

## ORACLE DATABASE APPLIANCE

### FEATURES

- Fully integrated database appliance in a single box
- Simple one-button installation, patching, and diagnostics
- Oracle Database, Enterprise Edition 11g
- Oracle Real Application Clusters or Oracle Real Application Clusters One Node
- Oracle Automatic Storage Management
- Oracle Enterprise Manager
- Oracle Linux
- Two database servers
- 24 processor cores
- 192 GB of memory
- 12 TB SAS disk storage
- External NFS storage support

### BENEFITS

- World's #1 database
- High availability for wide range of application databases
- Reduced planned and unplanned downtime
- Consolidation of databases onto common platform
- Ease of deployment and management
- Single-vendor support
- Pay-as-you-grow licensing

*The Oracle Database Appliance saves time and money by simplifying deployment, maintenance, and support of high-availability database solutions. Built with the latest generation of the world's most popular database—Oracle Database 11g—it offers customers a fully integrated system of software, servers, storage, and networking in a single box that delivers high-availability database services for a wide range of homegrown and packaged online transaction processing (OLTP) and data warehousing applications. All hardware and software components are supported by a single vendor—Oracle—and offers customers unique pay-as-you-grow software licensing to quickly scale from 2 processor cores to 24 processor cores without incurring the costs and downtime usually associated with hardware upgrades.*

### Fully Redundant Integrated System

Providing access to information 24/7 and protecting databases from unforeseen as well as planned downtime can be a challenge for many organizations. Indeed, manually building redundancy into database systems can be risky and error-prone if the right skills and resources aren't in-house. The Oracle Database Appliance is designed for simplicity and reduces that element of risk and uncertainty to help customers deliver higher availability for their application databases.

The Oracle Database Appliance hardware is a single 4U rack-mountable chassis containing two Oracle Linux server nodes, each with two 6-core Intel Xeon processors X5675 and 96 GB of memory. The two server nodes are connected via an internal redundant gigabit Ethernet (GbE) interconnect for cluster communication, and each provides both 1 GbE and 10 GbE external networking connectivity. The appliance contains 12 TB of raw storage that's triple-mirrored, offering 4 TB of resilient usable database storage. There are also four 73 GB solid-state disks for database redo logs to boost performance. To expand storage outside of the appliance, external NFS storage is supported for online backups, data staging, or additional database files. The appliance is designed with mission-critical requirements in mind, with hot-swappable and redundant components.



The Oracle Database Appliance runs Oracle Database 11g, Enterprise Edition, and customers have the choice of running Oracle Real Application Clusters (Oracle RAC) or Oracle RAC One Node for “active-active” or “active-passive” database server failover.

### Ease of Deployment, Management, and Support

To help customers easily deploy and manage their databases, the Oracle Database Appliance

features Appliance Manager software for one-button automation to provision, patch, and diagnose database servers. The Appliance Manager feature greatly simplifies the deployment process and ensures that database configuration adheres to Oracle’s best practices. It also drastically simplifies maintenance by patching the entire appliance, including all firmware and software, in one operation, using an Oracle-tested patch engineered specifically for the appliance. Its built-in diagnostics also monitor the system and detect component failures, configuration issues, and deviations from best practices. Should it be necessary to contact Oracle Support, Appliance Manager collects all relevant log files and environmental data into a single compressed file. In addition, the Oracle Database Appliance Automatic Service Request feature can automatically log service requests with Oracle Support to help speed resolution of issues.

**Pay-As-You-Grow Licensing**

The Oracle Database Appliance offers customers a unique pay-as-you-grow software licensing model to quickly scale from 2 to 24 processor cores without any hardware upgrades. Customers can deploy the Oracle Database Appliance with as few as 2 processor cores to run their database servers, and incrementally scale up to the maximum of 24 processor cores. This enables customers to deliver the performance and high availability that business users demand, and align software spending with business growth.

**Oracle Database Appliance Specifications**

<b>Architecture</b>
<b>System</b>
<ul style="list-style-type: none"> <li>Two server nodes per system</li> </ul>
<b>Processor</b>
<ul style="list-style-type: none"> <li>Two 6-core Intel Xeon processors X5675 per server node</li> </ul>
<b>Cache per Processor</b>
<ul style="list-style-type: none"> <li>Level 1: 32 KB instruction and 32 KB data</li> <li>Level 2: 256 KB unified</li> <li>Level 3: 12 MB shared inclusive</li> </ul>
<b>Main Memory</b>
<ul style="list-style-type: none"> <li>96 GB per server node</li> </ul>
<b>Interfaces</b>
<b>Standard I/O</b>
<ul style="list-style-type: none"> <li>USB: Three USB 2.0 ports (two rear, one internal) per server node</li> <li>Two 1 GbE ports (onboard) per server node</li> <li>Four PCIe 2.0 slots: eight-lane electrical/mechanical per server node: <ul style="list-style-type: none"> <li>PCIe internal slot: dual-port internal SAS-2 HBA</li> <li>PCIe slot 2: dual-port internal SAS-2 HBA</li> <li>PCIe slot 1: quad-port 1 GbE NIC</li> <li>PCIe slot 0: dual-port 10 GbE NIC</li> </ul> </li> </ul>
<b>Internal Interconnect</b>
<ul style="list-style-type: none"> <li>Redundant private 1 GbE interconnects for cluster communication</li> </ul>

<p><b>Storage</b></p> <ul style="list-style-type: none"> <li>• Twenty 3.5-inch 600 GB 15K rpm SAS HDDs per system:             <ul style="list-style-type: none"> <li>• 12 TB raw (triple-mirrored), 4 TB usable capacity</li> </ul> </li> <li>• Four 3.5-inch 73 GB SAS SSDs per system for database redo logs</li> <li>• Two rear-accessible, 2.5-inch 500 GB 7.2K rpm SATA HDDs (mirrored) per server node for OS</li> <li>• One internal 4 GB USB thumb drive per server node</li> <li>• External NFS storage support</li> </ul>
<p><b>Graphics</b></p> <ul style="list-style-type: none"> <li>• VGA 2-D embedded graphics controller</li> <li>• Support for resolutions of up to 1,600 × 1,200 × 16 bits @ 60 Hz (1,024 × 768 when viewed remotely via Oracle Integrated Lights Out Manager [Oracle ILOM] RKVMS)</li> <li>• Rear HD15 VGA port per server node</li> </ul>
<p><b>Remote Management</b></p> <p>Oracle ILOM</p> <ul style="list-style-type: none"> <li>• One dedicated 10/100Base-T Ethernet network management port per server node</li> <li>• In-band, out-of-band, and sideband network management access via any one of the two main Ethernet ports of each server node</li> <li>• One RJ-45 serial management port per server node</li> </ul> <p>Features and Facilities</p> <ul style="list-style-type: none"> <li>• DMTF-style command-line interface</li> <li>• Support for access via SSH 2.0, HTTPS, RADIUS, LDAP, and Microsoft Active Directory</li> <li>• Browser-based GUI for control of the system through a graphical interface</li> <li>• IPMI 2.0; SNMP v1, v2c, and v3</li> <li>• Remote management with full keyboard, video, mouse, storage redirection, and remote media capability (floppy, DVD, CD, and more)</li> <li>• Monitor and report system and component status on all field replaceable units (FRUs)</li> </ul>
<p><b>Software</b></p>
<p><b>Oracle Software (Pre-Installed)</b></p> <ul style="list-style-type: none"> <li>• Oracle Linux Release 5.8</li> <li>• Appliance Manager</li> </ul>
<p><b>Oracle Database Software (Sold Separately)</b></p> <ul style="list-style-type: none"> <li>• Choice of Oracle Database software, depending on the desired level of availability:             <ul style="list-style-type: none"> <li>• Oracle Database, Enterprise Edition 11g (11.2.0.3)</li> <li>• Oracle Database, Enterprise Edition 11g and Oracle Real Application Clusters One Node</li> <li>• Oracle Database, Enterprise Edition 11g and Oracle Real Application Clusters</li> </ul> </li> <li>• Support for             <ul style="list-style-type: none"> <li>• Oracle Database, Enterprise Edition 11g options</li> <li>• Oracle Enterprise Manager Management Packs for Oracle Database, Enterprise Edition 11g</li> </ul> </li> </ul>

<b>Subcapacity Software Licensing</b>
<ul style="list-style-type: none"> <li>• Enable and license 2, 4, 6, 8, 10, or 12 cores per server node</li> <li>• Note: Both server nodes must have the same number of cores enabled, however it is possible to license software for either only one of the nodes or both nodes, depending on the high availability requirements</li> </ul>
<b>Power</b>
<ul style="list-style-type: none"> <li>• Dual-redundant, hot-swappable power supply</li> <li>• Power Supply Output Rated Maximum: 1100W at 100-127VAC; 1200W at 200-240VAC</li> <li>• AC power: 100VAC/13A max (Japan only), 110–127VAC/12A max, 200–240VAC/7A max, 50/60 Hz</li> </ul>
<b>Environment</b>
<ul style="list-style-type: none"> <li>• Operating temperature: 5° C to 35° C (41° F to 95° F) at sea level; 5° C to 31° C (41° F to 88° F) at altitude</li> <li>• Nonoperating temperature: –40° C to 70° C (–40° F to 158° F)</li> <li>• Operating relative humidity: 10% – 90%, noncondensing</li> <li>• Nonoperating relative humidity: 93% relative humidity, noncondensing</li> <li>• Operating altitude: up to 3,048 m; maximum ambient temperature is derated by 1° C per 300 m above 900 m</li> <li>• Nonoperating altitude: up to 12,000 m</li> <li>• Acoustic noise: 7.8 B operating, 7.1 B idling - (LwAd: 1 B=10 dB)</li> <li>• Airflow: 130 CFM typical, 250 CFM max</li> </ul>
<b>Regulations</b>
<ul style="list-style-type: none"> <li>• Safety: UL/CSA 60950-1 2nd Ed, EN60950-1:2006 2nd Ed +A11:2009, IEC60950-1:2005 CB Scheme with all country differences</li> <li>• RFI/EMI: FCC CFR 47 Part 15 Subpart B Class A, EN 55022:2006+A1:2007 Class A, EN 61000-3-2:2006, EN 61000-3-3:1995+A1:2001+A2:2002, ETSI EN 300 386 V1.4.1 (2008)</li> <li>• Immunity: EN 55024:1998+A1:2001:+A2:2003</li> </ul>
<b>Certifications</b>
<ul style="list-style-type: none"> <li>• Safety: cTUVus, CE, BSMI, GOST R, S-Mark, CCC</li> <li>• EMC: CE, FCC, VCCI, ICES, C-Tick, KCC, GOST R, BSMI Class A</li> <li>• Other: complies with WEEE Directive (2002/96/EC) and RoHS Directive (2002/95/EC)</li> </ul>
<b>Dimensions and Weight</b>
<ul style="list-style-type: none"> <li>• Height: 175.1 mm (6.9 in.)</li> <li>• Width: 482.6 mm (19.0 in.); without mounting ears: 437 mm (17.2 in.)</li> <li>• Depth (to fan module handles and latches): 782.0 mm (30.8 in.)</li> <li>• Weight: 72.6 kg (160 lb.)</li> </ul>
<b>Mounting Options</b>
<ul style="list-style-type: none"> <li>• Rack-mounting slide rail kit (included)</li> </ul>

**Contact Us**

For more information about the Oracle Database Appliance, please visit [oracle.com](http://oracle.com) or call +1.800.786.0404 to speak to an Oracle representative.



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