

Optimizing Oracle Costs in the Cloud

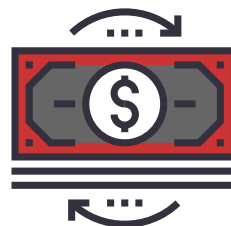
Comparing VMware Cloud on AWS to Oracle Cloud

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Overview of Oracle in the Cloud



For Oracle workloads, public cloud adoption has lagged behind cloud adoption leaders such as SaaS applications, and new software development



Cost is a relatively low decision factor when compared to more critical issues like security, business risk, and complexity



VMware Cloud on AWS offers a variety of options vital for customers looking to grow their business by moving their business critical applications to the Cloud

What Is Important to Oracle Customers?



Managing various risks to the business seems to be the most important thing

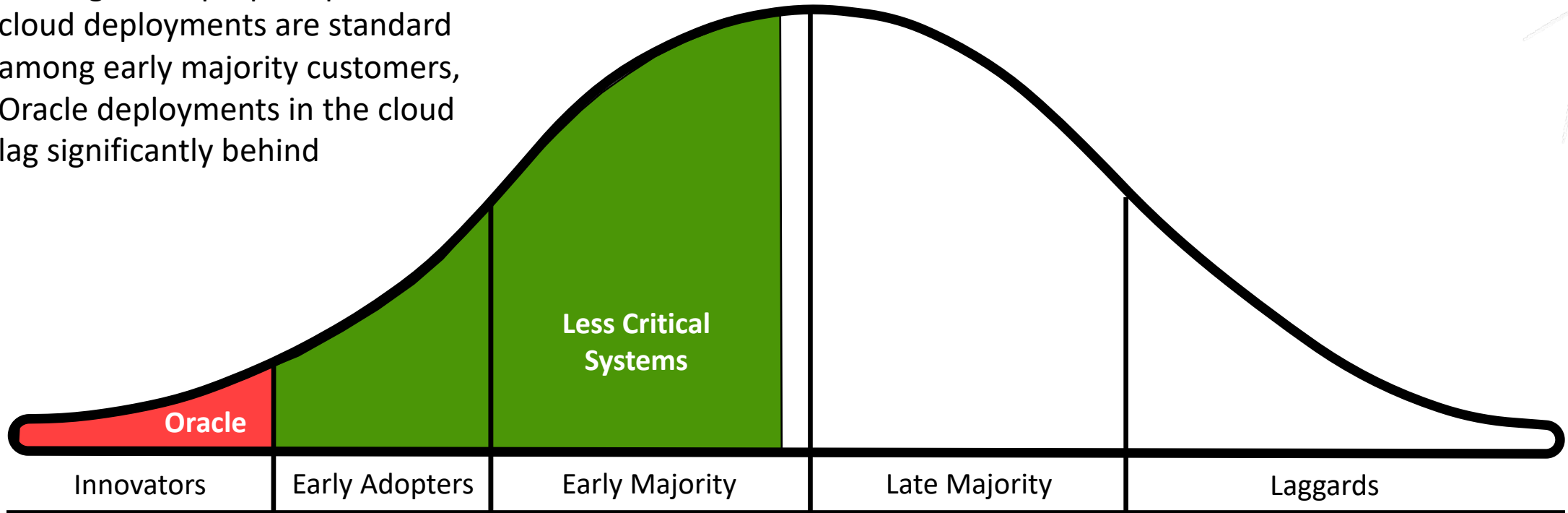


While cost is important, most House of Brick customers would rather spend the necessary money to keep things working well



Hybrid/Public Cloud Adoption

While general purpose public cloud deployments are standard among early majority customers, Oracle deployments in the cloud lag significantly behind



Oracle Users have Options for Cloud

Per vCPU
Cloud Policy:
AWS EC2/RDS
Microsoft Azure

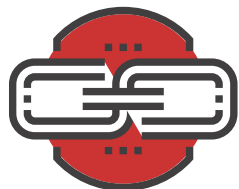
Standard Processor License:
VMware Cloud on AWS, EC2
Dedicated Hosts, Oracle
Cloud, Skytap

Oracle Unlimited License
Agreement (ULA): Google
Cloud Platform, VMware
Cloud on AWS, AWS (all),
Azure, Oracle Cloud, etc.

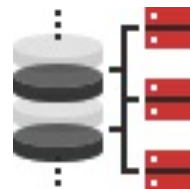
O-CPU License:
Oracle Cloud

Cloud Feature Comparison

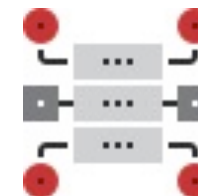
For organizations looking to migrate existing Oracle workloads to the cloud, there is a vast difference between IaaS and PaaS services that should be factored into migration plans.



VMware Cloud on AWS offers Hybrid Linked Mode for its vCenter tool, a tool widely used to manage on-premises VMware footprints



In VMware Cloud on AWS, the only variable for resource allocation is the number of nodes in a Software Defined Data Center (SDDC) cluster. Resources can then be split among virtual machines residing in the SDDC in any combination desired by an administrator

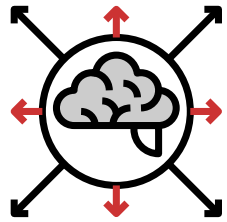


The Oracle Cloud IaaS and PaaS offerings include both virtual machines and dedicated server options. Both are available in a variety of configurations that Oracle refers to as shapes.

Licensing Options – Oracle Database

AWS Deployment Options	Standard Edition License Included from AWS	Oracle Cloud Environment Policy	Core-Based License	Unlimited License Agreement
Amazon RDS	✓	✓	✗	✓
AWS EC2 Compute	✗	✓	✗	✓
VMware Cloud on AWS	✗	✓	✓	✓
Dedicated Hosts on AWS EC2	✗	✓	✓	✓
AWS EC2 Bare Metal Instances	✗	✓	✓	✓

Licensing Options – Oracle Database



House of Brick is advising customers to consider the Oracle Cloud Policy as an option when deploying Oracle software products in the VMware Cloud on AWS



When licensing Oracle software products by the processor metric, the total processor cores available in a server are summed and then multiplied by the appropriate factor from Oracle's Processor Core Factor Table



Named User Plus (NUP) licensing is an alternative means of licensing Oracle software often used in test, development, or other non-production environments where actual user counts are relatively low



A separate Bring-Your-Own-License (BYOL) policy for the Oracle Cloud is outlined in Oracle's document *Oracle PaaS and IaaS Universal Credits Service Descriptions*¹

Workload Specs for Cost Comparison

Workload	Product	Virtual Machines	Cores
TINY	Oracle Database	2 Small, 2 Tiny	12
	Oracle WebLogic	2 Small, 2 Tiny	12
SMALL	Oracle Database	1 Medium, 5 Small, 3 Tiny	34
	Oracle WebLogic	1 Medium, 5 Small, 3 Tiny	34
MEDIUM	Oracle Database	2 Large, 7 Small, 3 Tiny	66
	Oracle WebLogic	2 Large, 7 Small, 3 Tiny	66
LARGE	Oracle Database	4 Large, 16 Small, 8 Tiny	144
	Oracle WebLogic	4 Large, 16 Small, 8 Tiny	144

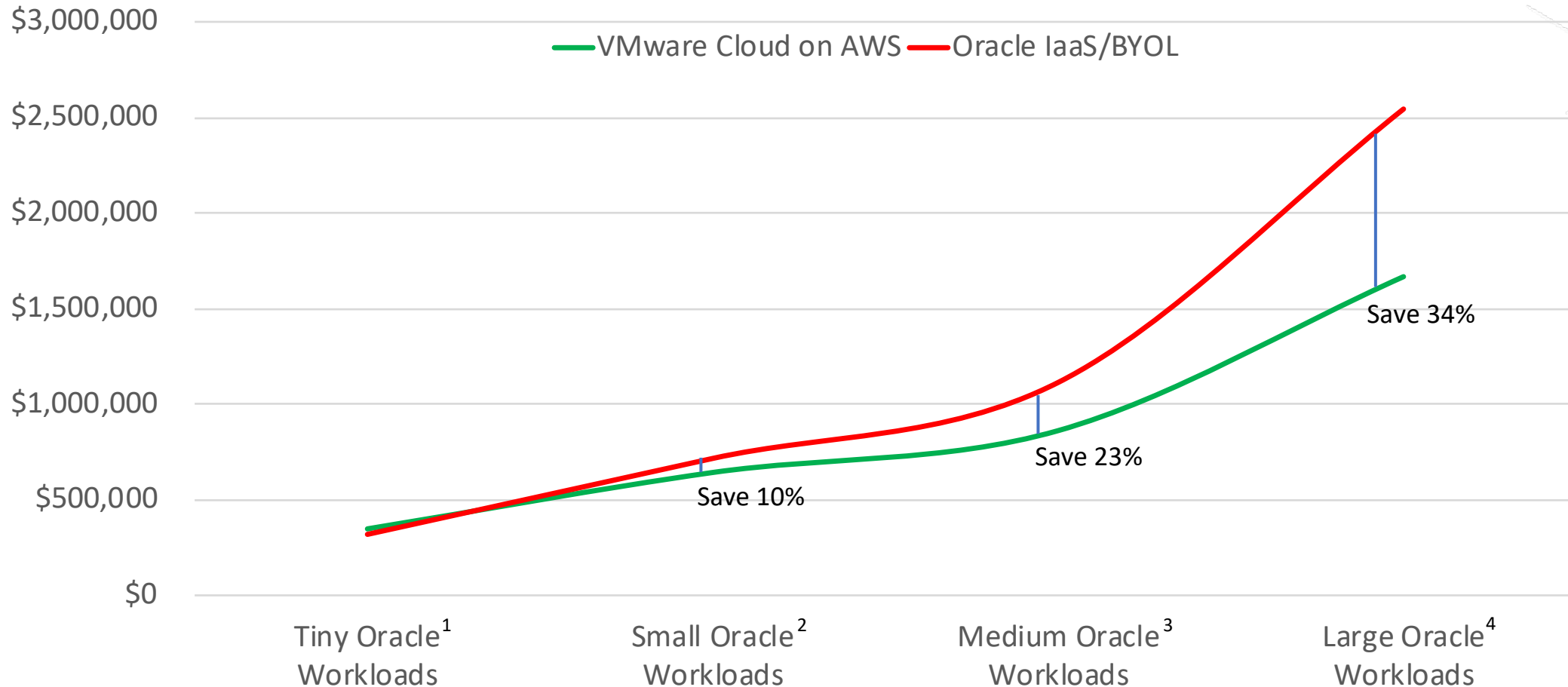
We modeled Oracle licensing costs and compute costs for hypothetical Oracle workloads based on our experience with common customer workloads.

This modeling allowed an exploration of the interaction of licensing costs, licensing rules, and cloud architectures.



Cost of Oracle on VMware Cloud on AWS vs Oracle Cloud

Oracle Cost Analysis VMware Cloud on AWS vs. Oracle IaaS



1 - 2 Node SDDC – 18 cores (75% cores disabled)
2 - 3 Node SDDC – 27 cores (75% cores disabled)

3 - Dual 3 Node SDDC – 54 cores (75% cores disabled)
4 - Dual 2 Node SDDC – 144 cores

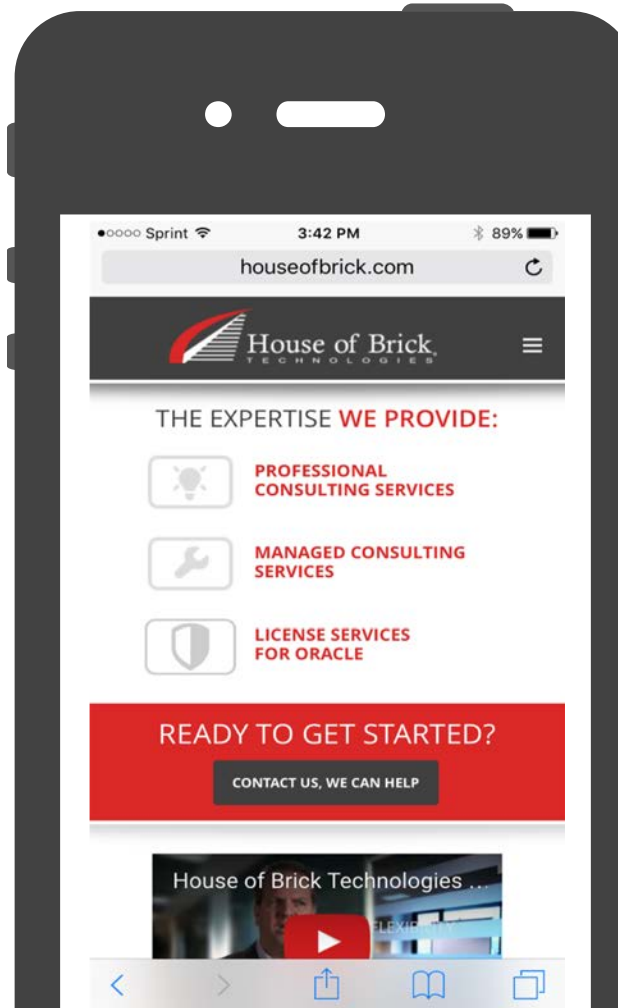
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Global Tier 1 Platform Specialists

Established in 1998, House of Brick is the recognized industry leader in the virtualization of business-critical systems. A VMware and AWS partner, House of Brick provides independent consulting, architecture services, and licensing review and analysis for Oracle and SQL Server based business critical systems.

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