



CommandCentral™ 5.1 Hardware and Software Compatibility List

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CommandCentral Storage and CommandCentral Storage Change Manager

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SAN device vendor hardware and software information frequently changes. It is strongly recommended that you download the latest version of this document from the Symantec Web site:

<http://seer.entsupport.symantec.com/docs/311599.htm>

TechNotes referenced in this document are available at

<http://www.symantec.com/enterprise/support/index.jsp>

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Requirements for CommandCentral Components

Component	OS*	System †
CommandCentral Management Server	Solaris 8, 9, 10 ²	1GHz UltraSPARC® III dual processors + 8GB RAM (16GB for CommandCentral Storage + Storage Change Manager)
	Windows 2000 (SP3 or later) Server, Advanced Server, Datacenter Server	1GHz Quad processor + 8GB RAM (16GB for CommandCentral Storage + Storage Change Manager) Pentium-based servers: Pentium 4 64-bit: Xeon/Opteron
	Windows 2003 Server: Standard Edition, Datacenter Edition (32-bit and 64-bit), Enterprise Edition (32-bit and 64-bit), Web Edition	1GHz Quad processor + 8GB RAM (16GB for CommandCentral Storage + Storage Change Manager) Pentium-based servers: Pentium 4 64-bit: Xeon/Opteron
CommandCentral managed host	Solaris 8, 9, 10 ²	Ultra 5 or higher, including SPARC clone equivalents from Fujitsu + 256/512MB RAM ¹
	Windows 2000 (SP3 or later) Server, Advanced Server, Datacenter Server	733 MHz Pentium 4 + 256/512MB RAM ¹
	Windows 2003 Server: Standard Edition, Datacenter Edition (32 and 64-bit), Enterprise Edition (32 and 64-bit), Web Edition	733 MHz + 256/512MB RAM ¹ Pentium-based servers: Pentium 4 64-bit: Xeon/Opteron
	Windows 2008 Server: Standard Edition, Datacenter Edition, Enterprise Edition, Web Edition (32 and 64-bit)	1 GHz + 512MB RAM 1 GHz (x86 processor) or 1.4 GHz (x64 processor) 64-bit: Xeon/Opteron
	IBM AIX 5.2 ³	Pseries + 16/512MB RAM
	IBM AIX 5.3 ⁴	P5 5xx + 16/512MB RAM
	HP-UX 11i v1 (11.11)	PA-RISC 2.0 and PCI HBA based systems: Superdome, V Class, N Class, L Class, 400/500, rp-series + 16/512MB RAM
	HP-UX 11i v2 (11.23)	Itanium 2 based systems: Integrity servers + 16/512MB RAM
	HP-UX 11i v2 0904 (11.23 PI)	PA-RISC 2.0 and PCI HBA based systems: Superdome, V Class, N Class, L Class, 400/500, rp-series + 16/512MB RAM
	HP-UX 11i v3 (11.31 PI) ⁵	PA-RISC 2.0 and PCI HBA based systems: Superdome, rp-series + 16/512MB RAM
	HP-UX 11i v3 (11.31) ⁵	Itanium 2 based systems: Integrity servers + 16/512MB RAM
	Red Hat Linux Advanced Server 3.0 (32-bit)	433 MHz Intel x86 equivalent + 256/512MB RAM
	Red Hat Linux Advanced Server 4.0 (32-bit)	433 MHz Intel x86 equivalent + 256/512MB RAM
	Red Hat Linux Enterprise Server 3.0 (32-bit)	433 MHz Intel x86 equivalent + 256/512MB RAM
	Red Hat Linux Enterprise Server 4.0 (32-bit, 64-bit)	433 MHz Intel x86 equivalent + 256/512MB RAM
	Red Hat Linux Enterprise Server 5.0 (32-bit, 64-bit) ^{5 & 6}	433 MHz Intel x86 equivalent + 256/512MB RAM
	Suse Linux Enterprise Server 9 (32-bit, 64-bit) ^{5 & 6}	433 MHz Intel x86 equivalent + 256/512MB RAM
	Suse Linux Enterprise Server 10 (32-bit, 64-bit) ^{5 & 6}	433 MHz Intel x86 equivalent + 256/512MB RAM
	VMware ESX Server 3.0.0, 3.0.1, 3.1, 3.5, 3.5.1, 3.5.2	433 MHz Intel x86 equivalent + 256/512MB RAM
	CommandCentral Agent Push Install Utility	Windows 2000 (SP3 or later) Server, Advanced Server, Datacenter Server
Windows 2003 Server: Standard Edition, Datacenter Edition (32 and 64-bit), Enterprise Edition (32 and 64-bit), Web Edition		733 MHz + 512MB RAM Pentium-based servers: Pentium 4 64-bit: Xeon/Opteron
Windows 2008 Server: Standard Edition, Datacenter Edition, Enterprise Edition, Web Edition (32 and 64-bit)		1 GHz + 512MB RAM 1 GHz (x86 processor) or 1.4 GHz (x64 processor) 64-bit: Xeon/Opteron
CommandCentral Browser Support	Solaris	Mozilla 1.7
	Windows	Microsoft Internet Explorer 6.x, 7.x Mozilla Firefox 1.07, 1.5, 2.0.0.x or 3.0

* Refer to Release Notes to verify appropriate patch levels

† Minimum recommended configuration. Memory requirement is in addition to what is already being consumed by other applications on the system.

¹ For Memory Requirements for CommandCentral managed hosts, the first number is without Array Management, the second is with Array Management.

² CommandCentral package is installed in Solaris 10 global zone only.

³ CommandCentral requires ML7 or later for AIX 5.2.

⁴ To install the CommandCentral 5.1 managed host on AIX 5.3 ML5, you must ensure that all IY92292 filesets are installed on the host. You can verify that the filesets are installed by typing the following command: "instfix -ik IY92292". The following message confirms that all filesets are installed: "All filesets for IY92292 were found".

⁵ Array Management and NetApp Unified Storage Discovery capabilities are not supported on Red Hat Linux Enterprise Server 5.0, Suse Linux Enterprise Server 9 & 10, HP-UX 11i v3 and VMware ESX platforms.

⁶ CommandCentral managed host is not supported and will fail to install if SE Linux is enabled on Linux systems.

CommandCentral Switches

Switch Vendor	Model	Firmware	Ancillary SW (CLI, API, etc.)	OS Platform	Features	SNMP MIB	Monitoring/Alerting	Notes
Brocade	SilkWorm 2400 2800 2040 2240 2050 2250	2.6.1, 2.6.1a, b, c 2.6.2a, b, c, d	Brocade SMI provider v120.7.2 (Refer the Notes section for Proxy switch firmware compatibility with SMI provider)	Windows 2000 Windows 2003 Solaris 8,9,10	Discovery Hard Zoning Multi-Zone Set Zoning Port Enable/Disable Trunking	FA MIB 3.0 FE MIB Brocade FC MIB	Supported	<p>CommandCentral 5.1 has SMI-S only configuration option for Brocade. Discovery of switches using Brocade API is removed from the CommandCentral 5.1 release as Brocade has EOL'ed these API interfaces.</p> <p>For users upgrading from CommandCentral 5.0 to the 5.1 version, its recommended to convert the discovery method from API to SMI-S before upgrading to 5.1. Users need to remove the old API configuration from the CommandCentral Console and configure Explorers with the SMI-S agents using 5.0MP1_RP3 + SMIS Explorer Hotfix 1. Contact Symantec Technical Support for more details.</p> <p>Minimum version of firmware for Proxy switch is 5.3.1a. 6.x is the recommended version (SMI-S requirement). The Brocade models listed in this document which do not have these minimum firmware versions can be used as target switches.</p> <p>Always pick the highest version of firmware in the Fabric for the proxy switch</p> <p>Users may need to upgrade switch firmware while they move from API method of discovery to SMIS discovery method</p> <p>Install SMI-S agent(s) on Windows or Solaris hosts</p> <p>Proxy switches are configured using the SMI-S agent GUI</p> <p>Proxy switches must have user credentials with "admin" permission</p> <p>CommandCentral discovers these Brocade switches, as well as their role in the fabric (principal/subordinate), total/free ports, port status, objects connected to each port, zoning information, and more.</p> <p>Note: Zoning license is required on switches for zoning administration to be functional in CommandCentral Storage.</p> <p>Fabric and Zoning Management of switches requires an out-of-band connection.</p> <p>-MPR supports basic Discovery, LSAN zoning. No monitoring support</p>
	SilkWorm 3200 3800	3.1, 3.1.1, 3.1.1b, d 3.1.2, 3.1.3, 3.1.3b 3.2.0a, 3.2.1						
	SilkWorm 3250 3850	4.4.0b, d, e 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a						
	SilkWorm 3900	4.4.0b, d, e, 4.4.1 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a						
	SilkWorm 12000	4.4.0b, d, e, 4.4.1 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c, 5.0.5d, 5.0.5f						
	SilkWorm 200E	5.0.1, 5.0.3, 5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a, 6.0.0, 6.0.1a, 6.1.0, 6.1.0c, 6.1.1						
	SilkWorm 4100	4.4.0b, d, e 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a, 6.0.0, 6.0.1a, 6.1.0, 6.1.0c, 6.1.1						
	SilkWorm 4900	5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a, 6.0.0, 6.0.1a, 6.1.0, 6.1.0c, 6.1.1						
	SilkWorm 5000	5.2.1, 5.3.1a, 6.0.0, 6.0.1a, 6.1.0, 6.1.0c, 6.1.1						
	SilkWorm 6400	2.6.1, 2.6.1a, b, c 2.6.2a, b, c, d						
	SilkWorm 24000	4.4.0b, d, e 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a						
	SilkWorm 48000	5.0.5c, 5.0.5d, 5.0.5f, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 5.3.1a, 6.0.0, 6.0.1a, 6.1.0, 6.1.0c, 6.1.1						
	~SilkWorm 7500	5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b, 5.3.0, 6.0.0, 6.1.0, 5.3.1a, 6.0.1a, 6.0.1c, 6.1.1						
	~SilkWorm AP7420 Multiprotocol Router (MPR)	7.3.0c 7.4.x						
	Silkworm 300	6.0.1a, 6.1.0c, 6.1.1						
	Silkworm 5100	6.0.1a, 6.1.0c, 6.1.1						
Silkworm 5300	6.0.1a, 6.1.0c, 6.1.1							
DCX Backbone	6.0.1a, 6.1.0c, 6.1.1							
Cisco	MDS 9216 MDS 9506 MDS 9509 MDS 9513	1.2, 1.3.4a, b 2.0.1b, 2.1.1a, b 3.0.1, 3.0.3b 3.1.2a, 3.1.3a, 3.2.2c	SNMP	Windows 2000 Windows 2003 Solaris 8,9,10	Discovery Hard Zoning* Multi-Zone Set Zoning Port Enable/Disable Trunking	MDS MIB SNMP IF MIB	Supported	<p>VSAN, Zone, Port Bundle (Port Channels), Module, and Slot discovery supported. VSAN, and Zone management supported. SNMP v3 supported. *Discovery of hard zones supported.</p>
	MDS 9120 MDS 9124 MDS 9134 MDS 9140	1.3.3c, 1.3.4a, b 2.0.1b, 2.1.1a, b, 3.0.1, 3.0.3b 3.1.2a, 3.1.3a, 3.2.2c						

CommandCentral Switches

Switch Vendor	Model	Firmware	Ancillary SW (CLI, API, etc.)	OS Platform	Features	SNMP MIB	Monitoring/Alerting	Notes
EMC (Connectrix)	DS-8B2	3.1, 3.1.1, 3.1.1b, d 3.1.2, 3.1.3, 3.1.3b 3.2.0a, 3.2.1	Brocade SMI provider v120.7.2 (Refer the Notes section for Proxy switch firmware compatibility with SMI provider)	Windows 2000 Windows 2003 Solaris 8,9,10	Discovery Hard Zoning Multi-Zone Set Zoning			CommandCentral 5.1 has SMI-S only configuration option. Discovery of switches using Brocade API or SWAPI is removed from the CommandCentral 5.1 release as Brocade has EOLed these API interfaces. For users upgrading from CommandCentral 5.0 to the 5.1 version, its recommended to convert the discovery method from API to SMI-S before upgrading to 5.1. Users need to remove the old API configuration from the CommandCentral Console and configure Explorers with the SMI-S agents using 5.0MP1_RP3 + SMIS Explorer Hotfix 1. Contact Symantec Technical Support for more details. For EMC-B series fabrics, the minimum version of firmware for Proxy switch is 5.3.1a. 6.x is the recommended version (SMI-S requirement). Other EMC-B models listed in this document which do not have the minimum firmware version can be used as target switches. Always pick the highest version of firmware in the Fabric for the proxy switch. Users may need to upgrade switch firmware while they move from API method of discovery to SMIS discovery method. Install SMI-S agent(s) on Windows or Solaris hosts. Proxy switches are configured using the SMI-S agent GUI. Proxy switches must have user credentials with 'admin' permission. For EMC-M series fabrics, the Brocade SMI Agent 2.2.2 is compatible with EFCM 9.7.2. It is not recommended to install SMI-S agent on the CommandCentral Management Server. SMI-S agent should be installed preferably on a Windows host. Host on which EFCM is running may be used. One SMI-S agent per EFCM is the recommended scale. Its required to uninstall the SWAPI Bridge Agent.
	DS-16B2							
	DS-32B2	4.4.0b, d, e, 4.4.1 5.0.1a, b, 5.0.3, 5.1.0						
	DS-220B DS-4900B	5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b						
	DS-12000B	4.4.0b, d, e, 4.4.1 5.0.1a, b, 5.0.3, 5.0.4, 5.0.5c						
	ED-48000B	5.0.5c, 5.1.0, 5.1.0a, 5.1.0d, 5.2.0a, 5.2.1b						
	DS-24M2 DS-32M2 ED-140M	6.00.00, 6.01.00, 6.02.00 7.01, 7.01.02 8.00.00, 8.01.00, 9.01.00, 9.02.00	McDATA SMI-S provider (Brocade SMI agent for EOS products) McDATA SMI-S Agent 2.2.2			Discovery Multi-Zone Set Zoning Port Enable/Disable	FA MIB 3.0 FA MIB 3.1	Supported
McDATA	ES-3016 ES-3032 ES-3216 ES-3232 ED-6064 ED-6140	6.00.00, 6.01.00, 6.02.00 7.01.00, 7.01.02 8.00.00, 8.01.00, 9.01.00, 9.02.00, 9.06.00, 9.07.02	McDATA SMI-S Agent 2.2.2 with EFCM 9.7.2	Windows 2000 Windows 2003 Solaris 8,9,10	Discovery Multi-Zone Set Zoning Port Enable/Disable	FA MIB 3.0 FA MIB 3.1	Supported	CommandCentral 5.1 has SMI-S only configuration option for McData. Discovery of switches using SWAPI is removed from the CommandCentral 5.1 release as Brocade has EOLed these API interfaces. For users upgrading from CommandCentral 5.0 to the 5.1 version, its recommended to convert the discovery method from SWAPI to SMI-S before upgrading to 5.1. Users need to remove the old SWAPI configuration from the CommandCentral web GUI and configure Explorers with the SMI-S agents using 5.0MP1_RP3 + SMIS Explorer Hotfix 1. Contact Symantec Technical Support for more details. SMI Agent 2.2.2 is compatible with EFCM 9.7.2 It is not recommended to install SMI-S agent on the CommandCentral Management Server SMI-S agent should be installed preferably on a Windows host. Host on which EFCM is running may be used. One SMI-S agent per EFCM is the recommended scale. Its required to uninstall the SWAPI Bridge Agent Refer to McData SMI-S Agent 2.2.2 Users Guide, Chapter 1, page 8 "Memory and CPU recommendations" contains SMI-S Memory/CPU/Sizing information and JVM resizing instructions Monitoring of switches discovered through McDATA SMI-S provider in proxy mode requires setting "EFCMIPAddress". Monitoring of switches discovered through McDATA SMI-S provider in direct switch connection mode is not supported. i10K switches with virtualization is not supported.
	Sphereon™ 4500	6.00.00, 6.01.00, 6.02.00 7.01.00, 7.01.02 8.00.00, 8.01.00, 9.01.00, 9.02.00, 9.06.00, 9.07.02						
	Sphereon™ 4300	9.01.00, 9.02.00, 9.06.00, 9.07.02						
	Sphereon™ 4400 Sphereon™ 4700	8.00.00, 8.01.00, 9.01.00, 9.02.00, 9.06.00, 9.07.02						
	Intrepid™ 10000 **	6.03.01, 6.05.00, 9.01.00, 9.02.00, 9.06.00, 9.07.02						
QLogic	SANbox2-8 SANbox2-16	2.0.0.03 3.0 5.0.1.10.0	N/A	Windows 2000 Windows 2003 Solaris 8,9,10 AIX, HP-UX, Linux	Discovery Multi-Zone Set discovery	FA MIB 3.0	Not Supported	Topology and zoning discovery through GS explorer. No zoning or port management. Monitoring is not supported. Each QLogic switch maintains its own zoning database. ONLY inactive zones and zone sets on the switch inband connected to a CommandCentral host will be discovered. "Orphaned Zone sets" are not supported.
	SANbox2-64	2.0.0.03, 3.0 5.0.1.10.0						
	SANbox 5200 SANbox 5600 SANbox 5602	5.0.1.10.0						
	SANbox 9000	6.6.0.14.0						

CommandCentral HBAs

HBA Vendor	Model	OS	Driver	Features Supported	Notes	
Emulex	LP9000 LP9000	Solaris	4.20K 5.0i, 5.01e, 5.01e-1, 5.02b, 5.03 6.01c*, 6.02f, g, 6.10g, 6.11c	FDMI Supported only with newer version of drivers.	CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. Please check the Emulex website for the latest firmware. The 2.12A1 device driver supporting CT Passthru is limited in the size of a McDATA Zone they can support (about 32 to 64 ports). For 4.53.Ax, CT Passthru will not work with any driver in this family. Emulex (Windows 2000) drivers support FDMI from versions 5-5.01 a0-01 (port driver) and 5-2.20a12-2 (miniport drivers) and onwards. Please refer to the Emulex website for information on configuring FDMI and for the Hardware Compatibility List for FDMI. * With Solaris driver version 6.01c and Linux driver version 2.01g, CT Passthru may fail with the default settings for the HBA. This problem can be worked around by setting the "lpfc_fdmf_on" paramter to 1 in the lpfc.conf file. This issue will be fixed in a later version of the driver.	
		Windows 2000 / Windows 2003-32bit	5-1.10a4, 1.20a3 5-2.12a1, 5-2.13a4 2.20a12-2, 2.21a8, 2.22a8, 2.23a6, 2.30a2, 2.40a2, 2.41a1, 2.42a0 5-4.53.a4, 5-4.53.a5 5-4.53.a7 (Compaq Only) 5-4.82a4 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9 2.01a4 (LP9000 only)			
		Windows 2003-64bit	5.00a10/a11 (Miniport) 6-1.10a4, 1.20a3 6-2.21a7, 6-2.21a8, 6-2.22a8 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9 2.01a4 (LP9000 only)			
		Windows 2008 32-bit	(STORport) 2.01a4 (LP9000 only)			
		Windows 2008 64-bit	(STORport) 2.01a4 (LP9000 only)			
		Windows 2000 for HP systems	5-4.82a9 5-4.82a14 (9002L only)			
		Linux Red Hat AS 3.0 32-bit	7.1.14, 7.3.6			
		Linux Red Hat AS 4.0 32-bit	8.0.6.27			
		Linux Red Hat AS 4.0 64-bit	8.0.16.40			
		Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29 (LP9000 only)			
		Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29 (LP9000 only)			
		Suse Linux ES 9 32-bit	8.0.16.44			
		Suse Linux ES 9 64-bit	8.0.16.44			
		Suse Linux ES 10 32-bit	8.2.0.29 (LP9000 only)			
		Suse Linux ES 10 64-bit	8.2.0.29 (LP9000 only)			
		LP8000S	Solaris			4.20K 5.0i, 5.01e, 5.01e-1, 5.02b, 5.03 6.01c*, 6.02f, g, 6.10g, 6.11c
		LP8000DC	Solaris			6.02f, g, 6.10g, 6.11c
			Windows 2000 / Windows 2003-32bit			5-1.10a4, 1.20a3 5-2.12a1, 5-2.13a4 2.20a12-2, 2.21a8, 2.22a8, 2.23a6, 2.30a2, 2.40a2, 2.41a1, 2.42a0 5-4.53.a4, 5-4.53.a5 5-4.53.a7 (Compaq Only) 5-4.82a4 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9
	Windows 2003-64bit		6-1.10a4, 1.20a3 6-2.21a7, 6-2.21a8, 6-2.22a8 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9			
	Linux Red Hat AS 3.0		7.1.14, 7.3.6			
	Linux Red Hat AS 4.0		8.0.6.27			
	Linux Red Hat AS 4.0 64-bit		8.0.16.40			
	Suse Linux ES 9 32-bit		8.0.16.44			
	Suse Linux ES 9 64-bit		8.0.16.44			
	Solaris		5.0i, 5.01e, 5.01e-1, 5.02b, 5.03 6.01c*, 6.02f, g, 6.10g, 6.11c			
	Windows 2000 / Windows 2003-32bit		5-1.10a4, 1.20a3 5-2.13a4 2.20a12-2, 2.21a8, 2.22a8, 2.23a6, 2.30a2, 2.40a2, 2.41a1, 2.42a0 5-4.82a4 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2003-64bit		6-1.10a4, 1.20a3 6-2.21a7, 6-2.21a8, 6-2.22a8 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2008 32-bit		(STORport) 2.01a4			
	Windows 2008 64-bit		(STORport) 2.01a4			
	Linux Red Hat AS 3.0 32-bit		7.1.14, 7.3.6			
	Linux Red Hat AS 4.0 32-bit		8.0.6.27			
	Linux Red Hat AS 4.0 64-bit		8.0.16.40			
	Linux Red Hat AS 5.0 32-bit		8.2.0.22, 8.2.0.29			
	Linux Red Hat AS 5.0 64-bit		8.2.0.22, 8.2.0.29			
	LP9802DC, LP9802	Windows 2003-64bit	6-1.10a4, 1.20a3 6-2.21a7, 6-2.21a8, 6-2.22a8 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			

CommandCentral HBAs

HBA Vendor	Model	OS	Driver	Features Supported	Notes
Emulex (Continued)	LP952L LP982	Windows 2000 / Windows 2003-32bit	5-1.10a4, 1.20a3 5-2.13a4 2.20a12-2, 2.21a6, 2.22a8, 2.23a6, 2.30a2, 2.40a2, 2.41a1, 2.42a0 5-4.82a4 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4	FDMI Supported with newer version of drivers.	CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. Please check the Emulex website for the latest firmware. The 2.12A1 device driver supporting CT Passthru is limited in the size of a McDATA Zone they can support (about 32 to 64 ports). For 4.53.Ax, CT Passthru will not work with any driver in this family. Emulex (Windows 2000) drivers support FDMI from versions 5-5.01 a0-01 (port driver) and 5-2.20a12-2 (miniport drivers) and onwards. Please refer to the Emulex website for information on configuring FDMI and for the Hardware Compatibility List for FDMI. * With Solaris driver version 6.01c and Linux driver version 2.01g, CT Passthru may fail with the default settings for the HBA. This problem can be worked around by setting the "lpfc_fdmf_on" parameter to 1 in the lpfc.conf file. This issue will be fixed in a later version of the driver.
		Windows 2003-64bit	6-1.10a4, 1.20a3 6-2.21a7, 6-2.21a8, 6-2.22a8 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4		
		Windows 2008 32-bit	(STORport) 2.01a4		
		Windows 2008 64-bit	(STORport) 2.01a4		
		Linux Red Hat AS 3.0 32-bit	1.30a6, 1.30a9, 2.01a4		
		Linux Red Hat AS 4.0 32-bit	2.01a4		
		Linux Red Hat AS 4.0 64-bit	8.0.16.40		
		Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29		
		Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29		
		Solaris	5.01e, 5.01e-1, 5.02b, 5.03 6.01c, 6.02f, g, 6.10g, 6.11c		
		Windows 2000 / Windows 2003-32bit	5-1.10a4, 1.20a3 2.23a6, 2.30a2, 2.40a2, 2.41a1, 2.42a0 5-4.82a4 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4		
		Windows 2003-64bit	6-1.10a4, 1.20a3 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4		
	Windows 2008 32-bit	(STORport) 2.01a4			
	Windows 2008 64-bit	(STORport) 2.01a4			
	Linux Red Hat AS 3.0 32-bit	7.1.14, 7.3.6			
	Linux Red Hat AS 4.0 32-bit	8.0.6.27			
	Linux Red Hat AS 4.0 64-bit	8.0.16.40			
	Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29			
	Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29			
	Windows 2000 / Windows 2003-32bit	5-1.10a4, 1.20a3 5-2.21a7, 5-2.22a8, 5-2.23a6 2.30a2, 2.40a2, 2.41a1, 2.42a0 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2003-64bit	6-1.10a4, 1.20a3 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2008 32-bit	(STORport) 2.01a4			
	Windows 2008 64-bit	(STORport) 2.01a4			
	Linux Red Hat AS 3.0 32-bit	7.1.14, 7.3.6			
	Linux Red Hat AS 4.0 32-bit	8.0.6.27			
	Linux Red Hat AS 4.0 64-bit	8.0.16.40			
	Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29			
	Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29			
	Solaris	5.02c, 5.0.2d 6.02f, g, 6.10g, 6.11c			
	Windows 2000 / Windows 2003-32bit	5-1.10a4, 1.20a3 5-2.21a7, 5-2.22a8, 5-2.23a6 2.30a2, 2.40a2, 2.41a1, 2.42a0 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2003-64bit	6-1.10a4, 1.20a3 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Linux Red Hat AS 3.0 32-bit	7.1.14, 7.3.6			
	Linux Red Hat AS 4.0 32-bit	8.0.6.27			
	Linux Red Hat AS 4.0 64-bit	8.0.16.40			
	Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29			
	Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29			
	Windows 2003-32bit	5-2.41a1, 2.42a0 (SCSIport) 5.10a10, 5.31a0 (STORport) 1.11a3, 1.20a3, 1.20a7, 1.30a6, 1.30a9, 2.01a4			
	Windows 2008 32-bit	(STORport) 2.01a4			

CommandCentral HBAs

HBA Vendor	Model	OS	Driver	Features Supported	Notes	
Emulex (Continued)	LPe11002, LPe11000, LPe11000, LPe1150, LP1150-E, LPe1150-E, LP11002, LP11000, LP1150, LP1005DC-CM2, LP10000ExDC, LP1050Ex, LP1050, LP1050DC, LP982, LP9402DC, LP9002L, LP9002DC, LP952L, LP8000DC and LP850	Windows 2008 64-bit	(STORport) 2.01a4			
	LP11000, LPe11002, LPe11000, LP11002, LP9002C, LP9002S, LP9002DC, LP9002L	Solaris 8, 9, 10	6.10g, 6.11c			
	LP10000, LP10000DC, LP11000, LP11002, LP9802, LP9002DC, LP9002S, LP9002L	Solaris 8, 9	1.11i			
	LP11002, LP11000, LP1150, LPe11002, LPe11000, LPe1150, LP1005DC-CM2, LP10000ExDC, LP1050Ex, LP10000DC, LP10000, LP1050DC, LP1050, LP9802DC, LP9802, LP982, LP9402DC, LP9002DC, LP9002L, LP952L	Suse Linux ES 9 32-bit	8.0.16.44			CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. Please check the Emulex website for the latest firmware. The 2.12A1 device driver supporting CT Passthru is limited in the size of a McDATA Zone they can support (about 32 to 64 ports). For 4.53.Ax, CT Passthru will not work with any driver in this family.
		Suse Linux ES 9 64-bit	8.0.16.44		FDMI Supported only with newer version of drivers.	Emulex (Windows 2000) drivers support FDMI from versions 5-5.01 a0-01 (port driver) and 5-2.20a12-2 (miniport drivers) and onwards. Please refer to the Emulex website for information on configuring FDMI and for the Hardware Compatibility List for FDMI.
		Suse Linux ES 10 32-bit	8.2.0.29			* With Solaris driver version 6.01c and Linux driver version 2.01g, CT Passthru may fail with the default settings for the HBA. This problem can be worked around by setting the "lpfc_fdm_i_on" parameter to 1 in the lpfc.conf file. This issue will be fixed in a later version of the driver.
		Suse Linux ES 10 64-bit	8.2.0.29			
		Windows 2003 32-bit	(STORport) 2.01a4			
		Windows 2003 64-bit	(STORport) 2.01a4			
		Windows 2008 32-bit	(STORport) 2.01a4			
		Windows 2008 64-bit	(STORport) 2.01a4			
		LPe12000, LPe12002, LPe1250	Linux Red Hat AS 4.0 64-bit	8.0.16.40 (LPe12000 only)		
		Linux Red Hat AS 5.0 32-bit	8.2.0.22, 8.2.0.29			
		Linux Red Hat AS 5.0 64-bit	8.2.0.22, 8.2.0.29			
		Suse Linux ES 9 32-bit	8.0.16.44			
		Suse Linux ES 9 64-bit	8.0.16.44			
		Suse Linux ES 10 32-bit	8.2.0.29			
		Suse Linux ES 10 64-bit	8.2.0.29			
HP	A 5158A A 6795A	HP-UX 11.0b HP-UX 11i v1 HP-UX 11i v2	11.00.10 (with HP patch PHSS_26798) 11.11.09 (with HP patch PHSS_26799) 11.23.01		CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. Max CT size limitation is 64 ports on a Mediate switch. RSCN changes are only noted after IOSCAN issued (next SAL exploration). * The 11.11.03 driver does not support in-band fabric discovery. Discovery of the fabric will need to be established out of band.	
	A 6795A	HP-UX 11i v3 (PA-RISC & IA)	B.11.31.0811			
		HP-UX 11i v1	11.11.03*			
	A 6826A	HP-UX 11i v3 (PA-RISC & IA)	B.11.31.0809			
IBM	6227	AIX 5.2	devices.pci.d#10007.rte 5.2.0.75			
	6228	AIX 5.2	devices.pci.d#10009.rte 5.2.0.75			
		AIX 5.2	devices.pci.d#10809.rte 5.2.0.75			
	6239		devices.pci.d#10809.rte 5.3.0.10 devices.pci.d#10809.rte 5.3.0.30		CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles.	
		AIX 5.3	devices.pci.d#1000a.rte 5.2.0.75			
	5716	AIX 5.2	devices.pci.d#1000a.rte 5.3.0.10			
		AIX 5.3	devices.pci.d#1000a.rte 5.3.0.30			
5758	AIX 5.3	devices.pci.d#1000d.rte 5.3.0.60, devices.pci.d#1000d.rte 5.3.8.0				
5759	AIX 5.3	devices.pci.d#1000d.rte 5.3.0.60, devices.pci.d#1000d.rte 5.3.8.0				
JNI (AMCC)	FCI-1063 FC64-1063		2.5.9 (HDS) 2.5.9.03 (Compaq) 2.5.9.18, 2.5.9.21 2.6.9, 2.6.10, 2.6.11, 2.6.12, 2.6.13		CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. The 2.5.x drivers do not support CT Passthru. For 2.6.9, there are circumstances where this driver may cause a system panic when handling CT Passthru requests.	
	FCE-6410 FCE2-6412 FCE-1063 FCE2-1063	Solaris	4.1, 4.1.1, 4.1.1.1 4.1.9 (Solaris 9) 4.1.5 (Solaris 8) 4.1.6		CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles.	
	FCE-6460 FCE-1473		5.1.1 5.2.1 5.3		There is a 2K CT Packet limitation with the 4.1.x and 5.1.1 drivers which could limit the amount of zoning information discovered. The 4.1.x drivers are not compatible with Brocade SilkWorm 12000 and 3900 running firmware versions v4.1.0 and v4.1.1.	
	FCX-6562 FCX2-6562		5.2.1 5.3		CommandCentral can perform in-band discovery of JNI dual HBA ports only when the installed SNIA library version is v2.0.03717-16 or higher.	

CommandCentral HBAs

HBA Vendor	Model	OS	Driver	Features Supported	Notes	
QLogic	QLA 2200F QLA 2202F	Solaris	3.16, 3.26, 4.03, 4.07, 4.09, 4.13, 4.13.01, 4.17	QLogic drivers support FDMI from version 4.13 (Solaris) onwards. Please refer to the QLogic website for information on configuring FDMI and for the Hardware Compatibility list for FDMI. Linux: StorageExplorer: discovering both sg and sd device for same LUN with different attributes, requires a SAH HF 2 or above	CommandCentral automatically discovers these HBAs and their physical connections to the SAN, as well as model, driver, firmware, OS version and OS handles. For 3.16, 3.26, 4.03, 4.07, 4.09, there are circumstances where this driver may cause a system panic when handling CT Passthru requests. For the 8.1.3 driver, there is a 2K CT packet limitation which could limit the amount of zoning information discovered. For the 8.2.3.63 driver, there is a 24K CT packet limitation which could limit the amount of zoning information discovered. The 4.13 and 4.13.01 Solaris drivers are not compatible with Brocade Silkstorm 12000 and 3900 running firmware versions v4.1.0 and v4.1.1. *5.01 driver for Solaris does not support the QLA2300.	
		Windows 2000 / Windows 2003-32bit	8.1.3 8.1.5.10, 8.1.5.12, 8.1.5.15, 8.1.5.20 8.1.5.62, 8.1.5.63			
		Linux Red Hat AS 3.0 32-bit	7.03.00			
		Linux Red Hat AS 4.0 32-bit	8.01.06, 8.01.07-fo, 8.01.04-d7			
	QLA 2202FS	Solaris SBus	3.16, 3.26, 4.03, 4.07, 4.09, 4.13, 4.13.01, 4.17			3.16, 3.26, 4.03, 4.07, 4.09, 4.13, 4.13.01, 4.17
		Solaris	3.16, 3.26, 4.03, 4.07, 4.09, 4.13, 4.13.01, 4.17 5.01*, 5.03			3.16, 3.26, 4.03, 4.07, 4.09, 4.13, 4.13.01, 4.17 5.01*, 5.03
	QLA 2300 QLA 2310 QLA 2340 QLA 2342 QLA 2344	Windows 2000 / Windows 2003-32bit	8.1.3 8.1.5.10, 8.1.5.12, 8.1.5.20 8.1.5.62, 8.1.5.63, 8.2.3.63			8.1.3 8.1.5.10, 8.1.5.12, 8.1.5.20 8.1.5.62, 8.1.5.63, 8.2.3.63
			9.0.0.12, 9.0.0.13 9.0.1.10, 9.0.1.12, 9.0.2.16, 9.0.2.17 9.1.0.10, 9.1.2.11, 9.1.4.10 (STORport) 9.1.2.14, 9.1.2.16, 9.1.2.19, 9.1.4.15			9.0.0.12, 9.0.0.13 9.0.1.10, 9.0.1.12, 9.0.2.16, 9.0.2.17 9.1.0.10, 9.1.2.11, 9.1.4.10 (STORport) 9.1.2.14, 9.1.2.16, 9.1.2.19, 9.1.4.15
		Windows 2003-64bit	8.2.3.63 9.1.2.16			8.2.3.63 9.1.2.16
		Windows 2008 32bit	Storport Miniport Driver 9.1.7.16			Storport Miniport Driver 9.1.7.16
		Windows 2008 64-bit	Storport Miniport Driver 9.1.7.16			Storport Miniport Driver 9.1.7.16
		Linux Red Hat AS 3.0 32-bit	7.00.03 7.03.00, 7.07.05			7.00.03 7.03.00, 7.07.05
		Linux Red Hat AS 4.0 32-bit	8.01.06, 8.01.07-fo, 8.01.04-d7			8.01.06, 8.01.07-fo, 8.01.04-d7
		Linux Red Hat AS 4.0 64-bit	8.02.14			8.02.14
		Linux Red Hat AS 5.0 32-bit	8.02.14			8.02.14
		Linux Red Hat AS 5.0 64-bit	8.02.14			8.02.14
		Suse Linux ES 9 32-bit	8.02.14			8.02.14
		Suse Linux ES 9 64-bit	8.02.14			8.02.14
	Suse Linux ES 10 32-bit	8.02.14	8.02.14			
	Suse Linux ES 10 64-bit	8.02.14	8.02.14			
	QLA24XX QLE24XX	Solaris	5.01, 5.03			5.01, 5.03
		Windows 2000 / Windows 2003-32bit	9.1.0.10, 9.1.2.11, 9.1.4.10 (STORport) 9.1.2.14, 9.1.2.16, 9.1.2.19, 9.1.4.15			9.1.0.10, 9.1.2.11, 9.1.4.10 (STORport) 9.1.2.14, 9.1.2.16, 9.1.2.19, 9.1.4.15
		Windows 2003-64bit	9.1.2.16			9.1.2.16
		Windows 2008 32bit	Storport Miniport Driver 9.1.7.16			Storport Miniport Driver 9.1.7.16
Windows 2008 64-bit		Storport Miniport Driver 9.1.7.16	Storport Miniport Driver 9.1.7.16			
Linux Red Hat AS 3.0 32-bit		7.07.05	7.07.05			
Linux Red Hat AS 4.0 32-bit		8.01.06, 8.01.07-fo, 8.01.04-d7	8.01.06, 8.01.07-fo, 8.01.04-d7			
Linux Red Hat AS 4.0 64-bit		8.02.14	8.02.14			
Linux Red Hat AS 5.0 32-bit		8.02.14	8.02.14			
Linux Red Hat AS 5.0 64-bit		8.02.14	8.02.14			
Suse Linux ES 9 32-bit		8.02.14	8.02.14			
Suse Linux ES 9 64-bit		8.02.14	8.02.14			
Suse Linux ES 10 32-bit	8.02.14	8.02.14				
Suse Linux ES 10 64-bit	8.02.14	8.02.14				
Sun	StorEdge X 6767 A or SG-XP01FC-QF2	Solaris	4.3.x 4.4.x 4.4.6 4.4.8 4.4.11 4.4.12#	SUNWsan v4.4.1 requires a patch from Sun to fix Bug ID #5095557; Patch ID #113767-07 (Solaris 8) or 114478-06 (Solaris 9). # Solaris 10 equivalence of 4.4.12 is kernel level Generic_118833-36 *Solaris 10 support SunOS 5.10: Sun Fibre Channel Device Drivers Patch 119130-09 or later* must be installed on the Solaris 10 for Leadville to work properly. Note: SunOS 5.10 Generic_118822-19 kernel patch level includes the 119130-09 patch.		
	X 6768 A or SG-XP02FC-QF2 SG-XP01FC-JF2 SG-XP02FC-JF2 SG-XP01FC-EM2* SG-XP02FC-EM2*	8, 9, 10*	8, 9, 10*			
Brocade	815 825 415 425	Solaris 10	V 1.0.0.02			
		Windows 2003-32bit	V 1.0.0.04			
		Windows 2003-64bit	V 1.0.0.04			
		Windows 2008 32bit	V 1.0.0.04			
		Windows 2008 64-bit	V 1.0.0.04			
		Linux Red Hat AS 5.0 32-bit	V 1.0.0.02			
Linux Red Hat AS 5.0 64-bit	V 1.0.0.02					
Generic				HBAs are discovered if connected to switches with their WWNs, but have no host association. An enclosure representing a host can be built around these HBAs to create a manually-configured host association. DAS support for IDE on Solaris and Windows SMI-S 1.1 support is added for CTP complaint vendors (Does not support Linux SMI-S). AIX, HP-UX, Linux do not require HBA API installation but Solaris and Windows require it. IDE disk discovery on Solaris, Linux and Windows		

CommandCentral Storage Devices

Storage Device Vendor	Model	OS Platform	Monitoring & Alerting	Management Functions / Extended Discovery Features *	Ancillary Software **	Notes
3PAR	InServ S400X	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	Deep Mapping	Firmware 2.2.2 (with Embedded SMI-S 1.1 provider)	Requires a network connection to the arrays and the CIMVAIL Explorer. The CIM Agent (SMI-S provider) runs on the array controller itself (in other words, it is embedded with controller software). The embedded SMI-S provider, by default, is turned off. This needs to be turned on by logging into the array if you want to manage this array via CommandCentral Storage. Thin Provisioning and array management operations are not supported.
EMC	CLARION FC4700 FC4700-2	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	LUN Creation/Deletion LUN Masking Multi LUN Masking Deep Mapping	NAVCLI 6.7, 6.16, 6.19, 6.24, 6.26	See the EMC Support Matrix to determine which storage array firmware version is compatible with a given NAVICLI version. Network connectivity is required between the storage arrays and the host where NAVICLI is installed. The storage array configuration must be "Shared Access Configuration," which requires Access Logix support enabled. NAVISECCLI (Secure CLI mode) also supported. If an user wants the Clarion Explorer to use the NAVISECCLI, then the user must install both NAVISECCLI and NAVICLI on the host. If the CLARION Explorer is installed on a CommandCentral managed host, then make sure that the managed host has Java Run-Time Environment (JRE) installed. Check the EMC NAVICLI documentation for required JRE version.
	CLARION Cx200 Cx400 Cx600	Windows 2000 Windows 2003 Solaris 8, 9, 10		LUN Creation and Deletion LUN Masking Multi LUN Masking RSV/Creation and Deletion Deep Mapping Snapshot Discovery (SnapView Snapshots, SnapView Clone, MirrorView (Sync))		
	CLARION Cx300 Cx500 Cx700	Windows 2000 Windows 2003 Solaris 8, 9, 10		Deep Mapping Multi LUN Masking RSV Creation and Deletion Snapshot Discovery (SnapView Snapshots, SnapView Clone, MirrorView (Sync))		
	CLARION CX3-20 CX3-40 CX3-80			NAVCLI 6.19, 6.22, 6.24, 6.26		
	AX100, AX150			-Performance (Only on Windows and Solaris based hosts)		
Symmetrix 3000 5000 8000	Windows 2000 Windows 2003 Solaris 8, 9, 10 HP-UX 11i v2* AIX 5.2, 5.3 Linux Red Hat AS/ES v3.0, v4.0 (32bit)**		LUN Creation and Deletion LUN Masking LUN Binding Multi LUN Masking Multi LUN Binding Deep Mapping Snapshot (BCV) Discovery SRDF Discovery ¹	EMC Solutions Enabler 5.5, 6.0, 6.2, 6.3.1, 6.4, 6.5.1	For discovery, the VCMDB LUN must be visible to the host where the EMC Solutions Enabler and VolumeLogix (if required) are installed. With Enginuity 5670 and later, access to the VCM database does not require that the VCM device be mapped to an FA and presented to a server, as long as there are gatekeepers available. The discovery (but no array management or monitoring) is supported via SYMAPI server as well, in which the case VCMDB LUN must be visible to the host where SYMAPI server is installed. The CommandCentral Symmetrix explorer still needs the EMC Solutions Enabler (SYMCLI) to be installed on the host (where the explorer is running) and it (SYMCLI) should be configured to access the SYMAPI server host over IP. Do not run more than one tool (GUI or CLI) at the same time which alters the device masks on an array, because this can corrupt array configuration data. CommandCentral cannot discover ESCON type Front End Directors; only Fibre Channel type Front End Directors are supported. Performance Reporting is only supported on Windows and Solaris hosts. *For HP-UX 11i v2, for the list of the required OS patches/updates please refer the CommandCentral Storage Release Notes (System Requirements). 6.3.0 SYMCLI has issues with snapshot discovery, 6.3.1 is recommended. EMC Solutions Enabler 6.0.2 qualified for AIX 5.2 ML05 only. For non-meta LUN deletion, requires 5670 with EMC Solutions Enabler 5.3 or above. ¹ If EMC Symmetrix/DMX has SRDF enabled, then SYMCLI 6.2 or later is required for the SRDF discovery. ² Virtual provisioning and new type of devices in DMX-4 like RAID-6 and SSD are not supported.	
DMX 800 1000 2000 3000 DMX-3 DMX-4 ²						
Engenio	E2400 E5600 XBB	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental Performance	LUN Binding LUN Creation and Deletion Multi LUN Binding Multi LUN Masking RSV Creation and Deletion Deep Mapping	Engenio SMI-S Provider (SMI-S 1.1 based CIMOM): v9.16.G0.17, v9.16.G0.34, v9.19.G0.17, v9.19.G0.17, v9.19.G0.19, v9.23.G0.00, v9.70.G0.02, v10.10.G0.04	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL explorer is installed. Download the Engenio SMI-S provider from here: http://www.lsi.com/storage_home/products_home/external_raid/management_software/smis_provider/index.html v10.10.G0.04 supports only discovery. No management is supported.
Fujitsu	ETERNUS 3000 100 300 500 600 700 ETERNUS 4000 100 300 500 ETERNUS 6000 700 900 1100 ETERNUS 8000 900 1100 2100	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	LUN Binding LUN Creation and Deletion Multi LUN Binding Multi LUN Masking RSV Creation and Deletion Deep Mapping	Storage Vendor's CIM object Manager (CIMOM, SMI-S 1.1 based): v1.40.2 (This version does not support E8000/E4000 models.) v1.40.9	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL explorer is installed. Contact Fujitsu support representative for the access to SMI-S provider. For E8000/E4000 models, SMI-S provider 1.40.9 or later is required.

CommandCentral Storage Devices

Storage Device Vendor	Model	OS Platform	Monitoring & Alerting	Management Functions / Extended Discovery Features *	Ancillary Software **	Notes
HDS	Freedom Storage Thunder 9200		Environmental Performance	LUN Binding LUN Creation and Deletion LUN Masking Multi LUN Masking Multi LUN Binding Deep Mapping Snapshots (ShadowImage)	HiCommand Device Manager: 4.0, 4.1, 4.2 5.0, 5.1, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0 HiCommand Tuning Manager: 4.x, 5.x (For Performance Statistics Only)	Refer to the Hitachi HiCommand Storage Array Requirements section of the <i>CommandCentral Hardware and Software Configuration Guide</i> for more information. Japanese Model Equivalents: 9200=SANRISE1100/1200
	Freedom Storage Storage Lightning 9900 Series 9910 9960			LUN Binding LUN Masking Multi LUN Binding Multi LUN Masking LUN Creation and Deletion Deep Mapping Snapshots (ShadowImage)	HiCommand Device Manager: 4.0, 4.1, 4.2 5.0, 5.1, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0 HiCommand Tuning Manager: 4.x, 5.x (For Performance Statistics Only)	Refer to the Hitachi Freedom Storage Lightning 9900 Series Array Requirements section of the <i>CommandCentral Hardware and Software Configuration Guide</i> for more information. Also refer to Hitachi's CE Firmware Field Upgrade Procedures (RN-SP001-00) for additional information. Japanese Model Equivalents: 9900=SANRISE2000 9910=SANRISE2200 9960=SANRISE2800
	Freedom Storage Thunder 9500 Series 9530V 9533V 9570V 9580V 9585V			LUN Binding LUN Creation and Deletion LUN Masking Multi LUN Binding Multi LUN Masking Deep Mapping Snapshots (ShadowImage)	HiCommand Device Manager: 4.0, 4.1, 4.2 5.0, 5.1, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0 HiCommand Tuning Manager: 4.x, 5.x (For Performance Statistics Only)	Refer to the Hitachi HiCommand Storage Array Requirements section of the <i>CommandCentral Hardware and Software Configuration Guide</i> for more information. Japanese Model Equivalents: 9530V=SANRISE9530V 9533V=SANRISE9533V 9570V=SANRISE9570V 9570V=SANRISE9970V 9580V=SANRISE9980V
	Tagma AMS 200 500 1000 Tagma WMS 100				HiCommand Device Manager: 4.2 5.0, 5.1, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0 HiCommand Tuning Manager: 4.x, 5.x (For Performance Statistics Only)	
	Tagma USP/SE9990 100 600 1100 NSC55 USP-V				LUN Binding LUN Creation and Deletion LUN Masking Multi LUN Binding Multi LUN Masking Deep Mapping Snapshots	HiCommand Device Manager: 4.0, 4.1, 4.2 5.0, 5.1, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0 HiCommand Tuning Manager: 4.x, 5.x (For Performance Statistics Only)
HP	xp 128 xp 1024	Windows 2000 Windows 2003 Solaris 8, 9, 10	Not Supported	Deep Mapping	SMI-S Provider (CIMOM) 2.1a, b	
	XP 48 XP 128 XP 512 XP 1024 XP 10000 XP 12000 XP 24000	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	LUN Binding LUN Creation and Deletion LUN Masking Multi LUN Binding Multi LUN Masking RSV Creation and Deletion* Deep Mapping Snapshots	CommandView XP AE 1.0.0-01, 5.0, 5.7	* Vendor issue for CV AE older than 5.0 : LUSE destruction fails to destroy underlying segments. Note: HotFix required for XP24000 support in CommandCentral Storage 5.0 or 5.0 RP1. For re-branded HDS Tagma arrays (i.e. storage arrays which support virtualization), the correlation of the physical disks of Tagma USP (i.e. HP XP arrays like XP12000, XP24000) and their backend array volumes (LUNs) is supported only when 1) these backend arrays are the HDS (or their re-branded HP OEM models) arrays and 2) the Tagma USP array and all of its backend arrays are discovered on a single CommandCentral host. For XP24000, CommandView XP AE 5.7 or later is required. No thin-provisioning support for XP 24000.
	EVA 3000, 5000	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental (only with SSSU v6.0 and later)	LUN Creation and Deletion LUN Masking RSV Creation and Deletion Deep Mapping	SSSU for HP StorageWorks CommandView EVA v4.0, v4.1, v5.0, v6.0 Command View EVA software v4.0 Command View EVA software v5.0 Command View EVA software v6.0 Command View EVA software v7.0	HP announced a mandatory factory modification for HP 5000 arrays, only the software and firmware versions listed here are supported. Requires a fibre connection between the Management Appliance and the arrays being managed. Requires a network connectivity between the Management Appliance and the host where the SSSU is installed.
	EVA 4x00, 6x00, 8x00				SSSU for HP StorageWorks CommandView EVA v4.0, v4.1, v5.0, v6.0 Command View EVA software v4.0 Command View EVA software v5.0 Command View EVA software v6.0 Command View EVA software v7.0	Requires a fibre connection between the Management Appliance and the arrays being managed. Requires a network connectivity between the Management Appliance and the host where the SSSU is installed.

CommandCentral Storage Devices

Storage Device Vendor	Model	OS Platform	Monitoring & Alerting	Management Functions / Extended Discovery Features *	Ancillary Software **	Notes
IBM	ESS (Shark) F10	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	LUN Creation LUN Masking Multi LUN Masking RSV Creation and Deletion Deep Mapping	Enterprise Storage Server CLI versions: 2.2.0.0, 2.3.1.1, 2.3.1.2 2.4.2.33	Network connectivity is required between the storage array(s) and the host where the ESS CLI is installed. JRE 1.3.1 or later installed on the host where the ESS CLI is installed. Windows platforms must be rebooted after installing the ESS CLI.
	ESS (Shark) F20 800	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	LUN Creation LUN Masking Multi LUN Masking RSV Creation and Deletion Deep Mapping	Enterprise Storage Server CLI versions: 2.2.0.0, 2.3.1.1, 2.3.1.2 2.4.2.33, 2.4.4.40, 2.4.4.92	Network connectivity is required between the storage array(s) and the host where the ESS CLI is installed. JRE 1.3.1 or later installed on the host where the ESS CLI is installed. Windows platforms must be rebooted after installing the ESS CLI.
			Environmental	LUN Binding LUN Creation Multi LUN Binding Multi LUN Masking Deep Mapping	IBM SMI-S Provider (SMI-S 1.1 based CIMOM): v5.2.1.139	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL Explorer is installed. Volume Deletion and Volume Space Management is not supported. Download the SMI-S provider from here: http://www-03.ibm.com/servers/storage/support/software/cimdsopi/downloading.html Minimum FW requirement for the arrays for support via SMI-S: - ESS F20 - 2.3.3.89 - ESS 800 - 2.4.3.56
	DS4100 DS4300 (FAST-T 600) DS4400 (FAST-T 700) DS4500 (FAST-T 900) DS4700 DS4800	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental Performance	LUN Binding LUN Creation and Deletion Multi LUN Binding Multi LUN Masking RSV Creation and Deletion Deep Mapping	Engenio SMI-S Provider (SMI-S 1.1 based CIMOM): v9.16.G0.17, v9.16.G0.34, v9.19.G0.17, v9.19.G0.19, v9.23.G0.00, v9.70.G0.02, v10.10.G0.04	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL Explorer is installed.
	DS6000 Series DS8000 (1750-511) DS8000 Series DS8100 (2107-921) DS8300 (2107-922)	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	Deep Mapping	IBM DSCLI versions 5.0.x 5.1.x 5.2.x 5.3.x	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL explorer is installed. Windows platforms must be rebooted after installing the DS CLI.
			Environmental	LUN Binding LUN Creation and Deletion Multi LUN Binding Multi LUN Masking Deep Mapping	IBM SMI-S Provider (SMI-S 1.1 based CIMOM): v5.2.1.139, v5.3.0.x	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL Explorer is installed. Extent Pool/Rank/Array (Volume Space equivalent for IBM ESS) management not supported. Download the SMI-S provider from here: http://www-03.ibm.com/servers/storage/support/software/cimdsopi/downloading.html Minimum FW requirement for the arrays for support via SMI-S: - DS6000 - 5.0.6.235 (LIC) / 6.0.600.23 (bundle) - DS8000 - 5.1.0.309 (LIC) / 6.1.0.44 (bundle) v5.3.0.x supports both Embedded and proxy CIMOMs for DS8XXX arrays.
	N series (Rebranded NetApp) N3000 series N5000 series	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental Performance (Windows and Solaris based hosts)	LUN Masking Deep Mapping vFilers SnapShots Snapmirrors FlexVols FlexClones	ONTAP 6.5.x 7.0.x 7.1.x 7.2.x	Thin provisioning not supported (7.x)
SAN Volume Controller (SVC) 2145	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	Deep Mapping Correlation with backend volumes	IBM SVC SMI-S 1.0.3 Provider: SVC 4.1.1 SVC 4.2	Requires a network connection to the arrays (SVC) that are managed through CIM agent (SMI-S Provider). Requires a network connection to the host where the CIMVAIL Explorer is installed. The CIM Agent for SVC runs on the SVC master console. The backend arrays, attached to the IBM SVC, should also be configured separately in CommandCentral in order to have the backend LUN correlation support. Arrays qualified as backend arrays for SVC: HDS 9900, EMC Clarion, IBM DS8000, IBM DS4x00.	
NEC	NEC Storage series iStorage series	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental	Deep Mapping	NEC SMI-S Provider v1.1	Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL explorer is installed. Contact NEC support for the access to the SMI-S provider software.
NetApp	F87 FAS200 Series FAS800 Series FAS900 Series FAS3000 Series FAS6000 Series NearStore Series V-Series	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental Performance (Windows and Solaris based hosts)	LUN Masking Deep Mapping vFilers SnapShots Snapmirrors FlexVols FlexClones	ONTAP 6.5.x 7.0.x 7.1.x 7.2.x	Thin provisioning not supported (7.x)* iSCSI discovery is supported from both Management Server platforms, iSCSI storage correlation is supported on Windows only and requires use of Microsoft iSCSI Software Initiator Version 2.02. Supports the correlation of the physical disks of NetApp V-Series storage systems and their backend array volumes (LUNs).
STK	D173 D178 D220 D280 6540 (FLEXLINE 380) 6130 6140	Windows 2000 Windows 2003 Solaris 8, 9, 10	Environmental Performance	LUN Binding LUN Creation and Deletion Multi LUN Binding Multi LUN Masking RSV Creation and Deletion Deep Mapping	Engenio SMI-S Provider (SMI-S 1.1 based CIMOM): v9.16.G0.17, v9.16.G0.34, v9.19.G0.17, v9.19.G0.19, v9.23.G0.00, v10.10.G0.04	Based on LSI/Engenio's information of comparative models. Requires a network connection to the arrays that are managed through CIM. Requires a network connection to the host where the CIMVAIL explorer is installed. Needs SMI-S Provider version 9.23.G0.00 or later. Download the Engenio SMI-S provider from here: http://www.lsi.com/storage_home/products_home/external_raid/management_software/smis_provider/index.html Note: No management operation is supported.
Generic SMI-S 1.1	Vendors conforming to SMI-S 1.1 and in-band support by CommandCentral	Windows 2000 Windows 2003 Solaris 8, 9, 10	Not Supported		SMI-S Provider (CIMOM) from the vendor that passed CTP test	CommandCentral discovers arrays that: 1) are compliant with and pass CTP conformance testing; 2) support profiles that are required by CommandCentral.* http://www.snia.org/ctp/conformingproviders#11provider (link to SMI-S CTP conformance test) *Please refer to the product management for latest support as the SMI-S standard is an emerging standard and may need specific client testing due to varied profiles in the standard and their interpretations by vendors

CommandCentral Miscellaneous Devices

Device Type	Vendor	Model	Firmware	Monitoring/Alerting	Notes
Tape/ Tape Array	STK	L-Series (L20/40/80/180/700e/5500)	Symantec does not specifically certify Library firmware for ACSLS controller libraries. Symantec certifies usage of these ACSLS controlled STK libraries via the ACSLS server only.	Not Supported	<p>CommandCentral Storage discovers tape devices which are attached to a SAN and hence visible to the managed host through a supported HBA/driver. A SCSI tape library may be attached to the SAN through an FC-SCSI bridge for this purpose. For list of supported HBAs/drivers refer to the <i>CommandCentral HBAs</i> section of this document.</p> <p>For other tape enclosures, you can identify or create enclosures for tape devices through the enclosure wizard.</p> <p>For a complete list of supported devices please refer to the VERITAS NetBackup DataCenter v4.5 or Enterprise Server v5.0/v5.1 Device Compatibility List available on the Symantec Support website (see link on page 1).</p>
		Powderhorn (9310)			
		Timberwolf (9710/9714/9730/9740)			
Multi-Protocol Router	Brocade	AP7420	7.3.0c, 7.4.x	Not Supported	
iSCSI Router	Cisco	5420		Not Supported	
DWDM	InRange	Spectrum 2000		Supported	
	ADVA	FST 2000		Supported	

CommandCentral Software

Application		Solaris			Windows				HP-UX			AIX		Linux (AS/ES)					VMware ESX		Cluster Support ¹	Application Correlation ²	Monitoring/Alerting		
Vendor	Software	Version	8	9	10	2k	2K3-32	2K3-64	2K8-32	2K8-64	11i v1	11i v2	11i v3	5.2	5.3	RH 3.0	RH 4.0 (32 and 64 bit)	RH 5.0 (32 and 64 bit)	Suse 9 (32 and 64 bit)	Suse 10 (32 and 64 bit)					
EMC	PowerPath	3.0.6	X	X		X	X									X						N/A	X	Supported	
		4.2	X	X													X								X
		4.3	X	X		X	X	X									X								X
		4.3.1	X	X		X	X	X									X								X
		4.4	X	X	X	X	X	X										X	X	X	X				X
		4.5	X	X	X	X	X	X	X									X	X	X	X				X
		4.6					X	X	X																X
		5.0								X	X							X	X	X	X				X
5.2																						X			
HP	HP LVM										X	X	X									X	X	Not supported	
	HP HFS										X	X	X									N/A	X	Supported	
	HP Secure Path	4.0C				X	X															N/A	X	Supported	
IBM	DB2 (EE, EEE, & ESE)	7.2	X	X	X									X	X							X	X	Supported	
		8.1	X	X	X									X	X							X	X		
		8.2	X	X	X										X	X						X	X		
	AIX JFS													X	X							N/A	X	Supported	
	AIX JFS2													X	X							X	X	Not supported	
AIX LVM													X	X							N/A	X	Supported		
Microsoft	NTFS					X	X	X	X	X												N/A	X	Not supported	
	LDM					X	X	X	X	X												N/A	X	Not supported	
	HBAAPI					SP4+	SP2+	SP2+	X	X															
	MPIO					X																			
	Cluster Server	2000					X																	X	Supported
		2003						X	X	X	X													X	
	Exchange	2000					X																	X	Supported
2003						X	X																X		
SQL Server	2000					X	X	X															X	Supported	
	2005					X	X	X	X	X													X		
Oracle	Oracle DB	8i	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	Supported	
		9i	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X		
	10g	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X		
	OPS	8i	X	X							X	X	X	X	X								X	Supported	
RAC	9i	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X			
Red Hat	Ext2															X	X	X				N/A	X	Supported	
	Ext3															X	X	X				X	X		
Sun	Solstice Disk Suite / Solaris VM		X	X	X																	N/A	X	Not supported	
	Solaris UFS		X	X	X																		X	Supported	
Sybase	ASE	11.9.3	X	X	X																		X	Supported	
		12.0		X																			X		
		12.5.1	X	X																			X		
		12.5.2	X	X	X																		X		
		12.5.3	X	X	X																		X		
		12.5.4	X	X	X																		X		

