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Consulting | Cloud Managed Services | Cloud Solutions

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Virtualization & Oracle in the Cloud Age

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Disclaimer

This presentation is for educational purposes only.

Your Oracle licenses are governed by your contractual obligations as spelled out in your Oracle License and Services Agreement, the oracle processor policy and the Oracle Software Technical Support Polices.

This presentation is to provide general background information on common use cases and configurations that may not be applicable to your situation.

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Agenda

- Understanding Virtualization effects Oracle Licensing both on-prem and in the cloud.
- Licensing Docs and terms
- Architecture factor
- Virtualization partitioning
- Vmware through the ages
- Partitioning Policy- governing document by oracle.
- nutanic
- Q&A

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Cloud Adoption| Companies Still Facing Complex Challenges

- Forced to choose between flexibility or lower cost

- Unable to rebalance spend across different services

- Limited visibility and control over Software spend

- Cannot leverage their on-premises software investments in the Cloud

- Delayed time to value because of complex pricing

Oracle | Licensing Terms

Knowledge of Oracle Virtualization Policies and Best Practices can make it simple and more affordable for customers to move to cloud, while also providing flexibility and choice in how, what and where they use cloud services

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Oracle | Licensing Terms

- Oracle Processor Core Factor

  - https://www.oracle.com/assets/processor-core-factor-table-070634.pdf

- Virtualization

  - Partition policy

    - Soft Partitioning

    - Hard Partitioning

    - Trusted Partitioning

- On-demand licensing

- Public Cloud

  - AWS, AZURE, OCI

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Oracle Licensing Through the Ages

Multi-processors brings the processor core factor.

   Computer sprawl leads to rise of virtualization.

      Virtualization reduces sprawl and heralds the arrival of the partition policy.

      Hyper-Converged Infrastructue arrives; still the partition policy rules

      Cloud blows in, yet provides no shelter from the partition policy.
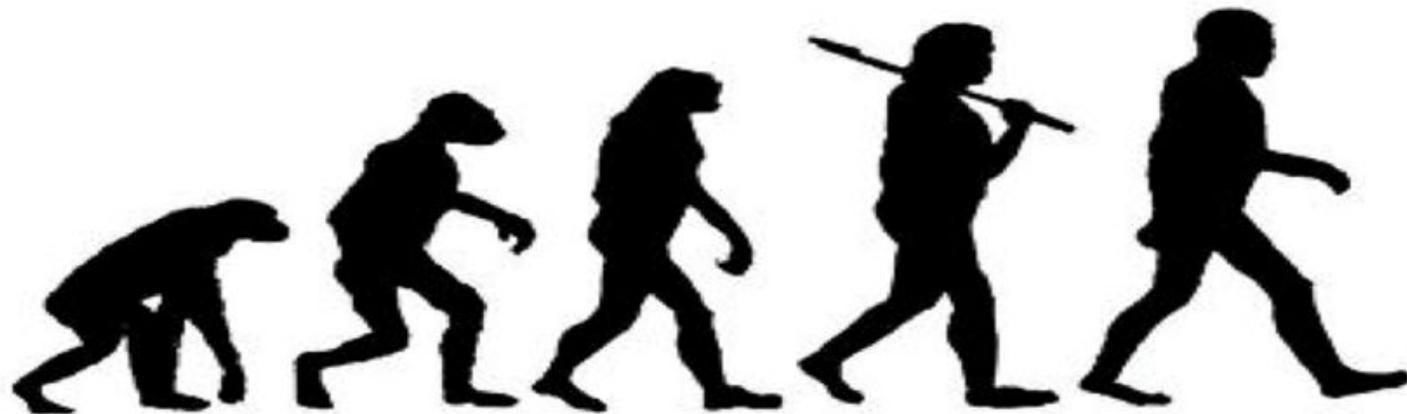
What is Oracle's Contractionual View on Partitioning

According to the Oracle's Partitioning Policy

"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 "

Why Parittion at all?

Cost Savings, it allows one to perform resource consolidation, increase uptime and decrease runnning costs

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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 to applications within the same operating system. This is a flexible way of managing data processing resources since the CPU capacity can be changed fairly easily, as additional resource is needed."

What does the above mean?

If your solution uses software to create separate silos of compute on a single physical device, you are using soft partitioning.

Examples of a few:

Vmware, Hyper-V, AIX Workload manager, Oracle OVM

Oracle's Basic Assumption:

Count all physical cores in the machine(s) and multiply by PCF.

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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, self-contained server, typically with its own CPUs, operating system, separate boot area, memory, input/output subsystem and network resources."

From licensing perspective what does the above mean?

If your machine is of the correct type it is possible to physically prtition cores and the licensing costs are reduced.

Examples:
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 OVM.

Oracle's Basic Assumption:
   "**All approved hard partitioning technologies must have a capped or a maximum number of cores/procesors for the given partition.**

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*"**Oracle** recognizes a practice in the industry to pay for server usage based on the number of CPUs that are actually turned on – the "**Capacity on Demand**," or "**Pay as You Grow" models.**"*

This feature is only available in some engineered with a few examples being Oracle Database Appliance and the Exadata Database Machine.

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OVM| Benefits

Hard Partitioning
Oracle VM offers an advanced feature for hard partitioning, also known as CPU pinning. Hard partitioning means binding vCPUs to physical CPU threads or cores, and preventing these vCPUs from being scheduled on physical CPUs - threads or cores other than the ones specified.

Application-Driven
Unlike VMware, Oracle's virtualization solutions know what is running inside the virtual machine and can provision and manage applications, middleware, and databases accordingly.

Low Cost
Unlike VMware, Oracle VM is free to download, use, and distribute, with affordable support fees.

Rapid Implementation
Oracle VM Templates make it quick to deploy enterprise software, including CRM, ERP, clustering, and management. Oracle VM Reference Configurations accelerate deployment of complete virtual infrastructure.

Integrated Management
Full-stack management lets you efficiently manage the hypervisor, physical server, and applications through one console.

Efficient Architecture
Having a single engineering team for Linux and Oracle VM leads to better optimization between the hypervisor and Linux. Aggressive testing of Oracle improves functionality and performance.

Integrated Support
Full-stack support means faster resolution of issues, with no finger pointing at multiple vendors.

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Summary

- Oracle is making it easier and more affordable for customers to

- Existing customers get license mobility to

- OVM makes contracting easy and consumption flexible, provides access to all current and futureOracle

Lowest Price + Higher Performance + More Automation = Lowest TCO

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Universal Credits - Flexible Consumption Choices

Unlimited access to all IaaS and PaaS services

Consumption Choices

Pay As You Go (PAYG)

- No upfront commitment
- Pay only for what you use
- Pay in arrears based on usage

- List Price
- Built for land and expand
- Best when usage is uncertain
- Elastic payments based on usage

Universal Credits Monthly Flex

- 1 year minimum term
- Agreed to monthly spend

- Savings vs PAYG start at 33%
- Additional discounts based on size of deal and term of deal
- Predictable spending
- Spend more, save more

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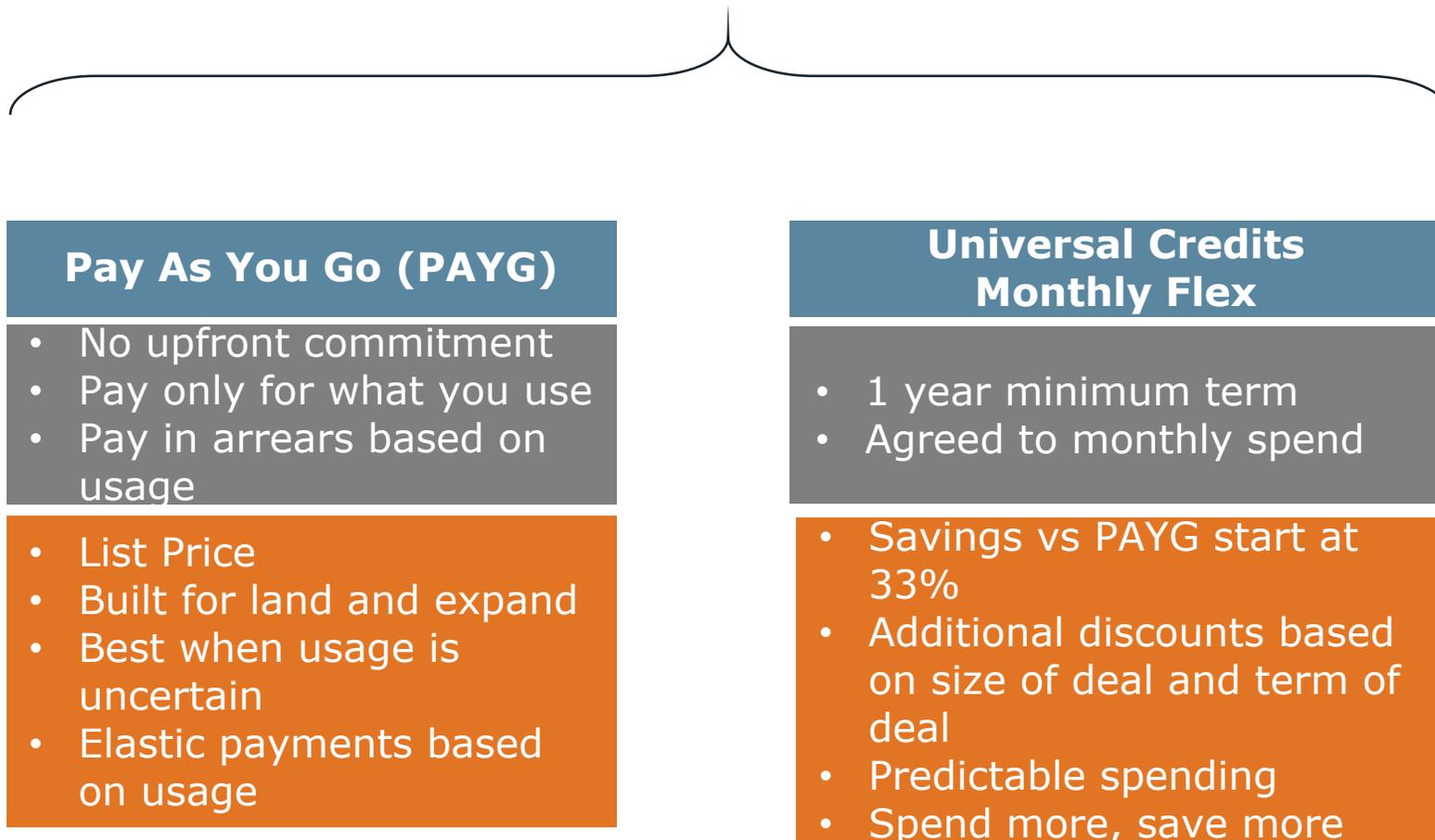
Simpler buying experience
- Customers subscribe to a single set of credits (for all IaaS and PaaS services)
- Customers not penalized by being locked into using specific SKU

Greater flexibility
- As new services are introduced, available for customers to deploy
- Contracted price for the rate card will apply to new services added

Easier expansion process
- Elastically scale with confidence with benefits of lower pre-paid instance pricing
- Expand to new workloads without going through another contracting cycle

Single set of cloud credits that spans Cloud at Customer and Oracle Public Cloud
- Availability slated for early Q3FY'18

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We are *personally* dedicated to our client's success.
And we know Oracle:

Up and Down.
In and Out.
Through and
Through.

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Dive up