

HP Serviceguard for Linux for Integrity Certification Matrix¹
A.11.18

Supported Servers	Linux Distribution ²		Fibre Channel <i>Max supported node = 16</i>	FC Host Bus Adapters	FC Multi-path software	SCSI Storage
Integrity: <ul style="list-style-type: none"> • BL860c³ • rx1600 • rx1620 • rx1620-2⁴ • rx2600 • rx2620 • rx2620-2 • rx2660 • rx3600³ • rx4640³ • rx5670 • rx6600³ • rx7620 • rx7640 • rx8620 • rx8640 • Integrity Superdome⁵ 	Red Hat EL5 2.6.18-8.el5 -8.1.6.el5 -8.1.8.el5 Red Hat EL4 AS/ES 2.6.9(U3) -34.EL 2.6.9(U4) -42.EL -42.0.8.EL 2.6.9(U5) -55.EL	SUSE SLES10 2.6.16.21 -0.8 2.6.16.46 (SP1) -0.12 -0.14	<ul style="list-style-type: none"> • StorageWorks MSA1000⁵ • 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, XP20000, XP24000 • EMC Symmetrix 8000-Series (5, 5.5) and Symmetrix DMX (6, 6.5)⁶ • EMC CLARiiON CX/AX 	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 ⁷	<i>Not supported</i>

¹ Matrix only 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 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. 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/software/releases/releases-media2/> for support dates.

³ Blades using Virtual Connect Technology are supported.

⁴ 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.

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 Supported with Red Hat EL 4 and SLES10. PowerPath must be used for multipath and it is supported for LockLUN. If a version of PowerPath earlier than 4.5 is used, check the EMC Knowledgebase article "emc137801"..

HP Serviceguard for Linux Certification Matrix¹ A.11.15²

Supported Servers	Linux Distribution ³ IA32 (32 bit) versions ONLY	Fibre Channel <i>Max supported node = 16</i>	FC Host Bus Adapters ¹	FC Multi- path software	SCSI Storage	
ProLiant: <ul style="list-style-type: none"> • DL580 G2 • BL20p G2⁴ • BL20p G3⁴ • BL20p G4⁴ • BL25p⁴ • BL40p⁴ • DL360 G3 • DL360 G4 • DL380 G3 • DL380 G4⁵ • DL380 G5⁵ • DL385⁵ • DL560 	<ul style="list-style-type: none"> • DL580 G3 • DL580 G4 • DL585⁵ • DL740 • DL760 G2 • ML350 G3 • ML350 G4⁵ • ML370 G3 • ML370 G4⁵ 	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) -20 ⁶ 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	<ul style="list-style-type: none"> • StorageWorks MSA1000⁷ • ProLiant DL380 Packaged Cluster with MSA1000⁷ • StorageWorks MSA1500c⁷ • 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 ⁸	<i>Single path only</i> <i>Max supported node = 2</i> <ul style="list-style-type: none"> • StorageWorks MSA500 • ProLiant DL380 G2 Packaged Cluster • ProLiant DL380 G3 Packaged Cluster

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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/software/releases/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 Matrix¹
A.11.15²

	Supported Servers	Linux Distribution ³		Fibre Channel <i>Max supported node = 16</i>	FC Host Bus Adapters	FC Multi-path software	SCSI Storage
IA-64	Integrity: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • StorageWorks MSA1000⁵ • 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	<ul style="list-style-type: none"> • <i>Not supported</i>

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

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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/software/releases/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 Matrix¹
A.11.14²

	Supported Servers	Linux Distribution ³	Fibre Channel	FC Host Bus Adapters	FC Multi-path software	SCSI Storage
x86	ProLiant: <ul style="list-style-type: none"> • BL20p G2⁴ • BL40p³ • 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 2.4.9 (U5) -e49 SUSE SLES 8 2.4.21 (SP3) -198 -215 -241 -273 <i>Serviceguard for Linux version A.11.15 is recommended for SLES8 clusters</i>	<i>Max supported node = 2</i> <ul style="list-style-type: none"> • StorageWorks MSA100 • ProLiant DL380 Packaged Cluster with MSA1000 (requires MSA1000 High Availability Kit) • StorageWorks EVA 3000 / 5000 (v3.01 or later) <i>Max supported node = 16</i> <ul style="list-style-type: none"> • 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	<i>Max supported node = 2</i> <i>Single path only</i> <ul style="list-style-type: none"> • StorageWorks MSA500 • ProLiant DL380 G2 Packaged Cluster • ProLiant DL380 G3 Packaged Cluster • ProLiant DL380 G3 Packaged Cluster - Racked
Integrity	N/A					

¹ Matrix refers to only Serviceguard support. Other components must be supported together independent of Serviceguard.

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/software/releases/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.