

Dell™ with Oracle® Database 11g R2 Enterprise Edition on Enterprise Linux



Oracle Database 11g R2 Enterprise Edition and RAC on Enterprise Linux 6.3



Minimum Hardware / Software Requirements (Updated 7/25/2013—for details, see below)			
	Validated Components	Minimum Single Node DB Configuration	Minimum Oracle RAC Configuration
Oracle Software & Licenses	Oracle Database 11g R2 Enterprise Edition	Single Node	RAC (min 2 nodes)
Oracle Patch Set	Oracle Database 11g R2 Patch Set 11.2.0.3		
Operating System	Red Hat Enterprise Linux 6.3 with kernel 2.6.32-279 Oracle Linux 6.3 with kernel 2.6.32-279 (Compatible Kernel)		
Recommended Support Contract	Dell ProSupport and Oracle supported		
Supported PowerEdge Servers	10g: M605, M805, R805, M905, R905 11g: M610 II, M610x, R610 II, T610 II, M710 II, M710HD, R715, M810, R810, R815, M910, R910, M915 12g: M620, R620, T620, R720, R720xd, R820, M820	1 only	2
Memory	All valid PowerEdge memory configurations	Minimum supported	Minimum supported
Dell Compellent Storage Array	SC8000, SC-40	N/A (For Internal Storage) 1 (For External Storage)	1
Dell EqualLogic iSCSI Storage Array	PS6510, PS6010, PS4100, PS6100, FS7500, PS6110, PS4110	N/A (For Internal Storage) 1 (For External Storage)	1
Dell PowerVault Storage Array	MD32x0, MD32x0i, MD36x0i, MD36x0f, MD12x0, MD3060e	N/A (For Internal Storage) 1 (For External Storage)	1
Fibre Channel Switch	PowerConnect B-8000 Brocade 200E, 4100, 5000, 300, 5100, 5300, 6510, 6505	N/A	N/A (for Direct Attached) 2
HBAs	Qlogic: QLE2560, QLE2562, QLE2460, QLE2462, QME2572 Emulex: LPE1105-M4, LPE1205-M, LPE11002, LPE12000, LPE12002, LPE1205-M	A (For Internal Storage) 2 ports (For External Storage)	2 ports (Per Node)

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Minimum Hardware / Software Requirements (Updated 7/25/2013—for details, see below)			
	Validated Components	Minimum Single Node DB Configuration	Minimum Oracle RAC Configuration
Ethernet Interfaces	Intel or Broadcom 1GbE NICs Intel 10GbE Server Adapters (AT, XF SR, AF, DA, KR) Broadcom 10GbE 57710, 57711, 57800S, 57810S, 57712	1	3 (per node)
Ethernet Switches for iSCSI Storage Area Network	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE Force10 4810, 4820T 10GbE	2	2
Ethernet Switches for Private Interconnect	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE Force10 4810, 4820T 10GbE	N/A	2
RAID Controllers (for internal storage only)	SAS 6 HBA, SAS 6/iR, PERC 6i, CERC 6, H200, H310, H700, H710, H710P	1	1 (per node)
Internal Disk Drive	All valid PowerEdge internal storage configurations	73 GB	73 GB (per node)

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Dell PowerEdge Servers				
	Model	BIOS	ESM — BMC Firmware	Notes
Dell 10g PowerEdge Servers	M605	5.4.1	1.65, A00 (iDRAC5)	Blade Server
	M805	2.3.3	1.65, A00 (iDRAC5)	Blade Server
	R805	4.2.1	1.65, A00 (iDRAC5)	
	M905	2.3.3	1.65, A00 (iDRAC5)	Blade Server
	R905	4.2.1	1.65, A00 (iDRAC5)	
Dell 11g PowerEdge Servers	R610, R610 II, T610, T610 II, R710, R710 II, T710, T710 II	6.3.0	1.95, A00 (iDRAC6)	
	M610, M610x, M710	6.3.0	3.50, A00 (iDRAC6)	Blade Server
	M710HD	7.0.0	3.50, A00 (iDRAC6)	Blade Server
	R715, R815	3.0.5	1.95, A00 (iDRAC6)	
	R810	2.8.2	1.95, A00 (iDRAC6)	
	M910	2.7.9	3.50, A00 (iDRAC6)	Blade Server
	R910	2.8.2	1.95, A00 (iDRAC6)	
	M915	3.0.5	3.50, A00 (iDRAC6)	Blade Server
Dell 12g PowerEdge Servers	M620	1.6.1	1.37.35, A00 (iDRAC7)	Blade Server
	R620	1.6.0	1.37.35, A00 (iDRAC7)	
	R720, R720xd	1.6.0	1.37.35, A00 (iDRAC7)	
	M820	1.5.1	1.37.35, A00 (iDRAC7)	Blade Server
	R820	1.5.1	1.37.35, A00 (iDRAC7)	

Internal Disks RAID		
Model	Firmware	Driver
SAS 6/iR (mptsas)	00.25.47.00.06.22.03.00, A04	3.04.19
PERC 6i	6.3.1-0003, A14	2.24.0.32 A07
CERC 6	6.3.2-0001, A15	2.24.0.32 A07
H200 (mpt2sas)	07.03.05.00, A09	09.101.00.00
H310 (megaraid_sas)	20.11.0-0002, A05	00.00.05.40-rh1
H700 (megaraid_sas)	12.10.5-0001, A11	4.31.1.32, A02
H710 / H710P (megaraid_sas)	21.1.0-0007, A03	00.00.05.38-rh
H810	21.1.0-0007	00.00.05.40-rh2

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Oracle Database 11g R2 Enterprise Edition and RAC on Enterprise Linux 6.3



Network Interconnect	
Model	Driver
Intel PROset GbE Family of Adapters	Driver version (e1000) = 7.3.21-k6-1-NAPI
Intel PROset PT/PF Single/Dual Port Server Adapters	Driver version (e1000e) = 2.1.4-NAPI
Intel Dual Port (ET) / Quad Port (VT/ET) GbE Server Adapters	Driver version (igb) = 3.4.9
Intel 10 GbE (AT/XF SR/AF DA/KR) Server Adapters	Driver version (ixgbe) = 3.10.17
Broadcom NetXtreme II GbE Family of Adapters	Driver version (bnx2) = 2.2.1j
Broadcom NetXtreme GbE Family of Adapters	Driver version (tg3) = 3.11.9
Broadcom NetXtreme II 10 GbE Family of Adapters	Driver version (bnx2x) = 1.72.18
Broadcom iSCSI Offload Engine (iSOE)	Driver version (bnx2i) = 2.7.2.1k
Native teaming driver	Driver version (bonding) = 3.4.0

Fibre Channel and SAS HBAs	
QLogic HBAs	
QLE 2460, QLE 2462	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QLE 2560, QLE 2562	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QME2472	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QME2572	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
Emulex HBAs	
LPE11002	Bios = 2.12a8; Firmware = 2.82a4; Driver version = 8.2.0.96.2p
LPE12000, LPE12002	Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p
LPE1105-M4	Bios = 2.12a8; Firmware = 2.82a4; Driver version = 8.2.0.96.2p
LPE1205-M	Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p
Dell HBAs	
Dell 6 Gbps SAS HBA	Firmware version = 00.10.51.00.60.12.05.00, A05; Driver version = 4.00.38.02-3, A05

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Oracle Database 11g R2 Enterprise Edition and RAC on Enterprise Linux 6.3



Fibre Channel Switches	
Brocade Fibre Channel Switches	
200E, 4100, 5000, 300, 5100, 5300, 5400, 6510, 6505	Firmware version = 6.2.0c or higher

iSCSI SAN Switches	
Dell PowerConnect 55xx GbE Ethernet Switches	Firmware = 4.1.0.10, A07 or higher
Dell PowerConnect 62xx GbE Ethernet Switches	Firmware = 3.3.5.5, A29 or higher
Dell PowerConnect 70xx GbE Ethernet Switches	Firmware = 5.1.0.1, A13 or higher
Dell PowerConnect 81xxF 10GbE Ethernet Switches	Firmware = 5.1.0.1, A02 or higher
Dell PowerConnect M6348 GbE Blade Switch	Firmware = 5.1.0.1, A24 or higher
Dell PowerConnect M8024-k 10GbE Blade Switch	Firmware = 5.1.0.1, A10 or higher
Dell PowerConnect M8428-k 10GbE Blade Switch	FOS v6.3.1
Dell Force10 MXL 10GbE Blade Switch	Force10 OS (FTOS) = 8.3.16.4, A03
Dell M I/O Aggregator Blade Switch	Force10 OS (FTOS) = 8.3.17.2 or higher
Dell Force10 S60	Force10 OS (FTOS) = 8.3.3.8 or higher
Dell Force10 4810	Force10 OS (FTOS) = 8.3.12.1 or higher
Dell Force10 4820T	Force10 OS (FTOS) = 8.3.10.2 or higher

iSCSI Storage	
Dell Compellent SC8000	Storage Center 6.1 or higher
Dell Compellent SC-40	Storage Center 5.4 or higher
Dell EqualLogic (all models)	Firmware = 6.0.2 or higher and HITKIT version 1.2.0
Dell PowerVault iSCSI Storage	MD32x0i/MD36x0i Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Fibre Channel Storage	
Dell Compellent SC8000	Storage Center 6.1 or higher
Dell Compellent SC-40	Storage Center 5.4 or higher
Dell PowerVault Fibre Channel Storage	MD36x0f Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

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SAS Storage	
Dell PowerVault	MD32x0 Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Software	
Oracle	Oracle 11g R2 11.2.0.3.0 Enterprise Edition
Operating system	Red Hat Enterprise Linux 6.3 with kernel 2.6.32-279 Oracle Linux 6.3 with kernel 2.6.32-279 (Compatible Kernel)
Dell Systems Management Tools and Documentation DVD	DVD provided by your Dell PowerEdge Server Bundle (support.dell.com)

Notes:

1. This assumes you don't need any other ports for other functions on the switch.
2. PowerEdge R610 and R610 II only support dual port Fibre Channel HBAs. 2 single port Fibre Channel HBAs are recommended for other servers.
3. This assumes one NIC for the public network and two teamed NICs for the private network. The two teamed NIC ports for the private network should be on separate PCI buses: one on on-board NIC, one on add on NIC card. It is recommended that two teamed NIC s are homogenous.
4. Minimum BIOS and ESM/BMC/iDRAC versions. For latest updates please go to <http://support.dell.com>.
5. Dell EqualLogic PS6000E/6010E are supported only to be used for Oracle Flash Recovery Area purposes.
6. Oracle Database 11g R2 – Patch Set 11.2.0.3 is a full installation and requires no previous patches
7. Qlogic HBAs are covered with level 3 support for Compellent Storage interoperability. For more information on support levels visit [Compellent Support](#)

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Dell™ with Oracle® Database 11g R2 Standard Edition on Enterprise Linux



Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



Minimum Hardware / Software Requirements (Updated 7/25/2013—for details, see below)			
	Validated Components	Minimum Single Node DB Configuration	Minimum Oracle RAC Configuration
Oracle Software & Licenses	Oracle Database 11g R2 Standard Edition	Single Node	RAC (min 2 nodes)
Oracle Patch Set	Oracle Database 11g R2 Patch Set 11.2.0.3		
Operating System	Red Hat Enterprise Linux 6.3 with kernel 2.6.32-279 Oracle Linux 6.3 with kernel 2.6.32-279 (Compatible Kernel)		
Recommended Support Contract	Dell ProSupport and Oracle supported		
Supported PowerEdge Servers	11g: R610 II, T610 II, R715 12g: R620, T620, R720, R720xd	1 only	2
Memory	All valid PowerEdge memory configurations	Minimum supported	Minimum supported
Dell PowerVault Storage Array	MD32x0, MD32x0i, MD36x0i, MD36x0f, MD12x0, MD3060e	N/A (For Internal Storage) 1 (For External Storage)	1
Fibre Channel Switch	PowerConnect B-8000 Brocade 200E, 4100, 5000, 300, 5100, 5300, 6510, 6505	N/A	N/A (for Direct Attached) 2
HBAs	Qlogic: QLE2560, QLE2562, QLE2460, QLE2462, Emulex: LPE11002, LPE12000, LPE12002,	A (For Internal Storage) 2 ports (For External Storage)	2 ports (Per Node)
Ethernet Interfaces	Intel or Broadcom 1GbE NICs Intel 10GbE Server Adapters (AT, XF SR, AF, DA, KR) Broadcom 10GbE 57710, 57711, 57800S, 57810S, 57712	1	3 (per node)

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Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



Minimum Hardware / Software Requirements (Updated 7/25/2013—for details, see below)			
	Validated Components	Minimum Single Node DB Configuration	Minimum Oracle RAC Configuration
Ethernet Switches for iSCSI Storage Area Network	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE Force10 4810, 4820T 10GbE	2	2
Ethernet Switches for Private Interconnect	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE Force10 4810, 4820T 10GbE	N/A	2
RAID Controllers (for internal storage only)	SAS 6 HBA, SAS 6/iR, PERC 6i, CERC 6, H200, H310, H700, H710, H710P	1	1 (per node)
Internal Disk Drive	All valid PowerEdge internal storage configurations	73 GB	73 GB (per node)

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Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



Dell PowerEdge Servers				
	Model	BIOS	ESM — BMC Firmware	Notes
Dell 11g PowerEdge Servers	R610, R610 II, T610, T610 II, R710, R710 II, T710, T710 II	6.3.0	1.95, A00 (iDRAC6)	
	R715	3.0.5	1.95, A00 (iDRAC6)	
Dell 12g PowerEdge Servers	R620	1.6.0	1.37.35, A00 (iDRAC7)	
	R720, R720xd	1.6.0	1.37.35, A00 (iDRAC7)	

Internal Disks RAID		
Model	Firmware	Driver
SAS 6/iR (mptsas)	00.25.47.00.06.22.03.00, A04	3.04.19
PERC 6i	6.3.1-0003, A14	2.24.0.32 A07
CERC 6	6.3.2-0001, A15	2.24.0.32 A07
H200 (mpt2sas)	07.03.05.00, A09	09.101.00.00
H310 (megaraid_sas)	20.11.0-0002, A05	00.00.05.40-rh1
H700 (megaraid_sas)	12.10.5-0001, A11	4.31.1.32, A02
H710 / H710P (megaraid_sas)	21.1.0-0007, A03	00.00.05.38-rh
H810	21.1.0-0007	00.00.05.40-rh2

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Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



Network Interconnect	
Model	Driver
Intel PROset GbE Family of Adapters	Driver version (e1000) = 7.3.21-k6-1-NAPI
Intel PROset PT/PF Single/Dual Port Server Adapters	Driver version (e1000e) = 2.1.4-NAPI
Intel Dual Port (ET) / Quad Port (VT/ET) GbE Server Adapters	Driver version (igb) = 3.4.9
Intel 10 GbE (AT/XF SR/AF DA/KR) Server Adapters	Driver version (ixgbe) = 3.10.17
Broadcom NetXtreme II GbE Family of Adapters	Driver version (bnx2) = 2.2.1j
Broadcom NetXtreme GbE Family of Adapters	Driver version (tg3) = 3.11.9
Broadcom NetXtreme II 10 GbE Family of Adapters	Driver version (bnx2x) = 1.72.18
Broadcom iSCSI Offload Engine (iSOE)	Driver version (bnx2i) = 2.7.2.1k
Native teaming driver	Driver version (bonding) = 3.4.0

Fibre Channel and SAS HBAs	
QLogic HBAs	
QLE 2460, QLE 2462	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QLE 2560, QLE 2562	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
Emulex HBAs	
LPE11002	Bios = 2.12a8; Firmware = 2.82a4; Driver version = 8.2.0.96.2p
LPE12000, LPE12002	Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p
Dell HBAs	
Dell 6 Gbps SAS HBA	Firmware version = 00.10.51.00.60.12.05.00, A05; Driver version = 4.00.38.02-3, A05

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Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



Fibre Channel Switches	
Brocade Fibre Channel Switches	
200E, 4100, 5000, 300, 5100, 5300, 5400, 6510, 6505	Firmware version = 6.2.0c or higher

iSCSI SAN Switches	
Dell PowerConnect 55xx GbE Ethernet Switches	Firmware = 4.1.0.10, A07 or higher
Dell PowerConnect 62xx GbE Ethernet Switches	Firmware = 3.3.5.5, A29 or higher
Dell PowerConnect 70xx GbE Ethernet Switches	Firmware = 5.1.0.1, A13 or higher
Dell PowerConnect 81xxF 10GbE Ethernet Switches	Firmware = 5.1.0.1, A02 or higher
Dell PowerConnect M6348 GbE Blade Switch	Firmware = 5.1.0.1, A24 or higher
Dell PowerConnect M8024-k 10GbE Blade Switch	Firmware = 5.1.0.1, A10 or higher
Dell PowerConnect M8428-k 10GbE Blade Switch	FOS v6.3.1
Dell Force10 MXL 10GbE Blade Switch	Force10 OS (FTOS) = 8.3.16.4, A03
Dell M I/O Aggregator Blade Switch	Force10 OS (FTOS) = 8.3.17.2 or higher
Dell Force10 S60	Force10 OS (FTOS) = 8.3.3.8 or higher
Dell Force10 4810	Force10 OS (FTOS) = 8.3.12.1 or higher
Dell Force10 4820T	Force10 OS (FTOS) = 8.3.10.2 or higher

iSCSI Storage	
Dell EqualLogic (all models)	Firmware = 6.0.2 or higher and HITKIT version 1.2.0
Dell PowerVault iSCSI Storage	MD32x0i/MD36x0i Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Fibre Channel Storage	
Dell PowerVault Fibre Channel Storage	MD36x0f Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

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Oracle Database 11g R2 Standard Edition and RAC on Enterprise Linux 6.3



SAS Storage	
Dell PowerVault	MD32x0 Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Software	
Oracle	Oracle 11g R2 11.2.0.3.0 Standard Edition
Operating system	Red Hat Enterprise Linux 6.3 with kernel 2.6.32-279 Oracle Linux 6.3 with kernel 2.6.32-279 (Compatible Kernel)
Dell Systems Management Tools and Documentation DVD	DVD provided by your Dell PowerEdge Server Bundle (support.dell.com)

Notes:

1. This assumes you don't need any other ports for other functions on the switch.
2. PowerEdge R610 and R610 II only support dual port Fibre Channel HBAs. 2 single port Fibre Channel HBAs are recommended for other servers.
3. This assumes one NIC for the public network and two teamed NICs for the private network. The two teamed NIC ports for the private network should be on separate PCI buses: one on on-board NIC, one on add on NIC card. It is recommended that two teamed NIC s are homogenous.
4. Minimum BIOS and ESM/BMC/iDRAC versions. For latest updates please go to <http://support.dell.com>.
5. Dell EqualLogic PS6000E/6010E are supported only to be used for Oracle Flash Recovery Area purposes.
6. Oracle Database 11g R2 – Patch Set 11.2.0.3 is a full installation and requires no previous patches
7. Qlogic HBAs are covered with level 3 support for Compellent Storage interoperability. For more information on support levels visit [Compellent Support](#)

For more information visit Dell.com/Oracle

Dell™ with Oracle® Database 11g R2 Enterprise Edition on OVM 3.2.2



Oracle Database 11g R2 Enterprise Edition and RAC on Oracle VM 3.2.2



Minimum Hardware / Software Requirements (Updated 7/25/2013—for details, see below)		
	Validated Components	Configuration
Oracle Software & Licenses	Oracle Database 11g R2 Enterprise Edition	Single Node
Oracle Patch Set	Oracle Database 11g R2 Patch Set 11.2.0.3	
Operating System	Oracle VM Server 3.2.2 Oracle VM Manager 3.2.2	
Recommended Support	Dell ProSupport and Oracle supported	
Supported PowerEdge Servers	12g: M620, R620, T620, R720, R720xd, R820, M820	1 only
Memory	All valid PowerEdge memory configurations	Minimum supported
Dell Compellent Storage Array	SC8000, SC-40	N/A (For Internal Storage) 1 (For External Storage)
Dell EqualLogic iSCSI Storage Array	PS6510, PS6010, PS4100, PS6100, FS7500, PS6110, PS4110	N/A (For Internal Storage) 1 (For External Storage)
Fibre Channel Switch	PowerConnect B-8000 Brocade 200E, 4100, 5000, 300, 5100, 5300, 6510, 6505	N/A
HBA's	Qlogic: QLE2560, QLE2562, QLE2460, QLE2462, QME2572 Emulex: LPE1105-M4, LPE1205-M, LPE11002, LPE12000, LPE12002, LPE1205-M	N/A (For Internal Storage) 2 ports (For External Storage)
Ethernet Interfaces	Intel or Broadcom 1GbE NICs Intel 10GbE Server Adapters (AT, XF SR, AF, DA, KR) Broadcom 10GbE 57710, 57711, 57800S, 57810S, 57712	1
Ethernet Switches for iSCSI Storage Area Network	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE Force10 4810, 4820T 10GbE	2
Ethernet Switches for Private Interconnect	PowerConnect 62xx GbE PowerConnect 55xx GbE PowerConnect 80xx, 81xx, 81xxF 10GbE Force10 S60 GbE	N/A
RAID Controllers (for internal storage only)	SAS 6 HBA, SAS 6/iR, PERC 6i, CERC 6, H200, H310, H700, H710, H710P	1
Internal Disk Drive	All valid PowerEdge internal storage configurations	73 GB

For more information visit Dell.com/Oracle

Oracle Database 11g R2 Enterprise Edition and RAC on Oracle VM 3.2.2



Dell PowerEdge Servers				
	Model	BIOS	ESM — BMC Firmware	Notes
Dell 12g PowerEdge Servers	M620	1.6.1	1.37.35, A00 (iDRAC7)	Blade Server
	R620	1.6.0	1.37.35, A00 (iDRAC7)	
	R720, R720xd	1.6.0	1.37.35, A00 (iDRAC7)	
	M820	1.5.1	1.37.35, A00 (iDRAC7)	Blade Server
	R820	1.5.1	1.37.35, A00 (iDRAC7)	

Internal Disks RAID		
Model	Firmware	Driver
H310 (megaraid_sas)	20.11.0-0002, A05	00.00.05.40-rh1
H710 / H710P (megaraid_sas)	21.1.0-0007, A03	00.00.05.38-rh

Network Interconnect	
Model	Driver
Intel PROset GbE Family of Adapters	Driver version (e1000) = 7.3.21-k6-1-NAPI
Intel PROset PT/PF Single/Dual Port Server Adapters	Driver version (e1000e) = 2.1.4-NAPI
Intel Dual Port (ET) / Quad Port (VT/ET) GbE Server Adapters	Driver version (igb) = 3.4.9
Intel 10 GbE (AT/XF SR/AF DA/KR) Server Adapters	Driver version (ixgbe) = 3.10.17
Broadcom NetXtreme II GbE Family of Adapters	Driver version (bnx2) = 2.2.1j
Broadcom NetXtreme GbE Family of Adapters	Driver version (tg3) = 3.11.9
Broadcom NetXtreme II 10 GbE Family of Adapters	Driver version (bnx2x) = 1.72.18
Broadcom iSCSI Offload Engine (iSOE)	Driver version (bnx2i) = 2.7.2.1k
Native teaming driver	Driver version (bonding) = 3.4.0

For more information visit Dell.com/Oracle

Oracle Database 11g R2 Enterprise Edition and RAC on Oracle VM 3.2.2



Fibre Channel and SAS HBAs	
QLogic HBAs	
QLE 2460, QLE 2462	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QLE 2560, QLE 2562	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QME2472	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
QME2572	Bios = 2.67; Driver version = 8.4.0.3.39.0-k
Emulex HBAs	
LPE11002	Bios = 2.12a8; Firmware = 2.82a4; Driver version = 8.2.0.96.2p
LPE12000, LPE12002	Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p
LPE1105-M4	Bios = 2.12a8; Firmware = 2.82a4; Driver version = 8.2.0.96.2p
LPE1205-M	Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p
Dell HBAs	
Dell 6 Gbps SAS HBA	Firmware version = 00.10.51.00.60.12.05.00, A05; Driver version = 4.00.38.02-3, A05

Fibre Channel Switches	
Brocade Fibre Channel Switches	
200E, 4100, 5000, 300, 5100, 5300, 5400, 6510, 6505	Firmware version = 6.2.0c or higher

iSCSI SAN Switches	
Dell PowerConnect 55xx GbE Ethernet Switches	Firmware = 4.1.0.10, A07 or higher
Dell PowerConnect 62xx GbE Ethernet Switches	Firmware = 3.3.5.5, A29 or higher
Dell PowerConnect 70xx GbE Ethernet Switches	Firmware = 5.1.0.1, A13 or higher
Dell PowerConnect 81xxF 10GbE Ethernet Switches	Firmware = 5.1.0.1, A02 or higher
Dell PowerConnect M6348 GbE Blade Switch	Firmware = 5.1.0.1, A24 or higher
Dell PowerConnect M8024-k 10GbE Blade Switch	Firmware = 5.1.0.1, A10 or higher
Dell PowerConnect M8428-k 10GbE Blade Switch	FOS v6.3.1
Dell Force10 MXL 10GbE Blade Switch	Force10 OS (FTOS) = 8.3.16.4, A03
Dell M I/O Aggregator Blade Switch	Force10 OS (FTOS) = 8.3.17.2 or higher
Dell Force10 S60	Force10 OS (FTOS) = 8.3.3.8 or higher
Dell Force10 4810	Force10 OS (FTOS) = 8.3.12.1 or higher
Dell Force10 4820T	Force10 OS (FTOS) = 8.3.10.2 or higher

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Oracle Database 11g R2 Enterprise Edition and RAC on Oracle VM 3.2.2



iSCSI Storage	
Dell Compellent SC8000	Storage Center 6.1 or higher
Dell Compellent SC-40	Storage Center 5.4 or higher
Dell EqualLogic (all models)	Firmware = 6.0.2 or higher and HITKIT version 1.2.0
Dell PowerVault iSCSI Storage	MD32x0i/MD36x0i Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Fibre Channel Storage	
Dell Compellent SC8000	Storage Center 6.1 or higher
Dell Compellent SC-40	Storage Center 5.4 or higher
Dell PowerVault Fibre Channel Storage	MD36x0f Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

SAS Storage	
Dell PowerVault	MD32x0 Firmware = 10.84.G6.25 MD3060e (expansion) Firmware = 07.84.00.64 MD12x0 (expansion) Firmware = 1.01 A00

Software	
Oracle	Oracle 11g R2 11.2.0.3.0 Enterprise Edition
Operating system	Red Hat Enterprise Linux 6.3 with kernel 2.6.32-279 Oracle Enterprise Linux 6.3 with kernel 2.6.32-279 (Compatible Kernel) Oracle VM Server 3.2.2 Oracle VM Manager 3.2.2
Dell Systems Management Tools and Documentation DVD	DVD provided by your Dell PowerEdge Server Bundle (support.dell.com)

Notes:

1. Qlogic HBAs are covered with level 3 support for Compellent Storage interoperability. For more information on support levels visit [Compellent Support](#)

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