

Scalability and Availability in Oracle7 7.3

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The Oracle7 7.3 Server (Oracle Universal Server) provides efficient, scalable, reliable and secure management for applications ranging from high volume online transaction systems to query intensive data warehouse applications. The Oracle Server is designed to support the following environments efficiently:

- Enterprise class OLTP
- Enterprise class Data Warehousing
- Enterprise wide distribution
- Enterprise wide System Management
- Internet and Intranet
- Special support for Audio, Video, Text and Spatial Data

Oracle 7.3 is available on a wide range of hardware platforms including almost all UNIX variants, MVS and NT across SMP, Clusters and MPP configurations with a single code base.

Scalability

Oracle 7.3 has demonstrated scalability on large SMP, cluster and MPP platforms. On an 8 CPU Digital AlphaServer, Oracle 7.3 has been benchmarked at 11,456.13 TPC-C transactions per minute at \$286 per transaction. On a 32 CPUs 4-Node Cluster Digital AlphaServer, Oracle 7.3 achieved the highest ever TPC-C benchmark with 30,390 TPC transactions per minute at \$305 per transaction. Some installations of Oracle 7.3 have data base sizes in excess of a Tera Byte. Key features include: Row level locking, transaction isolation via Consistent Read (CR) and discrete transactions. With the CR mechanism no read locks are acquired, enabling readers to neither block nor be blocked by writers. A consistent version of the database is created by applying undo to roll the required blocks back to the time of the query. Discrete transactions do not generate

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undo information, and hence, provide very high performance for short-duration transactions which are typical in OLTP environments. To address data warehouse application requirements, Oracle 7.3 offers a rich variety of query processing techniques, sophisticated query optimizations to choose most efficient data access path, and a scalable architecture that takes full advantage of all parallel hardware configurations. Oracle7.3 provides fully integrated bitmapped indexes and hash joins facilities. Oracle7.3's parallel query increases the performance of database operations by dynamically subdividing these operations into distinct tasks, and distributing the workload across all multiple processors. Oracle 7.3 parallelizes more operations than any other database product. A partial list includes table scans, sorts, data loading, aggregation, index creation, table and table space creation, as well as, recovery.

Availability

Oracle7.3 provides facilities for high-availability operations and applications without compromising scalability. The Oracle7.3 Parallel Server (OPS) ensures data accessibility in the event of a node failure, when operating in a clustered computer environment. If any node in the system should fail, affected users can resume processing on another operating node. The Oracle7.3 Online Backup Facility supports backup activities while the database is running, and without interrupting transaction processing, even during periods of heavy OLTP usage. The Oracle 7.3 standby database feature provides reliable and supported mechanism for implementing standby database system to facilitate rapid disaster recovery. In the event of a primary system failure, the standby database can be activated with minimal recovery, providing immediate system availability. Using Oracle7.3 Symmetric Replication, data can be replicated from a primary system to one or more alternative sites. Each alternative site and can be used for queries and modification and remains operational in case of problems in other sites.

Further Information

For more information:

<http://www.oracle.com/products/oracle7/oracle7.3/html/oracle7.3.ds.html>

This file also contains the relevant trade mark information