ORACLE

Oracle Database Licenses

Sales Academy – Get started knowledge transfer

Marcel Lamarca

Exadata Cloud Specialist

Oracle, Alliances & Channels LAD

March, 2024

SQL> select * from person where name = ‘Marcel Lamarca’

SCAN ME

MARCEL LAMARCA

Exadata Cloud Specialist

Upgrade, Utilities, Patching, Performance & Migrations

marcel-lamarca

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About My Career

- 22 Years dedicated to study and support Oracle Databases.
- 13 Years working with Exadata (On-prem, C@C and Cloud Services) .
- 5 Year working for Oracle do Brasil
- 2 Year on Alliances LAD knowledge Team

Certifications

Oracle Cloud Specialist (OCS)

- Exadata Database Machine X9M Certified Specialist
- OCI Foundation 2020 / 2023
- Oracle Autonomous Database Administrator Professional 2019 / 2023
- Oracle Cloud Database Migration and Integration 2021
- OCI Cloud Certified Architect Associate 2022
- OCI Cloud Certified Architect Professional 2022
- OCI Multi-Cloud Architect Professional 2023
- Oracle Database Services Certified Professional 2023

Oracle Certified Professional (OCP)

- Oracle Database certified professional 10g, 11g, 12c and 19c.
- Mysql 8.0 Database Administrator Certified Professional

Oracle Certified Specialist (OCE)

- Grid/RAC Database Administrator 11g
- Oracle Golden Gate 12c Certified Implementation Specialist

Agenda

1

Licenses concepts

License types
License Metrics
Oracle Price List
Hard Partition
Soft Partition

2

Oracle Support

Database Timeline
Support Rewards

3

Oracle Cloud

OCI License Manager
BYOL
License included
Universal Credits

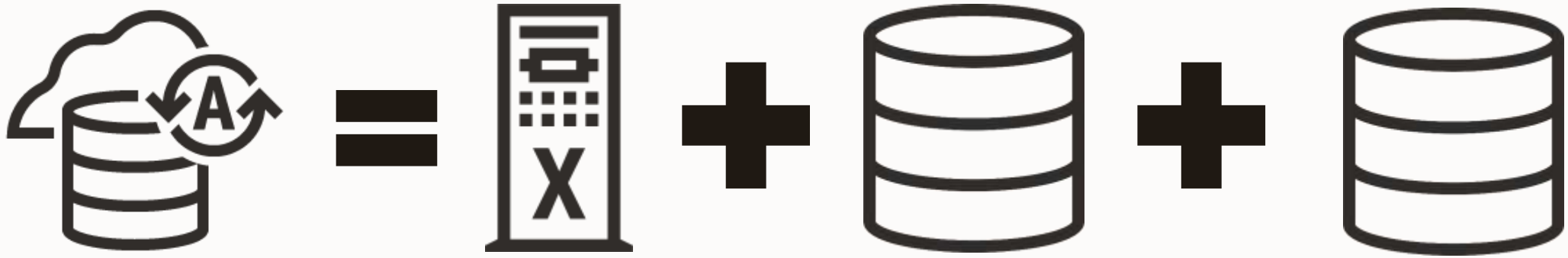
4

Oracle Database

Standard Edition
Enterprise Edition
Oracle Price List

Licenses Basic components

Oracle Database topics to be consider



Oracle Database Product = Infrastructure Platform + Oracle Database Edition + Oracle Database Version

General Licensing Information Environments

Development

[Check Database Dev Policy Here]

Quality Assurance, Testing & Staging

[Check Testing Policy here]

Disaster Recovery

Document database

[Check DR Policy Doc here]

Licensing issues are not presented only in production environments!

Oracle Processor concepts

CPU

Central Processor unit

May contain one or more cores

Used as metric for Oracle Database Standard Edition 2

VCPU

CORE

OCPU

CPU

Central Processor unit

May contain one or more cores

Used as metric for Oracle Database Standard Edition 2

VCPU

Virtual Central processor unit

Can be a core or a thread

Used as metric for others Cloud providers

CORE

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Virtual Central processor unit

Can be a core or a thread

Used as metric for others Cloud providers

CORE

Virtual or physical subdivision of a CPU

Can be a core or a thread

Used as metric for Oracle Database Enterprise Edition

OCPU

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VCPU

Virtual Central processor unit

Can be a core or a thread

Used as metric for others Cloud providers

CORE

Virtual or physical subdivision of a CPU

Can be a core or a thread

Used as metric for Oracle Database Enterprise Edition

OCPU

Processing Unit that Oracle Uses to create Services on OCI

Used for BYOL and core factor table

Software Licensing Metrics

Oracle Full Use license

Full Use license is without restrictions and allows usage that is full functionality.

you don’t have Limitations to install third applications including Oracle Tools.

Application Specific Full (ASFU)

Use is specific to run only with the defined application and may come with additional restrictions.

Share the same Datatabe with another applications and tools are not allowed.

Application Examples : **SAP**, **Oracle Business Suite**, **ISV**

Not Allowed examples :

- **Sqlplus connections**
- **Golden Gate connections**
- **Sql Developer connections**

Oracle Named User Plus VS Processor Metric Definition

Named User Plus (NUP)

Metric is defined as individuals authorized to use Oracle programs installed on single or multiple servers. Licensing considerations include:

- Human and non-human operated devices are counted towards NUP license
- Batch processing from computer to computer is permitted and does not require counting users at the front of the batch process

Processor Metric

The Processor metric is used to license all processors where Oracle programs are installed and/or running.

- Most Standard Edition products are licensed by Processor, which for Standard Edition programs is defined as a socket
- Enterprise Edition and other technology products may be licensed by cores

Oracle Core Factor table

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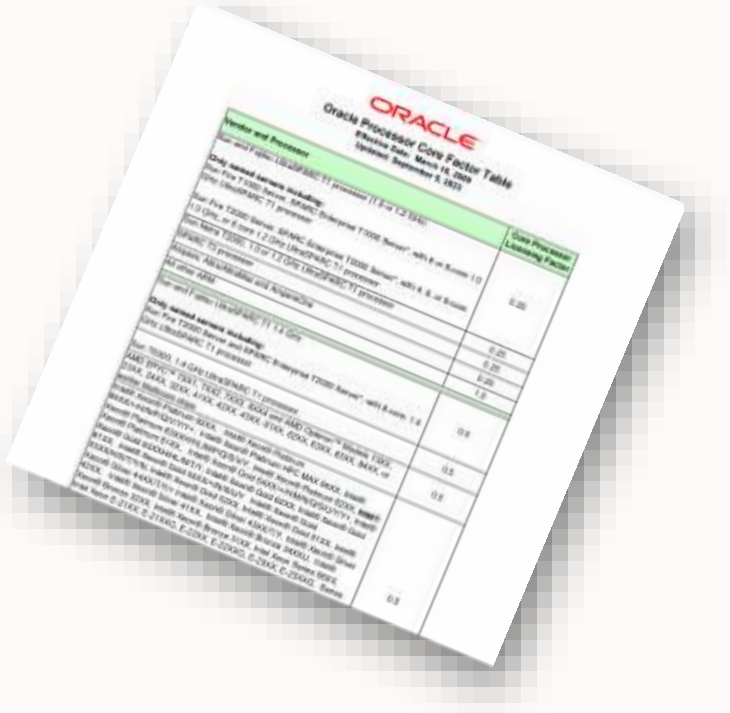
- **Core factor** gives you the delta to calculate Database Enterprise licenses number by processor



- Oracle strongly recomends check on-line documentation to be aware of all recent changes

- Core factor is used to calculate Database Enterprise Features too

- Last update on Septermber, 5 2023

Oracle Database Editions

Database Standard Edition

Oracle Database 19c Standard Edition 2 has some limitations compared to the Enterprise Edition.

- Lisensed by physical socket (core Factor not allowed)
- Oracle consider the socket factor limited by 2 sokets
- Standard Edition model using **NUP** metric requires at least **>10 users**

Oracle Database Enterprise Edition

Is the most complete version of Oracle database software, **core-based** licensing.

- There is no limit for core usage
- The delta to calculate CPU lisenses is :

(# of cores x core factor = # of Processor licenses)

- Enterprise Edition model using NUP metric requires at least >25 users per **processor lisences**

Oracle Database Standard Edition VS Enterprise Edition

Security Features/Option	Enterprise Edition	Standard Edition
Database Security Assessment Tool	✓	✓
Data Safe	✓	✓
Password Profiles	✓	✓
Strong Authentication	✓	✓
Network Encryption	✓	✓
Oracle RAC	✓	⊘
Oracle RAC one node	✓	⊘
Unified Audit	✓	✓
Oracle Active Data Guard	✓	⊘
Transparent Data Encryption	✓	⊘
Management Pack for Oracle Database	✓	⊘
Oracle Diagnostics Pack	✓	⊘
Oracle Tuning Pack	✓	⊘
Oracle Partition	✓	⊘
Oracle Advanced compression	✓	⊘
Real Application Test	✓	⊘

Oracle Database Versions, Editions, limitations and features

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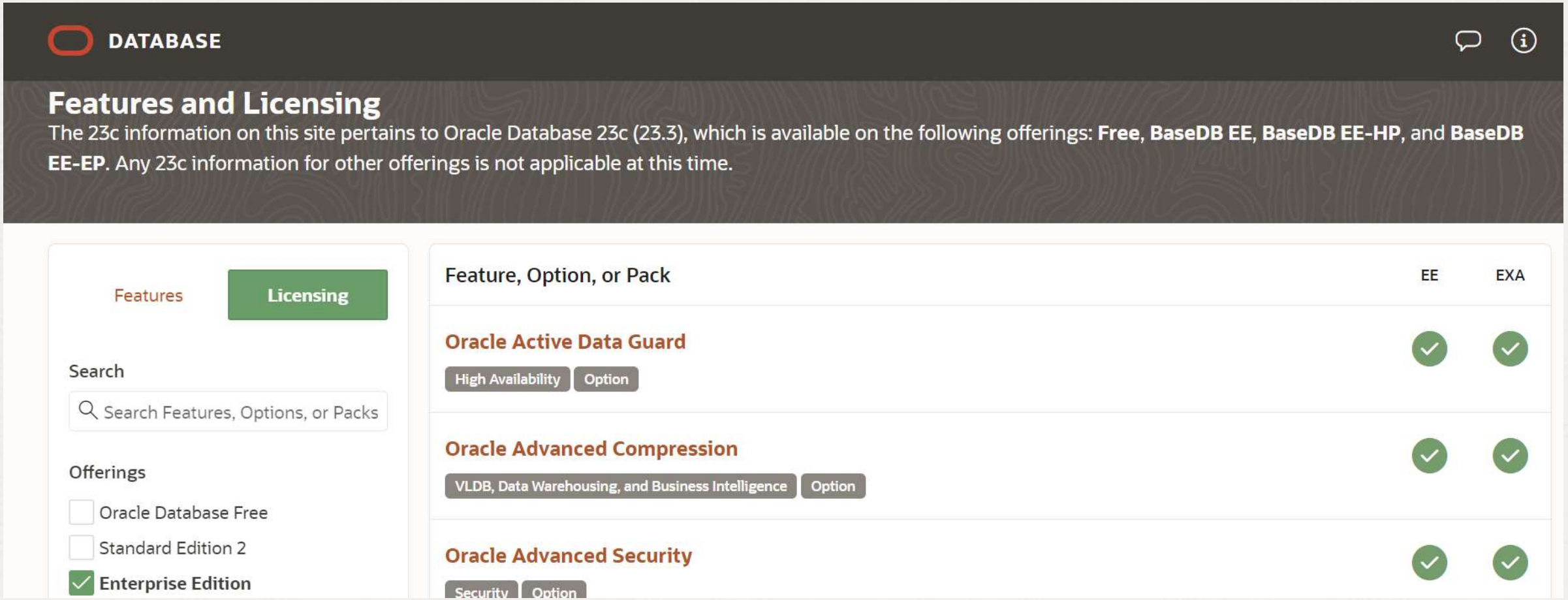

Oracle Database on virtualized environments

What is Partitioning?

“Partitioning” occurs when the CPUs on a server are separated into individual sections where each section acts as a separate system.

There are several hardware and **software virtualization** technologies available that deliver partitioning capabilities, with varying degree of resource allocation flexibility.”

Why Partition ?

- Database Administrators (DBAs) often partition servers to achieve the following benefits:

- Ability to run multiple operating systems, or multiple versions of an operating system, on the same server

- Ability to improve workload balancing and distribution by managing processor allocations across applications and users on the server

- Ability to leverage hardware models such as “Capacity on Demand” and "Pay As You Grow.”

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Hard Partitioning

Hard partitioning physically segments a server, by taking a single large server and separating it into distinct smaller systems.

Each separated system acts as a physically independent.

Examples :

- Hard Partitioning - LPAR
- Hard Partitioning - LDOM

Soft Partitioning

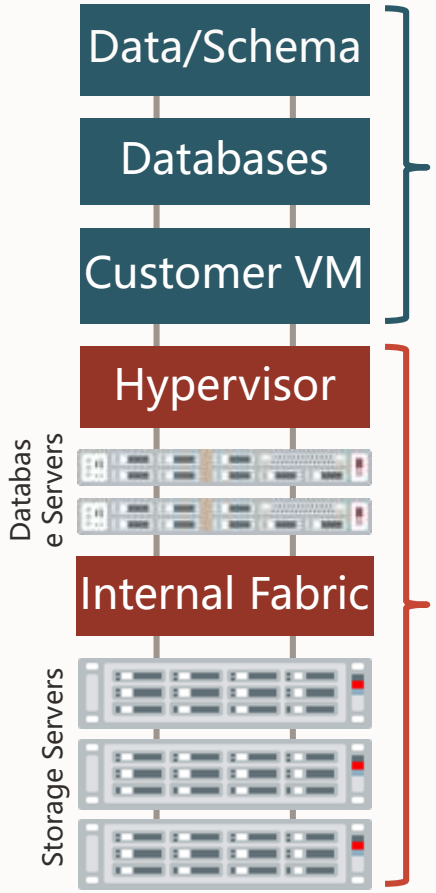
Soft partitioning segments the operating system using OS resource managers.

The operating system limits the number of CPUs where an Oracle database is running by creating areas where CPU resources are allocated.

Examples :

- Soft Partitioning - VSphere
- Soft Partitioning - HyperV

Understanding Trusted Partitioning on OCI



Customer subscribes to database services

- Oracle Recognizes **Hypervisor Technology**
- You can add Processors with no need to cover all Physical cores
- Oracle staff are not authorized to access customer VM

Oracle owns and manages infrastructure on OCI Databases

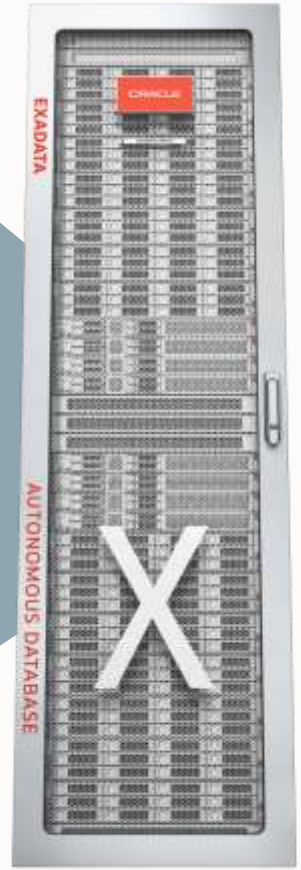
- Hypervisor, database and storage servers, storage network
- Patching, security scans, security updates
- Monitoring and maintenance
- Customer not authorized to access Oracle infrastructure

Oracle Database Features

Oracle Database and most used features options

- Multitenant
- In-Memory DB
- Real Application Clusters
- Active Data Guard
- Partitioning
- Advanced Compression
- Advanced Security, Label Security, DB Vault
- Real Application Testing
- Advanced Analytics, Spatial and Graph
- Management Packs for Oracle Database

All Oracle Database Innovations



What feature your environment needs ?

- **How To Verify Which Database Features are Used** (Doc ID 459837.1)

GOAL

This article explains how you can check which options or features are used in the database. This is particularly useful for licensing purposes or when you want to de-install a certain option.

SOLUTION

This can be achieved through the DBA_FEATURE_USAGE_STATISTICS view. This view will list the feature usage on a per patchset basis. So the combination of feature name and version is unique.

Typically one can verify the features used using the following query:

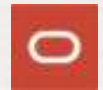
```
select *
from DBA_FEATURE_USAGE_STATISTICS
where detected_usages > 0
order by name, version;
```

To get a list of options that are not in use:

```
select *
from DBA_FEATURE_USAGE_STATISTICS
where detected_usages = 0
order by name, version;
```

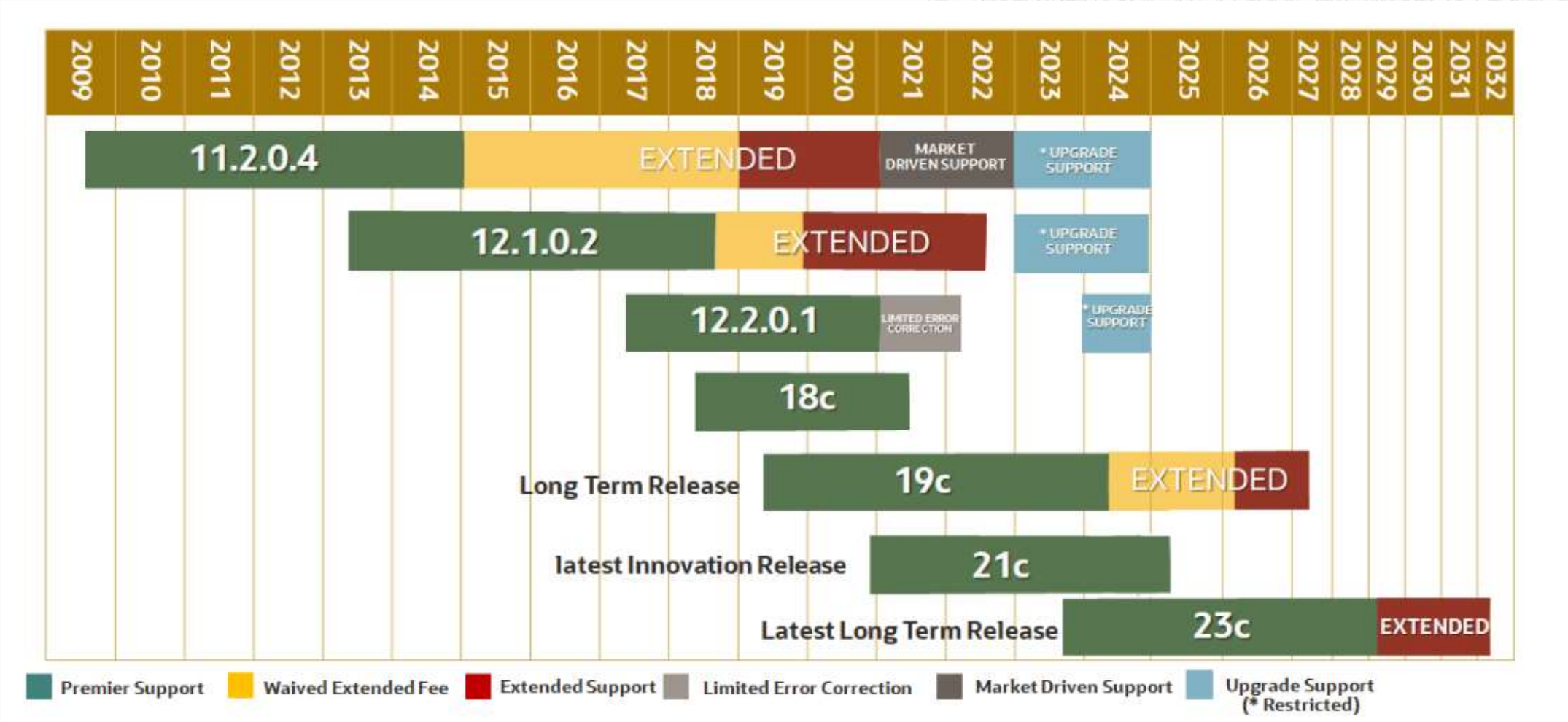
Note: If the DBID has been changed via nid command, the query against the DBFUS view MUST include the current DBID otherwise the results returned will be incorrect.

For a more detailed report on the option details and their usages, please see



Oracle Database Releases and timeline

My Oracle Support Official Note (Doc ID 742060.1)



Oracle Products Support life Time

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- Major product and technology releases
- Technical support
- My Oracle Support
- Updates, fixes, security alerts, data fixes, and critical patch updates
- Tax, legal, and regulatory updates
- Upgrade scripts
- Certification with most new third-party products/versions
- Certification with most new Oracle products

Understanding Price List

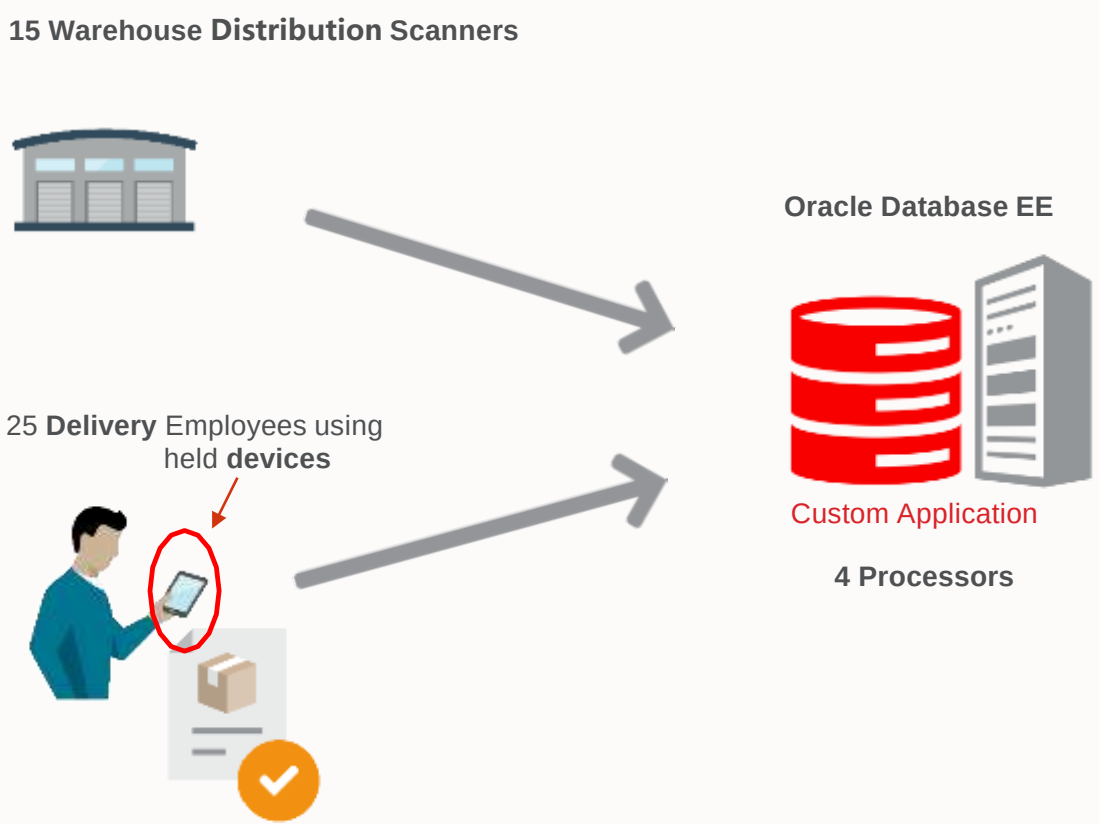
Understanding price list table

Section I

Prices in USA (Dollar)

	Oracle Database			
	Named User Plus	Software Update License & Support	Processor License	Software Update License & Support
Database Products				
Oracle Database				
Standard Edition 2	350	77.00	17,500	3,850.00
Enterprise Edition	950	209.00	47,500	10,450.00
Personal Edition	460	101.20	-	-
Mobile Server	-	-	23,000	5,060.00
NoSQL Database Enterprise Edition	200	44	10,000	2,200.00
Enterprise Edition Options:				
Multitenant	350	77.00	17,500	3,850.00
Real Application Clusters	460	101.20	23,000	5,060.00
Real Application Clusters One Node	200	44.00	10,000	2,200.00
Active Data Guard	230	50.60	11,500	2,530.00
Partitioning	230	50.60	11,500	2,530.00
Real Application Testing	230	50.60	11,500	2,530.00
Advanced Compression	230	50.60	11,500	2,530.00
Advanced Security	300	66.00	15,000	3,300.00
Label Security	230	50.60	11,500	2,530.00
Database Vault	230	50.60	11,500	2,530.00
OLAP	460	101.20	23,000	5,060.00
TimesTen Application-Tier Database Cache	460	101.20	23,000	5,060.00
Database In-Memory	460	101.20	23,000	5,060.00
Database Enterprise Management				
Diagnostics Pack	150	33.00	7,500	1,650.00
Tuning Pack	100	22.00	5,000	1,100.00
Database Lifecycle Management Pack	240	52.80	12,000	2,640.00
Data Masking and Subsetting Pack	230	50.60	11,500	2,530.00
Cloud Management Pack for Oracle Database	150	33.00	7,500	1,650.00

Licensing Oracle Enterprise Database Sample

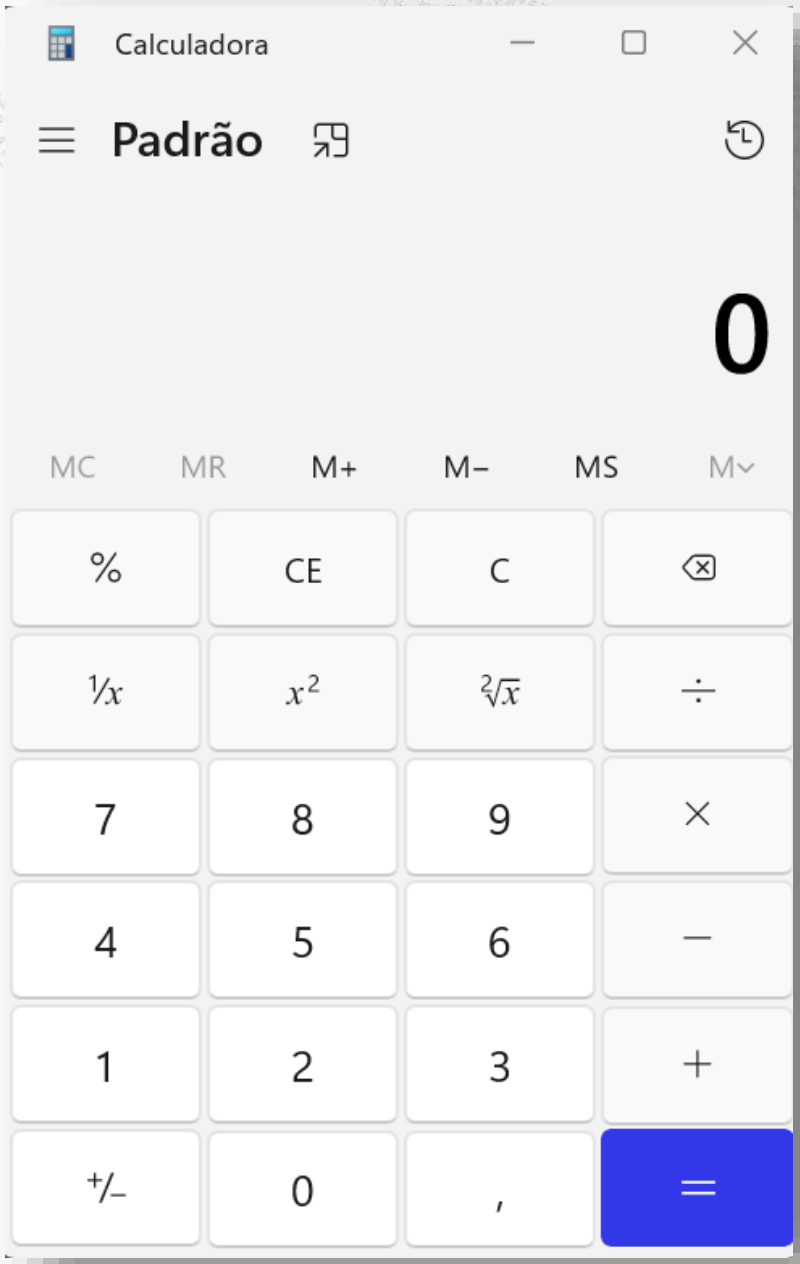


- Current distribution company has **40 named users** between Employees and Warehouse scanners.

Oracle Database Enterprise Edition is running on :

- **2** Processors server
- **12** Cores per processor
- **0.5** Core Factor

Let's check some numbers ?



(# of cores x core factor = # of Processor licenses)

- **2** Processors server
- **12** Cores per processor
- **0.5** Core Factor

2 Processor ✖ 12 Cores = 24 Cores

24 Cores ✖ 0.5 Core factor = 12 Processor licenses required

By Core Factor

By Named User NUP

12 Processor licenses ✖ 25 (user minimum) = 300 Named User Plus user

OCI Database Licensing Model

Cost-Effective Software Licensing Models

Subscribe to infrastructure and choose License Included or Bring Your Own License (BYOL)

License Included Pricing

Ideal for organizations with new workloads and dynamic utilization

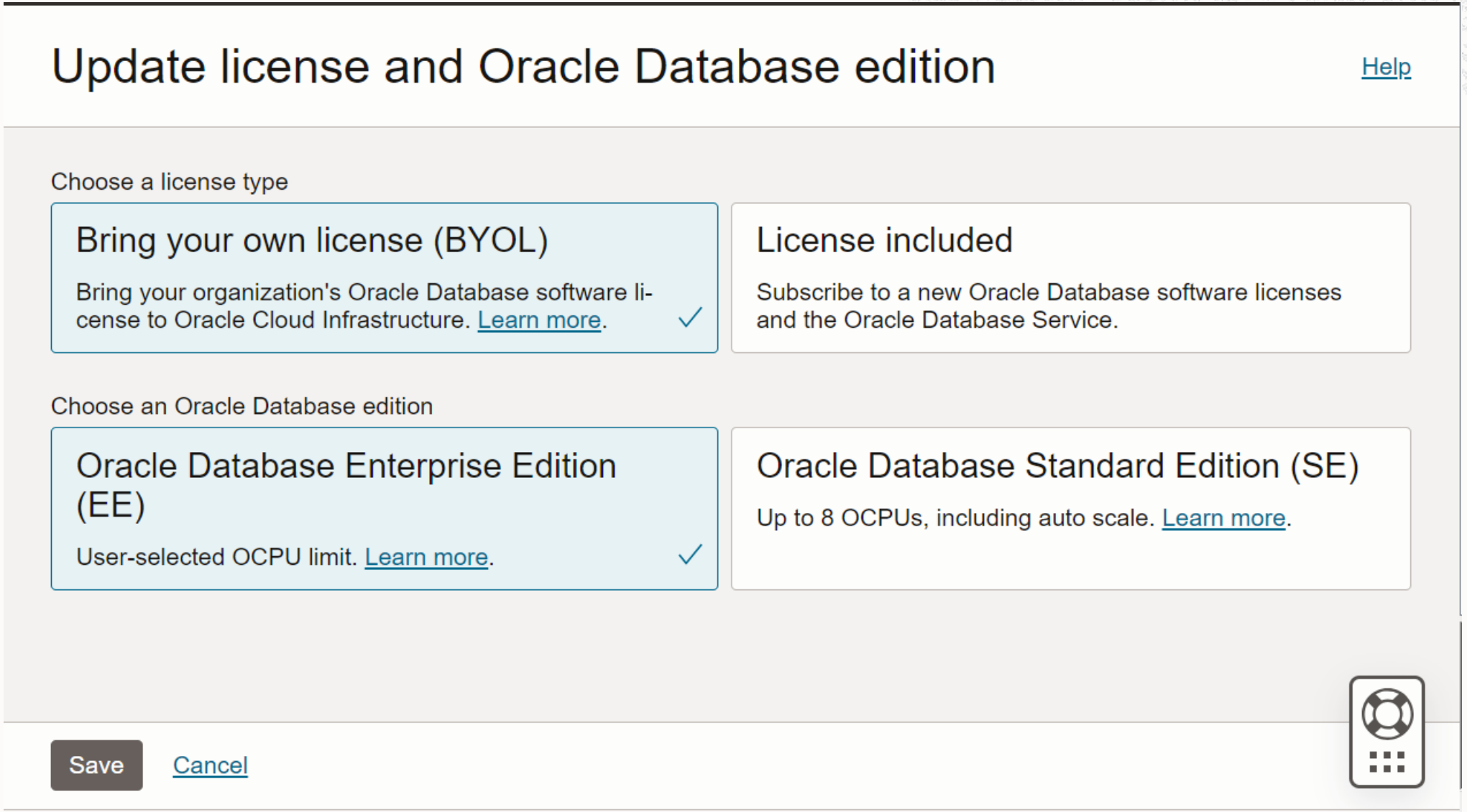
- Includes Oracle Database Enterprise Edition with all options and management packs at one low price
- Consumption-based pricing for software and vCPUs, includes software support and paid for with Universal Credits

Bring Your Own License Pricing

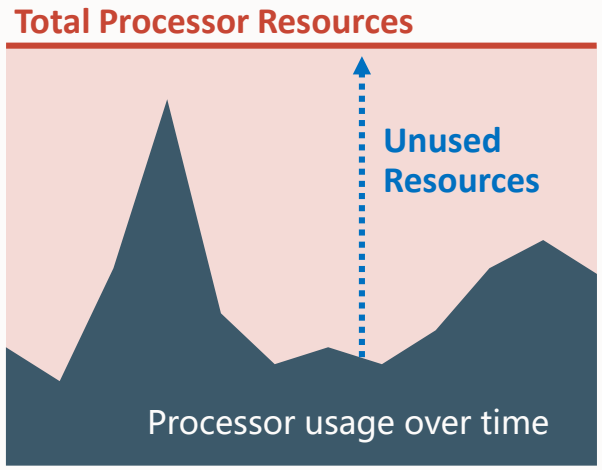
Ideal for organizations moving existing workloads with consistent usage to the cloud

- Utilize existing on-premises licenses and pay software support for them
- Very-low, compute-only consumption pricing, paid for with Universal Credits
- Includes Transparent Data Encryption, Data Safe, Oracle Machine Learning, and select management packs at no additional cost

You can change license type using OCI Console

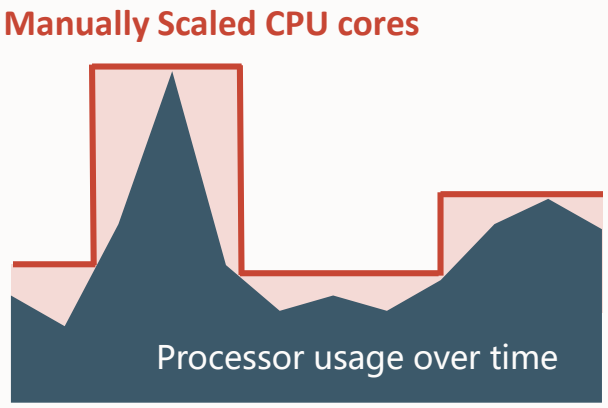


Online, Elastic Scaling with Exadata and Autonomous Database Services Pay only for what you use, in OCI or your data center



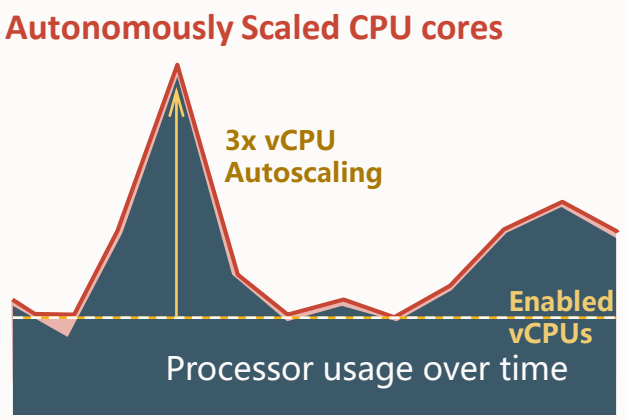
On-Premises & Other Clouds – Static

Purchase server processors and software licenses for **highest projected peak load**



Exadata Database Service – Elastic

Adjust enabled CPUs to match **actual workload** via APIs and web UI - CPUs are charged per second

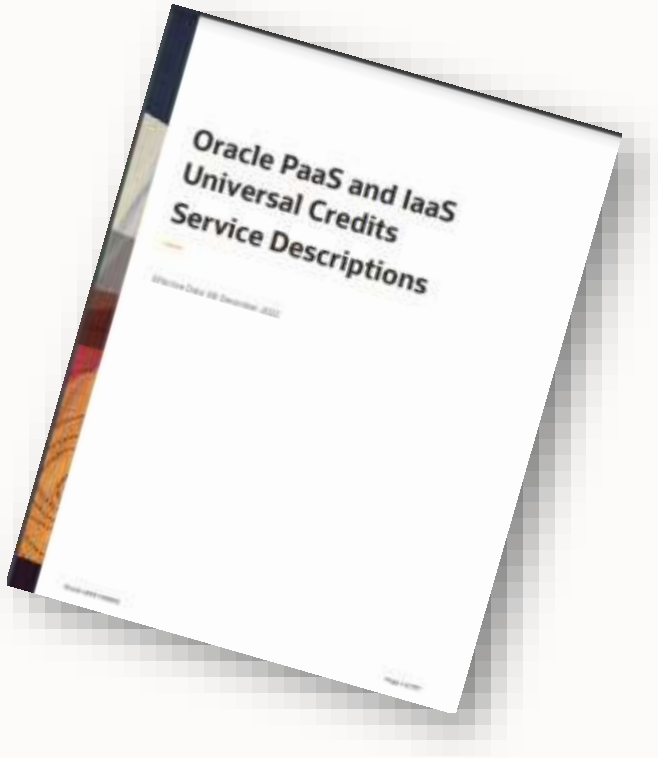


Autonomous Database – Self-scaling

Automatically scales CPU core consumption based on **dynamic workload demands**, in real-time

Oracle PaaS and IaaS Universal Credits Description

SCAN ME



Pay as You Go (PAYG)

- No upfront commitment
- Pay only for what you use
- Pay in arrears based on usage
- Built for land and expand

Universal Credits

- Agreed-to monthly spend
- Additional discounts based on size and term of deal
- Elastic payments based on usage

Autonomous Database Billing

Autonomous Database ECPU billing

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- The introduction of ECPU's is simply a new pricing metric. Using an ECPU Autonomous Database is essentially identical to an OCPU Autonomous Database
- The OCPU billing metric has been retired on Autonomous Data Warehouse and Autonomous Transaction Processing as of January 2024
- ECPU's provide similar or better price-performance than OCPU's for a given Autonomous Database workload.

Retirement Of The OCPU Billing Metric In Autonomous Database Serverless (Doc ID 2998742.1)

ACTIONS

What action do I need to take now?

We encourage customers to provision all new Autonomous Data Warehouse and Autonomous Transaction Processing databases or clones with the ECPU billing metric. We also encourage customers to update all existing databases to the ECPU billing metric, which is a simple and seamless button click or API call, as described in the documentation here. While you may choose not to update your existing databases' billing metric at this time, Oracle may convert your databases from the OCPU billing metric to the ECPU billing metric in the future.

Note: Autonomous Data Warehouse databases provisioned as part of Oracle Data Intelligence Platform (formerly Fusion Analytics Warehouse) service instance will be updated to the ECPU billing metric by Oracle. No user action is required on those databases.

How will updating my databases to the ECPU billing metric affect my service?

Updating your Autonomous Database Serverless to the ECPU billing metric will have **no impact to your service** and incur **no downtime**.

Which SKUs are affected by this retirement notice?

Oracle Autonomous Database will be retiring the OCPU-based SKUs and replacing them with the ECPU-based SKUs listed below:

Retired OCPU Billing Metric - SKU Name	Part Number	Metric
Oracle Autonomous Data Warehouse	B89040	OCPU Per Hour
Oracle Autonomous Data Warehouse - BYOL	B89039	OCPU Per Hour

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Retirement Of The OCPU Billing Metric In Autonomous Database On Dedicated Infra (Doc ID 2998755.1)

ACTIONS

What action do I need to take now?

We encourage users to provision new Autonomous VM Clusters (AVM) with the ECPU billing metric. Oracle will offer an online conversion capability to update existing OCPU AVMs and their respective Autonomous Container Databases and Autonomous Databases to the ECPU billing metric via the OCI console and API in Q3 CY2024. In the meantime, users can also use database cloning to migrate existing OCPU ADBs to ECPU if they have AVMs configured with the ECPU billing metric. While you may choose not to update your existing databases' billing metric at this time, Oracle may convert your databases from the OCPU billing metric to the ECPU billing metric in the future.

Which SKUs are affected by this retirement notice?

Oracle Autonomous Database on Dedicated Infrastructure will be retiring the OCPU-based SKUs and replacing them with the ECPU-based SKUs listed below:

Retired OCPU Billing Metric - SKU Name	Part Number	Metric
Oracle Autonomous Data Warehouse - Dedicated	B92182	OCPU Per Hour
Oracle Autonomous Data Warehouse – Dedicated - BYOL	B92184	OCPU Per Hour
Oracle Autonomous Transaction Processing - Dedicated	B92181	OCPU Per Hour
Oracle Autonomous Transaction Processing – Dedicated - BYOL	B92183	OCPU Per Hour

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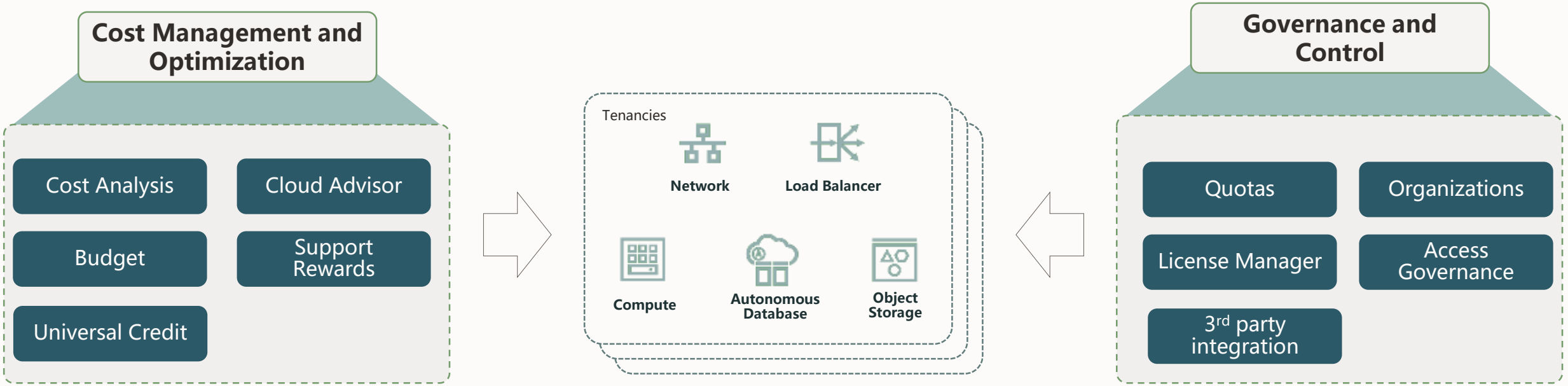
OCI License Manager

Oracle’s Cost Management and Governance Strategy

Core principle to guide cloud leaders into best practices

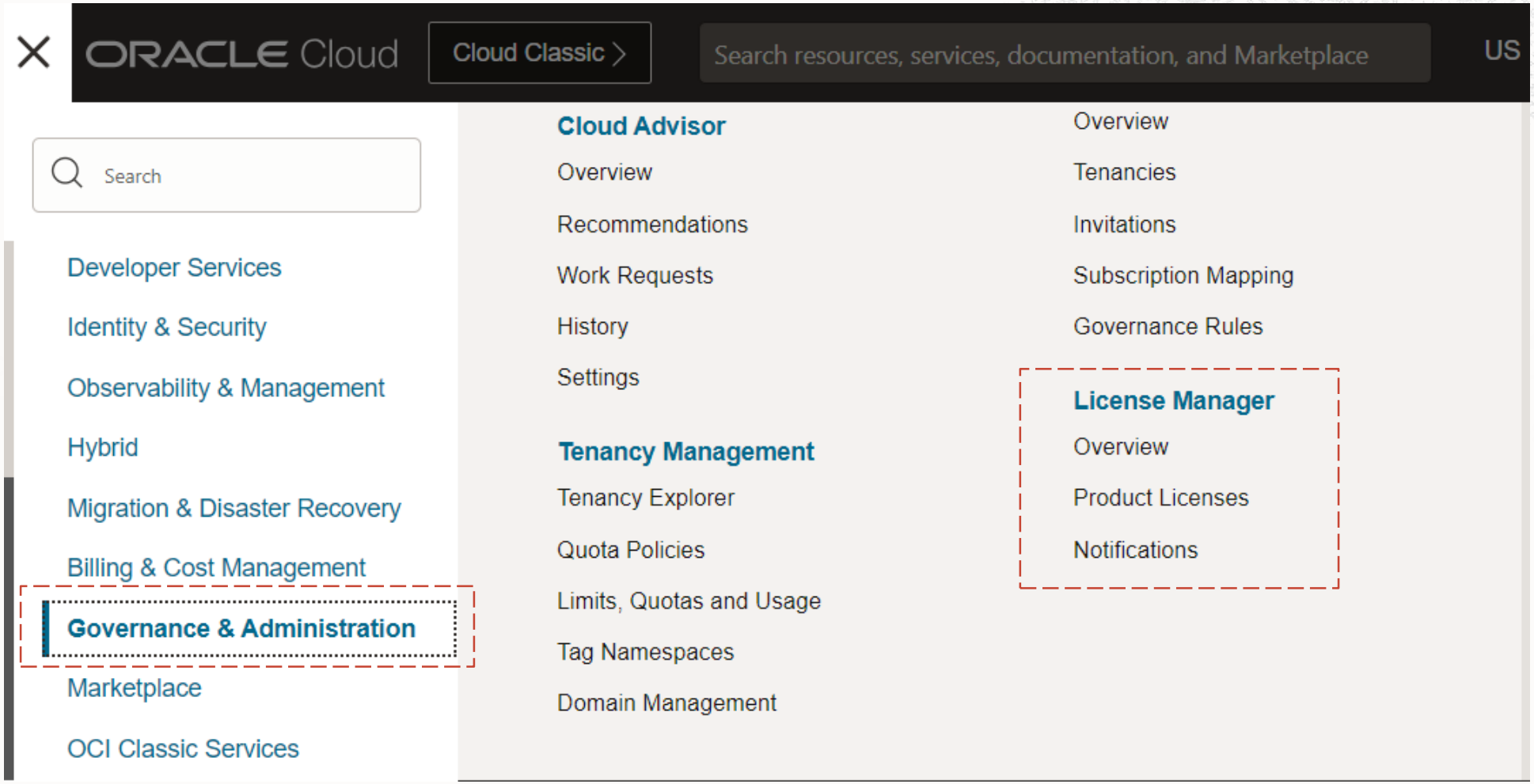


Easy-to-use

Automated

Prescriptive

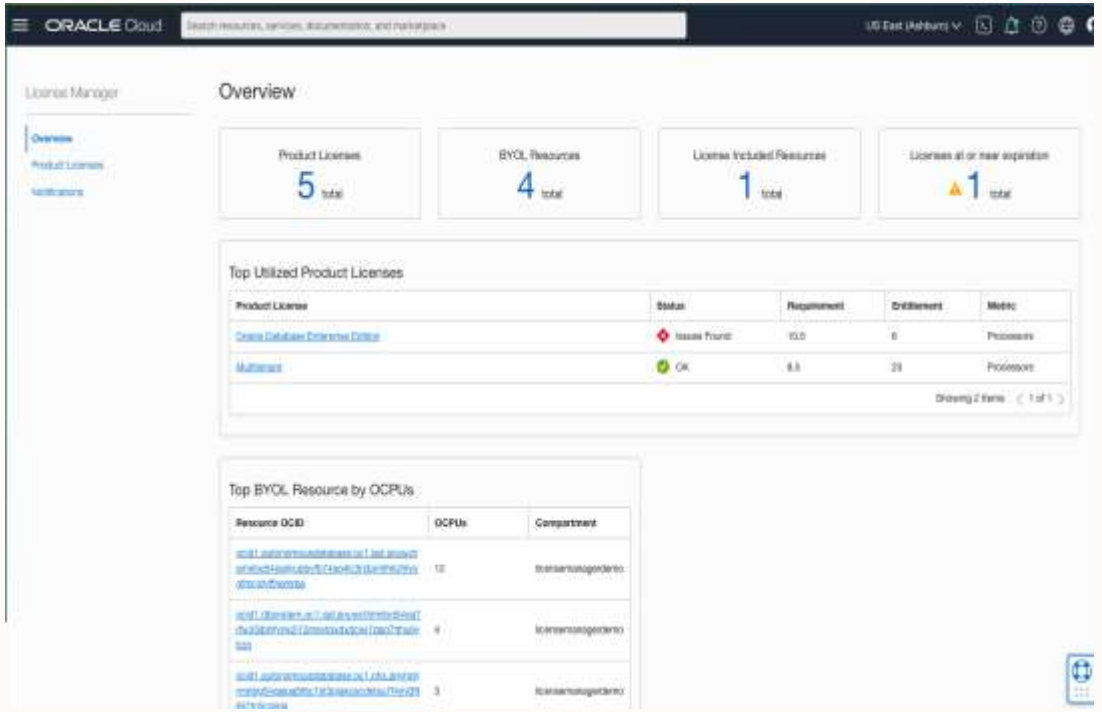
Oracle License Manager on OCI Console



License Manager

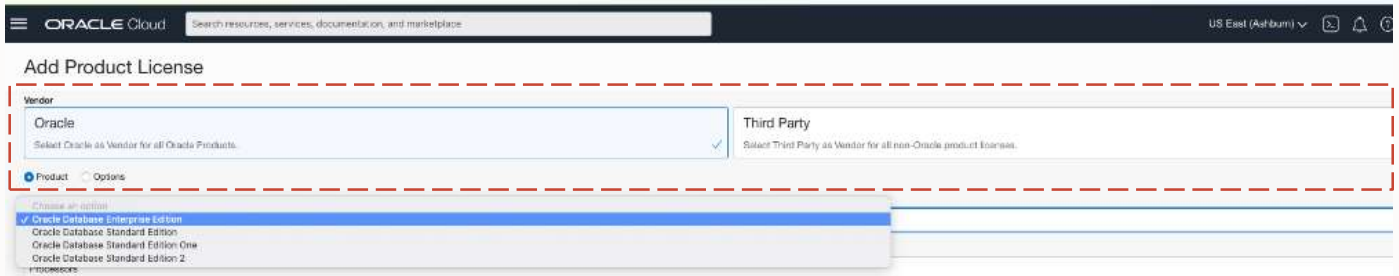
License Manager is a free, opt-in service that makes it easier for you to Bring Your Own License (BYOL) on OCI with the following capabilities:

- Automating the license portability rules for Oracle Database products to OCI Database service
- Single pane of glass to track licensing needs on both IaaS and PaaS resources. Use the same tool to track Oracle and Third-party license utilization
- Pro-active email notification on over-subscription and license expiration scenarios.



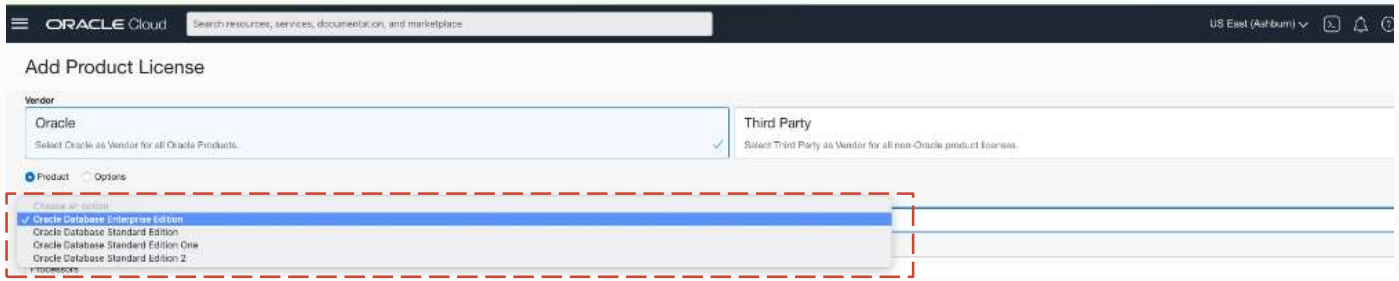
Oracle License Manager Configuration steps

Step 1 : Click Add Product License button.



Step 2 : Select between Oracle and third party for License creation.

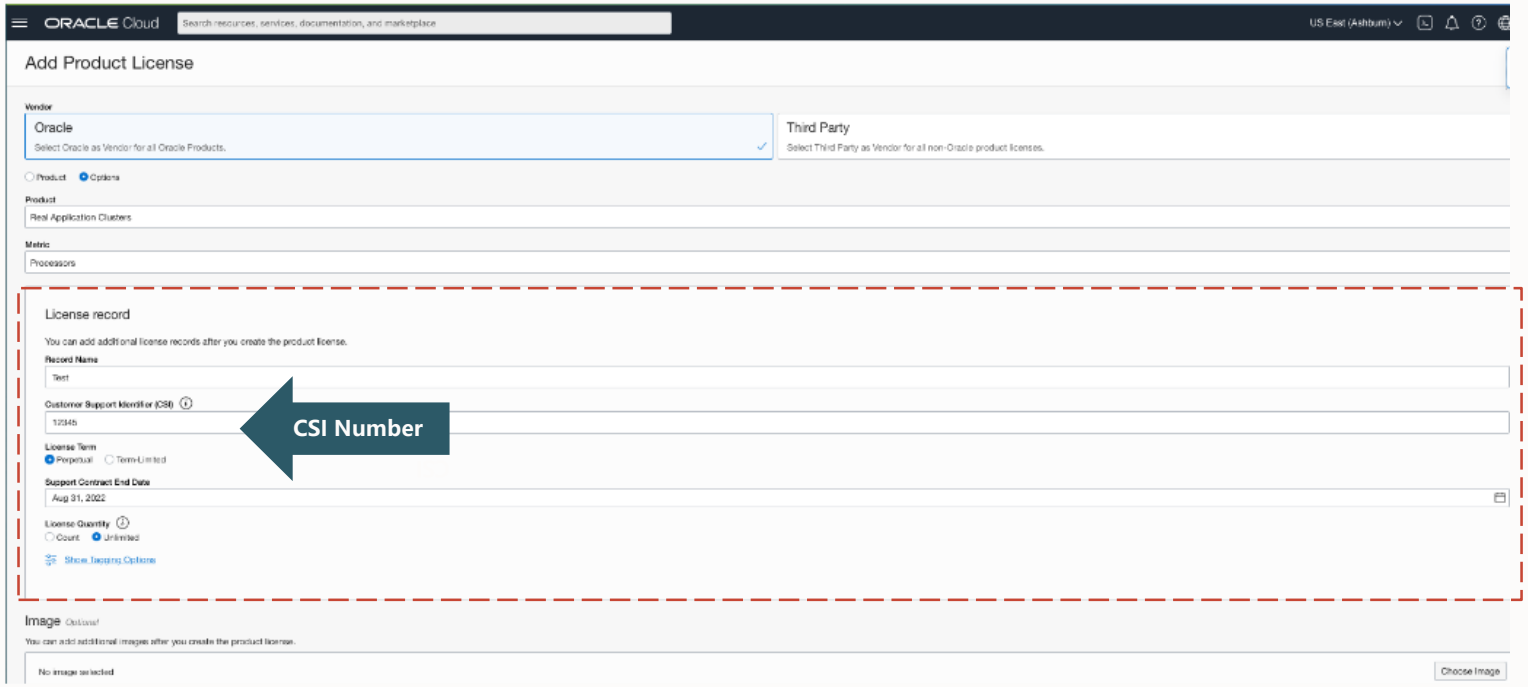
Oracle License Manager Configuration steps



Step 3 : Select an Oracle Database Product Edition.
Samples : **Enterprise Edition**, **Standard Edition.**

Step 4 : You can choose options : **Real Application Cluster** (RAC), **Multitenant** and **Active Data Guard**

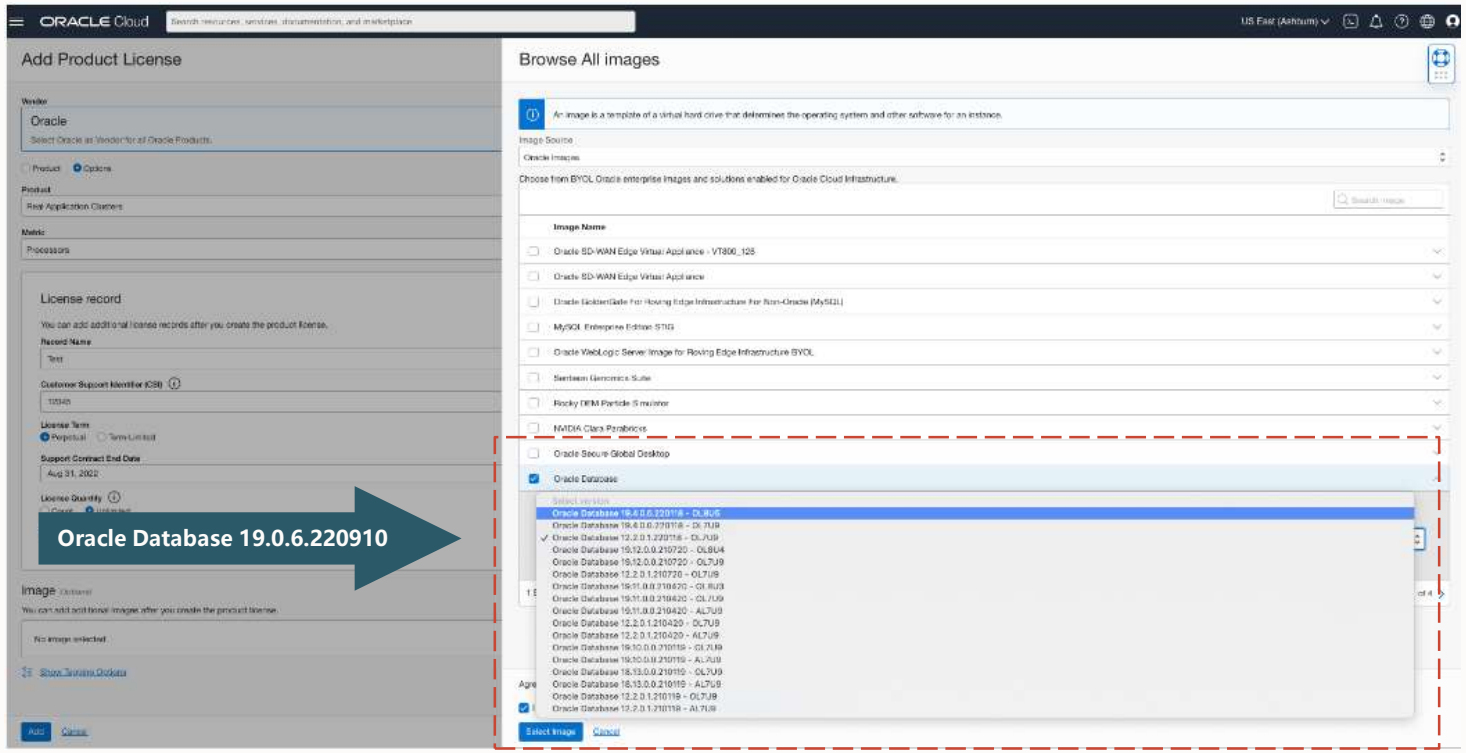
Oracle License Manager Configuration steps



Step 5 :

- You can input your license record details in the License record portion of the form.
- You can record information such as your Customer Support Identifier (CSI)
- You can also record your support contract end date and if your license

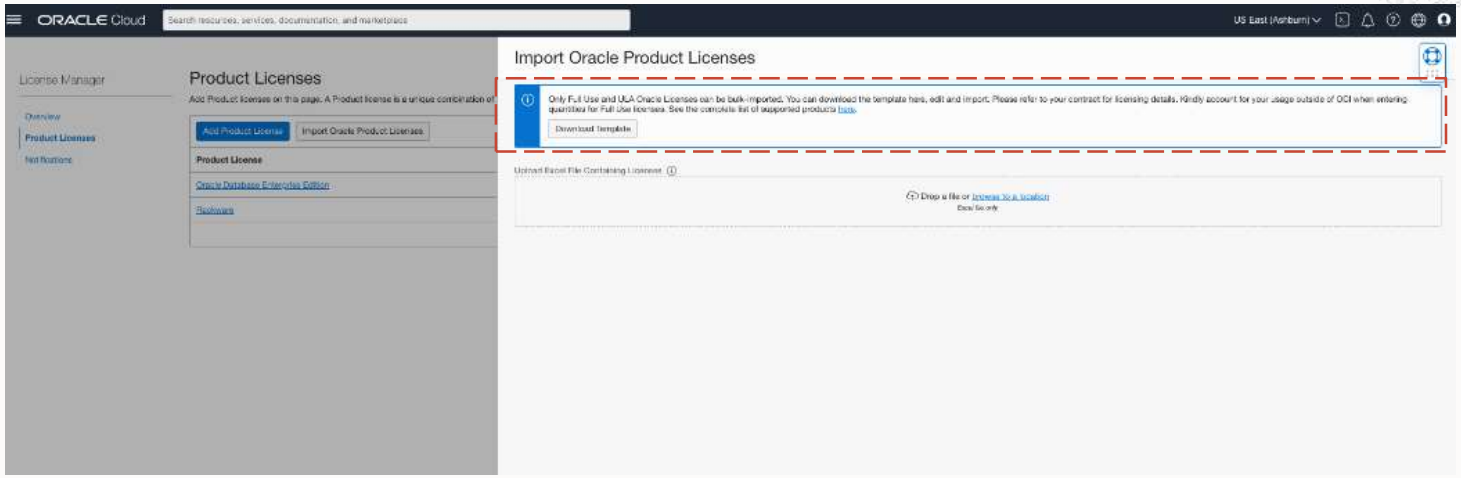
Oracle License Manager Configuration steps



Step 6 :

- To track license utilization on Compute resources, you can associate a Compute image with your license.
- Under the Image section, select Choose Image.
- You can select the specific image and image build in the form that appears.

Oracle License Manager Configuration steps



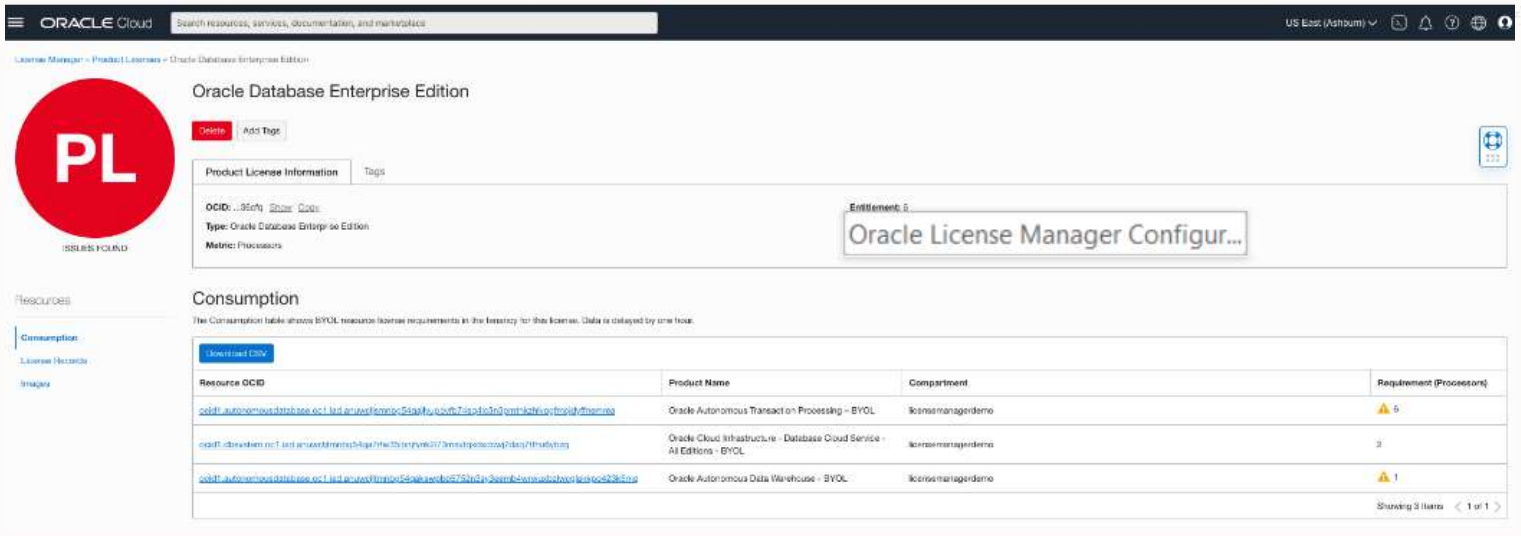
	A	B	C	D	E	F	G	H
1	Product Name	Metric	License Term	License End Date	License Level	License Count	CSI	Support Contract End Date
2	Oracle Database Enterprise Edition	PROCESSORS	PERPETUAL		ULA		1234567	28-May-2023
3	Real Application Clusters	PROCESSORS	PERPETUAL		ULA		1234567	28-May-2023
4	Multitenant	NAMED USER PLUS	TERM-LIMITED	28-Apr-2023	FULL USE	100	1234568	28-May-2023
5	Oracle Database Enterprise Edition	NAMED USER PLUS	TERM-LIMITED	28-Apr-2023	FULL USE	150	1234568	28-May-2023
6								
7								

Non-mandatory steps :

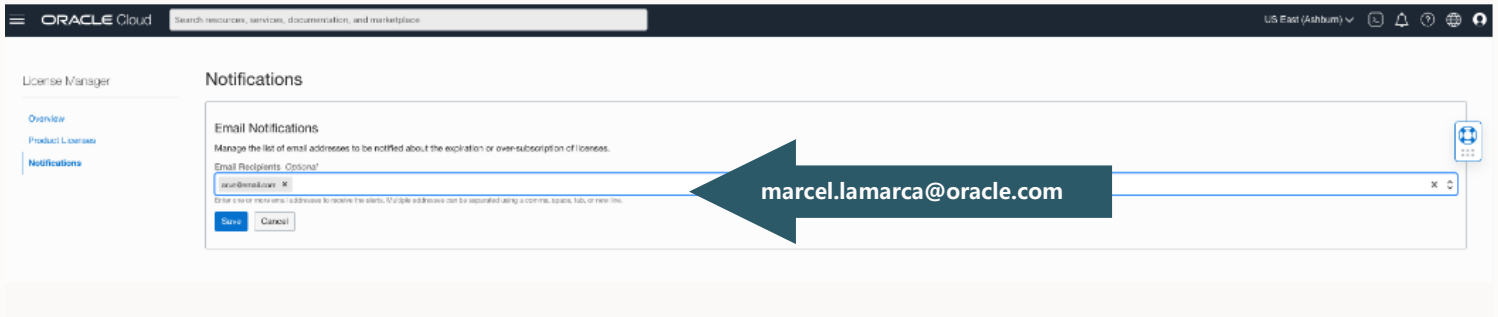
- You can also add Oracle licenses by clicking the Import Oracle Product Licenses button on the **Product License page**.

- You can download an Excel template, edit it to match your licensing data, and reimport it. The following image depicts a sample file.

Oracle License Manager Configuration steps

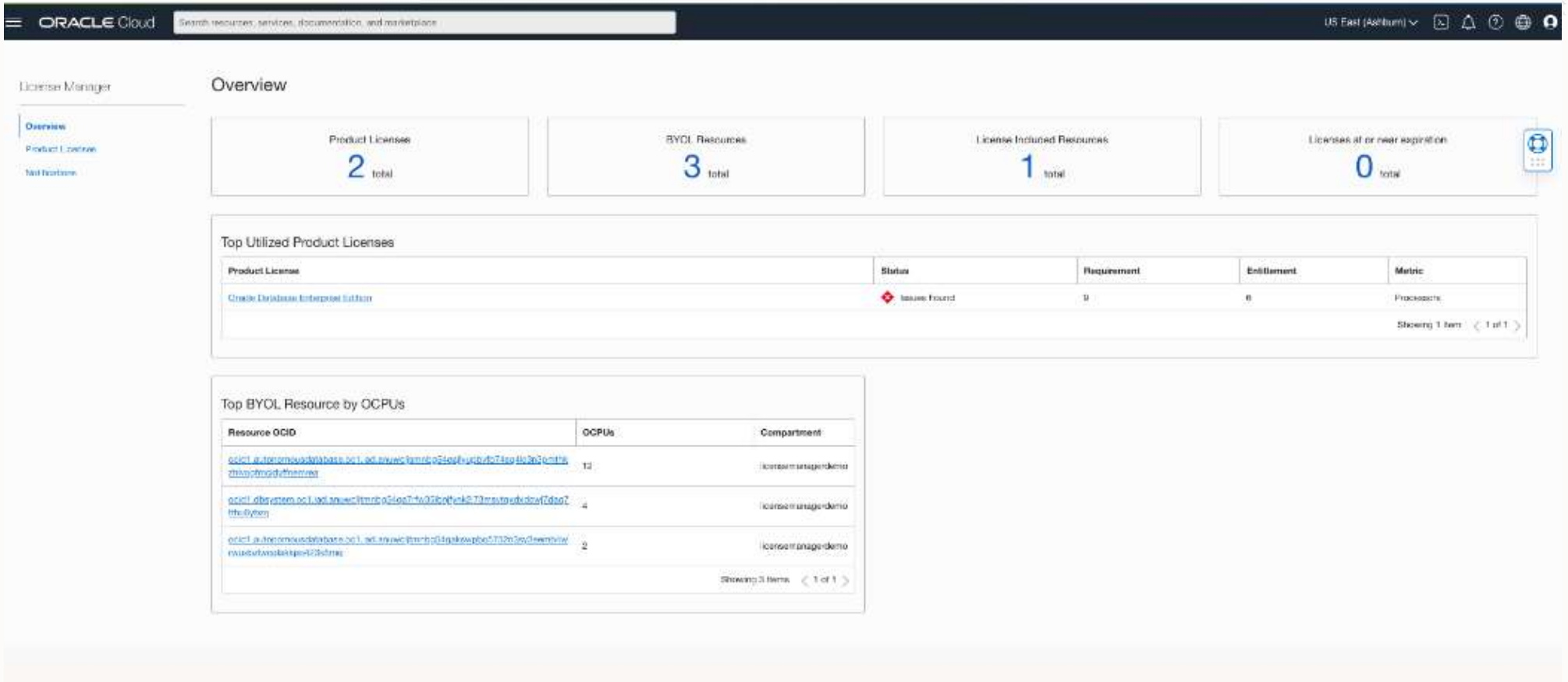


- You can view the entitlements and requirements for a license in the metric that the license was created in from the Product Licenses page.



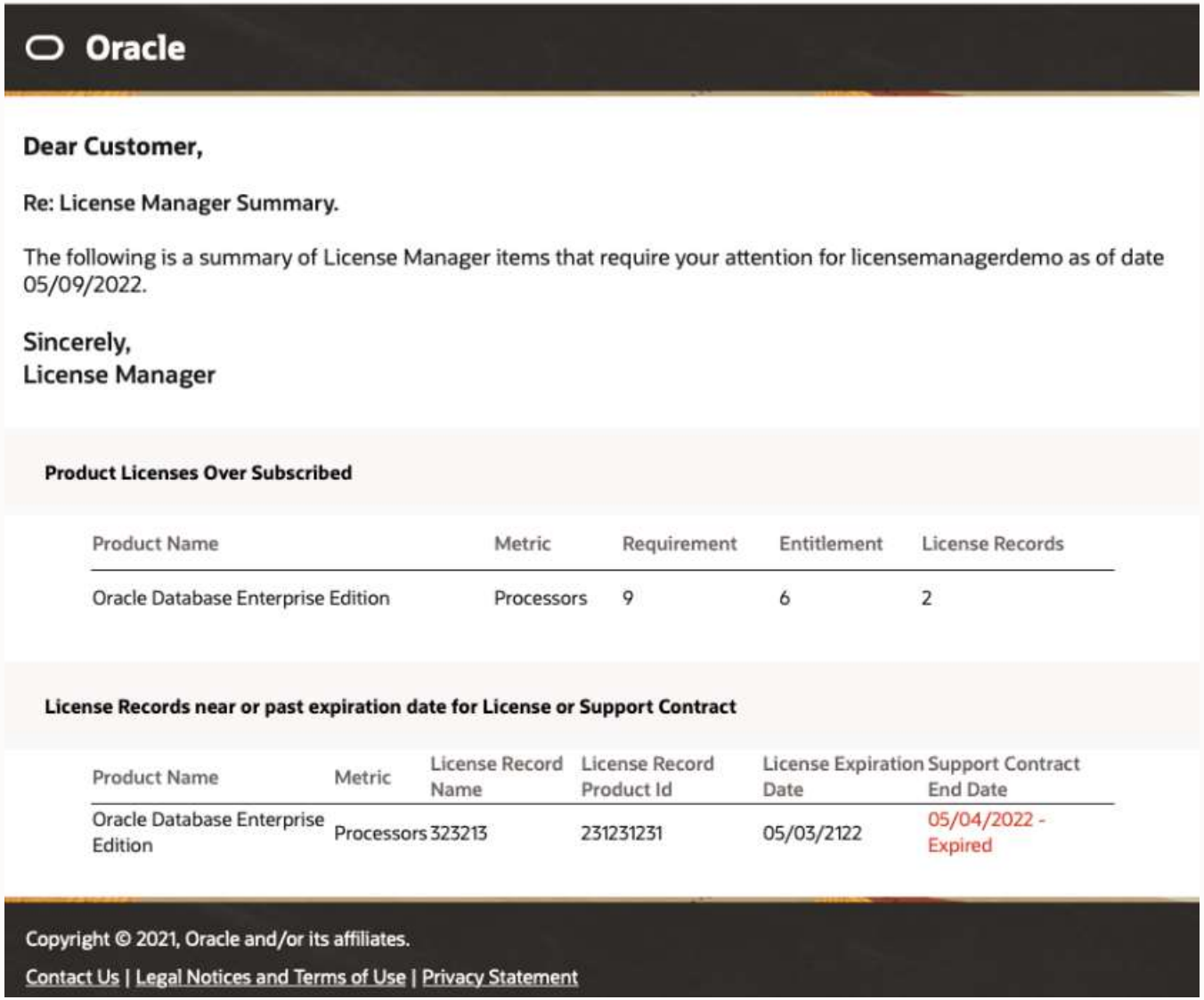
- You can also choose to receive a weekly email notification on scenarios such as oversubscription of licenses or license records at or near expiration by adding the email recipient list on the Notifications page

Oracle License Manager Configuration steps



License Manager e-mail notification

If items require action, you receive an email similar to the following example.



Oracle

Dear Customer,

Re: License Manager Summary.

The following is a summary of License Manager items that require your attention for licensemanagerdemo as of date 05/09/2022.

Sincerely,
License Manager

Product Licenses Over Subscribed

Product Name	Metric	Requirement	Entitlement	License Records
Oracle Database Enterprise Edition	Processors	9	6	2

License Records near or past expiration date for License or Support Contract

Product Name	Metric	License Record Name	License Record Product Id	License Expiration Date	Support Contract End Date
Oracle Database Enterprise Edition	Processors	323213	231231231	05/03/2122	05/04/2022 - Expired

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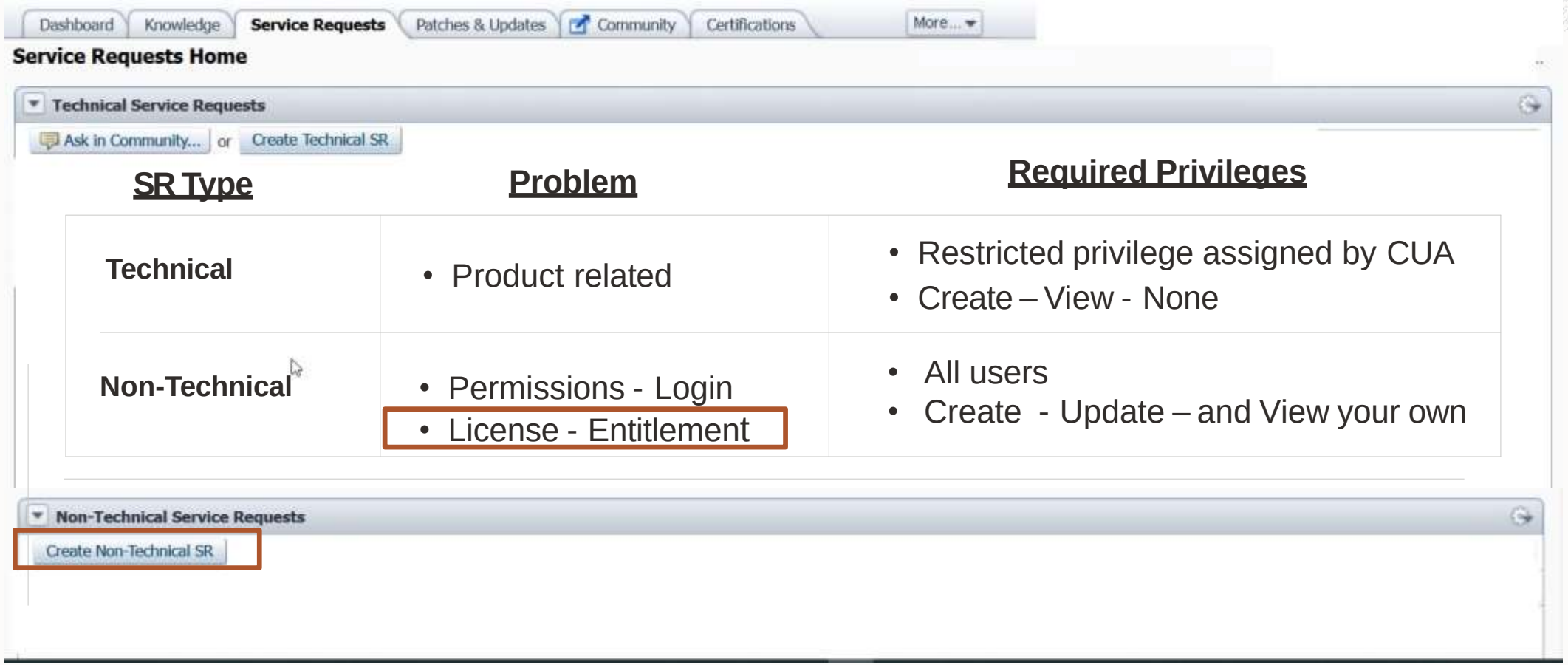
License communication channels

MOS Service SR Technical vs Non-Technical



Or send an e-mail to :infoprice@oracle.com

Oracle Software Investiment Advisor

Licensing Solutions

Can you help us understand the licensing implications of future technology decisions?"

Cloud Sizing

"What do we need to consider when moving parts of our existing environment to the cloud?"

Investment Economics

"How is our Oracle investment supporting the long-term goals of the business?"

Deployment Optimization

"How do I find out if my Oracle TCO is optimized across both on-premise and the cloud?"

License Knowledge Transfer

"Can you help us better understand our license and subscription terms and conditions?"

Entitlement Intelligence

"How do I find out the current state of our contractual agreements with Oracle?"

For more informatio contact sia-global_ww@oracle.com or visit www.oracle.com/goto/sia

Oracle License Management Services (LMS)

SCAN ME

ORACLE

Products Industries Resources Support Events Developer Partners

Overview | Services | Oracle Compliance | Tooling | Resources | Customer References | FA

What is Oracle License Management Services?

Oracle License Management Services (LMS) is the established authority on Oracle licensing policy. We provide Oracle customers with an open, transparent, and definitive assessment of their compliance position. We achieve this with an engagement process that's designed to help customers measure actual usage versus their contractual entitlements, and to address the operational and financial risks associated with any unauthorized deployments.

Resources

- **Oracle Database Licensing**

www.oracle.com/assets/databaselicensing-070584.pdf

- **Oracle Processor Core factor Table**

www.oracle.com/us/corporate/contracts/processor-core-factor-table-070634.pdf

- **Oracle Partition policy**

www.oracle.com/us/corporate/pricing/partitioning-070609.pdf

- **Licensing Oracle Software in the Cloud Computing Environment**

www.oracle.com/us/corporate/pricing/cloud-licensing-070579.pdf

- **Oracle Database 23c Licensing Information User Manual**

https://docs.oracle.com/en/database/oracle/oracle-database/23/dblic/database-licensing-information-user-manual.pdf

- **Oracle Licensing price team e-mail**

infoprice@oracle.com

- **Microsoft Licensing on Oracle Cloud Infrastructure**

https://docs.oracle.com/en-us/iaas/Content/Compute/References/microsoftlicensing.htm

- **OCI Cost Estimator**

https://www.oracle.com/cloud/costestimator.html

- **OCI License Manager Documentation**

https://docs.oracle.com/pt-br/iaas/Content/LicenseManager/Concepts/licensemanageroverview.htm

- **OCI License Manager Announcement**

https://blogs.oracle.com/cloud-infrastructure/post/announcing-license-manager-for-oracle-cloud-infrastructure

- **Oracle Database Features and licensing comparison**

https://apex.oracle.com/database-features/

- **Oracle Database Licensing Information User Manual**

https://docs.oracle.com/en/database/oracle/oracle-database/19/dblic/database-licensing-information-user-manual.pdf

- **Oracle Database BYOL FAQ**

https://www.oracle.com/cloud/bring-your-own-license/faq/

- **Oracle Lifetime Support**

https://www.oracle.com/us/assets/lifetime-support-technology-069183.pdf

- **Oracle Licensing Management Services**

https://www.oracle.com/corporate/license-management-services/

Thank you

Marcel Lamarca
marcel.lamarca@oracle.com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