ORACLE SNAP MANAGEMENT UTILITY FOR ORACLE DATABASE

EFFICIENTLY BACK UP, CLONE, AND RESTORE ORACLE DATABASES ON ORACLE'S ZFS STORAGE APPLIANCE WITH ORACLE SNAP MANAGEMENT UTILITY

KEY FEATURES

- Virtually unlimited number of database backups/copies/clones
- Fast restore/rollback to any point in time
- One-step provision of a copy/clone
- Built-in scheduler and policy management for automated backups
- Hot and cold database backups
- File format support (NFS/dNFS)
- Block format support (iSCSI)
- Single instance or Oracle Database with Oracle Real Application Clusters (Oracle RAC)

KEY BENEFITS

- Simplified management for Oracle Database protection
- Improve DBA productivity with automated backup/restore and cloning processes
- Higher database availability
- Increased development and testing efficiency
- Higher business productivity
- Reduced risk
- Cost savings

Oracle Databases form the backbone of information on which many corporations rely to run their business-critical applications. Database administrators are responsible to ensure data protection and data availability on a 24/7 basis, quickly restore access in case of data corruption or any other failure, and to provide fast and up-to-date database copies to maintain an agile development and testing environment. Today, many database administrators lack efficient management tools and rely on the storage administrators to successfully accomplish all these requirements.

With Oracle Snap Management Utility for Oracle Database, database administrators can directly perform the functions required to satisfy the above requirements, reducing the dependence on storage administrators, while increasing overall business productivity and saving costs.
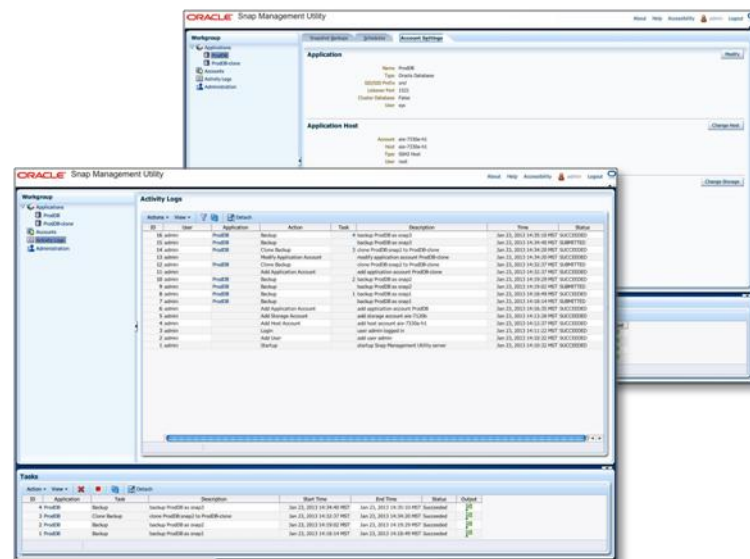

Figure 1: Browser user interface: Oracle Snap Management Utility for Oracle Database

Overview: Oracle Snap Management Utility for Oracle Database

The Oracle Snap Management Utility for Oracle Database is a standalone management tool specifically engineered to work with the Oracle ZFS Storage Appliance. It provides:

- A simple, fast, efficient, and automatic way to back up, restore, clone, and provision Oracle Databases that are stored on the Oracle ZFS Storage Appliance—all directly by

the database administrator through a graphical user interface

- One-step provisioning of database copies to accelerate development and test environments

- Support for any Oracle Database 10g or Oracle Database 11g deployed on the Oracle ZFS Storage Appliance

- Support for Oracle Solaris, Linux, and Windows clients and database hosts, for databases configured for NAS or SAN storage types

- Support for Oracle Real Application Clusters (Oracle RAC)

The Oracle Snap Management Utility for Oracle Database combines the underlying snapshot, clone and rollback capabilities of the Oracle ZFS Storage Appliance with standard host-side processing so all operations are always in a consistent state.
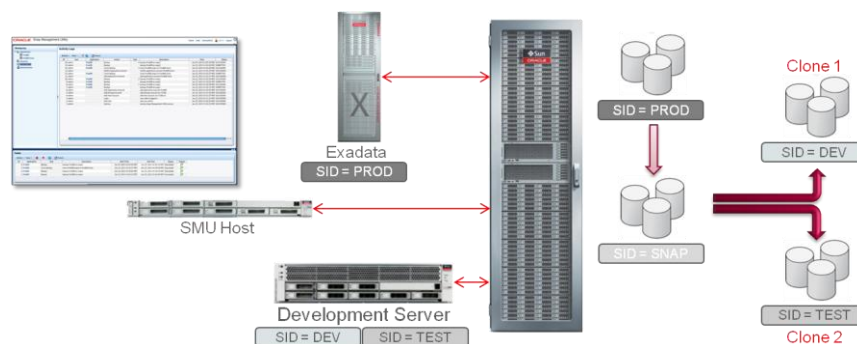

Figure 2. High-level view of the Oracle Snap Management Utility for Oracle Database architecture

Simplified Management for Database Protection

The Oracle Snap Management Utility for Oracle Database breaks down barriers that have constrained organizations from fully implementing efficient database protection management practices. Database backups and copies are not created as often as they should because the process is too time consuming, resource intensive, and expensive.

With the Oracle Snap Management Utility for Oracle Database, Oracle Database administrators can automate key backup processes, as well as copy, provision, and restore databases, using either a command-line interface (CLI) or a point-and-click browser user interface (BUI), without assistance from storage administrators and in a consistent manner that complies with IT policies. Database administrators can quickly create or modify backup schedules with fine granularity with the database in online or offline state, manage and monitor database copying and provisioning operations using a single step process, and restore to any point in time specified in the backup schedule.

Converting an Oracle Database with Oracle RAC to a single instance to provision for development and testing is performed automatically during the cloning process, as well provisioning to a different host operating system, further simplifying the management process.

Higher Availability and Data Protection

Oracle Snap Management Utility for Oracle Database complements the built-in availability and data protection features of the Oracle ZFS Storage Appliance, with capabilities that further increase data availability and protection.

Utilizing the space-efficient and high-performance snapshot technology, Oracle Database DBAs can protect their databases by creating an unlimited number of database backups. Since creating database backups is a fast process and does not take significant space, customers are

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able to set a high number of backups, up to a minute apart, to set points of recovery in case of data corruption or any other catastrophic event to the primary Oracle Database.

DBAs are able to restore their Oracle Database to a full state, within minutes, to any specific snapshot in the backup schedule. In addition, the backups are always in a consistent restorable state because of the tight design-integration between the Oracle Database and the Oracle Snap Management Utility for Oracle Database, ensuring no data loss, and providing higher protection and availability of the Oracle Database.

Efficient Development and Testing

Database copies are not created as often as they are required for development and testing, quality assurance, reporting, and training purposes. The key reason is that the process is too time consuming, and it uses valuable physical storage space and requires the intervention of other IT resources, making it an expensive proposition.

With the Oracle Snap Management Utility for Oracle Database and Oracle ZFS Storage Appliance, creating multiple up-to-date database copies is space-efficient and a quick process. The Oracle Snap Management Utility for Oracle Database automates over 88 percent of the steps required, so that in a single step, a database copy can be provisioned to any development or testing team anywhere in the world. Development and testing teams are able to perform their jobs faster and more efficiently, increasing the company's ability to meet its business objectives, such as delivering new products on time and on budget.

Oracle ZFS Storage Appliance for Oracle Database

The Oracle Snap Management Utility for Oracle Database is specifically engineered to work with the Oracle ZFS Storage Appliance, an enterprise storage system offering extreme performance and efficiency for Oracle Database storage, along with a rich set of data services. It provides native support for Oracle Databases with Hybrid Columnar Compression, enabling dev/test groups to work directly from the Oracle ZFS Storage Appliance, while significantly reducing storage capacity requirements. Oracle ZFS Storage Appliance is based on a massive DRAM and flash cache architecture and multi-threaded SMP OS that powers leading database performance. It is also engineered for high availability, offering dual-controller configurations, and remote replication for disaster recovery.

Oracle Snap Management Utility for Oracle Database	
Feature	**Details**
Supported Models	Oracle ZFS Storage 7120, 7320, 7420; Oracle ZFS Backup Appliance; Oracle ZS3 Series Storage ZS3-2, ZS3-4, ZS3-BA
License	Single license per Oracle ZFS Storage Appliance controller (2-node cluster requires 2 licenses)
Protocol support	File level: NFS/dNFS Block level (ASM): iSCSI
Clone type	Primary
Maximum number of snapshots	Virtually unlimited (limited only by physical system capacity)
Maximum number of clones	Virtually unlimited (limited only by physical system capacity)

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Automatic backup scheduler	Yes
Network connectivity support	1 GbE, 10 GbE, InfiniBand
Oracle ZFS Storage Appliance software version	2011.1.5 and later
User interface	CLI: SSH-based, batching/scripting BUI: Java, browser access
Oracle Database	
Release	Oracle Database 10*g*, Oracle Database 11*g*
Instance support	Single, Oracle RAC
Backup type	Online (hot), offline (cold) backups
Host operating system	Oracle Solaris 10 and Oracle Solaris,11, Oracle Linux (5.5,5.7,5.8,6.3) Red Hat Linux, Windows2008R2
Oracle Recovery Manager support	Yes
Provision Oracle Database with Hybrid Columnar Compression	Yes
Automatic conversion	Single instance to Oracle RAC, and vice-versa Provision to a different host operating system
Oracle Snap Management Utility for Oracle Database, server requirement	
Minimum RAM	2 GB
Host OS	Oracle Solaris 10, Oracle Solaris 11, Oracle Linux (5.5,5.6,5.7,5.8,6.3) Red Hat Linux, Windows 2008R2
Java version	Java Runtime Environment 6, 7
Engineered Systems support	Oracle Exadata Oracle SPARC SuperCluster Oracle Database Appliance

Contact Us

For more information about Oracle Snap Management Utility for Oracle Database or Oracle ZFS Storage Appliance, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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Hardware and Software, Engineered to Work Together

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