

# ORACLE RAC ONE NODE

## KEY FEATURES AND BENEFITS

### THE ALWAYS ONLINE SINGLE INSTANCE DATABASE

#### FEATURES

- Consolidation
- Cluster Failover
- Online Database Relocation
- Online Database Patches
- Online upgrade to Oracle RAC
- Certified with Oracle Virtual Machine

#### BENEFITS

- **Enables single-instance databases to leverage a private database cloud**
- **High Availability**
  - Failover protection for database and server failures
  - Operating System Rolling Upgrades and Patches
  - Database Rolling Patches
- **Performance**
  - Server scalability with no core limit
  - Online load balancing and scale-up
  - Online upgrade to Oracle RAC
- **Support for all Oracle supported platforms**
- **Standardized database deployment across enterprise**
- **Increases the benefit of Oracle VM with the high availability and scalability of Oracle RAC**

*Oracle RAC One Node is an always online single instance database. It provides protection from unplanned failures, as well as eliminates common causes of planned downtime for maintenance operations. It allows many databases to be consolidated into a private cloud, without incurring the overhead common to traditional server consolidation approaches. Databases can be online relocated within the pool of servers to balance the load, ensuring service levels are met during peaks in demand, or after a server failure. Oracle Database Resource Manager Instance Caging provides isolation to ensure all databases get their share of resource. There is no limit to server scalability and if applications grow to require more resources than a single server can supply, they can be easily upgraded online to multi-node Oracle Real Application Clusters.*

### Consolidation into the Cloud with Oracle RAC One Node

Oracle RAC One Node is an ideal tool for consolidating your single-instance database environments into a private cloud. It allows you to standardize all your Oracle Database deployments across the enterprise and supports all platforms and applications supported by Oracle Database 11g. Many databases can be consolidated into a single pool or servers with minimal overhead while providing the high availability benefits of failover protection, online rolling patch application, and rolling upgrades for the operating system.

Online database relocation is the unique feature of Oracle RAC One Node that enables online movement of an Oracle RAC One Node database to another node in the pool without downtime to the application. This allows migration for load balancing, hardware migrations, and high availability. Once the database has been relocated, the vacated server can be patched or upgraded, and the Oracle database binaries can be patched. Once the maintenance is complete; the Oracle RAC One Node database can be moved back to its original home.

Oracle Clusterware provides failover protection to Oracle RAC One Node. If the node fails, Oracle Clusterware will automatically detect the failure and restart the Oracle RAC One Node database on another server in the pool.

You can limit CPU utilization of individual database instances within the pool through Resource Manager Instance Caging. You can dynamically change this limit if needed, without restarting the affected Oracle RAC One Node databases. With Oracle RAC One Node, there is no limit to server scalability—Oracle RAC One Node can scale vertically to leverage the CPU on the largest servers. If applications

grow to require more resources than a single node can supply, you can easily upgrade your applications online to multi-node Oracle Real Application Clusters. If a server that is running multiple Oracle RAC One Node databases becomes overloaded, you can migrate one or more databases to another node in the pool using online database relocation with no downtime for application users.

### **Oracle RAC One Node with Server Virtualization**

You can use RAC One Node to get improved high availability and scalability in a server virtualization environment. Oracle RAC One Node is certified with Oracle Virtual Machine (Oracle VM), a free, next-generation server virtualization and management solution that makes enterprise applications easier to deploy, manage, and support. Oracle RAC One Node continually monitors the health of the database running inside the VM, and should it experience an issue, it will restart the affected database in place or on another virtual machine. It reduces the need for downtime for maintenance activities by enabling online database patching and OS patching and upgrades. Finally, if your VM is sized too small, you can online migrate the Oracle RAC One Node database to another larger Oracle VM node in the cluster (using online database relocation) or move the Oracle RAC One Node database to another Oracle VM node, and then resize the Oracle VM. When you relocate the Oracle RAC One Node database to the newly resized Oracle VM node, you can dynamically increase any limits programmed with Resource Manager Instance Caging.

### **Runs on Oracle Exadata**

Like all Oracle RAC, Oracle RAC One Node is fully supported on Oracle Exadata, a pre-integrated database machine that dramatically simplifies the process of deploying a database cloud. Oracle RAC One Node ensures your databases running on Oracle Exadata are protected from downtime, and are able to fully exploit the powerful compute and storage servers pooled within the machine.

### **Contact Us**

For more information about Oracle RAC One Node, please visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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