
HGST, 100 GB, HUSSL4010ASS600	•	•	•	•	•	•	•	•
HGST, 100 GB, HUSSL4010BSS600	•	•	•	•	•	•	•	•
HGST, 200 GB, HUSSL4020ASS600	•	•	•	•	•	•	•	•
HGST, 200 GB, HUSMM1620ASS200					•	•	•	•
HGST, 200 GB, HUSMM8020ASS200	•	•	•	•	•	•	•	•
HGST, 200 GB, HUSSL4020BSS600	•	•	•	•	•	•	•	•
HGST, 300 GB, HUC106030CSS600	•	•	•	•	•	•	•	•
HGST, 300 GB, HUC109030CSS600	•	•	•	•	•	•	•	•
HGST, 400 GB HUSMM1640ASS200					•	•	•	•
HGST, 400 GB, HUSMM8040ASS200	•	•	•	•	•	•	•	•
HGST, 400 GB, HUSSL4040ASS600	•	•	•	•	•	•	•	•
HGST, 400 GB, HUSSL4040BSS600	•	•	•	•	•	•	•	•
HGST, 450 GB, HUS156045VLS600	•	•	•	•	•	•	•	•
HGST, 500 GB, HDS725050KLA360	•	•	•	•	•	•	•	•
HGST, 500 GB, HUA722050CLA330	•	•	•	•	•	•	•	•
HGST, 600 GB, HUC106060CSS600	•	•	•	•	•	•		•

DRIVE SUPPORT PACKAGES (CONTINUED)

Updated Drives	Drive Support Packages							
	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.8
HGST, 600 GB, HUC109060CSS600	•	•	•	•	•	•	•	•
HGST, 800 GB, HUSMM1680ASS200						•	•	•
HGST, 800 GB, HUSMM8080ASS200						•	•	•
HGST, 800 GB, HUSMM8080ASS205								
HGST, 900 GB, HUC109090CSS600	•	•	•	•	•	•	•	•
HGST, 1 TB, HUA722010CLA330	•	•	•	•	•	•	•	•
HGST, 2 TB, HUA722020ALA330	•	•	•	•	•	•		•
HGST, 2 TB, HUA723020ALA640	•	•	•	•	•	•	•	•
HGST, 2 TB, HUS724020ALA640	•	•	•	•	•	•		•
HGST, 3 TB, HUA723030ALA640	•	•	•	•	•	•	•	•
HGST, 3 TB, HUS724030ALA640	•	•	•	•	•	•		•
HGST, 4 TB, HUS724040ALA640	•	•	•	•	•	•	•	•
HGST, 6 TB, HUS726060ALA640					•	•	•	•
Seagate, 1 TB, ST1000NM0033 9ZM173	•	•	•	•	•	•	•	•
Seagate, 2 TB, ST2000NM0033 9ZM175	•	•	•	•	•	•	•	•
Seagate, 3 TB, ST3000NM0033 9ZM178	•	•	•	•	•	•	•	•
Seagate, 3 TB, ST3000NM0063	•	•	•	•	•	•	•	•
Seagate, 3 TB, ST33000652SS					•	•	•	•
Seagate, 4 TB, ST4000NM0033 9ZM170	•	•	•	•	•	•	•	•
Seagate, 4 TB, ST4000NM0063	•	•	•	•	•	•	•	•
STEC, 100 GB, MACH8 IOPS	•	•	•	•	•	•	•	•
STEC, 200 GB, M8ISB2B-200UC						•	•	•
Western Digital, 1 TB, WD1002FBYS	•	•	•	•	•	•	•	•

CABLES, SWITCHES, and COMPATIBLE NODES

The following tables list the InfiniBand cables and switches that are compatible with Isilon nodes.

Model #	Description	Type	Compatible Nodes	Compatible Switches
850-0035	Cable, IB DDR, CX4-CX4, 1M	Copper	S200, X200, X400, NL400, IQ- and IQ Accelerator-x nodes	Cisco/TopSpin/SMC 7000/7008 series, Flextronics switches, Intel 90XX, 9120 series, Mellanox MTS2400 series*
850-0029	Cable, IB DDR, CX4-CX4, 3M	Copper	S200, X200, X400, NL400, IQ- and IQ Accelerator-x nodes	Cisco/TopSpin/SMC 7000/7008 series, Flextronics switches, Intel 90XX, 9120 series, Mellanox MTS2400 series*
850-0030	Cable, IB DDR, CX4-CX4, 5M	Copper	S200, X200, X400, NL400, IQ- and IQ Accelerator-x nodes	Cisco/TopSpin/SMC 7000/7008 series, Flextronics switches, Intel 90XX, 9120 series, Mellanox MTS2400 series*
851-0201	Cable, IB DDR, CX4-CX4, 8M	Copper	S200, X200, X400, NL400, IQ- and IQ Accelerator-x nodes	Cisco/TopSpin/SMC 7000/7008 series, Flextronics switches, Intel 90XX, 9120 series, Mellanox MTS2400 series*
851-0153*	Cable, IB Hybrid, QSFP-CX4, 1M	Copper	S-, X-, NL-, and IQ- nodes IQ Accelerator-x nodes, A100	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0154*	Cable, IB Hybrid, QSFP-CX4, 3M	Copper	S-, X-, NL-, and IQ- nodes IQ Accelerator-x nodes, A100	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0155*	Cable, IB Hybrid, QSFP-CX4, 5M	Copper	S-, X-, NL-, and IQ- nodes IQ Accelerator-x nodes, A100	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0156*	Cable, IB Hybrid, QSFP-CX4, 6M	Copper	S-, X-, NL-, and IQ- nodes All IQ Accelerator-x nodes, A100	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series

* Use a hybrid QSFP-CX4 cable to connect InfiniBand switches with CX4 ports to nodes that have QSFP ports (A100, S210, and X410).

CABLES, SWITCHES, and COMPATIBLE NODES (CONTINUED)

Model #	Description	Type	Compatible Nodes	Compatible Switches
851-0173 *	Cable, IB Hybrid, QSFP-CX4, 10M	Copper	S-, X-, NL-, and IQ-nodes. IQ Accelerator-x nodes, A100	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0208	Cable, IB QDR, QSFP-QSFP, 1M	Copper	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0209	Cable, IB QDR, QSFP-QSFP, 3M	Copper	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0210	Cable, IB QDR, QSFP-QSFP, 5M	Copper	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0211	Cable, IB QDR-QSFP/ QSFP-ACT OPT-10M	Optical	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0222**	Transceiver/Optic/S FP+/SR/ 40Gbe	N/A	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0224	Cable, IB MPO, Transceiver,10M	Optical	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0225	Cable, IB MPO, Transceiver,30M	Optical	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0226	Cable, IB MPO, Transceiver,50M	Optical	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series
851-0227	Cable, IB MPO, Transceiver,100M	Optical	S210, X410, A100, HD400, X210, NL410	Intel/Qlogic 12200/12300/12800 Series, Mellanox 8/18/36 port QDR Series

** Two 851-0222 transceivers are needed for every cable order for 851-0224, 851-0225, 851-0226, and 851-0227.

CABLES, SWITCHES, and COMPATIBLE NODES (CONTINUED)

ETHERNET COMPLIANT SWITCHES

Isilon nodes support industry-standard 1 GbE and 10 GbE switches. Ethernet switches should meet the following minimum requirements:

- Include non-blocking switch fabric
- Support a 1 MB buffer per switch port
- Support jumbo frames

10 GbE SFP TRANSCEIVERS

The table below lists SFP/SFP+ transceivers that have been certified by Isilon or have been reported by other sources to work with Isilon nodes.

Important: Because of the quantity and variety of SFP/SFP+ transceivers that exist, Isilon cannot test or qualify all the transceivers that are available. It is possible that some SFP/SFP+ transceivers that have been reported to work by other sources might not work in all environments. You should contact your Isilon sales representative if you have any questions.

The supported network interface cards (NICs) and compatible nodes:

NICs	Compatible Nodes
Chelsio	S200, X200, X400, NL400, 36NL, 72NL, 108NL
QLogic/Broadcom	S210, X210, X410, NL410, HD400
Intel	A100 Performance Accelerator

Manufacturer	MFR Part #	Isilon Part #	Isilon Certified	Type	Works with NIC
Amphenol & TE	10 meter	038-004-318-00	Yes	TwinAx, Active	QLogic, Intel
Amphenol & TE	2 meter	038-004-142-01	Yes	TwinAx, Passive	QLogic, Intel
Amphenol & TE	6 meter	039-004-144-01	Yes	TwinAx, Passive	QLogic, Intel
Avago	AFBR709ASMZ-E2		Yes	Optical, Multimode [SR]	Chelsio
Chelsio	SM10G-SR	047-0001-01	Yes	Optical, Multimode [SR]	Chelsio
Finisar	FTLX8571D3BCL SR	047-0001-01	Yes	Optical, Multimode [SR]	Chelsio
JDSU	PLRXPL-SC-S43-41B	047-0001-01	Yes	Optical, Multimode [SR]	Chelsio

SR: short range

LR: long range

10 GbE SFP TRANSCEIVERS (CONTINUED)

Manufacturer	MFR Part #	Isilon Part #	Isilon Certified	Type	Works with NIC
Amphenol	571540007 Rev K (1 meter)		No	TwinAx, Passive	Chelsio
Amphenol	571540002 Rev K (3 meter)		No	TwinAx, Passive	Chelsio
Arista Networks	CAB-SFP-SFP Rev 0002 (1, 2 meter)		No	TwinAx, Passive	Chelsio
Brocade	57-0000075-01		No	Optical, Multimode [SR]	Chelsio
Chelsio	SM10G-LR		No	Optical, Single mode [LR]	Chelsio
Cisco	QSFP-4SFP10G-CU5M (5 meter) [Quad cable]		No	TwinAx, Passive	Chelsio
Cisco	SFP-H10GB-ACU10M Rev 02 & Rev B (10 meter)		No	TwinAx, Passive	Chelsio
Cisco	SFP-H10GB-CU3M Rev A0 (3 meter)		No	TwinAx, Passive	Chelsio
Cisco	SFP-H10GB-CU5M (5 meter)		No	TwinAx, Passive	Chelsio
Finisar	FTLX8571D3BCL LR		No	Optical, Multimode [SR]	Chelsio
JDSU	PLRXPL-SC-S43-22N		No	Optical, Multimode [SR]	Chelsio
Juniper	740-030077 Rev 1 & Rev A (3 meter)		No	TwinAx, Passive	Chelsio
Merge Optics	TRX10GVP2010		No	Optical, Multimode [SR]	Chelsio

SR: short range

LR: long range

10 GbE SFP TRANSCEIVERS (CONTINUED)

Manufacturer	MFR Part #	Isilon Part #	Isilon Certified	Type	Works with NIC
Molex	75752-2301 (3 meter)		No	TwinAx, Passive	Chelsio

KNOWN SFP TRANSCEIVER INCOMPATIBILITIES

The following SFP transceivers are known to be incompatible with Isilon nodes.

Manufacturer	MFR Part #	Description
Cisco	SFP-H10GB-ACU7M	Does not work with newer Isilon nodes with QLogic NIC cards, such as S210 nodes.