

Oracle on Google Cloud Platform: Pitfalls, Real Options & Best Practices

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About House of Brick

- Founded in 1998
- Oracle, Microsoft, VMware, and Cloud
- Focus on Business Critical Enterprise Workloads
- House of Brick Services
 - Cloud and virtualization architectures
 - Oracle and MS SQL Server license review and optimization
 - Application and database migrations
 - High availability and disaster recovery strategies





Oracle Licensing & Cloud

What are the barriers (perceived or real) for the public cloud to be best practice for enterprise workloads?



INTERVIEW



Nathan Biggs

Licensing Oracle Software in Cloud Environments

by Nathan Biggs and Pamela Fulmer



Pamela Fulmer

Editor's Note: This article contains information on Oracle licensing that is provided as-is and without guarantee of applicability or accuracy. Given the complex nature of Oracle licensing and the ease with which license compliance risk factors can change significantly due to individual circumstances, readers are advised to obtain legal and/or expert licensing advice independently before performing any actions based on the information provided.

Nathan: I was pleased when invited by the Northern California Oracle Users Group to write an article addressing some of the complexities of licensing Oracle in virtualized and cloud envi-

Somewhere in your agreement is the following definition of the term Processor: "Processor shall be defined as all processors where the Oracle programs are installed and/or running." This is the most fundamental and important definition in your agreement. "Installed" is a past-tense activity that presently applies.

"Oracle has made very few changes to the actual binding contracts for running in virtualized or cloud"



Licensing is Processor-Based

ORACLE®

ORACLE LICENSE AND SERVICES AGREEMENT V121510

“Processor: shall be defined as all processors where the Oracle programs are installed and/or running.”

- Installed = past tense, but currently applicable.
- Running = present tense.
- There's nothing prospective in the contract.

OLSA_V121510_US_OPN.doc <http://www.nu-solutions.com/downloads/us-olsa-037355.pdf>



Entire Agreement Clause

ORACLE®

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“You agree that this agreement and the information which is incorporated into this agreement by written reference (including reference to information contained in a URL or referenced policy), **together with the applicable ordering document, are the complete agreement for the programs and/or services ordered by you**, and that this agreement supersedes all prior or contemporaneous agreements or representations, written or oral, regarding such programs and/or services.”

OLSA_V121510_US_OPN.doc <http://www.nu-solutions.com/downloads/us-olsa-037355.pdf>



Contractual vs. Non-Contractual

Oracle Document	Contractual?	
Technical Support Policies	✓	Yes
Core Processor Factor Table	✓	Yes
Ordering Documents	✓	Yes
Software Investment Guide	✗	No
Licensing Data Recovery Guide	✗	No
Technology Hosting	✗	No
Partitioning Policy	✗	No
Cloud Computing Environment Policy	✗	No



The Oracle Parking Garage



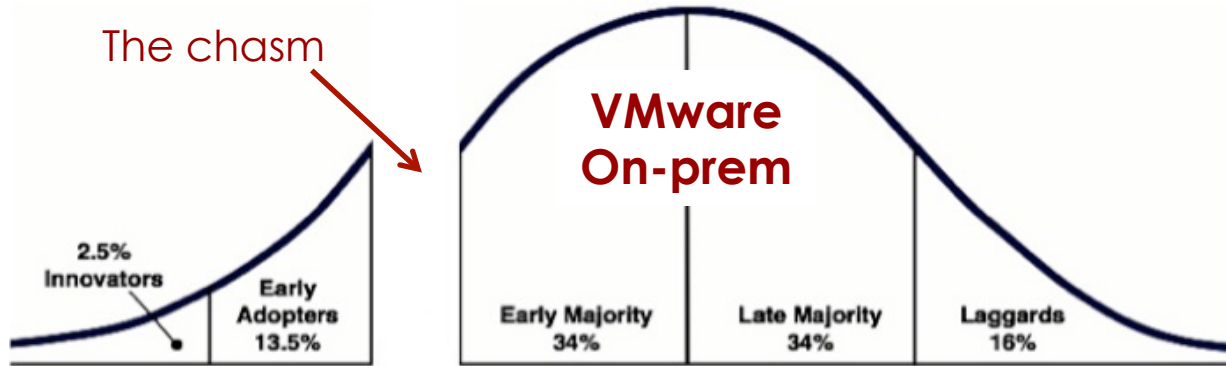


Oracle on GCP

Discussion of options, pitfalls and other practices



Cloud Adoption for Enterprise Workloads



2006

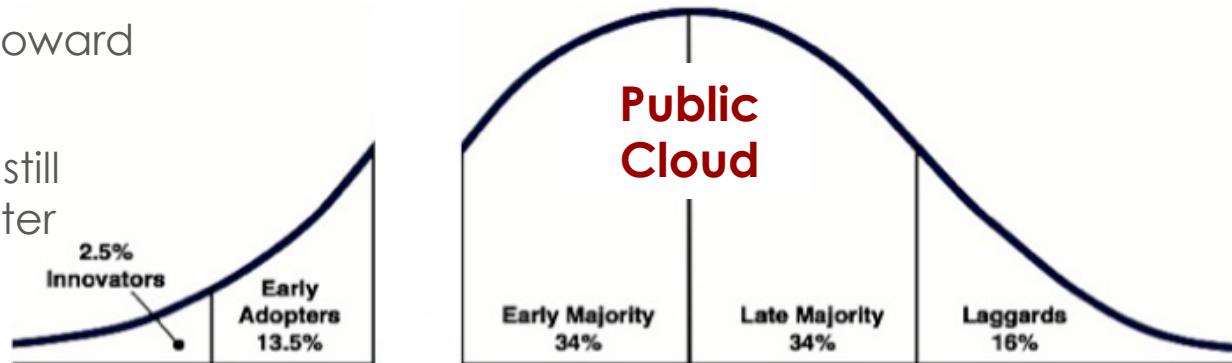
2010

2015

2018

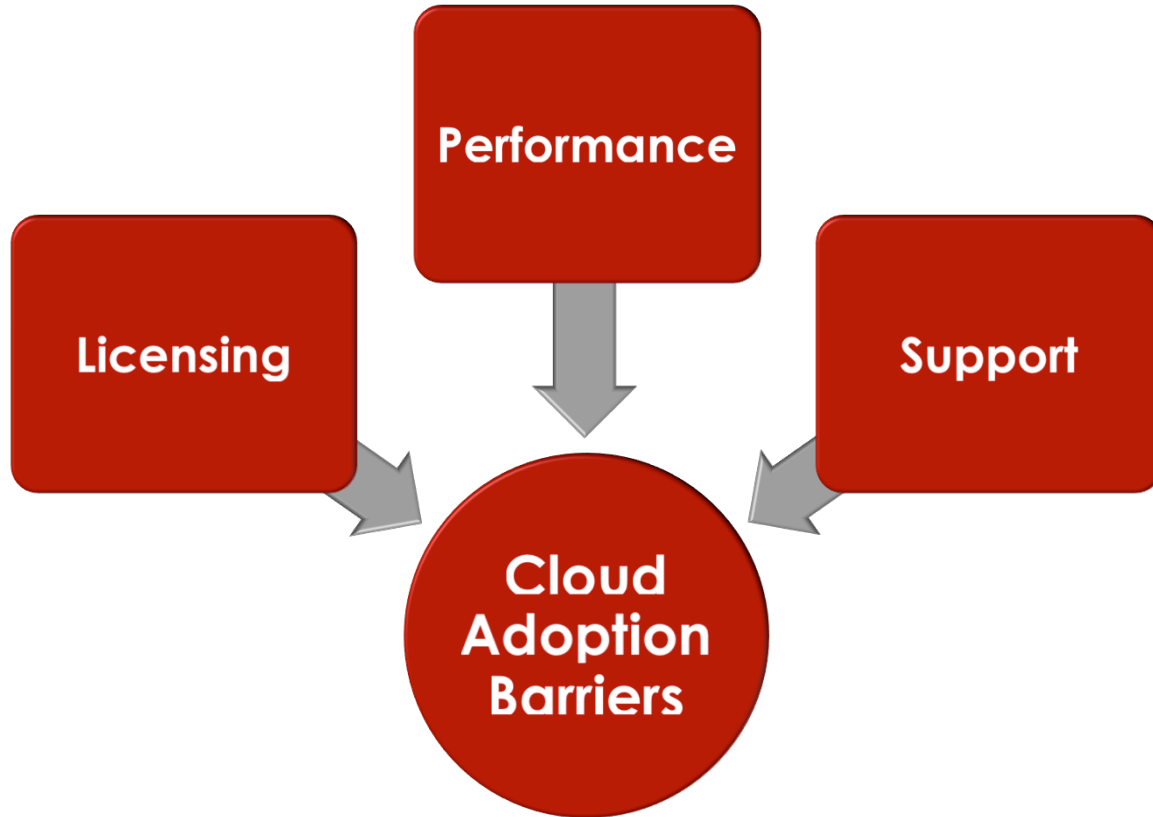
20??

- We are seeing strong push toward the cloud
- For enterprise apps, we are still in the innovator/early adopter phase
- There is a chasm to cross





Cloud Chasm for Enterprise Workloads



- ▣ These are the same barriers we encountered when House of Brick helped the industry cross the Enterprise Workload on VMware chasm
- ▣ Licensing is now the biggest concern on VMware
- ▣ In the Cloud, licensing is also (appropriately) the single biggest concern



Oracle Licensing on Google

- ULA is straightforward, but check for non-standard clauses
- Otherwise, Google customers must deploy to a GCP environment that is compatible with Oracle hardware-based license agreements:
 - Dedicated hosts (simplest, but not required)
 - Discoverable core counts, processor-type, sockets, etc.
 - Non-shared/Exclusive is preferable for performance
 - Big/Monolithic VMs (1 per physical server)
 - Ability to monitor or restrict automated movement of virtual machines
 - Live migration may (or may not) require additional licensing



Rightsizing GCP Instances

- ❑ Most people go large up front on their GCP instances to get the performance characteristics they desire:
 - ❑ CPU
 - ❑ Memory
 - ❑ Storage profile
- ❑ A best practice is to start small at the beginning and tune up to the right parameters for acceptable performance
 - ❑ Currently the smallest CPU license footprint is a single host
 - ❑ Google will work with customers under NDA to provide host details
- ❑ Smaller hosts control GCP costs, and more critically, Oracle licensing costs



Other GCP Considerations

- ❑ Oracle ULA and GCP
 - ❑ Requires accounting of traditional metrics; for “value assessments” and “certification” purposes
 - ❑ Contract *may* require all ULA resources to be owned by the customer, confounding cloud deployments
- ❑ Other BYOL considerations
 - ❑ Planning for and auditing usage requires NDA details from Google
- ❑ Reducing Oracle footprint on GCP
 - ❑ Minimum footprint is the number of processors required for a single host
 - ❑ A VM of any size currently requires licensing an entire host
 - ❑ Host core counts may differ by region
- ❑ Ensuring Oracle license compliance on GCP requires self-auditing



Ensuring Oracle License Compliance on GCP

- Live Migration
 - Only monolithic VMs can be migrated without licensing impact
 - Multiple VMs per host (single-tenant option) requires multiple hosts to be licensed
- No practical way to license a smaller VM based on vCPU
 - Google is evaluating capabilities similar to processor affinity
- VMs *will* change physical host (30-sec notice)
 - Movement can be blocked (configuration setting)
 - Movement can be audited
 - Licenses follow the host



- ▣ Migration of workloads occurs regularly
- ▣ Uptime – rated highest by Gartner Cloud Harmony
- ▣ Performance protection – unable to detect oversubscription (if any)
- ▣ Key use cases
 - ▣ Financial services (PayPal)
 - ▣ Telecom (Optiva - 10X for 10% price)
 - ▣ Generally Larger / ULA customers



Oracle & GCP FAQs

- Q: What are the support considerations for the GCP customer and Google?
 - Oracle supports platforms, nothing says you can't
- Q: Is GCP just like Amazon EC2 or MS Azure when it comes to Oracle?
 - No - they're "authorized" with 2 to 4x penalty
- Q: Could there be advantages to GCP compared to Amazon EC2 or MS Azure for running Oracle?
 - Uptime + Hardware/metric based is less expensive
- Q: For purposes of asset protection, do I need to keep a number of licenses in reserve for future Oracle deployments?
 - Absolutely not - only license what you're using
- Q: What other things do I need to look for in my own contract with Oracle?



Looking Forward

What does the future look like for Oracle Workloads on GCP?



Summary & Looking Forward

- ❑ Cloud computing is definitely bringing the next generation of operational benefits for enterprise-class systems like those running Oracle databases
- ❑ The cloud adoption for enterprise systems is still very early
- ❑ Understanding the barriers (technical, operational, political, financial, etc.) to cloud adoption is important to making the decision as to when and how you migrate
- ❑ Google Cloud Platform is an option for Oracle workloads today – when deployed correctly!



House of Brick Services

■ Oracle & SQL Server License Services

- Pre-audit assessment
- Audit defense
- Negotiation support

■ Ad Hoc Architecture Services

- Reference architecture and best practices
- Cloud instance and on-prem hardware right sizing
- Performance analysis and tuning
- Migration services

■ Managed License Support Service

- Annual internal audit
- Periodic check of VM logs and feature usage
- Monthly report to customer on usage data and compliance
- Unlimited support for Oracle audit
- Unlimited support for negotiations with Oracle
 - New purchase
 - Support renewal
 - ULA certification

Thank You

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