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- General Database Licensing Rules
- Current License Metrics
- Partitioning
- Virtualization
- Cloud Computing
- Choosing the Right License Metric
- Calculating License Requirements
- Know The Oracle Programs
- Optimization Opportunities
- Use Cases For Available Licenses

NASHVILLE, TN
MAY 9TH - 11TH

Software Investment Advisory (SIA) - Offerings

Cloud

- Mobilize on-prem to Cloud
- Examine a long-term holistic Oracle TCO
- Listen to your long-term strategy

Software

- Investment Optimization
- Architecture transformation
- Software Asset Management

Intelligence	***Knowledge Transfer***	***Optimization***	***Investment Economics***	***Subscription/ License Solution***
Data driven insights on your investment leveraged in a cloud model	Demystify cloud contract, service descriptions & policies	Align cloud spend with business value	Explore a new Oracle TCO Or Cloud Mobility– unit economics and usage accountability	Assess cloud subscription best practices
360° view of your Oracle Entitlements	Demystify license agreements, terms & conditions	Rationalize Deployments to optimize cost	Discover TCO and ROI of your Oracle Investments	Develop fit-for purpose License Strategy

License Knowledge Transfer

Demystify the details surrounding your Oracle Investments in order to better understand licensing structures in both cloud and on-premises environments.

Value Proposition

Adopt a more strategic approach to licensing

1. Understand your license and subscription agreements in detail
2. Gain relevant advice on your Oracle licensing programs
3. Align licenses to specific business objectives
4. Educate employees to make smarter software acquisitions

How we can help

- Provide standardized insights and education on Oracle's licensing terms and conditions
- Support consistent dialogue over licensing terms for both on premise and cloud software subscriptions

License Knowledge Transfer process

- Determine the scope of the chosen products
- Deliver an agreed-upon license education track

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General Technology Licensing Rules

All environments where an Oracle Technology program is **installed and/or running** must be licensed

- This includes
  - Production
  - Development
  - Test
  - Standby
  - etc.

General Technology Licensing Rules

License Metric

- Processor
- Named User Plus (NUP)
- OCPU

License Type

- Full Use (FU)
- Restricted or Limited Use
- Application Specific Full Use (ASFU)
- Embedded Software Licenses (ESL)
- Limited use licenses for proprietary application hosting

License Term

- Perpetual
- 1 Year Fix Term Licenses (FTL)
- Subscriptions In Cloud

Support

- Software Update License & Support
- Extended Customer Support
- Advanced Customer Support

Current License Metrics

- Processor
  - Used in environments where *users are uncountable*
  - Based on the number of *processors cores (EE)* or sockets (SE ,SE1 and SE2)* in the server where the Database is installed and/or running

- Named User Plus (NUP)
  - Used in environments where *users can be counted at the multiplexing front end*
  - Based on authorized users and non-human operated devices accessing the Database

Processor License Definition

Processor: shall be defined as all processors where the Oracle Programs are installed and/or running. Programs licensed on a processor basis may be accessed by Your internal users (including agents and contractors) and by Your third party users. The number of required licenses shall be determined by multiplying the total number of cores of the processor by a core processor licensing factor specified on the Oracle Processor Core Factor Table which can be accessed at http://oracle.com/contracts. All cores on all multicore chips for each licensed Program are to be aggregated before multiplying by the appropriate core processor licensing factor and all fractions of a number are to be rounded up to the next whole number. When licensing Oracle Programs with Standard Edition 2, Standard Edition One or Standard Edition in the product name (with the exception of WebCenterEnterprise Capture Standard Edition, Java SE Subscription, Java SE Support, Java SE Advanced, and Java SE Suite), a processor is counted equivalent to an occupied socket; however, in the case of multi-chip modules, each chip in the multi-chip module is counted as one occupied socket.

Database Enterprise Edition

- Count total physical processor cores and apply core factor
- Total number of CPU cores * Core Factor = Number of Processor licenses required

Database Standard Editions(Database SE/SE1/SE2)

- Count physical, occupied sockets of the machine, no cores are counted or core factor applied
- Note, Standard Edition 2 may only be licensed for servers with a maximum of 2 CPU sockets
- For Multi-Chip Modules each chip is counted as an occupied socket

Processor License Definition

ORACLE

Oracle Processor Core Factor Table

Effective Date: March 16, 2009
Updated: August 15, 2022

Vendor and Processor	Core Processor Licensing Factor
Sun and Fujitsu UltraSPARC T1 processor (1.0 or 1.2 GHz) **Only named servers including:** Sun Fire T1000 Server, SPARC Enterprise T1000 Server*, with 6 or 8-core 1.0 GHz UltraSPARC T1 processor Sun Fire T2000 Server, SPARC Enterprise T2000 Server*, with 4, 6, or 8-core 1.0 GHz, or 8 core 1.2 GHz UltraSPARC T1 processor	0.25
Sun Netra T2000, 1.0 or 1.2 GHz UltraSPARC T1 processor	0.25
SPARC T3 processor	0.25
Sun and Fujitsu UltraSPARC T1 1.4 GHz **Only named servers including:** Sun Fire T2000 Server and SPARC Enterprise T2000 Server*, with 8-core, 1.4 GHz UltraSPARC T1 processor	0.5
Sun T6300, 1.4 GHz UltraSPARC T1 processor	0.5
AMD EPYC™ 7XX1, 7XX2 and AMD Opteron™ Models 13XX, 23XX, 24XX, 32XX, 41XX, 42XX, 43XX, 61XX, 62XX, 63XX, 83XX, 84XX or earlier Multicore chips	0.5

Statement of Change:

On 09/01/2009, clarified that the "AMD Third Generation Opteron or earlier Multicore chips" are "AMD Opteron Models 13XX, 23XX, 24XX, 83XX, 84XX or earlier Multicore chips"

On 09/24/2009, changed the Core Processor Licensing Factor for Sun UltraSPARC T2+ from 0.75 to 0.50

On 02/16/2010, added new Intel Itanium chip 93XX to 0.5 core factor category. Also added IBM POWER7 chip to core factor 1 category

On 04/08/2010, added new Intel Xeon chips (Nehalem EX, Series 75XX and Westmere EP, Series 56XX) and new AMD Opteron chip (Series 61XX) with a core factor of 0.5

On 07/19/2010, added Intel Xeon chip (Nehalem EX, Series 65XX) and AMD Operton chip (Series 41XX) with a core factor of 0.5

On 10/05/2010, added SPARC T3 chip with a core factor of 0.25

On 12/01/2010, changed the Core Processor Licensing Factor for Intel Itanium Series 93XX from 0.5 to 1.0. Also added notes in parenthesis to the affected rows in the table above

On 12/02/2010, added SPARC64 VII+ chip with a core factor of 0.5

On 06/03/2011, added Intel Xeon Series E7-28XX, Series E7-48XX, and Series E7-88XX chips with a core factor of 0.5

On 09/06/2011, added SPARC T4 chip with a core factor of 0.5

On 12/08/2011, added AMD Opteron Chip Models: 32XX, 42XX, and 62XX with a core factor of 0.5

On 04/16/2012, added Intel Xeon Series E5-26XX, Series E5-16XX, and Series E3-12XX chips with a core factor of 0.5

On 07/19/2012, added Intel Xeon Series E5-24XX, and Series E5-46XX chips with a core factor of 0.5

On 11/7/2012, added IBM Power7+ chip with a core factor of 1.0

On 12/14/2012, added Intel Itanium chip 95XX to 1.0 core factor category

Deployment Scenario: Stand Alone Server

Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Stand Alone Server	Processor Make/Model	Physical Processors	Cores Per Processor	Cores Factor		Oracle Processor Licenses Required
Enterprise	Dell	Intel Zeon E5-2620	2	10	.5	=	?

Deployment Scenario: Stand Alone Server

Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Stand Alone Server	Processor Make/Model	Physical Processors		Cores Per Processor		Cores Factor		Oracle Processor Licenses Required
Enterprise	Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10

Named User Plus Licensing

Named User Plus: is defined as an individual authorized by you to use the programs which are installed on a single server or multiple servers, regardless of whether the individual is actively using the programs at any given time. A non human operated device will be counted as a named user plus in addition to all individuals authorized to use the programs, if such devices can access the programs. If multiplexing hardware or software (e.g., a TP monitor or a web server product) is used, this number must be measured at the multiplexing front end. Automated batching of data from computer to computer is permitted. You are responsible for ensuring that the named user plus per processor minimums are maintained for the programs contained in the user minimum table in the licensing rules section; the minimums table provides for the minimum number of named users plus required and all actual users must be licensed.

License **all individuals** and **non-human operated devices** accessing the program or the license minimum, **whichever is greater** regardless of whether they are using the program or not.

Named User Plus Licensing

Minimums

DB Enterprise Edition	25	NUP per Processor *
DB SE and SE One	5	NUP
DB SE2	10	NUP per Server **

*Taking into account Oracle's Processor definition

**Taking into account Oracle's Server definition

Core Factor Rounding

If rounding is required, total all license requirements and then **round up**.

Example 1: 3 IBM P5 with 1 dual core chips each, licensing for Database EE

- Total Cores in the environment for IBM = 3 * 1 * 2 = 6
- Current IBM licensing processor core factor of 0.75. => 6 * 0.75 = 4.5 → **5 licenses?**

Example 2: 1 Sun Fire server with 1 dual core chips each, licensing for Database EE.

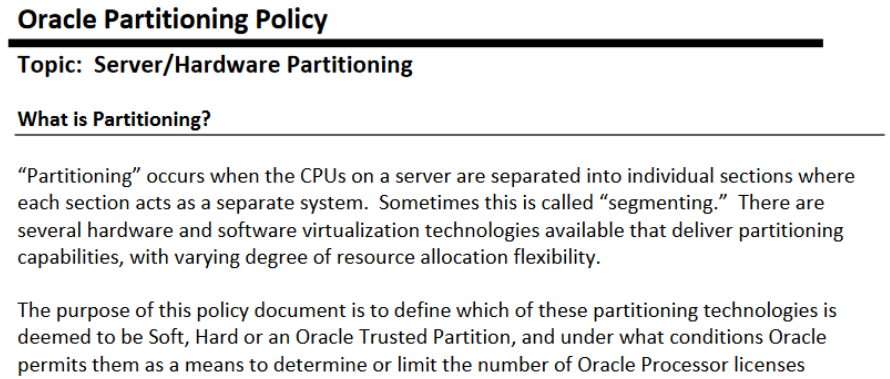
- Total Cores in the environment for Sun = 1 * 1 * 2 = 2
- Current licensing processor core factor of 0.75. => 2 * 0.75 = 1.5 → **2 licenses?**

Total license requirement is 6 Processors: 8 * .75 = 6

- If I rounded up separately, it would have come to 7 Processors
  - Minimum for DB EE would be 6 * 25 = 150 Named User Plus
  - If I rounded up separately, it would have come to 175 Named Users

What Is Partitioning?

- “Partitioning” occurs when the CPUs on a server are separated into individual sections where each section acts as a separate system.
- Sometimes this is called “segmenting.”
- Oracle documents its view on partitioning in a publicly available document, called Oracle Partitioning Policy:



Oracle Partitioning Policy

Topic: Server/Hardware Partitioning

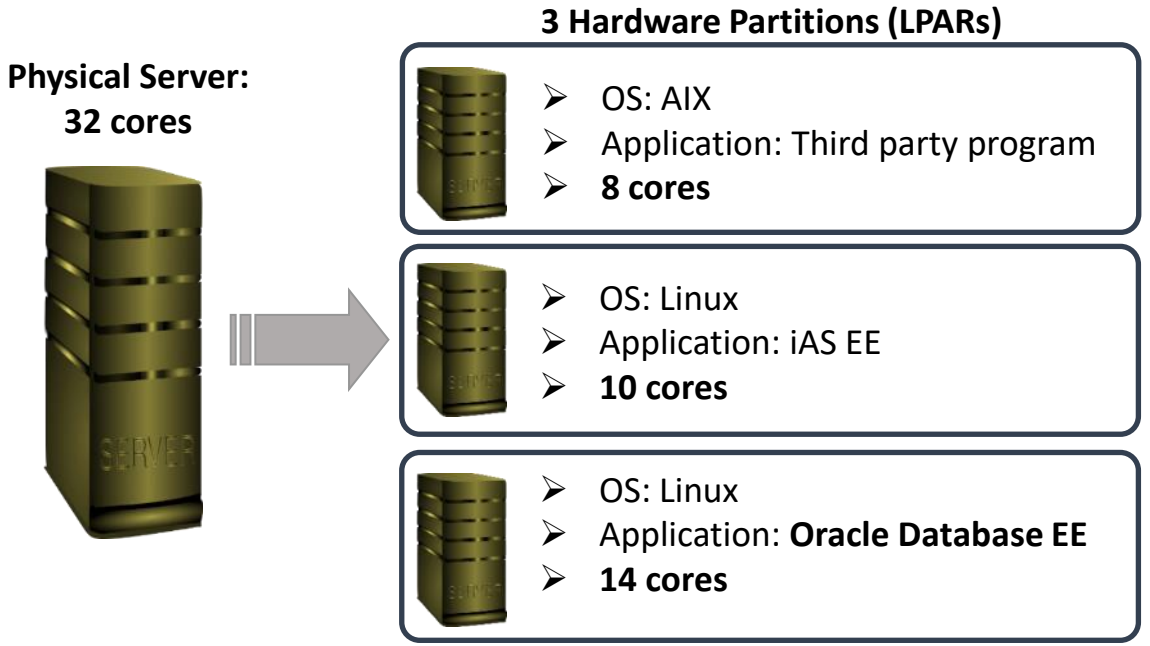
What is Partitioning?

“Partitioning” occurs when the CPUs on a server are separated into individual sections where each section acts as a separate system. Sometimes this is called “segmenting.” There are several hardware and software virtualization technologies available that deliver partitioning capabilities, with varying degree of resource allocation flexibility.

The purpose of this policy document is to define which of these partitioning technologies is deemed to be Soft, Hard or an Oracle Trusted Partition, and under what conditions Oracle permits them as a means to determine or limit the number of Oracle Processor licenses

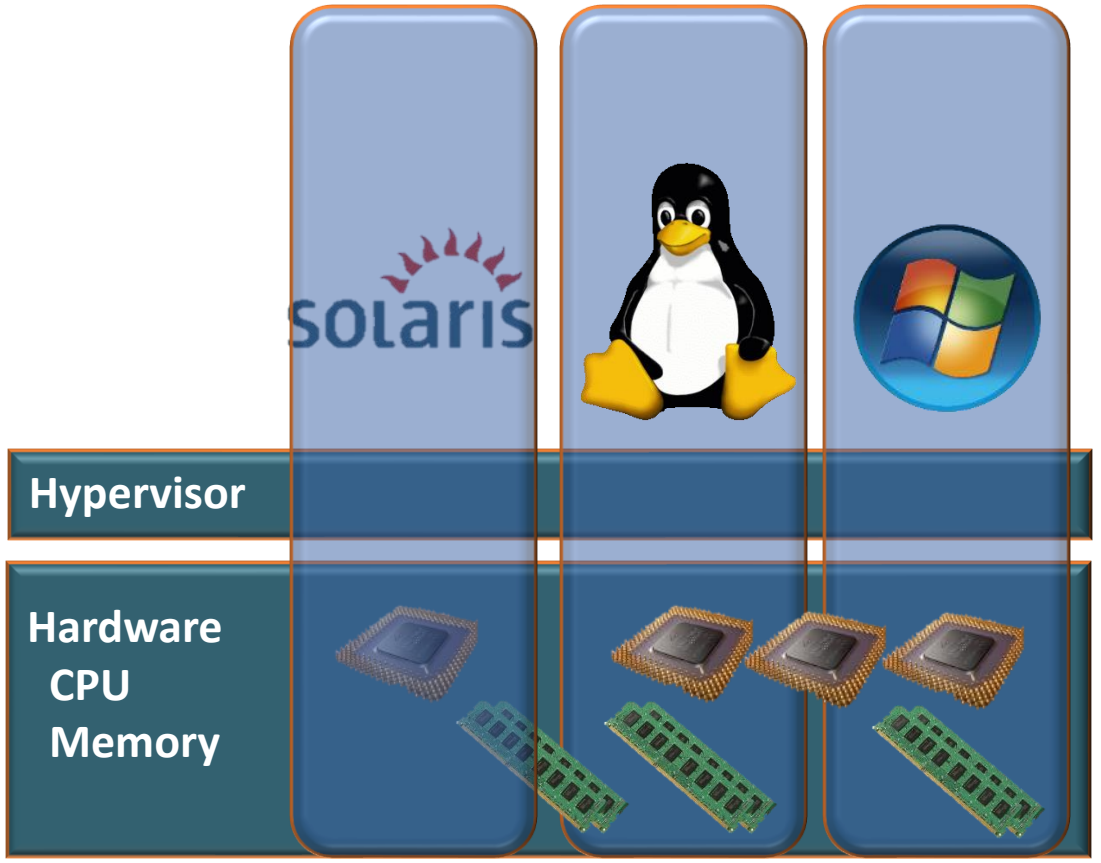
Types of Partitioning – Hard Partitioning

- Physically segments a server into smaller systems.
  - physically independent server
  - self-contained server
  - typically with own CPUs, OS, separate boot area, memory, input/output subsystem and network resources
- Oracle lists certain technologies as hard partitioning
  - Examples: IBM LPAR, Oracle VM, Solaris Zones, etc.
  - **no other technology or configuration qualify**



Types of Partitioning – Soft Partitioning

- Segments the OS using OS resource managers (Hypervisor)
- The OS
  - limits the number of CPUs where an Oracle Program is running
  - by creating areas where CPU resources are allocated to applications within the same OS
- CPU capacity can be changed fairly easily
- Soft partitioning is not permitted as a means to determine or limit the number of software licenses required for any given server.



Examples: VMware, Oracle VM, etc.

Oracle Licensing Policy – Virtualized Environments

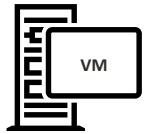
- **Processor License Metric Definition**
  Processor shall be defined as all processors where the Oracle programs are installed and/or running

- **Oracle Partitioning Policy**

  - Hard Partitioning: Oracle-approved hard partitioning technologies are permitted as a means to limit the number of software licenses required for any given server
  e.g.) IBM LPAR, HP vPar, HP nPar, Fujitsu PPAR, etc.

  - Soft Partitioning: Soft partitioning is not permitted as a means to determine or limit the number of software licenses required for any given server
  e.g.) Solaris 9 Resource Containers, AIX Workload Manager, HP Process Resource Manager, Affinity Management, Oracle VM, and VMware.

Deployment Scenario – Virtualized – Soft Partitioning

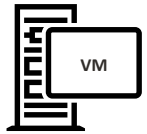


Oracle Database Edition:	Enterprise
License Metric:	Processor

vCenter	Cluster	Physical Server	Processor Make/Model	Physical Processors	Cores Per Processor	Cores Factor	Oracle Processor Licenses Required
vCenter A	Cluster A	Dell	Intel Zeon E5-2620	2	10	.5	?
		Dell	Intel Zeon E5-2620	2	10	.5	?
		Dell	Intel Zeon E5-2620	2	10	.5	?
	Cluster B	Dell	Intel Zeon E5-2620	2	10	.5	?
		Dell	Intel Zeon E5-2620	2	10	.5	?
		Dell	Intel Zeon E5-2620	2	10	.5	?

= ?

Deployment Scenario – Virtualized – Soft Partitioning



Oracle Database Edition:	Enterprise
License Metric:	Processor

vCenter	Cluster	Physical Server	Processor Make/Model	Physical Processors		Cores Per Processor		Cores Factor		Oracle Processor Licenses Required
vCenter A	Cluster A	Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10
		Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10
		Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10
	Cluster B	Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10
		Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10
		Dell	Intel Zeon E5-2620	2	x	10	x	.5	=	10

\+ + + + + = 60

Oracle Approved Third Party Cloud Vendors

Licensing Oracle Software in the Cloud Computing Environment consists of (2) Non Oracle cloud providers

- Amazon Web Services
    a) Amazon Elastic Compute Cloud (EC2)
    b) Amazon Relational Database Service (RDS)
- Microsoft Azure Platform

For the purposes of licensing Oracle programs in an Authorized Cloud Environment, Oracle customers are required to count vCPUs as follows:

- If hyper-threading is **enabled**, **two vCPUs** as equivalent to **one Oracle Processor** license
- If hyper-threading is **NOT enabled**, **one vCPU** as equivalent to **one Oracle Processor** license

Note: When counting Oracle Processor license requirements in Authorized Cloud Environments, the Oracle Processor Core Factor Table is not applicable.

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

Deployment Scenario: Authorized Cloud

Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Cloud	vCPUs	Multi-threading		Oracle Processor Licenses Required	
Enterprise	Amazon AWS	2	No	=	?	
Enterprise	Microsoft Azure	2	Yes	=	?	

Deployment Scenario: Authorized Cloud

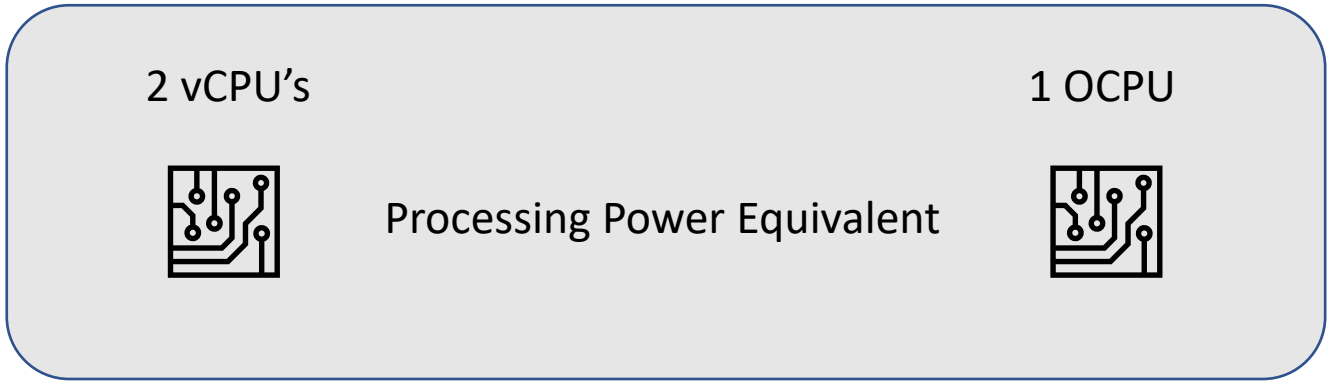
Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Cloud	vCPUs	Multi-threading			Oracle Processor Licenses Required	
Enterprise	Amazon AWS	2	No	1 Vcpu : 1 Proc	=	2	
Enterprise	Microsoft Azure	2	Yes	2 Vcpu : 1 Proc	=	1	

Oracle Cloud Infrastructure

Oracle OCPU

- An OCPU provides CPU capacity equivalent of one physical core of an Intel Xeon processor with hyper threading enabled.
- Each OCPU corresponds to two hardware execution threads, known as vCPUs



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

Deployment Scenario: Oracle Cloud

Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Cloud	OCPUs		Oracle Processor Licenses Required
Enterprise	Oracle OCI	2	=	?

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Deployment Scenario: Oracle Cloud

Oracle Database Edition:	Enterprise
License Metric:	Processor

Oracle Database Edition	Cloud	OCPUs			Oracle Processor Licenses Required
Enterprise	Oracle OCI	2	2 OCPU : 1 Proc	=	2

Choosing The Right Metric – Processor vs NUP

Environment Type	Unit Price	Visibility Of Users	Cost Analysis

Where to start:

- Can I count the number of users?
  - If Yes
    - Determine number of users
    - Calculate number of processor licenses required
    - Determine license minimums
    - Calculate number of NUPS required
    - Multiply cost of proc license by proc license requirement
    - Multiply cost of NUP license by NUP license requirement
    - Compare cost of processor license vs NUP license
  - If No
    - Move to processor licensing

Choosing The Right Metric – BYOL vs License Included

License Availability	OCI Usage	Calculate Need	Cost Analysis

Where to start:

- Do you have available on premises license?
  - If Yes
    - Calculate how many processor licenses you have available
    - Calculate how many OCPU's you need or are using
    - Apply 1 Processor license to each 2 OCPUs
    - Determine cost savings by using or switching to BYOL SKU
    - Direct workload owner to select or switch to BYOL SKU
  - If No
    - Determine which is more cost effective (purchasing perpetual licenses and utilizing BYOL vs license included)

Calculating License Requirements - Processor

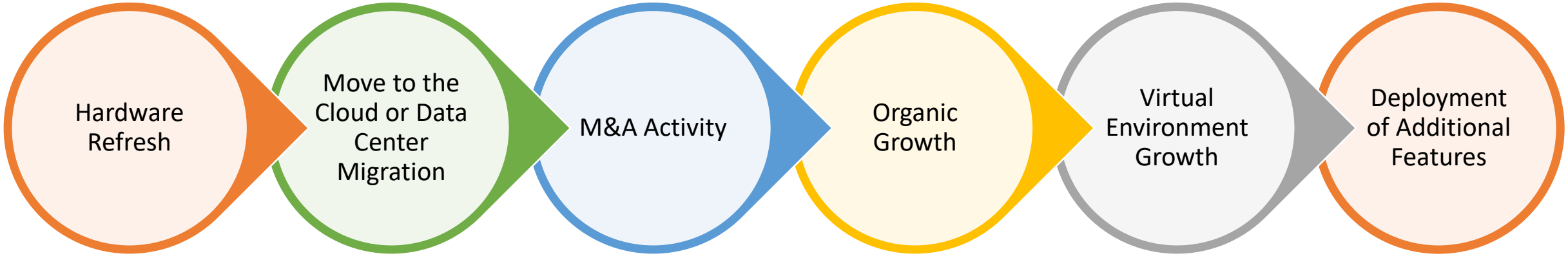
Infrastructure Type	Processor Make/Model	# Processors	# Cores	Core Factor	# vCPUs	Multi Threading	# OCPUs
Stand Alone Server	👍	👍	👍	👍			
Soft Partitioned	👍	👍	👍	👍			
Hard Partitioned	👍	👍	👍	👍			
3rd Party Authorized Cloud					👍	👍	
Oracle Cloud (OCI)							👍

Calculating License Requirements - Processor

Infrastructure Type	Processor Make/Model	# Processors	# Cores	Core Factor	# vCPUs	Multi Threading	# OCPUs	Users*
Stand Alone Server	👍	👍	👍	👍				👍
Soft Partitioned	👍	👍	👍	👍				👍
Hard Partitioned	👍	👍	👍	👍				👍
3rd Party Authorized Cloud					👍	👍		👍
Oracle Cloud (OCI)							👍	👍

*user = individuals and non-human operated devices

License Demand Sources



- Increased processor and core counts
- Dual usage
- Acquisition of entities
- New Projects
- Transaction/User Growth
- Additional hosts added to a cluster
- Utilizing additional options and packs

Action If License Trigger Is In Scope

- ❑ Perform sizing activity on new hardware to determine licenses needed
- ❑ Determine future infrastructure sizes
- ❑ Identify expected start and end dates of migration
- ❑ Review agreements to determine impacts
- ❑ Identify if combined environments will run in parallel or will be consolidated
- ❑ Determine if acquired entity will leverage Oracle applications
- ❑ Request architecture for new environments and perform sizing activity
- ❑ Identify what is changing. (i.e. new vCenter, Cluster, Host, etc)
- ❑ Performing sizing activity on new hardware
- ❑ Identify which options/packs were deployed and license them at the same quantity as the database

Know The Oracle Programs

Information on this slide is general in nature and there are many conditions that are required to be met before customers may take advantage of these programs.

Unlimited License Agreement

Agreement that enables a customer to deploy an unlimited quantity of Oracle product(s) in the agreement for the term of the agreement with a certification of license usage, **though no true up**, at the end of the unlimited deployment period

Oracle Support Rewards

A program that enables customers to **earn support rewards** when using Oracle Cloud Infrastructure (OCI) services

25% back in rewards for each $1 spent

- 33% back in rewards for each $1 spent (when in a ULA)

Bring Your Own License

A program that enables customers to **leverage their unused perpetual licenses** in Oracle's cloud (OCI) at a discounted rate

- Oracle Database Service – Enterprise - $0.4301 OCPU per hour
- Oracle Database Service – BYOL - $0.1935 OCPU per hour
- Discount for BYOL SKU vs License included = 55%

BYOL to PaaS is inclusive of:

- Compute + Compute Support
- Automation

License Included PaaS is inclusive of:

- Compute + Compute Support
- Automation
- License Entitlement + License Support

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License Optimization Opportunities

Information on this slide is general in nature and there are many conditions that are required to be met before customers may take advantage of these programs.

Multiple Database On A Single Server

If you have multiple databases on a single server, validate if all databases on that server are using the same options/packs. If not, consider deploying all licensed options/packs as once a server is licensed, all databases installed can utilize all options/packs

Oracle Support Rewards

Migrate workloads to OCI to earn support rewards that can be applied to your perpetual license support

Bring Your Own License

If you have available licenses, you should investigate utilizing them in OCI to receive a significant savings as compared to the license included PaaS SKU's

OCI PaaS Included Options/Packs

PaaS on OCI includes a set of options/packs with each service.

- Data Masking and Subsetting
- Diagnostics Pack
- Tuning Pack
- Real Application Testing

License Optimization Opportunities

Utilize Advanced Compression

By compressing the size of the database you can reduce database storage requirements/costs

Explore Exadata Consolidation Opportunities

If you already own Exadata's, investigate adding additional workloads. Exadata can support a significantly higher number of database instances when compared to commodity hardware

Leverage Pluggable Databases

19c includes 3 pluggable databases free with your Oracle Database Enterprise Edition License.

Interrogate What Is Running On VMware

Perform a cost analysis to compare number of licenses required for running Oracle Database Workloads in VMware vs on stand alone servers or in the cloud

Optimization Example: AWS or Azure vs OCI

Environment: 4 vCPUs with hyper threading enabled

Installed Products:

- Oracle Database Enterprise Edition
- Data Masking and Subsetting
- Diagnostics Pack
- Tuning Pack
- Real Application Testing

4 vCPUs

License Requirement on AWS or Azure

Oracle Database Enterprise Edition	(2) Processor Licenses
Data Masking and Subsetting	(2) Processor Licenses
Diagnostics Pack	(2) Processor Licenses
Tuning Pack	(2) Processor Licenses
Real Application Testing	(2) Processor Licenses

2 OCPUs

License Requirement on OCI

Oracle Database Enterprise Edition	(1) Processor Licenses
Data Masking and Subsetting	Free – Option Included
Diagnostics Pack	Free – Pack Included
Tuning Pack	Free – Pack Included
Real Application Testing	Free – Option Included

Optimization Example: AWS or Azure vs OCI

Environment: 4 vCPUs with hyper threading enabled

Installed Products:

- Oracle Database Enterprise Edition
- Data Masking and Subsetting
- Diagnostics Pack
- Tuning Pack
- Real Application Testing

License Savings	Support Savings
71%	71%

Total License Cost:	$164,000
Annual Support Cost:	$36,080

4 vCPUs

License Requirement on AWS

• Oracle Database Enterprise Edition	(2) x $47,500 = $95,000
• Data Masking and Subsetting	(2) x $11,500 = $23,000
• Diagnostics Pack	(2) x $7,500 = $13,000
• Tuning Pack	(2) x $5,000 = $10,000
• Real Application Testing	(2) x $11,500 = $23,000

Total License Cost:	$47,500
Annual Support Cost:	$10,450

2 OCPUs

License Requirement on OCI

• Oracle Database Enterprise Edition	(1) X $47,500 = $47,500
• Data Masking and Subsetting	Free – Option Included
• Diagnostics Pack	Free – Pack Included
• Tuning Pack	Free – Pack Included
• Real Application Testing	Free – Option Included

Optimization Example: AWS or Azure vs OCI

Environment: 4 vCPUs with hyper threading enabled

BYOL OCPU Per Hour Cost: $0.1935
OCPU's Required: 2
Hours Per Day: 24
Days Per Year: 365

$0.1935 x 2 x 24 x 365 = $3,390.12 ⬅ x 25% =

Oracle Support Rewards Earned

$874.53

Total License Cost:	$164,000	**Total License Cost:**	$47,500
Annual Support Cost:	$36,080	**Annual Support Cost:**	$10,450
4 vCPUs		2 OCPUs	
License Requirement on AWS		**License Requirement on OCI**	
• Oracle Database Enterprise Edition	(2) x $47,500 = $95,000	• Oracle Database Enterprise Edition	(1) X $47,500 = $47,500
• Data Masking and Subsetting	(2) x $11,500 = $23,000	• Data Masking and Subsetting	Free – Option Included
• Diagnostics Pack	(2) x $7,500 = $13,000	• Diagnostics Pack	Free – Pack Included
• Tuning Pack	(2) x $5,000 = $10,000	• Tuning Pack	Free – Pack Included
• Real Application Testing	(2) x $11,500 = $23,000	• Real Application Testing	Free – Option Included

Optimization Example: AWS or Azure vs OCI

Environment: 4 vCPUs with hyper threading enabled

Installed Products:

- Oracle Database Enterprise Edition
- Data Masking and Subsetting
- Diagnostics Pack
- Tuning Pack
- Real Application Testing

License Savings

71%

Support Savings

73%

Total License Cost:	$164,000
Annual Support Cost:	$36,080

Total License Cost:	$47,500
Annual Support Cost:	~~$10,450~~ - $874 = $9,576

4 vCPUs

License Requirement on AWS

• Oracle Database Enterprise Edition	(2) x $47,500 = $95,000
• Data Masking and Subsetting	(2) x $11,500 = $23,000
• Diagnostics Pack	(2) x $7,500 = $13,000
• Tuning Pack	(2) x $5,000 = $10,000
• Real Application Testing	(2) x $11,500 = $23,000

2 OCPUs

License Requirement on OCI

• Oracle Database Enterprise Edition	(1) X $47,500 = $47,500
• Data Masking and Subsetting	Free – Option Included
• Diagnostics Pack	Free – Pack Included
• Tuning Pack	Free – Pack Included
• Real Application Testing	Free – Option Included

Use Cases For Available Licenses

Leverage BYOL on OCI

Use available licenses to reduce your cloud spend by:

- Moving existing workloads from on premises or third party clouds to OCI
- Switch existing workloads on OCI from License Included to BYOL SKU
- BYOL can also be leveraged for cloud native development on OCI

Converge – Move From Other Databases

Oracle Database supports JSON, Mongo-DB and other database architecture's. Investigate opportunity to migrate from non Oracle databases to Oracle database.

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APPENDIX

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Software Investment Advisory – Sample Customer Journey

How customers leverage SIA services to make decisions

Intelligence

Provide a 360° view of Oracle investments globally

Knowledge Transfer

Demystify Oracle contracts, metrics, policies and provide transparency to enable decision making

Optimization

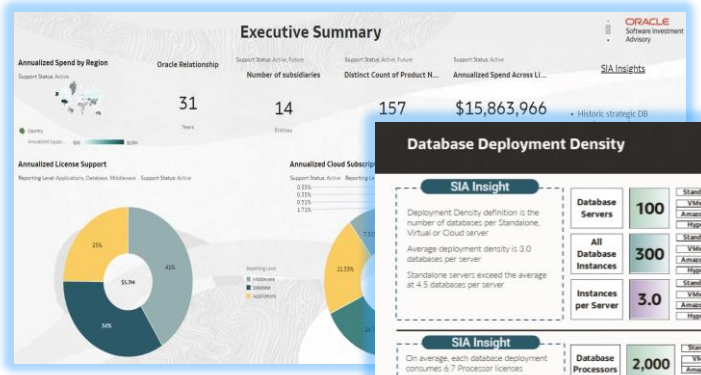
Provide insights into program/service utilization and identify opportunities for rationalization/optimization

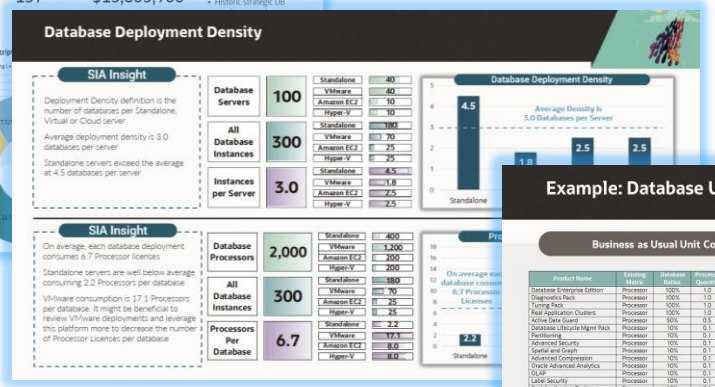
Investment Economics

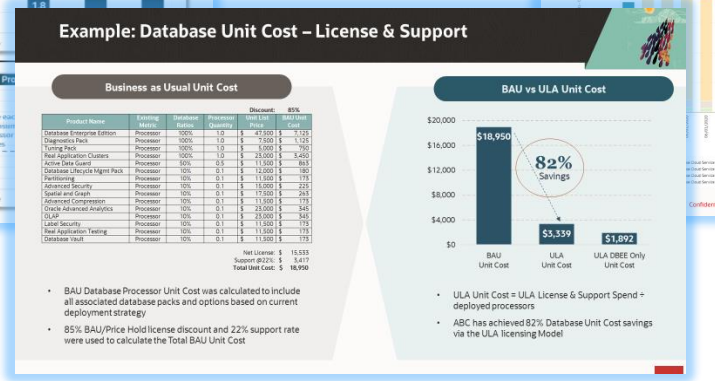
Help customers quantify the TCO/ROI of their Oracle investments and provide fact-based financial models for go-forward options

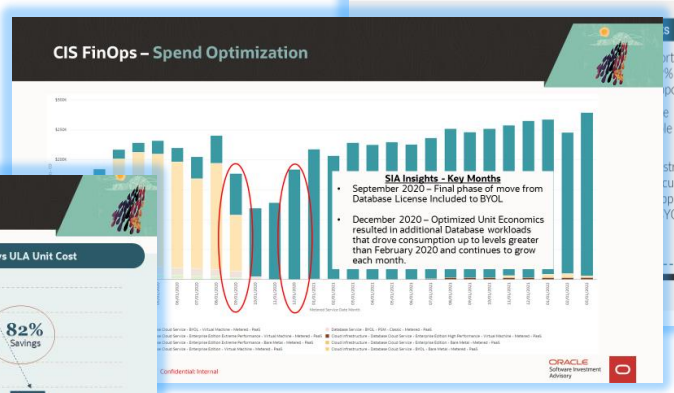
Subscription/Licensing Solutions

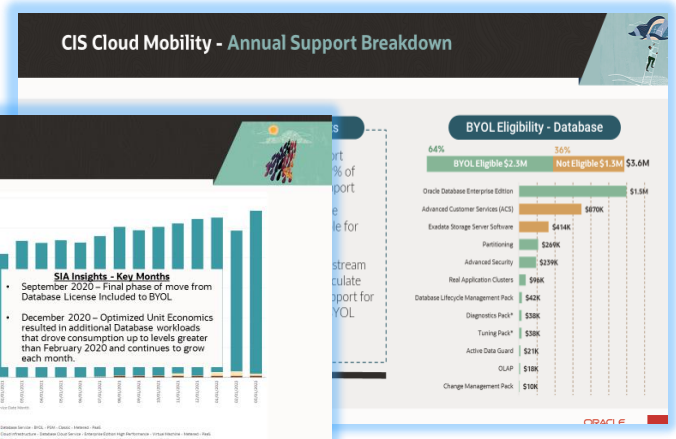
Develop fit-for-purpose strategy for go-forward Oracle contracts











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Software Investment Advisory

Types of Partitioning – Hard Partitioning

Partitioning occurs when the cores on a server are separated (or partitioned) into individual processors. The individual processors are then assigned to a single Virtual Machine (VM), a group of VMs, or grouped and assigned to a VM. Sometimes this is called "segmenting." There are several hardware and software virtualization technologies available which deliver partitioning capabilities, with varying degree of resource allocation flexibility.

Approved hard partitioning technologies include:
Physical Domains (also known as PDomains, Dynamic Domains, or Dynamic System Domains)
Solaris Zones (also known as Solaris Containers, capped Zones/Containers only)
IBM's LPAR (adds DLPAR with AIX 5.2)
IBM's Micro-Partitions (capped partitions only)
vPar (capped partitions only)
nPar
Integrity Virtual Machine (capped partitions only)
Secure Resource Partitions (capped partitions only)
Fujitsu's PPAR
Oracle Linux KVM *
Oracle VM Server **

(For KVM and VM Server, see next slide)

Types of Partitioning – Hard Partitioning

Oracle Linux KVM *
Oracle VM Server **

Note:

- All approved hard partitioning technologies must have a capped or a maximum number of cores/processors for the given partition.
- Using IBM processors in TurboCore mode is **not** permitted as a means to reduce the number of software licenses required; all cores must be licensed.
- IBM Power VM Live Partition Mobility is **not** an approved hard partitioning technology. All cores on both the source and destination servers in an environment using IBM Power VM Live Partition Mobility must be licensed.
- Oracle Linux KVM or Oracle VM Server may be used as hard partitioning technology only as described in the following documents:

*Oracle Linux KVM, only if specific cores are allocated per the following document:
https://www.oracle.com/a/ocom/docs/linux/ol-kvm-hard-partitioning.pdf

** Oracle VM Server for x86, only if specific cores are allocated per the following document:
http://www.oracle.com/technetwork/server-storage/vm/ovm-hardpart-168217.pdf

** Oracle VM Server for SPARC, only if specific cores are allocated per the following document:
http://www.oracle.com/technetwork/server-storage/vm/ovm-sparc-hard-partitioning1403135.pdf