

ORACLE

# ORACLE DATABASE LIFECYCLE MANAGEMENT PACK

Oracle Enterprise Manager is Oracle's on-premises management platform, providing a single pane of glass for management of Oracle environments, whether in customer data centers or in Oracle Cloud. Through deep integration into Oracle's product stack, Enterprise Manager provides market leading management and automation for Oracle engineered systems, databases, middleware, and hardware.

ORACLE  
Enterprise Manager

Enterprise Manager helps increase business agility using application-to-disk automation and maximizes service levels through intelligent management of the Oracle stack. It also enables customers to reduce costs through comprehensive lifecycle automation, combined hardware and software management, proactive monitoring and compliance control.

## INTRODUCTION

The Database Lifecycle Management Pack covers the entire lifecycle of the databases, including:

- Discovery and Inventory Monitoring: the ability to discover assets and monitor
- Provisioning and cloning: ability to quickly provision databases at scale
- Fleet Maintenance: ability to patch and upgrade all supported databases at scale with reduced downtime
- Data Cloning: ability to quickly clone production databases for internal consumption. Clones can be created using a wide range of hardware and software solutions
- Configuration and Compliance Management: ability to manage configuration drift and evaluate the compliance of targets and systems as they relate to business best practices and regulatory compliance

## AUTOMATED DISCOVERY OF ASSETS

The Database Lifecycle Management Pack eliminates the need to manually track databases. It provides non-intrusive out-of-box agentless capabilities to discover physical servers that are easily promoted to a managed state thus automatically discovering all databases and other applications. This is particularly important given the dynamic nature of Oracle Pluggable Databases (PDBs), for which Enterprise Manager maintains inventory and underlying Container Database (CDB) information.

This enables IT Executives to have a 360-degree view of their data center. Reports can be generated providing different views of the inventory information such as products, versions, lifecycle status, cost center, etc.

## AGILE PROVISIONING AND CLONING OF DATABASES

Database Lifecycle Management Pack comes with out-of-box Deployment Procedures to provision, clone and patch the Oracle Database (Single Instance, CDB, PDB and RAC Databases). Enterprise Manager also supports the entire lifecycle management of Oracle Multitenant Database including migration. DBA can also provision a new database from a gold image. The gold image along with configuration details can be captured in Provisioning Profiles.

## ORACLE DATABASE LIFE CYCLE MANAGEMENT PACK

### KEY FEATURES

- Works with all supported databases, including Oracle Database 18c and Oracle Database 19c
- Manage Oracle Multitenant databases
- Auto Discovery of hosts and databases
- Database provisioning and cloning
- Fleet Maintenance for Patching and Upgrades
- Oracle Database Configuration and Compliance Management

## PROVISIONING ON VIRTUALIZED EXADATA

The Exadata plug-in has been enhanced to support complete lifecycle management of a virtualized environment. VM provisioning on Exadata provides an efficient and automated mass deployment mechanism of RAC Clusters. Administrators can perform a variety of active management operations directly from the Exadata target homepage, including: Create / Delete RAC Databases including VMs; Extend existing clusters (Grid Infrastructure) including VMs; and Scale down cluster and/or de-provision the VM(s).

## FLEET MAINTENANCE - PATCHING AND UPGRADE AUTOMATION

Database Life Cycle Management offers unique fleet maintenance and scripting capabilities that can patch and upgrade databases at scale with minimal downtime. The subscription based model enables updates at scale across the entire cloud infrastructure to significantly reduce the time required for database maintenance activities.

It provides reports using Software Standardization Advisor that highlight pollution in software configuration affecting database estate and a recommended standardized configuration. Automation is made possible through EMCLI and RESTful APIs.

In order to achieve end to end automation for an enterprise patching activity, it is now possible to execute pre/post scripts for Fleet Maintenance operations like deploy, update, rollback, and cleanup.

## CONFIGURATION AND COMPLIANCE MANAGEMENT

The Database Lifecycle Management Pack provides industry's leading configuration compare, drift detection, search, topology and compliance management. Administrators can define gold standards and baselines for configurations allowing them to standardize their environments against those definitions. Configuration compares can be performed on a scheduled basis or manually invoked for a 1 to 1 or 1 to many compare.

Compliance Standards are provided to help customers meet the growing industry and regulatory compliance and reporting requirements, such as STIG. These Frameworks can be used out-of-box or extended to meet customer defined security requirements. Rules based analysis or real-time change detection can be applied to the Database or customer's environment. Integration with Change Management allows the identification and reporting of authorized and unauthorized changes.

### KEY BENEFITS

- Non-intrusive agentless discovery of Servers on the network
- 360-degree view of assets in data center
- Reduce DBA time by automating deployment and maintenance of standard database configurations
- Impact analysis of application upgrade due to database customizations
- Configuration Pollution detection and recommended standard configuration reports
- Frameworks for industry and regulatory compliance requirements and reporting

With Enterprise Manager 13c, the ORAchk health check engine from Oracle Support has been integrated with the compliance framework. This includes support for engineered systems (Exadata, Exalogic, Exalytics, ZDLRA) as well as stand-alone databases and hosts. Users now have a single location in the compliance dashboard to view the current and historical standings of the managed targets against best practices and health checks.

## RELATED PRODUCTS

- Oracle Diagnostics Pack
- Oracle Tuning Pack
- Oracle Data Masking Pack
- Cloud Management Pack for Oracle Database

## SCHEMA CHANGE MANAGEMENT

The Database Lifecycle Management Pack provides complete automation for the schema deployment process by capturing the definitions of the application schema objects in the form of a gold definition called a dictionary baseline. When all development changes have been completed, DBAs can save them in these baselines and propagate the changes to any target database environment.

Impact analysis of application upgrades on customizations can also be performed by automatically identifying schema changes specific to each customization.

## END TO END PDB LIFECYCLE MANAGEMENT

Feature capabilities include complete PDB Lifecycle management. Users can create a new PDB from non-CDB which will help migrate to the new CDB architecture in a seamless manner. Plug-in/Unplug PDB helps in easy movement of the Pluggable databases between different Container Databases. Users can perform a Full Clone of PDB and non-CDB using the Clone Wizard and it also supports Cloning PDBs from Snapshots. Refreshable PDBs support helps the users to refresh the Clone PDB at periodic intervals.

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