

**KEY BENEFITS**

- Simplify database consolidation
- Secure data isolation
- Rapid provisioning and cloning
- Faster upgrades and patching
- Manage many as one

## ORACLE MULTitenant

*Oracle Multitenant - an Oracle Database 12c Enterprise Edition option – introduces a new architecture that enables customers to easily consolidate multiple databases, without changing their applications. This new architecture delivers all the benefits of managing many databases as one, yet retains the isolation and resource prioritization of separate databases. In addition, Oracle Multitenant enables rapid provisioning and upgrades, and fully complements other options including Oracle Real Application Clusters and Active Data Guard.*

### Designed for the Cloud

Taking advantage of the flexible resource sharing and cost savings that Cloud computing offers can be a challenge for many IT organizations. Designed for the Cloud, Oracle Multitenant delivers a new architecture that simplifies a key step on the journey to the Cloud: database consolidation. In this new architecture, a multitenant container database can hold many pluggable databases. An administrator deals with the multitenant container database, but application code connects to one pluggable database, just like it does with previous releases of Oracle Database. Now customers can easily consolidate multiple databases onto private Clouds without changing their applications, and still control the prioritization of resources between consolidated databases. Oracle Multitenant is also suited to SaaS vendors looking for the power of Oracle database in a secure and isolated multitenant model.

### Efficient Consolidation

IT organizations have traditionally used virtualization and clustering technologies to consolidate their databases, and many have embarked on major application redevelopments to consolidate database schemas. This has typically resulted in limited consolidation density, increased management costs, and in many cases high development costs. Oracle Multitenant simplifies the consolidation process by plugging multiple databases into a multitenant container database without changing applications. In this new architecture, memory and background processes are only required at the multitenant container database level, enabling IT organizations to achieve a greater level of scalability and consolidation density without compromising the security of previously separate database silos.

### Rapid Provisioning and Cloning

Rapid provisioning and cloning of databases for various purposes including testing, development and problem diagnosis can be a challenge for many IT organizations. Database administrators typically devote a significant portion of their working days to creating new databases, cloning databases and moving databases between different servers. In addition to simplifying database consolidation, Oracle Multitenant also enables rapid database provisioning and cloning. For example, database administrators can easily copy production databases and plug them into development and test containers. In addition, if the underlying filesystem supports copy on write (e.g. ZFS Filesystem, ASM Cluster Filesystem) cloning of pluggable databases can occur almost instantaneously.

**RELATED PRODUCTS**

Oracle Multitenant complements many related products including:

- Real Application Clusters
- Active Data Guard
- Enterprise Manager

**Faster Upgrades and Patching**

Every database administrator has to apply upgrades and patches to keep their databases current of software releases and fixes. Currently, such updates are applied to each individual database, including production, test and development databases throughout an organization. With Oracle Multitenant, upgrades and patches are applied to the multitenant container database only (i.e. not to each pluggable database) thereby simplifying and speeding up the entire process. However, administrators require the flexibility to perform selective updates and may not want to concurrently update all pluggable databases in any container. In this situation, administrators simply create a new updated multitenant container database and selectively unplug databases from existing containers and plug them into these new ones with the latest release levels.

**Manage Many Databases As One**

An obvious benefit of consolidating databases is that administrators have fewer databases to upgrade and patch, but the benefits of managing many databases as one don't end there. For example, instead of executing separate database backups, administrators only require to back up their database at the multitenant container database level. In other words, all pluggable databases consolidated into a container will be backed up as one, and administrators retain the flexibility to perform recovery operations at individual pluggable database level if required. Similarly, administrators maintaining standby systems in another data center (e.g. using Active Data Guard) will need to set up a standby configuration, only at the multitenant container database level, to replicate all pluggable databases consolidated in that container.

**Plug Into The Cloud**

Getting onto the Cloud using Oracle Multitenant is very simple. Administrators can utilize familiar upgrade-in-place methods to upgrade existing databases and plug them into a multitenant container database or use data integration tools such as Data Pump and GoldenGate to migrate data to pluggable databases. Administrators can use Oracle Enterprise Manager Cloud Control to simplify the management of Oracle Multitenant from database creation, to workload resource management, problem diagnosis and more. In addition, Oracle Multitenant is fully compatible with existing database options and features including Oracle Real Application Clusters, Active Data Guard, Real Application Testing and Recovery Manager.

**Contact Us**

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



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