

HP StorageWorks P9000 Command View Advanced Edition Suite Software

System Requirements

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1 Management server requirements

This chapter describes the management server requirements.

- Hardware requirements (section 1-1)
- Software requirements (section 1-2)

1-1 Hardware requirements

Installation of the HP StorageWorks P9000 Command View Advanced Edition Suite requires a computer that satisfies the following hardware requirements.

1-1-1 Computer requirements

The following table describes the computer requirements for the management server.

Table 1-1 Management Server Computer Requirements

Item	Windows	Linux
Processor	Minimum: Dual-Core Processor Recommended: At least Quad-Core Processor	Minimum: Dual-Core Processor Recommended: At least Quad-Core Processor
Physical memory	Minimum: 3 MB Recommended: At least 6 GB ¹	Minimum: 3 GB Recommended: At least 6 GB ¹
Disk space	Minimum: 5 GB Recommended: At least 20 GB	Minimum: 5 GB Recommended: At least 20 GB
Monitor	XGA (1024 x 768 resolution) or higher.	
LAN card	10/100 Ethernet LAN card If the computer and the LAN cable are compatible with Gigabit Ethernet, you can use a Gigabit-class card.	
DVD drive	Required.	

1: If the Device Manager server and software products other than the Device Manager server and the Tiered Storage Manager server are used simultaneously, the amount of the physical memory must be equal to the total memory size of all the software products.

1-1-2 Virtual memory requirements

If adequate virtual memory is not allocated on the management server, the HP StorageWorks P9000 Command View Advanced Edition Suite products and any other installed programs might become unstable or might not start. To ensure stable operation of the management server, in addition to the virtual memory required for the OS and other programs, the management server also requires the amount of virtual memory required for both the products shown in [Table 1-2](#) and Common Component.

In addition to the virtual memory required for all the products installed on a management server, be sure to secure enough virtual memory (500MB) for Common Component.

The following table shows the virtual memory requirements for each product in this version.

Table 1-2 Virtual memory requirements for each product

Product name	Virtual memory requirement (MB)
Device Manager ¹ + Tiered Storage Manager + Replication Manager ²	2,200
<p>NOTE: Device Manager, Tiered Storage Manager, and Replication Manager will always be installed at the same time.</p> <p>If you plan to install these products, and if 1,000 MB of virtual memory is already used by the OS and other programs, you must secure more than 3,700 MB of virtual memory.</p> <p>2,200 (for Device Manager, Tiered Storage Manager, and Replication Manager) + 500 (for Common Component) + 1,000 (already used virtual memory) = 3,700</p> <p>¹: If the Device Manager agent is installed on the management server, you need to allocate additional virtual memory for it. Specify a value for the virtual memory of the Device Manager agent in the <code>server.agent.maxMemorySize</code> property.</p> <p>²: If Replication Manager Application Agent is installed on the management server, you need to allocate additional virtual memory for it. For details on virtual memory requirements, see the <i>HP StorageWorks P9000 Replication Manager Software Configuration Guide</i>.</p>	

1-1-3 Required disk space

Installation of the HP StorageWorks P9000 Command View Advanced Edition Suite requires the disk space described in [Table 1-3](#) and [Table 1-4](#).

Table 1-3 Required disk space (in Windows)

Item	Default installation folder	Required disk space
Installation folder for Common Component	<code>program-files-folder\CVXPAE\Base¹</code>	2.5 GB
Installation folder for the Device Manager server	<code>program-files-folder\CVXPAE\DeviceManager</code>	
Installation folder for the Tiered Storage Manager server	<code>program-files-folder\CVXPAE\TieredStorageManager</code>	
Installation folder for the Replication Manager server	<code>program-files-folder\CVXPAE\ReplicationManager</code>	
Installation folder for the setup support utility	<code>program-files-folder\CVXPAE\Utility</code>	
Installation folder for the Host Data Collector	<code>program-files-folder\CVXPAE\HostDataCollector</code>	
Storage folder of the database for Common Component ²	<code>program-files-folder\CVXPAE\database</code>	650 MB
	<code>program-files-folder\CVXPAE\database\Base</code>	

Table 1-3 Required disk space (in Windows)

Item	Default installation folder	Required disk space
Storage folder of the database for the Device Manager server	<i>program-files-folder</i> \CVXPAE\database\DeviceManager	700 MB
Storage folder of the database for the Tiered Storage Manager server	<i>program-files-folder</i> \CVXPAE\database\HTSM	150 MB
Storage folder of the database for the Replication Manager server	<i>program-files-folder</i> \CVXPAE\database\HRPM	250 MB
Installation folder for the common library ²	<i>program-files-folder</i> \Hitachi\HNTRLib2	1 MB
	<i>common-program-files-folder</i> \Hitachi	
Output folder for common trace log files ²³	<i>program-files-folder</i> \Hitachi\HNTRLib2\spool	1 MB
Output folder for installation log files	<i>program-files-folder</i> \CVXPAE\HInst	10 MB
A temporary folder ⁴	A folder specified by the environment variable TMP	300 MB

NOTE: Note that the *program-files-folder*\CVXPAE portion can be changed. Read it as the folder specified during installation.

If the architecture is x86, *program-files-folder* and *common-program-files-folder* are the folders specified in the Windows environment variables %ProgramFiles% and %CommonProgramFiles%.

If the architecture is IPF or x64, *program-files-folder* and *common-program-files-folder* are the folders specified in the Windows environment variable %ProgramFiles(x86)% and %CommonProgramFiles(x86)%.

¹ If you are installing the HP StorageWorks P9000 Command View Advanced Edition Suite in an environment where Common Component has already been installed, install it on the same drive.

² This is not required if an HP StorageWorks P9000 Command View Advanced Edition Suite product has already been installed.

³ You can change the size and number of generations of common trace log files.

⁴ This is required only during installation, and is unnecessary after installation.

Table 1-4 Required Disk Space (Linux)

Item	Default Installation Directory	Required Disk Space
Installation directory for Common Component	/opt/CVXPAE/Base	2.7 GB
Installation directory for the Device Manager server	/opt/CVXPAE	
Installation directory for the Tiered Storage Manager server	/opt/CVXPAE/TieredStorageManager	
Installation directory for the Replication Manager server	/opt/CVXPAE/ReplicationManager	

Table 1-4 Required Disk Space (Linux)

Item	Default Installation Directory	Required Disk Space
Installation directory for the setup support utility	/opt/CVXPAE/Utility	
Installation directory for the Host Data Collector	/opt/CVXPAE/HostDataCollector /opt/CVXPAE/Winexe	
Storage directory of the database for Common Component ¹	/var/opt/CVXPAE/database	750 MB
	/var/opt/CVXPAE/Base/database/Base	
Storage directory of the database for the Device Manager server	/var/opt/CVXPAE/database/DeviceManager	700 MB
Storage directory of the database for the Tiered Storage Manager server	/var/opt/CVXPAE/database/HTSM	150 MB
Storage directory of the database for the Replication Manager server	/var/opt/CVXPAE/database/HRpM	250 MB
Installation directory for the common library ¹	/opt/hitachi	1 MB
Output directory for common trace log files ¹²	/var/opt/hitachi/HNTRLib2/spool	1 MB
Output directory for installation log files	/opt/CVXPAE/HInst	10 MB
A temporary directory ³	/var/tmp	1.7 GB
<p>NOTE: Note that the /opt/CVXPAE portion can be changed. Read it as the directory specified during installation.</p> <p>¹ This is not required if a HP StorageWorks P9000 Command View Advanced Edition Suite product has already been installed.</p> <p>² You can change the size and number of generations of common trace log files.</p> <p>³ This is required only during installation, and is unnecessary after installation.</p>		

1-2 Software requirements

Installation of the HP StorageWorks P9000 Command View Advanced Edition Suite requires a computer that satisfies the following software requirements.

1-2-1 Prerequisite OS

Table 1-5 to Table 1-6 describe the prerequisite OSs for the HP StorageWorks P9000 Command View Advanced Edition Suite.

Table 1-5 Usable management server OSs (Windows)

OS	Edition	Service pack	HP StorageWorks P9000 Command View Advanced Edition Suite	IPv6

			DvM TSM RpM	HDC	
Windows XP	Professional	SP2	Y	Y	--
		SP3	Y	Y	--
Windows Server 2003 R2 (x86)	Datacenter Edition Enterprise Edition Standard Edition	SP2	Y	Y	Y
Windows Server 2003 R2 (x64)	Datacenter x64 Edition Enterprise x64 Edition Standard x64 Edition	SP2	Y	Y	Y
Windows Vista (x86)	Business Enterprise Ultimate	No SP	Y	Y	Y
		SP1	Y	Y	Y
		SP2	Y	Y	Y
Windows 7 (x86)	Enterprise Edition Professional Edition Ultimate Edition	No SP	Y	Y	Y
		SP1	Y	Y	Y
Windows 7 (x64)	Enterprise Edition Professional Edition Ultimate Edition	No SP	Y	Y	Y
		SP1	Y	Y	Y
Windows Server 2008 (x86) ¹	Datacenter 32-bit Edition Datacenter without Hyper-V 32-bit Edition Enterprise 32-bit Edition Enterprise without Hyper-V 32-bit Edition Standard 32-bit Edition Standard without Hyper-V 32-bit Edition	SP2	Y	Y	Y
Windows Server 2008 (IPF) ¹	for Itanium-based Systems	No SP SP1	Y	Y	Y
		SP2	Y	Y	Y
Windows Server 2008 (x64) ¹	Datacenter Edition Datacenter without Hyper-V Edition Enterprise Edition Enterprise without Hyper-V Edition Standard Edition Standard without Hyper-V Edition	No SP SP1	Y	Y	Y
		SP2	Y	Y	Y

Table 1-5 Usable management server OSs (Windows)

OS	Edition	Service pack	HP StorageWorks P9000 Command View Advanced Edition Suite		IPv6
			DvM TSM RpM	HDC	
Windows Server 2008 R2 (IPF) ¹	for Itanium-based Systems	No SP	Y	Y	Y
Windows Server 2008 R2 (x64) ¹	Datacenter Edition Enterprise Edition Standard Edition	No SP	Y	Y	Y
		SP1	Y	Y	Y
Legend Y: Supported. --: Not supported. ¹ : Operation on Server Core is not supported.					

Table 1-6 Usable management server OSs (Linux)

OS	Version	Architecture	HP StorageWorks P9000 Command View Advanced Edition Suite		IPv6
			DvM TSM RpM	HDC	
Red Hat Enterprise Linux 5 Red Hat Enterprise Linux 5 Advanced Platform	5.4	x86	Y	--	Y
		x64	Y	--	Y
Red Hat Enterprise Linux 5 Red Hat Enterprise Linux 5 Advanced Platform	5.5	x86	Y	Y	Y
		x64	Y	Y	Y

Table 1-6 Usable management server OSs (Linux)

OS	Version	Architecture	HP StorageWorks P9000 Command View Advanced Edition Suite		IPv6
			DvM TSM RpM	HDC	
Red Hat Enterprise Linux 5 Red Hat Enterprise Linux 5 Advanced Platform	5.6	x86	Y	--	Y
		x64	Y	--	Y
SUSE Linux Enterprise Server 10	SP2	x86	Y	--	Y
		x64	Y	--	Y
	SP3	x86	Y	--	Y
		x64	Y	--	Y
SUSE Linux Enterprise Server 11	No SP	x86	Y	--	Y
		x64	Y	--	Y
	SP1	x86	Y	Y	Y
		x64	Y	Y	Y
Legend Y: Supported. --: Not supported.					

NOTE: Host Data Collector does not support Linux environment. You have to install Host Data Collector to another OS environment.

1-2-2 Prerequisite JDK

- For Window or Linux

HP StorageWorks P9000 Command View Advanced Edition Suite products, the following Oracle Sun JDK versions are available besides the bundled JDK 5 Update 03 (1.5.0_03) or later except in Windows XP or Windows Server 2003 R2 environment:

- Oracle Sun JDK 5 (1.5.0)

An Update 17 or later version is required for SSL communication between the external authentication server (LDAP directory server) and the management server.

- Oracle Sun JDK 6 (1.6.0)

If the OS of the management server is Windows, the file system of the management server must be NTFS in order to use Oracle Sun JDK. Use Oracle Sun JDK for 32 bit because Hitachi Command Suite products are 32 bit applications.

After new installation, the bundled JDK in the product will be set to use. Exchange the JDK for Hitachi Command Suite products to use Oracle Sun JDK after the installation.

1-2-3 Other Prerequisite software

The following software is required for the management server:

- For Windows
 - Microsoft Windows Installer 3.1
This software is required for decompressing the installer.
- For Linux
 - gzip
This software is required for decompressing the installer.
 - The following package is required for the listed OS:4
 - Red Hat Enterprise Linux 4.x(x86) : compat-libstdc++-33-3.2.3-47.3
 - Red Hat Enterprise Linux 5.2(x86),5.3(x86/x64) or later : compat-libstdc++-33-3.2.3-61
 - SUSE Linux Enterprise Server 10 SP2(x86/x64) : compat-libstdc++-5.0.7-22.2
 - SUSE Linux Enterprise Server 10 SP3(x86) : libstdc++33-3.3.3-7.8.1
 - SUSE Linux Enterprise Server 10 SP3(x64) : libstdc++33-32bit-3.3.3-7.8.1
 - SUSE Linux Enterprise Server 11(x86) : libstdc++33-3.3.3-11.9
 - SUSE Linux Enterprise Server 11(x64) : libstdc++33-32bit-3.3.3-11.9

1-2-4 Virtualization software

[Table 1-7](#) and [Table 1-8](#) describe the virtual machine OSs on which the HP StorageWorks P9000 Command View Advanced Edition Suite can run.

Table 1-7 Virtualization software (Windows)

Virtual Machine			Virtualization software		
OS	Edition	Service Pack	VMware ESX ¹	Hyper-V ²	HP Integrity VM ³
Windows XP	Professional	SP2	Y	--	--
		SP3	Y	--	--
Windows Server 2003 R2 (x86)	Datacenter Edition Enterprise Edition Standard Edition	SP2	Y	Y	--
Windows Server 2003 R2 (x64)	Datacenter x64 Edition Enterprise x64 Edition Standard x64 Edition	SP2	Y	Y	--
Windows Vista (x86)	Business Enterprise Ultimate	No SP	Y	--	--
		SP1	Y	--	--
		SP2	Y	--	--
Windows 7 (x86)	Enterprise Edition Professional Edition Ultimate Edition	No SP SP1	Y	--	--
Windows 7 (x64)	Enterprise Edition Professional Edition Ultimate Edition	No SP SP1	Y	--	--
Windows Server 2008 (x86)	Datacenter 32-bit Edition Datacenter without Hyper-V 32-bit Edition Enterprise 32-bit Edition Enterprise without Hyper-V 32-bit Edition Standard 32-bit Edition Standard without Hyper-V 32-bit Edition	No SP SP1	Y	Y	--
		SP2	Y	Y	--
Windows Server 2008 (IPF)	for Itanium-based Systems	No SP SP1	Y	Y	Y
		SP2	Y	Y	--

Table 1-7 Virtualization software (Windows)

Virtual Machine			Virtualization software		
OS	Edition	Service Pack	VMware ESX ¹	Hyper-V ²	HP Integrity VM ³
Windows Server 2008 (x64)	Datacenter Edition	No SP SP1	Y	Y	--
	Datacenter without Hyper-V Edition Enterprise Edition Enterprise without Hyper-V Edition Standard Edition Standard without Hyper-V Edition				
		SP2	Y	Y	--
Windows Server 2008 R2 (IPF)	for Itanium-based Systems	No SP	Y	Y	--
Windows Server 2008 R2 (x64)	Datacenter Edition	No SP	Y	Y	--
	Enterprise Edition Standard Edition	SP1	Y	Y	--

Legend

Y: Supported.

--: Not supported.

NOTE: To run the HP StorageWorks P9000 Command View Advanced Edition Suite on a virtual machine, configure the virtual machine to satisfy the requirements in [1-1-1](#).

¹:The following versions can be used.

	Virtual machine	Prerequisite version	Prerequisite software products
1	ESX3.5	update2 or later	--
2	ESX3.5i	--	vMA
3	ESX4.0	--	vMA
4	ESX4.0i	--	vMA

²: Version 1.0 or 2.0 can be used.

³: Version 4.1 can be used.

1-2-5 Supported cluster software

Table 1-8 Supported cluster environments

OS	Architecture	Service Pack	Cluster software
Windows Server 2003 R2	x86	SP2	Microsoft Cluster Service

Table 1-8 Supported cluster environments

OS	Architecture	Service Pack	Cluster software
Windows Server 2008	x86	No SP SP1	Microsoft Failover Cluster
		SP2	
	x64	No SP SP1	
		SP2	
Windows Server 2008 R2	x64	No SP SP1	Microsoft Failover Cluster

1-2-6 Related software

(1) Performance Advisor

By linking Tiered Storage Manager to Performance Advisor, you can check performance information of storage systems from the management client. From the GUI, you can display performance information related to LDEVs or array groups by launching the Performance Advisor GUI windows. In addition, by using the GUI or CLI client, you can check array group usage. The following table describes the software required to check performance information from management clients.

Table 1-9 Software required to check performance information from management clients

Condition	Software	Version
Displaying the Performance Advisor GUI windows from the GUI	Performance Advisor	4.0 or later
Checking the array group usage from the GUI or CLI client	Performance Advisor	3.4 or later ¹
¹ : To link Tiered Storage Manager with Performance Advisor, the CLI library is required. To obtain performance information from Performance Advisor, you need to specify the installation directory for the Performance Advisor CLI in the PATH environment variable. If you do not specify the PATH environment variable, an environment settings error will occur, and you will not be able to obtain the performance information. For details on installing the CLI client library and setting up the environment, see the <i>HP StorageWorks Performance Advisor P9000 Software Command-Line User Interface Reference Guide</i> .		

(2) Device Manager Mainframe Agent

By using Tiered Storage Manager, you can migrate and shred mainframe volumes on OS/390 or z/OS. The following table describes the software required for using Tiered Storage Manager to manage mainframe volumes.

Table 1-10 Software required to manage mainframe volumes

Software	Version
Device Manager Mainframe Agent	6.0 or later

2 Host Data Collector

This chapter gives the Host Data Collector support matrix for the network elements.

- Server support matrix(section 2-1)
- Supported Storage Systems and HBAs(section2-3)
- Volume Manager support matrix(section 2-5)

2-1 Server support matrix

The following table provides the support matrix for the servers supported by the Host Data Collector.

Table 2-1 Host Data Collector server support matrix

OS name	Server version	Service pack	Architecture
Windows Server 2003	Standard Edition Enterprise Edition Datacenter Edition	SP2	x86
	Standard x64 Edition Enterprise x64 Edition Datacenter x64 Edition	SP2	x64
	R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	SP2	x86
	R2 Standard x64 Edition R2 Enterprise x64 Edition R2 Datacenter x64 Edition	SP2	x64
Windows Server 2008	Standard 32-bit Edition Enterprise 32-bit Edition Datacenter 32-bit Edition Standard without Hyper-V 32-bit Edition Enterprise without Hyper-V 32-bit Edition Datacenter without Hyper-V 32-bit Edition	SP2	x86
	Standard Edition Enterprise Edition Datacenter Edition Standard without Hyper-V Edition Enterprise without Hyper-V Edition Datacenter without Hyper-V Edition	SP2	x64

Table 2-1 Host Data Collector server support matrix

OS name	Server version	Service pack	Architecture
	R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	No SP	x64
	R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	SP1	x64
Solaris	9	None	SPARC 32 bit, 64 bit
	10	None	SPARC 32 bit, 64 bit x64 64 bit
Red Hat ELAS or Red Hat ELES	5.5	None	x64 x86
SUSELES	11	SP1	x64 x86

The following table provides the prerequisite libraries matrix for the Host Data Collector.

Table 2-2 Host Data Collector prerequisite libraries matrix

OS name	Package Name
Solaris 9 (SPARC)	SUNWcsl
	SUNWlibpopt
	SUNWsembau
	SUNWgss
	SUNWcsl
	SUNWlibsasl
	SUNWpr
	SUNWtls
	SUNWkrbu
Solaris 10 (SPARC)	SUNWcslr
	SUNWcsl

Table 2-2 Host Data Collector prerequisite libraries matrix

OS name	Package Name
	SUNWlibpopt
	SUNWlibmsr
	SUNWsembau
	SUNWgss
	SUNWcsl
	SUNWlibsasl
	SUNWpr
	SUNWtls
	SUNWkrbu

NOTE: It is required that SMBClient (3.0.35 or later) is installed and running correctly.

2-2 Target Host support matrix

The following table provides the target host matrix for the servers supported by the Host Data Collector.

Table 2-3 Host Data Collector target support matrix

OS name	Server version	Service pack	Architecture
Windows Server 2003	Standard Edition	SP2	x86
	Enterprise Edition		IPF
	Datacenter Edition	SP2	x64
	Web Edition		
	Standard x64 Edition		
	Enterprise x64 Edition	SP2 (*2)	x84
Datacenter x64 Edition			
R2 Standard Edition	SP2(*2)	x64	
R2 Enterprise Edition			
R2 Datacenter Edition			
R2 Standard x64 Edition	SP2(*2)	x64	
R2 Enterprise x64 Edition			
R2 Datacenter x64 Edition			

Table 2-3 Host Data Collector target support matrix

OS name	Server version	Service pack	Architecture	
Windows Server 2008	Standard 32-bit Edition Enterprise 32-bit Edition Datacenter 32-bit Edition or Standard without Hyper-V 32-bit Edition Enterprise without Hyper-V 32-bit Edition Datacenter without Hyper-V 32-bit Edition	SP2(*2)	x86	
	for Itanium-based Systems	SP2	IPF	
	Standard Edition Enterprise Edition Datacenter Edition Standard without Hyper-V Edition Enterprise without Hyper-V Edition Datacenter without Hyper-V Edition	SP2(*2)	x64	
	R2 Standard Edition	No SP	x64	
	R2 Enterprise Edition R2 Datacenter Edition	SP1(*2)	x64	
	R2 for Itanium-Based Systems	No SP	IPF	
		SP1(*2)	x64	
	Solaris	9 (*1)	None	SPARC 32 bit, 64 bit
		10	None	SPARC 32 bit, 64 bit x64 64 bit
	AIX	5.3	None	POWER 32 bit 64 bit
6.1		None	POWER 64 bit	
7.1		None	POWER 64 bit	
HP-UX	11iv2	None	IPF	
			PA-RISC 64 bit	

Table 2-3 Host Data Collector target support matrix

OS name	Server version	Service pack	Architecture		
	11iv3	None	IPF		
			PA-RISC 64 bit		
Red Hat ELAS or Red Hat ELES	4.7	None	x86		
			IPF		
			x64		
	4.8	None	x86		
			IPF		
			x64		
Red Hat EL or Red Hat ELAP	5.3	None	x64		
			5.4	None	x86
					IPF
	5.5	None	x64		
			x86		
			IPF		
	SUSELES	10	SP3	x86	
				IPF	
				x64	
11				No SP	x86
					IPF
					x64
		SP1	x86		
			IPF		
			x64		

#:(*1) In case that target operation system is Solaris 9 4/04 s9s_u6wos_08a SPARC, host discovery fails because of SCP (Secure Copy) command failure.

Please use later release of Solaris 9.

#:(*2) ESX4.1, ESX4.0 are supported.

2-3 Supported Storage Systems and HBAs

The following storage system models are supported by Host Data Collector:

- P9500
- XP24000/XP20000
- XP12000/XP10000/SVS200
- XP1024/XP128

CAUTION: If you gather the information from host that connects to a storage system shown above, use an HBA described in the manual of the storage system.

CAUTION: To obtain host WWN information, an HBA API library that supports SNIA HBA API provided by the HBA vendors is required.

CAUTION: Fibre Channel is supported.

2-4 File system support matrix

Table 2-4 to **Table 2-10** provide the File System support matrix for the Host Data Collector.

Table 2-4 Host Data Collector File System support matrix for Windows 2003

OS version	Service pack	Architecture	File System
Standard Edition	SP2	x86	NTFS
Enterprise Edition			FAT
Datacenter Edition		IPF	FAT32
Web Edition			NTFS
			FAT
			FAT32
Standard x64 Edition	SP2	x64	NTFS
Enterprise x64 Edition			FAT
Datacenter x64 Edition			FAT32
R2 Standard Edition	SP2	x86	NTFS
R2 Enterprise Edition			FAT
R2 Datacenter Edition			FAT32
R2 Standard x64 Edition	SP2	x64	NTFS
R2 Enterprise x64 Edition			FAT
R2 Datacenter x64 Edition			FAT32

Table 2-5 Host Data Collector File System support matrix for Windows 2008

OS version	Service pack	Architecture	File System
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Table 2-5 Host Data Collector File System support matrix for Windows 2008

OS version	Service pack	Architecture	File System
Standard 32-bit Edition Enterprise 32-bit Edition Datacenter 32-bit Edition Standard without Hyper-V 32-bit Edition Enterprise without Hyper-V 32-bit Edition Datacenter without Hyper-V 32-bit Edition	SP2	x86	NTFS FAT FAT32
for Itanium-based Systems	SP2	IPF	NTFS FAT FAT32
Standard Edition Enterprise Edition Datacenter Edition Standard without Hyper-V Edition Enterprise without Hyper-V Edition Datacenter without Hyper-V Edition	SP2	x64	NTFS FAT FAT32
R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	No SP SP1	x64	NTFS FAT FAT32
R2 for Itanium-Based Systems	No SP SP1	IPF	NTFS FAT FAT32

Table 2-6 Host Data Collector File System support matrix for Solaris

OS version	Service pack	Architecture	File System
9	None	SPARC	VxFS
		Kernel mode: 32-bit or 64-bit	UFS
10	None	SPARC	VxFS
		Kernel mode: 32-bit or 64-bit	UFS
		x64	VxFS
		Kernel mode: 64-bit	UFS

Table 2-7 Host Data Collector File System support matrix for AIX

OS version	Service pack	Architecture	File System
5.3	None	POWER Kernel mode: 32-bit or 64-bit	JFS
6.1	None	POWER Kernel mode: 64-bit	JFS
7.1	None	POWER Kernel mode: 64-bit	JFS

Table 2-8 Host Data Collector File System support matrix for HP-UX

OS version	Service pack	Architecture	File System
11iv2	None	IPF	VxFS (*1) HFS
		PA-RISC Kernel mode: 64-bit	VxFS (*1) HFS
11iv3	None	IPF	VxFS (*1) HFS
		PA-RISC Kernel mode: 64-bit	VxFS (*1) HFS

#:(*1) Online JFS is not supported.

Table 2-9 Host Data Collector File System support matrix for RedHatELAS or RedHatELES

OS version	Service pack	Architecture	File System
5.3	None	x64	ext2
			ext3
5.4	None	x86	ext2
			ext3

Table 2-9 Host Data Collector File System support matrix for RedHatELAS or RedHatELES

OS version	Service pack	Architecture	File System
		IPF	ext2
			ext3
		x64	ext2
			ext3
5.5	None	x86	ext2
			ext3
		IPF	ext2
			ext3
		x64	ext2
			ext3

Table 2-10 Host Data Collector File System support matrix for SUSELES

OS version	Service pack	Architecture	File System
10	SP3	x86	ext2
			ext3
		IPF	ext2
			ext3
		x64	ext2
			ext3
11	No SP	x86	ext2
			ext3
		IPF	ext2
			ext3
		x64	ext2
			ext3
	SP1	x86	ext2
			ext3
		IPF	ext2

Table 2-10 Host Data Collector File System support matrix for SUSELES

OS version	Service pack	Architecture	File System
			ext3
		x64	ext2
			ext3

2-5 Volume Manager support matrix

Table 2-11 to **Table 2-17** provide the Volume Manager support matrix for the Host Data Collector.

Table 2-11 Host Data Collector Volume Manager support matrix for Windows 2003

OS version	Service pack	Architecture	Volume manager	Volume manager version
Standard Edition Enterprise Edition Datacenter Edition Web Edition	SP2	x86	Basic Dynamic	None
		IPF	Basic Dynamic	None
Standard x64 Edition Enterprise x64 Edition Datacenter x64 Edition	SP2	x64	Basic Dynamic	None
R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	SP2	x64	Basic Dynamic	None
R2 Standard x64 Edition R2 Enterprise x64 Edition R2 Datacenter x64 Edition	SP2	x64	Basic Dynamic	None

Table 2-12 Host Data Collector Volume Manager support matrix for Windows 2008

OS version	Service pack	Architecture	Volume manager	Volume manager version
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Table 2-12 Host Data Collector Volume Manager support matrix for Windows 2008

OS version	Service pack	Architecture	Volume manager	Volume manager version
Standard 32-bit Edition Enterprise 32-bit Edition Datacenter 32-bit Edition Standard without Hyper-V 32-bit Edition Enterprise without Hyper-V 32-bit Edition Datacenter without Hyper-V 32-bit Edition	SP2	x86	Basic Dynamic	None
Itanium-based systems	SP2	IPF	Basic Dynamic	None
Standard Edition Enterprise Edition Datacenter Edition Standard without Hyper-V Edition Enterprise without Hyper-V Edition Datacenter without Hyper-V Edition	SP2	x64	Basic Dynamic	None
R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	No SP SP1	x64	Basic Dynamic	None
R2 for Itanium-Based Systems	No SP SP1	IPF	Basic Dynamic	None

Table 2-13 Host Data Collector Volume Manager support matrix for Solaris

OS version	Service pack	Architecture	Volume manager	Volume manager version
9	None	SPARC Kernel mode: 32-bit or 64-bit	None	None
			SVM	1.0
			VxVM	5
10	None	SPARC Kernel mode:	None	None
			SVM	1.0

Table 2-13 Host Data Collector Volume Manager support matrix for Solaris

OS version	Service pack	Architecture	Volume manager	Volume manager version
		32-bit or 64-bit	VxVM	5 5.0MP1
		x64	None	None
		Kernel mode: 64-bit	SVM	1.0

Table 2-14 Host Data Collector Volume Manager support matrix for HP-UX

OS version	Service pack	Architecture	Volume manager	Volume manager version
11iv2	None	IPF	None	None
			LVM	independent
		PA-RISC Kernel mode: 64-bit	None	None
			LVM	independent
11iv3	None	IPF	None	None
			LVM2.1	independent
		PA-RISC Kernel mode: 64-bit	None	None
			LVM2.1	independent

Table 2-15 Host Data Collector Volume Manager support matrix for AIX

OS version	Service pack	Architecture	Volume manager	Volume manager version
5.3	None	POWER Kernel mode: 32-bit or 64-bit	LVM	independent
6.1	None	POWER Kernel mode: 64-bit	LVM	independent

Table 2-15 Host Data Collector Volume Manager support matrix for AIX

OS version	Service pack	Architecture	Volume manager	Volume manager version
7.1	None	POWER Kernel mode: 64-bit	LVM	independent

Table 2-16 Host Data Collector Volume Manager support matrix for Linux RedHatEL or RedHatELAP

OS version	Service pack	Architecture	Volume manager	Volume manager version
5.4	None	x86	None	None
			LVM2	independent
		IPF	None	None
			LVM2	independent
		x64	None	None
			LVM2	independent
5.5	None	x86	None	None
			LVM2	independent
		IPF	None	None
			LVM2	independent
		x64	None	None
			LVM2	independent

Table 2-17 Host Data Collector Volume Manager support matrix for Linux SUSELES

OS version	Service pack	Architecture	Volume manager	Volume manager version
10	SP3	x86 Kernel ver: independent	None	None
			LVM2	independent
		IPF	None	None

Table 2-17 Host Data Collector Volume Manager support matrix for Linux SUSELES

OS version	Service pack	Architecture	Volume manager	Volume manager version
		Kernel ver: independent	LVM2	independent
		x64	None	None
		Kernel ver: independent	LVM2	independent
11	No SP	x86	None	None
		Kernel ver: independent		
		IPF	None	None
		Kernel ver: independent	LVM2	Independent
		x64	None	None
		Kernel ver: independent	LVM2	Independent
	SP1	x86	None	None
		Kernel ver: independent	LVM2	Independent
		PF	None	None
		Kernel ver: independent	LVM2	Independent
		x64	None	None
		Kernel ver: independent	LVM2	Independent

2-6 Path Manager support matrix

Table 2-18 to **Table 2-24** provide the Volume Manager support matrix for the Host Data Collector.

Table 2-18 Host Data Collector Volume Manager support matrix for Windows 2003

OS version	Service pack	Architecture	Path manager	Path manager version
Standard Edition	SP2	x86	HDLM	6.3.0 to 6.4.0

Table 2-18 Host Data Collector Volume Manager support matrix for Windows 2003

OS version	Service pack	Architecture	Path manager	Path manager version
Enterprise Edition Datacenter Edition Web Edition		IPF	HDLM	6.3.0 to 6.4.0
Standard x64 Edition Enterprise x64 Edition Datacenter x64 Edition	SP2	x64	HDLM	6.3.0 to 6.4.0
R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	SP2	x86	HDLM	6.3.0 to 6.4.0
R2 Standard x64 Edition R2 Enterprise x64 Edition R2 Datacenter x64 Edition	SP2	x64	HDLM	6.3.0 to 6.4.0

Table 2-19 Host Data Collector Volume Manager support matrix for Windows 2008

OS version	Service pack	Architecture	Path manager	Path manager version
Standard 32-bit Edition Enterprise 32-bit Edition Datacenter 32-bit Edition Standard without Hyper-V 32-bit Edition Enterprise without Hyper-V 32-bit Edition Datacenter without Hyper-V 32-bit Edition	SP2	x86	HDLM	6.3.0 to 6.4.0
for Itanium-based Systems	SP2	IPF	HDLM	6.3.0 to 6.4.0
Standard Edition Enterprise Edition Datacenter Edition Standard without Hyper-V Edition Enterprise without Hyper-V Edition Datacenter without Hyper-V Edition	SP2	x64	HDLM	6.3.0 to 6.4.0

Table 2-19 Host Data Collector Volume Manager support matrix for Windows 2008

OS version	Service pack	Architecture	Path manager	Path manager version
R2 Standard Edition R2 Enterprise Edition R2 Datacenter Edition	No SP	x64	HDLM	6.3.0 to 6.4.0
R2 for Itanium-Based Systems	No SP	IPF	HDLM	6.3.0 to 6.4.0

Table 2-20 Host Data Collector Volume Manager support matrix for Solaris

OS version	Service pack	Architecture	Path manager	Path manager version
9	None	SPARC Kernel mode: 32-bit or 64-bit	HDLM	6.3.0 to 6.4.0
10	None	SPARC Kernel mode: 32-bit or 64-bit	VxVM-DMP	5.0
			HDLM	6.3.0 to 6.4.0
		x64 Kernel mode: 64-bit	VxVM-DMP	5.0

Table 2-21 Host Data Collector Volume Manager support matrix for AIX

OS version	Service pack	Architecture	Path manager	Path manager version
5.3	None	POWER Kernel mode: 32-bit or 64-bit	HDLM	6.3.0 to 6.4.0
6.1	None	POWER Kernel mode: 64-bit	HDLM	6.3.0 to 6.4.0
7.1	None	POWER Kernel mode: 64-bit	HDLM	6.5.0

Table 2-22 Host Data Collector Volume Manager support matrix for HP-UX

OS version	Service pack	Architecture	Path manager	Path manager version
11iv2	None	PA-RISC Kernel mode: 64-bit	HDLM	6.3.0 to 6.4.0
		IPF	HDLM	6.3.0 to 6.4.0

Table 2-23 Host Data Collector Volume Manager support matrix for RedHatEL or RedHatELAP

OS version	Service pack	Architecture	Path manager	Path manager version
5.4	None	x86	HDLM	6.3.0 to 6.4.0
		IPF	HDLM	6.3.0 to 6.4.0
		x64	HDLM	6.3.0 to 6.4.0
5.5	None	x86	HDLM	6.3.0 to 6.4.0
		IPF	HDLM	6.3.0 to 6.4.0
		x64	HDLM	6.3.0 to 6.4.0

Table 2-24 Host Data Collector Volume Manager support matrix for SUSELES

OS version	Service pack	Architecture	Path manager	Path manager version
10	SP3	x86	HDLM	6.3.0 to 6.4.0
11	No SP	x86	HDLM	6.3.0 to 6.4.0
	SP1	x86	HDLM	6.5.0

3 Device Manager agent requirements

This chapter gives the system requirements of the Device Manager agent.

- Hardware requirements (section 3-1)
- Software requirements (section 3-2)

3-1 Hardware requirements

This section explains the system requirements for SAN environments that are supported by Device Manager agents.



CAUTION: Before you connect the host with storage systems via FC-HUB (or FC-SWITCH), confirm whether FC-HUB (or FC-SWITCH) and its firmware are appropriate for the storage system:

- Check the corresponding HBA model. For details, see 3-1-3 .
- Check the FC-HUB (and firmware) supported by the target storage systems. Refer to the appropriate documentation for your storage system.

3-1-1 Computer requirements

The following table describes the computer requirements for Device Manager agent.

Table 3-1 Computer requirements for Device Manager Agent.

OS	Installation destination	Required disk space	Remarks
Windows	For 32-bit (x86) architecture <code>system-drive\Program Files\HDVM\HbaseAgen</code> For 64-bit (IPF or x64) architecture <code>system-drive\Program Files(x86)\HDVM\HBaseAgent</code>	180MB	An additional 100 MB of temporary free space is required for the system drive during installation.
Solaris	<code>/opt/HDVM/HBaseAgent</code>	25MB	The temporary free space during installations in <code>/var/tmp</code> directory are also required. New installation 30MB Overwrite installation 80MB
	<code>/var/opt</code>	5MB	
AIX	<code>/usr/HDVM/HBaseAgent</code>	40MB	The temporary free space during

Table 3-1 Computer requirements for Device Manager Agent.

OS	Installation destination	Required disk space	Remarks
	/var	5MB	installations in /var/tmp directory are also required. New installation 30MB Overwrite installation 80MB
Linux(x86 or x64)	/opt/HDVM/HBaseAgent	145MB	The following temporary free space is required in the directory /var/tmp during installation: New installation 155 MB Overwrite installation 205 MB
	/var/opt	5MB	
Linux (IPF)	/opt/HDVM/HBaseAgent	145MB	The following temporary free space is required in the directory /var/tmp during installation: New installation 155 MB Overwrite installation 205 MB
	/var/opt	5MB	
HP-UX	/opt/HDVM/HBaseAgent	25MB	The temporary free space during installations in /var/tmp directory are also required. New installation 30MB Overwrite installation 80MB

¹: The installation folder can be modified during new installation.

3-1-2 Supported storage systems

The following storage system models are supported by the Device Manager agent:

- P9500
- XP24000/XP20000
- XP12000/XP10000/SVS200
- XP1024/XP128

If a host in which the Device Manager agent is installed is connected to a storage system, all HBA models supported by that storage system are available.

3-1-3 Supported Host Bus Adapter models

To obtain host WWN information, the HBA models shown in the following table and the HBA API library provided by the HBA vendor are required.

Table 3-2 HBA models required to obtain Host WWN information

OS	Model name
Windows	Emulex LP8000
	Emulex LP9002DC
	Emulex LP9002L
	Emulex LP9802
	QLogic QLA23xx ¹
	QLogic QLA24xx ¹
Solaris (SPARC edition)	JNI FCI-1063
	JNI FC64-1063
	JNI FCE-6410
	JNI FCE-6460
	QLogic QLA2200
	Sun HBA ²
Solaris (x64 Edition (AMD64))	QLogic QLA2310
	Sun HBA
AIX	IBM6227
	IBM6228
Linux	QLogic QLA2200F
	QLogic QLA23xx
	QLogic QLA24xx
HP-UX	HP A3404A
	HP A3591B
	HP A3636A
	HP A3740A
	HP A5158A
	HP A6684A
	HP A6685A
	HP A6795A
	HP A6826A
	HP A9784A
¹ : In order to use a QLogic HBA, download and then install Fibre Channel Information Tool (fcinfo) version x86 from the Microsoft web site. Even if the OS of a host where the Device Manager agent is installed is the IPF version or x64 version, the fcinfo x86 version must be used. ² : When using an HBA by Oracle on Solaris 9, install Sun StorEdge SAN Foundation Software 4.2 or later.	

Note that if either of the following conditions is satisfied, obtaining host WWN information, alternate path WWN information, and LU information (such as file systems, usage, copy types, copy roles, and copy statuses) might not be possible:

- The host on which the Device Manager agent is running does not recognize the LU for the storage system.

- A multi-path configuration is set up in one of the following host environments, where the host OS is:
 - Windows, and Dynamic Link Manager or Windows MPIO is used.
 - Solaris, and Dynamic Link Manager or Sun StorEdge Traffic Manager is used.
 - AIX, and MPIO is used.

3-2 Software requirements

The following explains the system requirements for the Device Manager agent.

CAUTION:

- The name of each host on which the Device Manager agent runs must be unique within the notification destination Device Manager server.
- Device Manager agent can connect to Device Manager server of the same version or later. However, if the version of the Device Manager server is later than that of the Device Manager agent, the Device Manager functionality that can be used is limited to that of the Device Manager agent.

3-2-1 Supported operating systems

The following table lists the supported operating systems for Device Manager agents.

Table 3-3 Supported operating systems

OS	Version	Architecture	IPv6 Environment Support	Remarks
Windows Server 2003 R2 ¹	No SP	x86	--	Not applicable
		x64 Edition (EM64T and AMD64)	--	Runs under WOW64.
	SP2	x86	Y	Not applicable
		x64 Edition (EM64T and AMD64)	Y	Runs under WOW64.
Windows Server 2008 ¹	No SP	x86	Y	Not applicable
		IPF	--	Runs under WOW64.
		x64 Edition (EM64T and AMD64)	Y	
	SP2	x86	Y	Not applicable
		IPF	--	Runs under WOW64.
		x64 Edition (EM64T and AMD64)	Y	
Windows Server 2008 R2 ¹	No SP	IPF	--	Runs under WOW64.
		x64 Edition (EM64T and AMD64)	Y	
	SP1	IPF	Y	Runs under

Table 3-3 Supported operating systems

OS	Version	Architecture	IPv6 Environment Support	Remarks
		x64 Edition (EM64T and AMD64)	Y	WOW64.
Solaris	8	SPARC (32 and 64 bit)	--	HP recommends that Solaris Patch Cluster be installed.
	9	SPARC (32 and 64 bit)	--	
	10 ²	SPARC (32 and 64 bit)	Y	
		x64 Edition (AMD64) ³	Y	
AIX	5.3	32 bit 64 bit	Y	Not applicable
	6.1	64 bit	Y	The Device Manager agent does not support environments where the Secure by Default function is enabled.
	7.1	64 bit	Y	Not applicable
HP-UX	11i v1	PA-RISC (32 and 64 bit)	--	Workstation is not supported.
	11i v2	PA-RISC (64bit) IPF	Y	
	11i v3	PA-RISC (64bit) IPF	Y	
Red Hat Enterprise Linux	Linux AS/ES 4 Update 1	x86 IPF x64 Edition (EM64T)	--	Not applicable
	Linux AS/ES 4 Update 3	x86 IPF x64 Edition (EM64T)	--	
	Linux AS/ES 4 Update 4	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux AS/ES 4.5	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux AS/ES 4.6	x86	Y	

Table 3-3 Supported operating systems

OS	Version	Architecture	IPv6 Environment Support	Remarks
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux AS/ES 4.7	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux AS/ES 4.8	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.0	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.1 ⁴	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.2	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.3	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.4	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.5	x86	Y	
		IPF	--	
		x64 Edition (EM64T)	Y	
	Linux 5.6	x86	Y	
IPF		--		
x64 Edition (EM64T)		Y		

Table 3-3 Supported operating systems

OS	Version	Architecture	IPv6 Environment Support	Remarks
	Linux 6.0	x86	--	
		x64 Edition (EM64T)	--	
SUSE Linux Enterprise Server 9	SP1 SP2 SP3 SP4	x86	--	Only the default kernel is supported.
SUSE Linux Enterprise Server 10 ⁵	No SP SP1 SP2 SP3	x86 IPF x64 Edition (EM64T)	--	
SUSE Linux Enterprise Server 11	No SP SP1	x86 IPF x64 Edition (EM64T)	--	
<p>Legend</p> <p>Y: Supported.</p> <p>--: Not supported.</p> <p>¹: If Windows Firewall has been enabled, the Device Manager agent must be registered as an exception with Windows Firewall when a new installation of the Device Manager agent is performed.</p> <p>²: The Device Manager agent runs in the usual global environment (global zone) only. If a non-global zone has been created, install the Device Manager agent in the global zone.</p> <p>³: The Device Manager agent supports only the Sun Fire x64 server family hardware. In addition, only the 64-bit kernel mode is supported.</p> <p>⁴: The following library is required: glibc-2.5-18.el5_1.1 or later.</p> <p>⁵: The module of gdb-6.5-21.2 or later is necessary.</p>				



CAUTION: The Device Manager agent only supports global addresses. You cannot use link-local addresses or global unique local addresses (site-local addresses).

3-2-2 Required patches for operating systems

When using the Device Manager agent, it is assumed that the OS patches or succeeding patches listed in [Table 3-4](#) to [Table 3-16](#) have been applied. The following tables only list the OSs to which patches must be applied.

Table 3-4 Required patches for Windows

OS	Architecture	Patches
Windows Server 2003 R2 (No SP)	x86	KB922772
	x64 (EM64T and AMD64)	KB922772

Table 3-5 Required patches and succeeding patches for Solaris 8

Required patches	Succeeding patches
108434-22 SunOS 5.8: 32-Bit Shared library patch for C++	108434-23, 108434-24, 108434-25
108435-22 SunOS 5.8: 64-Bit Shared library patch for C++	108435-23, 108435-24, 108435-25
108528-29 SunOS 5.8: kernel update and Apache patch	None.
108773-27 SunOS 5.8: IIM and X Input & Output Method patch	108773-28
108921-25 CDE 1.4: dtwm patch	108921-26, 108921-27
108940-76 Motif 1.2.7 and 2.1.1: Runtime library patch for Solaris 8	None.
108987-19 SunOS 5.8: Patch for patchadd and patchrm	None.
108989-02 SunOS 5.8: /usr/kernel/sys/acctctl and /usr/kernel/sys/exacctsyst patch	None.
109147-44 SunOS 5.8: linker patch	None.
109326-20 SunOS 5.8: libresolv.so.2 and in.named patch	109326-21, 109326-22, 109326-23, 109326-24, 109326-25
110386-04 SunOS 5.8: RBAC Feature Patch	None.
110910-11 SunOS 5.8: /usr/lib/fs/ufs utilities patch	110910-12
111023-03 SunOS 5.8: /kernel/fs/mntfs and /kernel/fs/sparcv9/mntfs patch	None.
111111-07 SunOS 5.8: /usr/bin/nawk patch	None.
111308-05 SunOS 5.8: /usr/lib/libmtmalloc.so.1 patch	None.
111310-01 SunOS 5.8: /usr/lib/libdhcagent.so.1 patch	None.
111317-07 SunOS 5.8: /sbin/init and /usr/sbin/init patch	None.
112003-03 SunOS 5.8: Unable to load fontset in 64-bit Solaris 8 iso-1 or iso-15	None.
112396-03 SunOS 5.8: /usr/bin/fgrep patch	None.
112438-03 SunOS 5.8: /kernel/drv/random patch	None.
112472-01 SunOS 5.8: Font2DTest2 abort when Lucida Sans Thai Typewriter selected	None.
113648-04 SunOS 5.8: mount patch	113648-05
113886-48 OpenGL 1.3: OpenGL Patch for Solaris (32-bit)	113886-49
113887-48 OpenGL 1.3: OpenGL Patch for Solaris (64-bit)	113887-49
115827-01 SunOS 5.8: /sbin/sulogin and /sbin/netstrategy patch	None.
116602-01 SunOS 5.8: /sbin/uadmin and /sbin/hostconfig patch	None.
117000-05 SunOS 5.8: Kernel Patch	None.

Table 3-5 Required patches and succeeding patches for Solaris 8

Required patches	Succeeding patches
117350-53 SunOS 5.8: kernel patch	117350-54, 117350-55, 117350-56, 117350-57, 117350-58, 117350-59, 117350-60, 117350-61, 117350-62
119067-09 X11 6.4.1: Xsun patch	119067-10, 119067-11
123478-01 SunOS 5.8: fsck patch	None.
128624-04 SunOS 5.8: LDAP2 client, libc, libthread and libnsl libraries patch	128624-05, 128624-06, 128624-07, 128624-08, 128624-09, 128624-10, 128624-11, 128624-12

NOTE: The architecture is SPARC (32 or 64 bit). You can also install the required patches by applying J2SE Solaris 8 Recommended Patch Cluster. For details on the latest information, see the Oracle web site.

Table 3-6 Required Patches and Succeeding Patches for Solaris 9

Required patches	Succeeding patches
111711-16 SunOS 5.9: 32-bit Shared library patch for C++	111711-17, 111711-18, 111711-19, 111711-20, 111711-21, 111711-22, 111711-23, 111711-24, 111711-25, 111711-26, 111711-27
111712-16 SunOS 5.9: 64-Bit Shared library patch for C++	111712-17, 111712-18, 111712-19, 111712-20, 111712-21, 111712-22, 111712-23, 111712-24, 111712-25, 111712-26, 111712-27
112785-63 X11 6.6.1: Xsun patch	112785-64, 112785-65
112963-32 SunOS 5.9: linker Patch	112963-33, 112963-34, 112963-35
113096-03 X11 6.6.1: OWconfig patch	None.
113886-48 OpenGL 1.3: OpenGL Patch for Solaris (32-bit)	113886-49
113887-48 OpenGL 1.3: OpenGL Patch for Solaris (64-bit)	113887-49

NOTE: The architecture is SPARC (32 or 64 bit). You can also install the required patches by applying J2SE Solaris 9 Recommended Patch Cluster. For details on the latest information, see the Oracle web site.

Table 3-7 Required Patches and Succeeding Patches for Solaris 10

Architecture	Required patches	Succeeding patches
SPARC (32 and 64 bit)	118833-36 SunOS 5.10: kernel patch	None.
	118918-24 SunOS 5.10: Solaris Crypto Framework patch	None.
	119042-10 SunOS 5.10: svccfg & svcprop patch	119042-11, 138217-01
	119090-26 SunOS 5.10: Sun iSCSI Device Driver and Utilities	None.

Table 3-7 Required Patches and Succeeding Patches for Solaris 10

Architecture	Required patches	Succeeding patches
	119254-52 SunOS 5.10: Install and Patch Utilities Patch	119254-53, 119254-54, 119254-55, 119254-56, 119254-57, 119254-58, 119254-59, 119254-60, 119254-61, 119254-62, 119254-63, 119254-64, 119254-65, 119254-66, 119254-67, 119254-68, 119254-69, 119254-70, 119254-71, 119254-72
	119578-30 SunOS 5.10: FMA Patch	None.
	120900-04 SunOS 5.10: libzonecfg Patch	None.
	121133-02 SunOS 5.10: zones library and zones utility patch	None.
	138064-03 SunOS 5.10: pkcs11_softtoken patch ¹	None.
x64 Edition (AMD64) (Version 1.4.2 of the Java execution environment)	119091-27 SunOS 5.10_x86: Sun iSCSI Device Driver and Utilities	None.
	138065-03 SunOS 5.10_x86: pkcs11_softtoken patch ¹	137138-09
x64 Edition (AMD64) (Version 5.0 of the Java execution environment)	113000-07 SunOS 5.10_x86: SUNWgrub patch	None.
	117435-02 SunOS 5.10_x86: biosdev patch	None.
	118344-14 SunOS 5.10_x86: Fault Manager Patch	None.
	119091-27 SunOS 5.10_x86: Sun iSCSI Device Driver and Utilities	None.
	119255-50 SunOS 5.10_x86: Install and Patch Utilities Patch	119255-51, 119255-52, 119255-53, 119255-54, 119255-55, 119255-56, 119255-57, 119255-58, 119255-59, 119255-60, 119255-61, 119255-62, 119255-63, 119255-64, 119255-65, 119255-66, 119255-67, 119255-68, 119255-69, 119255-70, 119255-71, 119255-72, 119255-73
	119964-08 SunOS 5.10_x86: Shared library patch for C++_x86	119964-09, 119964-10, 119964-11, 119964-12, 119964-13, 119964-14, 119964-15, 119964-16, 119964-17, 119964-18, 119964-19, 119964-20, 119964-21
	120901-03 SunOS 5.10_x86: libzonecfg patch	None.
	121264-01 SunOS 5.10_x86: cadp160 driver patch	None.
	121334-04 SunOS 5.10_x86: zoneadmd, zlogin and zoneadm patch	None.

Table 3-7 Required Patches and Succeeding Patches for Solaris 10

Architecture	Required patches	Succeeding patches
	126420-01 SunOS 5.10_x86: umountall patch	126420-02, 140797-01
	138065-03 SunOS 5.10_x86: pkcs11_softtoken patch ¹	137138-09

NOTE: You can also install the required patches by applying J2SE Solaris 10 Recommended Patch Cluster. For details on the latest information, see the Oracle web site.

¹: Apply this patch if you use Solaris 10 11/06 (update 3), Solaris 10 8/07 (update 4), Solaris 10 5/08 (update 5), or Solaris 10 10/08 (update 6). Check the update numbers by referencing the `/etc/release` file. The following shows an example of the `/etc/release` file for Solaris 10 11/06.

```
Assembled 14 November 2006
Solaris 10 11/06 s10s_u3wos_10 SPARC
Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
Use is subject to license terms.
Assembled 14 November 2006
```

Table 3-8 Required Patches and Succeeding Patches for AIX 5.3

Java execution environment	Required patches	Succeeding patches
Version 1.4.2	5300-02 (APAR IY69190)	5300-03, 5300-04, 5300-05, 5300-06, 5300-07, 5300-08, 5300-09, 5300-10, 5300-11, 5300-12
Version 5.0	5300-03 (APAR IY71011)	5300-04, 5300-05, 5300-06, 5300-07, 5300-08, 5300-09, 5300-10, 5300-11, 5300-12
Version 6.0	5300-07 (APAR IZ07976)	5300-08, 5300-09, 5300-10, 5300-11, 5300-12

NOTE: The architecture is 32 or 64 bit. For details on the latest information, see the IBM web site.

Table 3-9 Required Patches and Succeeding Patches for AIX 6.1

Java execution environment	Required patches	Succeeding patches
Version 1.4.2	6100-00	6100-01, 6100-02, 6100-03, 6100-04, 6100-05, 6100-06
Version 5.0	6100-00	6100-01, 6100-02, 6100-03, 6100-04, 6100-05, 6100-06
Version 6.0	6100-00	6100-01, 6100-02, 6100-03, 6100-04, 6100-05, 6100-06

NOTE: The architecture is 64 bit. For details on the latest information, see the IBM web site.

Table 3-10 Required Patches and Succeeding Patches for AIX 7.1

Java execution environment	Required patches	Succeeding patches
Version 1.4.2	7100-00	None.

Table 3-10 Required Patches and Succeeding Patches for AIX 7.1

Java execution environment	Required patches	Succeeding patches
Version 5.0	7100-00	None.
NOTE: The architecture is 64 bit. For details on the latest information, see the IBM web site.		

Table 3-11 Required Patches for Linux

OS	Architecture	Patches
Red Hat Enterprise Linux 5.1	x86 IPF x64 Edition (EM64T)	glibc-2.5-18.el5_1.1 or later nscd-2.5-18.el5_1.1 or later
SUSE Linux Enterprise Server 10	x86 IPF x64 Edition (EM64T)	gdb-6.5-21.2 or later

Table 3-12 Required Patches and Succeeding Patches for HP-UX 11i v1

Required patches	Java execution environment	Succeeding patches
PHCO_25226 s700_800 11.11 Initialised TLS, Psets, Mutex performance	Version 1.4.2 Version 5.0 Version 6.0	PHCO_26466, PHCO_27632, PHCO_29109, PHCO_29960, PHCO_30544, PHCO_33282, PHCO_36229, PHCO_38307
PHCO_25452 s700_800 11.11 libc cumulative patch		PHCO_26124, PHCO_27434, PHCO_27740, PHCO_27910, PHCO_28427, PHCO_29029, PHCO_29287, PHCO_29495, PHCO_29955, PHCO_30030, PHCO_30530, PHCO_31061, PHCO_31903, PHCO_32761, PHCO_33360, PHCO_33533, PHCO_33711, PHCO_34275, PHCO_35743, PHCO_36184, PHCO_37369, PHCO_38279
PHCO_29960 s700_800 11.11 Pthread enhancement and fixes		PHCO_30544, PHCO_33282, PHCO_36229, PHCO_38307
PHKL_24253 s700_800 11.11 thread nostop patch supporting NFS		PHKL_24569, PHKL_25994, PHKL_30216, PHKL_32061, PHKL_34309, PHKL_35879
PHKL_24254 s700_800 11.11 thread nostop patch supporting NFS		PHKL_24568, PHKL_25728, PHKL_25840, PHKL_27092, PHKL_27294, PHKL_27317, PHKL_29707, PHKL_30032, PHKL_30216, PHKL_32061, PHKL_34309, PHKL_35879
PHKL_24255 s700_800 11.11 thread nostop patch supporting NFS		PHKL_25652, PHKL_25993
PHKL_24256 s700_800 11.11 signal race condition patch/threads enh		PHKL_24567, PHKL_25729, PHKL_28122

Table 3-12 Required Patches and Succeeding Patches for HP-UX 11i v1

Required patches	Java execution environment	Succeeding patches
PHKL_24257 s700_800 11.11 thread nostop patch supporting NFS		PHKL_23665, PHKL_24551, PHKL_25389, PHKL_27091, PHKL_29706, PHKL_30033, PHKL_30587, PHKL_31993, PHKL_33328, PHKL_33336, PHKL_34310, PHKL_35281, PHKL_36948
PHKL_24751 s700_800 11.11 preserve IPSW W-bit and GR31 lower bits		None.
PHKL_25227 s700_800 11.11 VM/JFS deadlock; mmap performance/defect		PHKL_25614, PHKL_26233, PHKL_27278, PHKL_28267, PHKL_28428, PHKL_28990, PHKL_30158, PHKL_30616, PHKL_31003, PHKL_32578, PHKL_32806, PHKL_33261, PHKL_33270, PHKL_33988, PHKL_35464, PHKL_35564
PHKL_25367 s700_800 11.11 Priority inversion and thread hang		PHKL_26468, PHKL_27316, PHKL_30837, PHKL_34534, PHKL_38299, PHKL_38430
PHKL_25468 s700_800 11.11 eventport (/dev/poll) pseudo driver		PHKL_30542
PHKL_25614 s700_800 11.11 VM- JFS deadlock, mmap, perf thread creation		PHKL_26233, PHKL_27278, PHKL_28267, PHKL_28428, PHKL_28990, PHKL_30158, PHKL_30616, PHKL_31003, PHKL_32578, PHKL_32806, PHKL_33261, PHKL_33270, PHKL_33988, PHKL_35464, PHKL_35564
PHKL_25728 s700_800 11.11 Psets Enablement, thread cumulative		PHKL_25840, PHKL_27092, PHKL_27294, PHKL_27317, PHKL_29707, PHKL_30032, PHKL_30216, PHKL_32061, PHKL_34309, PHKL_35879
PHKL_25729 s700_800 11.11 signals, threads enhancement, Psets Enablement		PHKL_28122
PHKL_25840 s700_800 11.11 Thread NOSTOP, Psets, Thread Abort		PHKL_27092, PHKL_27294, PHKL_27317, PHKL_29707, PHKL_30032, PHKL_30216, PHKL_32061, PHKL_34309, PHKL_35879
PHKL_25842 s700_800 11.11 Thread Abort		PHKL_30288, PHKL_34311
PHKL_25871 s700_800 11.11 eventport syscalls;socket close(2) hang fix		PHKL_25995, PHKL_29826, PHKL_30317, PHKL_30541, PHKL_30557, PHKL_32374, PHKL_32457, PHKL_34024, PHKL_35091, PHKL_37753, PHKL_39133

Table 3-12 Required Patches and Succeeding Patches for HP-UX 11i v1

Required patches	Java execution environment	Succeeding patches
PHKL_27091 s700_800 11.11 Core PM, vPar, Psets Cumulative, slpq1 perf		PHKL_29706, PHKL_30033, PHKL_30587, PHKL_31993, PHKL_33328, PHKL_33336, PHKL_34310, PHKL_35281, PHKL_36948
PHKL_27092 s700_800 11.11 Thread NOSTOP, Abort; Psets		PHKL_27294, PHKL_27317, PHKL_29707, PHKL_30032, PHKL_30216, PHKL_32061, PHKL_34309, PHKL_35879
PHKL_28489 s700_800 11.11 copyin EFAULT, LDCD access type		None.
PHKL_32927 s700_800 11.11 PA- 8800 Fix Java (64-bit JVM) process hang		PHKL_36763
PHKL_34534 s700_800 11.11 vPar, callout, abstime, sync perf, wakeup		PHKL_38299, PHKL_38430
PHNE_23502 s700_800 11.11 ONC/NFS General Release/Performance Patch		PHNE_24035, PHNE_24910, PHNE_25625, PHNE_25627, PHNE_26388, PHNE_27218, PHNE_28103, PHNE_28568, PHNE_28983, PHNE_29211, PHNE_29303, PHNE_29783, PHNE_29883, PHNE_30378, PHNE_30380, PHNE_30661, PHNE_31097, PHNE_31929, PHNE_32477, PHNE_32811, PHNE_33315, PHNE_33498, PHNE_33971, PHNE_34293, PHNE_34662, PHNE_34938, PHNE_35418, PHNE_35871, PHNE_36168, PHNE_37110, PHNE_37568, PHNE_39167
PHNE_25084 s700_800 11.11 Cumulative STREAMS Patch		PHNE_26728, PHNE_27703, PHNE_28476, PHNE_29825, PHNE_30367, PHNE_31091, PHNE_33313, PHNE_33729, PHNE_34131, PHNE_34777, PHNE_35453, PHNE_36576
PHNE_29887 s700_800 11.11 cumulative ARPA Transport patch		PHNE_31247, PHNE_33159, PHNE_33628, PHNE_34135, PHNE_34672, PHNE_35183, PHNE_35351, PHNE_36125, PHNE_37671, PHNE_37898, PHNE_38678
PHSS_24932 s700_800 11.11 Japanese TrueType font patch		PHSS_26971
PHSS_24934 s700_800 11.11 Korean TrueType font patch		PHSS_26973
PHSS_24936 s700_800 11.11 Chinese-S TrueType font patch for 11.11		PHSS_26975

Table 3-12 Required Patches and Succeeding Patches for HP-UX 11i v1

Required patches	Java execution environment	Succeeding patches
PHSS_25449 s700_800 11.11 X/Motif Runtime OCT2001 Periodic Patch		PHSS_25881, PHSS_27234, PHSS_27425, PHSS_28370, PHSS_28875, PHSS_29371, PHSS_30262, PHSS_30787, PHSS_31000, PHSS_33130, PHSS_35711, PHSS_37028
PHSS_25881 s700_800 11.11 X/Motif Runtime JAN2002 Periodic Patch		PHSS_27234, PHSS_27425, PHSS_28370, PHSS_28875, PHSS_29371, PHSS_30262, PHSS_30787, PHSS_31000, PHSS_33130, PHSS_35711, PHSS_37028
PHSS_30049 s700_800 11.11 ld(1) and linker tools cumulative patch		PHSS_30966, PHSS_30968, PHSS_30970, PHSS_32864, PHSS_33033, PHSS_33035, PHSS_33037, PHSS_35379, PHSS_35381, PHSS_35383, PHSS_35385, PHSS_37516, PHSS_37517, PHSS_38154, PHSS_39077, PHSS_39749
PHSS_35385 s700_800 11.11 ld(1) and linker tools cumulative patch	Version 6.0	PHSS_37516, PHSS_37517, PHSS_38154, PHSS_39077, PHSS_39749
<p>NOTE: The architecture is PA-RISC (32 or 64 bit). Depending on the OS release date, required patches might have been applied at the time of delivery. For details on the latest information, see the HP web site.</p>		

Table 3-13 Required Patches and Succeeding Patches for HP-UX 11i v2

Architecture	Required patches	Succeeding patches
PA-RISC (64bit) (Version 5.0 of the Java execution environment)	PHSS_33349 s700_800 11.23 linker + fdp cumulative patch	PHSS_34040, PHSS_34353, PHSS_34440, PHSS_34858, PHSS_34860, PHSS_35979, PHSS_36336, PHSS_36342, PHSS_37201, PHSS_37492, PHSS_37947, PHSS_39093, PHSS_38134, PHSS_39821
PA-RISC (64bit) (Version 6.0 of the Java execution environment)	PHSS_37201s700_800 11.23 linker + fdp cumulative patch	PHSS_37492, PHSS_37947, PHSS_38134, PHSS_39093, PHSS_39821
	PHSS_33349 s700_800 11.23 linker + fdp cumulative patch	PHSS_39821, PHSS_38134, PHSS_39093, PHSS_37947, PHSS_37492, PHSS_37201, PHSS_36342, PHSS_36336, PHSS_35979, PHSS_34860, PHSS_34858, PHSS_34440, PHSS_34353, PHSS_34040

Table 3-13 Required Patches and Succeeding Patches for HP-UX 11i v2

Architecture	Required patches	Succeeding patches
IPF (Version 1.4.2 of the Java execution environment)	PHCO_30476 s700_800 11.23 Pthread library patch	PHCO_30543, PHCO_31553, PHCO_32489, PHCO_33675, PHCO_34718, PHCO_34944, PHCO_35997, PHCO_36323, PHCO_37543, PHCO_37940, PHCO_38955, PHCO_39699
	PHKL_30192 s700_800 11.23 Eliminate race at MxN kernel thread creation	PHKL_31500
	PHSS_30015 s700_800 11.23 Aries cumulative patch	PHSS_30237, PHSS_30674, PHSS_30779, PHSS_31816, PHSS_32213, PHSS_32502, PHSS_34201, PHSS_35045, PHSS_35528, PHSS_36519, PHSS_37552, PHSS_38526, PHSS_39293
IPF (Version 5.0 of the Java execution environment)	PHCO_30476 s700_800 11.23 Pthread library patch	PHCO_30543, PHCO_31553, PHCO_32489, PHCO_33675, PHCO_34718, PHCO_34944, PHCO_35997, PHCO_36323, PHCO_37543, PHCO_37940, PHCO_38955, PHCO_39699
	PHKL_30192 s700_800 11.23 Eliminate race at MxN kernel thread creation	PHKL_31500
	PHKL_35029 s700_800 11.23 ksleep cumulative patch	PHKL_36826, PHKL_37121
	PHSS_30015 s700_800 11.23 Aries cumulative patch	PHSS_30237, PHSS_30674, PHSS_30779, PHSS_31816, PHSS_32213, PHSS_32502, PHSS_34201, PHSS_35045, PHSS_35528, PHSS_36519, PHSS_37552, PHSS_38526, PHSS_39293
	PHSS_33349 s700_800 11.23 linker + fdp cumulative patch	PHSS_34040, PHSS_34353, PHSS_34440, PHSS_34858, PHSS_34860, PHSS_35979, PHSS_36336, PHSS_36342, PHSS_37201, PHSS_37492, PHSS_37947, PHSS_38134, PHSS_39093
	PHSS_33350 s700_800 11.23 aC++ Runtime	PHSS_34041, PHSS_34441, PHSS_35055, PHSS_35978, PHSS_36343, PHSS_37500, PHSS_38140
	PHSS_34043 s700_800 11.23 Integrity Unwind Library	PHSS_34854, PHSS_34859, PHSS_36345, PHSS_37039, PHSS_37498, PHSS_37953, PHSS_38138, PHSS_39101

Table 3-13 Required Patches and Succeeding Patches for HP-UX 11i v2

Architecture	Required patches	Succeeding patches
	PHSS_25045 s700_800 11.23 solves problem emulating floating point patch	PHSS_39293, PHSS_38526, PHSS_37552, PHSS_36519, PHSS_35528
	PHKL_36667 s700_800 11.23 11.23 mmap patch	PHKL_39901, PHKL_39901, PHKL_39436, PHKL_37653
IPF (Version 6.0 of the Java execution environment)	PHSS_30015 s700_800 11.23 Aries cumulative patch	PHSS_39293, PHSS_38526, PHSS_37552, PHSS_36519, PHSS_35528, PHSS_35045, PHSS_34201, PHSS_32502, PHSS_32213, PHSS_31816, PHSS_30779, PHSS_30674, PHSS_30237
	PHKL_30192 s700_800 11.23 Eliminate race at MxN kernel thread creation	PHKL_31500
	PHCO_30476 s700_800 11.23 Pthread library patch	PHCO_37940, PHCO_38955, PHCO_37543, PHCO_36323, PHCO_35997, PHCO_34944, PHCO_34718, PHCO_33675, PHCO_32489, PHCO_31553, PHCO_30543
	PHSS_33349 s700_800 11.23 linker + fdp cumulative patch	PHSS_38134, PHSS_39093, PHSS_37947, PHSS_37492, PHSS_37201, PHSS_36342, PHSS_36336, PHSS_35979, PHSS_34860, PHSS_34858, PHSS_34440, PHSS_34353, PHSS_34040
	PHSS_33350 s700_800 11.23 aC++ Runtime	PHSS_38140, PHSS_37500, PHSS_36343, PHSS_35978, PHSS_35055, PHSS_34441, PHSS_34041
	PHSS_34043 s700_800 11.23 Integrity Unwind Library	PHSS_39101, PHSS_38138, PHSS_37953, PHSS_37498, PHSS_37039, PHSS_36345, PHSS_34859, PHSS_34854
	PHKL_35029 s700_800 11.23 ksleep cumulative patch	PHKL_37121, PHKL_36826
	PHSS_35045 s700_800 11.23 Aries cumulative patch	PHSS_35528, PHSS_36519, PHSS_37552, PHSS_38526, PHSS_39293
	PHKL_36667 s700_800 11.23 mmap(2),mlock[all](2),madvise(2), msync(2)	PHKL_37653, PHKL_39436, PHKL_39901, PHKL_40094
NOTE: Depending on the OS release date, required patches might have been applied at the time of delivery. For details on the latest information, see the HP web site.		

Table 3-14 Required Patches and Succeeding Patches for HP-UX 11i v3

Architecture	Required patches	Succeeding patches
PA-RISC (64bit) (Version 1.4.2 of the Java execution environment)	PHKL_40208 11.31 scheduler cumulative patch	None.
PA-RISC (64bit) (Version 5.0 of the Java execution environment)	PHKL_40208 11.31 scheduler cumulative patch	None.
PA-RISC (64bit) (Version 6.0 of the Java execution environment)	PHSS_37202 11.31 linker + fdp cumulative patch	PHSS_37493, PHSS_37948, PHSS_37955, PHSS_38135, PHSS_39094, PHSS_39822
	PHKL_40208 11.31 scheduler cumulative patch	None.
IPF (Version 1.4.2 of the Java execution environment)	PHKL_40208 11.31 scheduler cumulative patch	None.
	PHCO_38050 11.31 pthread library cumulative patch	PHCO_38837, PHCO_39604
IPF (Version 5.0 of the Java execution environment)	PHKL_40208 11.31 scheduler cumulative patch	None.
	PHSS_37501 11.31 aC++ Runtime (IA: A.06.16, PA: A.03.76)	PHSS_38141
	PHCO_38050 11.31 pthread library cumulative patch	PHCO_38837, PHCO_39604
	PHSS_38139 11.31 Integrity Unwind Library	PHSS_39102
IPF (Version 6.0 of the Java execution environment)	PHSS_37501 11.31 aC++ Runtime (IA: A.06.16, PA: A.03.76)	PHSS_38141
	PHCO_38050 11.31 pthread library cumulative patch	PHCO_38837, PHCO_39604
	PHSS_38139 11.31 Integrity Unwind Library	PHSS_39102
	PHKL_40208 11.31 scheduler cumulative patch	None.

NOTE: Depending on the OS release date, required patches might have been applied at the time of delivery. For details on the latest information, see the HP web site.

3-2-3 Prerequisite Java execution environments

Conditions depend on the OSs where Device Manager agent is installed.

- For Window or Linux

If the host OS is Windows or Linux, the bundled JRE in the product will be set to use after new installation. To use Oracle Sun JDK or Oracle Sun JRE, change the Java execution environment for Device Manager agent after the installation.

The following is the prerequisite of Java execution environment for Device Manager agent.

Table 3-1 Prerequisite Java execution environment for Device Manager agent (Windows or Linux)

OS name	Bundled JRE 5.0 (1.5.0)	Oracle Sun JDK 6.0 Update 22 (1.6.0_22) or later ¹	Oracle Sun JRE 6.0 Update 22 (1.6.0_22) or later ¹
Windows Server 2003 (x86)	Y	Y	Y
Windows Server 2003 (x64)	Y	Y ²	Y ¹
Windows Server 2003 (IPF)	Y	N	N
Windows Server 2003 R2 (x86)	Y	Y	Y
Windows Server 2003 R2 (x64)	Y	Y ²	Y ²
Windows Server 2008 (x86)	Y	Y	Y
Windows Server 2008 (x64)	Y	Y ²	Y ²
Windows Server 2008(IPF)	Y	N	N
Windows Server 2008 R2 (x64)	Y	Y ²	Y ²
Windows Server 2008 R2 (IPF)	Y	N	N
Red Hat Enterprise Linux (x86)	Y	Y	Y
Red Hat Enterprise Linux (x64)	Y	Y	Y
Red Hat Enterprise Linux (IPF)	Y	Y	Y
SUSE Linux Enterprise Server (x86)	Y	Y	Y
SUSE Linux Enterprise Server (x64)	Y	Y	Y
SUSE Linux Enterprise Server (IPF)	Y	Y	Y
<p>Legend: Y: Supported. N: Not supported. --: None ¹: Use the program of installer type for Windows, or package type for Linux but not self-extract file. ²: Use Java execution environment for 32 bit because Device Manager agent is 32 bit application.</p>			

NOTE: If Dynamic Link Manager is installed in the host, use an execution environment of Java for 32 bit.

- For Solaris, AIX or HP-UX

If the host OS is Solaris, AIX, or HP-UX, you need software that provides a Java execution environment on the host before installing the Device Manager agent. Download the software from your OS vendor site, and then install it.

The following table shows the prerequisite Java execution environments for Device Manager agents.

Table 3-15 Required Java execution environments (Solaris, AIX or HP-UX)

OS	Architecture	Java execution environment
Solaris	SPARC (32 and 64 bit)	For IPv4 environment operation: <ul style="list-style-type: none"> • JDK 1.4.2_xx (xx is 15 or later) • JDK 5.0 (Update 11 or later) • JDK 6.0 (Update 17 or later) For IPv6 environment operation: <ul style="list-style-type: none"> • DK 5.0 (Update 11 or later) • JDK 6.0 (Update 17 or later)
	AMD64	JDK 5.0 (Update 11 or later) JDK 6.0 (Update 17 or later)
AIX	32 bit 64 bit	For IPv4 environment operation: <ul style="list-style-type: none"> • JDK 1.4.2 (Update 8 or later) • JDK 5.0 (Update 5 or later) • JDK 6.0 (Update 17 or later) For IPv6 environment operation: <ul style="list-style-type: none"> • JDK 5.0 (Update 5 or later) • JDK 6.0 (Update 17 or later)
HP-UX	PA-RISC (32 and 64 bit) IPF	For IPv4 environment operation: <ul style="list-style-type: none"> • JDK 1.4.2_xx (xx is 17 or later) • RTE 1.4.2_xx (xx is 17 or later) • JDK 5.0 (Update 11 or later) • JRE 5.0 (Update 11 or later) • JDK 6.0 (Update 17 or later) • JRE 6.0 (Update 17 or later) For IPv6 environment operation: <ul style="list-style-type: none"> • JDK 5.0 (Update 11 or later) • JRE 5.0 (Update 11 or later) • JDK 6.0 (Update 17 or later)

NOTE: Use a package program instead of a self-expanding program. If multiple versions are installed, the Device Manager agent uses the latest version of the Java execution environment.

Use the following commands to check the versions of the listed software products, which provide a Java execution environment.

Table 3-16 Commands for Checking the Version of the Software that Provides a Java Execution Environment

OS	Software That Provides a Java Execution Environment	Command
Solaris	JDK 1.4.2	pkginfo -li SUNWj3rt
	JDK 5.0	pkginfo -li SUNWj5rt
	JDK 6.0	pkginfo -li SUNWj6rt
AIX	JDK 1.4.2 (32 bit)	lslpp -l Java14.sdk
	JDK 1.4.2 (64 bit)	lslpp -l Java14_64.sdk
	JDK 5.0 (32 bit)	lslpp -l Java5.sdk
	JDK 5.0 (64 bit)	lslpp -l Java5_64.sdk
	JDK 6.0 (32 bit)	lslpp -l Java6.sdk
	JDK 6.0 (64 bit)	lslpp -l Java6_64.sdk
HP-UX	JDK 1.4.2	swlist T1456AA
	RTE 1.4.2	swlist T1457AA
	JDK 5.0	swlist Java15JDK
	JRE 5.0	swlist Java15JRE



CAUTION: When updating the software that provides a Java execution environment (after installing the Device Manager agent), temporarily stop the Device Manager agent service before proceeding with any updates. Also, when changing the installation path of the software that provides a Java execution environment, you must modify the `server.agent.JRE.location` setting in the `server.properties` file.

3-2-4 Supported virtualization software

The Device Manager agent can also run on the guest OSs or the VIO clients of the virtualization software in the following table. Note that the Device Manager agent should be installed on either a virtualization server (host OS) or the virtual machines (guest OS or VIO client).

Table 3-17 Supported virtualization software

Guest OS or VIO client	Version	Architecture	Virtualization software
Windows Server 2003 R2	No SP	x86 x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> VMware ESX 3.x VMware ESX 4.x VMware ESXi 3.x VMware ESXi 4.x
	SP2	x86 x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> VMware ESX 3.x VMware ESX 4.x VMware ESXi 3.x VMware ESXi 4.x Windows Server 2008 (Hyper-V) Windows Server 2008 R2 (Hyper-V2)

Table 3-17 Supported virtualization software

Guest OS or VIO client	Version	Architecture	Virtualization software
Windows Server 2008	No SP SP1 SP2	x86 x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> VMware ESX 3.x VMware ESX 4.x VMware ESXi 3.x VMware ESXi 4.x Windows Server 2008 (Hyper-V) Windows Server 2008 R2 (Hyper-V2)
Windows Server 2008 R2	No SP SP1	x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> VMware ESX 3.x VMware ESX 4.x VMware ESXi 3.x VMware ESXi 4.x Windows Server 2008 (Hyper-V) Windows Server 2008 R2 (Hyper-V2)
Solaris	10	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> Solaris 10 (SPARC) (Logical Domains 1.2 or 1.3)
AIX	5.3	32 bit 64 bit	<ul style="list-style-type: none"> VIO 2.1.1¹
	6.1	64 bit	
	7.1	64 bit	Not applicable

¹: HBAs that support NPIV are required. Use HBAs that support NPIV to assign LUs to the VIO client.

When running the Device Manager agent on a guest OS or a VIO client, be sure to take into account the number of LUs managed by the virtual machines in order to allocate a sufficient amount of memory to the guest OS or the VIO client. As for the Device Manager agent configuration, follow the configuration recommendations.



CAUTION: When you use Logical Domains, if you export a physical disk of the service domain as a virtual disk of the guest domain, specify the full disk. If you specify a single slice disk instead, information about the virtual disk cannot be acquired correctly.

3-2-5 Supported file systems

The following table lists the file systems supported by the Device Manager agent.

Table 3-18 Supported file systems

OS	File system
Windows	NTFS
	FAT
	FAT32
Solaris	UFS
	Veritas File System
AIX	JFS

Table 3-18 Supported file systems

OS	File system
Red Hat Enterprise Linux	ext2 ext3 ext4
SUSE Linux Enterprise Server	ext2 ext3
HP-UX	Veritas File System (JFS ¹)
	HFS
¹ : This includes HP OnlineJFS and HP JFS, which are recognized as Veritas File System on a host.	

3-2-6 Supported volume managers

The following table lists volume managers supported by the Device Manager agent. Note that the table only lists OSs that support volume managers.

Table 3-19 Supported volume managers

OS	Version	Architecture	Volume manager
Windows Server 2003	No SP	x86 IPF x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic
	SP1	x86	<ul style="list-style-type: none"> Basic Dynamic VERITAS Volume Manager 4.3
		IPF	<ul style="list-style-type: none"> Basic Dynamic
	SP2	x86 IPF x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic
Windows Server 2003 R2	No SP SP2	x86 x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic
Windows Server 2008	No SP SP1 SP2	x86 IPF x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic
Windows Server 2008 R2	No SP	IPF x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic
	SP1	x64 Edition (EM64T and AMD64)	<ul style="list-style-type: none"> Basic Dynamic

Table 3-19 Supported volume managers

OS	Version	Architecture	Volume manager
Solaris	8	SPARC (32 or 64 bit)	<ul style="list-style-type: none"> • SDS 4.2.1 • VERITAS Volume Manager 3.2 • VERITAS Volume Manager 3.5 • VERITAS Volume Manager 4.0
	9	SPARC (32 or 64 bit)	<ul style="list-style-type: none"> • SVM 1.0 • VERITAS Volume Manager 3.5 • VERITAS Volume Manager 4.0 • VERITAS Volume Manager 4.1 • Veritas Volume Manager 5.0
	10	SPARC (32 or 64 bit)	<ul style="list-style-type: none"> • SVM 1.0 • VERITAS Volume Manager 4.1 MP2¹ • Veritas Volume Manager 5.0¹ • Veritas Volume Manager 5.0 MP1¹
		x64 Edition (AMD64)	<ul style="list-style-type: none"> • SVM 1.0 • VERITAS Volume Manager 4.1 • VERITAS Volume Manager 4.1 MP2 • Veritas Volume Manager 5.0 MP1
AIX	5.3	32 bit 64 bit	LVM
	6.1	64 bit	LVM
	7.1	64 bit	LVM
Red Hat Enterprise Linux	Linux AS/ES 4	x86 IPF x64 Edition (EM64T)	LVM2
	Linux 5	x86 IPF x64 Edition (EM64T)	LVM2
	Linux 6	x86 x64 Edition (EM64T)	LVM2
SUSE Linux Enterprise Server	9	x86	LVM2
	10	x86 IPF x64 Edition (EM64T)	LVM2

Table 3-19 Supported volume managers

OS	Version	Architecture	Volume manager
	11	x86 IPF x64 Edition (EM64T)	LVM2
HP-UX	11i v1	PA-RISC (32 or 64 bit)	<ul style="list-style-type: none"> • LVM • VERITAS Volume Manager 3.5
	11i v2 (for versions earlier than 12/2005)	PA-RISC (64 bit) IPF	<ul style="list-style-type: none"> • LVM • VERITAS Volume Manager 3.5 •
	11i v2 (for versions later than or equal to 12/2005)	PA-RISC (64 bit) IPF	<ul style="list-style-type: none"> • LVM • VERITAS Volume Manager 3.5 • VERITAS Volume Manager 4.1
	11i v3	PA-RISC (64 bit) IPF	<ul style="list-style-type: none"> • LVM • LVM2² • LVM2.1² • VERITAS Volume Manager 4.1
<p>¹: Logical domains cannot be used.</p> <p>²: This version of Device Manager agent supports volume groups whose version is up to 2.1. Therefore, even if an LVM that supports volume groups whose version is higher than 2.1 is installed on a host, the file systems and device files will be created as volume groups of version 2.1.</p>			



CAUTION: Even if the Device Manager agent is installed on the host, the GUI LU usage rate will not be displayed in the following cases:

- Windows is the OS on the host using the LUs, and LUs or LU partitions are subject to dynamic disk management.
- Solaris is the OS on the host using the LUs, and LUs are managed by SDS, SVM, or Veritas Volume Manager.
- The OS on the host using the LUs is AIX.
- Linux is the OS on the host using the LUs, and LUs satisfy one of the following conditions:
 - The LUs are managed by LVM2.
 - The LUs are partitioned, and some of the LU partitions are managed by a volume manager.
 - The OS on the host using the LUs is HP-UX, and the LUs are managed by LVM.

3-2-7 Supported path management software

Path management software is required when path redundancy is used between host ports and storage system ports to increase system reliability and availability. The following table lists the path management software supported by the Device Manager agent. Note that the table only lists OSs that support path management software.

Table 3-20 Supported path management software

OS	Version	Architecture	Path management software
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Table 3-20 Supported path management software

OS	Version	Architecture	Path management software
Windows Server 2003	No SP	x86 IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 5.9.1 to 6.5.0
	SP1	x86 IPF	Dynamic Link Manager 5.9.1 to 6.5.0
	SP2	x86 IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 5.9.1 to 6.5.0
Windows Server 2003 R2	No SP SP2	x86 x64 Edition (EM64T and AMD64)	Dynamic Link Manager 5.9.1 to 6.5.0
Windows Server 2008	No SP SP1	x86 IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 5.9.5 to 6.5.0
	SP2	x86 IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 6.1.0 to 6.5.0
Windows Server 2008 R2	No SP	IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 6.2.0 to 6.5.0
	SP1	IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 6.2.0 to 6.5.0
Solaris	8	SPARC (32 and 64 bit)	Dynamic Link Manager 05-00 to 6.5.0
	9	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> • VERITAS Volume Manager 4.0 (Dynamic Multi-Pathing) • VERITAS Volume Manager 4.1 (Dynamic Multi-Pathing) • Dynamic Link Manager 05-00 to 6.5.0 • Sun StorEdge Traffic Manager 6.2.6
	10	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> • Dynamic Link Manager 5.6.1 to 6.5.0 • Sun StorEdge Traffic Manager
		x64 Edition (AMD64)	Sun StorEdge Traffic Manager
AIX	5.3	32 bit 64 bit	<ul style="list-style-type: none"> • Dynamic Link Manager 05-41 to 6.5.0 • MPIO
	6.1	64 bit	Dynamic Link Manager 5.9.4 to 6.5.0
	7.1	64 bit	Dynamic Link Manager 6.5.0
HP-UX	11i v1	PA-RISC (32 bit)	<ul style="list-style-type: none"> • PV-link • Secure Path

Table 3-20 Supported path management software

OS	Version	Architecture	Path management software
		PA-RISC (64 bit)	<ul style="list-style-type: none"> PV-link Secure Path
	11i v2	PA-RISC (64 bit) IPF	<ul style="list-style-type: none"> PV-link Secure Path
	11i v3	PA-RISC (64 bit) IPF	<ul style="list-style-type: none"> PV-link MPIO
Red Hat Enterprise Linux	Linux AS/ES 4 Update 1 Update 3 Update 4 4.5	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 5.9.3 to 6.5.0
	Linux AS/ES 4.6	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 5.9.4 to 6.5.0
	Linux AS/ES 4.7	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.0.0 to 6.5.0
	Linux AS/ES 4.8	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.0.0 to 6.5.0
	Linux 5.0	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 5.9.3 to 6.5.0
	Linux 5.1	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 5.9.4 to 6.5.0
	Linux 5.2	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 5.9.4 to 6.5.0
	Linux 5.3	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.1.2 to 6.5.0
	Linux 5.4	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.1.2 to 6.5.0
	Linux 5.5	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.1.2 to 6.5.0
	Linux 5.6	x86 IPF x64 Edition (EM64T)	Dynamic Link Manager 6.5.0
	Linux 6.0	x86 x64 Edition (EM64T)	Dynamic Link Manager 6.5.2

Table 3-20 Supported path management software

OS	Version	Architecture	Path management software
SUSE Linux Enterprise Server	9 (SP1, SP2, SP3)	x86	Dynamic Link Manager 5.9.3 to 6.5.0
	9 (SP4)	x86	Dynamic Link Manager 6.0.0 to 6.5.0
	10 (No SP, SP1)	x86	Dynamic Link Manager 5.9.3 to 6.5.0
	10 (SP2)	x86	Dynamic Link Manager 6.0.1 to 6.5.0
	10 (SP3)	x86	Dynamic Link Manager 6.3.0 to 6.5.0
	11 (No SP)	x86	Dynamic Link Manager 6.2.1 to 6.5.0
	11 (SP1)	x86 IPF x64 Edition (EM64T and AMD64)	Dynamic Link Manager 6.5.0

3-2-8 Supported cluster software

When cluster software is installed, hosts on which Device Manager agent is also installed can be clustered in an Active-Standby configuration or Active-Active configuration. The Device Manager agent runs in cluster environments configured with the cluster software listed in the table below. Note that the table only lists OSs that support cluster software.

Notes:

Because the Device Manager agent is not compatible with the logical host, the Device Manager agent cannot be registered in cluster resources. The Device Manager agent is activated on the physical hosts that make up the cluster, and collects the data for those hosts.

For details about setting up the cluster software, see the manual for each cluster software product.

Table 3-21 Supported cluster software

OS	Version	Architecture	Cluster software
Windows Server 2003	No SP	x86	<ul style="list-style-type: none"> Microsoft Cluster Service VERITAS Cluster Server 4.1
		IPF	Microsoft Cluster Service
		x64 Edition (EM64T and AMD64)	Microsoft Cluster Service
	SP1	x86	<ul style="list-style-type: none"> Microsoft Cluster Service VERITAS Cluster Server 4.1 VERITAS Cluster Server 4.3
		IPF	Microsoft Cluster Service
	SP2	x86	Microsoft Cluster Service
IPF		Microsoft Cluster Service	

Table 3-21 Supported cluster software

OS	Version	Architecture	Cluster software
		x64 Edition (EM64T and AMD64)	Microsoft Cluster Service
Windows Server 2003 R2	No SP SP2	x86	Microsoft Cluster Service
		x64 Edition (EM64T and AMD64)	Microsoft Cluster Service
Windows Server 2008	No SP SP1 SP2	x86	Microsoft Failover Cluster
		IPF	Microsoft Failover Cluster
		x64 Edition (EM64T and AMD64)	Microsoft Failover Cluster
Windows Server 2008 R2	No SP SP1	IPF x64 Edition (EM64T and AMD64)	Microsoft Failover Cluster
Solaris	8	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> • Sun Cluster 3.0 • Sun Cluster 3.1 • VERITAS Cluster Server 1.3 • VERITAS Cluster Server 2.0 • VERITAS Cluster Server 3.5 • PRIMECLUSTER 4.1.4^{1,2}
	9	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> • Sun Cluster 3.1 • VERITAS Cluster Server 3.5 • VERITAS Cluster Server 4.0 • VERITAS Cluster Server 4.1 • Cluster Perfect 4.5 R2 • PRIMECLUSTER 4.1.4^{1,2}
	10	SPARC (32 and 64 bit)	<ul style="list-style-type: none"> • Sun Cluster 3.1 • VERITAS Cluster Server 4.1 • VERITAS Cluster Server 4.1 MP2 • Veritas Cluster Server 5.0 • Veritas Cluster Server 5.0 MP1 • PRIMECLUSTER 4.1.4^{1,2} • PRIMECLUSTER 4.2^{1,2}
		x64 Edition (AMD64)	<ul style="list-style-type: none"> • VERITAS Cluster Server 4.1 MP2 • Veritas Cluster Server 5.0 MP1
AIX	5.3	32 bit	<ul style="list-style-type: none"> • HACMP 5.2 • PowerHA 5.5 • PowerHA 6.1
		64 bit	<ul style="list-style-type: none"> • HACMP 5.2 • PowerHA 5.5 • PowerHA 6.1
	6.1	64 bit	<ul style="list-style-type: none"> • HACMP 5.4.1 • PowerHA 5.5 • PowerHA 6.1
Red Hat Enterprise	Linux AS/ES 4 Update 1	x86	VERITAS Cluster Server 4.1

Table 3-21 Supported cluster software

OS	Version	Architecture	Cluster software
Linux	Linux AS/ES 4 Update 4	IPF	PRIMECLUSTER 4.2 ¹
	Linux AS/ES 4.5	IPF	PRIMECLUSTER 4.2 ¹
	Linux AS/ES 5.5	x86	ClusterPro 2.1
HP-UX	11i v1	PA-RISC (32 bit)	Serviceguard 11.16
		PA-RISC (64 bit)	<ul style="list-style-type: none"> • MC/Service Guard 11.15 • Serviceguard 11.16
	11i v2	PA-RISC (64 bit)	<ul style="list-style-type: none"> • Serviceguard 11.16 • Serviceguard 11.17
		IPF	
	11i v3	PA-RISC (64 bit)	<ul style="list-style-type: none"> • Serviceguard 11.17
		IPF	<ul style="list-style-type: none"> • Serviceguard 11.17 • Serviceguard 11.18

4 GUI requirements

- Requirements for GUI operations (section 4-1)

4-1 Requirements for GUI operations

Table 4-1 lists the supported OSs, Web browsers, and Java Runtime Environment (JRE) versions for using this version of Device Manager GUI. Table 4-1 also indicates whether linkages with management tools are supported, and whether IPv6 connections to the Device Manager server using GUI are supported.

Adobe Flash Player 10.1 or later is required for all browsers.

Table 4-1 Environment for using GUI

OS	Web browser	JRE version ¹²	Linkage with Remote Web Console				IPv6 connections
			P9500	XP24000 /XP20000	XP12000 /XP10000 /SVS200	XP1024 /XP128	
Windows XP (x86 version) SP2	Internet Explorer 7.0 ⁶	1.4.2_xx (xx is 04 or later)	Y	Y	Y	Y	N
		5.0 (Update 7 or later)	Y	Y	Y	N	N
		6.0	Y	Y	N	N	N
	Internet Explorer 8.0	1.4.2_xx (xx is 04 or later)	Y	Y	Y	Y	N
		5.0 (Update 7 or later)	Y	Y	Y	N	N
		6.0	Y	Y	N	N	N
Windows XP (x86 version) SP3	Internet Explorer 7.0	1.4.2_xx (xx is 04 or later)	N	N	N	N	N
		5.0 (Update 7 or later)	N	N	N	N	N
		6.0	N	N	N	N	N
	Internet Explorer 8.0	1.4.2_xx (xx is 04 or later)	N	N	N	N	N
		5.0 (Update 7 or later)	N	N	N	N	N
		6.0	N	N	N	N	N

Table 4-1 Environment for using GUI

OS	Web browser	JRE version ¹²	Linkage with Remote Web Console				IPv6 connections
			P9500	XP24000 /XP20000	XP12000 /XP10000 /SVS200	XP1024 /XP128	
		6.0	N	N	N	N	N
Windows Server 2003 R2 (x86 version) SP2	Internet Explorer 6.0 ⁷	1.4.2_xx (xx is 12 or later)	N	N	Y	N	N
		5.0 (Update 7 or later)	Y	Y	Y	N	Y
		6.0	Y	Y	N	N	Y
	Internet Explorer 7.0 ⁷	1.4.2_xx (xx is 12 or later)	Y	Y	Y	N	N
		5.0 (Update 7 or later)	Y	Y	Y	N	N
		6.0	Y	Y	N	N	N
Windows Vista (x86 version) no SP	Internet Explorer 7.0	6.0	Y	Y	Y	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Vista (x64 version) no SP	Internet Explorer 7.0	6.0	Y	Y	Y	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Vista (x86 version) SP1	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Vista (x64 version) SP1	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Vista (x86 version) SP2	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Vista (x64 version) SP2	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y

Table 4-1 Environment for using GUI

OS	Web browser	JRE version ¹²	Linkage with Remote Web Console				IPv6 connections
			P9500	XP24000 /XP20000	XP12000 /XP10000 /SVS200	XP1024 /XP128	
Windows 7 (x86 version or x64 version) No SP SP1	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Server 2008 ³ (x86 version) No SP SP1	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Server 2008 ³ (x64 version) No SP SP1	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Server 2008 ³ (x86 version) SP2	Internet Explorer 7.0	6.0	N	N	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Server 2008 ³ (x64 version) SP2	Internet Explorer 7.0	6.0	Y	Y	N	N	Y
	Internet Explorer 8.0	6.0	N	N	N	N	Y
Windows Server 2008 ³ R2 (x64 version) no SP SP1	Internet Explorer 8.0	6.0	Y	Y	N	N	Y
Solaris 10 SPARC 32bit	Firefox 3.6.x	1.4.2_xx (xx is 12 or later)	N	N	N	N	N
		5.0 (Update 7 or later)	N	N	N	N	N
		6.0	N	N	N	N	N
Red Hat Enterprise Linux 5.2 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux AP 5.2 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y

Table 4-1 Environment for using GUI

OS	Web browser	JRE version ¹²	Linkage with Remote Web Console				IPv6 connections
			P9500	XP24000 /XP20000	XP12000 /XP10000 /SVS200	XP1024 /XP128	
Red Hat Enterprise Linux 5.3 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux AP 5.3 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux 5.4 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux AP 5.4 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux 5.5 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
Red Hat Enterprise Linux AP 5.5 (x86 version)	Firefox 3.6.x	6.0 (1.6.0_10-b33 or later)	N	N	N	N	Y
SUSE Linux Enterprise Server 11 (x86 version) no SP SP1	Firefox 3.6.x	6.0	N	N	N	N	Y

Legend:

Y: Linkage with XP Remote Web Console is supported

N: Linkage with XP Remote Web Console is not supported

¹: When Java Runtime Environment (JRE) is installed, Java Web Start (JWS) of the same version as JRE is automatically installed. For xx, we recommend that you use the latest version.

²: To link Device Manager with a management tool, you need to use a JRE that is supported by the management tool.

³: Server Core is not supported.

⁴: This management tool is supported in 32-bit OSs only.

⁴⁵: Solaris 10 (x64 edition) is supported only when the Sun Fire x64 Servers hardware is used.

⁶: The following is the restrictions when Device Manager server security is enabled:

- If the default signature algorithm, SHA256withRSA, is specified when a keypair is created, this browser cannot be used.
- To use this browser, apply Windows XP Service Pack 3.

⁷: The following is the restrictions when Device Manager server security is enabled:

- If the default signature algorithm, SHA256withRSA, is specified when a keypair is created, this browser cannot be used.
- To use this browser, apply Microsoft Knowledge Base article 938397.



CAUTION:

- For best results, when using the Device Manager GUI, make sure that the size of the page display area of the Web browser is at least 800 pixels wide and 600 pixels tall. The minimum supported monitor resolution is XGA (1024 x 768).
-

5 Device Manager CLI requirements

- **Platforms for Device Manager CLI and the Java runtime environment**

Table 5-1 lists platforms on which Device Manager CLI runs and the requisite Java runtime environments. In addition, this table also lists the support status of Device Manager CLI in IPv6 environments. The following symbols are used in the table:

- Y: Device Manager CLI is supported in IPv6 environments.
- N: Device Manager CLI is not supported in IPv6 environments.

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
Windows XP (x86)	Windows XP Professional SP2	JRE version 1.4.1_xx (xx is 07 or later) ¹	N
		JRE version 1.4.2_xx (xx is 04 or later) ¹	N
		JRE version 5.0_xx (xx is 03 or later) ⁵	N
		JRE version 5.0 (Update 7 or later)	N
		JRE version 6.0	N
	Windows XP Professional SP3	JRE version 1.4.2_xx (xx is 06 or later) ¹	N
		JRE version 5.0 (Update 7 or later)	N
		JRE version 6.0	N
Windows Server 2003 R2 (x86)	Windows Server 2003 R2, Standard Edition SP2 Windows Server 2003 R2, Enterprise Edition SP2 Windows Server 2003 R2, Datacenter Edition SP2	JRE version 1.4.2_xx (xx is 04 or later) ¹	N
		JRE version 5.0_xx (xx is 03 or later) ⁵	Y
		JRE version 5.0 (Update 7 or later)	Y
		JRE version 6.0	Y
Windows Server 2003 R2 (x64)	Windows Server 2003 R2, Standard x64 Edition SP2 Windows Server 2003 R2, Enterprise x64 Edition SP2 Windows Server 2003 R2, Datacenter x64 Edition SP2	JRE version 1.4.2_xx (xx is 12 or later) ¹	N
		JRE version 5.0_xx (xx is 03 or later) ⁵	Y
		JRE version 5.0 (Update 7 or later)	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
Windows Vista (x86, x64)	Windows Vista Business Windows Vista Business SP1 Windows Vista Business SP2 Windows Vista Enterprise Windows Vista Enterprise SP1 Windows Vista Enterprise SP2 Windows Vista Ultimate Windows Vista Ultimate SP1 Windows Vista Ultimate SP2	JRE version 6.0	Y
Windows 7 (x86, x64)	Windows 7 Enterprise Edition Windows 7 Enterprise Edition SP1 Windows 7 Professional Edition Windows 7 Professional Edition SP1 Windows 7 Ultimate Edition Windows 7 Ultimate Edition SP1	JRE version 6.0	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
		JRE version 5.0 (Update 7 or later)	Y
		JRE version 6.0	Y
Windows Server 2008 (x86, x64) ²	Windows Server 2008 Standard Windows Server 2008 Standard SP1 Windows Server 2008 Standard SP2 Windows Server 2008 Standard 32-bit Windows Server 2008 Standard 32-bit SP1 Windows Server 2008 Standard 32-bit SP2 Windows Server 2008 Standard without Hyper-V Windows Server 2008 Standard without Hyper-V SP1 Windows Server 2008 Standard without Hyper-V SP2 Windows Server 2008 Standard without Hyper-V 32-bit Windows Server 2008 Standard without Hyper-V 32-bit SP1 Windows Server 2008 Standard without Hyper-V 32-bit SP2 Windows Server 2008 Enterprise Windows Server 2008 Enterprise SP1 Windows Server 2008 Enterprise SP2 Windows Server 2008 Enterprise 32-bit Windows Server 2008 Enterprise 32-bit SP1 Windows Server 2008 Enterprise 32-bit SP2 Windows Server 2008 Enterprise without Hyper-V	JRE version 6.0	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
	Windows Server 2008 Enterprise without Hyper-V SP1 Windows Server 2008 Enterprise without Hyper-V SP2 Windows Server 2008 Enterprise without Hyper-V 32-bit Windows Server 2008 Enterprise without Hyper-V 32-bit SP1 Windows Server 2008 Enterprise without Hyper-V 32-bit SP2 Windows Server 2008 Datacenter Windows Server 2008 Datacenter SP1 Windows Server 2008 Datacenter SP2 Windows Server 2008 Datacenter 32-bit Windows Server 2008 Datacenter 32-bit SP1 Windows Server 2008 Datacenter 32-bit SP2 Windows Server 2008 Datacenter without Hyper-V Windows Server 2008 Datacenter without Hyper-V SP1 Windows Server 2008 Datacenter without Hyper-V SP2 Windows Server 2008 Datacenter without Hyper-V 32-bit Windows Server 2008 Datacenter without Hyper-V 32-bit SP1 Windows Server 2008 Datacenter without Hyper-V 32-bit SP2		
Windows Server 2008 (IPF) ²	Windows Server 2008 for Itanium-based Systems Windows Server 2008 for Itanium-based Systems SP1 Windows Server 2008 for Itanium-based Systems SP2	JRE version 5.0.xx (xx is 11 or later) ^{1, 3}	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
Windows Server 2008 R2 (x64) ²	Windows Server 2008 R2 Standard Windows Server 2008 R2 Standard SP1 Windows Server 2008 R2 Enterprise Windows Server 2008 R2 Enterprise SP1 Windows Server 2008 R2 Datacenter Windows Server 2008 R2 Datacenter SP1	JRE version 6.0	Y
Windows Server 2008 R2 (IPF) ²	Windows Server 2008 R2 for Itanium-based Systems	JRE version 5.0.xx (xx is 11 or later) ^{1,3}	Y
Solaris	Solaris 9 (SPARC edition)	JRE version 1.4.1_xx (xx is 07 or later) ¹	N
		JRE version 1.4.2_xx (xx is 04 or later) ¹	N
		JRE version 5.0_xx (xx is 03 or later) ⁵	N
		JRE version 5.0 (Update 7 or later)	N
		JRE version 6.0	N
	Solaris 10 (SPARC edition)	JRE version 1.4.2_xx (xx is 12 or later) ¹	N
		JRE version 5.0_xx (xx is 03 or later) ⁵	Y
		JRE version 5.0 (Update 7 or later)	Y
		JRE version 6.0	Y
	Solaris 10 (x64 edition) ⁴	JRE version 5.0 (Update 7 or later)	Y
AIX	AIX 5L Version 5.3 (POWER)	JRE version 1.4.2	N
		JRE version 5.0 (Update 7 or later)	N
HP-UX	HP-UX 11i v1 (PA-RISC)	JRE version 1.4.2_xx (xx is 06 or later) ¹	N
		JRE version 5.0.xx (xx is 03 or later) ¹	N
	HP-UX 11i v2 (IPF) HP-UX 11i v2 (PA-RISC)	JRE version 1.4.2_xx (xx is 06 or later) ¹	N
		JRE version 5.0.xx (xx is 03 or later) ¹	Y
	HP-UX 11i v3 (IPF) HP-UX 11i v3 (PA-RISC)	JRE version 5.0.xx (xx is 03 or later) ¹	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
Linux (x86)	Red Hat Enterprise Linux 5.4 Red Hat Enterprise Linux 5.4 Advanced Platform Red Hat Enterprise Linux 5.5 Red Hat Enterprise Linux 5.5 Advanced Platform	JRE version 6.0 (Update 4 or later)	Y
	Red Hat Enterprise Linux 5.6 Red Hat Enterprise Linux 5.6 Advanced Platform	JRE version 6.0 (Update 4 or later)	N
	SUSE Linux Enterprise Server 10 SP2 SUSE Linux Enterprise Server 10 SP3	JRE version 5.0 (Update 10 or later)	Y
	SUSE Linux Enterprise Server 11 SUSE Linux Enterprise Server 11 SP1	JRE version 6.0	Y
Linux (x64)	Red Hat Enterprise Linux 5.4 Red Hat Enterprise Linux 5.4 Advanced Platform Red Hat Enterprise Linux 5.5 Red Hat Enterprise Linux 5.5 Advanced Platform	JRE version 6.0 (Update 4 or later)	Y
	Red Hat Enterprise Linux 5.6 Red Hat Enterprise Linux 5.6 Advanced Platform	JRE version 6.0 (Update 4 or later)	N
	SUSE Linux Enterprise Server 10 SP2 SUSE Linux Enterprise Server 10 SP3	JRE version 5.0 (Update 10 or later)	Y
	SUSE Linux Enterprise Server 11 SUSE Linux Enterprise Server 11 SP1	JRE version 6.0	Y

Table 5-1 Platform, Java runtime environment, and IPv6 environment support for Device Manager CLI

OS	OS version	Java runtime environment	IPv6 environment support
<p>¹ For xx, we recommend that the latest version be used.</p> <p>² Device Manager CLI does not support Hyper-V.</p> <p>³ Use the JRE used for the Device Manager server.</p> <p>⁴ Solaris 10 (x64 edition) is supported only when the Sun Fire x64 Servers hardware is used.</p> <p>⁵ JRE bundled in each product</p> <p>NOTE: If the system on which HP-UX operates uses a Dual-Core Intel® Itanium® 2 Processor for the CPU, use JRE version 1.4.2_xx (xx is 10 or later) or JRE version 5.0.03 or later, which comes with HP-UX (released in June 2006 or September 2006) that supports the processor.</p> <p>NOTE: If you run Device Manager CLI using a time zone for the U.S. and Canada, set up the OS so that the OS will support the new Daylight Saving Time (DST) rules introduced in 2007. Set up the OS, according to the information provided by the OS vendor.</p> <p>NOTE: If you run Device Manager CLI using a time zone for the U.S. and Canada, use the JRE that supports the new Daylight Saving Time (DST) rules introduced in 2007. The JRE used in the Device Manager server version 5.7 or later supports the new DST. If you run Device Manager CLI by using the JRE used in the Device Manager server version 5.7 or later, you do not have to prepare another JRE.</p> <p>NOTE: To use this function, we recommend that you install JRE version 6.0. We do not recommend that you use JRE version 1.4.1, 1.4.2, or 5.0 because entered passwords are displayed on the screen in those versions.</p> <p>NOTE: To use Device Manager CLI with the encoded password, install JRE version 1.4.2 or later on the management client.</p>			

6 Tiered Storage Manager CLI requirements

The following table lists the programs that are required to set up the CLI on a management client.

Table 6-1 OS, JRE Version, and IPv6 environment support for CLI Client

OS	OS product	JRE version	IPv6 ¹ environment support
Windows XP ²	Microsoft Windows XP Professional Edition Operating System (SP2, SP3)	1.4.2 (Build 06 or later)	--
		5.0 (Build 07 or later) ⁶ or 5.0 (Build 07 or later) 6.0	Y
Windows Server 2003 R2 (x86) ²	Microsoft Windows Server 2003 R2, Datacenter Edition (SP2) Microsoft Windows Server 2003 R2, Enterprise Edition (SP2) Microsoft Windows Server 2003 R2, Standard Edition (SP2)	5.0 (Build 07 or later) ⁶ or 5.0 (Build 07 or later) or 6.0	Y
Windows Server 2003 R2 (x64) ²	Microsoft Windows Server 2003 R2, Datacenter Edition (SP2) Microsoft Windows Server 2003 R2, Enterprise Edition (SP2) Microsoft Windows Server 2003 R2, Standard Edition (SP2)	5.0 (Build 07 or later) ⁶ or 5.0 (Build 07 or later) or 6.0	Y
Windows Vista (x86) ²	Microsoft Windows Vista Business Edition (No SP, SP1, SP2) Microsoft Windows Vista Enterprise Edition (No SP, SP1, SP2) Microsoft Windows Vista Ultimate Edition (No SP, SP1, SP2)	6.0	Y
Windows Vista (x64) ²	Microsoft Windows Vista Business Edition (No SP, SP1, SP2) Microsoft Windows Vista Enterprise Edition (No SP, SP1, SP2) Microsoft Windows Vista Ultimate Edition (No SP, SP1, SP2)	6.0	Y

Table 6-1 OS, JRE Version, and IPv6 environment support for CLI Client

OS	OS product	JRE version	IPv6 ¹ environment support
Windows 7 (x86)	Microsoft Windows 7 Enterprise Edition (No SP, SP1) Microsoft Windows 7 Professional Edition (No SP, SP1) Microsoft Windows 7 Ultimate Edition (No SP, SP1)	6.0	Y
Windows 7 (x64)	Microsoft Windows 7 Enterprise Edition (No SP, SP1) Microsoft Windows 7 Professional Edition (No SP, SP1) Microsoft Windows 7 Ultimate Edition (No SP, SP1)	6.0	Y
Windows Server 2008 (x86) ^{2, 3, 4}	Microsoft Windows Server 2008 Datacenter 32-bit (No SP, SP1, SP2) Microsoft Windows Server 2008 Enterprise 32-bit (No SP, SP1, SP2) Microsoft Windows Server 2008 Standard 32-bit (No SP, SP1, SP2) Microsoft Windows Server 2008 Datacenter without Hyper-V 32-bit (No SP, SP1, SP2) Microsoft Windows Server 2008 Enterprise without Hyper-V 32-bit (No SP, SP1, SP2) Microsoft Windows Server 2008 Standard without Hyper-V 32-bit (No SP, SP1, SP2)	6.0	Y

Table 6-1 OS, JRE Version, and IPv6 environment support for CLI Client

OS	OS product	JRE version	IPv6 ¹ environment support
Windows Server 2008 (x64) ^{2, 3, 4}	Microsoft Windows Server 2008 Datacenter (No SP, SP1, SP2) Microsoft Windows Server 2008 Enterprise (No SP, SP1, SP2) Microsoft Windows Server 2008 Standard (No SP, SP1, SP2) Microsoft Windows Server 2008 Datacenter without Hyper-V (No SP, SP1, SP2) Microsoft Windows Server 2008 Enterprise without Hyper-V (No SP, SP1, SP2) Microsoft Windows Server 2008 Standard without Hyper-V (No SP, SP1, SP2)	6.0	Y
Windows Server 2008 (IPF) ^{3, 4, 5}	Microsoft Windows Server 2008 for Itanium-based Systems (No SP, SP1, SP2)	5.0 (Build 11 or later)	Y
Windows Server 2008 R2 (x64) ^{3, 4}	Microsoft Windows Server 2008 R2, Datacenter (No SP, SP1) Microsoft Windows Server 2008 R2, Enterprise (No SP, SP1) Microsoft Windows Server 2008 R2, Standard (No SP, SP1)	6.0	Y
Windows Server 2008 R2 (IPF) ^{3, 4, 5}	Microsoft Windows Server 2008 R2 for Itanium-based Systems (No SP)	5.0 (Build 11 or later)	Y
Solaris	Solaris 9 (SPARC)	1.4.2 (Build 06 or later)	--
		5.0 (Build 07 or later) ⁶ or 5.0 (Build 07 or later) or 6.0	Y
	Solaris 10 (SPARC)	1.4.2 (Build 06 or later)	--
		5.0 (Build 07 or later) ⁶ or 5.0 (Build 07 or later) or 6.0	Y
	Solaris 10 (x64)	5.0 (Build 07 or later)	Y
	HP-UX	HP-UX 11i v1 (PA-RISC)	1.4.2 (Build 08 or later) or 5.0 (Build 03 or later)
HP-UX 11i v2 (PA-RISC)		1.4.2 (Build 08 or later)	--

Table 6-1 OS, JRE Version, and IPv6 environment support for CLI Client

OS	OS product	JRE version	IPv6 ¹ environment support
	HP-UX 11i v2 (IPF) HP-UX 11i v3 (PA-RISC) HP-UX 11i v3 (IPF)	5.0 (Build 03 or later)	Y
Linux	Red Hat Enterprise Linux 5.4 (x86) Red Hat Enterprise Linux 5.4 (x64) Red Hat Enterprise Linux 5.4 Advanced Platform (x86) Red Hat Enterprise Linux 5.4 Advanced Platform (x64)	6.0 (Build 4or later)	Y
	Red Hat Enterprise Linux 5.5 (x86) Red Hat Enterprise Linux 5.6 (x86) Red Hat Enterprise Linux 5.5 Advanced Platform (x86) Red Hat Enterprise Linux 5.6 Advanced Platform (x86) Red Hat Enterprise Linux 5.5 Advanced Platform (x64) Red Hat Enterprise Linux 5.6 Advanced Platform (x64)	6.0 (Build 4or later)	--
	SUSE Linux Enterprise Server 10 (x86) (SP2, SP3) SUSE Linux Enterprise Server 10 (x64) (SP2, SP3)	5.0 (Build 10 or later)	Y
	SUSE Linux Enterprise Server 11 (x86) (No SP, SP1) SUSE Linux Enterprise Server 11 (x64) (No SP, SP1)	6.0	Y

Table 6-1 OS, JRE Version, and IPv6 environment support for CLI Client

OS	OS product	JRE version	IPv6 ¹ environment support
<p>Legend:</p> <p>Y: An IPv6 environment is supported.</p> <p>--: An IPv6 environment is not supported.</p> <p>¹ Both an IPv4 environment and IPv6 environment are required to run Tiered Storage Manager.</p> <p>² The CLI also runs on guest OSs on VMware ESX version 3.x.</p> <p>³ The CLI does not support operations on Windows Server 2008 (Hyper-V) guest OSs.</p> <p>⁴ Operation on Server Core is not supported.</p> <p>⁵ Use the JRE used for the HP StorageWorks P9000 Command View Advanced Edition Suite products, installed with the Tiered Storage Manager server. The <code>java</code> command is installed to the following location: <i>installation-folder-of-Common-Component\jdk\jre\bin</i></p> <p>⁶ JRE bundled in each product</p> <p>NOTE: To use this function, we recommend that you install JRE version 6.0. We do not recommend that you use JRE version 1.4.1, 1.4.2, or 5.0 because entered passwords are displayed on the screen in those versions.</p> <p>NOTE: To use Device Manager CLI with the encoded password, install JRE version 1.4.2 or later on the management client.</p>			

7 Storage systems requirements

- System requirements for storage systems (section 7-1)
- Updating the microcode or firmware (section 7-2)
- P9500 (section 7-3)
- XP24000/XP20000 (section 7-4)
- XP12000/XP10000/SVS200 (section 7-5)
- XP512/XP48 (section 7-6)

7-1 System requirements for storage systems

To use Device Manager or Tiered Storage Manager to manage storage systems, you need storage system management tools and software in addition to Device Manager and Tiered Storage Manager.

7-2 Updating the microcode or firmware

If you want to update the microcode or firmware of a storage system, follow the procedure below. While the microcode or firmware is being updated, do not change the configuration by, for example, refreshing the storage system or performing path operations.

To update the microcode or firmware:

1. Make sure that no Device Manager refresh or setup operations are being executed on the target storage system.

You need to ensure that operations such as adding or removing storage, creating or deleting LDEVs, and setting the host mode have finished.

NOTE: You do not need to stop the Device Manager server.

2. Temporarily change the settings in the property file so that the Device Manager database is not updated while the microcode or firmware is being updated.

Change the property settings in the `server.properties` file as follows:

- Change the setting for the `server.dispatcher.daemon.configUpdate.detection.interval` property to 0.
 - Change the setting for the `server.dispatcher.daemon.autoSynchro.doRefresh` property to `false`.
3. Update the microcode or firmware.
During the update, an error might be output to the trace log or error log because of storage system polling. This error will not be output after the microcode is changed successfully.
 4. Set the SVP tuning parameters, and then restart the SVP.
 5. For P9500 or XP24000/XP20000, restart the Device Manager server.
 6. Manually refresh the storage system.
 7. Restore the property settings that you changed in step 2.

7-3 P9500

The following table lists the prerequisite firmware versions and software products.

Table 7-1 Prerequisite firmware versions and software products (for P9500)

Prerequisite firmware versions	Prerequisite software products
<ul style="list-style-type: none"> Controller microcode: Any 	<p>Required software to manage storage systems:</p> <ul style="list-style-type: none"> JAVA API SNMP API LUN Manager <p>To use functions for creating a LUSE or LDEV (CVS):</p> <ul style="list-style-type: none"> OPEN Volume Management <p>To use the copy pair functionality:</p> <ul style="list-style-type: none"> Business Copy/Snapshot Continuous Access Synchronous Snapshot Continuous Access Journal <p>To use Element Manager:</p> <ul style="list-style-type: none"> P9000 Remote Web Console <p>To use External Storage:</p> <ul style="list-style-type: none"> External Storage <p>To use cache logical partitioning (CLPR):</p> <ul style="list-style-type: none"> Cache Partition <p>To use 3DC functionality:</p> <ul style="list-style-type: none"> Cont Access Journal 3DC & 4x4 for Open and MF <p>To use the Thin Provisioning functionality:</p> <ul style="list-style-type: none"> Thin Provisioning <p>To use the Smart Tier functionality:</p> <ul style="list-style-type: none"> Smart Tier

7-4 XP24000/XP20000

The following table lists the prerequisite firmware versions and software products.

Table 7-2 Prerequisite firmware versions and software products (for XP24000/XP20000)

Prerequisite firmware versions	Prerequisite software products
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Table 7-2 Prerequisite firmware versions and software products (for XP24000/XP20000)

Prerequisite firmware versions	Prerequisite software products
<ul style="list-style-type: none"> • Controller microcode: 60-01-24-xx/xx or later • Controller microcode to use a XP Continuous Access Journal function or a Hitachi Universal Replication for Mainframe function: 60-03-28-xx/xx or later • Controller microcode to use a LUSE: 60-04-10-xx/xx or later • Controller microcode to use the function that allows LU creation and LU formatting to be performed separately: 60-01-24-xx/xx or later • Controller microcode to use when a copy pair of Hitachi ShadowImage for Mainframe or of Hitachi TrueCopy for Mainframe exists on a managed XP24000/XP20000: 60-01-62-xx/xx or later • Controller microcode to use the setup function of the XP Thin Provisioning Software functionality: 60-02-xx-xx/xx or later 	<ul style="list-style-type: none"> • Java API • SNMP API • LUN Manager • XP Remote Web Console <p>To use functions for creating a LUSE or LDEV (CVS):</p> <ul style="list-style-type: none"> • XP Virtual LVI/LUN (VLL) and Volume Shredder <p>To use the copy pair functionality:</p> <ul style="list-style-type: none"> • XP Business Copy • Hitachi ShadowImage for Mainframe¹ • XP Continuous Access Software • Hitachi TrueCopy for Mainframe¹ • XP Continuous Access Asynchronous • Hitachi TrueCopy Asynchronous for Mainframe¹ • XP Continuous Access Journal • Hitachi Universal Replicator for Mainframe¹ • XP Snapshot¹ <p>To use XP External Storage Software:</p> <ul style="list-style-type: none"> • XP External Storage Software
<ul style="list-style-type: none"> • Controller microcode to perform a quick format: 60-02-2x-xx/xx or later • Controller microcode to use the performance information acquisition feature: 60-01-42-xx/xx or later 	<p>To use storage logical partitioning (SLPR) or cache logical partitioning (CLPR):</p> <ul style="list-style-type: none"> • XP Disk/Cache Partition <p>To use 3DC functionality:</p> <ul style="list-style-type: none"> • Disaster Recovery Extended

Table 7-2 Prerequisite firmware versions and software products (for XP24000/XP20000)

Prerequisite firmware versions	Prerequisite software products
<ul style="list-style-type: none"> • Controller microcode to use the function that links XP Thin Provisioning Software and XP Continuous Access Software, and the function that links XP Thin Provisioning Software and XP Continuous Access Journal: 60-02-4x-xx/xx or later • Controller microcode to use XP External Storage Software for mapping external volumes to internal volumes: 60-02-4x-xx/xx or later • Controller microcode to use XP External Storage Software for removing the mapping between external and internal volumes: 60-06-00-xx/xx or later • Controller microcode to manage storage systems by using IPv6 addresses: 60-02-4x-xx/xx or later • Controller microcode to use 23 REC Command Support as the host mode option 60-02-24-xx/xx or later • Controller microcode to use 48 ESAM Svol Read Option as the host mode option 60-06-21-xx/xx or later • Controller microcode to use 49 BB Credit Set Up Option1, 50 BB Credit Set Up Option2 or 51 Round Trip Set Up Option as the host mode option 60-07-5x-xx/xx or later • Controller microcode to use when the Device Manager server periodically checks changes in the XP24000/XP20000 configuration: 60-04-10-xx/xx or later 	<p>To use the XP Thin Provisioning Software functionality:</p> <ul style="list-style-type: none"> • XP Thin Provisioning Software
<p>¹ From Device Manager, you can only check configuration information of copy pairs. You cannot change the copy pair configuration.</p> <p>NOTE: Do not use DHCP if you use Device Manager to manage the storage system.</p>	

7-5 XP12000/XP10000/SVS200

The following table describes the prerequisite firmware versions and software products.

Table 7-3 Prerequisite firmware versions and software products (for XP12000/XP10000/SVS200)

Prerequisite firmware versions	Prerequisite software products
<ul style="list-style-type: none"> • Controller microcode: 50-07-69-00/00 or later • Controller microcode to use the XP Disk/Cache Partition view function: 50-03-xx-xx/xx or later • Controller microcode to use XP Continuous Access Journal functions: 50-09-85-xx/xx or later • Controller microcode to use XP External Storage Software to view the setting status of a remote command device: 50-07-00-xx/xx or later 	<ul style="list-style-type: none"> • Java API • SNMP API • LUN Manager • XP Remote Web Console <p>To use functions for creating a LUSE or LDEV (CVS):</p> <ul style="list-style-type: none"> • XP Virtual LVI/LUN (VLL) and Volume Shredder <p>To use the copy pair functionality:</p> <ul style="list-style-type: none"> • XP Business Copy • Hitachi ShadowImage for Mainframe¹ • XP Continuous Access Software • Hitachi TrueCopy for Mainframe¹ • XP Continuous Access Asynchronous • Hitachi TrueCopy Asynchronous for Mainframe¹ • XP Continuous Access Journal • Hitachi Universal Replicator for Mainframe¹ • XP Snapshot¹ <p>To use XP External Storage Software:</p> <ul style="list-style-type: none"> • XP External Storage Software
<ul style="list-style-type: none"> • Controller microcode to use 3DC functionality: 50-08-00-xx/xx or later • Controller microcode to use the function that allows LU creation and LU formatting to be performed separately: 50-09-00-xx/xx or later • Controller microcode to use the function for acquiring the status of an LDEV: 50-09-00-xx/xx or later • Controller microcode to use the performance information acquisition feature: 50-09-34-xx/xx or later • Controller microcode to use 19 VMware as the host mode option: 50-09-00-xx/xx or later • Controller microcode to use 27 iSCSI Delayed ACK improvement as the host mode option: 50-09-37-xx/xx or later • Controller microcode to use 23 REC Command Support as the host mode option: 50-09-7x-xx/xx or later 	<p>To use storage logical partitioning (SLPR) or cache logical partitioning (CLPR):</p> <ul style="list-style-type: none"> • XP Disk/Cache Partition
<p>¹ From Device Manager, you can only check configuration information of copy pairs. You cannot change the copy pair configuration.</p> <p>NOTE: Do not use DHCP if you use Device Manager to manage the storage system.</p>	

7-6 XP512/XP48

Device Manager and Tiered Storage Manager versions 7.0 and later do not support XP512/XP48. If XP512/XP48 remains under management after upgrading Device Manager and Tiered Storage Manager, use GUI or CLI to remove XP512/XP48 from Device Manager management.

8 Support and other resources

- Contacting HP (section 8-1)
- Related information (section 8-2)
- Conventions (section 8-3)

8-1 Contacting HP

8-1-1 HP technical support

For worldwide technical support information, see the HP support website:

<http://www.hp.com/support>

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

8-1-2 Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

<http://www.hp.com/go/e-updates>

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

8-1-3 Documentation feedback

HP welcomes your feedback.

To make comments and suggestions about product documentation, send a message to storagedocsFeedback@hp.com. All submissions become the property of HP.

8-2 Related information

For additional information, see the following HP websites:

- <http://www.hp.com>
- <http://www.hp.com/go/storage>
- <http://www.hp.com/support/manuals>
- <http://www.hp.com/support/cvaemanuals>
- <http://www.hp.com/storage/spock>

8-3 Conventions

This guide follows the conventions shown in [Table 8-1](#) to refer to HP StorageWorks P9000 products.

Table 8-1 Product reference conventions

Product reference	Full name or meaning
Device Manager	<ul style="list-style-type: none"><li data-bbox="647 415 1428 447">• HP StorageWorks P9000 Command View Advanced Edition software