HP Serviceguard for Linux Certification Matrix[1]

A.11.16

Supported Servers		Linux Distribution[2]		Fibre Channel *Max supported node = 16*	FC Host Bus Adapters	FC Multi-path software	SCSI Storage

ProLiant:
• BL20p[3]:
  G2, G3, G4
• BL25p[3]
  G1, G2
• BL40p[3]
• BL45p[3]
• BL460c[3]
• BL465c[3]
• BL480c[3]
• BL685c[3]
• DL360:
  G3, G4, G5
• DL380:
  G3, G4, G5
• DL385
• DL385 G2
• DL560
	• DL580:
	  G2, G3, G4
	• DL585
	• DL585 G2
	• DL740
	• DL760 G2
	• ML350
	  G3, G4p, G5
	• ML370:
	  G3, G4, G5
	• ML570 G3
	• ML570 G4
	IBM:[4]
	• eServer 325
	• xSeries 346
	Dell:[4]
	• PowerEdge
	  2850
		Red Hat EL4 AS/ES
		2.6.9 (U1) -11.EL
		2.6.9 (U2) -22.EL[9]
		  –22.0.2.EL
		2.6.9(U3) -34.EL
		2.6.9(U4) -42.EL
		  –42.0.8.EL
		Red Hat EL3 AS/ES
		2.4.21 (U1) -9.0.3
		2.4.21 (U2) -15.0.3
		  -15.0.4
		2.4.21 (U3)[5] -20.EL
		2.4.21(U4) -27.EL
		2.4.21(U5) -32.EL
		  -32.0.1EL
		2.4.21(U6) -37.EL
		  -37.0.1.EL
		2.4.21(U7) -40.EL
		2.4.21(U8) -47.EL
		  -47.0.1.EL
			SUSE SLES9
			2.6.5 (SP1)
			  -7.139
			  -7.145
			  -7.147
			  -7.151
			  -7.151.29
			2.6.5 (SP2)
			  -7.191
			  -7.193
			  -7.202.7
			2.6.5 (SP3)
			  -7.244
			  -7.252
			  -7.253
			SUSE SLES10
			2.6.16.21
			  -0.8
				• StorageWorks MSA1000[6]
				• ProLiant DL380 G4 Packaged Cluster with MSA1000[6]
				• StorageWorks MSA1500cs[6]
				• StorageWorks VA 7100, 7110, 7400, 7410
				• StorageWorks EVA 3000, 4000, 5000, 6000, 8000 (v3.01 or later)
				• StorageWorks XP48, XP128, XP512, XP1024, XP10000, XP12000
				• EMC Symmetrix 8000-Series (5, 5.5) and Symmetrix DMX (6, 6.5) [7]
				• EMC CLARiiON CX/AX[8]
					Any HP HBA supported in the servers listed.
					
					For non-HP servers, any HP FC HBA supported in those servers with HP storage arrays
						For HP arrays, use multipath function built into HBA driver from HP
						
						PowerPath[7] 4.3.3 and above with EMC Arrays
							Single path only
							Max supported node = 2
							• StorageWorks MSA500 G2
							• ProLiant DL380 G3 Packaged Cluster
							• ProLiant DL380 G3 Packaged Cluster – Racked
							
							Multi-path supported using MD (not DM see manual)
							Max supported node = 4
							• StorageWorks MSA500 G2
							• ProLiant DL380 G4 Packaged Cluster with MSA500 G2
							• HP ProLiant DL385 Packaged Cluster with MSA500G2
							Multipath not supported for LockLUN device.

[1] Matrix only refers to Serviceguard support. <u>All other hardware and software components must be supported together independent of Serviceguard.</u> Unless specifically stated in these notes, all configurations of any server listed are supported as long as the general Serviceguard configuration requirements are met.
A problem with the Round Robin load balancing function of Linux bonding may prevent Serviceguard from detecting network failures. A package may not fail over in this situation. The "Failover" bonding mode is recommended until the driver is fixed in the Linux kernels.

[2] Not every product in a certified configuration supports all of the errata shown here. Please check that other products used in the cluster support the errata that is proposed. Supports the IA-32 and x86-64 versions of the distributions but not mixed in the same cluster. See http://www.hp.com/softwarereleases/releases-media2/ for support dates.

[3] Blades are supported with FibreChannel storage only with the mezzanine adapters

[4] Dell and IBM servers require the addition of a software Care Pack or support contract as well as HP Host Bus Adapters and driver

[5] Rare problem caused by failures in the network environment with RedHat3 Update3 can be avoided by work around detailed at http://forums1.itrc.hp.com/service/forums/questionanswer.do?threadId=754018. This is fixed in Update4.

[6] Both Active/Active and Active/Passive versions supported. MSA1000 and especially the MSA1500cs arrays must be configured so that no single failure would make any shared storage unavailable. Please refer to the respective documentation on ensuring high availability storage.

[7] For PowerPath version 4.3.3 and 4.3.4 contact EMC support for the version that does NOT automatically activate ALL volume groups. Any 4.5 or later version is OK. Check the EMC Knowledgebase article "emc137801" for more information. LockLUN is supported with PowerPath.

[8] Only Red Hat EL 4 and SUSE SLES9 configurations are supported.

[9] Please contact HP support to receive required Serviceguard for Linux patch for support for this and later updates.

HP Serviceguard for Linux for Integrity Certification Matrix
A.11.16[1]

Supported Servers	Linux Distribution[2]		Fibre Channel *Max supported node = 16*	FC Host Bus Adapters	FC Multi-path software	SCSI Storage

Integrity:
• BL860c
• rx1600
• rx1620
• rx1620-2[3]
• rx2600
• rx2620
• rx2620-2[3]
• rx2660
• rx3600[3]
• rx4640[3]
• rx5670
• rx6600[3]
• rx7620
• rx7640
• rx8620
• rx8640
• Integrity Superdome[3]
	Red Hat EL 4 AS/ES
	2.6. 9 (U1)-11.EL
	2.6.9 (U2)-22.EL[4]
	  −22.0.2.EL
	2.6.9(U3)-34.EL
	2.6.9(U4) -42.EL
	  −42.0.8.EL
	
	Red Hat EL 3 AS
	2.4.21 (U1) -9.0.3
	2.4.21 (U2) -15.0.3
	  -15.0.4
	2.4.21 (U3)-20.EL[5]
	2.4.21(U4)-27.EL
	2.4.21(U5) -32.EL
	  -32.0.1EL
	2.4.21(U6) -37.EL
	  -37.0.1.EL
	2.4.21(U7) -40.EL
	2.4.21(U8) -47.EL
	  -47.0.1.EL
		SUSE SLES 9
		2.6.5 (SP1)
		  -7.139
		  -7.145
		  -7.151
		  -7.151.29
		2.6.5 (SP2)
		  -7.191
		  -7.193
		  -7.202.7
		2.6.5 (SP3)
		  -7.244
		  -7.252
		  -7.253
		
		SUSE SLES10
		2.6.16.21
		  -0.8
			• StorageWorks MSA1000[6]
			  StorageWorks MSA1500cs
			• StorageWorks VA 7100, 7110, 7400, 7410
			• StorageWorks EVA 3000, 4000, 5000, 6000, 8000 (v3.01 or later)
			• StorageWorks XP48, XP128, XP512, XP1024, XP10000, XP12000
			• EMC Symmetrix 8000-Series (5, 5.5) and Symmetrix DMX (6, 6.5)
			• EMC CLARiiON CX/AX[7]
				Any HP HBA supported in the servers listed.	For HP arrays, use multipath function built into HBA driver from HP
					
					PowerPath 4.3.3 and above with EMC Arrays[8]
						Not supported

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[1] Matrix only refers to Serviceguard support. <u>All other hardware and software components must be supported together independent of Serviceguard.</u> Unless specifically stated in these notes, all configurations of any server listed is supported as long as the general Serviceguard configuration requirements are met.
  A problem with the Round Robin load balancing function of Linux bonding may prevent Serviceguard from detecting network failures. A package may not fail over in this situation. The "Failover" bonding mode is recommended until the driver is fixed in the Linux kernels.

[2] Not every product in a certified configuration supports all of the errata shown here. Please check that other products used in the cluster support the errata that is proposed. Information on older errata that are supported may not be shown. Certification of newer Updates, ServicePacks, and Errata will be completed as soon after release as practical. See http://www.hp.com/softwarereleases/releases-media2/ for support dates.

[3] Serviceguard for Linux supports servers with the Single core and Dual-Core Intel Itanium 2 processors. Please ensure that the Linux distribution used is supported on both Serviceguard for Linux and the server.

[4] Please contact HP support to receive required Serviceguard for Linux patch for support for this update.

[5] Rare problem caused by failures in the network environment with RedHat3 Update3 can be avoided by work around detailed at
  http://forums1.itrc.hp.com/service/forums/questionanswer.do?threadId=754018. This is fixed in Update4.

[6] Both Active/Active and Active/Passive versions supported. MSA1000 and especially the MSA1500cs arrays must be configured so that no single failure would make any shared storage unavailable. Please refer to the respective documentation on ensuring high availability storage.

[7] Only Red Hat EL 4 and SUSE SLES9 configurations are supported. Check with your EMC representative for any additional configuration requirements.

[8] For PowerPath version 4.3.3 and 4.3.4 contact EMC support for the version that does NOT automatically activate ALL volume groups. Any 4.5 or later version is OK. Check the EMC Knowledgebase article "emc137801" for more information. LockLUN is supported with PowerPath.

HP Serviceguard for Linux Certification Matrix[1]
A.11.15[2]

Supported Servers		Linux Distribution[3] IA32 (32 bit) versions ONLY		Fibre Channel *Max supported node = 16*	FC Host Bus Adapters[1]	FC Multi-path software	SCSI Storage
ProLiant: - BL20p G2[4] - BL20p G3[3] - BL20p G4[3] - BL25p[4] - BL40p[3] - DL360 G3 - DL360 G4 - DL380 G3 - DL380 G4[4] - DL380 G5[4] - DL385[4] - DL560	- DL580 G2 - DL580 G3 - DL580 G4 - DL585[5] - DL740 - DL760 G2 - ML350 G3 - ML350 G4[4] - ML370 G3 - ML370 G4[4]	Red Hat EL3 AS/ES 2.4.21 (U1) -9.0.3 2.4.21 (U2) -15.0.3 -15.0.4 2.4.21 (U3)[6] -20 2.4.21(U4) -27.EL 2.4.21(U5) -32.EL -32.0.1EL 2.4.21(U6) -37.EL -37.0.1.EL 2.4.21(U7) -40.EL	SUSE SLES 8 2.4.21 (SP3) -198 -215 -241 -273 2.4.21 (SP4) -278 -286 -292 -295	- StorageWorks MSA1000[7] - ProLiant DL380 Packaged Cluster with MSA1000[6] - StorageWorks MSA1500cs[6] - StorageWorks VA 7100, 7110, 7400, 7410 - StorageWorks EVA 3000, 4000, 5000, 6000, 8000 (v3.01 or later) - StorageWorks XP48, XP128, XP512, XP1024, XP10000, XP12000 - EMC Symmetrix 8000-Series (5, 5.5) and Symmetrix DMX (6, 6.5)[8]	Any QLogic based HBA including FCA2214 FCA2214DC FC2214 FC2214DC FC1142SR FC1242SRDC FC1143 FC1243DC Mezzanine adapters for HP Bladeservers	HBA driver 7.00.03 and above SecurePath[9] Powerpath 4.3.3 and above with EMC Arrays[7]	*Single path only* *Max supported node = 2* - StorageWorks MSA500 - ProLiant DL380 G2 Packaged Cluster - ProLiant DL380 G3 Packaged Cluster *Multi-path supported* *Max supported node = 4* - StorageWorks MSA500 G2 - ProLiant DL380 G4 Packaged Cluster with MSA500 G2

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[1] Matrix only refers to Serviceguard support. <u>All other hardware and software components must be supported together independent of Serviceguard.</u> Unless specifically stated in these notes, all configurations of any server listed is supported as long as the general Serviceguard configuration requirements are met.
    A problem with the Round Robin load balancing function of Linux bonding may prevent Serviceguard from detecting network failures. A package may not fail over in this situation. The "Failover" bonding mode is recommended until the driver is fixed in the Linux kernels.

[2] Not recommended for new installations. This version is out of "patch phase". Please refer to the Serviceguard for Linux support model (available on the page http://www.hp.com/softwarereleases/releases-media2/)

[3] Not every product in a certified configuration supports all of the errata shown here. Please check that other products used in the cluster support the errata that is proposed. Information on older errata that are supported may not be shown. Certification of newer Updates, ServicePacks, and Errata will be completed as soon after release as practical.

[4] Blades are supported for Fibre Channel shared storage only

[5] There is no support running the AMD64 or EMT64 versions of Red Hat or SuSE, even though the OS may support 32bit applications. During certification testing of the DL585 and the "G4" servers, a seldom seen problem was discovered affecting the disk monitor (cmresmond). A replacement copy of cmresmond is available from www.itrc.hp.com in the Servers/ProLiant server clustering forum at http://forums1.itrc.hp.com/service/forums/questionanswer.do?threadId=665900

[6] Rare problem caused by failures in the network environment can be avoided by work around until Linux distributions address is detailed at http://forums1.itrc.hp.com/service/forums/questionanswer.do?threadId=754018. This is fixed in Update 4.

[7] Both Active/Active and Active/Passive versions supported. MSA1000 and especially the MSA1500cs arrays must be configured so that no single failure would make any shared storage unavailable. Please refer to the respective documentation on ensuring high availability storage.

[8] Requires Red Hat EL 3 update 2 or later. For PowerPath version 4.3.3 and 4.3.4 contact EMC support for the version that does NOT automatically activate ALL volume groups. Any 4.5 or later version is OK. Check the EMC Knowledgebase article "emc137801" for more information.

[9] HP SecurePath supported for SLES8 and various RedHat 3 errata. Check with your representative.

HP Serviceguard for Linux for Integrity Certification Matrix[1]
A.11.15[2]

	Supported Servers	Linux Distribution[3]		Fibre Channel *Max supported node = 16*	FC Host Bus Adapters	FC Multi-path software	SCSI Storage

IA-64	Integrity:
	• rx1600
	• rx2600
	• rx4640
	• rx5670
	• rx7620
	• rx8620
		Red Hat EL 3 AS
		2.4.21 (U1)
		  -9.0.1
		  -9.0.3
		2.4.21 (U2)
		  -15.0.3
		  -15.0.4
		2.4.21 (U3)[4]
		  -20
		2.4.21(U4)
		  -27.EL
		2.4.21(U5)
		  -32.EL
		  -32.0.1EL
		2.4.21(U6)
		  -37.EL
		  -37.0.1.EL
		2.4.21(U7) -40.EL
			SUSE SLES 8
			2.4.21 (SP3)
			  -198
			  -241
			  -273
			2.4.21 (SP4)
			  -278
			  -286
			  -292
			  -295
				• StorageWorks MSA1000[5]
				• StorageWorks VA 7100, 7110, 7400, 7410
				• StorageWorks EVA 3000, 4000, 5000, 6000, 8000 (v3.01 or later)
				• StorageWorks XP48, XP128, XP512, XP1024, XP10000, XP12000
				• EMC Symmetrix 8000-Series (5, 5.5) and Symmetrix DMX (6, 6.5)[6]
					A6826A	HBA driver 7.00.03 and above
						
						SecurePath [7]
						
						Powerpath 4.3.3 and above with EMC Arrays[5]
							• *Not supported*

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[1] Matrix refers to Serviceguard support. All other hardware and software components must be supported together independent of Serviceguard. Unless specifically stated in these notes, all configurations of any server listed is supported as long as the general Serviceguard configuration requirements are met.
A problem with the Round Robin load balancing function of Linux bonding may prevent Serviceguard from detecting network failures. A package may not fail over in this situation. The "Failover" bonding mode is recommended until the driver is fixed in the Linux kernels.

[2] Not recommended for new installations. This version is out of "patch phase". Please refer to the Serviceguard for Linux support model (available on the page http://www.hp.com/softwarereleases/releases-media2/)

[3] Not every product in a certified configuration supports all of the errata shown here. Please check that other products used in the cluster support the errata that is proposed. Information on older errata that are supported may not be shown. Certification of newer Updates, ServicePacks, and Errata will be completed as soon after release as practical.

[4] Rare problem caused by failures in the network environment can be avoided by work around until Linux distributions address is detailed at http://forums1.itrc.hp.com/service/forums/questionanswer.do?threadId=754018. This is fixed in Update 4.

[5] Both Active/Active and Active/Passive versions supported. MSA1000 and especially the MSA1500cs arrays must be configured so that no single failure would make any shared storage unavailable. Please refer to the respective documentation on ensuring high availability storage.

[6] Requires Red Hat EL 3 update 2 or later. For PowerPath version 4.3.3 and 4.3.4 contact EMC support for the version that does NOT automatically activate ALL volume groups. Any 4.5 or later version is OK. Check the EMC Knowledgebase article "emc137801" for more information.

[7] HP SecurePath supported for SLES8 and various RedHat 3 errata. Check with your representative.

HP Serviceguard for Linux Certification Matrix[1]
A.11.14[2]

	Supported Servers	Linux Distribution[3]	Fibre Channel	FC Host Bus Adapters	FC Multi-path software	SCSI Storage
x86	ProLiant: • BL20p G2[4] • BL40p[3] • DL360 G3 • DL380 G3 • DL560 • DL580 G2 • DL740 • DL760 G2 • ML350 G3 • ML370 G3	Red Hat EL2.1 ES & AS 2.4.9 (U3) -e35 -e38 –e39 2.4.9 (U4) -e41 -e43 2.49 (U5) -e49 SUSE SLES 8 2.4.21 (SP3) -198 -215 -241 -273 *Serviceguard for Linux version A.11.15 is recommended for SLES8 clusters*	*Max supported node = 2* • StorageWorks MSA100 • ProLiant DL380 Packaged Cluster with MSA1000 (requires MSA1000 High Availability Kit) • StorageWorks EVA 3000 / 5000 (v3.01 or later) *Max supported node = 16* • StorageWorks VA 7100, 7110, 7400, 7410 • StorageWorks XP48, XP128, XP512, XP1024	FCA2214 FCA2214DC Mezzanine adapters for HP BladeSystem	HBA driver 7.00.03 and above SecurePath [5]	*Max supported node = 2* *Single path only* • StorageWorks MSA500 • ProLiant DL380 G2 Packaged Cluster • ProLiant DL380 G3 Packaged Cluster • ProLiant DL380 G3 Packaged Cluster - Racked
Integrity	N/A					

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[1] Matrix refers to only Serviceguard support. <u>Other components must be supported together independent of Serviceguard.</u>
   A problem with the Round Robin load balancing function of Linux bonding may prevent Serviceguard from detecting network failures. A package may not fail over in this situation. The "Failover" bonding mode is recommended until the driver is fixed in the Linux kernels.

[2] Do not use for new installations. This version is out of "patch phase" for RedHat 2.1 and out of support phase for SLES8. Please refer to the Serviceguard for Linux support model (available on the page http://www.hp.com/softwarereleases/releases-media2/)

[3] Not every product in a certified configuration supports all of the errata shown here. Information on older errata that are supported may not be shown

[4] Blades are supported for Fibre Channel shared storage only

[5] HP SecurePath supported for SLES8 and various RedHat 2.1 errata. Check with your representative.