

# Oracle Gen2 Cloud

## Financial Analyst Meeting

**Don Johnson**

Executive Vice President  
Oracle Cloud Infrastructure

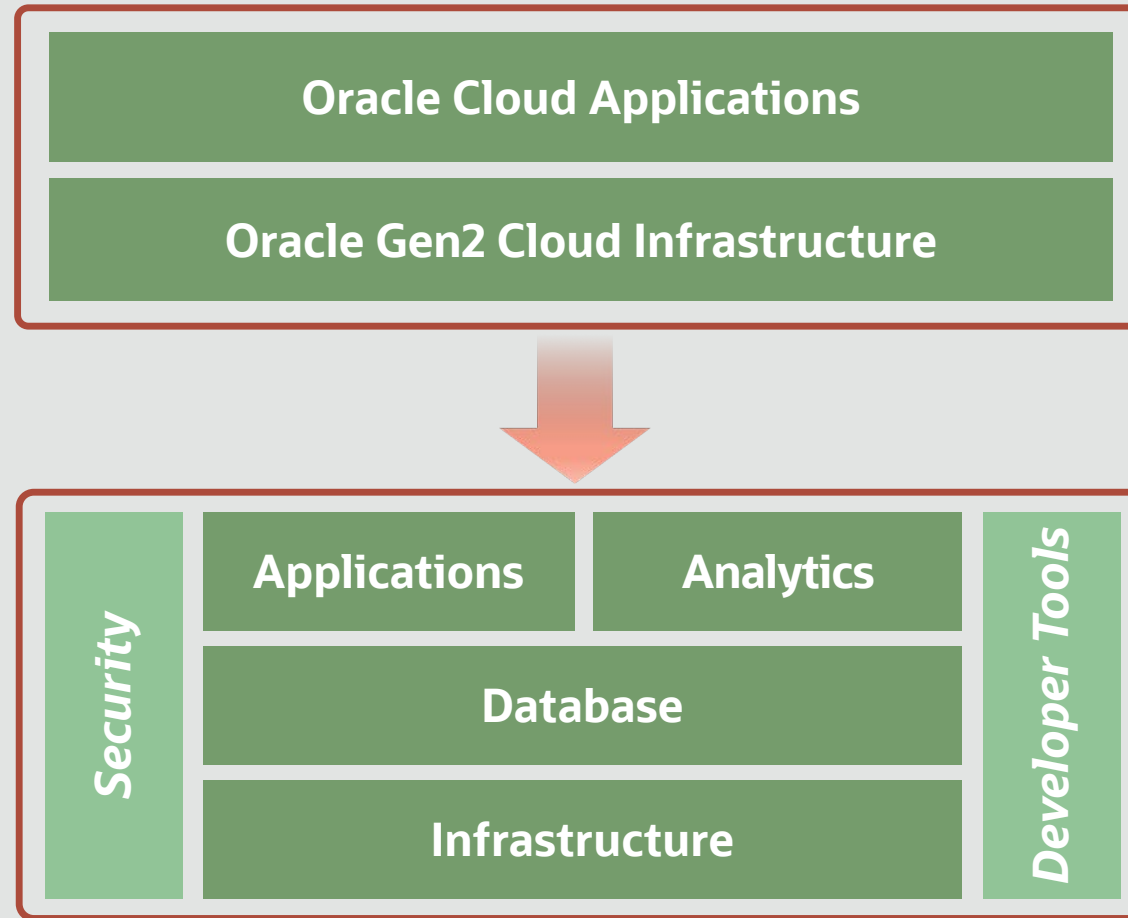
# Safe Harbor

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

Statements in this presentation relating to Oracle's future plans, expectations, beliefs, intentions and prospects are "forward-looking statements" and are subject to material risks and uncertainties. A detailed discussion of these factors and other risks that affect our business is contained in Oracle's Securities and Exchange Commission (SEC) filings, including our most recent reports on Form 10-K and Form 10-Q under the heading "Risk Factors." These filings are available on the SEC's website or on Oracle's website at <http://www.oracle.com/investor>. All information in this presentation is current as of September 19, 2019 and Oracle undertakes no duty to update any statement in light of new information or future events.

# Oracle Gen2 Cloud

## Apps, Data, Infrastructure



Oracle Cloud

# Oracle Gen2 Cloud Global Footprint

2018 – 4 Regions



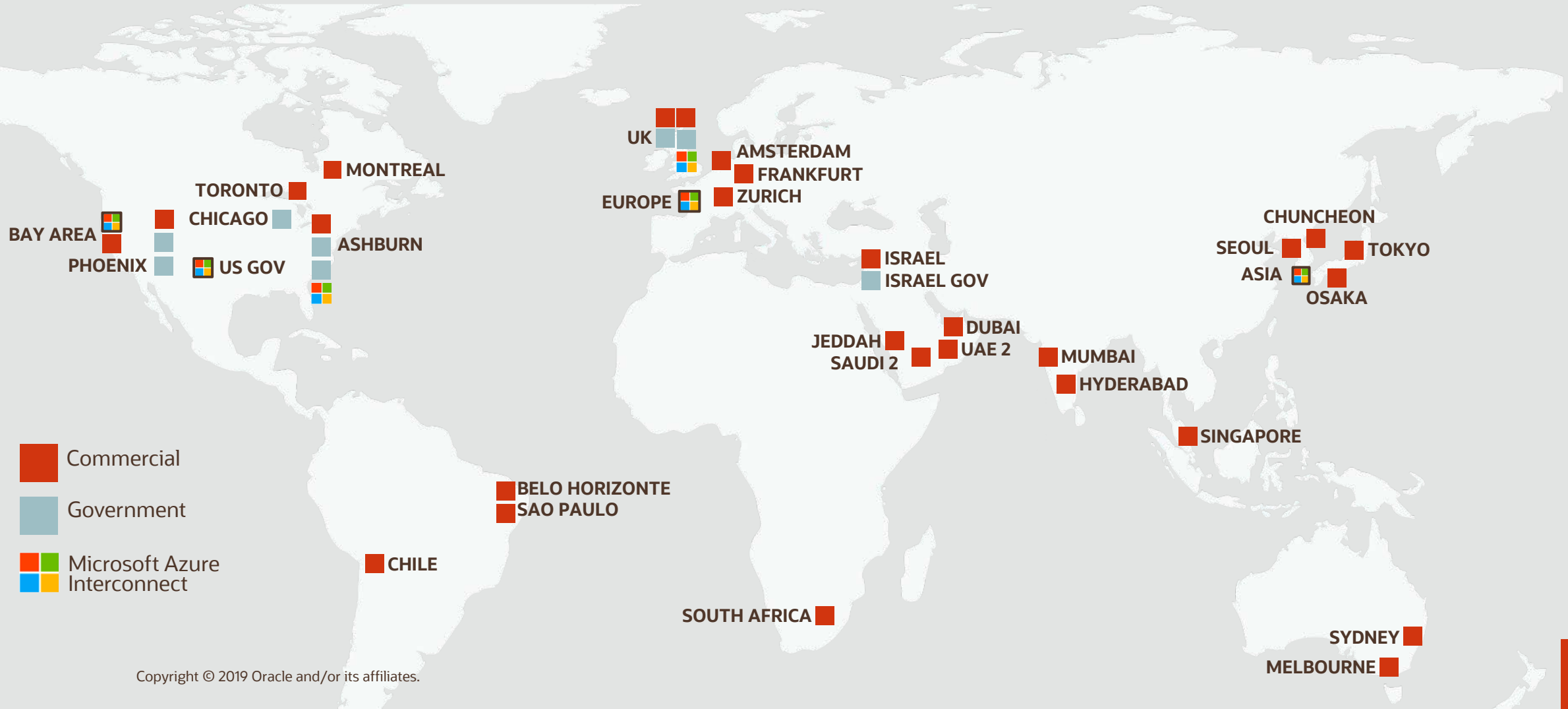
# Oracle Gen2 Cloud Global Footprint

## 2019 – 16 Regions



# Oracle Gen2 Cloud Global Footprint

## 2020 – 36 Regions ... vs 25 AWS Regions





# Oracle Gen2 Cloud Global Footprint

## Growing Quickly, Disaster Recovery Everywhere

### Very rapid global expansion

- Local in-country presence is required for data residency, latency,...
- By 2020, there will be 36 Oracle Gen2 Cloud Regions (AWS has 25)

### For Oracle Cloud, Disaster Recovery in-country is the norm

- Enterprise workloads, all serious workloads, require DR
- By 2020, there will be 11 geographies where Oracle has Local DR (AWS has 4)

### SaaS fully integrated

- Our entire cloud stack is deployed in our Gen2 Cloud Regions
- FusionApps + Netsuite available in all regions

### Dedicated Gen2 Cloud Regions

- Gen2 Cloud Regions dedicated to individual customers
- Our entire cloud stack, built and operated for a single customer
- Full cloud stack, right next to on-premise location

# Why Customers Choose Oracle Gen2 Cloud

## We Support Workloads They Can't Run on Other Clouds

### Oracle Database Applications

Large mission-critical apps running on Oracle DB / Exadata + IaaS



Rolls-Royce®

Manhattan  
Associates

FICO

BRINKS

Allianz Partners



### Oracle Applications: E-Business Suite, JD Edwards, PeopleSoft, etc.

Large mission-critical ERP systems running on Oracle DB / Exadata + IaaS

Office DEPOT  
*Taking Care of Business*



COX AUTOMOTIVE™

Tupperware®

CIRCLE K

### Infrastructure-Intensive Applications

Large infrastructure-hungry apps & services running on IaaS – HPC, Big Data, SaaS Services

FIRE EYE™



Cisco Tetration Analytics

nationalgrid



# Infrastructure Customers

---

Big Brands run in the  
Oracle Gen2 Cloud

Cisco Tetration Analytics

**Cisco SaaS enters new  
market at much lower cost  
by increasing utilization  
15X on high performance  
Oracle Cloud Infrastructure**

Cisco Tetration is a workload protection platform that processes millions of events to secure customers in the public cloud and on-premises

It now runs on Oracle Cloud Infrastructure globally, consuming thousands of bare metal cores, and went from **concept to launch in two months** with Oracle's support

Cisco accelerated **provisioning times from six weeks to hours** and can now efficiently offer Tetration to mid-sized commercial customers

**2.5X**  
the performance  
of on-prem

**15X**  
better CPU  
utilization



## **Intelligent Cybersecurity**

### **Analyzes and Protects Millions of Daily emails from Advanced Cyber Threats**

- Created core **security-as-a-service** application on Oracle Cloud Infrastructure
- Support custom OS and 20-30% performance increase over appliance
- **40-50% reduction in Disaster Recovery costs**



# Innovative Start-Up Runs their Business on Oracle Cloud

- Innovative startup brings gas delivery to the customer
- Uses **OCI Containers and Kubernetes to run their core MySQL-based cloud-native application**
- Considering a broad range of cloud native services for future services





**Time to deploy a cluster  
had decreased from a  
half day to 2 minutes**

- Less focus on maintenance, more on development
- Can move disaster recovery to the cloud
- Deploy WebLogic clusters in Oracle Cloud Infrastructure Container Engine for Kubernetes

# Siemens builds a new IoT business on OCI

---

- Running **new SaaS service** on OCI
- Siemens sells data that they collect with the operation of customer turbines, selling business insights on **when power generators should spin up or down turbines based on demand, weather** and other factors

# SIEMENS



# Texas state government runs critical payroll systems on OCI

- Running general ledger/HR systems across two OCI regions
- Projected **50% cost savings**
- Expect to eventually support 100 state agencies and **156,000 employees**



## Global chain of convenience stores runs on OCI

- 1,000 cores of compute and Exadata CS
- Parent company operates and licenses 68,000 stores in 17 countries





## Moved JD Edwards to OCI with Oracle Platinum Partner Velocity

4-5X

faster performance  
on mission-critical  
Oracle apps

30-40%

total cost of  
ownership savings

### CUSTOMER PERSPECTIVE



Our finance and branch teams that use JD Edwards are just ecstatic over the performance. They can run financial reports and manage distribution tasks faster than ever.”

Clif Lee, Director of Corporate Systems, TruGreen



## Global chain of 15,000 convenience stores run on OCI

- Second largest chain of convenience stores in the United States
- Full range of cloud infrastructure including **Exadata CS**



# Tupperware migrated JD Edwards to the cloud

---

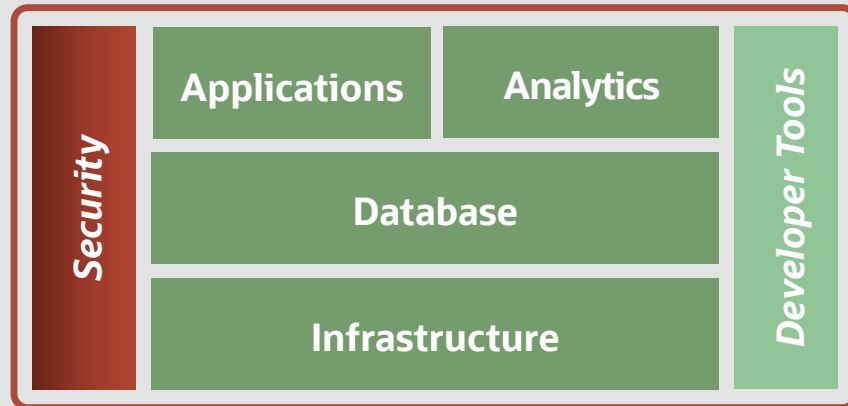
- Migrated Oracle Database and JD Edwards workloads globally
- Oracle Cloud Infrastructure Database for performance and availability

---

# Tupperware®

# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data



Oracle Cloud

Bare Metal Isolation provides bedrock security at a foundational level

With Bare Metal, Customers have sole possession of a computer. They don't need to trust anyone else on their computer, including Oracle

Customers have no access to Oracle's core cloud virtualization logic. Oracle doesn't need to trust our customers (who we love, but prefer not to trust)

No trust is required from anyone

Bare Metal Isolation – Dedicated Physical Hosts





# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data

Being secure requires that systems are always patched, up to date, 100%, ASAP

Oracle Autonomous Linux is fully automated

Automatic online patching and updating

Automatic security monitoring and remediation



Autonomous Linux – Ksplice Live Patching Reporting

Bare Metal Isolation – Dedicated Physical Hosts

# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data

Data is the crown jewel of any business

Nothing is more important than  
Database Security

Oracle Autonomous Database is 100%  
automated, always patched, always up  
to date

No human labor, no human error



Autonomous Database – Self Patching Automated

Autonomous Linux – Ksplice Live Patching Reporting

Bare Metal Isolation – Dedicated Physical Hosts

# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data

Security needs to be simple, on by default, and for the most important things, mandatory

Resources launched in a Maximum Security Zone are always on dedicated infrastructure, with the highest levels of data encryption and network security

Always on, not optional

Maximum Security Zone – Most Secure Mandatory

Autonomous Database – Self Patching Automated

Autonomous Linux – Ksplice Live Patching Reporting

Bare Metal Isolation – Dedicated Physical Hosts



# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data

Oracle Cloud Guard constantly watches and collects data from Audit, Data Safe, OS Management, Logging, and Network Flow Logs services

It analyzes data, detects threats and misconfigurations. It can alert you, and better yet, will kill threats with no human intervention



Cloud Guard – Scans – Kills Threats – Automated

Maximum Security Zone – Most Secure – Mandatory

Autonomous Database – Self Patching – Automated

Autonomous Linux – Ksplice – Live Patching – Reporting

Bare Metal Isolation – Dedicated Physical Hosts

# Oracle Gen2 Cloud: Security

Our Most Fundamental Responsibility is to Protect Our Customers' Security and Data

Always-On Security

100% Automated

Protecting Every Layer of the Stack

Cloud Guard – Scans Kills Threats Automated

Protect

Maximum Security Zone – Most Secure Mandatory

Policy

Autonomous Database – Self Patching Automated

DB

Autonomous Linux – Ksplice Live Patching Reporting

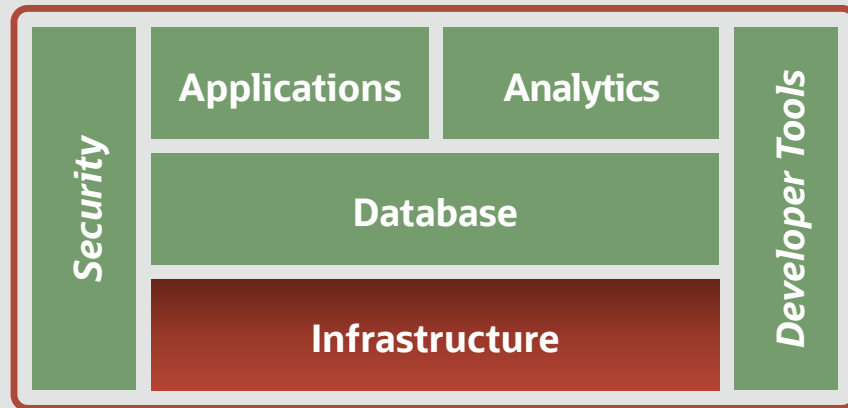
OS

Bare Metal Isolation – Dedicated Physical Hosts

Infra

# Oracle Gen2 Cloud: Infrastructure

Oracle Excels in Price, Performance, Reliability, SLAs & Providing Truly Elastic IaaS



Oracle Cloud

Infrastructure-intensive workloads **Run Best** on Oracle Cloud

We provide the **Best Absolute Performance**

We offer the **Best Price**

**Superior Price/Performance by an Order of Magnitude**

**Industry Best SLAs** – both data plane & control plane

**We Support Workloads No Other Cloud Can** – e.g. high scale HPC

We offer **Truly Elastic Infrastructure** – configurable compute, configurable storage – with no downtime, no tradeoffs



# Oracle Gen2 Cloud: Infrastructure

## Oracle Cloud Offers the Best Performance Per Server

	ORACLE Cloud Infrastructure	AWS	Oracle offers
Compute	2.57 TFLOPs	1.77 TFLOPs	45% more
Memory	153.02 GB/s	134.03 GB/s	14% more
Block Storage	500,000 IOPS	80,000 IOPS	525% more

# Oracle Gen2 Cloud: Infrastructure

## Oracle Cloud Offers The Best Price

---

### AWS Costs More

<b>Standard VMs</b>	+ 49%
<b>Standard Bare Metal</b>	+ 45%
<b>Block Storage</b>	+ 7,900%
<b>Data Egress</b>	+ 1,300%
<b>Private Line</b>	+ 2,100%

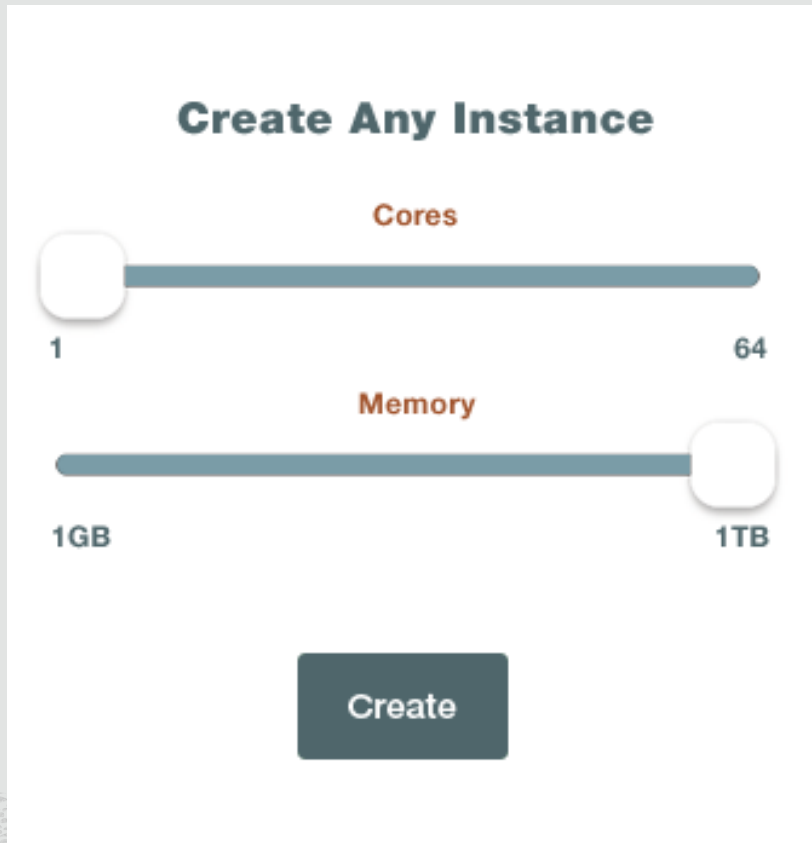
# Oracle Gen2 Cloud: Infrastructure

Oracle Offers the Best SLAs - Data Plane Availability, Performance, & Control Plane

	ORACLE Cloud Infrastructure	AWS
Availability	Covered	Covered
Performance	Covered	<i>No Coverage</i>
Manageability	Covered	<i>No Coverage</i>

# Oracle Gen2 Cloud: Infrastructure

## Next Gen Compute – True Elasticity: Configure by the Core



The screenshot shows a user interface titled "Create Any Instance". It features two horizontal sliders. The top slider is labeled "Cores" and has a range from 1 to 64. The bottom slider is labeled "Memory" and has a range from 1GB to 1TB. Below the sliders is a dark blue button labeled "Create".

- ✓ **True Flexibility**  
Pick exactly the number of cores and memory you need based on your workloads
- ✓ **True Elasticity**  
Autonomously scale cores up/down based on application needs
- ✓ **True Availability**  
Never go down even when auto-scaling cores. Zero Downtime.

# Oracle Gen2 Cloud: Infrastructure

## Next Gen Storage – True Elasticity: Configure Performance

**Attach Storage**  
**Create Any Instance**

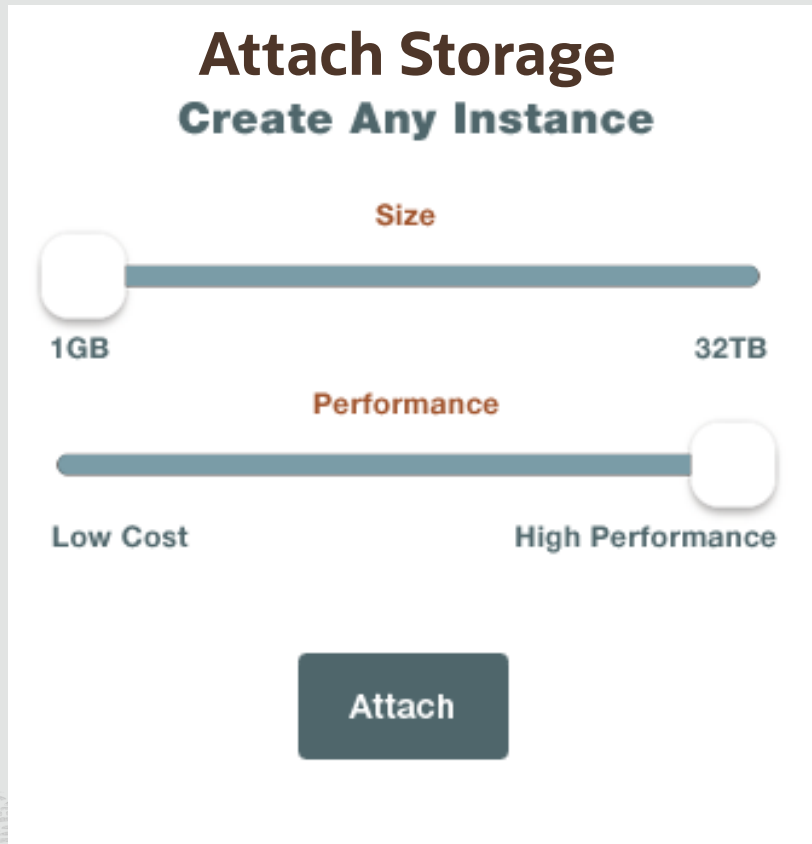
**Size**

1GB 32TB

**Performance**

Low Cost High Performance

**Attach**



### ✓ **True Flexibility and Elasticity**

Pick the amount of storage to attach to your instance & simply scale up when you need

### ✓ **Performance On Demand**

Choose to pay for peak performance or optimize for cost

### ✓ **Always Available**

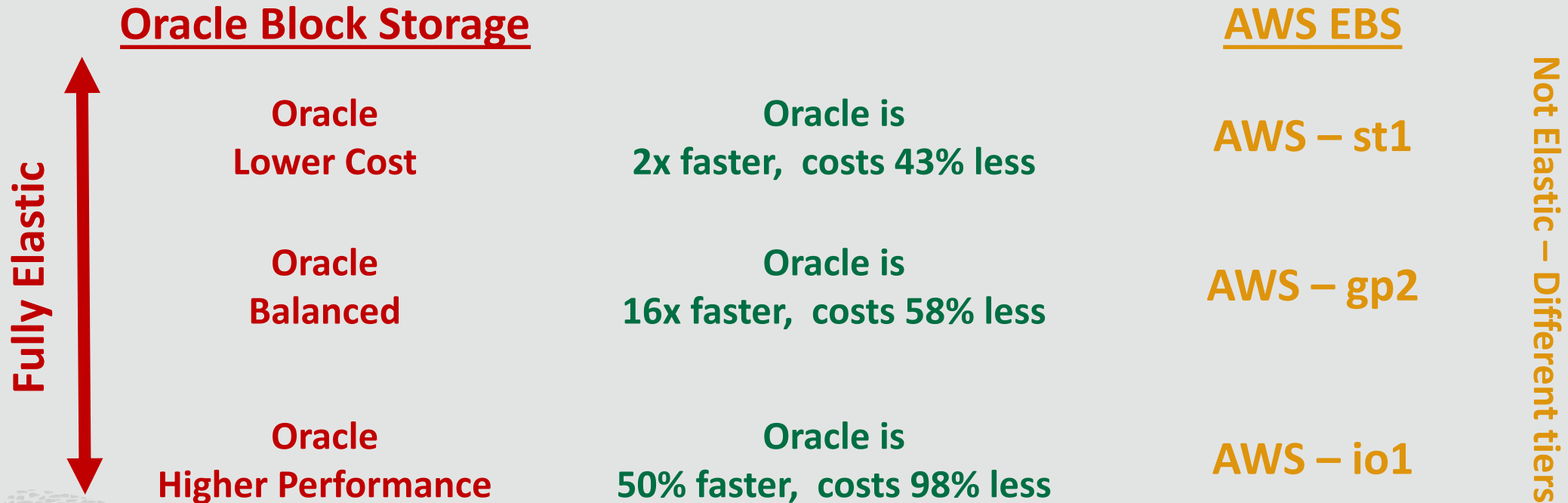
Never go down even when when scaling. Zero downtime. Period



# Oracle Gen2 Cloud: Infrastructure

## Oracle Gen2 Block Storage vs AWS EBS – Elastic vs Non-Elastic

500 GB comparison for elasticity and price/performance



# Oracle Gen2 Cloud: Infrastructure

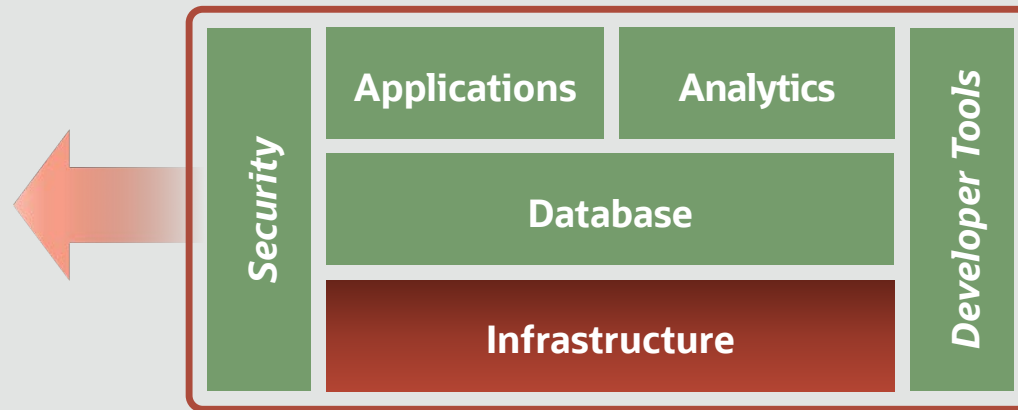
## Truly Elastic Infrastructure, No Downtime, No Tradeoffs

Truly Elastic	Oracle Compute + Storage	AWS EC2 + Storage
Scale up Compute	No Downtime	>10 Minute Outage
Scale up Storage Performance	No Downtime	>Several Hours Outage
Flexible Instance sizing	Truly Flexible <i>"Pay for what you use"</i>	Fixed shape sizes <i>"Pay for what you don't use"</i>

# Oracle Gen2 Cloud: Partners & Ecosystem

## Delivering Comprehensive Enterprise Solutions with Partners

## Partners



Oracle Cloud

## ISVs



# Oracle Gen2 Cloud: Partners & Ecosystem

## Two Clouds, Connected Together



### True Multi-Cloud for Enterprise

Customers can leverage existing investments in Oracle and Microsoft technology to accelerate lift and shift to public cloud

Connect best in class cloud services across both clouds to modernize applications  
Expanding globally – new region interconnects to support global applications and services

**Available Now** : Ashburn (Virginia, US); London (UK)

**Coming Soon** : US West, US Government, Asia, and Europe regions

# Oracle Gen2 Cloud: Partners & Ecosystem

## Move Your Entire Datacenter



### True VMware Lift+Shift onto Oracle Gen2 Cloud Infrastructure

Only cloud that enables you to manage your own VMware certified stack

- Control version management, operations and infrastructure, upgrade timeline

Extend on-premise VMware environments to Oracle Gen2 Cloud

- Access advanced Cloud offerings like Autonomous Database & Exadata Cloud Service

Leverage existing VMware tools & investments in Oracle Gen2 Cloud

- Reduce complexity of large migrations by leveraging existing operational capabilities

Billed under existing Oracle Cloud UCM

- Simplified billing. Oracle provides first line of Support



# Marketplace With Integrated Billing

## Third-Party ISV Applications billed under UCM

Try and buy from a comprehensive ecosystem of enterprise ISV applications

Use Universal Cloud Credits to purchase ISV applications

Simplify cost-management through consolidated billing for ISV application and Oracle services

Deploy simple images or a stack using pre-configured Terraform templates

First line of support for listed ISVs

FORTINET

SCYLLA

Couchbase  
NoEQUAL

NETSCOUT

H<sub>2</sub>O.ai

PYRAMID  
ANALYTICS

aviatrix

sesame  
SOFTWARE

SHIELDIO

CIS Center for  
Internet Security

blueprism

compellon

stromasys  
legacy server emulation

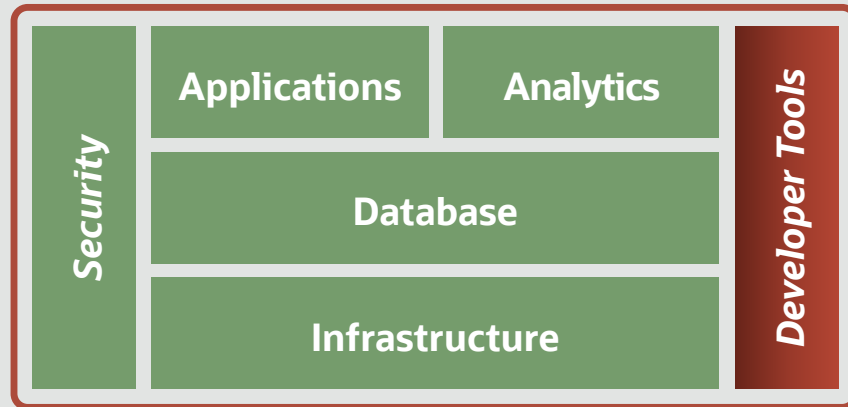
Solution-Soft

A10

AVI  
Networks

# Oracle Gen2 Cloud: Developers

## Complete Cloud Native Development Stack Open Standards



Oracle Cloud

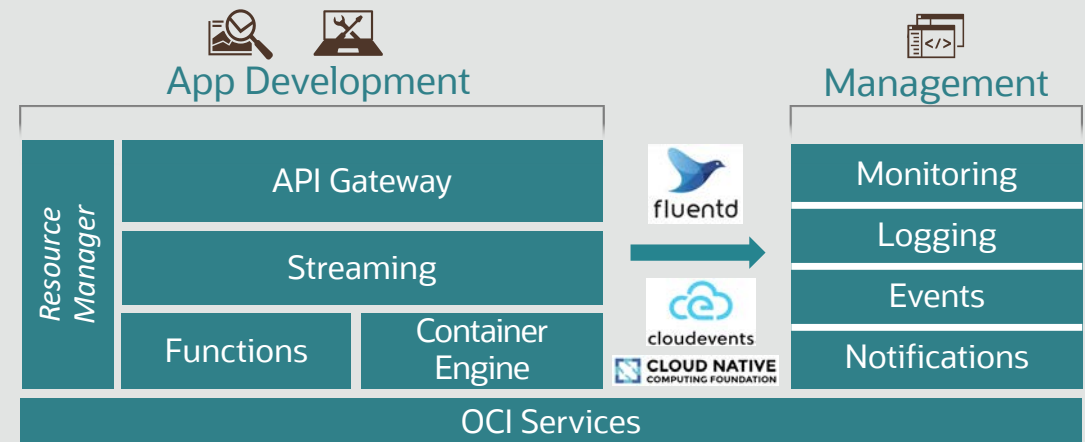
Enterprises Need Portability and Choice

We have a Full, General Purpose Cloud Native Stack

- Containers, Kubernetes, Serverless
- Streaming, Events, Notifications, Telemetry, Logging
- Mobile, IoT, AI, ML

Providing Open Interfaces, Supporting de facto Standards

Limit Lock-In, Maximize Developer Productivity



# Oracle Gen2 Cloud: Developers

## Oracle Cloud Free Tier – No Friction Dev/Test

Always Free Tier – Services You Can Use For an Unlimited Time



**Autonomous Database**

*2 x Databases  
20 GB each*



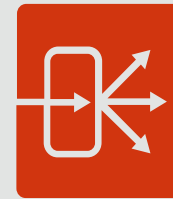
**Compute**

*2 x VMs  
1 GB Mem  
each*



**Storage**

*100 GB Block  
10 GB Object  
10 GB Archive*



**Networking/ Load Balancing**

*10 Mbps LB  
10 TB Outbound  
Data Transfer*



**Monitoring / Notifications**

*500M Metrics In  
1B Metrics Out  
1M Notifications  
1K Emails*

Available to All New and Existing Cloud Accounts

# Oracle Gen2 Cloud

## Financial Analyst Meeting

### Don Johnson

Executive Vice President  
Oracle Cloud Infrastructure

### Gaurav Duggal

Vice President  
Reliance Jio