



Dell Storage Compatibility Matrix

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Document Overview

This Compatibility Matrix describes SAN components (switches, host bus adapter, operating systems, etc.) that have been tested in Dell's Storage Infrastructure and Solutions (SIS) labs. The testing results demonstrate that the Dell Storage Products (SC, PS and FS Series), as tested, will, under normal operating conditions, operate as expected and documented in SC Series, PS Series, and FS Series product documentation.

The first portion of this document describes Dell's commitment to supporting the various products that have been tested and those products or components that have not been tested. This section describes a multi-tiered support policy that describes any limitations to a customer's supportability for Dell and non-Dell components when those components or their constituent software (drivers, firmware, etc.) are not listed in this matrix.

The second part of this document lists switches that have been tested and confirmed to be interoperable with the Dell SC, PS and FS Series products. The resulting configurations are separated by networking technology (Fibre Channel or Ethernet) and product vendor/model.

The final section of this document details the hardware and software used when testing different host network connectivity devices (Network Interface Controllers, Converged Network Adapters, and Host Bus Adapters) and storage initiators in a variety of operating system environments. The results are separated by protocol and then grouped by operating system.



Dell Storage Support Policy Statement

This Compatibility Matrix details devices that have been tested by Dell's storage test labs. While Dell tests on a wide variety of devices, it is impossible to test against every device or version for all vendors with which the various Dell Storage products can interoperate. Therefore, the information presented **in this document does not constitute a complete list of what is supportable**, but simply a list of what has been specifically tested. **Regardless of the support level (described below), Dell Storage customers will always be provided full contractual support of their storage solution.**

Each row in a table defines a SAN component and the software, or firmware that was tested with that component. Each of these entries constitutes a supportable "configuration".

Based on this Matrix, a customer configuration will be classified into one of the three levels of supportability, as described below. Each level of supportability also references the requirement for designing the SAN subsystem using documented recommended best practices suitable for the each Dell Storage product family. These recommended best practices are documented in a variety of technical whitepapers as well as a consolidated in the [Dell EqualLogic Configuration Guide](#) (published on the Dell TechCenter Community) and [Compellent Customer Knowledge Center](#).

Please contact your Dell sales representative with questions about how to classify your proposed configuration.

For the purposes of the support statement, the following definitions apply:

- "storage solution" – the end-to-end set of components (operating system, network controller, switch and switch firmware, and array FW that permits a host to target communication).
- "component" – the individual parts of a storage solution in the form of host network interface adapters, iSCSI initiators, iSCSI host bus adapters, switches, and arrays.

Level 1: Full Contractual Support

For tested components listed in this Compatibility Matrix, (and for the specific FW or Software version listed), **Dell will provide solution support, under an active ProSupport or CoPilot support contract assuming that all other components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.**

Level 2: Conditional Support

In addition to the component versions tested by Dell and listed in this Compatibility Matrix, the compatibility of comparable hardware models ("comparable" can include similar devices based on the SAME architecture and from the SAME vendor, or newer firmware versions) can be projected based upon the results for the systems actually tested and will be designated as "conditionally supported".

Dell will provide full contractual support for the storage solution under an active ProSupport or CoPilot support contract, assuming that all components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.

Resolution of functional and/or performance issues may be out of Dell's control. In such cases, these issues will need to be addressed by the applicable component or software/firmware vendor. *If these issue(s) cannot be resolved in a timely manner by Dell or the component vendor, Dell may require, in its sole discretion, as a condition of continuing support, that the customer replace the component with one that was tested and/or upgrade/downgrade to a supported software version.*



Examples of Conditional Support situations include, but are not limited to:

- If a switch or server adapter shares the same underlying ASIC or chipset and is from the same vendor as a tested configuration, then it may produce similar results.
- If a component is an identical model of a component listed, but differs in FW version, then it may produce similar results for any firmware and/or drivers that are newer than those listed. For example, if version X of firmware has been tested and is listed as "Level 1", then firmware versions newer than version X are expected to continue to work.

Failure of a "conditionally supported" component to provide the same service level as the similar device listed, unless Dell has communicated end of support or a specific incompatibility for a particular product, firmware or software version, would be treated as a bug that needs to be fixed by the device or software/firmware vendor.

Level 3: Commercially Reasonable Effort

For components not listed within this Compatibility Matrix, OR where customers have not, or is not willing to apply accepted Dell recommended best practices for the specific storage family's SAN design and implementation, **as long as the customer has an active support contract with the appropriate vendor(s), and an active ProSupport or CoPilot support contract, Dell will provide storage solution full contractual support for all Dell branded components and Commercially Reasonable Effort (CRE) support any untested component of the configuration, until such time as it is determined, in Dell's sole discretion, that a problem lies within the untested component(s) or the way they interoperate with Dell.**

Dell does not guarantee that issues undertaken on a CRE basis will be resolved in a timely fashion, or at all. There is a possibility that the customer would need to replace an untested component or take the affected system out of production to resolve the issues.

Support for Cross-Platform Co-Existing Solutions

Cross-platform Co-existing solutions are defined at those SAN environments that host more than one storage platform technology. In general, this could be two or more array technology solutions from the same vendor or different vendors. Examples would be

- A SAN solution that is hosting a Dell SC Series array as well as an EMC array solution, while sharing the same network resources.
- A SAN solution that is hosting a Dell SC Series array as well as a Dell PS Series array solution, while sharing the same network resources.

For the purposes of support, Dell will support the following scenarios involving two or more array solutions sharing a common network infrastructure:

- **A Dell PS Series SAN infrastructure introducing/adding a Dell SC Series array solution to the existing PS SAN.**

Any other array co-existence solution is not supported at the time of publish date of this document.

This implies that certain criteria will be assumed and only these configurations will receive Level 1 support:

- iSCSI only



- A single IP subnet
- PS Series Host Integration Tools may (or may not) be installed on individual hosts where supported

To determine support level of the Co-Existent solution, the following rules apply:

- Level 1 support is provided assuming, for each array solution (PS and SC), all of the components used (Operating Systems, Adapters, and Switches) are listed in the matrices included in this document and applying the Support Policy Statement described earlier in this document to each solution.
- Level 2 support is provided if any included component is considered Level 2 support for either of the array solutions
- Level 3 support is provided for any other solutions.

FS Series Additional Support Statement

The FS Series of products are NAS appliances that work with the various Dell Storage PS and SC series products. All FS series products are tested for interoperability with their respective "back-end" storage array products, and Dell will support any and all issues arising in or between these products while the products are under warranty and/or an active ProSupport or CoPilot support contract for both products.

The sections below describe general support policies for the FS Series, particularly as they relate to the results published in this document. There are additional environmental and cabling considerations that should be taken into account when building a storage solution that includes FS Series NAS appliances. Please consult other FS Series documentation or contact your Dell account representative to ensure that all the relevant factors have been taken into consideration.

Switch Support Policy

Dell tests switches for two of the three networks associated with an FS Series NAS cluster, namely the "back-end" iSCSI or Fibre Channel network situated between the NAS controllers and the PS or SC storage arrays. The FS 7000 Series NAS appliances connect to the PS Series SAN arrays using the industry standard iSCSI protocol, while the FS 8000 Series NAS appliances connect to the SC Series SAN arrays using either iSCSI or Fibre Channel. For proper configuration, at least one switch is required (a minimum of two switches is recommended) to interconnect these products. Direct connection of any FS Series NAS appliances and the respective arrays is not supported.

The three levels of support described above are applicable to the FS Series switches listed in this Matrix for back-end network configuration.

There are two other networks associated with an FS7xxx cluster, namely the "front-end" connection to the customer's existing client network, and the cluster or "private" interconnect network for communication between FS7xxx controllers. Both of these networks are Ethernet based.

Any Ethernet switch listed for use as a "back-end" switch is also valid for use as a "private" interconnect network switch and can be used for both "back-end" and "private" simultaneously.

Client OS Environment Support Policy

Although Dell tests the FS Series NAS solution in a variety of client operating system environments, this document does not provide resulting compatibility data. The statements made with respect to compatibility for the FS Series in this document are not to be construed as a guarantee of interoperability or supportability of client operating systems.



Other Statements

Operating System, Switch and Server Adapter Settings

This document does not cover recommended practices, though optimized SAN or NAS solutions consists of a combination of supported hardware and software as defined in this document, along with recommended practices as documented in various whitepapers published by Dell. Dell does maintain documents with recommended best practices and recommended settings for various operating systems, switches and server adapters, which are available to download from The Dell Tech Center community website (<http://en.community.dell.com/techcenter/default.aspx>).

Server Interoperability

This Compatibility Matrix details interoperability from the storage array to various server hosts via a switch and one or more network adapters or host bus adapters (HBAs). Testing of, and support for, a specific server platform (such as Dell PowerEdge servers) was not performed as part of this program and customers should visit the server vendor's website to determine which operating systems and adapters are supported by the server vendor.

Host Connectivity Adapters and Server Vendor Support

This matrix lists many host network adapters and HBAs that have been tested for use within the indicated Dell Storage array family SAN environment. It is not implied that all of these adapters and their driver/firmware stacks are supported by any or all server vendors. The reader must ensure that the host network adapter and its associated drivers are on that vendors Hardware Compatibility List indicating their support for that adapter and driver. This includes Dell's own PowerEdge server products. Inclusion in the adapter compatibility tables should not be interpreted as that adapter and driver/firmware combination as being supported by Dell's PowerEdge server products. Please refer to the following link for details on PowerEdge Server supported adapters.

Limits of Supportability

If any recommendations made by Dell to resolve a customer's issues – whether they are functional or performance related – is not followed, Dell cannot guarantee that the issue can be resolved to the satisfaction of the customer. Dell's ability to provide customers with any level of supportability are dependent on the customer's willingness to implement any solution recommendation.

Disclaimers

Information in this document is subject to change at any time, in Dell's sole discretion, without notice or liability.

Abbreviations and Terminology

"_"	Indicates a feature that is not applicable based on lack of capability
"L1", "L2", "L3"	Level 1, Level 2, Level 3. Support Level provided for that feature. See Support Policy Statement for details.
BfS	Boot from SAN. A general term referring to functionality on a CNA/HBA/NIC to allow bare-metal OS boot from a remote, SAN-based target/LUN/Volume.
CNA	Converged Network Adapter. A Networking device that supports DCB and can manage more than one class of network traffic...typically consisting of storage and non-storage traffic types.
Conv	Converged Ethernet (DCB) capable switch. FC/FCoE/TCP functionality
DCB	Data Center Bridging...specifically this is used to indicate iSCSI over DCB



Eth	Ethernet
FC	Fibre Channel
FCoE	Fibre Channel over Ethernet
FW	Firmware. Typically the main operating system for an appliance type device or component such as a NIC, Switch, or other device. Typically not user-interactive, though it may contain sub-systems that provide user interaction such as a Command Line Interface.
HBA	Host Bus Adapter - indicates hardware-based FC/FCoE/iSCSI storage functionality
iBFT	iSCSI Boot Firmware Table. A specific, standards-based BfS technology that supports booting from iSCSI protocol-based targets. Part of the ACPI 3.0 standard.
MLAG	General term or specific feature offering by some switch vendors for switch-to-switch multipath interconnection.
NA	Not applicable
NIC	Network Interface Controller. A networking device that provides Ethernet and optionally TCP/IP functionality. May or may not provide SAN/Network boot functionality. For SAN solutions, requires a software-based protocol initiator (FCoE/iSCSI) to access storage area network remote targets.
OS	Operating System
SC / SCOS	Storage Center (Operating System). The core software of the SC Series products that provides all storage and management functionality
SPB	IEEE standards based switch-to-switch multipathing solution
TRILL	IETF standards based switch-to-switch multipathing solution
VLT	Virtual Link Trunking. Proprietary switch-to-switch multipathing solution provided by certain Dell Networking switch products
vPC	Virtual Port Channel. Proprietary switch-to-switch multipathing solution provided by certain Cisco Network products. Specifically Nexus branded products.



Switch Summary

The switch summary list below represents the arrays used during our validation of the listed switch and this list should not be construed as stating that those arrays not indicated will not work, but simply an indication that they were not used during our testing. It is expected that any of our array models should work with any switch listed unless otherwise noted. Dell does not currently include in its validation process, the testing of "mixed speed" SAN solutions (1 and 10GbE arrays attached to same switch). Dell fully supports the use of 1GbE arrays attached to 1GbE (as indicated) as well as the 10GbE switches listed assuming the switch provides 1Gb RJ-45 ports.

Note: Attaching 10GbE arrays to 1GbE switches is not supported due to the potential of performance limitations that could result in data unavailable scenarios. By design, 1GbE switches typically do not have the resources to manage 10GbE edge traffic. The one exception to this is the PS6210, which will automatically negotiate to 1GbE speeds if attached to a 1GbE switch and is thus considered a 1GbE array in this situation.

Vendor	Model	Switch Type	PS Series							SC Series				FS Series								
			PS4000	PS4100	PS4110	PS4210	PSM4110	PS5000/5500	PS6000/6500	PS 6010/6510	PS6100	PS6110	PS6210	Series 20/30	Series 40	SCv2000 Series	SC4000	SC8000	FS7500	FS7600	FS7610	FS8600
Brocade	300	FC												X	X	X	X	X				X
	5x00	FC												X	X		X	X				X
	6505	FC												X	X	X	X	X				
	6510	FC												X	X	X	X	X				
	6520	FC												X	X	X	X	X				
	8000/8000e	Conv			X	X				X		X	X	X	X		X	X				
	DCX	FC												X	X		X	X				
	DCX-4S	FC												X	X		X	X				
	DCX8510	FC												X	X		X	X				
	DCX8510-4	FC												X	X		X	X				
	M5424	FC												X	X		X	X				
	M6505	FC												X	X	X	X	X				
	RX	Eth	X	X					X	X												
	Turbolron 24X	Eth			X	X					X											
	VDX 6720	Conv			X	X					X		X	X								
	VDX 6730	Conv													X	X		X	X			
	VDX 6740	Conv			X	X					X		X	X			X	X				
Cisco	Catalyst 3560X	Eth													X			X				

Vendor	Model	Switch Type	PS Series								SC Series			FS Series								
			PS4000	PS4100	PS4110	PS4210	PSM4110	PS5000/5500	PS6000/6500	PS 6010/6510	PS6100	PS6110	PS6210	Series 20/30	Series 40	SCv2000 Series	SC4000	SC8000	FS7500	FS7600	FS7610	FS8600
Cisco	Catalyst 3750E	Eth												X			X					
	Catalyst 3750X-48T-L	Eth	X	X				X	X		X		X*									
	Catalyst 4948 10Gb	Eth	X	X				X	X		X		X*			X						
	Catalyst 4948E	Eth	X	X				X	X		X		X*			X						
	M3130G	Eth	X	X				X	X		X											
	M3130X	Eth	X	X				X	X		X											
	MDS 9124	FC												X	X	X	X	X	X			
	MDS 9148	FC												X	X	X	X	X	X			X
	MDS 9222i	FC												X	X	X	X	X	X			X
	Nexus 5010/5020	Eth			X	X				X		X	X	X	X				X			X
	Nexus 5548UP/5596UP	Conv			X	X				X		X	X	X	X	X	X	X	X	X	X	X
	Nexus 6001	Conv			X	X	X			X		X	X				X	X				X
Dell	Nexus 7000 Family	Conv			X	X				X		X	X				X	X				X
	DN N2000	Eth		X		X*			X		X		X*				X					
	DN N3000	Eth		X		X*			X		X		X*			X	X		X		X	
	DN N4000	Eth			X	X				X		X	X		X	X	X	X		X	X	
	DN S5000	Conv			X	X				X		X	X		X	X	X	X	X	X	X	X
	DN S6000	Eth			X	X				X		X	X		X		X	X				X
	DN Z9000 (Force10 Z9000)	Eth			X	X				X		X	X									
	DN Z9500	Eth				X	X				X		X	X								
	Force10 C-Series	Eth	X	X				X	X		X											
	Force10 MXL	Conv				X	X	X			X		X	X		X	X	X	X	X	X	
	Force10 S25N	Eth	X	X					X	X		X		X*								
	Force10 S4810P	Eth				X	X				X		X	X		X		X	X			X
	Force10 S4820T	Eth				X	X				X		X	X			X					
	Force10 S50N	Eth	X	X		X*		X	X		X		X*									
	Force10 S55	Eth	X	X		X*		X	X		X		X*								X	X
	Force10 S60	Eth	X	X		X*		X	X		X		X*				X				X	X

Vendor	Model	Switch Type	PS Series									SC Series			FS Series						
			PS4000	PS4100	PS4110	PS4210	PSM4110	PS5000/5500	PS6000/6500	PS 6010/6510	PS6100	PS6110	PS6210	Series 20/30	Series 40	SCv2000 Series	SC4000	SC8000	FS7500	FS7600	FS7610
Dell	PowerConnect 6224	Eth	X	X		X*		X	X		X		X*		X		X				X
	PowerConnect 6248	Eth	X	X		X*		X	X		X		X*		X		X				X
	PowerConnect 7024	Eth	X	X		X*		X	X		X		X*		X		X	X	X		X
	PowerConnect 7048	Eth	X	X		X*		X	X		X		X*		X		X				X
	PowerConnect 8024F	Eth			X	X				X		X	X		X		X	X	X	X	X
	PowerConnect 8132/8132F	Eth			X	X				X		X	X		X		X	X			X
	PowerConnect 8164/8164F	Eth			X	X				X		X	X		X		X	X		X	X
	PowerConnect B-DCX 4S	FC													X	X		X	X		
	PowerConnect B-Series 8000e	Eth			X	X				X		X	X	X	X		X	X			
	PowerConnect B-Series RX	Eth	X					X	X												
	PowerConnect J-Series EX4200	Eth	X			X*		X	X					X*							
	PowerConnect J-Series EX4500	Eth			X	X				X		X									
	PowerConnect M6348	Eth	X	X		X*		X	X		X		X*								
	PowerConnect M6505	FC													X	X	X	X	X	X	
	PowerConnect M8024-k	Eth			X	X	X			X		X	X		X		X	X			
	PowerConnect M8428-k	Conv			X	X	X			X		X	X		X		X	X			
	PowerEdge IO Aggregator	Eth					X														
HP	5900	Eth			X	X				X		X	X				X	X			
Juniper Networks	EX4200-48T	Eth	X	X		X*		X	X		X		X*								
	EX4500-48T	Eth								X											
McDATA	Intrepid 6064	FC													X	X		X	X		
	Sphereon 4400	FC													X	X		X	X		
	Sphereon 4700	FC													X	X		X	X		
Qlogic	1400	FC													X	X		X	X		
	SANBox 5600	FC													X	X		X	X		
	SANBox 5800	FC													X	X		X	X		

* PS4210 and PS6210 models supported connecting to 1Gb Ethernet ports only.

Fibre Channel Switches

Configurations listed in this section are supported at Level 1 (as described above) for the listed switch firmware/array firmware combinations. Solutions/combinations that differ from the firmware versions listed for any given switch or array would be supported at Level 2.

Switch validation reflects only those switches that connect directly to the array ports. There is no required validation for other "upstream" switches. Upstream switches may be any industry standard Fibre Channel switch that is supported by the switches that it is connected to.

The columns referencing "Virtual" and "Legacy" port modes have been removed. While this information was pertinent early in the product's history as NPIV based virtual port mode was introduced into the product, this is no longer a necessary consideration for any switch FW or host OS released over the last couple of years. For this reason, the DSCM will no longer be tracking this information and it should be assumed that Dell will provide full support for both legacy port mode and virtual port mode unless specifically indicated for that specific table entry.

Note: All FC Switches listed for SCOS 6.6 or later are supported for SCv Series as well as SC Series Arrays

Persistent FCIDs

In HP-UX and IBM AIX environments, the FCIDs of WWNs need to be persisted. However, HP-UX 11i v3 and greater has a feature called Agile Addressing that, if enabled and used, eliminates the need for persistent FCIDs. Similarly, AIX 5.3 and greater has a feature called Dynamic Tracking that also eliminates that need for persistent FCIDs, but it is limited to a failover time of 15 seconds.

Brocade's persistent FCID feature is called fabric.wwnPidMode and is a switch-wide setting. It can be enabled in the GUI as well as the command line. It requires a minimum FOS of 6.4.0 and is only available on 8Gbps hardware. In addition, fabric.wwnPidMode does not persist virtual WWPN's FCIDs.

Cisco's persistent FCID feature is called Persistent FCID and is enabled on a per VSAN basis. It can be enabled in the GUI as well as the command line. In MDS 91xx switches, there is a limitation that does not allow virtual WWPN's to have their FCIDs persisted. In MDS 92xx switches, Persistent FCID and NPIV ports coexist correctly.

There are HP-UX and AIX Copilot Services Technical Alerts (CSTAs) outlining these switch persistent FCID configuration requirements in more detail. These CSTAs are available on Knowledge Center (<http://kc.compellent.com>).

Vendor	Model	Type	Switch FW Version	SC OS Supported	Notes
Brocade	300	FC	6.3.2a	5.5.x	
				6.0.x	
			6.4.0	5.3.x	
				5.4.x	

Vendor	Model	Type	Switch FW Version	SC OS Supported	Notes
Brocade				5.5.x	
			6.4.2	6.0.x	
			7.0.0b	5.5.x	
				6.1.x	
				6.2.x	
			7.0.2	6.3.x	
			7.1.0a	5.6.x	
				6.3.x	
				6.4.x	
			7.3.0c	6.6.x	
	5000	FC	6.4.2	6.5.x	
	5100	FC	6.3.0c	5.4.x	
	5300	FC	6.4.1a	5.5.x	
	65xx Family	FC	7.0.0b	5.5.x	
				6.0.x	
				6.1.x	
				6.2.x	
			7.0.2	6.3.x	
				6.4.x	
				6.5.x	
			7.1.0a	5.6.x	
				6.3.x	
				6.4.x	
			7.2.0a*	6.4.x	
				6.5.x	
				6.6.x	
				7.3.0c	6.6.x
	8000/8000e	Conv	6.3.2a	5.5.x	
				6.0.x	
			6.4.2	5.5.x	
			7.0.0b	5.5.x	
				6.1.x	

Vendor	Model	Type	Switch FW Version	SC OS Supported	Notes
Brocade	DCX-4S	FC	6.4.1a	6.2.x	
				5.5.x	
		FC	6.4.2	6.0.x	
				5.5.x	
				6.0.x	
	DCX-8510-4	FC	7.0.0b	5.5.x	
				6.0.x	
				6.1.x	
				6.2.x	
			7.0.2	5.5.x	
				6.3.x	
Cisco	MDS 9124	FC	5.0.1a	5.4.x	
				6.0.x	
			5.0.4d	5.5.4+	
				6.0.x	
				6.3.x	
			5.2.6a	6.3.x	
	MDS 9148	FC	4.1.3a	6.3.10+	
				6.4.x	
			5.0.1a	5.4.x	
			5.0.4	5.4.x	
				5.5.x	
			5.0.4d	5.5.4+	
				6.0.x	
				6.1.x	
			5.0.4d	6.2.x	
			5.2.6a	5.6.X	
				6.3.x	
				6.4.x	
			6.2.3	6.4.x	
				6.5.x	
			6.2.7	6.4.x	

Vendor	Model	Type	Switch FW Version	SC OS Supported	Notes
Cisco	MDS 9222i	FC		6.5.x	
				6.6.x	
				6.2.11	6.6.x
			4.1.3	5.3.x	
			5.0.1a	5.3.x	
				5.4.x	
			5.0.4	5.4.x	
				5.5.x	
				6.0.x	
			5.0.4d	5.5.x	
				6.0.x	
				6.1.x	
				6.2.x	
			5.2.6	6.3.x	
			5.2.6a	5.5.x	
				5.6.x	
				6.3.x	
				6.4.x	
			6.2.3	6.5.x	
			6.2.7	6.4x	
				6.5.x	
				6.6.x	
			6.2.11	6.6.x	
Dell	PowerConnect B-DCX 4S	FC	6.4.1a	6.3.1	
	PowerConnect B-Series	Conv	6.3.2a	5.5.x	
	Dell Networking S5000	Conv	9.1.1.x	6.4.x	
				6.5.x	
	8000/8000e		6.3.2a	6.0.x	

Vendor	Model	Type	Switch FW Version	SC OS Supported	Notes
Dell			7.0.0b	5.5.x	
				6.1.x	
				6.2.x	
	PowerConnect M5424	FC	6.4.2	6.3.x	
			7.1.0a	5.6.x	
				6.4.x	
	PowerConnect M6505	FC	7.0.1-sh	5.5.x	
				6.2.x	
				6.3.x	
				6.4.x	
			7.2.0a	6.4.x	
				6.5.x	
				6.6.x	
			7.3.0c	6.6.x	

Ethernet Switches

The following table lists all of the validated Ethernet switches. These switches, depending on feature capability may support Fibre Channel over Ethernet (FCoE) as well as iSCSI SAN solutions. For each switch listed, the Dell Storage product series tested along with supported switch features relevant to that product are indicated.

Testing of any listed switch is validated for use only at the switch's designed speed class. For example, if a switch is designed as a 1GbE switch – even though it may have a limited set of 10GbE ports – typically provided for infrastructure interconnects – the switch is only validated with 1Gb native array interfaces. The one general exception to this policy is recent 10GbE/40GbE switches that are designed to use 40GbE to 10GbE "breakout cables". If the switch is designed to leverage this capability, Dell does include the use of these cables to access the – now native 10Gb ports – for use with 10GbE arrays.

Note: Switch validation reflects only those switches that connect directly to the array ports. There is no required validation for other "upstream" switches.

Upstream switches may be any industry standard Fibre Channel switch that is supported by the switches that it is connected to.

Note 2: The columns referencing "Virtual" and "Legacy" port modes have been removed. While this information was pertinent early in the product's history as NPIV based virtual port mode was introduced into the product, this is no longer a necessary consideration for any switch FW or host OS released over the last couple of years. For this reason, the DSCM will no longer be tracking this information and it should be assumed that Dell will provide full support for both legacy port mode and virtual port mode unless specifically indicated for that specific table entry.

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series					
				PS OS	DCB	Switch Interconnect				iSCSI	Switch Interconnect				
						vPC/VLT	Stacking	LAG			FCoE	iSCSI	vPC/VLT	Stacking	LAG
Brocade	8000/8000e	Conv	6.3.0a	4.3.x	NA	NA	NA	L1	NA	L3	L3	NA	NA	L3	
			6.4.1a	5.1.x	L1	NA	NA	L1	NA	L3	L3	NA	NA	L3	
			6.4.2	L2	L2	NA	NA	L2	NA	5.5.x	L3	NA	NA	L1	
			7.0.0b	6.0.x	L1	NA	NA	L1	NA	L2	L3	NA	NA	L1	
				7.0.x	L1	NA	NA	L1		6.3.x	L3	NA	NA	L1	
			7.0.2	L2	L2	NA	NA	L2			L3	NA	NA	L1	
			7.1.0a	L2	L2	NA	NA	L1	NA	5.6.x	L3	NA	NA	L1	
						NA	NA	L1		6.3.x	L3	NA	NA	L1	
						NA	NA	L1		6.4.x	L3	NA	NA	L1	
	RX	Eth	7.1.2	7.0.x	L1	NA	NA	L1	NA	L2	L3	NA	NA	L2	
			2.701FT157	5.0.2	NA	NA	NA	L1	L3	L3	L3	NA	NA	L3	
	Turbolron 24X		2.8.0aT143	6.0.x	NA	NA	NA	L1	L3	L3	L3	NA	NA	L3	

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series										
				PS OS	DCB	Switch Interconnect				FCoE	iSCSI	Switch Interconnect								
						vPC/VLT	Stacking	LAG				vPC/VLT	Stacking	LAG						
Brocade			4.2.0.0a	4.3.x	NA	NA	NA	L1	NA	NA	5.4.x	NA	NA	L1						
						NA	NA				5.5.x	NA	NA	L1						
						NA	NA				6.0.x	NA	NA	L1						
			7.3.0	L2	NA	NA	NA	L2	NA	NA	5.5.x	NA	NA	L1						
						NA	NA				6.3.x	NA	NA	L1						
						NA	NA				6.4.x	NA	NA	L1						
			VDX 6720	Conv	2.0.1a	5.1.x	L1	NA	L3	NA	L3	5.5.x	L3	NA	L1					
								NA	L3			6.0.x	L3	NA	L1					
								NA	L3			6.1.x	L3	NA	L1					
	VDX 6730	Conv	3.0.1	L3	L3	NA	L3	L3	NA	6.3.x	L3	L3	NA	L1						
	VDX 6740	Conv	4.1.0	L3	L3	NA	L3	L3	L3	L3	L3	6.5.x	L3	NA	L1					
			5.0.1	7.0.x	L3	NA	L3	L1	6.6.x			6.6.x	L1	NA	L1					
Cisco	Catalyst 3560E	Eth	12.2(53)SE2	L3	NA	NA	L3	L3	L3	NA	NA	5.4.x	NA	L1	L1					
												6.1.x	NA	L1	L1					
												6.2.x	NA	L1	L1					
			12.2(53)SE2	L3	NA	NA	L3	L3	L3	NA	NA	6.3.x	NA	L1	L1					
												6.4.x	NA	L1	L1					
												6.5.x	NA	L1	L1					
	Catalyst 3560X	Eth	12.2(53)SE2	L3	L3	L3	L3	L3	L3	NA	NA	6.3.x	NA	L1	L1					
												6.4.x	NA	L1	L1					
												6.5.x	NA	L1	L1					
	Catalyst 3750E	Eth	12.2(35)SE5	Deprecated					L3	NA	5.4.x	NA	L1	L1						
				Deprecated							5.5.x	NA	L1	L1						
			12.2(53)SE2	Deprecated							6.0.x	NA	L1	L1						
			15.0(2)SE2	Deprecated							6.1.x	NA	L1	L1						
				Deprecated							5.6.x	NA	L1	L1						
	Catalyst 3750X-48T-L	Eth	12.0(1)SE2	5.1.x	NA	NA	L1	L1	L3	NA	6.4.x	NA	L1	L1						
				6.0.x	NA	NA	L1	L1			6.5.x	NA	L1	L1						

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG					vPC/VLT	Stacking	LAG	
Cisco	Catalyst 4948 10Gb	Eth	12.0(2)SE4	7.0.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	L3	
			12.2(40)SG	4.3.x	NA	NA	NA	L1	L3	NA	L3	NA	L3	L3	L3	
		Catalyst 4948E	Eth	15.0(2)SG8	7.0.x	NA	NA	NA	L1	6.6.x	NA	6.6.x	NA	L1	L1	
	Nexus 5010/5020*	Conv	4.1(3)N1(1)	L3	NA	L3	NA	L3	NA	L3	5.3.x	L1	NA	L1	L1	
			4.2(1)N1(1)								5.4.x	L1	NA	L1	L1	
			4.2(1)N2(1)								6.0.x	L1	NA	L1	L1	
			5.0(3)N1(1c)	L2	NA	L2	NA	L2	NA	L2	5.5.x	6.1.x	L1	NA	L1	
			5.0(3)N2(2)								6.0.x	L2	L1	NA	L1	
			5.0(4)N1(4d)								6.1.x	L1	NA	L1	L1	
			5.1(3)N1(1a)								6.2.x	L1	NA	L1	L1	
			5.1(3)N2(1)	L2	NA	L2	NA	L2	NA	L2	5.5.x	L2	NA	L2	L2	
			5.1(3)N2(1b)								5.6.x	L2	NA	L2	L2	
			5.2(1)N1(5)								5.7.x	L2	L2	NA	L2	
	Nexus 55xx	Eth	5.0(2)N2(1)	L3	N	L3	NA	L3	NA	L3	5.5.x	L1	NA	L1	L1	
			7.1(0)N1(1b)	L3	N	L3	NA	L3	NA	L3	6.6.x	L1	NA	L1	L1	
	Nexus 55xxUP	Conv	5.0(3)N1(1c)	L3	N	L3	NA	L3	NA	6.3.x	5.5.x	L1	NA	L1	L1	
			5.2(1)N1(1)								6.0.x	L1	NA	L1	L1	
			5.2(1)N1(2a)								6.1.x	L1	NA	L1	L1	
			5.2(1)N1(2b)	L2	N	L2	NA	L2	NA	L2	6.2.x	L1	NA	L1	L1	

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series							
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect				
						vPC/VLT	Stacking	LAG			SCOS	SCOS	vPC/VLT	Stacking	LAG		
Cisco													6.3.x	L1	NA	L1	
				6.0(2)N1(2)	6.0.x	N	L1	NA	L1	NA	L2	L2	L2	NA	NA	L1	
				6.0(2)N2(2)	L2	N	L2	NA	L2	NA	6.4.x	6.4.x	L1	NA	L1		
				7.0(0)N1(1)	7.0.x	L1	L1	NA	L1	NA	6.5.x	6.5.x	L1	NA	L1		
				7.1(0)N1(1b)	L2	N	L3	NA	L3	NA	L2	6.6.x	L1	NA	L1		
				7.0(1)N1(1)	L2	L2	L2	NA	L2	NA	6.4.x	6.4.x	L1	NA	L1		
				7.0(3)N1(1)	L2	L2	L2	NA	L2	NA	6.5.x	6.5.x	L1	NA	L1		
				Nexus 6000 Family	Conv	7.0(3)N1(1)	7.0.x	L1	L1	NA	L1	NA	6.5.x	6.5.x	L1	NA	L1
						7.1.x	L1	L1	NA	L1	NA	6.6.x	L1	NA	L1		
						7.1(0)N1(1b)	L2	N	L3	NA		L3	L3	6.6.x	L1	NA	L1
				Nexus 7000 Family	Conv	6.1(1)	L3	NA	L3	NA	L3	L3	L3	6.4.x	L1	NA	L1
						6.1(2)	6.0.x	NA	L3	NA	L1	L3	L3	L2	L2	NA	L2
						6.2(2a)	7.0.x	NA	L3	NA	L1	L3	L3	L2	L2	NA	L2
						6.2(6)	7.0.x	N	L3	NA	L1	L3	L3	L2	L2	NA	L2
	UCS 6120XP°	Conv	1.4(1m)			L3	NA	L3	NA	L3	NA	5.5.x	L3	L3	NA	L3	
Dell	DN N2000	Eth	6.0.x	7.0.x		NA	NA	L1	L1	L3	NA	L3	NA	L3	NA	L3	L3
			6.2.x		L2	L2	L2	NA	L2	6.6.x	NA	6.6.x	L1	NA	L1		
	DN N3000	Eth	6.0.x	7.0.x		NA	NA	L1	L1	L3	NA	6.5.x	NA	L1	L1		
			6.1.x		L2	L2	L2	NA	L2	6.6.x	NA	6.6.x	L1	NA	L1		
	DN N4000	Eth	6.0.x	7.0.x		NA		L1	L1	6.6.x	L3	6.5.x	NA	L1	L1		
			6.1.x	7.1.x	L1	NA	L1	L1	L1	6.6.x	L3	6.6.x	NA	L1	L1		
			6.2.x		L2	L2	L2	NA	L2	6.6.x	NA	6.6.x	L1	NA	L1		
	DN S5000	Conv	9.0.x	6.0.x	L1	L1	L1	L1	L1	NA	L3	6.3.x	L1	L1	L1		
				7.0.x	L1	L1	L1	L1	L1		NA	6.3.x	L1	L1	L1		
			9.1.x	7.0.x	L1	L1	L1	L1	L1	NA	L3	6.3.x	L1	L1	L1		

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG			SCOS	SCOS	vPC/VLT	Stacking	LAG	
Dell											6.5.x	L1	L1	L1		
			9.6.x	7.0.x	L1	L1	L1	L1	NA	L3	6.5.x	L1	L1	L1		
			9.7.x	L2	L2	L2	NA	L2	NA	NA	6.6.x	L1	NA	L1		
	DN S6000	Eth	9.0.x	6.0.x	L1	L1	L1	L1	NA	L3	6.4.x	L1	L1	L1		
			9.3.x	7.0.x	L1	L1	L1	L1	NA	L3	L2	L2	L2	L2		
			9.4.x	7.0.x	L1	L1	L1	L1	NA	L3	L2	L2	L2	L2		
			9.5.x	L2	L2	L2	L2	L2	NA	L3	6.5.x	L1	L1	L1		
			9.6.x	7.0.x	L1	L1	L1	L1	NA	L3	L2	L2	L2	L2		
			9.7.x	7.1.x	L1	L1	L1	L1	NA	L3	6.6.x	L1	NA	L1		
	DN Z9000 (Force10 Z9000)	Eth	9.3.x	7.0.x	NA	L1	L1	L1	NA	L3	L3	L3	L3	L3		
			9.4.x	7.0.x	NA	L1	L1	L1	NA	L3	L3	L3	L3	L3		
			9.7.x	7.1.x	L1	L1	L1	L1	NA	L3	6.6.x	L1	NA	L1		
	DN Z9500	Eth	9.5.x	7.0.x	L3	L1	L1	L1	NA	L3	L3	L3	L3	L3		
			9.7.x	7.1.x	L1	L1	L1	L1	NA	L3	6.6.x	L1	NA	L1		
	Force10 C-Series	Eth	7.7.2.x	4.3.x	NA	NA	NA	L1	L3	NA	L3	NA	NA	L3		
	DN MXL (Force10 MXL)	Eth	8.3.16.x	5.2.x	L1	L1	L1	L1	L3	NA	5.5.x	L1	L1	L1		
				6.0.x	L1	L1	L1	L1			6.2.x	L1	L1	L1		
			9.2.x	6.0.x	L1	L1	L1	L1	L3		6.3.x	L1	L1	L1		
				7.0.x	L1	L1	L1	L1	L3	NA	6.4.x	L1	L1	L1		
			9.3.x	L2	L2	L2	L2	L2	L3	NA	6.5.x	L1	L1	L1		
				9.4.x	7.0.x	L1	L1	L1	L3	NA	L2	L2	L2	L2		
			9.5.x	L2	L2	L2	L2	L2	6.6.x	NA	6.6.x	L1	NA	L1		
				9.6.x	7.0.x	L1	L1	L1	L2	L3	L2	L2	L2	L2		
			9.7.x	7.1.x	L1	L1	L1	L1	6.6.x	L3	6.6.x	L1	NA	L1		
	Force10 S25N	Eth	7.7.2.x	4.3.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	L3	
			8.4.2.x	5.1.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	L3	
				6.0.x	NA	NA	L1	L1			L3	NA	L3	L3	L3	

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG			SCOS	SCOS	vPC/VLT	Stacking	LAG	
Dell				7.0.x	NA	NA	L1	L1								
Dell	DN S4810 (Force10 S4810)	Eth	8.3.7.x	5.1.x	L3	NA	L1	L1	NA	NA	5.5.x	L1	L1	L1		
				8.3.12.x	5.2.x	L1	NA	L1	L1	NA	NA	5.5.x	L1	L1	L1	
					6.0.x	L1	NA	L1	L1			6.3.x	L1	L1	L1	
				9.1.x	6.0.x	L1	L1	L1	L1	NA	NA	6.4.x	L1	L1	L1	
				9.2.x	7.0.x	L1	L1	L1	L1	NA	NA	6.4.x	L1	L1	L1	
				9.3.x	L2	L2	L2	L2	NA	NA	6.5.x	L1	L1	L1		
				9.4.x	7.0.x	L1	L1	L1	L1	NA	NA	L2	L2	L2	L2	
				9.5.x	L2	L2	L2	L2	NA	NA	6.4.x	L1	L1	L1		
											6.5.x	L1	L1	L1		
											6.6.x	L1	NA	L1		
				9.6.x	7.0.x	L1	L1	L1	L1	NA	L3	6.5.x	L1	L1	L1	
					7.1.x	L1	L1	L1	L1							
				9.7.x	7.1.x	L1	L1	L1	L1	NA	L3	6.6.x	L1	NA	L1	
Dell	DN S4820T (Force10 S4820T)	Eth	8.3.19.x	6.0.x	L1	L1	L1	L1	L3	NA	L3	L3	L3	L3		
				9.2.x	7.0.x	L1	L1	L1	L1	L3	NA	L3	L3	L3	L3	
				9.4.x	7.0.x	L1	L1	L1	L1	L3	NA	L3	L3	L3	L3	
				9.5.x	L2	L2	L2	L2	6.6.x	NA	6.6.x	L1	L1	L1		
				9.6.x	7.0.x	L1	L1	L1	L1	L2	L3	L2	L2	L2	L2	
				9.7.x	7.1.x	L1	L1	L1	L1	6.6.x	L3	6.6.x	L1	L1	L1	
Dell	Force10 S50N	Eth	7.7.2.x	4.3.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	L3	
				8.4.2.x	5.1.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	
					6.0.x	NA	NA	L1	L1							
					7.0.x	NA	NA	L1	L1							
Dell	Force10 S55	Eth	8.3.5.x	5.1.x	NA	NA	L1	L1	L3	NA	L3	NA	L3	L3	L3	
				6.0.x	NA	NA	L1	L1								
				7.0.x	NA	NA	L1	L1								

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG			SCOS	SCOS	vPC/VLT	Stacking	LAG	
Dell	Force10 S60	Eth	8.3.3.x	5.1.x	NA	NA	L1	L1	6.6.x	NA	6.6.x	L1	NA	L1		
				6.0.x	NA	NA	L1	L1								
				7.0.x	NA	NA	L1	L1								
	PowerConnect 62xx Family	Eth	2.2.0.x	L3	NA	NA	L3	L3	6.3.1	NA	6.3.1	NA	L1	L1		
			3.2.0.x	4.1.x	NA	NA	L1	L1	L3	NA	6.3.1	NA	L1	L1		
			3.3.4.x	6.0.x	NA	NA	L1	L1	L3	NA	6.3.1	NA	L1	L1		
			3.3.7.x	7.0.x	NA	NA	L1	L1	L3	NA	L2	NA	L2	L2		
	PowerConnect 70xx Family	Eth	4.0.x	L3	NA	NA	L3	L3	L3	NA	5.5.x	NA	L1	L1		
											6.0.x	NA	L1	L1		
											6.1.x	NA	L1	L1		
											6.2.x	NA	L1	L1		
											6.3.x	NA	L1	L1		
			4.1.x	4.3.x	NA	NA	L1	L1	L3	NA	L2	NA	L2	L2		
				4.2.x	6.0.x	NA	NA	L1	L1	L3	NA	L2	NA	L2	L2	
			5.0.x	6.0.x	NA	NA	L1	L1	L3	NA	5.5.x	NA	L1	L1		
											5.6.x	NA	L1	L1		
											6.3.x	NA	L1	L1		
											6.4.x	NA	L1	L1		
											5.1.x	6.0.x	NA	L2	L2	
											7.0.x	NA	NA	L1	L1	
	PowerConnect 81xx Family	Eth	5.0.x	5.2.x	L1	NA	L1	L1	L3	NA	6.2.x	NA	L1	L1		
				6.0.x	L1	NA	L1	L1	L3	NA	6.3.x	NA	L1	L1		
			5.1.x	6.0.x	L1	NA	L1	L1	L3	NA	6.4.x	NA	L1	L1		
				7.0.x	L1	NA	L1	L1	L3	NA	L2	NA	L2	L2		
			6.0.x	7.0.x	L1	NA	L1	L1	L3	NA	6.5.x	NA	L1	L1		
	PowerConnect B-Series B8000/8000e	Eth	6.3.0a	4.3.x	N	NA	NA	L1	NA	L3	L3	NA	NA	NA	L1	
			6.3.2a	L2	L2	NA	NA	L2	NA	6.0.x	L3	NA	NA	NA	NA	
			6.4.1a	5.1.x	L1	NA	NA	L1	NA	L2	L3	NA	NA	NA	L3	
			6.4.2	L2	L2	NA	NA	L2	NA	5.5.x	L3	NA	NA	NA	L1	

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG			SCOS	SCOS	vPC/VLT	Stacking	LAG	
Dell				7.0.0b	6.0.x	L1	NA	NA	L1	NA	L2	L3	NA	NA	L1	
				7.0.x	L1	NA	NA	NA	L1		6.1.x	6.2.x				
				7.0.2†	L2	L2	NA	NA	L2		6.3.x	L2	NA	NA	L1	
				7.1.0at	L2	L2	NA	NA	L2	NA	5.6.x	L3	NA	NA	L1	
											6.3.x		NA	NA	L1	
											6.4.x		NA	NA	L1	
				7.1.2	7.0.x	L1	NA	NA	L1	NA	L2	L3	NA	NA	L3	
	PowerConnect B-Series RX	Eth		2.7.2fT157	5.0.2	NA	NA	NA	L1	L3	L3	L3	NA	NA	L3	
				2.8.0aT143	6.0.x	NA	NA	NA	L1	L3	L3	L3	NA	NA	L3	
	PowerConnect J-Series EX4200	Eth		10.2R1.8	5.0.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
				12.0R1.9	6.0.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
					7.0.x	NA	NA	L1	L1							
	PowerConnect J-Series EX4500	Eth		10.2R1.8	5.0.x	NA	NA	L1	L1	NA	L3	L3	NA	L3	L3	
				12.0R9	6.0.x	NA	NA	L1	L1	NA	L3	L3	NA	L3	L3	
	PowerConnect M6348	Eth		3.1.3.x	4.3.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
				4.2.x	6.0.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
				5.0.x	6.0.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
				5.1.x	6.0.x	NA	NA	L1	L1	L3	L3	L3	NA	L3	L3	
				7.0.x	NA	NA	L1	L1								
	PowerConnect M8428-k	Eth		6.3.1_dcb1	6.0.x	N	NA	L3	L1	L3	L3	L2	NA	NA	L2	
				6.3.1_dcb5	7.0.x	N	NA	L3	L1	NA	6.4.x	6.4.x	NA	NA	L1	
											6.5.x	6.5.x	NA	NA	L1	
											6.6.x	6.6.x	NA	NA	L1	
HP	5900AF-48G	Eth		8.3.17.x	6.0.x	L1	NA	L1	L1	L3	NA	NA	NA	NA	NA	
				9.2.x	6.0.x	L1	L1	L1	L1	L3	NA	NA	NA	NA	NA	
					7.0.x	L1	L1	L1	L1							
				9.6.x	7.0.x	L1	L1	L1	L1	L3	L3	L2	L2	L2	L2	
Juniper	EX4200-48T	Eth	10.2R1.8	5.0.x	NA	NA	L1	L1	L1	L3	L3	6.5.x	NA	NA	L1	

Vendor	Model	Type	Switch FW Version	PS Series					SCv2000 Series	SC Series						
				PS OS	DCB	Switch Interconnect				iSCSI	FCoE	iSCSI	Switch Interconnect			
						vPC/VLT	Stacking	LAG					vPC/VLT	Stacking	LAG	
Juniper			12.0R1.9	6.0.x	NA	NA	L1	L1	L3	L3	L3	L3	NA	L3	L3	
				7.0.x	NA	NA	L1	L1		NA	L3	L3	NA	L3	L3	
	EX4500-48T	Eth	10.2R1.8	5.0.x	NA	NA	L1	L1	NA	L3	L3	L3	NA	L3	L3	
				12.0R9	6.0.x	NA	NA	L1	L1	NA	L3	L3	NA	L3	L3	

^o Dell has performed limited SC Series testing directly connecting into a Cisco UCS 6120XP over FCoE connectivity. This requires the 6120XP to be in FC Switching Mode and Storage Center ports to be in Virtual Port mode. If leveraging a native Fibre Channel connection, an external switch is required and the 6120XP must be set to FC End Host Mode. Cisco UCS does not support FCoE direct connect on UCS firmware versions prior to 2.1(1).

*Cisco Nexus 5010/5020 FCoE with firmware version 5.1(1)N1(2A) is not supported. Firmware version 5.1(3)N1(1a) is recommended and supported

SAN Deprecated Switches

The switches listed below have been previously tested for use with Dell Storage products, but they are no longer tested by Dell. These switches are supported at Level 2 for configurations listed and Level 3 for all other configurations.

Vendor	Model	Type	Switch FW Version	Last Valid OS Version	PS Series			SC Series		
					Last Valid OS Version					
					Fibre Channel	FCoE	iSCSI			
Arista	7148SX	Eth	EOS4.5.1	4.3.x	NA	NA	L3			
Brocade	5100	FC	6.3.0c	NA	5.4.x	NA	L3			
	FGS648P-STK	Eth	05.0.1T7e11	4.1.x	NA	NA	L3			
	FESX648	Eth	04.2.00T73e2	4.1.x	NA	NA	L3			
	FCX648S	Eth	06.0.00T7f12	4.1.x	NA	NA	L3			
Cisco	Catalyst 3750E Family	Eth	12.2(35)SE51	4.1.x	NA	NA	L3			
	Catalyst 4900M	Eth	12.2(40)SG2	4.1.x	NA	NA	L3			
	MDS 9124	FC	5.01a	NA	5.4.x	NA	L3			
	MDS 9128	FC	5.0.4	NA	5.4.x	NA	L3			
	M3130G	Eth	12.2(50)SE	Host Only	NA	NA	L3			
	M3130X	Eth	12.2(50)SE	Host Only	NA	NA	L3			
Dell	PowerConnect 5424	Eth	2.0.0.43	4.1.x	NA	NA	L3			
	PowerConnect 5448	Eth	2.0.0.43	4.1.x	NA	NA	L3			
	PowerConnect 8024	Eth	5.1.x	7.0.x	NA	NA	L3			
	PowerConnect 8024F	Eth	5.1.x	7.0.x	NA	NA	6.5.x			
	PowerConnect M6220	Eth	2.2.0.3	Host Only	NA	NA	L3			
			5.0.1.3	Host Only	NA	NA	L3			
			5.1.x	Host Only	NA	NA	L3			
	PowerConnect M8024	Eth	5.1.0.x	Host Only	NA	NA	6.4.x			
Extreme Networks	X450a-48T	Eth	1.0.3.11	4.1.x	NA	NA	L3			
HP	3500yl-48G	Eth	K12.122	4.1.x	NA	NA	L3			
McData	4300	FC	9.9.6.2	NA	5.4.x	NA	NA			
	Sphereon 4400	FC	09.01.00.50	NA	5.4.x	NA	NA			

Vendor	Model	Type	Switch FW Version	Last Valid OS Version	PS Series			SC Series		
					Last Valid OS Version			Fibre Channel		
					FCoE	iSCSI				
McData	Sphereon 4500	FC	9.9.0.16	NA	5.4.x	NA	NA			
	Sphereon 4700	FC	9.01.00.50	NA	4.2.x	NA	NA			
	Intrepid 6064	FC	9.01.00.50	NA	3.6.x	NA	NA			
Nortel/Avaya	ERS5510-48T	Eth	5.0.0.21	4.1.x	NA	NA	L3			
Qlogic	1400	FC	5.0.1.10.0	NA	4.1.x	NA	NA			
	SANBox 5600	FC	7.4.0.16.0	NA	5.2.x	NA	NA			
	SANBox 5800	FC	7.4.0.16.0	NA	5.2.x	NA	NA			

Fibre Channel Host Bus Adapters

Configurations listed in this section are supported at Level 1 (as described above) for the listed switch firmware/array firmware combinations. Switch validation reflects only those switches that connect directly to the array ports. There is no validation for other "upstream" switches. Feature and other support levels are indicated where different from the default Level 1 support.

NOTE: Unless otherwise noted, the OS provided "native" Multipath IO functionality is used for all validations listed.

Persistent FCIDs

In HP-UX and IBM AIX environments, the FCIDs of WWNs need to be persisted. However, HP-UX 11i v3 and greater has a feature called Agile Addressing that, if enabled and used, eliminates the need for persistent FCIDs. Similarly, AIX 5.3 and greater has a feature called Dynamic Tracking that also eliminates that need for persistent FCIDs, but it is limited to a failover time of 15 seconds.

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Apple	OS X	5.3	LSI	7x02XP-LC	2.0.1	1.00.30	1.2.23.0	L3	4.x.y	L3	
				7x04EP	2.0.2	NA	1.3.20.0	L3	4.x.y	L3	
		5.4	LSI	7x02EP	2.0.2	NA	1.2.18.0	L3	4.x.y	L3	
		5.5	LSI	7x02EP	2.0.2	NA	1.2.18.0	L3	4.x.y	L3	
		5.6	LSI	7x02XP-LC	2.0.2	1.00.30	1.2.23.0	L3	4.x.y	L3	
		5.7	LSI	7x02EP	2.0.2	NA	1.2.18.0	L3	5.1.x	L3	
		5.8	LSI	7x02XP-LC	2.0.2	1.00.30	1.2.23.0	L3	5.1.x	L3	
				7x02EP	2.0.2	NA	1.2.18.0	L3	4.x.y	L3	
									5.2.x	L3	
									5.3.x	L3	
									5.4.x	L3	
									5.5.x	L3	
		6.2	LSI	7x04EP	NA	NA	NA	L3	5.2.x	L3	
		6.7	LSI	7x04EP	NA	NA	NA	L3	5.2.x	L3	
		6.8	LSI	7x02EP	NA	NA	1.2.18.0	L3	6.0.x	L3	
					2.5.0	NA	1.2.18.0	L3	5.5.x	L3	
									6.1.x	L3	
				7x04EP	NA	NA	NA		5.5.x	L3	
									6.0.x	L3	
							1.12.18	L3	5.5.x	L3	
							1.3.23.0	L3	6.2.x	L3	
		8.2	LSI	7x04EP	NA	NA	1.3.23.0	L3	5.5.x	L3	
									5.6.x	L3	
									6.3.x	L3	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes						
Apple									6.4.x	L3							
		9.5	LSI	7x04EP	NA	NA	1.3.23.0	L3	6.5.x	L3							
Citrix	XenServer	5.6	Qlogic	QxE25xx	NA	NA	NA	L3	5.5.x	L3							
		6.0	Emulex	LPx1200x	8.3.5.77.1p	2.12a6	2.00a4	L3	6.2.x	L1							
		6.1	Emulex	LPx1200x	8.3.5.77.1p	2.12a10	2.01a10	L3	5.5.x	L1							
		6.2	Emulex	LPx1200x	8.3.7.14	2.12a11	2.01a11	L3	5.6.x	L3							
		Qlogic	QxE25xx	8.5.0.3.55.6-k	3.13	5.7.0	L3	6.4.x	L1								
HP	HP-UX	11i v2	Emulex	LP900x	4.31.09	NA	3.93a0	L3	4.x.y	L3							
		HP	A6795A	B.11.23.0709	1.37	NA	L3	4.x.y	L3	Agilent Tachyon XL2							
11i v3	Emulex							L3	4.x.y	L3							

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
HP									5.0.x	L1		
									5.1.x	L1		
									5.2.x	L1		
									5.3.x	L1		
									5.4.x	L1		
						2.05	4.4.4	L3	4.x.y	L1		
						5.5.x	L1					
						5.3.x	L1					
						5.4.x	L1					
						B.11.31.0909	2.12	L3	5.4.x	L1		
						5.5.x	L1					
						Qlogic 2562 ASIC, AH400A is supported						
						AH401A	B.11.31.0909	2.12	4.4.4	L3	5.5.x	L1
						6.0.x						
						B.11.31.1009	2.05	L3	5.5.x	L1		
						5.6.x	L1					
						6.0.x	L1					
						6.1.x	L1					
						6.2.x	L1					
						6.3.x	L1					
						6.4.x	L1					
						6.5.x	L1					
						6.6.x	L1					
						6.0.x	L1					
						6.3.x	L1					
Tru-64	5.1A	HP	FCA2684	2.14	NA	NA	1.90a4	L3	4.x.y	L3	Emulex LP10000	
							NA		4.x.y	L3		
							L3	5.1.x	L3			
								5.2.x	L3			
								5.3.x	L3			
								5.4.x	L3			
								5.5.x	L3			
								6.0.x	L3			
								6.1.x	L3			
								6.2.x	L3			
								6.3.x	L3			
OpenVMS	8.3	HP	FCA2354	NA	NA	NA	NA	L3	4.x.y	L1	Emulex LP9xxx	
									5.1.x	L1		
									5.2.x	L1		

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
HP								L3	5.3.x	L1		
									5.4.x	L1		
									5.5.x	L1		
									6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
		8.4	HP	FCA2354	NA	NA	NA		5.5.x	L1	Emulex LP9xxx	
									5.6.x	L1		
									6.3.x	L1		
									6.4.x	L1		
									6.5.x	L1		
									6.6.x	L1		
IBM	AIX	5.2	Cambex	PC200x	2.5.10.39	NA	3.3.19	L3	4.x.y	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
									5.1.x	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
									5.2.x	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
									5.3.x	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
									5.4.x	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
									5.5.x	L3	MPIO: cbxdpf.driver.obj (5.2.1.10)	
		5.3	Cambex	PC400x	3.0.0.9	NA	4.00.26	L3	4.x.y	L3	MPIO: cbxdpf.driver.obj (5.3.1.10)	
									4.00.29	L3	MPIO: cbxdpf.driver.obj (5.3.1.10)	
									4.x.y	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									5.0.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									5.1.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									5.2.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
		6.1	IBM	575x	5.3.90	NA	10x8	L3	5.3.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									5.4.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									5.5.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									6.0.x	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.3	
									1.50a4	10x8	L3	
									5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.3	
									577D	6.1.6.0	3.10a3	
									2.00x7	L3	6.1.x	
									6.2.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
									6.1.90	NA	10x8	
									4.x.y	L1	Emulex LP11000; MPIO: CML PCM 1.0.0.5	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
IBM	Windows Server	7.1	IBM	577D	6.1.2.0	NA	11x4	L3	4.x.y	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.4.1	3.10a3	11x4		5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.4.6.0	NA	11x4		6.0.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					7.1.0.0	3.10a3	2.00x7	L3	5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					7.1.0.15	NA	11x4		6.0.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		5.6.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		6.1.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		6.2.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		6.3.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		6.4.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
					6.1.6.0	3.10a3	2.00x7		6.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5
Microsoft	Windows Server	2003 R2	Emulex	LPx1100x	5-2.10A7	2.00a1	2.70a5	L3	4.x.y	L1	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Microsoft						5.03a0	2.80a4	L3	4.x.y	L3	
					5.2.30.016	5.03a0	2.82.a4	L3	5.2.x	L3	
					5.2.50.007	2.12a6	2.00a4	L3	5.5.x	L3	
					7-2.10a7	5.03a0	2.80a4		6.0.x	L3	
								L3	4.x.y	L3	
									5.0.x	L3	
				LPx1200x	5-2.10a7	5.03a2	1.10a5	L3	4.x.y	L3	
					5.2.30.016	5.03a2	1.11a5	L3	5.2.x	L3	
					5.2.32.002	2.12A6	2.00A4	L3	5.5.x	L1	MPIO: CML DSM 4.1.2.5
					5.2.50.7	2.12A6	2.00A4	L3	6.1.x	L1	MPIO: CML DSM 4.1.2.5
					5.2.70.018	2.12A10	2.01A10		6.2.x	L1	MPIO: CML DSM 4.1.2.5
								L3	5.5.x	L1	MPIO: CML DSM 4.1.2.5
									6.3.x	L1	MPIO: CML DSM 4.1.2.5
									6.4.x	L1	MPIO: CML DSM 4.1.2.5
								L3	5.6.x	L3	MPIO: CML DSM 4.1.2.5
								L3	6.4.x	L3	
									6.5.x	L1	MPIO: CML DSM 4.1.2.6
								L3	6.6.x	L1	
					7-2.10a7	5.03a2	1.10a5	L3	4.x.y	L3	MPIO: CML DSM 4.1.2.5
									5.0.x	L3	MPIO: CML DSM 4.1.2.5
				Qlogic	7.2.30.016	5.03a2	1.11a5	L3	5.2.x	L3	MPIO: CML DSM 4.1.2.5
									5.4.x	L3	MPIO: CML DSM 4.1.2.5
					7.2.50.007	2.12a6	2.00a4	L3	6.0.x	L1	MPIO: CML DSM 4.1.2.5
				QLA23xx	9.1.4.15	1.52	3.3.21	L3	4.x.y	L3	
					9.1.7.16	1.43	3.3.25	L3	4.x.y	L1	MPIO: CML DSM 3.0.0.7
					QxE24xx	9.1.4.15	1.18	4.0.26	L3	4.x.y	L1
						1.24	4.0.26	L3	4.x.y	L2	
						9.1.7.16	1.18	4.3.1	L3	4.x.y	L2
						9.1.7.18	1.18	4.4.0	L3	4.x.y	L1
						2.10	4.4.0	L3	4.x.y	L1	MPIO: CML DSM .3.1.1.2
				9.1.8.16	9.1.8.16	1.12	4.6.0	L3	5.0.x	L1	MPIO: CML DSM .4.1.2.1
					2.10	4.6.2	4.x.y		L1	MPIO: CML DSM .4.1.2.1	
							5.1.x		L1	MPIO: CML DSM .4.1.2.1	
							5.2.x		L1	MPIO: CML DSM .4.1.2.1	
							L3	5.0.x	L1	MPIO: CML DSM .4.1.2.1	
				9.1.8.17	9.1.8.17	1.12	5.1.2	L3	4.x.y	L1	MPIO: CML DSM .4.1.2.1
									5.2.x	L1	MPIO: CML DSM .4.1.2.1
						1.29	5.1.2	L3	5.4.x	L2	MPIO: CML DSM .4.1.2.1

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Microsoft	Windows Server 2008					2.10	4.4.0	L3	4.x.y	L1	MPIO: CML DSM .4.1.2.1
							5.1.2	L3	4.x.y	L1	MPIO: CML DSM .4.1.2.1
						9.1.8.25	2.10	5.1.3	L3	4.x.y	L1
										5.2.x	L1
										5.3.x	L1
										5.4.x	L1
							5.4.2	L3	5.5.x	L1	MPIO: CML DSM .4.1.2.3
									6.0.x	L1	MPIO: CML DSM .4.1.2.3
									5.5.x	L1	MPIO: CML DSM .4.1.2.3
						9.1.9.25	2.10	5.4.2	L3	6.0.x	L1
										5.5.x	L1
						9.1.9.27	2.10	5.4.4	L3	5.5.x	L1
										6.0.x	L1
						QxE25xx	9.1.9.27	5.4.4	L3	5.5.x	L1
										6.0.x	L1
										6.1.x	L1
										6.2.x	L1
										6.3.x	L1
										6.4.x	L3
		2008	Emulex	LPx1100x	5-2.10a7	5.03a0	2.80a4	L3	4.x.y	L3	
									5.0.x	L3	
					7-2.10a7	5.03a0	2.72a2	L3	4.x.y	L3	
									4.x.y	L3	
							2.80a4		5.0.x	L3	
				LPx1200x	7.230.016	5.03a0	2.82a4	L3	5.2.x	L3	
									5.4.x	L3	
					7-2.10a7	5.03a2	1.10a5	L3	4.x.y	L3	
									5.0.x	L3	
						5.03a0	1.10a5	L3	4.x.y	L3	
									4.x.y	L3	
		Qlogic	QLA23xx	7.2.30.016	5.03a2	1.11a5	L3	5.2.x	L3		
									5.4.x	L3	
				7.2.50.007	2.12a6	2.00a4	L3	6.0.x	L1		
									6.0.x	L1	
					7.2.70.014	2.12a6	2.00a4	L3	5.5.x	L1	
					6.0.x	L1					
					6.1.x	L1					
					6.2.x	L1					
					4.x.y	L1					

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Microsoft					9.1.7.18	1.54	3.3.25	L3	5.2.x	L1	
						1.43	3.3.25	L3	4.x.y	L1	
						1.50	3.3.25	L3	4.x.y	L1	
						1.54	3.3.21	L3	4.x.y	L1	
							3.3.25	L3	4.x.y	L1	
					QxE24xx	9.1.7.18	2.10	4.4.4	5.4.x	L1	
						9.1.8.17	1.29	5.1.2	5.4.x	L1	
						9.1.8.25	2.10	5.1.3	4.x.y	L1	
									5.2.x	L1	
									5.3.x	L1	
					9.1.9.27			L3	5.4.x	L1	
						2.10	5.4.4		5.5.x	L1	
						3.00	5.4.4		6.0.x	L1	
					QxE25xx	9.1.9.25	2.10	5.4.2	5.5.x	L1	
									6.0.x	L1	
					9.1.9.27	3.00	5.4.1	L3	6.0.x	L1	
							5.4.2	L3	6.0.x	L1	
						3.00	5.4.4	L3	5.5.x	L1	
							5.6.4	L3	5.5.x	L1	
									6.1.x	L1	
									6.2.x	L1	
									6.2.x	L1	
2008 R2	Emulex	LPx12xx	7.2.50.007	3.03a9	2.00a5	L3	5.5.x	L1			
							6.0.x	L1			
							6.1.x	L1			
							6.2.x	L1			
			2.72.012.001	6.03x1	2.10a10	L3	5.5.x	L1			
							6.3.x	L1			
							6.4.x	L1			
			2.74.014.001	6.03x1	2.10a10	L3	5.6.x	L3			
							6.4.x	L1			

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
Microsoft				LPx1200x	2.76.003.001	6.03x1	2.10a12	L3	6.4.x	L3		
					10.2.370.8	6.03x1	2.01a12	6.6.x	6.6.x	L1		
					7.2.41.0	5.03a2	2.00a4	L3	5.5.x	L3		
					7.2.50.007	5.03a2	2.00a4	L3	6.0.x	L3		
					3.03a9	2.00a5	L3	5.5.x	L3			
					7.2.50.014	5.03a2	2.00a4	L3	6.1.x	L3		
					7.2.70.018	5.03a2	2.00a4	L3	6.2.x	L3		
					2.72.012.001	6.03x1	2.10a10	L3	6.3.x	L3		
					2.72.012.001	5.03a2	2.10a10	L3	6.3.x	L3		
					2.74.014.001	5.03a2	2.01a11	L3	5.6.x	L3		
				LPx1600x	2.72.012.001	kt8.00a	1.1.21.4	L3	5.5.x	L1		
					2.74.014.001	kt8.02a8	1.1.21.1	L3	6.3.x	L1		
							1.1.35.0	L3	6.4.x	L2		
								L3	5.6.x	L1		
								L3	6.3.x	L1		
								L3	6.4.x	L2		
								L3	5.6.x	L1		
			Qlogic	QLA23xx	2.76.003.001	kt8.03a15	1.1.55.1	L3	6.4.x	L2		
								L3	6.5.x	L1	Kit 1.1.55.1	
								L3	10.0.803.2	6.6.x		
								L3	5	6.6.x	L1	
					9.1.8.6	1.43	3.3.25	L3	5.5.x	L3		
			QxE24xx	9.1.8.25	9.1.8.25	1.29	4.0.30	L3	5.5.x	L1		
						1.43	5.1.3	L3	5.4.x	L1		
						2.10	5.1.3	L3	5.3.x	L1		
								L3	5.4.x	L1		
								L3	5.5.x	L1		
			9.1.9.25		9.1.8.6	1.19	4.6.1	L3	6.0.x	L1		
						1.29	5.4.2	L3	5.5.x	L2		
						2.10	5.4.2	L3	5.5.x	L1		
						3.00	5.4.1	L3	6.0.x	L1		

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Microsoft					9.1.9.27	1.18	5.4.4	L3	5.5.x	L3	
						2.10	5.4.4	L3	5.5.x	L1	
					9.1.9.47	3.00	5.6.4	L3	5.5.x	L1	
									6.1.X	L3	
									6.2.x	L1	
					9.1.10.26	3.00	5.6.5	L3	6.3.x	L3	
									6.3.x	L3	
					9.1.11.20	3.20	5.9.0	L3	5.5.x	L3	
									6.3.x	L3	
									6.4.x	L3	
						QxE25xx	1.18	5.4.4	L3	5.5.x	L3
							3.00	5.4.4	L3	5.5.x	L1
									6.0.x	L1	
					9.1.9.47	3.00	5.6.4	L3	5.5.x	L1	
									6.1.x	L1	
									6.2.x	L1	
					9.1.10.26	3.00	5.6.5	L3	5.5.x	L3	
									6.3.x	L1	
						3.13	5.6.5		6.3.x	L1	
					9.1.11.20	3.13	5.9.0	L3	5.6.x	L1	
									6.4.x	L1	
									6.5.x	L2	
						3.18	5.9.0		5.6.x	L2	
									6.4.x	L1	
					3.20			L3	5.6.x	L2	
									6.3.x	L3	
									6.4.x	L2	
					9.1.11.24	3.23	7.0.2	L3	6.4.x	L3	
									6.5.x	L1	
					3.24	3.24	7.1.0	L3	6.4.x	L2	
									6.5.x	L1	
					9.1.12.21	3.24	7.4.0	6.6.x	6.6.x	L1	
						3.27	7.4.0		6.6.x	L1	
					QxE26xx	9.1.10.26	3.17	L3	6.2.x	L1	
									6.3.x	L1	
						9.1.10.27	3.17	L3	6.4.x	L3	
						9.1.11.20	3.17		6.3.x	L1	
							3.19	L3	5.6.x	L3	
									6.4.x	L3	
						9.1.11.24	3.23	7.0.2	L3	6.4.x	L2

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Microsoft								6.5.x	L3		
					9.1.12.21	3.27	7.4.1	6.6.x	6.6.x	L1	
					2.76.003.001	KT8.03a15	1.1.55.1	L3	6.5.x	L3	
		2012	Emulex	LPx1600x	10.2.370.8	KT8.03a15	10.0.803.25	6.6.x	6.6.x	L1	
					9.1.9.109	3.00	5.4.1	L3	6.2.x	L1	
					9.1.10.26	3.13	5.7.0		6.3.x	L1	
			Qlogic	QxE25xx	9.1.11.20	3.13	5.9.0	L3	5.5.x	L1	
					3.20	5.9.0	L3		6.3.x	L1	
					9.1.11.24	3.24	7.1.0	L3	6.4.x	L1	
					9.1.12.21	3.27	7.4.0		6.5.x	L1	
					9.1.10.28	3.13	6.4.0	L3	5.5.x	L1	
					9.1.11.20	3.17	6.4.0		6.3.x	L1	
					3.19	6.6.3	L3	L3	6.4.x	L1	
					9.1.11.24	3.24	7.1.0		6.4.x	L2	
					9.1.12.21	3.27	7.4.1	6.6.x	6.6.x	L1	
		2012 R2	Emulex	LPx1600x	2.76.003.001	1.1.21.4	1.1.21.4		6.4.x	L1	
					9.1.11.20	3.24	5.9.0	L3	6.5.x	L1	
					9.1.11.24	3.24	7.1.0		6.4.x	L1	
			Qlogic	QxE25xx	9.1.12.21	3.27	7.4.0	6.6.x	6.6.x	L1	
					9.1.11.20	3.17	6.4.0		6.4.x	L1	
					3.19	6.6.3	L3		6.4.x	L1	
				QxE26xx	9.1.11.24	3.24	7.1.0	L3	6.5.x	L1	
					9.1.12.21	3.27	7.4.1		6.4.x	L1	
					9.1.11.20	3.17	6.4.0	L3	6.5.x	L1	
					3.19	6.6.3	L3		6.4.x	L1	
Novell	Netware	6.5-SP6	Qlogic	QLx24xx	6.90o	1.24	4.00.26	L3	4.x.y	L3	
		6.5-SP7	Qlogic	QLA23xx	6.90o	1.24	3.03.20		4.x.y	L1	
									5.0.x	L1	
									5.1.x	L1	
									5.2.x	L1	
									5.3.x	L1	
									5.4.x	L1	
									5.5.x	L1	
									6.0.x	L1	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
Novell	SUSE Linux Enterprise Server	10	Emulex	LPx1200x	8.2.0.48.2p	5.12a2	2.00	L3	6.1.x	L1		
									6.2.x	L1		
									6.3.x	L1		
									6.4.x	L1		
							2.01a10	L3	5.5.x	L1		
									6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
			Qlogic	QLx24xx	8.01.07.15	1.12	4.0.26	L3	5.6.x	L3		
						1.24	4.0.26		6.4.x	L1		
						1.24	4.0.26		6.4.x	L2		
					8.02.00-k6	1.29	4.3.2		6.5.x	L1		
									4.x.y	L1		
									5.0.x	L1		
									5.1.x	L1		
									5.2.x	L1		
									5.3.x	L1		
									5.4.x	L1		
			Qlogic	QxE24xx	8.2.0.10.10.3-k4	1.29	4.4.9	L3	5.5.x	L1		
									6.0.x	L1		
									6.0.x	L1		
						1.29	4.4.5		5.2.x	L1		
			QxE25xx	8.3.7.7-k	3.00	5.4.1	L3	L3	6.2.x	L1		
					3.13	5.7.0			5.5.x	L1		
					3.20	5.9.0			6.3.x	L1		
					3.24	7.1.0			6.4.x	L1		
			QxE26xx	8.04.00.12.11.3-k	3.24	7.1.0		L3	5.6.x	L3		
									6.4.x	L1		
									6.5.x	L1		

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes			
Novell						3.27	7.4.1	6.6.x	6.6.x	L1				
		12	Emulex	LPx1200x	10.2.8040.1	5.13a0	2.01a12	6.6.x	6.6.x	L1				
Oracle	Linux Server (UEK)	6.3	Qlogic	QxE25xx	8.4.0.3.39.0-k	3.00	5.4.1	L3	5.5.x	L1				
		6.4	Qlogic	QxE25xx	8.04.00.11.39.o-k	3.20	5.8.0		6.3.x	L1				
							L3	5.6.x	L1					
				QxE26xx	8.04.00.11.39.o-k	3.20		6.4.0		6.4.x	L1			
		6.5	Qlogic			8.05.00.03.39.0-k	3.23	7.0.1	L3	6.5.x	L1			
									L3	6.5.x	L1			
						8.05.00.03.39.0-k	3.24	7.0.1		6.6.x	L1			
		7.0	Qlogic	QxE25xx	8.07.00.16.39.0-k	3.23	7.00.01	L3	6.6.x	L1				
					8.07.00.16.39.0-k				L3	6.6.x	L1			
Oracle	Oracle Virtual Machine	3.2.x	Qlogic	QxE25xx	8.04.00.11.39.0-k	3.20	5.3.7	L3	6.3.x	L3				
									L3	6.4.x	L3			
				QxE26xx	8.05.00.03.39.0-k1	3.20	5.9.0	L3	6.5.x	L3				
									6.4.x	L3				
		3.3.x	Qlogic	QxE25xx	8.04.00.11.39.0-k	3.20	6.4.0	L3	6.5.x	L3				
									L3	6.4.x	L3			
				QxE26xx	8.05.00.03.39.0-k1	3.19	6.6.3	L3	6.5.x	L3				
									6.5.x	L3				
Solaris (SPARC)	Solaris (SPARC)	9	Qlogic	QLA23xx	5.03	2.00.09	3.3.21	L3	4.x.y	L3				
					5.04	1.17	3.3.27		4.x.y	L3				
					2.19	1.17	3.3.119	L3	4.x.y	L3				
									5.1.x	L3				
					1.43	3.3.119	L3	5.2.x	L3					
								5.3.x	L3					
								5.4.x	L3					
								5.5.x	L3					
								6.0.x	L3					
		10	Qlogic	QLA24xx	2.21	1.17	4.0.27	L3	6.1.x	L3				
					4.x.y	L1								

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
Oracle					2.26	1.17	4.2.2	L3	4.x.y	L1	
						2.04	4.2.2	L3	4.x.y	L1	
					2.29	1.17	4.4.1	L3	4.x.y	L1	
						2.04	4.4.1	L3	4.x.y	L1	
					2.31	2.04	5.1.0	L3	4.x.y	L1	
									5.2.x	L1	
									5.3.x	L1	
									5.4.x	L1	
									5.5.x	L1	
									6.0.x	L1	
									5.5.x	L1	
									6.1.x	L1	
									6.2.x	L1	
									5.5.x	L1	
									6.3.x	L1	
									6.4.x	L1	
									6.5.x	L1	
									6.6.x	L1	
									5.9.0	L3	5.6.x L3
									3.06	3.15	5.6.0 L2
Solaris (x86/x64)	11	Qlogic	QxE25xx	3.06	3.15	5.6.0	L3	6.2.x	L1		
					3.19	5.7.0	L3	6.3.x	L1		
RedHat	Enterprise Linux	10	Qlogic	QxE25xx	3.06	3.19	5.7.0	L3	6.4.x	L1	
RedHat	Enterprise Linux	5.0	Qlogic	QLA23xx	8.01.07-k7	1.43	3.3.20	L3	4.x.y	L1	
RedHat	Enterprise Linux	5.1	Qlogic	QLA23xx	8.01.07-k7	1.43	3.3.20	L3	4.x.y	L1	
RedHat	Enterprise Linux	5.2	Emulex	LPx1200x	8.2.0.29	5.03a2	1.10a5	L3	4.x.y	L3	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
RedHat		Qlogic	QLA23xx	8.02.00-k5	1.43	3.3.26	L3	4.x.y	L1		
								5.0.x	L3		
		5.3	Qlogic	QxE24xx	8.02.00.06.05.03-k	1.29	4.4.5	L3	4.x.y	L1	
		5.4	Qlogic	QLA23xx	8.03.00.10.05.04-k	1.43	3.3.26	L3	5.1.x	L1	
									5.2.x	L1	
			QxE24xx	8.03.00.10.05.04-k	1.29	4.4.9	L3	4.x.y	L1		
								5.3.x	L1		
								5.4.x	L1		
		5.5	Qlogic	QxE24xx	8.03.01.04.05.05-k	1.29	4.4.9	L3	5.4.x	L1	
									5.5.x	L1	
									6.0.x	L1	
		5.7	Qlogic	QxE24xx	8.03.07.03.05.07-k	1.29	5.3.16	L3	5.5.x	L1	
									6.0.x	L1	
						3.00	5.3.16	L3	5.5.x	L1	
		5.8	Qlogic	QxE25xx	8.03.07.03.05.07-k	3.00	5.3.16	L3	5.5.x	L1	
						8.3.7.9.5.8-k	5.4.1	L3	6.1.x	L1	
									6.2.x	L1	
									6.3.x	L1	
						3.13	5.7.0	L3	5.5.x	L1	
						6.3.x	L1				
		5.9	Qlogic	QxE25xx	8.3.7.15.5.9-k	3.13	5.7.0	L3	6.4.x	L1	
						3.20	5.9.0	L3	5.6.x	L3	
						6.4.x			L1		
		5.10	Emulex	LPx1200x	8.2.0.128.3p	5.03x3	2.01a10	L3	6.4.x	L1	
						5.13a0	2.01a12		6.4.x	L2	
			Qlogic	QxE25xx	8.03.07.15.05.09-k	3.20	5.9.0	L3	6.4.x	L1	
						3.24	7.1.0		6.4.x	L1	
						L3	6.5.x	L1			
							6.5.x	L1			
		5.11	Emulex	LPx1200x	8.2.0.128.3p	5.13a0	2.01A12	6.6.x	6.6.x	L1	
						5.13a3	2.01A12		6.6.x	6.6.x	L1
			Qlogic	QLx25xx	8.03.07.15.05.09-k	3.27	7.04.00	6.6.x	6.6.x	L1	
		6.0	Emulex	LPx1200x	8.3.5.17	2.12a6	1.10a5	L3	5.4.x	L1	
									5.5.x	L1	

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
RedHat						5.03a2	1.10a5	L3	6.0.x	L1		
									5.5.x	L1		
									6.0.x	L1		
		6.2	Emulex	LPx1200x	8.3.5.45.4p	5.12a2	2.00a4	L3	5.5.x	L1		
									6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
									6.3.x	L1		
		6.3	Emulex	LPx1200x	8.3.5.68.5p	5.12a9	2.01a10	L3	6.3.x	L1		
									5.5.x	L1		
		6.4	Emulex	LPx1200x	8.3.5.68.5p	5.12a9	2.01a10	L3	6.3.x	L1		
									6.4.x	L1		
						2.12a11	2.01a11	L3	5.6.x	L1		
									6.4.x	L1		
		6.5	Emulex	LPx1200x	8.3.5.68.5p	5.13a0	2.01a12	L3	6.4.x	L2		
									6.5.x	L1		
			Qlogic	QxE25xx	8.04.00.08.06.4-k	3.20	5.09.00	L3	6.4.x	L1		
									6.4.x	L1		
									6.5.x	L2		
		6.6	Emulex	LPx1200x	8.3.5.68.5p	5.13a3	2.01A12	6.6.x	6.6.x	L1		
									6.6.x	L1		
		7.0	Qlogic	QxE26xx	8.04.00.08.06.4-k	3.24	7.1.0	L3	6.4.x	L2		
									6.5.x	L1		
					8.06.00.08.07.0-k2	3.27	7.4.1	6.6.x	6.6.x	L1		
									6.4.x	L1		
VMware	ESX/ESXi	4.0	Emulex	LP2100x	8.2.0.30.53	NA	1.00	L3	5.2.x	L1		
									5.3.x	L1		
				LPx1200x	8.2.0.30.53	NA	1.10a5		5.4.x	L1		
									5.5.x	L1		
									5.4.x	L1		
		Qlogic	QxE24xx	8.02.01-k1-vmw31	1.29	2.12a6	2.00a4	L3	5.5.x	L1		
									6.0.x	L1		
									6.0.x	L1		
						4.00.30	L3	4.x.y	L1			
								4.04.06	L1			

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
VMware	4.1	Emulex	LPx1200x	QxE25xx	8.02.01-k1-vm38	1.29	4.04.09	L3	4.x.y	L1	
					8.02.01-k1-vmw43	1.29	4.04.09		5.0.x	L1	
					831.k1.23vmw	2.10	5.02.00	L3	5.1.x	L1	
					8.02.01-k1-vmw48	2.10	4.04.09		5.2.x	L1	
								L3	5.3.x	L1	
									5.4.x	L1	
									5.3.x	L3	
									5.4.x	L3	
								L3	5.5.x	L3	
									5.6.x	L3	
									5.5.x	L1	
									6.0.x	L1	
				8.2.0.30.53	NA	1.00	L3	5.4.x	L3		
								5.5.x	L3		
						1.10a5	L3	5.3.x	L1		
								5.4.x	L1		
					8.2.1.30.1-58vmw	NA	1.00	L3	5.4.x	L1	
									5.5.x	L1	
						1.10a5	L3	5.3.x	L1		
								5.5.x	L1		
						2.12a6	L3	6.0.x	L1		
								6.1.x	L1		
								6.2.x	L1		
					8.2.1.79.25	NA	2.00a4	L3	5.4.x	L3	
					8.2.1.90.28	NA	2.00a4		6.0.x	L1	
				8.2.1.141.55	2.12a10	2.01a10	L3	5.5.x	L1		
								6.0.x	L1		
								6.1.x	L1		
								6.2.x	L1		
				LPe12xx	8.2.1.30.1-58vmw	2.12a11	2.01a10	L3	6.4.x	L1	
							2.01a11		6.5.x	L1	
							3.03a9	2.00a5	L3	5.5.x	L1

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
VMware									6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
									5.5.x	L1		
					8.2.1.141.55	6.03x1	2.01a10	L3	5.6.x	L1		
									6.3.x	L1		
									6.4.x	L1		
					LPx1600x	8.2.1.141.55	1.1.21.4	1.1.21.4	L3	5.5.x	L1	8Gb only
									6.3.x	L1	8Gb only	
									6.4.x	L1	8Gb only	
			Qlogic	QxE24xx	831.k1.28.1-1vmw	1.12	5.02.00	L3	5.3.x	L1		
									5.4.x	L1		
									5.5.x	L1		
									5.5.x	L1		
					841.k1.50.1-1vmw	2.10	5.02.00	L3	6.0.x	L1		
									5.5.x	L1		
									6.0.x	L1		
									6.1.x	L1		
			QxE25xx	831.k1.23vmw	3.00	5.02.00	L3	5.5.x	6.2.x	L1		
									5.6.x	L1		
					831.k1.28.1-1vmw	3.20	5.09.00	L3	6.3.x	L1		
									5.6.x	L1		
									6.4.x	L1		
									5.3.x	L1		
			QxE25xx	831.k1.23vmw	2.10	5.02.00	L3	5.4.x	5.4.x	L1		
									5.3.x	L1		
					3.00	5.02.00	L3	5.4.x	5.4.x	L1		
									5.5.x	L1		
									6.0.x	L1		
									5.5.x	L1		
			3.00	5.04.01	L3	5.6.x	L1	6.0.x	6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
									6.2.x	L1		

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
VMware	5.0	Emulex			841.k1.50.1-1vmw	3.00	5.06.01	L3	6.3.x	L1		
							5.06.05	L3	5.5.x	L1		
									6.3.x	L1		
						3.13	5.06.05	L3	5.5.x	L1		
									6.3.x	L1		
						3.18	5.09.00	L3	5.6.x	L1		
									6.4.x	L1		
			QxE26xx	841.k1.50.1-1vmw	3.20	5.09.00	L3	5.6.x	L1			
									6.4.x	L1		
									6.5.x	L1		
					841.k1.61.1-1vmw	3.20	5.09.00	L3	6.5.x	L1		
		LPx12xx	LPx1200x	8.2.2.1-18vmw	3.03a9	2.00a5	L3	5.5.x	L1			
									6.0.x	L1		
									6.1.x	L1		
									6.2.x	L1		
									5.5.x	L1		
					8.2.4.141.55	6.03x1	2.01a10	L3	6.4.x	L1	8Gb only	
									6.3.x	L1	8Gb only	
				LPx1600x	8.2.2.1-18vmw	2.12a6	2.00a4	L3	5.5.x	L1		
									6.0.x	L1		
									6.1.x	L1		
					8.2.4.141.55	2.12a10	2.01a10		5.5.x	L1		
								6.3.x	L1			
		Qlogic	QxE25xx	8.2.4.141.55	1.1.21.4	1.1.21.4	1.1.21.4	L3	5.5.x	L1	8Gb only	
								6.3.x	L1	8Gb only		
					901.k1.1-14vmw	3.00	5.02.00	L3	5.5.x	L1		
									6.0.x	L1		
				911.k1.1-16vmw	3.00	5.06.00			6.1.x	L1		
								6.2.x	L1			

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes	
VMware					934.5.6.0-1vmw	3.00	5.06.00	L3	6.2.x	L1		
							5.06.05	L3	5.5.x	L1		
								L3	6.3.x	L1		
							5.06.00	L3	5.5.x	L1		
								L3	6.3.x	L1		
					QxE26xx	3.13	5.06.05	L3	5.5.x	L1		
								L3	6.3.x	L1		
							841.k1.50.1-1vmw	3.17	6.04.00	L3	6.2.x	L1 8Gb only
							934.5.6.0-1vmw	3.17	6.04.00	L3	5.5.x	L1 8Gb only
								L3	6.3.x	L1	8Gb only	
	5.1	Emulex	LPx12xx	8.2.4.146.62	6.03x1	2.01a0	L3	5.6.x	L1			
								6.4.x	L1			
						2.01a10	L3	6.4.x	L1			
								6.5.x	L1			
								L3	6.6.x	L1		
			LPx1600x	8.2.4.141.55	1.1.21.4	1.1.21.4	L3	5.5.x	L1			
								6.3.x	L1			
				8.2.4.146.62	1.1.21.4	1.1.21.4	L3	6.4.x	L1			
								L3	5.6.x	L1		
							1.1.43.3		6.4.x	L1		
			Qlogic	QxE25xx	934.5.6.0-1vmw	3.18	5.09.00	L3	6.5.x	L1		
									5.6.x	L1		
					934.5.20.0-1vmw	3.20	5.09.00	L3	6.4.x	L1		
									6.4.x	L1		
							3.18	L3	6.5.x	L1		
				QxE26xx	934.5.6.0-1vmw	3.20	5.09.00	L3	6.4.x	L1		
									6.5.x	L1		
					934.5.20.0-1vmw	3.24	7.03.00	L3	6.6.x	L1		
									5.5.x	L1		
							3.19	L3	6.3.x	L1		
						3.24	7.00.01	L3	6.4.x	L1		
									6.5.x	L1		

Vendor	Operating System	OS Version	HBA Vendor	Model	Driver	Boot Code	Firmware	SCv Series	SC Series	BfS	Notes
VMware		5.5	Emulex	LPx12xx	10.0.100.0-1vmw	6.03x1	2.01a10	L3	5.6.x	L1	
					10.2.455.0	6.03X1	2.01A12		6.4.x	L1	
					10.0.100.0-1vmw	1.1.21.4	1.1.21.4		6.5.x	L1	
					10.0.575.8	1.1.21.4	1.1.21.4	L3	6.4.x	L1	
					10.0.727.44	1.1.21.4	1.1.21.4		6.5.x	L1	
				LPx1600x	1.1.43.3	1.1.43.3	L3	6.4.x	L1		
					10.2.455.0	KT8.03a15	10.2.470.14	6.5.x	L1		
		6.0	Qlogic	QxE25xx	1.0.12.0-1vmw	3.18	5.09.00	6.4.x	L1		
					1.1.41.0	3.24	7.03.00	L3	6.5.x	L1	
					1.0.12.0-1vmw	3.19	6.6.3		6.4.x	L1	
					1.1.7.0	3.24	7.00.01	L3	6.4.x	L1	
					1.1.20.0	3.24	7.1.0		6.5.x	L1	
				QxE26xx	1.1.41.0	3.24	7.03.00	L3	6.4.x	L1	
					10.2.455.0	KT8.03a15	10.2.470.14		6.5.x	L1	
					1.1.39.0	3.24	7.00.01	6.6.x	6.6.x	L1	

Fibre Channel over Ethernet Host Bus and Converged Network Adapters

Configurations listed in this section are supported at Level 1 (as described above) for the listed switch firmware/array firmware combinations. Switch validation reflects only those switches that connect directly to the array ports. There is no validation for other "upstream" switches. Feature and other support levels are indicated where different from the default Level 1 support.

NOTE: Unless otherwise noted, the OS provided "native" Multipath IO functionality is used for all validations listed.

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	Firmware	SC Array OS	BfS	Notes	
Microsoft	Windows Server	2003 R2	Qlogic	QxE81xx	9.1.7.18	NA	5.1.3	4.x	L1		
		2008 R2	Broadcom	BRCM578xx	7.0.19.0	7.2.0	7.2.6	6.1.x	L3	HP 534	
		Brocade	BR1741M-k	3.0.1.0	3.0.1.0	3.0.1.0	5.5.x	L1			
								6.0.x	L1		
								6.1.x	L1		
								6.2.x	L1		
				3.2.0.0	3.2.0.0	3.2.0.0	5.5.x	L1			
								6.3.x	L1		
				3.2.1.0	3.2.1.0	3.2.1.0	5.6.x	L1			
								6.4.x	L1		
		Cisco	VIC-1280	2.1.0.25	2.1(3a)	2.1(3)	6.4.x	L1		Download Kit 2.1(3a)	
				2.1.0.27	2.2(1c)	2.2(1c)	6.4.x	L1		Download Kit 2.2(1c)	
								6.5.x	L1		
							6.4.x	L1		Download Kit 2.2(2c)	
								6.5.x	L1		
				2.2(3d)	2.2(3d)	2.2(3d)	6.6.x	L1		Download Kit 2.2(3d)	
		Qlogic	QxE81xx	9.1.8.27	2.14	5.3.2	5.4.x	L3			
				9.1.9.15	2.14	5.3.2	5.5.x	L3			
				9.1.10.18	3.18	5.9.0	5.6.x	L3			
								6.3.x	L3		
								6.4.x	L3		
			QxE82xx	9.1.9.36	3.07	4.9.41	5.5.x	L1			
				9.1.9.37	3.07		6.0.x	L1			
							5.5.x	L1			
							6.1.x	L1			
				9.1.10.15	3.11	4.10.8	6.3.x	L1			
			9.1.10.18	2.14	4.12.10	5.5.x	L1				
							6.3.x	L1			
					3.12	4.14.14	5.6.x	L1			

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	Firmware	SC Array OS	BfS	Notes
Microsoft								6.4.x	L1	
					9.1.11.12	3.23	4.16.17	6.5.x	L1	
					9.1.12.10	3.24	4.16.101	6.6.x	L1	
		2012	Broadcom	BRCM578xx	7.8.12.0	7.85	7.8.57.0	6.4.x	L1	HP 534
			Qlogic	QxE82xx	9.1.11.12	3.23	4.16.17	6.4.x	L1	
		2012 R2	Broadcom	BRCM578xx	7.8.12.0	7.8.5	7.8.57.0	6.4.x	L1	HP 534
			Cisco	VIC-1280	2.3.0.20	2.1(3a)	2.1(3a)	6.4.x	L1	
						2.2(1c)	2.2(1c)	6.5.x	L1	
					2.4.0.8	2.2(2c)	2.2(2c)	6.4.x	L1	Download Kit 2.2(2c)
						2.2(3d)	2.2(3d)	6.6.x	L1	
			Emulex	OCx1410x	10.4.246.0	10.2.506.19	10.2.506.19	6.6.x	L1	
			Qlogic	QxE82xx	9.1.11.12	3.23	4.16.17	6.4.x	L1	
			6.5.x	L1						
RedHat	Enterprise Linux	6.3	Cisco	VIC-1280	1.5.0.1	2.1(3)	2.1(3)	6.4.x	L1	Download Kit 2.1(3)
		2.2(1c)	2.2(1c)	6.5.x	L1	Download Kit 2.2(1c)				
		7.0	Cisco	VIC-1280	1.6.0.10	2.2(2c)	2.2(2c)	6.4.x	L1	Download Kit 2.2(2c)
			2.2(3d)	2.2(3d)	6.6.x	L1				
VMware	ESX/ESXi	4.0	Qlogic	QxE81xx	831.k1.23vmw	2.13	5.01.03	5.5.x	L1	
					831.k1.25vmw	2.13	5.02.03	5.4.x	L1	
					831.k1.28.1-1vmw	2.14	5.02.01	5.4.x	L1	
					841.k1.28.1-1vmw	2.13	5.01.03	5.5.x	L1	
					6.0.x	L1				
		4.1	Brocade	Br1741-k	3.2.0.0	3.2.1.0	3.2.0.0	6.4.x	L3	
			Emulex	OCx1010x	8.2.1.104.33	4.02a12	4.0.360.3	5.5.x	L1	
					6.1.x	L1				
					8.2.1.126.50	4.02a12	4.0.360.3	6.2.x	L1	
					8.2.1.141.55	NA	4.2.324.30	5.5.x	L1	
			OCx1110x	8.2.1.141.55	NA	4.4.249.3	6.3.x	L1		
					8.2.1.151.65	4.6.142.10	4.6.142.10	6.5.x	L1	
			Qlogic	QxE81xx	841.k1.28.1-1vmw	2.13	5.01.03	5.5.x	L1	

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	Firmware	SC Array OS	BfS	Notes
VMware								6.0.x	L1	
								6.1.x	L1	
								6.2.x	L1	
				841.k1.50.1-1vmw	3.13	5.07.00	5.5.x	L1		
								6.3.x	L1	
					3.18	5.09.00	5.6.x	L3		
								6.4.x	L1	
				841.k1.61.1-1vmw	3.23	7.00.02	6.5.x	L1		
				QxE82xx	831.k1.28.1-1vmw	3.07	4.09.01	6.1.x	L1	
					841.k1.28.1-1vmw	3.07	4.09.01	5.5.x	L1	
								6.0.x	L1	
								6.2.x	L1	
					841.k1.42.1-1vmw	3.23	4.16.17	6.4	L1	
					841.k1.50.1-1vmw	3.11	4.10.08	6.3.x	L1	
						3.14	4.12.10	5.5.x	L1	
								6.3.x	L1	
						3.12	4.14.14	5.6.x	L3	
								6.4.x	L1	
						3.23	4.16.17	6.4.x	L1	
	5.0	Brocade	BR-M1741-k	3.0.1.0	3.0.1.0	3.0.1.0		5.5.x	L1	
								6.0.x	L1	
								6.1.x	L1	
								6.2.x	L1	
		Emulex	OCe1010x	3.2.0.0	3.2.0.0	3.2.0.0	6.3.x	L1		
				8.2.2.1-18vmw	4.02a12	4.0.360.3	5.5.x	L1		
								6.0.x	L1	
								6.1.x	L1	
								6.2.x	L1	
				8.2.4.141.55	4.2.324.30	5.2.324.30	5.5.x	L1		
								6.3.x	L1	
		Qlogic	QxE81xx	831.k1.23vmw	2.13	5.1.3	5.3.x	L1		
								5.4.x	L1	
								5.5.x	L1	
				901.k1.1-14vmw	3.00	5.4.1	5.5.x	L1		
								6.0.x	L1	
								6.1.x	L1	
								6.2.x	L1	
				934.5.6.0-1vmw	3.13	5.7.0	6.3.x	L1		

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	Firmware	SC Array OS	BfS	Notes
VMware	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
VMware	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	Firmware	SC Array OS	BfS	Notes
VMware								6.5.x	L1	
					10.2.445.0	10.4.170.0	10.4.170.0	6.6.x	L1	
					OCx1410x	10.2.445.0	10.4.170.0	10.4.170.0	6.6.x	L1
			Qlogic	QxE81xx	1.1.20.0	3.23	7.0.2	6.4.x	L1	
								6.5.x	L1	
					1.1.41.0	3.23	7.0.2	6.6.x	L1	
			Qlogic	QxE82xx	1.0.12.0-1vmw	3.12	4.14.14	5.6.x	L1	
								6.4.x	L1	
					3.23	4.16.17	6.5.x	L1		
				1.1.7.0	3.23	4.16.17	6.4.x	L1		
								6.5.x	L1	
				1.1.41.0	3.23	4.16.101	6.6.x	L1		
				6.1.6.0	3.10a3	2.00x7	5.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							5.6.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							6.1.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							6.2.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							6.3.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							6.4.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
							6.5.x	L1	Emulex LP12002; MPIO: CML PCM 1.0.0.5	
	6.0	Qlogic	QxE82xx	1.1.39.0	3.23	4.16.101	6.6.x	L1		

iSCSI Converged Network and Host Bus Adapters

Configurations listed in this section are supported at Level 1 (as described above) for the listed switch firmware/array firmware combinations. Switch validation reflects only those switches that connect directly to the array ports. There is no validation for other "upstream" switches. Feature and other support levels are indicated where different from the default Level 1 support.

NOTE: Unless otherwise noted, the OS provided "native" Multipath IO functionality is used for all validations listed.

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes
								Array OS	BfS	DCB	SCv Series	SC Series	BfS	
Citrix	XenServer	5.6	Qlogic	QLx406x	Built-in	NA	NA	L3	L3	NA	L3	5.5.x	L3	
IBM	AIX	6.1	Qlogic	QLx405x	Built-in	NA	NA	L3	L3	NA	L3	5.3.x	L3	
Microsoft	Windows Server	2003	Broadcom	BRCM570x	5.2.11.0	NA	NA	4.0.x	L1	NA	L3	L3	L3	
				BRCM577xx	5.2.11.0	NA	NA	4.0.x	L1	NA	L3	L3	L3	
			Qlogic	QLx405x	2.1.4.19	NA	3.0.1.24	L3	L3	NA	L3	4.x.y	L3	
												5.0.x	L3	
						NA	3.0.1.53	L3	L3	NA	L3	4.x.y	L3	
												4.x.y	L3	
						NA	3.0.1.40	L3	L3	NA	L3	4.x.y	L3	
												5.1.x	L3	
												5.2.x	L3	
												4.x.y	L3	
												5.2.x	L3	
			QLx406x	2.1.4.26	2.1.4.26	NA	3.0.1.53	3.2.8	L1	NA	L3	4.x.y	L3	
												5.3.x	L3	
												5.4.x	L3	
												5.5.x	L3	
												6.0.x	L3	
												5.5.x	L1	
												5.6.x	L2	
												6.0.x	L1	
			QLx406x	2.1.5.15	2.1.5.15	NA	3.0.1.53	L3	L3	NA	L3	6.1.x	L1	
												6.2.x	L1	
						NA	3.0.1.24	L3	L3	NA	L3	6.3.x	L1	
												6.4.x	L1	
				2.1.4.26	2.1.4.26	NA	3.0.1.24	L3	L3	NA	L3	6.5.x	L2	
												6.6.x	L1	

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes	
								Array OS	BfS	DCB	SCv Series	SC Series	BfS		
Microsoft	2008	Broadcom	Broadcom	BRCM570x	5.2.11.0	NA	NA	4.0.x	L1	NA	L3	L3	L3		
				BRCM577xx	5.2.11.0	NA	NA	4.0.x	L1	NA	L3	L3	L3		
		Qlogic	QLx405x	2.1.4.19		NA	2.0.0.7	L3	L3	NA	L3	4.x.y	L3		
						NA	3.0.1.53	3.2.8	L1	NA	L3	4.x.y	L3		
			QLx406x	2.1.4.19		NA	3.0.1.24	L3	L3	NA	L3	4.x.y	L3		
						NA	3.0.1.53	L3	L3	NA	L3	4.x.y	L3		
					2.1.4.26		3.0.1.53	L3	L3	NA	L3	4.x.y	L3		
												5.2.x	L3		
												5.3.x	L1		
												5.4.x	L1		
												5.5.x	L1		
												6.0.x	L1		
												6.1.x	L1		
												6.2.x	L1		
												6.3.x	L1		
												2.09	3.0.1.75	L3	
												2.1.5.15	3.0.1.53	L3	
												NA	L3	5.5.x	L1
												2.1.5.25	3.0.1.53	3.0.1.53	L3
		2008 R2	Broadcom	BRCM570x	5.2.14.0	NA	NA	4.0.x	L1	NA	L3	L3	L3		
					6.2.7.0	NA	NA	6.0.x	L1	NA	L3	L3	L3		
			BRCM577xx	5.2.11.0	NA	NA	4.0.x	L1	NA	L3	L3	L3			
					7.2.5.0	NA	NA	6.0.x	L1	NA	L3	L3	L3		
			BRCM578xx	7.2.1.0	7.2.6	7.2.6	L3	L3	L3	NA	L3	6.1.x	L3	HP 534	
					7.2.12.0	NA	NA	6.0.x	L1	L3	L3	L3	L3		
								7.0.x	L1	L1					
		Emulex	OCx1400x	10.2.421.0	2.0.281.7 68	10.2.50 6.19	L3	L3	L3	NA	L3	6.6.x	6.6.x	L1	
												5.3.x	L3		
		Qlogic	QLx405x	2.1.4.26		NA	3.0.1.53	3.2.8	L1	NA	L3	5.4.x	L3		

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes					
								Array OS	BfS	DCB	SCv Series	SC Series	Bfs						
Microsoft	Windows Server 2012 R2	Windows Server 2012 R2	Microsoft	Microsoft	Microsoft	Microsoft	Microsoft	2.1.5.15	3.0.1.53	3.0.1.53	L3	L3	NA	L3	5.5.x	L3			
															6.0.x	L3			
															6.1.x	L3			
															6.2.x	L3			
															6.3.x	L3			
								QLx406x	2.1.4.26	2.09	3.0.1.75	L3	L3	NA	L3	5.4.x	L3		
															5.5.x	L3			
															6.0.x	L3			
								QxE82xx	2.1.5.27	2.16	4.14.14	L3	L3	L3	L3	6.4.x	L3		
															6.5.x	L1			
															6.6.x	L1			
															6.2.x	L1			
															6.3.x	L1			
								2.1.5.37	2.1.5.37	2.16	4.14.14	L3	L3	L3	L3	5.6.x	L1	Package: 7.00.12	
															6.4.x	L1			
															6.4.x	L1			
								2.1.6.10	2.4.12	4.18.4	L3	L3	L3	L3	6.6.x	6.6.x	L1		
															6.6.x	6.6.x	L1		
2012	Broadcom	Broadcom	BRCM570x	In-Box	NA	NA	5.2.x	L1	NA	L3	L3	L3	L3	L3	L3	L3			
															6.0.x	L1	NA		
			BRCM577xx	In-Box	NA	NA	5.2.x	L1	NA	L3	L3	L3	L3	L3	L3	L3			
															6.0.x	L1	NA		
		Emulex	BRCM578xx	7.6.51.0	NA	NA	6.0.x	L1	NA	L3	L3	L3	L3	L3	L3	L3	HP 534		
															6.0.x	L1	NA		
			OCE1010x-i	7.4.1.0	NA	NA	6.0.x	L1	L1	L3	L3	L3	L3	L3	L3	L3	L3		
															6.6.x	6.6.x	L1		
		Qlogic	QLx406x	2.1.4.26	2.09	3.0.1.53	L3	L3	NA	L3	L3	L3	L3	L3	5.5.x	L3			
															6.2.x	L3			
				2.1.4.27	2.09	3.0.1.75	L3	L3	NA	L3	L3	L3	L3	L3	6.3.x	L3			
															5.6.x	L3			
			7.6.51.0	2.1.5.37	NA		6.0.x	L1	NA	L3	L3	L3	L3	L3	6.4.x	L3			
															6.5.x	L1			
			QxE82xx	2.1.6.10	2.0.1.35	4.16.17	L3	L3	NA	L3	L3	L3	L3	L3	6.6.x	6.6.x	L1		
															6.6.x	6.6.x	L1		
2012 R2	Broadcom	BRCM578xx	7.8.76.0	7.8.51	7.8.53	7.0.x	L1	L3				L3	L3	L3	L3	L3	L3	HP 534	
	Cisco	VIC-1280	2.4.0.8	2.2(1c)	2.2(1c)	L3	L3	NA	L3	6.5.x	L1								

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes
								Array OS	BfS	DCB	SCv Series	SC Series	BfS	
Microsoft			Emulex	OCx1010x-i	10.2.421.0	2.0.42.0	4.2.324.11	L3	L3	NA	6.6.x	6.6.x	L1	
			Qlogic	QxE82xx	2.1.5.38 2.1.6.10	2.19 2.04.12	4.16.17 4.18.4	L3	L3	NA	L3	6.4.x 6.5.x	L1 L1	
								L3	L3	NA	6.6.x	6.6.x	L1	
Novell	SUSE Linux Enterprise Server	10	Qlogic	QLx405x	5.01.0.04	NA	2.0.0.45	L3	L3	NA	L3	4.x.y	L3	
							3.0.1.53	L3	L3	NA		4.x.y 5.0.x 5.1.x	L3 L3 L3	
					5.01.02-d4	NA	2.0.0.45	L3	L3	NA	L3	4.x.y	L3	
							3.0.1.53	L3	L3	NA		4.x.y 5.2.x 5.3.x 5.4.x 5.5.x 6.0.x	L3 L3 L3 L3 L3 L3	
							3.0.1.53	L3	L3	NA		5.5.x 6.0.x	L3 L3	
							3.0.1.53	L3	L3	NA		5.5.x 6.0.x	L3 L3	
				QLx406x	5.01.03.03.10.03-d4	NA	3.0.1.53	L3	L3	NA	L3	5.5.x 6.0.x 6.1.x 6.2.x 6.3.x	L3 L3 L3 L3 L3	
							3.0.1.53	L3	L3	NA		5.5.x 6.4.x 6.5.x	L3 L3 L3	
							3.0.1.75	L3	L3	NA		5.6.x 6.4.x 6.5.x	L3 L3 L3	
							3.0.1.75	L3	L3	NA		5.6.x 6.4.x 6.5.x	L3 L3 L3	
							3.0.1.75	L3	L3	NA		5.6.x 6.4.x 6.5.x	L3 L3 L3	
		11	Broadcom	BRCM570x	2.0.4	NA	NA	5.2.x	L3	NA	L3	L3	L3	
					2.1.11	NA	NA	6.0.x	L3	NA		L3	L3	
					2.7.10.1b	7.10.0	7.10.18	8.0	L3	NA		L3	L3	
				BRCM577xx	2.1.11	NA	NA	6.0.x	L3	NA	L3	L3	L3	
					2.7.6.2	NA	NA	7.0.x	L1	NA		L3	L3	
			Qlogic	QLx406x	2.7.10.1b	7.10.11	7.10.18	8.0	L3	NA	L3	L3	L3	
					5.2.15.5.3.0-k0		3.0.1.53	L3	L3	NA		5.5.x 6.2.x 6.3.x	L3 L3 L3	
							3.0.1.75	L3	L3	NA		5.6.x	L3	

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes
								Array OS	BfS	DCB	SCv Series	SC Series	BfS	
Novell				5.03.00.06.11.3-k0	2.09	3.0.1.75	L3	L3	NA	L3	6.4.x	L3		
											6.4.x	L3		
											6.5.x	L3		
											6.6.x	L3		
Oracle	Solaris	9-SPARC	Qlogic	QLx406x	5.04.00.00.12.0-k3	NA	3.0.1.75	L3	L3	NA	L3	6.6.x	L3	
RedHat	Enterprise Linux	5.1	Qlogic	QLx401x	5.00	NA	3.0.0.0-4	L3	L3	NA	L3	4.x.y	L3	
		5.2	Qlogic	QLx406x	5.01.03.04	NA	3.0.1.24	L3	L3	NA	L3	4.x.y	L3	
					5.01.00-k8	NA	3.0.1.24	L3	L3	NA	L3	4.x.y	L3	
		5.3	Qlogic	QLx406x	5.01.03.04	NA	3.0.1.53	L3	L3	NA	L3	4.x.y	L3	
					5.01.03.04	NA	3.0.1.24	L3	L3	NA	L3	5.1.x	L3	
		5.4	Qlogic	QLx406x	5.01.00.01.05.04-k9	NA	3.0.1.53	L3	L3	NA	L3	5.2.x	L3	
							3.0.1.24	L3	L3	NA	L3	4.x.y	L3	
							3.0.1.53	L3	L3	NA	L3	5.2.x	L3	
							8.03.00.10.05.04-k	NA	3.0.3.26	L3	L3	NA	L3	5.3.x
		5.5	Qlogic	QLx406x	5.01.00.01.05.04-k9	NA	3.0.1.53	L3	L3	NA	L3	5.4.x	L3	
							3.0.1.53	L3	L3	NA	L3	5.5.x	L3	
							8.03.00.10.05.04-k	NA	3.0.3.26	L3	L3	NA	L3	6.0.x
		5.7	Broadcom	BRCM570x	2.6.23			4.3.6	L3	NA	L3	L3	L3	
					5.01.00.01.05.04-k9	NA	3.0.1.53	L3	L3	NA	L3	5.5.x	L3	
					5.02.15.01.05.07-k0	NA	3.0.1.53	L3	L3	NA	L3	6.0.x	L3	
		5.8	Broadcom	BRCM570x	2.6.23			4.3.6	L3	NA	L3	L3	L3	
					2.7.4.1f			6.0.x	L3	NA	L3	L3	L3	
					2.7.0.3			6.0.x	L3	L3	L3	L3	L3	
			Qlogic	QLx406x	5.02.15.01.05.07-k0	NA	3.0.1.53	L3	L3	NA	L3	5.5.x	L3	
												6.0.x	L3	
												6.1.x	L3	
												6.2.x	L3	
												6.3.x	L3	
		5.9	Broadcom	BRCM5709	2.7.2.2			7.0.x	L1	NA	L3	L3	L3	
				BRMC578xx	2.7.2.2			7.0.x	L1	L3	L3	L3	L3	HP 534

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes	
								Array OS	BfS	DCB	SCv Series	SC Series	BfS		
RedHat			Qlogic	QLx406x	5.02.04.05.05.09-d0	NA	3.0.1.75	L3	L3	NA	L3	5.6.x	L3		
												6.4.x	L3		
		5.10	Qlogic	QLx406x	5.02.04.06.05.10-d0	NA	3.0.1.75	L3	L3	NA	L3	6.4.x	L3		
												6.5.x	L3		
		5.11	Qlogic	QLx406x	5.02.04.06.05.10-d0	NA	3.0.1.75	L3	L3	NA	L3	6.6.x	L3		
												6.6.x	L3		
		6.1	Emulex	OCE10102-i	4.0.323.0	NA	NA	6.0.x	L3	L3	NA	L3	L3	L3	
												6.1.x	L3		
		6.2	Broadcom	BRCM570x	2.1.11	NA	NA	6.0.x	L3	NA	L3	L3	L3		
												6.2.x	L3		
		6.3	Qlogic	QLx406x	5.2.15.5.5.6-c0	NA	3.0.1.53	L3	L3	NA	L3	5.5.x	L3		
												6.1.x	L3		
		6.4	Broadcom	BRCM577xx	2.7.2.2	NA	NA	7.0.x	L1	L3	L3	L3	L3		
												5.5.x	L3		
		6.5	Qlogic	QLx406x	5.02.0.00.06.03-k4	NA	3.0.1.75	L3	L3	NA	L3	5.6.x	L3		
												6.4.x	L3		
VMware	ESX/ESXi	4.0	Broadcom	BRCM570x	2.70.1k.v50.2	NA	NA	4.3.x	L3	NA	L3	L3	L3		
												5.2.x	L3		
												6.0.x	L3		
		Emulex	OCE10102-i	2.102.525.9	NA	NA	5.1.x	L3	L3	NA	L3	L3	L3		
												5.1.x	L3		
		Qlogic	QLx406x	5.01.00-k8	NA	3.00.01.24	L3	L3	NA	L3	4.x.y	L3			
											5.2.x	L3			
											5.3.x	L3			
											5.4.x	L3			

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes						
								Array OS	BfS	DCB	SCv Series	SC Series	BfS							
VMware								5.01.03.1-9vmw	NA	3.00.01.24	L3	L3	NA	L3	5.4.x	L3				
								Broadcom	BRCM570x	2.70.1k.v50.2	NA	NA	4.3.x	L3	NA	L3	L3	L3		
											5.2.x	L3	NA	L3						
											6.0.x	L3	NA	L3						
								BRMC577xx	1.8.11t5rc2.8.1-3vmw	NA	NA	4.3.x	L3	NA	L3	L3	L3			
											5.2.x	L3	NA	L3						
											6.0.x	L3	NA	L3						
			Emulex	OCx1010x-i	2.102.525.9	NA	NA	NA	NA	5.1.x	L3	N	L3	L3	L3					
				OCx1110x-i	2.102.525.9	NA	NA			5.1.x	L3	L3	L3	L3	L3					
			Qlogic	QLx406x	5.01.03.1-9vmw	NA	3.00.01.53	L3	L3	NA	L3	5.3.x	L1							
												5.4.x	L1							
												5.5.x	L1							
												6.0.x	L1							
												6.2.x	L1							
								524.01.45-2vmw	NA	3.00.01.53	L3	L3	NA	L3	6.1.x	L1				
													6.2.x	L1						
													534.4.7.0-1vmw	NA	L3	5.5.x	L1			
																6.3.x	L1			
																6.4.x	L3			
			QxE82xx	524-01-34vmw	2.12	4.09.46.9112	L3	L3	L3	L3	L3	L3	L3	L3	5.5.x	L1				
															6.1.x	L1				
															6.2.x	L1				
															4.10.8	L3	6.2.x	L1		
								524.01.45-2vmw	NA	4.09.46.9112	L3	L3	L3	L3	L3	6.1.x	L1			
																6.2.x	L1			
																2.19	4.16.17	L3	6.4.X	L1
																2.19	4.16.17	L3	6.5.x	L1
			534.4.7.0-1vmw	NA	2.12	4.10.8	L3	L3	L3	L3	L3	L3	L3	L3	6.3.x	L1				
															2.14	4.12.10	L3	5.5.X	L1	
															2.16	4.14.14	L3	5.6.X	L1	
															2.19	4.16.17	L3	6.4.X	L1	
															2.19	4.16.17	L3	6.5.x	L1	
	5.0	Broadcom	BRCM570x	1.9.1d.v50.1-3vmw	NA	NA	4.3.6	L3	NA	L3	L3	L3	L3	L3	L3	L3	L3	L3	L3	
																5.1.2	L3	NA	L3	L3

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes
								Array OS	BfS	DCB	SCv Series	SC Series	BfS	
VMware	5.1	Broadcom	Emulex	2.72.10.v50.2	NA	NA	5.2.x	L3	NA	L3	L3	L3	HP 534	
							6.0.x	L3	NA	L3				
				BRCM577xx	2.70.1k.v50.2	NA	NA	5.2.x	L3	NA	L3	L3	L3	
								6.0.x	L3	NA	L3			
				BRCM578xx	2.70.1k.v50.2	NA	NA	5.2.x	L3	L3	L3	L3	L3	
								6.0.x	L3	L3	L3			
			Qlogic	QLx406x	5.01.03.2-3vmw	2.09	3.00.01.53	L3	L3	NA	L3	5.5.X	L1	HP 534
												6.0.X	L1	
												6.1.X	L1	
												6.2.X	L1	
			Qlogic	634.5.7.0-1vmw	2.09	3.00.01.53	L3	L3	NA	L3	5.5.X	L3	HP 534	
											6.3.X	L3		
				QxE82xx	624-01-36vmw	2.12	4.09.46.9112	L3	L3	L3	L3	5.5.x	L1	
												6.1.x	L1	
												6.2.x	L1	
			Qlogic	624-01-43	2.12	4.10.8	L3	L3	L3	L3	L3	6.2.x	L1	HP 534
												6.3.x	L1	
				634.5.7.0-1vmw	2.12	4.10.8	L3	L3	L3	L3	L3	5.5.x	L2	
												6.4.x	L1	
			Qlogic	2.14	4.12.10	L3	L3	L3	L3	L3	L3	6.4.x	L1	HP 534
												6.5.x	L1	
				2.710.30.v50.4	7.10.11	7.10.18	7.0.x	L1	NA	L3	L3	6.4.x	L1	
												6.5.x	L1	
				634.5.7.0-1vmw	2.12	1.10.47	L3	L3	L3	L3	L3	6.3.x	L1	
												5.5.x	L1	
			634.5.18.0-1vmw	2.16	4.14.14	L3	L3	L3	L3	L3	L3	5.6.x	L1	HP 534
												6.4.x	L1	
			634.5.26.0-1vmw	2.16	4.14.14	L3	L3	L2	L2	L3	L3	6.4.x	L1	HP 534
												6.5.x	L1	
			2.19	4.16.17	L3	L3	L2	L2	L2	L3	L3	6.4.x	L1	HP 534
												6.5.x	L1	

Vendor	Operating System	OS Version	CNA Vendor	Model	Driver	Boot Code	FW	PS Series			SC Series			Notes
								Array OS	BfS	DCB	SCv Series	SC Series	BfS	
VMware	5.5	Broadcom	BRCM578xx	1.78.11v55.4	NA	NA	7.0.x	L3	L2	L3	L3	L3	L3	
				1.78.58.v55.1	7.8.51	7.8.55	L2	L3	L2	L3	6.4.x	L1		
		Cisco	VIC-1280	2.1.2.42	2.2(1c)	2.2(1c)	L3	L3	NA	L3	6.5.x	L1		
		Qlogic	QxE82xx	634.55.23.0-1OEM	2.19	4.16.17	7.0.x	L1	L3	L3	L3	L3	L3	
				634.55.26.0-1vmw	2.16	4.14.14	L3	L3	L3	L3	6.4.x	L1		
					2.19	4.16.17	L3	L3	L3	L3	6.4.x	L1		
					2.19	4.16.17	L3	L3	L3	L3	6.5.x	L1		
				634.55.28.0	2.19	4.16.17	L3	L3	L3	L3	6.4.x	L1		
				644.55.35.0	2.04.12	4.18.4					6.4.x	L1		
					2.19	4.16.10 1	L3	L3	L3	L2	6.6.x	L1		
	6.0	Broadcom	BRCM570x	2.78.76.v60.8-1	7.10.0	7.10.18	7.0.x	L1	NA	L3	L3	L3	L3	
			BRCM578xx	2.78.76.v60.8-1	7.10.11	7.10.18	7.0.x	L1	L2	L3	L3	L3	L3	
		Qlogic	QxE82xx	644.55.35.0	2.19	4.16.10 1	L3	L3	L3	L3	6.6.x	L1		

1 - Brocade BR-1741-k only provides HBA functionality for FCoE. As an iSCSI adapter, it is a simple NIC and utilizes an OS provided software iSCSI initiator. Please reference the Validated NICs table for actual support levels

^ - Vendor Certified. Vendor claims support, though Dell Storage has not validated vendor claim. Support may require vendor involvement.

Network Interface Cards for Boot from SAN for iSCSI and FCoE

Network Interface Controllers (NIC) are the simplest class of host connectivity interfaces and provide basic Ethernet and TCP/IP functionality to the server. For storage solutions, this class of adapters must be paired with special software within the host server's operating system called a storage initiator. Each NIC listed has been tested with the listed operating system's software iSCSI or FCoE initiator.

NOTE: Unless otherwise noted, the OS provided "native" Multipath IO functionality is used for all validations listed.

Vendor	Operating System	OS Version	NIC Vendor	Model	Features						Notes	
					PS Series		SCv Series	SC Series	SW Initiator			
					BfS	DCB	BfS	BfS	iSCSI	FCoE		
Citrix	XenServer	5.x	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		6.0	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		6.2	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		6.5	Intel	X5xx Family	L3	NA	L3	L3	Y	NA		
HP	HP-UX 11i	3.0	HP	All	L3	NA	L3	L3	Y	NA		
IBM	AIX	6.1	IBM	All	L3	NA	L3	L3	Y	NA		
		7.1	IBM	All	L3	NA	L3	L3	Y	NA		
Microsoft	Windows Server	2003/2003R2	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM577xx	L1	NA	L3	L3	Y	NA		
				Intel	Pro1000	L1	NA	L3	Y	NA		
		2008	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM577xx	L1	NA	L3	L3	Y	NA		
			Intel	Pro1000	L1	NA	L3	L3	Y	NA		
				X5xx Family	L1	NA	L3	L3	Y	NA		
		2008 R2	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM572x	NA	NA	L3	L3	Y	NA		
				BRCM577xx	L1	NA	L3	L3	Y	NA		
				BRCM578xx	L3	L1	L3	L3	Y	NA	HP 534	
			Emulex	OCx1410x	L3	L3	L3	L3	Y	NA		
			Intel	i350	L1	NA	L1	L1	Y	NA		
				Pro1000	L1	NA	L3	L3	Y	NA		
				X5xx Family	L1	L3	L1	L1	Y	NA		
			Qlogic	QxE82xx	L3	L3	L3	L3	Y	NA		

Vendor	Operating System	OS Version	NIC Vendor	Model	Features						Notes	
					PS Series		SCv Series	SC Series	SW Initiator			
					BfS	DCB	BfS	BfS	iSCSI	FCoE		
Microsoft		2012	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM5719	NA	NA	L3	L3	Y	NA		
				BRCM577xx	L1	NA	L3	L3	Y	NA		
				BRCM578xx	L1	L3	L3	L3	Y	N	HP 534	
			Emulex	OCx1010x	L3	L3	L3	L3	Y	NA		
				X5xx Family	L1	L3	L1	L1	Y	N		
			Intel	i350	L1	NA	L1	L1	Y	NA		
				QxE82xx	L3	L3	L3	L3	Y	N		
		2012 R2	Broadcom	BRCM578xx	L3	NA	L3	L3	Y	N		
			Emulex	OCx1010x	L3	L3	L3	L3	Y	NA		
			Intel	X5xx Family	L1	L3	L1	L1	Y	N		
				i350	L1	NA	L1	L1	Y	NA		
			Qlogic	QxE82xx	L3	L3	L3	L3	Y	N		
Novell	SUSE Linux Enterprise Server	10 SP4	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		11 SP2	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
				BRCM5719	NA	NA	L3	L3	Y	NA		
			Broadcom	BRCM5720	NA	NA	L3	L3	Y	NA		
				BRCM577xx	L3	NA	L3	L3	Y	NA		
		11 SP2	Intel	X5xx Family	L3	L3	L3	L3	Y	NA		
		11 SP3	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
			Intel	X5xx Family	L1	L3	L3	L3	Y	N		
		12	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
			Intel	X5xx Family	L1	L3	L3	L3	Y	N		
Oracle	Linux (UEK)	6.4	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM578xx	L1	NA	L3	L3	Y	NA	HP 534	
		6.5	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM577xx	L1	NA	L3	L3	Y	NA		
RedHat	Enterprise Linux	5.7	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		5.8	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
				BRMC577xx	L3	NA	L3	L3	Y	NA		

Vendor	Operating System	OS Version	NIC Vendor	Model	Features						Notes	
					PS Series		SCv Series	SC Series	SW Initiator			
					BfS	DCB	BfS	BfS	iSCSI	FCoE		
RedHat		5.9	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRMC578xx	L1	NA	L3	L3	Y	NA	HP 534	
			Intel	i350	L1	NA	L3	L3	Y	NA		
		5.10	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
			Qlogic	QLx40xx	L3	NA	L3	L3	Y	NA		
		6.1	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
		6.2	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
			Intel	X5xx Family	L3	L3	L3	L3	Y	NA		
		6.3	Broadcom	BRCM5719	NA	NA	L3	L3	Y	NA		
				BRCM5720	NA	NA	L3	L3	Y	NA		
				BRCM578xx	L3	L3	L3	L3	Y	NA	HP 534	
			Intel	X5xx Family	L3	L3	L3	L3	Y	NA		
		6.4	Broadcom	BRMC578xx	L1	L1	L3	L3	Y	NA	HP 534	
			Brocade	1020	L3	L3	L3	L3	Y	NA		
		6.5	Broadcom	BRCM570x	L3	NA	L3	L3	Y	NA		
			Intel	i350	L1	L3	L1	L1	Y	NA		
				X5xx Family	L1	L3	L1	L1	Y	NA		
			Qlogic	QxE82xx	L3	L3	L1	L1	Y	N		
		6.6	Emulex	OCx1410x	L3	L3	L3	L3	Y	N		
			Intel	i350	L3	L3	L1	L1	Y	N		
				X5xx Family	L3	L3	L1	L1	Y	N		
			Qlogic	QxE82xx	L3	L3	L3	L3	Y	N		
		7.0	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
			Intel	X5xx Family	L1	L3	L1	L1	Y	NA		
VMware	ESX/ESXi	4.0	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRMC577xx	L1	NA	L3	L3	Y	NA		
				Pro1000	L1	NA	L3	L3	Y	NA		
		4.1	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRMC577xx	L1	NA	L3	L3	Y	NA		

Vendor	Operating System	OS Version	NIC Vendor	Model	Features						Notes	
					PS Series		SCv Series	SC Series	SW Initiator			
					BfS	DCB	BfS	BfS	iSCSI	FCoE		
VMWare			Intel		L1	NA	L3	L3	Y	NA		
				Pro1000	L1	NA	L3	L3	Y	NA		
				10Gb AF DA	L3	NA	L3	L1	Y	NA		
		5.0	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM5719	NA	NA	L3	L3	Y	NA		
				BRCM5720	NA	NA	L3	L3	Y	NA		
				BRCM577xx	L1	L3	L3	L3	Y	NA		
				BRCM578xx	L1	L3	L3	L3	Y	N	HP 534	
		5.1	Brocade	1020	L1	NA	L3	L3	Y	N		
				1020	L1	NA	L3	L3	Y	N		
				1020	L1	NA	L3	L3	Y	N		
		5.5	Intel	Pro1000	L1	NA	L3	L3	Y	NA		
				i350	L3	NA	L3	L3	Y	NA		
				X5xx Family	L1	L3	L3	L3	Y	Y		
		6.0	Broadcom	BRCM570x	L1	NA	L3	L3	Y	NA		
				BRCM5719	NA	NA	L3	L3	Y	NA		
				BRCM5720	NA	NA	L3	L3	Y	NA		
		5.5	Qlogic	BRCM577xx	L3	NA	L1	L1	Y	NA		
				BRCM578xx	L3	NA	L3	L3	Y	N	HP 534	
				QxE82xx	L3	L3	L3	L3	Y	N		
		5.5	Brocade	M1741-k	L3	NA	L1	L1	Y	N		
				M1741-k	L3	NA	L1	L1	Y	NA		
				M1741-k	L3	NA	L1	L1	Y	NA		
		6.0	Intel	X5xx Family	L3	L3	L1	L1	Y	NA		
				i350	L3	L3	L1	L1	Y	NA		
				i350	L3	L3	L1	L1	Y	NA		
		6.0	Qlogic	QxE82xx	L3	L3	L3	L3	Y	N		
				QxE82xx	L3	L3	L3	L3	Y	Y		

Software iSCSI Initiators

Software iSCSI initiators are typically provided by the host OS vendor and can be used with any industry standards based Network Interface Controller (NIC). The table below provides guidance on what software iSCSI initiators have been tested with each platform and the support level for advanced features such as booting from the SAN and Data Center Bridging functionality. It should be noted that Microsoft Windows and RedHat Enterprise Linux provide some level of software DCB functionality, but it has not been tested by Dell and is supported on an L3 basis. It is preferable, that if DCB is needed to allow for a converged SAN/LAN network, that an iSCSI CNA with iSCSI Hardware Offload capability be used.

If Boot from SAN functionality is desired, it is advised that the design include one of the adapters listed in the *iSCSI Network Interface Cards for Boot from SAN* table be used to ensure the indicated support level.

Vendor	iSCSI Initiator/ Operating System	Initiator Version	Valid Array OS Versions			Features		
			PS Series OS Version	SCv Series	SC Series	EqualLogic		Compellent
						DCB	iSCSI Boot	
Atto	Apple OSX 10	3.20	L3	L3	4.2.x	NA	L3	L3
		3.22	3.2.8	L3	L2	NA	L3	L3
Citrix	XenServer 4.x	In-Box	3.2.8 ¹	L3	L3	NA	L3	L3
	XenServer 5.x	In-Box	3.2.8 ¹	L3	L3	NA	L3	L3
		5.6 FP1	L2	L3	5.5.2	NA	L3	L3
	XenServer 6.x	6.0.2	6.0.x	L3	L3	NA	L3	L3
		6.2.x	6.0.x, 7.0.x	L3	6.5.x, 6.6.x	NA	L3	L3
		6.5	L2	6.6.x	6.6.x	NA	L3	L3
globalSAN	Apple OSX 10	3.3	3.2.8	L3	L3	NA	L3	L3
Hewlett-Packard	HP-UX 11i	03E	3.2.8	L3	L3	NA	L3	L3
		B.11.31.01	L2	L3	4.x	NA	L3	L3
		B.11.31.03	L2	L3	5.4.2, 5.5.2, 5.5.3, 5.5.4, 6.0.1, 6.0.2, 5.5.10, 6.2.1, 6.3.1	NA	L3	L3
		B11.31.03c	L2	L3	5.5.20, 6.3.10, 6.4.x, 6.5.x, 6.6.x	NA	L3	L3
IBM	AIX 5.2	RTS	3.2.8	L3	L3	NA	L3	L3
	AIX 5.3	5.3.0.0	L2	L3	6.2.x	NA	L3	L3
		5.3.0.50	L2	L3	4.1.x, 4.2.x, 4.5.x, 5.0.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x, 6.2.x	NA	L3	L3

Vendor	iSCSI Initiator/ Operating System	Initiator Version	Valid Array OS Versions			Features		
			PS Series OS Version	SCv Series	SC Series	EqualLogic		Compellent
						DCB	iSCSI Boot	iSCSI Boot
IBM	AIX 6.1	6.1.4.0	L2	L3	5.4.x, 5.5.x, 6.0.x, 6.1.x, 6.3.x, 6.4.x, 6.5.x	NA	L3	L3
	AIX 7.1	7.1.0.0	L2	L3	5.5.x, 5.6.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x	NA	L3	L3
Microsoft	Windows 7	RTM	3.2.8+, 4.x, 5.x, 6.0.x	L3	L3	NA	L1	L3
	Windows Vista	RTM	3.2.8+, 4.x, 5.x, 6.0.x	L3	L3	NA	L1	L3
	Windows 2003	2.08	3.2.8+, 4.x, 5.x, 6.0.x	L3	L3	NA	L1	L3
	Windows 2003 R2	5.2.3790.1653	3.2.8+, 4.x, 5.x, 6.0.x	L3	4.1.x, 4.2.x	NA	L1	L3
		5.2.3790.3392	3.2.8+, 4.x, 5.x, 6.0.x	L3	4.1.x, 4.2.x, 4.5.x	NA	L2	L3
		5.2.3790.3825	3.2.8+, 4.x, 5.x, 6.0.x	L3	4.2.x, 4.5.x, 5.0.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L2	L3
	Windows 2008	6.1.6001.18000	3.2.8+, 4.x, 5.x, 6.0.x	L3	4.1.x, 4.2.x, 4.4.x, 5.0.x, 5.1.x	NA	L1	L3
		6.1.6001.18005	3.2.8+, 4.x, 5.x, 6.0.x	L3	4.5.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x	NA	L1	L3
		6.1.6002.18005	3.2.8+, 4.x, 5.x, 6.0.x	L3	5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x	NA	L1	L3
	Windows 2008 R2	6.1.7600.16385	3.2.8+, 4.x, 5.x, 6.0.x	L3	5.3.x, 5.4.x, 5.5.x, 6.0.x	NA	L1	L3
		6.1.7601.17514	3.2.8+, 4.x, 5.x, 6.0.x, 7.0.x	L3	5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L1	L3
		6.1.7601.18386	L2	6.6.x	6.6.x	NA	L1	L1
	Windows 2012	6.2.8370.0	5.2.x ² , 6.0.x, 7.0.x	L3	5.5.x, 6.3.x, 6.4.x, 6.5.x	L3	L1	L1
		6.2.9200.16451	6.0.x, 7.0.x	6.6.x	6.4.x, 6.5.x, 6.6.x	L3	L1	L1
	Windows 2012 R2	6.3.9600.16384	6.0.x, 7.0.x	L3	6.4.x, 6.5.x	L3	L1	L3
		6.3.9600.17090	L2	6.6.x	6.6.x	NA	L1	L1
Novell	Netware 6.5	1.06.03	L3	L3	4.1.x, 4.2.x	NA	L3	L3
	Netware 6.5	1.06.05	3.2.8	L3	L3	NA	L3	L3

Vendor	iSCSI Initiator/ Operating System	Initiator Version	Valid Array OS Versions			Features		
			PS Series OS Version	SCv Series	SC Series	EqualLogic		Compellent
						DCB	iSCSI Boot	iSCSI Boot
Novell	Suse Linux Enterprise Server 10	2.0.707-0.19	L3	L3	4.1.x,	NA	L3	L3
		2.0.707	L3	L3	4.1.x, 4.2.x, 4.5.x, 5.0.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x, 6.0.x	NA	L3	L3
		2.0-868	L3	L3	5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x	NA	L3	L3
		2.0-870	3.2.8+, 4.x, 5.x	L3	L3	NA	L3	L3
	Suse Linux Enterprise Server 11	2.0-870	3.2.8+, 4.x, 5.x	L3	L3	NA	L3	L3
		2.0-872	L2	L3	5.5.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x	NA	L3	L3
		2.0-873	7.0.x	L3	L3	NA	L3	L3
		2.2.3	L2	6.6.x	6.4.x, 6.5.x, 6.6.x	NA	L3	L3
	Suse Linux Enterprise Server 12	2.0-873	7.0.x	L3	6.6.x	NA	L3	L3
Oracle/Sun	Solaris 10 (SPARC)	10U8 In-Box	3.2.8	L3	L3	NA	L3	L3
		20070417-0	L2	L3	4.1.x, 4.2.x, 4.5.x	NA	L3	L3
		20071207-0	L2	L3	4.5.x, 5.0.x, 5.1.x	NA	L3	L3
		20080715-0	L2	L3	4.2.x	NA	L3	L3
		20090828-0	L2	L3	4.5.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x	NA	L3	L3
		20110524-0	L2	L3	5.5.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L3	L3
	Solaris 10(x86)	20120627-0	L2	L3	6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L3	L3
	Solaris 11 (SPARC)	20091111-0	L2	L3	5.5.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L3	L3
	Enterprise Linux 5	5.2	3.2.8+, 4.x	L3	L3	NA	L3	L3
		5.5	4.x, 5.x	L3	L3	NA	L3	L3
	Enterprise Linux 6	6	5.0.2+	L3	L3	NA	L3	L3

			Valid Array OS Versions			Features		
Vendor	iSCSI Initiator/ Operating System	Initiator Version	PS Series OS Version	SCv Series	SC Series	EqualLogic		Compellent
						DCB	iSCSI Boot	iSCSI Boot
Oracle/Sun	Linux Server UEK 6.3	6.2.0-872.41	L3	L3	5.5.x, 6.3.x	NA	L3	L3
	Linux Server UEK 6.4	6.2.0-873.-2.0.2	L3	L3	6.4.x	NA	L3	L3
	Linux Server UEK 6.5	6.2.0-873.10.0.0	7.0.x	L3	6.5.x, 6.6.x	NA	L1	L3
	Linux Server UEK 7.0	6.2.0-873-10.0.1	L2	L3	6.6.x			
RedHat	RHEL 5	6.2.0.865-0.8	L3	L3	4.1.x	NA	L3	L3
		6.2.0.868-0.7	L3	L3	4.1.x, 4.2.x, 4.5.x, 5.0.x	NA	L3	L3
		6.2.0.868-0.18	L3	L3	4.5.x	NA	L3	L3
		6.2.0.871-0.10	L3	L3	4.5.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x	NA	L3	L3
		6.2.0.871-0.16	L3	L3	5.4.x, 5.5.x, 6.0.x	NA	L3	L3
		6.2.0.872-10	4.x, 5.x, 6.x	L3	5.5.x, 6.0.x	NA	L1	L3
		6.2.0.872-13	4.x, 5.x, 6.x	L3	5.5.x, 6.1.x, 6.2.x, 6.3.x	NA	L1	L3
		6.2.0.872-16	L2	L3	6.4.x, 6.5.x, 6.6.x	NA	L3	L3
	RHEL 6	6.2.0.872-10	4.x, 5.x, 6.x	L3	5.4.x, 5.5.x 6.0.x	NA	L1	L3
		6.2.0.872-33	4.x, 5.x, 6.x	L3	5.5.x, 6.0.x, 6.1.x, 6.2.x	L3	L1	L3
		6.2.0.872-41	4.x, 5.x, 6.x	L3	5.5.x, 6.3.x	L3	L1	L3
		6.2.0.873-2	4.x, 5.x, 6.x	L3	6.4.x	L3	L1	L3
		6.2.0.873-10	L2	L3	6.5.x	L3	L3	L3
		6.2.0.873-14	L2	6.6.x	6.6.x	L3	L3	L3
	RHEL 7	6.2.0.873-21	7.0.x	6.6.x	6.4.x, 6.6.x	NA	L3	L3
VMware	ESX 3.5	3.5U5	3.2.8+, 4.x	L3	4.1.x, 4.2.x, 4.5.x, 5.0.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x, 6.0.x	NA	L3	L3
	vSphere 4.0	In-Box	4.0.6+, 5.1.x, 5.2.x, 6.0.x	L3	4.5.x, 5.0.x, 5.1.x, 5.2.x, 5.3.x, 5.4.x, 5.5.x, 6.0.x	NA	L1	L3
	vSphere 4.1/ESXi 4.1	In-Box	4.0.6+, 5.1.x, 5.2.x, 6.0.x	L3	5.3.x, 5.4.x, 5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x, 6.4.x, 6.5.x	NA	L1	L3

Vendor	iSCSI Initiator/ Operating System	Initiator Version	Valid Array OS Versions			Features		
			PS Series OS Version	SCv Series	SC Series	EqualLogic		Compellent
						DCB	iSCSI Boot	iSCSI Boot
VMware	vSphere 5.0	In-Box	5.1.x, 5.2.x, 6.0.x	L3	5.5.x, 6.0.x, 6.1.x, 6.2.x, 6.3.x	NA	L1	L3
	vSphere 5.1	In-Box	5.1.x, 5.2.x, 6.0.x, 7.0.x	L3	5.5.x, 6.3.x, 6.4.x, 6.5.x	NA	L1	L1
	vSphere 5.5	In-Box	6.0.x, 7.0.x	6.6.x	5.5.x, 6.3.x, 6.4.x, 6.5.x, 6.6.x	NA	L1	L1
	vSphere 6.0	In-Box	7.0	6.6.x	6.6.x	NA	L1	L3

1 – Tested by vendor

2 – Tested using Microsoft “Release to Manufacturing” version...Actual support may change

RTM - Release to Manufacturer. Term used to describe the initial released version of an Operating System from the vendor.

In-Box - Term used to describe the version included with each release of a given Operating System by the vendor

Software FCoE Initiators

Software FCoE initiators may be provided by the host OS vendor and can be used with any industry standards based Network Interface Controller (NIC) that supports FCoE and DCB functionality. The table below provides guidance on what software FCoE initiators have been tested with each platform and the support level for advanced features such as booting from the SAN.

If Boot from SAN functionality is desired, it is advised that the design include one of the adapters listed in the *Network Interface Cards for Boot from SAN for iSCSI and FCoE* table be used to ensure the indicated support level.

Vendor	iSCSI Initiator/ Operating System	Initiator Version	SCv Series	SC Series	Boot from SAN
VMware	vSphere 5.0	In-Box	L3	5.5.x, 6.2.x, 6.3.x	L3
	vSphere 5.1	In-Box	L3	5.5.x, 5.6.x, 6.3.x, 6.4.x, 6.5.x	L1
	vSphere 5.5	In-Box	6.6.x	6.4.x, 6.5.x, 6.6.x	L1

In-Box - Term used to describe the version included with each release of a given Operating System by the vendor

SAS HBA

SAS HBA Support table lists those SAS HBA adapters that have been tested with the SCv Series of array products. Any SAS HBA used, other than those listed below are considered supported at a Level 3 – Commercially Reasonable Effort basis.

OS Vendor	OS Version	Adapter Vendor	Adapter Model	Adapter Driver	Adapter Firmware	SAN Boot
Microsoft	2008 Server R2	Dell	12G SAS Adapter	2.50.75.01	03.00.08.00	No
	2012 Server	Dell	12G SAS Adapter	2.50.75.01	03.00.08.00	No
	2012 Server R2	Dell	12G SAS Adapter	2.50.75.01	03.00.08.00	No
Red Hat	RHEL 6.6	Dell	12G SAS Adapter	4.00.01.00	03.00.08.00	No
	RHEL 7.0	Dell	12G SAS Adapter	4.00.01.00	03.00.08.00	No
VMWare	ESXi 5.5	Dell	12G SAS Adapter	04.00.00.00.1vmw	03.00.08.00	No

Fluid File System SAN Switches

Vendor	Model	Type	Switch FW	Equallogic(FS7xxx)		Compellent(FS8600)		Notes	
				FS OS Version	PS OS Version	FS OS Version	SCOS Version		
Brocade	300	FC	6.4.1b	NA	NA	2.0.x	6.1.x		
							6.2.x		
							6.3.x		
						3.0.x	6.1.x		
							6.2.x		
	5100	FC	6.1.1a	NA	NA		6.3.x		
					2.0.x	6.1.x			
						6.2.x			
						6.3.x			
					3.0.x	6.1.x			
Cisco	MDS 9148	FC	5.0(1a)	NA		NA		6.2.x	
								6.3.x	
					3.0.x	6.1.x			
						6.2.x			
						6.3.x			
	MDS 9222i	FC	6.2(3)	NA	NA	3.0.x	6.4.x		
	Nexus 5010/5020	Eth	5.1.3N2.1	2.0.4720	6.0.x	L3	L3		
				2.0.6740	6.0.x				
				3.0.8501	7.0.x				
	Nexus 55xx UP	Conv	6.0(2)N1(2)	3.0.8501	7.0.x	L2	L2		
			7.0(3)N1(1)	L2	L2	4.0.x	6.5.10		
Dell	Force10 s4810	Eth	8.3.12.x	2.0.4720	6.0.x	L3	L3		
				9.1.x	2.0.6740	L3	L3		
				9.2.x	3.0.8501	L3	L3		
				9.6.x	L2	L2	3.0.x	6.5.10	
							4.0.x	6.5.10	
	Force10 s4820T	Eth	9.2.x	3.0.8291	7.0.x	L3	L3		
	Force10 S60	Eth	8.3.3.6	1.0.402	5.2.1	L3	L3		
			8.3.3.7	2.0.4720	6.0.x				
	PowerConnect 70xx	Eth	4.0.0.x	L3	L3	3.0.x	6.1.x		
							6.2.x		
							6.3.x		
				4.2.2.3	2.0.4720		6.4.x		
				5.1.0.1	2.0.6740	6.0.4+	L2	L2	
	PowerConnect 81xx	Eth	5.0.0.4	2.0.6740	6.0.4	L3	L3		
			5.1.0.1	2.0.6740	6.0.4	L3	L3		
				3.0.8291	7.0.x				
	DN N30xx	Eth	6.1.0.x	3.0.x	7.0.x	3.0.x	6.5.x		
	DN N40xx	Eth	6.1.0.x	3.0.x	7.0.x	3.0.x	6.5.x		
			6.1.2.x	L2	L2	4.0.x	6.5.10		
	DN S5000	Conv	9.1.1.0	L3	L3	3.0.x	6.4.x	FC and iSCSI	
			9.6.x	L3	L3	4.0.x	6.5.10	iSCSI Only	



Fluid File System Deprecated Switches

Vendor	Model	Type	Switch FW	Equallogic(FS7xxx)		Compellent(FS8600)	
				FS OS Version	PS OS Version	FS OS Version	SCOS Version
Dell	PowerConnect 62xx	Eth	3.3.x	1.0.402	5.2.1	3.0.x	6.4.x
	PowerConnect 8024/8024F	Eth	5.1.x	3.0.8501	7.0.x	3.0.x	6.1.x



Fluid File System Enterprise Manager Support

FluidFS Version	Enterprise Manager Version	Storage Center Version
2	6.2.2.8+	6.1.3+
		6.2.x
3	6.3.4+	6.3.x
3	2014 R1 and newer	6.3.x
		6.4.x
		6.5.x



Security Key Management System Support

Vendor	KMS Solution	KMS Version	Valid Array OS Versions	
			PS Series OS Version	SC Series OS Version
SafeNet	k150	6.6.x	NA	6.5.x
		8.1.x		6.5.x
	k150v	8.0.x	NA	6.5.x
		8.1.x		6.5.x
	k250	6.6.x	NA	6.5.x, 6.6.x
		8.1.x		6.5.x, 6.6.x
Thales	k460	6.6.x	NA	6.5.x
		8.1.x		6.5.x, 6.6.x
	EMS200	4.0.2	NA	6.5.x, 6.6.x



Storage Virtualization Appliances

Dell does not directly test or validate any 3rd party storage virtualization appliances in front of Dell's storage products. Dell does work with various 3rd party vendors of such appliances to ensure that our arrays have been validated with these vendor's devices and to ensure that our storage products are listed in each vendor's respective certification matrices. The following vendor's currently lists one or more Dell Storage products in their certification matrix as well as a link to each certification matrix.

IBM SAN Volume Controller (SVC)

http://www-01.ibm.com/support/docview.wss?uid=ssg1S1004620#_Compellent

IBM Storwize V7000

http://www-01.ibm.com/support/docview.wss?uid=ssg1S1004622#_Compellent



Additional Resources

Dell Storage SC/FS Series Whitepapers	http://en.community.dell.com/techcenter/storage/w/wiki/5018.compellent-technical-content.aspx
Dell Storage SC/FS Series Videos	http://en.community.dell.com/techcenter/storage/w/wiki/5089.compellent-video-content.aspx
Dell Storage Partner Portal (8)	http://partnerdirect.dell.com/sites/channel/en_us/Systems/Storage/Pages/Storage.aspx
Dell Storage SC/FS Series Customer Support Portal (8)	http://customer.compellent.com/login.aspx?item=%2fdefault&user=extranet%5CAnonymous&site=customerportal
Dell Storage PS/FS Series Configuration Guide	http://en.community.dell.com/techcenter/storage/w/wiki/2639.equallogic-configuration-guide.aspx
Dell Storage PS Series Rapid Configuration Portal	http://en.community.dell.com/techcenter/storage/w/wiki/3615.rapid-equallogic-configuration-portal-by-sis.aspx
Dell Storage PS/FS Series Whitepapers	http://en.community.dell.com/techcenter/storage/w/wiki/2660.equallogic-technical-content.aspx

