Oracle® Database

Database Licensing Information User Manual

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Oracle Database Database Licensing Information User Manual, 12*c* Release 2 (12.2)

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Preface

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Audience

This book is intended for all purchasers of Oracle Database 12*c*.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Related Documents

For more information, see these Oracle resources:

- *Oracle Database New Features Guide* for information on the features new to this release of Oracle Database
- Oracle Global Pricing and Licensing, available at:

http://www.oracle.com/us/corporate/pricing/index.html

- Oracle Database licensing guidelines, available at:
https://www.oracle.com/assets/databaselicensing-070584.pdf

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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Licensing Information

- [Introduction](#)
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1.1 Introduction

This Licensing Information document is a part of the product or program documentation under the terms of your Oracle license agreement and is intended to help you understand the program editions, entitlements, restrictions, prerequisites, special license rights, and/or separately licensed third party technology terms associated with the Oracle software program(s) covered by this document (the "Program(s)"). Entitled or restricted use products or components identified in this document that are not provided with the particular Program may be obtained from the Oracle Software Delivery Cloud website (`https://edelivery.oracle.com`) or from media Oracle may provide. If you have a question about your license rights and obligations, please contact your Oracle sales representative, review the information provided in Oracle's Software Investment Guide (`http://www.oracle.com/us/corporate/pricing/software-investment-guide/index.html`), and/or contact the applicable Oracle License Management Services representative listed on `http://www.oracle.com/us/corporate/license-management-services/index.html`.

1.2 Oracle Database Offerings and Their Permitted Features

This section contains:

- [Oracle Database Offerings](#)
- [Permitted Features, Options, and Management Packs by Oracle Database Offering](#)
- [Oracle Database Options and Their Permitted Features](#)
- [Oracle Management Packs and Their Permitted Features](#)
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1.2.1 Oracle Database Offerings

Table 1-1   Oracle Database Offerings

Oracle Database Offering	License Deployment Options	Abbreviated Name Used in this Guide	Description
Oracle Database Standard Edition 2	On-Premises, OCI*, and ACEs**	SE2	Oracle Database Standard Edition 2 includes features necessary to develop workgroup, department-level, and Web applications.

Table 1-1   (Cont.) Oracle Database Offerings

Oracle Database Offering	License Deployment Options	Abbreviated Name Used in this Guide	Description
Oracle Database Enterprise Edition	On-Premises, OCI*, and ACEs**	**EE**	Oracle Database Enterprise Edition provides performance, availability, scalability, and security for developing applications such as high-volume online transaction processing (OLTP) applications, query-intensive data warehouses, and demanding Internet applications. Oracle Database Enterprise Edition can be enhanced with the purchase of Oracle Database options and Oracle management packs.
Oracle Database Enterprise Edition on Oracle Exadata Database Machine	On-Premises, OCI*, and ACEs**	**EE-Exa**	Oracle Database Enterprise Edition software installed on an Oracle Exadata Database Machine or an Oracle Supercluster. Includes all of the components of Oracle Database. You can further enhance this offering with the purchase of Oracle Database options and Oracle management packs.
Oracle Database Personal Edition	On-Premises	**PE**	Oracle Database Personal Edition supports single-user development and deployment environments that require full compatibility with Oracle Database Standard Edition 2 and Oracle Database Enterprise Edition. Includes all of the components that are included with Enterprise Edition, as well as all Oracle Database options, with the exception of the Oracle RAC One Node and Oracle Real Application Clusters options, which cannot be used with Personal Edition. Personal Edition is available on Linux and Windows platforms only. Oracle management packs cannot be used with Personal Edition.
Oracle Base Database Service Standard Edition	OCI*	**BaseDB SE**	Includes Oracle Database Standard Edition 2 software
Oracle Base Database Service Enterprise Edition	OCI*	**BaseDB EE**	Includes Oracle Database Enterprise Edition software
Oracle Base Database Service Enterprise Edition - High Performance	OCI*	**BaseDB EE-HP**	Includes Oracle Base Database Service Enterprise Edition software plus many Oracle Database options and Oracle management packs
Oracle Base Database Service Enterprise Edition - Extreme Performance	OCI*	**BaseDB EE-EP**	Includes Oracle Base Database Service Enterprise Edition software plus all Oracle Database options and Oracle management packs that are appropriate for use in the cloud.
Oracle Database Exadata Cloud Service Oracle Database Exadata Cloud@Customer	OCI*	**ExaCS/CC**	This guide uses **ExaCS/CC** to describe the licensing policies for both Oracle Database Exadata Cloud Service and Oracle Database Exadata Cloud@Customer. These offerings include Oracle Database Enterprise Edition software plus all Oracle Database options and Oracle management packs that are appropriate for use in Oracle Database Exadata Cloud Service or Oracle Database Exadata Cloud@Customer.

* OCI: Oracle Cloud Infrastructure

**ACEs: Authorized Cloud Environments

> ⓘ **Note**
>
> For the list of Authorized Cloud Environments, see `https://www.oracle.com/assets/cloud-licensing-070579.pdf`. All other public clouds and environments that are in any way considered an extension of non-Authorized Cloud Environments, such as cloud management, cloud billing, cloud support, cloud automation, cloud images, or cloud monitoring software, are not Authorized Cloud Environments.

1.2.2 Permitted Features, Options, and Management Packs by Oracle Database Offering

The tables in this section list Oracle Database features, Oracle Database options, and Oracle management packs, and their availability for each Oracle Database offering. The `Y` value in a column means that the feature, option, or pack is available for a particular offering; `N` means that it is unavailable; `N/A` means that it is not applicable. These tables can help you understand the difference between Oracle Database offerings to determine which one is right for you.

The tables are organized into the following functional categories:

- Consolidation - Table 1-2
- Development Platform - Table 1-3
- High Availability - Table 1-4
- Integration - Table 1-5
- Manageability - Table 1-6
- Networking - Table 1-7
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- Snapshots and Cloning - Table 1-11
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- VLDB, Data Warehousing, and Business Intelligence - Table 1-13

Table 1-2   Consolidation

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/CC	Notes
Oracle Multitenant - # of PDBs	1	252	4096	1	1	4096	4096	4096	The number value in each column indicates the maximum number of pluggable databases (PDBs) that can be created for each offering. • For all offerings, if you are not licensed for Oracle Multitenant, then the container database architecture is available in single-tenant mode, that is, with one user-created PDB, one user-created application root, and one user-created proxy PDB. • **EE**: Extra cost option; if you are licensed for Oracle Multitenant, then you can create up to 252 PDBs. • **EE-Exa**: Extra cost option; if you are licensed for Oracle Multitenant, then you can create up to 4096 PDBs. • **BaseDB EE-HP**, **BaseDB EE-EP**, and **ExaCS/CC**: License included option: You can create up to 4096 PDBs. BYOL option: Limit is 3 PDBs, unless you purchase the Oracle Multitenant option. **Authorized Cloud Environments:** Use is limited to three pluggable databases per container database. **Note:** For licensing purposes, one non-CDB instance is equivalent to one user-created PDB inside one CDB.

Table 1-3   Development Platform

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/CC	Notes
SQLJ		Y	Y	Y	Y	Y	Y	Y	Requires Oracle Programmer
Oracle Developer Tools for Visual Studio		Y	Y	N/A	N/A	N/A	N/A	N/A	Windows only

Table 1-3 (Cont.) Development Platform

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Microsoft Distributed Transaction Coordinator support	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Active Directory integration	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Native .NET Data Provider—ODP.NET	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
.NET Stored Procedures	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only

Table 1-4 High Availability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Application Continuity	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option, the Oracle RAC One Node option, or the Oracle Real Application Clusters option
Oracle Sharding	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: No limit on the number of either primary shards or standby shards if every shard has an Oracle Active Data Guard, Oracle GoldenGate, or Oracle RAC license. Without an Oracle Active Data Guard, Oracle GoldenGate, or Oracle RAC license, use is limited to three primary shards, with basic Data Guard standbys. **BaseDB EE**, **BaseDB EE-HP**, and **Authorized Cloud Environments**: Use is limited to three primary shards; there is no limit on the number of standby shards. **BaseDB EE-EP** and **ExaCS/CC**: No limit on the number of either primary shards or standby shards.
Oracle Fail Safe	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Oracle RAC One Node	Y	Y	Y	N	N	N	N	N	**EE** and **EE-Exa**: Extra cost option
Oracle Data Guard—Redo Apply	N	Y	Y	N	Y	Y	Y	Y	
Oracle Data Guard—Far Sync Standby	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option
Oracle Data Guard—SQL Apply	N	Y	Y	N	Y	Y	Y	Y	

Table 1-4   (Cont.) High Availability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Data Guard—Snapshot Standby	N	Y	Y	N	Y	Y	Y	Y	
Oracle Data Guard—Real-Time Cascading Standbys	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option
Oracle Active Data Guard	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Extra cost option; license included with Oracle GoldenGate
Rolling Upgrades—Patch Set, Database, and Operating System	N	Y	Y	N	Y	Y	Y	Y	
Rolling Upgrade Using Active Data Guard	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option
Online index rebuild	N	Y	Y	N	Y	Y	Y	Y	
Online table organization	N	Y	Y	N	Y	Y	Y	Y	`ALTER TABLE … MOVE ONLINE` operations
Online table redefinition	N	Y	Y	N	Y	Y	Y	Y	Using the `DBMS_REDEFINITION` package
Duplexed backup sets	N	Y	Y	N	Y	Y	Y	Y	
Block change tracking for fast incremental backup	N	Y	Y	N	Y	Y	Y	Y	
Unused block compression in backups	N	Y	Y	N	Y	Y	Y	Y	
Block-level media recovery	N	Y	Y	N	Y	Y	Y	Y	
Lost Write Protection	N	Y	Y	N	Y	Y	Y	Y	
Automatic Block Repair	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option
Parallel backup and recovery	N	Y	Y	N	Y	Y	Y	Y	
Tablespace point-in-time recovery	N	Y	Y	N	Y	Y	Y	Y	
Trial recovery	N	Y	Y	N	Y	Y	Y	Y	
Fast-start fault recovery	N	Y	Y	N	Y	Y	Y	Y	
Flashback Table	N	Y	Y	N	Y	Y	Y	Y	
Flashback Database	N	Y	Y	N	Y	Y	Y	Y	
Flashback Transaction	N	Y	Y	N	Y	Y	Y	Y	
Flashback Transaction Query	N	Y	Y	N	Y	Y	Y	Y	

Table 1-4   (Cont.) High Availability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Optimization for Flashback Data Archive	N	Y	Y	N	N	Y	Y	Y	Basic Flashback Data Archive is in all offerings **EE** and **EE-Exa**: Optimization for Flashback Data Archive requires the Oracle Advanced Compression option
Online Datafile Move	N	Y	Y	N	Y	Y	Y	Y	
Transaction Guard	N	Y	Y	N	Y	Y	Y	Y	
Cross-platform Backup and Recovery	N	Y	Y	N	Y	Y	Y	Y	
Global Data Services	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Active Data Guard option
Recovering tables and table partitions from RMAN backups	N	Y	Y	N	Y	Y	Y	Y	

Table 1-5   Integration

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Streams	Y	Y	Y	Y	Y	Y	Y	Y	**SE2**: No capture from redo
Database Gateways	Y	Y	Y	Y	Y	Y	Y	Y	Includes Database Gateway for ODBC All other Database Gateway products require a separate product license
Messaging Gateway	N	Y	Y	N	Y	Y	Y	Y	
AQ Sharded Queues	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Partitioning option

Table 1-6   Manageability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Cloud Management Pack for Oracle Database	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle Data Masking and Subsetting Pack	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle Database Lifecycle Management Pack for Oracle Database	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option

Table 1-6   (Cont.) Manageability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Diagnostics Pack	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle Tuning Pack	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option, also requires Oracle Diagnostics Pack
Oracle Real Application Testing	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Database Resource Manager	N	Y	Y	N	Y	Y	Y	Y	
I/O Resource Management	N	N	Y	N	N	N	N	Y	
Instance Caging	Y	Y	Y	Y	Y	Y	Y	Y	
SQL Plan Management	N	Y	Y	N	Y	Y	Y	Y	SQL Plan Management does not require a license for Oracle Diagnostics Pack or Oracle Tuning Pack
SQL Tuning Sets	N	Y	Y	N	Y	Y	Y	Y	**EE** and **EE-Exa**: SQL Tuning Sets can also be accessed by way of database server APIs and command-line interfaces. The following subprograms, part of the `DBMS_SQLTUNE` package, provide an interface to manage SQL Tuning Sets and are part of the EE and EE-Exa offerings: `ADD_SQLSET_REFERENCE`, `CAPTURE_CURSOR_CACHE_SQLSET`, `CREATE_SQLSET`, `CREATE_STGTAB_SQLSET`, `DELETE_SQLSET`, `DROP_SQLSET`, `LOAD_SQLSET`, `PACK_STGTAB_SQLSET`, `REMOVE_SQLSET_REFERENCE`, `SELECT_CURSOR_CACHE`, `SELECT_SQLSET`, `SELECT_WORKLOAD_REPOSITORY`, `UNPACK_STGTAB_SQLSET`, `UPDATE_SQLSET`.
Oracle Fleet Patching and Provisioning (formerly Rapid Home Provisioning)	N	Y	Y	N/A	N/A	N/A	N/A	N/A	**EE** and **EE-ES**: When deployed across multiple clusters, each FPP-managed target must be licensed for one of the following: Oracle Database Lifecycle Management Pack, Oracle RAC, or Oracle RAC One Node

Table 1-7   Networking

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/CC	Notes
RDMA fabric	N	N	Y	N	N	N	N	Y	
Oracle Connection Manager	N	Y	Y	N	Y	Y	Y	Y	Available via a custom install of the Oracle Database client, usually installed on a separate machine or compute instance
Network Compression	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Compression option
Network Encryption (SSL/TLS)	Y	Y	Y	Y	Y	Y	Y	Y	

Table 1-8   Performance

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/CC	Notes
Client Side Query Cache	N	Y	Y	N	Y	Y	Y	Y	
Query Results Cache	N	Y	Y	N	Y	Y	Y	Y	
PL/SQL Function Result Cache	N	Y	Y	N	Y	Y	Y	Y	
Oracle TimesTen Application-Tier Database Cache	N	Y	Y	N	N	N	N	N	**EE** and **EE-Exa**: Extra cost option
Database Smart Flash Cache	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	**EE**: Solaris and Oracle Linux only
Support for Oracle Exadata Storage Server Software	N	N	Y	N	N	N	N	Y	
Adaptive Execution Plans	N	Y	Y	N	Y	Y	Y	Y	
Concurrent Execution of `UNION` and `UNION ALL` Branches	N	Y	Y	N	Y	Y	Y	Y	
Oracle Database In-Memory	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Extra cost option
In-Memory Column Store on Active Data Guard standby	N	N	Y	N	N	N	N	Y	**EE-Exa**: Requires the Oracle Database In-Memory option and the Oracle Active Data Guard option

Table 1-8   (Cont.) Performance

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Fault Tolerant In-Memory Column Store	N	Y	Y	N	N	N	N	Y	**EE**: Requires Oracle Database Appliance, the Oracle Database In-Memory option, and the Oracle Real Application Clusters option **EE-Exa**: Requires the Oracle Database In-Memory option and the Oracle Real Application Clusters option
In-Memory Aggregation	N	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Database In-Memory option
Attribute Clustering	N	Y	Y	N	Y	Y	Y	Y	
Zone Maps	N	N	Y	N	N	N	N	Y	**EE-Exa**: Requires the Oracle Partitioning option

Table 1-9   Scalability

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Real Application Clusters (Oracle RAC)	Y	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Extra cost option
Automatic Workload Management	Y	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Real Application Clusters option
Quality of Service Management	Y	Y	Y	N	N	N	Y	Y	**EE** and **EE-Exa**: Requires the Oracle RAC One Node option or the Oracle Real Application Clusters option
Oracle NoSQL Database Enterprise Edition	N	Y	Y	N/A	N/A	N/A	N/A	N/A	

Table 1-10   Security

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Transparent Data Encryption (TDE) for Columns	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Security option
Transparent Data Encryption (TDE) for Tablespaces	N	Y	Y	Y	Y	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Security option
Oracle Advanced Security	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option

Table 1-10   (Cont.) Security

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Database Vault	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle Label Security	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Enterprise User Security	N	Y	Y	N	Y	Y	Y	Y	**EE**, **EE-Exa**, **BaseDB EE**, **BaseDB EE-HP**, **BaseDB EE-EP**, and **ExaCS/CC**: Enterprise User Security is a feature for directory-based management of database users. It requires a corresponding Oracle Identity Management Directory Services Plus to be licensed.
Fine-grained Auditing	N	Y	Y	N	Y	Y	Y	Y	
Privilege Analysis	N	Y	Y	N	Y	Y	Y	Y	
Real Application Security	N	Y	Y	N	Y	Y	Y	Y	
Redaction	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Security option
Transparent Sensitive Data Protection	N	Y	Y	N	Y	Y	Y	Y	
Virtual Private Database	N	Y	Y	N	Y	Y	Y	Y	

Table 1-11   Snapshots and Cloning

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Storage Snapshot Optimization	N	Y	Y	N/A	N/A	N/A	N/A	N/A	**EE** and **EE-Exa**: Requires the Oracle Advanced Compression option

Table 1-12   Spatial and Graph Data

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Spatial and Graph	Y	Y	Y	Y	Y	Y	Y	Y	Oracle Spatial and Graph no longer requires an extra cost license. See Oracle Database Insider blog post for more information.
Graph and Semantic Technologies (RDF/OWL)	Y	Y	Y	Y	Y	Y	Y	Y	Graph and Semantic Technologies (RDF/OWL) no longer requires an extra cost license. See Oracle Database Insider blog post for more information.

Table 1-12   (Cont.) Spatial and Graph Data

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Parallel spatial index builds	N	Y	Y	N	Y	Y	Y	Y	
Partitioned spatial indexes	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Partitioning option

Table 1-13   VLDB, Data Warehousing, and Business Intelligence

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/ CC	Notes
Oracle Partitioning	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle On-Line Analytical Processing (OLAP)	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Oracle Machine Learning (formerly Advanced Analytics)	Y	Y	Y	Y	Y	Y	Y	Y	Oracle Machine Learning no longer requires an extra cost license. See Oracle Database Insider blog post for more information.
Oracle Advanced Compression	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Extra cost option
Advanced Index Compression	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Compression option
Prefix Compression (also called Key Compression)	N	Y	Y	N	Y	Y	Y	Y	
Hybrid Columnar Compression	N	Y	Y	N	Y	Y	Y	Y	**EE**: Requires ZFS, Axiom, or FS1 storage
Row-Level Locking for Hybrid Columnar Compression	N	Y	Y	N	N	N	N	Y	**EE**: Requires ZFS or FS1 storage, and the Oracle Advanced Compression option **EE-Exa**: Requires the Oracle Advanced Compression option
Exadata Flash Cache Compression	N	N	Y	N	N	N	N	Y	**EE-Exa**: Requires the Oracle Advanced Compression option
Heat Map	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Compression option or the Oracle Database In-Memory option
Automatic Data Optimization	N	Y	Y	N	N	Y	Y	Y	**EE** and **EE-Exa**: Requires the Oracle Advanced Compression option or the Oracle Database In-Memory option
Basic Table Compression	N	Y	Y	N	Y	Y	Y	Y	

Table 1-13   (Cont.) VLDB, Data Warehousing, and Business Intelligence

Feature / Option / Pack	SE2	EE	EE-Exa	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaCS/CC	Notes
Deferred Segment Creation	N	Y	Y	N	Y	Y	Y	Y	
Bitmapped index, bitmapped join index, and bitmap plan conversions	N	Y	Y	N	Y	Y	Y	Y	
Parallel query/DML	N	Y	Y	N	Y	Y	Y	Y	
Parallel statistics gathering	N	Y	Y	N	Y	Y	Y	Y	
Parallel index build/ scans	N	Y	Y	N	Y	Y	Y	Y	
Parallel Data Pump Export/Import	N	Y	Y	N	Y	Y	Y	Y	
In-Memory Parallel Execution	N	Y	Y	N	Y	Y	Y	Y	
Parallel Statement Queuing	N	Y	Y	N	Y	Y	Y	Y	
Parallel capture and apply via XStream	N	Y	Y	N	Y	Y	Y	Y	
Transportable tablespaces, including cross-platform and full transportable export and import	N	Y	Y	N	Y	Y	Y	Y	Import of transportable tablespaces is supported from all offerings that include Enterprise Edition software into **SE2**; this does not include the use of cross-platform capabilities.
Summary management —Materialized View Query Rewrite	N	Y	Y	N	Y	Y	Y	Y	

1.2.3 Oracle Database Options and Their Permitted Features

Table 1-14 lists Oracle Database options, the Oracle Database offerings for which each option is available, and the features that are included with each option. You must be licensed for an option in order to use any of its features.

Table 1-14   Oracle Database Options and Their Permitted Features

Option	Availability	Included Features
Oracle Active Data Guard	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Active Data Guard includes the following features: • Physical Standby with Real-time Query • Fast Incremental Backup on Physical Standby • Automatic Block Repair • Active Data Guard Far Sync • Global Data Services • Real-Time Cascade • Application Continuity • Rolling Upgrade using Active Data Guard In an Oracle Data Guard configuration, Oracle Active Data Guard must be licensed on any standby databases with any of the above features in use, as well as the primary database. If there are additional standby databases in the Oracle Data Guard configuration that are not using any of the Oracle Active Data Guard features, those standby databases do not require an Oracle Active Data Guard license. **Note:** For customers who back up standby databases to Zero Data Loss Recovery Appliance (ZDLRA) and wish to use the Fast Incremental Backup on Physical Standby or Real-Time Cascade feature, an Oracle Active Data Guard license is not required. Oracle Active Data Guard must still be licensed on standby databases, if any other of the above features are in use.
Oracle Advanced Compression	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Advanced Compression includes the following features: • Advanced Row Compression • Advanced LOB Compression • Advanced LOB Deduplication • RMAN Backup Compression (`RMAN DEFAULT COMPRESS` does not require the Oracle Advanced Compression option) • Data Pump Export Data Compression (`COMPRESSION=METADATA_ONLY` does not require the Oracle Advanced Compression option) • Heat Map • Automatic Data Optimization • Data Guard Redo Transport Compression • Advanced Network Compression • Optimization for Flashback Data Archive History Tables • Storage Snapshot Optimization • Online Move Partition (to any compressed format) • Exadata Flash Cache Compression (This feature can be enabled only on Exadata storage servers, and all database processors that access the Exadata storage servers must be licensed for Oracle Advanced Compression.) • Advanced Index Compression • Row-Level Locking for Hybrid Columnar Compression (Requires Exadata, Supercluster, ZFS, or FS1 storage) **Note:** The use of Hybrid Columnar Compression without Row-Level Locking does not require a license for Oracle Advanced Compression.

Table 1-14   (Cont.) Oracle Database Options and Their Permitted Features

Option	Availability	Included Features
Oracle Advanced Security	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Advanced Security includes the following features: • Transparent Data Encryption (TDE) for columns and tablespaces (including Oracle SecureFiles) • DataPump Export File encryption • RMAN backup encryption to disk • Encrypted Database File System (DBFS) • Data Redaction of sensitive data returned to applications (Full, Partial, Regular Expression, and Random techniques) Oracle Advanced Security includes a restricted use license for certain Oracle Enterprise Manager features. Refer to Oracle Advanced Security in "Restricted Use Licenses" for more information. **Note:** Network encryption (native network encryption, network data integrity, and SSL/TLS) and strong authentication services (Kerberos, PKI, and RADIUS) are no longer part of Oracle Advanced Security and are available in all licensed editions of all supported releases of Oracle Database.
Oracle Database In-Memory	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Database In-Memory includes the following features: • In-Memory Column Store • Fault Tolerant In-Memory Column Store (Requires Exadata, Supercluster, or Oracle Database Appliance) • In-Memory Aggregation • Heat Map • Automatic Data Optimization
Oracle Database Vault	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Database Vault includes the following features: • Separation of Duties • Realms • Command Rules • Trusted Paths Oracle Database Vault includes special license rights for Oracle Label Security. Refer to Oracle Database Vault in "Special License Rights" for more information. Oracle Database Vault includes a restricted use license for certain Oracle Enterprise Manager features. Refer to Oracle Database Vault in "Restricted Use Licenses" for more information.
Oracle Label Security	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Label Security includes the following features: • Label based access control (LBAC) • Multi-level security (MLS) • Label factors for Oracle Database Vault (Confidential, Sensitive) • User label authorizations (Confidential, Sensitive: PII) • Data labels (Sensitive: PII) Oracle Label Security includes a restricted use license for certain Oracle Enterprise Manager features. Refer to Oracle Label Security in "Restricted Use Licenses" for more information.

Table 1-14   (Cont.) Oracle Database Options and Their Permitted Features

Option	Availability	Included Features
Oracle Multitenant	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Multitenant includes the following features: • For **EE** and **PE**, the ability to have up to 252 pluggable databases per multitenant container database • For **EE-Exa**, **BaseDB EE-HP**, **BaseDB EE-EP**, and **ExaCS/CC**, the ability to have up to 4096 pluggable databases per multitenant container database A restricted use license for Oracle Multitenant is included with all Oracle Database offerings. Refer to Oracle Multitenant in "Restricted Use Licenses" for more information. **Note:** For licensing purposes, one non-CDB instance is equivalent to one user-created PDB inside one CDB.
Oracle On-Line Analytical Processing (OLAP)	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle On-Line Analytical Processing (OLAP) includes the following features: • OLAP Cube Definition, Storage, and Querying • OLAP API and Metadata • OLAP Cube Materialized Views • Analytic Workspaces • SQL Access to OLAP Cubes
Oracle Partitioning	Extra cost option: **EE**, **EE-Exa** Included option: **PE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Partitioning includes the following features: • Table Partitions and Subpartitions • Global and Local Index Partitions and Subpartitions • AQ Sharded Queues • Zone Maps (Available only on **EE-Exa** and **ExaCS/CC**; requires Exadata or Supercluster)
Oracle RAC One Node	Extra cost option: **EE**, **EE-Exa** Included option: **SE2**	Oracle RAC One Node includes the following features: • Database Cold Failover to another node in the cluster in case of server or instance failure • Online migration of the database instance to another server • Support for online rolling upgrades of the database, grid infrastructure, and OS homes • Online upgrade to Oracle Real Application Clusters • Policy-managed Server Pools • Quality of Service Management • Application Continuity
Oracle Real Application Clusters (Oracle RAC)	Extra cost option: **EE**, **EE-Exa** Included option: **SE2**, **BaseDB EE-EP**, **ExaCS/CC**	Oracle Real Application Clusters (Oracle RAC) includes the following features: • All of the features included with Oracle RAC One Node • Real Application Clusters scaling to multiple servers • Connection Load Balancing • Fast Connection Failover • Hot Cluster Failover

Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features

Option	Availability	Included Features

Oracle Real Application Testing	Extra cost option: **EE**, **EE-Exa**
	
	Included option: **PE**, **BaseDB EE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**
		Oracle Real Application Testing includes the following features:
		
		• Database Replay
		• SQL Performance Analyzer (SPA)
		• Database Migration Planner
		• Database Migration Workbench
		
		Database Replay
		
		• The Oracle Real Application Testing license is required on both capture and replay systems for Database Replay and is charged by the total number of CPUs on those systems.
		• Use of Capture and Replay ASH Analytics Reports, Compare Period ADDM Reports, and Replay Compare Period Reports also requires an Oracle Diagnostics Pack license.
		• An Oracle Real Application Testing license permits you to access Database Replay functionality through Oracle Enterprise Manager, as well as through the following database server command-line APIs: `DBMS_WORKLOAD_CAPTURE` package and `DBMS_WORKLOAD_REPLAY` package. The use of the `DBMS_WORKLOAD_REPLAY.COMPARE_PERIOD_REPORT()` function also requires a license for Oracle Diagnostics Pack.
		
		SQL Performance Analyzer (SPA)
		
		An Oracle Real Application Testing license permits you to access SQL Performance Analyzer functionality through Oracle Enterprise Manager, as well as through the following database server command-line API: `DBMS_SQLPA` package, which is part of the Oracle Real Application Testing option.
		
		Database Migration Planner
		
		• Database Migration Planner was renamed from Database Consolidation Workbench in Enterprise Manager Cloud Control 13.4.
		• Database Migration Planner, introduced in Oracle Enterprise Manager Cloud Control 13c, provides a data-driven and systematic approach to consolidation by eliminating guess work and human errors.
		• Use of the consolidation planning feature of Database Migration Planner requires an Oracle Diagnostics Pack license.
		• An Oracle Real Application Testing license permits you to access the following links on the Database Migration Planner page in Oracle Enterprise Manager:
		  – From the **Enterprise** menu, select **Migration and Consolidation**, then select **Database Migration Planner**.
		  – On the database target home page, select the **Administration** menu, then select **Database Migration Planner**.
		  – All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Planner.
		
		Database Migration Workbench
		
		• Database Migration Workbench, introduced in Oracle Enterprise Manager Cloud Control 13c Release 4, is a single workbench that integrates all needs for migration sizing and performance comparison.
		• An Oracle Real Application Testing license permits you to access the following links on the Database Migration Workbench page in Oracle Enterprise Manager:

Table 1-14   (Cont.) Oracle Database Options and Their Permitted Features

Option	Availability	Included Features
		– From the **Enterprise** menu, select **Migration and Consolidation**, then select **Database Migration Workbench**.
		– All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Workbench.
Oracle TimesTen Application-Tier Database Cache	Extra cost option: **EE**, **EE-Exa** Included option: **PE**	Oracle TimesTen Application-Tier Database Cache includes the following features: • Data access using PL/SQL, JDBC, ODBC, ttClasses, OCI, and Pro*C/C++ interfaces • Transaction Log API (XLA) for change notification • Multi-node Cache Grid • Automatic data synchronization with the Oracle database • Transactional replication between the in-memory cache databases • Automated failure detection and database failovers • TimesTen Extension for Oracle SQL Developer • TimesTen Plug-in for Oracle Enterprise Manager

1.2.4 Oracle Management Packs and Their Permitted Features

Table 1-15 lists Oracle management packs, the Oracle Database offerings for which each pack is available, and the features that are included with each pack. The features in these packs are accessible through Oracle Enterprise Manager, Desktop Widgets, and APIs provided with Oracle Database software. You must be licensed for a management pack in order to use any of its features.

Table 1-15   Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
Oracle Cloud Management Pack for Oracle Database	Extra cost pack: **EE**, **EE-Exa** Included pack: **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	**Features:** Oracle Cloud Management Pack for Oracle Database includes the following features: • Database-as-a-Service comprising self-service database provisioning on physical or virtual infrastructure • DBaaS Rapid Start Kit allowing users to set up and configure Enterprise Manager Cloud Control 12*c* in under a minute. • Pluggable Database-as-a-Service (PDBaaS) providing self-service provisioning on a pool of multitenant container databases (CDBs). • Support shared server, shared cluster, and shared database (Schema-as-a-Service) deployment models • Virtual assembly provisioning. For example, if there is an assembly topology of three VMs (two WebLogic Server-managed servers and one database), you will need both packs to cover the respective tiers. • Snap Clone, a fast, storage efficient way of cloning Oracle databases • Full clones using RMAN backups • Role based access and resource control through quotas and retirement policies • Schedule- and performance-based resource management policies • Metering and chargeback based on fixed cost, utilization metrics and configuration parameters of the database • Programmatic access to the Self-Service Portal • Blueprint driven orchestration of cloud operations **Prerequisites:** Oracle Cloud Management Pack for Oracle Database requires Oracle Database Lifecycle Management Pack for Oracle Database. **Licensed Links:** Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Cloud Management Pack for Oracle Database. Starting on the Enterprise Summary home page, click the **Enterprise** menu. Select: • **Cloud**, then **Infrastructure Home** • **Cloud**, then **Infrastructure Request Dashboard** • **Cloud**, then **Infrastructure Policies** • **Cloud**, then **Middleware and Database Home** • **Cloud**, then **Middleware and Database Request Dashboard** • **Cloud**, then **Self Service Portal** • **Cloud**, then **Service Instances** • **Chargeback** • **Provisioning and Patching**, then **Database Provisioning**. In the Database Provisioning page, in the Related Links section of the left menu pane, click **Provision Pluggable Databases**. Next, from the PDB Operations section, select **Create New Pluggable Databases**. Click **Launch**, and from Pluggable Database Creation Options, select **Clone an Existing PDB -> Snap Clone**. Starting on the Enterprise Summary home page, click the **Setup** menu. Select: • **Cloud**. Select **Infrastructure** • **Cloud**. Select **Database** • **Provisioning and Patching**, then **Storage Registration** On the Multitenant container database's home page, from the Oracle Database menu, select **Provisioning**, then **Provision Pluggable**

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		Database. Next, from the PDB Operations section, select **Create New Pluggable Databases**. Click **Launch**, and from Pluggable Database Creation Options, select **Clone an Existing PDB -> Snap Clone**.

Licensed APIs:

Use of the following APIs requires a license for Oracle Cloud Management Pack for Oracle Database:

- Assembly Operations — Any POST/GET/PUT/DELETE on `/em/cloud/iaas` URI space for Resources Assembly Template and Assembly Instance
- DBaaS Operations — Any POST/GET/PUT/DELETE on `/em/cloud/dbaas` URI space
- DBaaS Setup Operations — Any POST/GET/PUT/DELETE on `/em/websvcs/restful/extws/cloudservices/admin/cfw/v1` URI space.

Licensed Command Line Interface (CLI) Verbs:

The following Enterprise Manager Command Line Interface (CLI) verbs are licensed as part of Oracle Cloud Management Pack for Oracle Database. These verbs operate on a database pool.

- `add_pool_members`
- `create_charge_item`
- `create_dbaas_quota`
- `create_dbprofile`
- `create_pool`
- `create_service_template`
- `delete_charge_item`
- `delete_dbaas_quota`
- `delete_pool`
- `delete_service_template`
- `get_dbaas_quota`
- `get_dbaas_request_settings`
- `get_metering_data`
- `get_pool_capacity_data`
- `get_pool_capacity_summary_data`
- `get_pool_constraints`
- `get_pool_criteria`
- `get_pool_detail`
- `get_pool_instance_data`
- `get_pool_target_type`
- `get_pools`
- `get_service_template`
- `list_charge_item_candidates`
- `remove_pool_members`
- `update_dbaas_quota`
- `update_dbaas_request_settings`
- `update_pool`

Licensed Views and Tables:

The following objects within the repository schema are licensed under Oracle Cloud Management Pack for Oracle Database:

- Tables starting with `EMCT_CBA`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• Views starting with `EMCT$CBA`
		• The `GP_EMCT_CBA_TARGET_CHARGE` views
		• The `MGMT$EMCT_CBA_CHARGE_DAILY` view
		• The `MGMT$EMCT_CBA_CHARGE_HOURLY` view
		Licensed Chargeback Reports:
		The following BI Publisher reports are licensed under Oracle Cloud Management Pack for Oracle Database:
		• Charge Trend Report
		• Charge Summary Report
		• Usage Trend Report
		• Usage Summary Report
		Also, any report created using the "create-like" feature of BI publisher referring the preceding reports, falls under this license.

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
Oracle Data Masking and Subsetting Pack	Extra cost pack: **EE**, **EE-Exa** Included pack: **BaseDB EE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	**Features:** Oracle Data Masking and Subsetting Pack includes the following features: • Application Data Modeling • Data Masking Formats Library • Data Masking Definitions • Data Subsetting Definitions • Application Data Modeling, Data Masking and Subsetting Enterprise Manager Command Line Interface (CLI) verbs • Application Data Modeling accelerator for select versions of Oracle E-Business Suite • Application Data Modeling accelerator for select versions of Oracle Fusion Applications • Data Masking templates for select versions of Oracle Fusion Applications • Data Masking templates for select versions of Oracle E-Business Suite Oracle Data Masking and Subsetting Pack includes the following restricted use licenses: • Database Gateway for APPC • Database Gateway for DRDA • Database Gateway for Informix • Database Gateway for SQLServer • Database Gateway for Sybase • Database Gateway for Teradata If you want to use the Oracle Database Gateways listed above not solely for the purposes of Oracle Data Masking and Subsetting Pack, then you must purchase full-use licenses for the Oracle Database Gateways. When using Oracle Data Masking and Subsetting Pack for non-Oracle databases, the Oracle Database Gateways stage the data in a separately licensed Oracle Database. Oracle Data Masking and Subsetting functionality cannot be executed directly against the non-Oracle database. Oracle Data Masking and Subsetting Pack must be licensed only for the source database server, i.e., the databases from which the data originates. There is no requirement to license the pack for the staging database server on which masking and subsetting operations are executed, or for copies made of the masked database. **Notes:** **1.** Oracle Data Masking and Subsetting Pack incorporates the previous Oracle Data Masking Pack, Oracle Test Data Management Pack, and Oracle Data Masking and Subsetting Pack for non-Oracle Databases. **2.** Application Data Modeling was previously called Data Discovery and Modeling. **Licensed Links:** All features, functions, links, buttons, and drill-downs on these Oracle Enterprise Manager menus are licensed as part of the Oracle Data Masking and Subsetting Pack. Starting on the Enterprise Summary home page, click the **Enterprise** menu, then **Quality Management**, then select:

Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• **Application Data Modeling**
		• **Data Masking Definitions**
		• **Data Masking Formats**
		• **Data Subset Definitions**
		From the Oracle database or cluster database target home page, click the **Security** menu, then select:
		• **Application Data Modeling**
		• **Data Masking Definitions**
		• **Data Subsetting**

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
Oracle Database Lifecycle Management Pack for Oracle Database	Extra cost pack: **EE**, **EE-Exa** Included pack: **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	**Features:** Oracle Database Lifecycle Management Pack for Oracle Database includes the following features: • Change Activity Plans • Client system analyzer • Compliance • Configuration Collection Extensibility • Configuration Compare • Configuration History • Configuration Instance Browser • Configuration Save • Configuration Search • Configuration Topology • Copy Objects • Database Patching • Database Provisioning • Database Upgrade • Disaster Recovery via Site Guard • Enterprise Data Governance • File Synchronization • Notifications • Pluggable Database (PDB) Clone • PDB Create/Plug/Unplug (Multiple target operations or performed using a customized deployment procedure.) • PDB Migrate • RAC Scale Back • RAC Scale Out • Real-time configuration change detection • Real-time schema change detection • Schema and Data Comparisons • Schema and Data Synchronization • Schema Change Plans • Schema Comparisons • User Defined Deployment Procedures (UDDP) With the purchase of Oracle Database Lifecycle Management Pack for Oracle Database, you also are entitled to the features described in the following sections. These features are restricted to the Oracle Database targets in the Oracle Database Home and the Platform (hardware and operating system) for the CPUs you have licensed. • Application Configuration Console • The `oplan` Utility (The basic OPlan feature is free for everyone that has an Oracle Support contract. Use of OPlan metadata to drive orchestration logic from either Enterprise Manager or custom/third-party scripts is part of Oracle Database Lifecycle Management Pack for Oracle Database.) • Migrate to ASM • Self Update **Licensed Parameters:** The `init.ora` parameter `ENABLE_DDL_LOGGING` is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database when set to `TRUE`. When set to `TRUE`, the database reports schema changes in

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		real time into the database alert log under the message group schema_ddl. The default setting is `FALSE`.

Licensed Links:

The Licensed Links, features, and functions listed in the following sections apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management on non-Oracle Database targets, you must purchase the appropriate management pack.

Licensed Links – Database Provisioning Procedures:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

• From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Procedure Library**. All Procedures that Clone and Provision a Database are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.

• From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Database Provisioning**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

• From the Oracle database or cluster database target home page, click the Oracle Database menu, then **Provisioning**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Database Upgrade:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

• From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Procedure Library**. All Procedures that Upgrade a Database are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.

• From the Oracle database or cluster database target home page, click the Oracle Database menu, then **Provisioning**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – User Defined Deployment Procedures (UDDP)

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

• From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Procedure Library**. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – RAC Scale Out and Scale Back

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

• From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Procedure Library**. All

Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		Procedures that Extend or Scale a database or RAC are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.

- From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Database Provisioning**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- From the Oracle cluster database target home page, click the Oracle Database menu, then **Provisioning**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Database Patching

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, **Provisioning and Patching**, then **Procedure Library**. All Procedures that patch a database, Clusterware or Real Application Clusters are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Offline Patching

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Setup** menu, **Provisioning and Patching**, then **Offline Patching**. From the Online and Offline Setting tab, the **Connection**, **Offline** setting is licensed with Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Instance Browser

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and select a Database. From the database home page, click on **Oracle Database**, **Configuration**. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- If the Target Home Page is accessed directly or by other paths:
  - From the database home page, click on **Oracle Database**, **Configuration**. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Search

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, then **Configuration and Search**. All features, functions, links,

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration History

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, then **Configuration and History**. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Compare

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, then **Configuration and Compare**. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Save

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, then **Configuration and Save**. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Topology

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Target Home Page, click on **Oracle Database**, **Configuration**, **Topology**. In the View Dropdown, Used By is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- From the Target Home Page, click on **Oracle Database**, **Configuration**, **Topology**, **Customization**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- If the Target Home Page is accessed directly or by other paths:
  - From the Target Home Page, click on **Oracle Database**, **Configuration**, **Topology**. In the View drop-down, Used By is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
  - From the Target Home Page, click on **Oracle Database**, **Configuration**, **Topology**, **Customization**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Configuration Collection Extensibility

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu, then **Configuration and Custom**. All features, functions,

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – File Synchronization

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- When viewing comparison results differences as described in the Configuration Compare feature, select the configuration specification in the tree on the left. Select **Enable File Synchronization**. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Schema Comparison:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and then select a Database. From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- If the Target Home Page is accessed directly or by other paths:
  - From the database home page, click on **Schema**, **Change Management**. All features, unctions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Schema and Data Comparisons:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and then select a Database. From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- If the Target Home Page is accessed directly or by other paths:
  - From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Schema and Data Synchronization:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and then select a Database. From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.
- If the Target Home Page is accessed directly or by other paths:

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		– From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Copy Objects:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and then select a Database. From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

- If the Target Home Page is accessed directly or by other paths:
  - From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Real-Time Schema Change Detection:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click on **Targets**, **Databases**, and then select a Database. From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

- If the Target Home Page is accessed directly or by other paths:
  - From the database home page, click on **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Links – Real-time Configuration Change Detection and Compliance:

Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:

- From the Enterprise Manager home page, click the **Enterprise** menu and **Compliance**. All features, functions, links, buttons, and drill-downs associated with the Library, Results and Real-Time Observations pages are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.

Licensed Reports:

The following reports are part of Oracle Database Lifecycle Management Pack for Oracle Database. All reports in each of these sections are licensed as part of this pack. To access the reports go to the Enterprise Manager home page, click the Reports, Information Publisher Reports or BI Publisher Enterprise Reports.

The following reporting areas, reports, and sub-reports under Information Publisher Reports are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database:

Table 1-15　(Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• Compliance • Deployment and Configuration • Sample Host reports, Configuration Reports • Security The following reporting areas, reports and sub-reports under BI Publisher Enterprise Reports are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database: • Compliance • Deployment and Configuration • Sample Host reports, Configuration Reports • Security **Licensed Command Line Interface (CLI) Verbs:** The following Enterprise Manager Command Line Interface (CLI) verbs are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database. • `associate_cs_targets` • `clone_database` • `config_compare` • `config_db_service_target` • `configure_log_archive_locations` • `confirm_instance` • `create_database` • `describe_instance` • `describe_procedure_input` • `disable_config_history` • `enable_config_history` • `export_compliance_group` • `export_compliance_standard_rule` • `export_facet` • `export_standard` • `fix_compliance_state` • `get_config_searches` • `get_config_templates` • `get_executions` • `get_instance_data` • `get_instance_status` • `get_instances` • `get_oms_config_property` • `get_procedure_types` • `get_procedure_xml` • `get_procedures` • `get_retry_argument` • `get_saved_configs` • `ignore_instance` • `import_compliance_object` • `list_oms_config_properties` • `remove_cs_target_association` • `reschedule_instance`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `resume_instance`
		• `run_config_search`
		• `save_procedure`
		• `set_config_history_retention_period`
		• `stop_instance`
		• `submit_procedure`
		• `suspend_instance`
		• `update_and_retry_step`
		• `update_procedure_input`
		• `upgrade_database`
		Licensed Repository Views – Compliance Views:
		The following compliance views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:
		• `MGMT$CCC_ALL_OBS_BUNDLES`
		• `MGMT$CCC_ALL_OBSERVATIONS`
		• `MGMT$CCC_DIAG_ANALYTICS`
		• `MGMT$CCC_DIAG_QUEUEBACKLOG`
		• `MGMT$COMPLIANCE_STANDARD`
		• `MGMT$COMPLIANCE_STANDARD_GROUP`
		• `MGMT$COMPLIANCE_STANDARD_RULE`
		• `MGMT$COMPOSITE_CS_EVAL_SUMMARY`
		• `MGMT$CS_ASM_DISKGRP_SETTINGS`
		• `MGMT$CS_DB_CONTROL_FILE_COUNT`
		• `MGMT$CS_DB_INIT_PARAMS`
		• `MGMT$CS_DB_RBS_IN_SYSTEM`
		• `MGMT$CS_DB_REC_SEG_SETTINGS`
		• `MGMT$CS_DB_REC_TS_SETTINGS`
		• `MGMT$CS_DB_REC_USER_SETTINGS`
		• `MGMT$CS_DB_REDO_LOG_COUNT`
		• `MGMT$CS_DB_REDO_LOGS`
		• `MGMT$CS_DB_TABLESPACES`
		• `MGMT$CS_DB_TBSP_SEGSPACE_MGMT`
		• `MGMT$CS_EVAL_SUMMARY`
		• `MGMT$CS_FEATURE_USAGE`
		• `MGMT$CS_GROUP_EVAL_SUMMARY`
		• `MGMT$CS_GROUP_KEYWORD`
		• `MGMT$CS_HA_INFO`
		• `MGMT$CS_HIERARCHY`
		• `MGMT$CS_KEYWORD`
		• `MGMT$CS_RQS_HIERARCHY`
		• `MGMT$CS_RULE_ATTRS`
		• `MGMT$CS_RULE_EVAL_SUMMARY`
		• `MGMT$CS_RULEFOLDER`
		• `MGMT$CS_TARGET_ASSOC`
		• `MGMT$CS_TGT_ASSOC_TXF_REQ`
		• `MGMT$CSG_HIERARCHY`
		• `MGMT$CSG_SUBGROUP`
		• `MGMT$CSR_CURRENT_VIOLATION`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `MGMT$CSR_TARGET_ASSOC`
		• `MGMT$CSR_VIOLATION_CONTEXT`
		• `MGMT$CSRF_TARGET_ASSOC`
		• `MGMT$EM_CS_RULE_EVENT_ERROR`
		• `MGMT$EM_RULE_VIOL_CTXT_DEF`
		• `MGMT$ICS_TARGET_ASSOC`
		• `MGMT$REPO_RULE_CHK_DETAILS`
		• `MGMT$REPOSITORY_RULE_BIND_VARS`
		• `MGMT$REPOSITORY_RULE_PARAMS`
		• `MGMT$RULE_KEYWORD`

Licensed Repository Views – Provisioning and Patching Views:

The following provisioning and patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:

- `EM$PROV_APPTYPES`
- `EM$PROVAPP_METADATA`
- `EM$PROVAPP_METADATA_VERSION`
- `EM$PROVAPP_TAG_PROPERTIES`
- `EM$PROVAPP_TAGS`
- `MGMT$PA_RECOM_METRIC_SOURCE`

Licensed Repository Views – Patching Views:

The following patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:

- `GC$EM_PC_PLAN_PATCHES`
- `GC$EM_PC_PLANS`
- `GC$EM_PC_PLAN_TARGETS`
- `GC_PC_EXECUTION_INSTANCES`
- `GC_PC_PLAN_ANALYSIS_RS`
- `GC_PC_PLAN_REMEDY`
- `GC_PC_PLAN_REMEDY_DETAILS`
- `GC_PC_PLAN_USERS`
- `GC_PC_TARGETS`
- `MGMT$APPLIED_PATCHES`
- `MGMT$APPLIED_PATCHSETS`
- `MGMT$ARU_FAMILY_PRODUCT_MAP`
- `MGMT$ARU_LANGUAGES`
- `MGMT$ARU_PATCH_RECOMMENDATIONS`
- `MGMT$ARU_PLATFORMS`
- `MGMT$ARU_PRODUCT_RELEASE_MAP`
- `MGMT$ARU_PRODUCTS`
- `MGMT$ARU_RELEASES`
- `MGMT$ARU_TARGETS`
- `MGMT$PA_AFFTED_HOST_GUID_OH`
- `MGMT$PA_AFFTED_HOST_OH`
- `MGMT$PA_AFFTED_TARGETS`
- `MGMT$PA_FINAL_PATCH_LIST`
- `MGMT$PA_TARGET_MAPPING`
- `MGMT$PR_APPL_PATCHES_TO_OH`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `MGMT$PR_APPL_PATCHES_TO_OH_TGT`
		• `MGMT$PR_HOME_INFO`
		• `MGMT$PR_HOMES_AFFECTED_COUNT`
		• `MGMT$RECOM_METRIC_SOURCE`

Licensed Repository Views – Configuration Views:

The following configuration views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:

- `GC$ECM_COMP_PROPERTIES`
- `GC$ECM_CONFIG_SUMMARY`
- `GC$ECM_CURR_CONFIG`
- `GC$ECM_CURR_CONFIG_FLAT_MEMS`
- `GC$ECM_CURR_CONFIG_SNAPSHOTS`
- `GC$ECM_CURR_TARGET_SNAPSHOTS`
- `GC$ECM_DATA_RETENTION_TIME`
- `GC$ECM_GEN_SNAPSHOT`
- `GC$ECM_SAVED_CONFIG`
- `GC$ECM_SAVED_CONFIG_FLAT_MEMS`
- `GC$ECM_SAVED_CONFIG_SNAPSHOTS`
- `GC$ECM_SAVED_CONFIG_TARGETS`
- `GC$ECM_SAVED_TARGET_SNAPSHOTS`
- `MGMT$CCS_DATA`
- `MGMT$CCS_DATA_SOURCE`
- `MGMT$CCS_DATA_SOURCE_VISIBLE`
- `MGMT$CCS_DATA_VISIBLE`
- `MGMT$DB_CONTROLFILES`
- `MGMT$DB_DATAFILES`
- `MGMT$DB_DBNINSTANCEINFO`
- `MGMT$DB_FEATUREUSAGE`
- `MGMT$DB_INIT_PARAMS`
- `MGMT$DB_LICENSE`
- `MGMT$DB_OPTIONS`
- `MGMT$DB_REDOLOGS`
- `MGMT$DB_ROLLBACK_SEGS`
- `MGMT$DB_SGA`
- `MGMT$DB_TABLESPACES`
- `MGMT$DB_TABLESPACES_ALL`
- `MGMT$ECM_CMP_JOB_LAST_RESULTS`
- `MGMT$ECM_CMP_JOBS`
- `MGMT$ECM_CMP_RPT_CCS_DS`
- `MGMT$ECM_CMP_RPT_CCS_DS_DTLS`
- `MGMT$ECM_CMP_RPT_CCS_PD_ALL`
- `MGMT$ECM_CMP_RPT_CCS_PD_DIFFS`
- `MGMT$ECM_CMP_RPT_CI_DIFFS`
- `MGMT$ECM_CMP_VISIBLE_CONFIGS`
- `MGMT$ECM_CURRENT_SNAPSHOTS`
- `MGMT$ECM_VISIBLE_SNAPSHOTS`
- `MGMT$SERVICETAG_INSTANCES`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `MGMT$SERVICETAG_REGISTRY` • `MGMT$UNPATCHABLE_DB_TARGETS` **Licensed Repository Views – Oracle Home Patching Views:** The following Oracle home patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database: • `MGMT$APPLIED_PATCHES` • `MGMT$APPLIED_PATCHSETS` • `MGMT$APPL_PATCH_AND_PATCHSET` • `MGMT$CPF_ADVISORY_INFO` • `MGMT$CPF_HOMES_INFO` • `MGMT$CPF_PATCH_INFO` • `MGMT$EM_HOMES_PLATFORM` • `MGMT$HOMES_AFFECTED` • `MGMT$OH_CLONE_PROPERTIES` • `MGMT$OH_COMP_DEP_RULE` • `MGMT$OH_COMP_INST_TYPE` • `MGMT$OH_COMPONENT` • `MGMT$OH_CRS_NODES` • `MGMT$OH_DEP_HOMES` • `MGMT$OH_FILE` • `MGMT$OH_HOME_INFO` • `MGMT$OH_INSTALLED_TARGETS` • `MGMT$OH_INV_SUMMARY` • `MGMT$OH_PATCH` • `MGMT$OH_PATCHED_COMPONENT` • `MGMT$OH_PATCHED_FILE` • `MGMT$OH_PATCH_FIXED_BUG` • `MGMT$OH_PATCHSET` • `MGMT$OH_VERSIONED_PATCHV` • `MGMT$PATCH_ADVISORIES` **Licensed Repository Views – Security Views:** The following security views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database: • `MGMT$ESA_ALL_PRIVS_REPORT` • `MGMT$ESA_ANY_DICT_REPORT` • `MGMT$ESA_ANY_PRIV_REPORT` • `MGMT$ESA_AUDIT_SYSTEM_REPORT` • `MGMT$ESA_BECOME_USER_REPORT` • `MGMT$ESA_CATALOG_REPORT` • `MGMT$ESA_CONN_PRIV_REPORT` • `MGMT$ESA_CREATE_PRIV_REPORT` • `MGMT$ESA_DBA_GROUP_REPORT` • `MGMT$ESA_DBA_ROLE_REPORT` • `MGMT$ESA_DIRECT_PRIV_REPORT` • `MGMT$ESA_EXMPT_ACCESS_REPORT` • `MGMT$ESA_KEY_OBJECTS_REPORT` • `MGMT$ESA_OH_OWNERSHIP_REPORT`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `MGMT$ESA_OH_PERMISSION_REPORT` • `MGMT$ESA_POWER_PRIV_REPORT` • `MGMT$ESA_PUB_PRIV_REPORT` • `MGMT$ESA_SYS_PUB_PKG_REPORT` • `MGMT$ESA_TABSP_OWNERS_REPORT` • `MGMT$ESA_TRC_AUD_PERM_REPORT` • `MGMT$ESA_WITH_ADMIN_REPORT` • `MGMT$ESA_WITH_GRANT_REPORT` **Licensed Repository Views – Client Configuration Views:** The following client configuration views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database: • `MGMT$CSA_COLLECTIONS` • `MGMT$CSA_FAILED` • `MGMT$CSA_HOST_COOKIES` • `MGMT$CSA_HOST_CPUS` • `MGMT$CSA_HOST_CUSTOM` • `MGMT$CSA_HOST_IOCARDS` • `MGMT$CSA_HOST_NICS` • `MGMT$CSA_HOST_OS_COMPONENTS` • `MGMT$CSA_HOST_OS_FILESYSEMS` • `MGMT$CSA_HOST_OS_PROPERTIES` • `MGMT$CSA_HOST_RULES` • `MGMT$CSA_HOST_SW` • `MGMT$ECM_CONFIG_HISTORY`

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
Oracle Diagnostics Pack	Extra cost pack: **EE**, **EE-Exa** Included pack: **BaseDB EE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**	**Features:** Oracle Diagnostics Pack includes the following features: • Performance monitoring and diagnostics (database and host) • Automatic Workload Repository (AWR) • AWR Warehouse • Automatic Database Diagnostic Monitor (ADDM) • Compare Period ADDM • Real Time ADDM • Active Session History (ASH) • ASH analytics • Performance Hub • Top Activity Lite • Exadata Cell Grid Administration • Exadata Cell Grid Performance • Exadata Cell Group Health Overview page • Exadata Resource Utilization • Blackouts • Notifications • Metric and Alert/Event history • User-Defined Metrics and Metric Extensions • Management Connectors • Dynamic metric baselines and Adaptive metric thresholds • Monitoring templates and Template Collections • Replay Compare Period Report • Supporting functionality to perform per stream bottleneck detection and per component top wait event analysis In order to use the features listed above, you must purchase licenses for Oracle Diagnostics Pack. A new initialization parameter, `CONTROL_MANAGEMENT_PACK_ACCESS`, controls access to Oracle Diagnostics Pack and Oracle Tuning Pack. This parameter can be set to one of three values: • `DIAGNOSTIC+TUNING`: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is enabled in the database server. • `DIAGNOSTIC`: Only Oracle Diagnostics Pack functionality is enabled in the server. • `NONE`: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server. Any and all methods of accessing Oracle Diagnostics Pack functionality, whether through Enterprise Manager Console, Desktop Widgets, command-line APIs, or direct access to the underlying data, requires an Oracle Diagnostics Pack license. **Licensed Links:** To determine which links in Enterprise Manager are part of Oracle Diagnostics Pack, click the **Setup** link on the top right-hand part of the Enterprise Manager Home page. • When you click the **Setup** link, the navigation bar contains the **Management Pack Access** link. Click this link. • This will take you to the **Management Pack Access** page, which allows you to grant and remove access from all the management packs.

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features

		– For Enterprise Manager Database Control, click the **Remove Access** radio button for the Diagnostics Pack and click **Apply**.
		– For Enterprise Manager Cloud Control, click the appropriate check box for the Diagnostics Pack and click **Apply**.
		
		This procedure disables all the links and tabs associated with Oracle Diagnostics Pack in Enterprise Manager. All the disabled links and tabs are part of Oracle Diagnostics Pack and therefore require a pack license.
		
		Licensed Command-Line APIs:
		
		Oracle Diagnostics Pack features can also be accessed by way of database server APIs and command-line interfaces:
		
		• The `DBMS_ADDM`, `DBMS_PERF`, `DBMS_UMF`, and `DBMS_WORKLOAD_REPOSITORY` packages are part of this pack.
		• The `DBMS_ADVISOR` package is part of this pack if you specify ADDM as the value of the `advisor_name` parameter, or if you specify for the value of the `task_name` parameter any value starting with the ADDM prefix.
		• The `DBMS_WORKLOAD_REPLAY.COMPARE_PERIOD_REPORT` function is part of this pack.
		• The `V$ACTIVE_SESSION_HISTORY` dynamic performance view and its underlying table, `X$ASH`, are part of this pack.
		• The `DBA_STREAMS_TP_PATH_BOTTLENECK` view is part of this pack.
		• All views beginning with `DBA_ADDM_` are part of this pack.
		• Some data in `DBA_STREAMS_TP_COMPONENT_STAT` requires Oracle Diagnostics Pack. The following filter clause to any query on `DBA_STREAMS_TP_COMPONENT_STAT` shows Diagnostics-Pack-dependent data:
		
		`where STATISTIC_UNIT = 'PERCENT'`
		
		For example, the following query shows Diagnostics-Pack-dependent data only:
		
		`SELECT * FROM DBA_STREAMS_TP_COMPONENT_STAT`
		`  where STATISTIC_UNIT = 'PERCENT';`
		
		• All data dictionary views beginning with the prefix `DBA_HIST_` are part of this pack, along with their underlying tables.The only exception are the views: `DBA_HIST_SNAPSHOT`, `DBA_HIST_DATABASE_INSTANCE`, `DBA_HIST_SNAP_ERROR`, `DBA_HIST_SEG_STAT`, `DBA_HIST_SEG_STAT_OBJ`, and `DBA_HIST_UNDOSTAT`. They can be used without the Oracle Diagnostics Pack license.
		• All data dictionary views with the prefix `DBA_ADVISOR_` are part of this pack if queries to these views return rows with the value `ADDM` in the `ADVISOR_NAME` column or a value of `ADDM*` in the `TASK_NAME` column or the corresponding `TASK_ID`.
		• The following reports found in the `/rdbms/admin/` directory of the Oracle home directory are part of this pack: `awrrpt.sql`, `awrrpti.sql`, `awrgrpt.sql`, `awrgrpti.sql`, `awrgdrpt.sql`, `awrgdrpi.sql`, `addmrpt.sql`, `addmrpti.sql`, `ashrpt.sql`, `ashrpti.sql`, `awrddrpt.sql`, `awrddrpi.sql`, `awrsqrpi.sql`, `awrsqrpt.sql`, `awrextr.sql`, `awrload.sql`, `awrinfo.sql`, `spawrio.sql`, and `spawrrac.sql`.
		
		Licensed Repository Views – Monitoring Views:

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		The following monitoring views are licensed under Oracle Diagnostics Pack:

- `MGMT$ALERT_ANNOTATIONS`
- `MGMT$ALERT_CURRENT`
- `MGMT$ALERT_HISTORY`
- `MGMT$ALERT_NOTIF_LOG`
- `MGMT$AVAILABILITY_CURRENT`
- `MGMT$AVAILABILITY_HISTORY`
- `MGMT$BLACKOUT_HISTORY`
- `MGMT$BLACKOUTS`
- `MGMT$METRIC_COLLECTIONS`
- `MGMT$ALERT_CURRENT`
- `MGMT$METRIC_DAILY`
- `MGMT$METRIC_DETAILS`
- `MGMT$METRIC_HOURLY`
- `MGMT$TARGET_METRIC_COLLECTIONS`
- `MGMT$TARGET_METRIC_SETTINGS`

Licensed Repository Views – Template Views:

The following template views are licensed under Oracle Diagnostics Pack:

- `MGMT$TEMPLATES`
- `MGMT$TEMPLATE_METRIC_COLLECTION`
- `MGMT$TEMPLATE_METRIC_SETTINGS`
- `MGMT$TEMPLATE_POLICY_SETTINGS`

Additional Licensing Information:

- The use of Top Activity Lite in Enterprise Manager requires an Oracle Diagnostics Pack license.
- The use of Top Activity Lite in OCI Database Management Service requires both an Oracle Diagnostics Pack license and an OCI Database Management Service subscription – Full Management.

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features

Oracle Tuning Pack	Extra cost pack: **EE**, **EE-Exa**
	
	Included pack: **BaseDB EE**, **BaseDB EE-HP**, **BaseDB EE-EP**, **ExaCS/CC**
		Features:
		Oracle Tuning Pack includes the following features:
		• SQL Access Advisor
		• SQL Tuning Advisor
		• Oracle Database In-Memory Advisor
		• Automatic SQL Tuning
		• SQL Profiles
		• Real-time SQL and PL/SQL Monitoring
		• Real-time Database Operations Monitoring
		• Reorganize objects
		A new initialization parameter, `CONTROL_MANAGEMENT_PACK_ACCESS`, is introduced to control access to Oracle Diagnostics Pack and Oracle Tuning Pack in the database server. This parameter can be set to one of three values:
		• `DIAGNOSTIC+TUNING`: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is enabled in the database server.
		• `DIAGNOSTIC`: Only Oracle Diagnostics Pack functionality is enabled in the server.
		• `NONE`: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server.
		Any and all methods of accessing Oracle Tuning Pack functionality, whether through Enterprise Manager Console, Desktop Widgets, command-line APIs, or direct access to the underlying data, requires an Oracle Tuning Pack license.
		
		Prerequisites:
		Oracle Tuning Pack requires Oracle Diagnostics Pack.
		
		Licensed Links:
		To determine which links in Enterprise Manager are part of Oracle Tuning Pack, click the **Setup** link on the top right-hand part of the Enterprise Manager Home page.
		• When you click the **Setup** link, the navigation bar contains the **Management Pack Access** link. Click this link.
		• This will take you to the Management Pack Access page, which allows you to grant and remove access from all the management packs.
		  – For Enterprise Manager Database Control, click the **Remove Access** radio button for the Tuning Pack and click **Apply**.
		  – For Enterprise Manager Cloud Control, click the appropriate check box for the Tuning Pack and click **Apply**.
		This procedure disables all the links and tabs associated with Oracle Tuning Pack in Enterprise Manager. All the disabled links and tabs are part of Oracle Tuning Pack and therefore require a pack license.
		
		Licensed Command Line APIs:
		Oracle Tuning Pack features can also be accessed by way of database server APIs and command-line interfaces:
		• `DBMS_ADVISOR`, when the value of the `advisor_name` parameter is either SQL Tuning Advisor or SQL Access Advisor.
		• `DBMS_AUTO_SQLTUNE`
		• `DBMS_PERF`
		• `DBMS_SQL_MONITOR`
		• `DBMS_SQLTUNE` (See Note)

Table 1-15   (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		• `V$SQL_MONITOR` • `V$SQL_PLAN_MONITOR` • The following report found in the `/rdbms/admin/` directory of the Oracle home directory is part of this pack: `sqltrpt.sql`. **Note**: If you are licensed for the on-premises Oracle Database Enterprise Edition, then you can use certain subprograms of the `DBMS_SQLTUNE` package even if you do not have an Oracle Tuning Pack license. See the SQL Tuning Sets entry in <u>Table 1-6</u> for more information.

1.2.5 Checking for Feature, Option, and Management Pack Usage

Oracle provides the script `options_packs_usage_statistics.sql`, which enables you to check feature usage, Oracle Database option usage, and Oracle management pack usage on your database. This script lists, in two distinct sections:

• Oracle Database option and Oracle management pack usage

• Features used by each option and management pack

You can obtain the script from My Oracle Support as follows:

1. Use a Web browser to view the My Oracle Support Web site:

   <u>https://support.oracle.com</u>

2. Log in to My Oracle Support.

   If you are not a My Oracle Support registered user, then click **Register** and follow the registration instructions.

3. Search for Document ID 1317265.1, or access it directly with the following URL:

   <u>https://support.oracle.com/rs?type=doc&id=1317265.1</u>

You can manually run the script on an individual database or use Oracle Enterprise Manager Job System to automatically run the script on multiple databases. Refer to *Oracle Enterprise Manager Cloud Control Administrator's Guide* for information on Oracle Enterprise Manager Job System.

> ⓘ **Note**
>
> The information obtained from this script will provide you an overview of the licensable Oracle Database options and Oracle management packs that were identified as used by your organization. This is to be used for informational purposes only and this does not represent your license entitlement or requirement. Please contact the License Management Services representative at <u>http://www.oracle.com/us/corporate/license-management-services/index.html</u> to understand your license requirements.

1.3 Special License Rights

Table 1-16   Special License Rights

Feature / Option	Licensing Information
Data Guard Far Sync	The far sync instance can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the far sync instance.
Enterprise User Security	If you wish to use Enterprise User Security in Oracle Database Enterprise Edition, you no longer need to license the Oracle Advanced Security option for Kerberos and PKI based authentication. It does require a corresponding Oracle Identity Management Directory Services Plus to be licensed. Any Oracle Advanced Security licenses purchased on or before January 31, 2004, have restricted use of the Oracle Internet Directory (OID) component of Oracle Directory Services Plus to support Enterprise User Security.
Global Data Services	The GSM listener can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the GSM listener.
Infrastructure repository databases	A separate single instance Oracle Database can be installed and used as an infrastructure repository for RMAN, Oracle Enterprise Manager Cloud Control, Automatic Workload Repository (AWR) Warehouse, Global Data Services Catalog, Sharding Catalog, and Grid Infrastructure Management Repository without additional license requirements, provided that all the targets are correctly licensed. It may not be used or deployed for other uses. The infrastructure repositories for RMAN, Oracle Enterprise Manager Cloud Control, AWR Warehouse, Global Data Services Catalog, and Sharding Catalog can be shared in one database, or deployed in separate databases. Enterprise Edition must be used for the infrastructure repository database(s). If Oracle RAC is used for the infrastructure database, then Oracle RAC licenses for all servers, and Enterprise Edition licenses for all but the first server, are required. If Data Guard is used for the infrastructure database for RMAN, Oracle Enterprise Manager Cloud Control, AWR Warehouse, Global Data Services, and Grid infrastructure management Repository, then an Enterprise Edition license for the standby server is required. The Infrastructure Database for the Sharding Catalog can be protected with Data Guard without a second Enterprise Edition license.
Oracle ASM Cluster File System (Oracle ACFS)	When used with non-Oracle Database files, all Oracle ACFS features are free. When used with Oracle Database files, all Oracle ACFS features are free, with the following exceptions: • ACFS Auditing - Not available (use Oracle Audit Vault*) • ACFS Compression - Not available (use Oracle Advanced Compression*) • ACFS Encryption - Not available (use Oracle Transparent Data Encryption (TDE), part of the Oracle Advanced Security option*) • ACFS Security - Not available (use Oracle Database Vault*) * Requires appropriate full-use licenses to these products or components. Oracle will provide support services for Oracle ACFS only if the server it operates on also operates an Oracle product, which may include Oracle Linux or Oracle Solaris, which is under an Oracle support contract.
Oracle Automatic Storage Management (Oracle ASM)	Oracle ASM is free to use with all Oracle databases and Oracle ACFS file systems.

Table 1-16   (Cont.) Special License Rights

Feature / Option	Licensing Information
Oracle Clusterware	Oracle Clusterware provides cluster membership and high availability monitoring and failover. Oracle Clusterware may be used to protect any application (restarting or failing over the application in the event of a failure) on any server, free of charge. Oracle will provide support for Clusterware only if the server is running an Oracle product that is under a valid Oracle support contract. Examples of such products include, but are not limited to, Oracle Linux, Oracle Solaris, Oracle Database, and Oracle Fusion Middleware.
Oracle Connection Manager	Oracle Connection Manager can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Connection Manager.
Oracle Data Guard broker	You can install the broker command line interface DGMGRL and run the observer software on computer systems that are separate from the Oracle Data Guard primary and standby systems. It is not necessary to obtain a separate license for a system hosting the observer.
Oracle Database Backup Cloud Service	Oracle Database Backup Cloud Service includes use of the following two features from the Oracle Advanced Security option or the Oracle Advanced Compression option at no additional cost: • RMAN backup encryption • All RMAN backup compression algorithms To use additional features of the Oracle Advanced Security option or the Oracle Advanced Compression option, you must license those options separately. In addition, the Oracle Advanced Security option must be separately licensed when performing RMAN encrypted backups directly to disk.
Oracle Database Gateway for ODBC	Oracle Database Gateway for ODBC can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Gateway for ODBC.
Oracle Database Provider for DRDA	Oracle Database Provider for DRDA can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Database Provider for DRDA.
Oracle Database Vault	When Oracle Database Vault is configured and enabled, it configures and enables Oracle Label Security. Oracle Label Security is solely restricted for use by the Oracle Database Vault software. If you want to create Oracle Label Security policies, then you must purchase a full-use license for Oracle Label Security.
Oracle JDK and Oracle JRE	Oracle customers of Oracle products that use the Oracle JDK or Oracle JRE are entitled, without the need to separately purchase Oracle Java SE Subscriptions, to the following: • Download and use Oracle Java SE updates, patches, and tools for use with the licensed Oracle product. Customers are only entitled to download such Java SE versions as are required by their Oracle product. • Install and use such Java SE updates, patches, and tools to develop or deploy an Oracle product. • Customers can file service requests for Java issues against an Oracle product, but not directly against Java SE. • Oracle JFR may be used when requested by Oracle Support for troubleshooting Oracle products on any supported Oracle product.

Table 1-16   (Cont.) Special License Rights

Feature / Option	Licensing Information
Oracle Real Application Clusters (Oracle RAC)	The following licensing information applies when using Oracle Real Application Clusters in a clustered server environment with Oracle Database Standard Edition 2: • You must use Oracle Clusterware. Third-party clusterware management solutions are not supported. • Oracle Automatic Storage Management (Oracle ASM) or Oracle ASM Cluster File System (Oracle ACFS) is required for creating and managing all Oracle database file types. Raw volumes, partitions, or third-party cluster file systems are not supported for storing Oracle database files with Oracle Database Standard Edition 2 and Oracle RAC. Refer to *Oracle Automatic Storage Management Administrator's Guide* for a comprehensive list of all database file types. • Oracle ACFS or a local OS file system must be used to store all non-database files. No Oracle-maintained copies of any non-database files can exist in any other locations, with the following exceptions: – Customers who want to manually script maintenance of a standby database can create a second copy of their archive logs outside of Oracle ASM on a local file system only, designated by the `LOG_ARCHIVE_DEST_n` parameter. – RMAN backups of files can reside on either a local or network mounted file system. • No other cluster software can be installed on the system, including OCFS, OCFS2, third-party clusterware, third-party cluster volume managers, and third-party cluster file systems.
Oracle Real Application Testing	The full functionality of Oracle Real Application Testing is available only on Oracle Database 11*g* Release 1 or higher. Partial functionality of Oracle Real Application Testing is available to customers wishing to upgrade from Oracle9*i* Database Release 2 or Oracle Database 10*g*. The functionality available on Oracle9*i* Database Release 2 is as follows: • **Database Replay**: Only the Workload Capture feature is supported, and the captured workload may only be replayed only on Oracle Database 11*g*. This feature can be used only to facilitate upgrades from Oracle 9*i* Database Release 2 to Oracle Database 11*g* or higher. The functionality available on Oracle Database 10*g* Release 2 is as follows: • **Database Replay**: Only the Workload Capture feature is supported, and the captured workload may be replayed only on Oracle Database 11*g*. This feature can be used only to facilitate upgrades from Oracle Database 10*g* Release 2 to Oracle Database 11*g*. • **SQL Performance Analyzer**: Only the Remote SQL Test Execute and SQL Capture into SQL Tuning Set features are supported. These features can be used only to facilitate upgrades from Oracle9*i* Database Release 2 and Oracle Database 10*g* Release 1 to Oracle Database 10*g* Release 2 or higher. When upgrading to Oracle Database 10*g* Release 2 from earlier releases (Oracle 9*i* Database or Oracle Database 10*g* Release 1), Oracle Database 11*g* is needed to remotely execute SQL on the target database (that is, Oracle Database 10*g* Release 2). Oracle Real Application Testing licensing is required for both systems, Oracle Database 10*g* Release 2 and Oracle Database 11*g*.

Table 1-16   (Cont.) Special License Rights

Feature / Option	Licensing Information
Oracle Secure Backup Oracle Secure Backup Cloud Module	For backup of Oracle Database Enterprise Edition, Oracle Secure Backup includes restricted use licenses for: • RMAN backup encryption to tape or Amazon S3 • RMAN backup compression leveraging LOW, MEDIUM, BASIC or HIGH algorithms The Oracle Secure Backup special-use licenses apply to RMAN backup encryption, which is a component of the Oracle Advanced Security option, and RMAN backup compression levels, which are components of the Oracle Advanced Compression option. To use additional features of the Oracle Advanced Security option or the Oracle Advanced Compression option, you must license those options separately. In addition, the Oracle Advanced Security option must be licensed when performing RMAN encrypted backups directly to disk whether or not Oracle Secure Backup is the media manager.
Oracle Secure Backup Cloud Module on ZDLRA	Oracle Secure Backup Cloud Module can be used free of charge on Oracle Zero Data Loss Recovery Appliance (ZDLRA) for the sole purpose of backing up data to and restoring data from S3-compatible storage devices that are in the same campus as ZDLRA. This special use license does not allow you to move such data to or from Non-Oracle Public Cloud Environments, either directly or through gateway devices. You are allowed to move such data to and from Oracle databases that do not have ZDLRA, however, Oracle Secure Backup Cloud Module must be licensed on those Oracle databases. For example, if you use Oracle Secure Backup Cloud Module free of charge on ZDLRA to back up data to an S3-compatible storage device, you can then use Oracle Secure Backup Cloud Module to restore that data to an Oracle database without ZDLRA, but only if Oracle Secure Backup Cloud Module is licensed on that Oracle database. To move data to or from the Oracle Cloud Infrastructure, the ZDLRA provides an integration with the OCI Backup Cloud Module which does not require a license.
Oracle Secure Backup Express	Oracle Secure Backup Express is bundled with the Oracle Database. Support for Oracle Secure Backup Express is provided exclusively through a free Oracle Discussion Forum monitored by Oracle employees as well as community experts. Oracle Secure Backup Express can back up an Oracle database as well as Oracle home files and other file system data requiring tape protection. For more information, refer to *Oracle Secure Backup Licensing Information*.
Oracle Wallet	An Oracle Wallet is a PKCS#12 container used to store authentication and encryption keys. The Oracle database secure external password store feature stores passwords in an Oracle Wallet for password-based authentication to the Oracle database. The Oracle Wallet may also be used to store credentials for PKI authentication to the Oracle Database, configuration of network encryption (SSL/TLS), and Oracle Advanced Security transparent data encryption (TDE) master encryption keys. Network encryption (native network encryption, network data integrity, and SSL/TLS) and strong authentication services (Kerberos, PKI, and RADIUS) are no longer part of Oracle Advanced Security and are available in all licensed editions of all supported releases of Oracle Database.
Shard Director	The shard directors can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the shard directors.

Table 1-16   (Cont.) Special License Rights

Feature / Option	Licensing Information
XStream	XStream provides application programming interfaces (APIs) that enable client applications to receive real-time data changes from an Oracle database (using XStream Out APIs) and to send real-time data changes to an Oracle database (using XStream In APIs). These data changes can be shared between Oracle databases and other systems, such as filesystems and non-Oracle databases. XStream is licensed via the Oracle GoldenGate product. You must purchase a license for this product before using the XStream APIs. Please contact your Oracle sales representative for additional information.

1.4 Restricted Use Licenses

Table 1-17   Restricted Use Licenses

Feature / Option	Licensing Information
Oracle Advanced Compression Oracle Advanced Security	Restricted use licenses for Oracle Advanced Compression and Oracle Advanced Security are granted when performing either of the following migrations: • Oracle Zero Downtime Migration • Oracle Cloud Infrastructure Database Migration (DMS) These restricted use licenses are in effect only while the migration is being performed and apply solely for the purposes of the migration operation. All other uses of Oracle Advanced Compression and Oracle Advanced Security require a license.
Oracle Advanced Security	Any Oracle Advanced Security licenses purchased on or before January 31, 2004, have restricted use of the Oracle Internet Directory (OID) component of Oracle Directory Services Plus to support Enterprise User Security. Oracle Advanced Security includes a restricted use license for the following Oracle Enterprise Manager features: • Application Data Models (previously called Data Discovery and Modeling) • Sensitive Column Types and Sensitive Data Discovery • Application Accelerators If you want to use the Oracle Enterprise Manager features listed above not solely for the purposes of Oracle Advanced Security, then you must purchase a full-use license for Oracle Data Masking and Subsetting Pack.
Oracle Application Server Containers for J2EE	A restricted use license for Oracle Application Server Containers for J2EE (OC4J) is included with all editions (except for Oracle Database Express Edition). This embedded version is provided solely to support Oracle Enterprise Manager (Database and Cloud Control), Advanced Queuing Servlet, Ultra Search, and Application Express, and may not be used or deployed for other purposes
Oracle Applications Unlimited	An Oracle Base Database Service Enterprise Edition (BaseDB EE) instance being used to support an Oracle Cloud deployment of an Oracle Applications Unlimited application has restricted use of the following options: Oracle On-Line Analytical Processing (OLAP) and Oracle Partitioning. These options may be used only to support Oracle Applications Unlimited and may not be used or deployed for any other purpose.

Table 1-17   (Cont.) Restricted Use Licenses

Feature / Option	Licensing Information
Oracle Database Mobile Server	Oracle Database Mobile Server is a powerful tool for controlling networks of mobile or embedded devices from a centralized management console. It provides a secure, scalable method for connecting applications running locally on mobile or embedded devices to an Oracle enterprise backend. The synchronization system is robust and fault tolerant. It is able to successfully synchronize over unreliable or intermittently available networks. Oracle Database Mobile Server provides management for applications, users, and devices. It runs on a variety of application server platforms, including Oracle WebLogic, Oracle Glassfish, and Apache TomEE. On the client device side, it is designed to work with Oracle Berkeley DB as a data store, providing efficient, reliable, and secure data management running locally on mobile and embedded devices. It is also compatible with SQLite, a widely used open source data store. Database Mobile Server supports many popular device platforms including Oracle Java, Linux, Windows (laptop as well as mobile/CE), and Android.
Oracle Database Vault	Oracle Database Vault includes a restricted use license for the following Oracle Enterprise Management features: • Application Data Modeling (previously called Data Discovery and Modeling) • Application Data Modeling accelerator for select versions of Oracle E-Business Suite • Application Data Modeling accelerator for select versions of Oracle Fusion Applications
Oracle HTTP Server	A restricted use license for Oracle HTTP Server is included with all editions (except for Oracle Database Express Edition) when the HTTP Server is running on the same server as the database. Running Oracle HTTP server on a different server requires that other server be licensed to use the HTTP server, either through an Oracle Database license or an Oracle Application Server license
Oracle Internet Directory Oracle Unified Directory	A restricted use license for Oracle Identity Management Directory Services Plus components Oracle Internet Directory (OID)/Oracle Unified Directory (OUD) is included with all editions (except for Oracle Database Express Edition) if users use the Directory Naming feature to configure Oracle Net Services. OID/OUD may not be used or deployed for other uses.
Oracle Label Security	Oracle Label Security includes a restricted use license for the following Oracle Enterprise Manager features: • Application Data Models (previously called Data Discovery and Modeling) • Sensitive Column Types and Sensitive Data Discovery • Application Accelerators If you want to use the Oracle Enterprise Manager features listed above not solely for the purposes of Oracle Label Security, then you must purchase a full-use license for Oracle Data Masking and Subsetting Pack.
Oracle Multitenant	A restricted use license is included with all Oracle Database offerings that permits you to use the container database architecture in single-tenant mode without the Oracle Multitenant option license. Single-tenant mode is defined as one user-created pluggable database, and, optionally, one user-created application root, and one user-created proxy pluggable database.
Oracle Programmer	Oracle Programmer provides application programmers with a programmatic interface to any edition of Oracle Database. However, in order to user Oracle Programmer, you must purchase a separate Oracle Programmer license. Oracle Programmer includes the following products: • Embedded SQL-style interfaces: Pro*C/C++, Pro*COBOL, Pro*Fortran, SQL*Module for Ada, SQLJ • Utilities to generate host-language bindings from database schemas: Object Type Translator and JPub

Table 1-17   (Cont.) Restricted Use Licenses

Feature / Option	Licensing Information
Oracle Real Application Testing	Restricted use licenses of Load Testing Accelerator for Oracle Database, Oracle Load Testing, and Oracle Load Testing Controller are included with Oracle Real Application Testing for use for Oracle Database testing and may not be used for application testing.
Oracle Secure Backup Express	Oracle Secure Backup Express is a centralized tape backup management solution that provides data protection for single-server Oracle Database environments. A restricted use license for Oracle Secure Backup Express is included with all Oracle Database editions. Oracle Secure Backup Express is limited to a single host with one direct-attached tape drive and has some restrictions on advanced feature usage. Refer to the *Oracle Secure Backup Licensing Information* for additional information.
Oracle Sharding	Oracle Sharding includes a restricted use license for Global Data Services.
	If you want to use Global Data Services not solely for the purposes of Oracle Sharding, then you must be licensed for the Oracle Active Data Guard option.
Oracle Spatial and Graph	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of supporting the following Spatial, Property Graph, and RDF Graph Technologies (RDF/OWL) features: spatial topology, property graph schema, and RDF Semantic Graph. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.
Real Application Security	Restricted use of Real Application Security (RAS) is allowed on Oracle Database Standard Edition 2 (SE2) and Oracle Base Database Service Standard Edition (BaseDB SE), free of charge, for the sole purpose of using the subprograms in the `DBMS_NETWORK_ACL_ADMIN` package.
Recovery Manager (RMAN)	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of supporting the RMAN recovery catalog. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.
Unified Audit	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of storing the unified audit trail. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.

2

Third-Party Notices and/or Licenses

2.1 Commercial Software

Commercial software products or components distributed in Oracle Database 12*c* Release 2 (12.2) are identified in the following table along with the applicable licensing information.

Table 2-1   Commercial Software

Provider	Component(s)	Licensing Information
DataDirect	DataDirect Technology	The DataDirect component provided with this Oracle Program is distributed only for use with Oracle Program.
Frederico Caldiera Knabben (FredCK.com)	CKEditor	© 2003 - 2010 CKSource - Frederico Knabben. All rights reserved. This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
MapInfo Corp.	Projections Code	Portions of this software Copyright 1992-2000, MapInfo Corporation, ALL RIGHTS RESERVED.
Microsoft	Microsoft Visual Studio 2010 Redistributables	Must include Oracle copyright notice in Oracle applications containing the Distributable Code. Oracle must not use Microsoft's trademarks in Oracle program names or in a way that suggests Oracle programs come from or are endorsed by Microsoft.
Microsoft	Microsoft Visual Studio 2013 Redistributables	Must include Oracle copyright notice in Oracle applications containing the Distributable Code. Oracle must not use Microsoft's trademarks in Oracle program names or in a way that suggests Oracle programs come from or are endorsed by Microsoft.
RSA	Micro Edition Suite (MES)	This product includes code licensed from RSA Data Security. See Figure 2-1.
Sibental, Inc.	AnyChart AnyChart Flash Chart Component AnyGantt AnyMap	AnyChart Flash chart support in Oracle Application Express is based on the Anychart Flash Chart Component. Anychart is a flexible Macromedia Flash-based solution that enables developers to create animated, compact, interactive flash charts. Flash charts are rendered by a browser and require Flash player 8 or later. Flash charts used in interactive reports require Flash Player 9 or later. For more information about Anychart, go to: http://www.anychart.com Any attempt to unbundle the AnyChart Flash Chart Component from an Oracle product, or to use the AnyChart Flash Chart Component outside of the Oracle product will be in violation of this license and will result in the immediate termination of this license.

Figure 2-1   RSA Secure Logo

2.2 Open Source or Other Separately Licensed Software

Required notices for open source or other separately licensed software products or components distributed in Oracle Database 12*c* Release 2 (12.2) are identified in the following table along with the applicable licensing information. Additional notices and/or licenses may be found in the included documentation or readme files of the individual third party software.

Table 2-2   Open Source or Other Separately Licensed Software

Provider	Component(s)	Licensing Information
ACE - Open Source Community	ACE Code Editor for the Web	Copyright (c) 2010, Ajax.org B.V. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: • Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. • Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. • Neither the name of Ajax.org B.V. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL AJAX.ORG B.V. BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

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Provider	Component(s)	Licensing Information
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Provider	Component(s)	Licensing Information
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		• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
		• Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
		• Neither the name of the JXLayer project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.
		THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Alexis Sellier	Less.js	This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Anton Scheffer	As Zip	Copyright (C) 2010,2011 by Anton Scheffer
		Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:
		The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
		THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
Apache	Apache Commons Logging	Copyright 2003-2007 The Apache Software Foundation
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		This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.

Table 2-2   (Cont.) Open Source or Other Separately Licensed Software

Provider	Component(s)	Licensing Information

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		`// Apache License, Version 2.0, in this case for`
		`// Commons Logging`
		`// -------------------------------------------------`
		
		Commons Logging
		
		Copyright 2001-2007 The Apache Software Foundation
		
		This product includes/uses software(s) developed by 'an unknown organization'
		
		• Unnamed - avalon-framework:avalon-framework:jar:4.1.3
		• Unnamed - log4j:log4j:jar:1.2.12
		• Unnamed - logkit:logkit:jar:1.0.1
		
		This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.

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Apache	Apache Geronimo JMS 1.1 Specification	This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Apache	Apache HC Fluent	This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Apache	Apache Http Components Client	Apache HttpComponents Client Copyright 1999-2013 The Apache Software Foundation This product includes software developed at The Apache Software Foundation (http://www.apache.org/). This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Apache	Apache POI	For a copy of the license, see Apache POI License.
Apache	Apache Tomcat	For a copy of the license, see Apache Tomcat License.

Table 2-2   (Cont.) Open Source or Other Separately Licensed Software

Provider	Component(s)	Licensing Information
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		Portions of this software were originally based on the following:- software copyright (c) 2000-2003, BEA Systems.
		Aside from contributions to the Apache XMLBeans project, this software also includes:
		• one or more source files from the Apache Xerces-J and Apache Axis products, Copyright (c) 1999-2003 Apache Software Foundation
		• W3C XML Schema documents Copyright 2001-2003 (c) World Wide Web Consortium (Massachusetts Institute of Technology, European Research Consortium for Informatics and Mathematics, Keio University)
		• resolver.jar from Apache Xml Commons project, Copyright (c) 2001-2003 Apache Software Foundation
		• Piccolo XML Parser for Java from http://piccolo.sourceforge.net/,Copyright 2002 Yuval Oren under the terms of the Apache Software License 2.0
		• JSR-173 Streaming API for XML from http://sourceforge.net/projects/xmlpullparser/,Copyright 2005 BEA under the terms of the Apache Software License 2.0
		This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Apache	Commons CLI	Apache Commons CLI
		Copyright 2001-2009 The Apache Software Foundation
		This product includes software developed by The Apache Software Foundation (http://www.apache.org/).
		This product is licensed under the Apache 2.0 license. See The Apache Software License, Version 2.0.
Apache	Commons Codec	Apache Commons Codec
		Copyright 2002-2013 The Apache Software Foundation
		This product includes software developed at The Apache Software Foundation (http://www.apache.org/).
		src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java contains test data from http://aspell.sourceforge.net/test/batch0.tab.
		Copyright (C) 2002 Kevin Atkinson (kevina@gnu.org).
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- `javaee_web_services_client_1_2.xsd`
- `javaee_6.xsd`
- `javaee_web_services_1_3.xsd`
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- `jsp_2_2.xsd`
- `web-app_3_0.xsd`

- `web-common_3_0.xsd`

- `web-fragment_3_0.xsd`

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Version 1.1 - 26 February 2007

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gdal/frmts/gtiff/tif_float.c

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gdal/frmts/pcraster/libcsf

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gdal/frmts/grib/degrib/*

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gdal/ogr/ogrsf_frmts/dxf/intronurbs.cpp

This code is derived from the code associated with the book "An Introduction to NURBS" by David F. Rogers. More information on the book and the code is available at: http://www.nar-associates.com/nurbs/

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