

ORACLE REAL APPLICATION CLUSTERS

KEY FEATURES AND BENEFITS

FOUNDATION FOR
ORACLE'S PRIVATE CLOUD
ARCHITECTURE

FEATURES

- Server Pool Managed Services for Automatic Workload Management
- Datacenter High Availability
- Run any packaged or custom application unchanged
- Scale out to 100 nodes
- Single image installation and management
- Included with Oracle Database 11g Standard Edition

BENEFITS

- **24/7 availability** - Provide continuous uptime for database applications
- **On-demand scalability** - Expand capacity by simply adding servers to your cluster
- **Lower computing costs** - Use low-cost commodity hardware and reduce cost of downtime
- **World-record performance** - Runs faster than the fastest mainframe
- Foundation for a private cloud

Oracle Real Application Clusters (RAC) provides unbeatable fault tolerance, performance, and scalability with no application changes necessary. Oracle RAC is a cluster database with a shared cache architecture that overcomes the limitations of traditional shared-nothing and shared-disk approaches to provide a highly scalable and available database solution for all your business applications. Oracle RAC provides the foundation for private cloud computing.

Oracle's Real Application Clusters (RAC) supports the transparent deployment of a single database across pools of server, providing fault tolerance from hardware failures or planned outages. Oracle RAC provides Oracle's highest level of capability in terms of availability, scalability, and low-cost computing. Oracle RAC supports mainstream business applications of all kinds. This includes OLTP, DSS, and Oracle's unique ability to effectively support mixed OLTP/DSS environments. This also includes popular packaged products such as SAP, PeopleSoft, Siebel, and Oracle E*Business Suite, as well as custom applications.

Oracle RAC provides a single image installation and management. Database administrators have a single point of control to install and manage an Oracle RAC cluster using a graphical user interface (GUI) or command line tools. Oracle Database 11g streamlines the install with automatic checks and fixes for missed pre-requisites for both Oracle Grid Infrastructure (Oracle Clusterware and Oracle Automatic Storage Management) as well as Oracle RAC.

High Availability

Oracle RAC provides the highest availability for applications by removing the single server as a single point of failure. If a node in a server pool fails, the Oracle Database continues to run on the remaining server in the pool. Individual servers can be shut down for maintenance while application users continue to work. In addition, Fast Application Notification (FAN) enables end-to-end recovery of applications and load balancing when a cluster configuration changes.

Flexible Scalability

Oracle Real Application Clusters provides flexibility for scaling applications. In order to keep costs low, server pools can be built on standardized, commodity-priced servers, storage pools, and network components. When you need more processing power, simply add another server without taking users offline to gain horizontal scalability. Oracle Clusterware and Oracle RAC support up to 100 servers in a pool.

ORACLE REAL APPLICATION CLUSTERS

Oracle Real Application Clusters 11g enables the transparent deployment of a single database across a pool of servers and provides the highest levels of availability and scalability. Server pools, storage pools, CPUs, and memory can be dynamically provisioned while the system remains online. Service levels can be efficiently maintained while lowering the total cost of ownership. Oracle RAC provides dynamic distribution of workload and transparent protection against system failures.

RELATED PRODUCTS

Oracle RAC One Node
 Oracle Clusterware
 Oracle Data Guard
 Part of the Maximum Availability Architecture

RELATED SERVICES

The following services are available from Oracle Support Services:

- Update Subscription Services
- Product Support Services
- OnlineDBA
- OnlineDBA for Applications

Automatic Workload Management

With Oracle Database 11g Release 2, application workloads can be individually managed and controlled using managed services. The Database Administrator controls which processing resources are allocated to each service during normal operations and in response to failures. Users connecting to a service are load balanced across the server pool. Performance is tracked on a per-service-basis by the Oracle Database 11g Automatic Workload Repository facility. Thresholds on performance metrics can be set to automatically generate alerts when hit. Services are integrated with the Database Resource Manager, Oracle Streams, and the Scheduler.

To provide the best possible throughput of application transactions, the Oracle Database 11g Universal Connection Pool (UCP) provides intelligent load balancing for applications called Runtime Connection Load Balancing.

Oracle Clusterware

Oracle Database 11g includes Oracle Clusterware, a complete, integrated cluster management solution available on all platforms supported for Oracle RAC 11g Release 2. Oracle Clusterware includes mechanisms for cluster messaging, locking, failure detection, and recovery. For most platforms, no 3rd party clusterware management software needs to be purchased. Oracle will, however, continue to support selected 3rd party clusterware products on specific platforms.

Oracle Clusterware includes a High Availability API to make applications highly available. Oracle Clusterware can be used to monitor, relocate, and restart any application. In an Oracle RAC environment, Oracle Clusterware automatically manages all Oracle processes.

Contact Us

For more information about Oracle Real Application Clusters, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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