Netapp Interoperability Matrix

NetApp® FC, FCoE, iSCSI and NAS (NFS) Storage System Interoperability

The NetApp Interoperability Matrix (IMT) defines the components and versions that have been qualified and which can be used to construct FC/FCoE, iSCSI and NFS configurations that are supported end-to-end by NetApp. NetApp partners with operating system, I/O stack and hardware component vendors during their development and release cycles in order to provide support and interoperabililty at or within certain periods following the vendors general availability release. For support of configurations not included in the NetApp Interoperability Matrix, including pre-general-availability releases, or to obtain support for your particular configuration via the NetApp Product Variance Request (PVR) process, please contact your NetApp account team or partner. If you experience technical issues with NetApp storage systems in configurations not listed in the NetApp Interoperability Matrix, the NetApp Technical Support Center will diagnose and support the configuration on a best-efforts basis, and resolution may require changing the configuration to one currently listed in the matrices or working with your account team or partner through the PVR process.
NetApp provides complimentary host utilities for FC/FCoE, iSCSI, and NFS storage systems that ensure proper integration with host operating system, I/O stack and host hardware components, and use of the NetApp host utilities is required for generally supported configurations within the NetApp Interoperability Matrix. The applicable host utilities are specified in the rows and notes of the host operating system interoperability matrices.

Beyond the configuration components practically required to have basic I/O, such as the host operating system level, server or processor architecture, initiator and host multipath, the components listed in the interoperability matrices are elective and the row-based configurations reflect the entire configuration supported by NetApp. Note that NetApp supports all server hardware models corresponding to the server or processor architecture listed in the interoperability matrix, but does not specify server models by brand.

NetApp storage systems are built on a common operating system infrastructure - Data ONTAP®. Unless otherwise noted in the matrices, support by the Data ONTAP operating system is the criterion used to determine whether a system configuration is qualified in a particular environment rather than the particular hardware model of the system. All system models that run a qualified Data ONTAP version are equivalent for support purposes.

Non-disruptive Upgrade

Non-disruptive upgrade of Data ONTAP and other system-level components is supported for SAN and NFS environments.
Minor NDU (within a Data ONTAP version family) is supported in Data ONTAP 6.5.3 and later.
Major NDU (between Data ONTAP version families) is supported in Data ONTAP 7.0.6 and later to Data ONTAP 7.2.3 and later for Data ONTAP 7.2.x target releases.
Major NDU is supported from Data ONTAP 7.1.2 and later to Data ONTAP 7.2.3 and later for Data ONTAP 7.2.x target releases.
Major NDU is supported from Data ONTAP 7.2.3 and later to Data ONTAP 7.3 GA and later for Data ONTAP 7.3.x target releases.
NDU Documentation - For complete information about non-disruptive upgrade, see the Data ONTAP Upgrade Guide for either Data ONTAP 7.2.5.1 or 7.3, available on NOW at http://now.netapp.com/NOW/knowledge/docs/ontap/rel7251/ and http://now.netapp.com/NOW/knowledge/docs/ontap/rel73/

NetApp storage systems are built on a common operating system infrastructure - Data ONTAP®. Unless otherwise noted in the matrices, support by the Data ONTAP operating system is the criterion used to determine whether a system configuration is qualified in a particular environment rather than the particular hardware model of the system. All system models that run a qualified Data ONTAP version are equivalent for support purposes. The NetApp storage systems below run the Data ONTAP operating system and support the FC, iSCSI and NFS protocols (list refers to stand-alone and high-availability storage systems). Refer to the Host Operating System matrices above for details about Data ONTAP versions qualified with a particular host.

NetApp Upgrade Advisor - an online tool available on the NOW (NetApp on the Web) site for all systems with a valid support contract that are configured to send AutoSupport messages. When you submit your system identification and target release, the Upgrade Advisor compares AutoSupport data about your system to known requirements and limitations of the target release and generates an upgrade plan (and optionally a back-out plan) with recommended preparation and execution procedures. The Upgrade Advisor not only dramatically simplifies the process of qualifying your environment for a successful upgrade; the automated mechanism significantly reduces the potential for human error. In conjunction with the Upgrade Advisor, NetApp best practice for NDU strongly recommends review of the Data ONTAP Upgrade Guide and Release Notes. For more information, see AutoSupport home on NOW at http://now.netapp.com/NOW/asuphome/

Shared SAN Host Support for Heterogeneous Storage Support

NetApp supports shared SAN host configurations in which host servers are attached to both NetApp and non-NetApp storage systems, as defined hereafter. All components in the configuration must be supported by the individual storage system vendors. NetApp best practices to limit interoperability issues and facilitate diagnosis are that each vendor's storage system be connected through a separate HBA and that each vendor's target port be configured in its own zone (single-initiator zoning), and, when creating host-based volume containers, volumes and stripes do not span vendor storage systems.

For configurations not addressed below, please contact your account team or partner regarding the potential for a PVR.
Native Host OS Multipath - Accessing NetApp and third-party storage systems from a single host in which the host is using native OS multipath is supported with Data ONTAP 7.3 and later and with SSI controller failover mode, as long as the NetApp configuration requirements are met, as specified in the NetApp Host Utilities documents.
Symantec Veritas Storage Foundation DMP Multipath - Accessing NetApp and third-party storage systems from a single host is supported, as long as the configuration uses the NetApp Array Support Libraries for the applicable host operating environment and NetApp configuration requirements are met, as specified in the NetApp Host Utilities.
(PVR-Required) Native Host OS Multipath (NetApp) and EMC PowerPath (CLARiiON) - Accessing NetApp storage systems via native OS multipathing and EMC CLARiiON storage systems via EMC PowerPath from a single host is supported via PVR. For configurations not listed, please contact your account team or partner regarding the potential for a PVR.
Windows: EMC CLARiiON w/PowerPath 4.5+, or EMC Symmetrix w/PowerPath 5.3+ and connected to NetApp FAS via Data ONTAP DSM 3.3.1 for Windows MPIO and later.
Solaris: EMC CLARiiON and Symmetrix w/ PowerPath 5+ and connected to NetApp FAS via SUN Traffic Manager (MPxIO)
AIX: EMC CLARiiON and Symmetrix w/ PowerPath 5+ and connected to NetApp FAS via AIX MPIO

EFI boot support

EFI (Extensible Firmware Interface), or UEFI (Unified Extensible Firmware Interface), is a replacement for the older server BIOS firmware. UEFI-based servers can SAN boot from a LUN on a NetApp storage system. The steps for configuring the new UEFI boot are different, but the concepts are the same as booting a system with server BIOS. See your server and storage adapter documentation for specific configuration steps.
SAN boot using standard EFI or UEFI boot is supported only for hosts running HP-UX 11iv2, HP-UX 11iv3, and later. Check the specific configuration in IMT to be sure SAN booting is supported.
For all other host operating systems, SAN boot is supported only using the UEFI Legacy Option (BootBIOS).

Oracle

For Oracle information, please see https://support.oracle.com/CSP/ui/flash.html

End of Support

NetApp aims to provide continued support for installed configurations, but may remove configurations and support from the NetApp Interoperability Matrix within three months after an operating system, I/O stack or hardware component vendor announces end of support for a product. NetApp will continue support for existing installations of end-of-support configurations as long as general support is available from the applicable vendor. Support of NetApp storage systems and software is provided according to NetApp's standard warranty and support lifecycle.

Third-party Virtualization Appliance Support - IBM Storage Virtualization Controller (SVC)

NetApp supports IBM's support of FAS storage systems with SVC. In the event of configuration support situations, NetApp will diagnose basic storage hardware operations and IBM support owns overall connectivity and configuration management and support for SVC deployments. SVC configurations require a NetApp PVR for support, which provides an escalation process to IBM support and/or IBM SVC engineering. IBM maintains supported configurations for IBM N series and FAS storage systems at http://www-01.ibm.com/support/docview.wss?uid=ssg1S1003277&rs=555#_IBM_N_Series

Ethernet Switch Support

NetApp supports all traditional (non-Data Center Bridging) 10GbE switches with iSCSI and NAS without specific model reference in the IMT.

NetApp supports enhanced (Data Center Bridging capable) 10GbE switches with iSCSI and NAS without specific model reference. For FCoE configurations, supported 10GbE switches are listed by specific model reference.

Ethernet Host NIC, Server Adapter, and TCP/IP Offload (TOE) Adapter Support

NetApp supports all 1GbE and 10GbE NICs (network interface cards) and server adapters for rack, tower and listed bladeserver configurations, without specific NIC or adapter model reference, with iSCSI and NAS configurations as otherwise specified in the IMT.

NetApp supports 1GbE and 10GbE TCP/IP offload (TOE) adapters in rack, tower and listed bladeserver configurations , without specific adapter model reference, with iSCSI and NAS configurations as otherwise specified in the IMT.

NetApp supports 1GbE and 10GbE iSCSI offload adapters by specific model reference in the IMT for rack, tower and listed bladeserver configurations.

Third-party Host Bus Adapter (HBA) and Converged Network Adapter (CNA) Model Support

NetApp supports third-party HBA models that are based on original equipment manufacturer models from Brocade, Emulex and QLogic, so long as the HBA is used with NetApp-qualifed driver and firmware levels and within configurations outlined in the NetApp Support Matrix. NetApp lists the Brocade, Emulex and QLogic models within the NetApp Interoperability Matrix.

Third-party Certifications with NetApp Storage Systems

Beyond qualification by NetApp and listing in the NetApp Interoperability Matrix, NetApp participates in the certification activities of ecosystem parties, as listed below. For additional certifications not listed herein, please work with your account team or partner through the PVR process.

Microsoft
Windows Server Catalog
Microsoft Cluster Server

VMware
Hardware Compatibility List

Cisco
Cisco Partner Network

Oracle
Storage Compatibility Program
Solaris Ready
Cluster Open Storage

Symantec (Veritas)
Hardware Compatibility List

IBM
PowerVM (VIO Server)
SAN Volume Controller

Hewlett Packard
HP BladeSystem SAN Checkmark
HP-UX Mass Storage Solutions Interoperability Program

Brocade
Brocade Partner Network

Copyright

Search Criteria

Storage Solution	Storage Area Network (SAN)
Name	
Status	All
Last modified from	
Last modified till	
Components	FC; NetApp Data ONTAP 7.3.5; HP HP-UX 11i v1 (B.11.11 Dec 2004); HP HP-UX 11i v1 (B.11.11 Dec 2006);

HP-UX 11i

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20080825-020808172-753	Supported	Info: 29,33,35,37,39,40,41	FC	NetApp FCP HP-UX Host Utilities 4.1	HP HP-UX 11i v1 (B.11.11 Dec 2006)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6826A {Bus=PCI-X, Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Spec=2GB dual Port }; HP HBA A9782A {Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Rate=2GB , Spec=PCI-X single port }; HP HBA A9784A {Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Rate=2GB, Spec=PCI-X Single port }; HP HBA AB379A {Bus=PCI-X, Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Spec=Dual port 4GB }; HP HBA AB379B {Bus=PCI-X, Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Spec=Dual Port 4GB }; HP HBA AD193A {Bus=PCI-X, Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Spec=Combo FC 4GB and 1GB ethernet }; HP HBA AD194A {Bus=PCI-X,	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS; HP HP-UX RawIO	HP Serviceguard A.11.14; HP Serviceguard A.11.16	Bus PCIX; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4; NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode	NetApp cfmode P; NetApp cfmode SSI	

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
								Driver=FibrChanl-01:B.11.11.13, Firmware=With Driver, Spec=Combo FC 4GB and 1GB ethernet }								
20080825-020808154-754	Supported	Info: 29,33,35,37,39,40,41	FC	NetApp FCP HP-UX Host Utilities 4.1	HP HP-UX 11i v1 (B.11.11 Dec 2006)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6795A {Bus=PCI, Driver=FibrChanl-00:B.11.11.13, Firmware=With Driver, Spec=2GB Single Port }	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS; HP HP-UX RawIO	HP Serviceguard A.11.14; HP Serviceguard A.11.16	Bus PCI; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4; NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode	NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061911-1087	Supported	Info: 29,30,35,37,39,40,41	FC	NetApp FCP HP-UX Attach Kit 1.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A5158A {Driver=Fibr Chanl-00:B.11.11.12, Firmware=with Driver, Spec=Single-port 1 Gb PCI FC HBA }; HP HBA A6795A {Driver=Fibr Chanl-00:B.11.11.12, Firmware=with Driver, Spec=2Gb PCI single port }	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS; HP HP-UX RawIO	HP Serviceguard A.11.14; HP Serviceguard A.11.16	Bus PCI; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.1.0.1; NetApp Data ONTAP 7.1.1; NetApp Data ONTAP 7.1.1.1; NetApp Data ONTAP 7.1.2; NetApp Data ONTAP 7.1.2.1; NetApp Data ONTAP 7.1.3; NetApp Data ONTAP 7.2; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4;	NetApp cfmode DF; NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
														NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode		

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061910-1129	Supported	Info: 29,30,35,39,40	FC	NetApp FCP HP-UX Attach Kit 1.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A5158A {Driver=Fibr Chanl-00:B.11.11.12, Firmware=with Driver, Spec=Single-port 1 Gb PCI FC HBA }; HP HBA A6795A {Driver=Fibr Chanl-00:B.11.11.12, Firmware=with Driver, Spec=2Gb PCI single port }	Veritas VxVM 3.5	Veritas DMP 3.5 (MP3)	Veritas VxFS 3.5	Veritas VCS 3.5	Bus PCI; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot No	NetApp Data ONTAP 7.1.0.1; NetApp Data ONTAP 7.1.1; NetApp Data ONTAP 7.1.1.1; NetApp Data ONTAP 7.1.2; NetApp Data ONTAP 7.1.2.1; NetApp Data ONTAP 7.1.3; NetApp Data ONTAP 7.2; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4;	NetApp cfmode DF; NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
														NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode		

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061909-1177	Supported	Info: 29,30,35,39,40	FC	NetApp FCP HP-UX Attach Kit 1.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6826A {Driver=Fibr Chanl-01:B.11.23.04.01, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A6826A {Driver=Fibr Chanl-01:B.11.11.05, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A6826A {Driver=Fibr Chanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.11.05, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.23.04.01, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=Fibr Chanl-01:B.11.11.0	Veritas VxVM 3.5	Veritas DMP 3.5 (MP3)	Veritas VxFS 3.5	Veritas VCS 3.5	Bus PCIX; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot No	NetApp Data ONTAP 7.1.0.1; NetApp Data ONTAP 7.1.1; NetApp Data ONTAP 7.1.1.1; NetApp Data ONTAP 7.1.2; NetApp Data ONTAP 7.1.2.1; NetApp Data ONTAP 7.1.3; NetApp Data ONTAP 7.2; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.2L1; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.4L1; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2;	NetApp cfmode DF; NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
								5, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=FibrChanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=FibrChanl-01:B.11.23.04.01, Firmware=with Driver, Spec=2Gb PCI-X single port }						NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4; NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode		

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061909-1160	Supported	Info: 29,30,35,37,39,40,41	FC	NetApp FCP HP-UX Attach Kit 1.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6826A {Driver=Fibr Chanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A6826A {Driver=Fibr Chanl-01:B.11.11.05, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A6826A {Driver=Fibr Chanl-01:B.11.23.04.01, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.11.05, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.23.04.01, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=Fibr Chanl-01:B.11.23.0	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS; HP HP-UX RawIO	HP Serviceguard A.11.14; HP Serviceguard A.11.16	Bus PCIX; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.1.0.1; NetApp Data ONTAP 7.1.1; NetApp Data ONTAP 7.1.1.1; NetApp Data ONTAP 7.1.2; NetApp Data ONTAP 7.1.2.1; NetApp Data ONTAP 7.1.3; NetApp Data ONTAP 7.2; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4;	NetApp cfmode DF; NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
								4.01, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=FibrChanl-01:B.11.11.04, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=FibrChanl-01:B.11.11.05, Firmware=with Driver, Spec=2Gb PCI-X single port }						NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode		

NetApp Interoperability Matrix

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061892-1050	Supported	Info: 29,30,31,34,37,39,40,41	FC	NetApp FCP HP-UX Host Utilities 4.0.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6795A {Driver=Fibr Chanl-00:B.11.11.12, Firmware=with Driver, Spec=2Gb PCI single port }	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS	HP Serviceguard A.11.16	Bus PCI; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.1; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4; NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode	NetApp cfmode P; NetApp cfmode SSI	

HP-UX 11i

Name	Status	Foot notes	Protocol	Host Utilities	Host OS	Host Platform	Software Initiator	Host HBA	Host Volume Manager	Host Multipath	Host File System	Host Clustering	Host Feature	ONTAP OS	ONTAP Feature	Guest OS
20071003-051061891-1053	Supported	Info: 29,30,31,34,37,39,40,41	FC	NetApp FCP HP-UX Host Utilities 4.0.1	HP HP-UX 11i v1 (B.11.11 Dec 2004)	HP PA-RISC L1000; HP PA-RISC L2000; HP PA-RISC L3000; HP PA-RISC N4000; HP PA-RISC rp24xx; HP PA-RISC rp34xx; HP PA-RISC rp44xx; HP PA-RISC rp5400; HP PA-RISC rp7400; HP PA-RISC rp84xx	Not Applicable	HP HBA A6826A {Driver=Fibr Chanl-01:B.11.11.08, Firmware=with Driver, Spec=2Gb PCI-X dual port }; HP HBA A9782A {Driver=Fibr Chanl-01:B.11.11.08, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA A9784A {Driver=Fibr Chanl-01:B.11.11.08, Firmware=with Driver, Spec=2Gb PCI-X single port }; HP HBA AB465A {Driver=Fibr Chanl-01:B.11.11.08, Firmware=with Driver, Spec=Dual-port 2 GB PCI FC/1000Base-T }	HP HP-UX LVM	HP PVLinks	HP HP-UX HFS; HP HP-UX JFS; HP HP-UX Online JFS	HP Serviceguard A.11.16	Bus PCIX; HP Virtual OLAR; HP Virtual nPar; HP Virtual vPar; SAN Boot Yes	NetApp Data ONTAP 7.1; NetApp Data ONTAP 7.2.1; NetApp Data ONTAP 7.2.1.1; NetApp Data ONTAP 7.2.2; NetApp Data ONTAP 7.2.3; NetApp Data ONTAP 7.2.4; NetApp Data ONTAP 7.2.5; NetApp Data ONTAP 7.2.5.1; NetApp Data ONTAP 7.2.6; NetApp Data ONTAP 7.2.6.1; NetApp Data ONTAP 7.2.7; NetApp Data ONTAP 7.3.0; NetApp Data ONTAP 7.3.1; NetApp Data ONTAP 7.3.1.1; NetApp Data ONTAP 7.3.1.1L1; NetApp Data ONTAP 7.3.2; NetApp Data ONTAP 7.3.3; NetApp Data ONTAP 7.3.4; NetApp Data ONTAP 7.3.5; NetApp Data ONTAP 8.0 7-mode; NetApp Data ONTAP 8.0.1 7-mode	NetApp cfmode P; NetApp cfmode SSI	

Info

Note ID	Text
34	Itanium - HP Integrity Superdome rx86xx, rx76xx, rx66xx, rx56xx, rx46xx, rx26xx, rx16xx

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Note ID	Text
41	For additional SnapDrive or for SnapManager compatibility information, see the SnapDrive compatibility matrix at http://now.netapp.com/NOW/knowledge/docs/olio/guides/snapmanager_snapdrive_compatibility/.
30	Patch Bundles for HP-UX B.11.23, September 2006, with PA-RISC and Itanium: Minimum revision is HW/Enable11i for HP-UX 11i v2, May 2005, or Maximum revision is HWEnable 11i B.11.23.0606.046a for HP-UX 11i v2, September 2006. Base Quality Pack Bundle for HP-UX 11i v2, March 2007, with minimum revision September 2006. HWEnable B.11.23.0609.053 Hardware Enablement Patches for HP-UX 11i v2, September 2006.
40	HP A6826A = 2Gb PCI-X dual port; A9784A = 2Gb PCI-X single port; A9782A = 2Gb PCI-X single port; A6795A = 2Gb PCI single port; A5158A = 1Gb PCI single port
33	Patch Bundles for HP-UX 11i v1 (B.11.11) with PA-RISC: Bundle 11i, June 2003 required, and Minimum revision patch bundle is HWEnable 11i for HP-UX 11i v1, December 2003, or Maximum revision is HWEnable 11i B.11.11.0612 for HP-UX 11i v1, December 2006.
31	Individual HP-UX Patches: PHSS_30371 - HP Serviceguard A.11.15 (check the HP Web site for any warnings about these patches or upgrades to the patches).
29	NetApp provides complimentary host utilities for FC and iSCSI storage systems that ensure proper integration with host operating system, I/O stack and host hardware components, and use of the NetApp host utilities is required for generally supported configurations within the NetApp Interoperability Matrix. The NetApp host utilities consist of software that complies with applicable host operating system vendor support requirements and documentation. The host utilities establish proper timeout and path settings for NetApp storage system installations and provide scripts for potential configuration support management. The host utilities are available at http://now.netapp.com/NOW/cgi-bin/software within the applicable FC or iSCSI pull-down option by host operating system type. The host utilities do not include HBAs or HBA drivers/firmware, and customers should procure applicable host software from the operating system, HBA or I/O stack vendor.
35	PA-RISC - HP rp7400, N4000, rp84xx, rp44xx, rp34xx, rp5400, L1000, L2000, L3000, rp24xx
37	PVLinks is included with HP's Logical Volume Manager (LVM) and ships with HP-UX. PVLinks supports up to eight paths per LUN.
39	NetApp cfmode (controller failover): SSI (Single System Image); P (Partner); DF (Dual Fabric)

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