# Dell™ with Oracle® 11gR2 Database Standard Edition Running Enterprise Linux

# Oracle 11gR2 Database Standard Edition and RAC Running on Enterprise Linux 5.7

| Minimum Hardware/Software Requirements (Updated 05/14/12– for details, see below) | | | |
|---|---|---|---|
| | **Validated Component(s)** | **Minimum Single Node DB Config** | **Minimum Oracle RAC Config** |
| Oracle Software & Licenses | Oracle 11g R2 11.2.0.3.0 Standard Edition | Single Node | RAC (max 2 nodes) |
| **Oracle Patch(es)** | Oracle 11g R2 11.2.0.3 | | |
| **Operating System** | Red Hat Enterprise Linux 5.7 with kernel 2.6.18-274<br>Oracle Linux 5.7 with kernel 2.6.18-274 (Compatible Kernel) | | |
| **Recommended Support Contract** | Dell ProSupport and Oracle supported | | |
| **Supported PowerEdge Servers** | PowerEdge R610, R710, R610 II, R715, T610, T710, T610 II, T710 II, R620, T620, R720, R720xd, R820 | 1 Only | 2 |
| **Memory** | All valid PowerEdge memory configurations | Minimum supported | Minimum supported |
| **Dell PowerVault Storage Array** | Dell PowerVault MD32XX (SAS), MD32XXi (iSCSI) w/ MD 12XX, MD36XXi (iSCSI) w/ MD 12XX, MD36XXF (FC) w/ MD12XX Expansion | N/A (For Internal Storage)<br>1 (For ExternalStorage) | 1 |
| **Fibre Channel Switch** | | N/A | N/A (For Direct Attached)<br>2 (8 port switches for 2-4 nodes, and 16 port switches for 5 or more nodes)1 |
| **HBAs** | Qlogic - QLE2460, QLE2462, QLE2562<br><br>Emulex - LPe1150e LPe11002, LPe12000, LPe12002 | N/A (For Internal Storage)<br>2 (For External Storage) | 2 ports (Per Node)2 |
| Ethernet Interfaces | Intel or Broadcom 1GbE NICs<br>Intel 10GbE Server Adapters (AT, XF SR, AF DA, KR)<br>Broadcom 10GbE 57710/57711/57800S/57810S/57712 | 1 | 3 (Per Node)[3] |
| **Ethernet Switches for iSCSI Storage Area Network** | Dell PowerConnect 62xx GbE, PowerConnect 54xx GbE , PowerConnect 8024, 8024F 10GbE | 2 | 2 |
| **Ethernet Switches (For Private Interconnect)** | 1/10GbE Switches | N/A | 2 |
| **Raid Controllers (Used for internal storage only)** | PERC 5/i,<br>PERC 6i, SAS 6/iR, H200, H700, H310, H710P | 1 | 1 (Per Node) |
| **Internal Drive** | All valid PowerEdge internal storage configurations | 73 GB | 73 GB/node |

For more information, visit Dell.com/Oracle

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| Dell PowerEdge Servers | | | | |
|---|---|---|---|---|
| **Dell PowerEdge™ Servers** | **Model** | **BIOS[4]** | **ESM - BMC Firmware[4]** | **Notes** |
| | PE R610, PE R610 II | 6.0.7 | 1.80,A01 (iDRAC6) | |
| | PE R710, PE R710 II PE T610, PE T610 II, PE T710, PE T710 II | 6.1.0 | 1.80,A01 (iDRAC6) | |
| | PE R715 | 2.3.0 | 1.80,A01 (iDRAC6) | |
| | PE R620, PE 720, PE R720xd | 1.0.4 | V1.00.00, A00(iDRAC7) | |

| Internal Disks RAID | |
|---|---|
| H710P | Firmware version = 3.130.05-1462; Driver version=00.00.05.38-rh |
| H310 | Firmware version = 2.120.14-1436; Driver version=00.00.05.38-rh |
| H700 | Firmware version = 12.10.2-0004, A08; Driver version = 00.00.04.31.2-1, A12 |
| H200 (mpt2sas) | Firmware version = 07.03.05.00,A09; Driver version = 08.101.00.01 |
| PERC 5/i | Firmware version = 5.2.2-0072; Driver version = 00.00.05.38-rh1 |
| PERC 6/i | Firmware version = 6.3.1-0003, A12; Driver version = 00.00.05.38-rh1 |
| SAS 6/iR (mptsas) | Firmware version = 00.25.57.00; Driver version = 3.04.18rh |

| Network Interconnect | |
|---|---|
| Intel Proset GbE Family of Adapters | Driver version (e1000) = 7.3.21-k4-3-NAPI |
| Intel PROSet PT/PF Single/Dual Port Server Adapters | Driver version (e1000e) = 1.6.3-NAPI |
| Intel Dual Port (ET)/Quad Port (VT/ET) GbE Server Adapters | Driver version (igb) = 3.2.10 |
| Intel 10 GbE (AT/XF SR/AF DA) Server Adapters | Driver version (ixgbe) = 3.6.7-NAPI |
| Broadcom NetXtreme II GbE Family of Adapters | Driver version (bnx2) = 2.1.12b |
| Broadcom NetXtreme GbE Family of Adapters | Driver version (tg3) = 3.120h |
| Broadcom NetXtreme II 10 GbE (57710/57711) Family of Adapters | Driver version (bnx2x) = 1.70.36 |
| Broadcom iSCSI Offload Engine (iSOE) | Driver version (bnx2i) = 2.7.0.41 |
| **NIC Teaming** | |
| Native teaming driver | Driver version (bonding) = 3.4.0 |

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| Qlogic HBAs | |
|---|---|
| QLE 2460, QLE 2462 | Bios = 2.10; Driver version = 8.03.07.03.05.07-k |
| QLE 2560, QLE 2562 | Bios = 2.10; Driver version = 8.03.07.03.05.07-k |

| Emulex HBAs | |
|---|---|
| LPe1150-E, LPe11002 | Bios = 2.12a8;  Firmware = 2.82a4; Driver version = 8.2.0.96.2p |
| LPe12000-E, LPe12002-E | Bios = 2.12a8; Firmware = 2.00a5; Driver version = 8.2.0.96.2p |

| Dell HBAs | |
|---|---|
| SAS 5/e | Firmware version = 00.10.51.00.06.12.05.00,A05 Driver version = 4.00.38.02-3, A05 |
| Dell 6Gbps SAS HBA | Firmware version = 07.03.05.00.A08, Driver version = 07.00.01.00-1, A03 |

| Fibre Channel SAN Switches | |
|---|---|
| **Cisco Fibre Channel Switches** | |
| MDS 9124 | Firmware version = 3.1.2 or higher |
| **Brocade Fibre Channel Switches** | |
| 200E, 4100, 5000, 300, 5100, 5300 | Firmware version = 6.2.0c or higher |

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| iSCSI SAN Switches | |
|---|---|
| Dell PowerConnect 54xx GbE Ethernet Switches | Firmware = V2.0.0.46, A10 or higher |
| Dell PowerConnect 62xx GbE Ethernet Switches | Firmware = 3.3.1.10, A25 or higher |
| Dell PowerConnect 8024, 8024F 10GbE Ethernet Switches | Firmware = 4.1.1.9, A10 or higher |

| iSCSI Storage | |
|---|---|
| Dell PowerVault iSCSI Storage | MD32x0i Firmware = 07.80.41.60, NVSRAM = N26X0-780890-001<br>MD36x0i Firmware = 07.80.41.60, NVSRAM = N26X0-780890-901<br>MD12x0 Firmware = 1.01 A00 |

| FC Storage | |
|---|---|
| Dell PowerVault Fibre channel storage | MD36xxf Firmware = 07.80.41.60, NVSRAM = N26X0-780890-901<br>MD12x0 Firmware = 1.01 A00 |

| SAS Storage | |
|---|---|
| Dell PowerVault | MD32x0 Firmware = 07.80.41.60, NVSRAM = N26X0-780890-001; MD12x0 Firmware = 1.01 A00 |

| Software | |
|---|---|
| Oracle | Oracle 11g R2 11.2.0.3 Standard Edition |
| Operating system | Redhat Enterprise Linux 5.7 with kernel 2.6.18-274<br>Oracle Linux 5.7 with kernel 2.6.18-274 (Compatible Kernel) |
| Dell Systems Management Tools and Documentation DVD | DVD provided by your Dell PowerEdge Server Bundle (support.dell.com) |

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**NOTES :**

1. PowerEdge R610 and R610 II only support dual port Fibre Channel HBAs. 2 single port Fibre Channel HBAs are recommended for other servers.
2. This assumes you don't need any other ports for other functions on the switch. 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.
3. Minimum BIOS and ESM/BMC/iDRAC versions. For latest updates please go to http://support.dell.com.