



# Data Management on Oracle Cloud

An Overview of Oracle Database Cloud Services

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Product Management  
Oracle Data Management Cloud Services

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**ORACLE®**

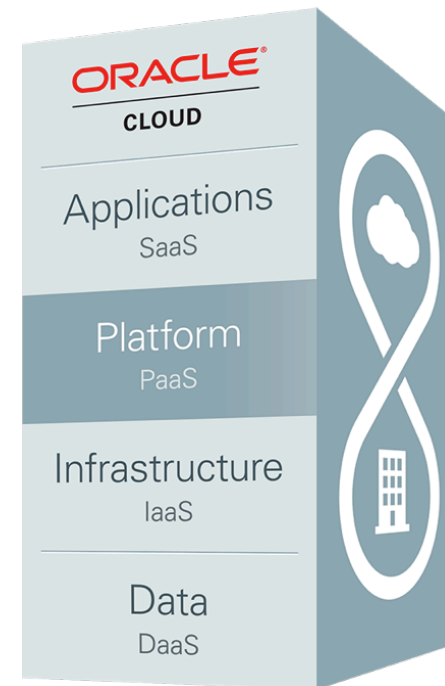
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# Data Management on Oracle Cloud

- 1 Oracle Data Management Cloud
- 2 Oracle Database Cloud Service
- 3 Live Demo



# Oracle Data Management Cloud Platform

# Strategy – Oracle Data Management Platform

Integrated and Hybrid Cloud database management solutions



On Premises



Same Architecture  
Same Software  
Same Skills



Oracle Cloud

# Strategy – Complete Data Management Platform

Support any data, any scale, on-premises and in the Cloud

## NoSQL Database



- Key-value
- Graph
- Document
- IoT Analytics

## Oracle Database



- Relational
- Spatial
- Graph
- Document
- Real-time Analytics

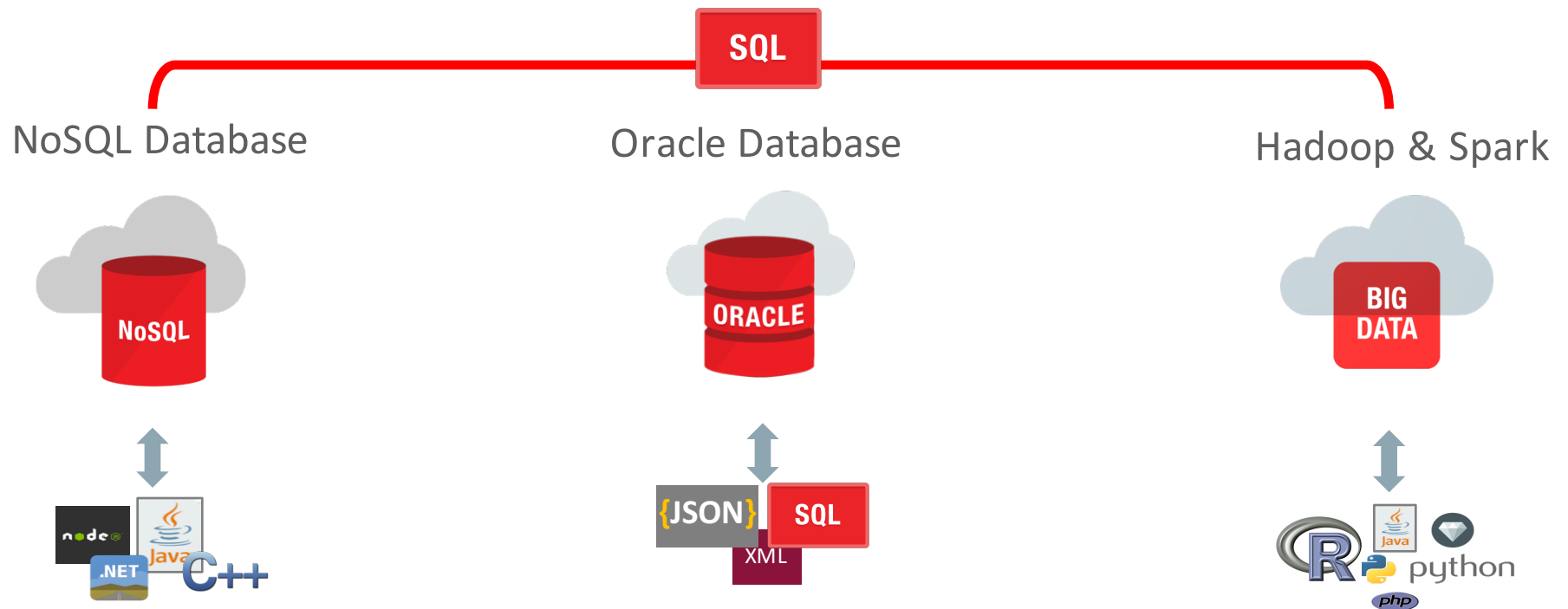
## Hadoop & Spark



- Logs
- Streaming
- Archive
- Spatial
- Web Analytics

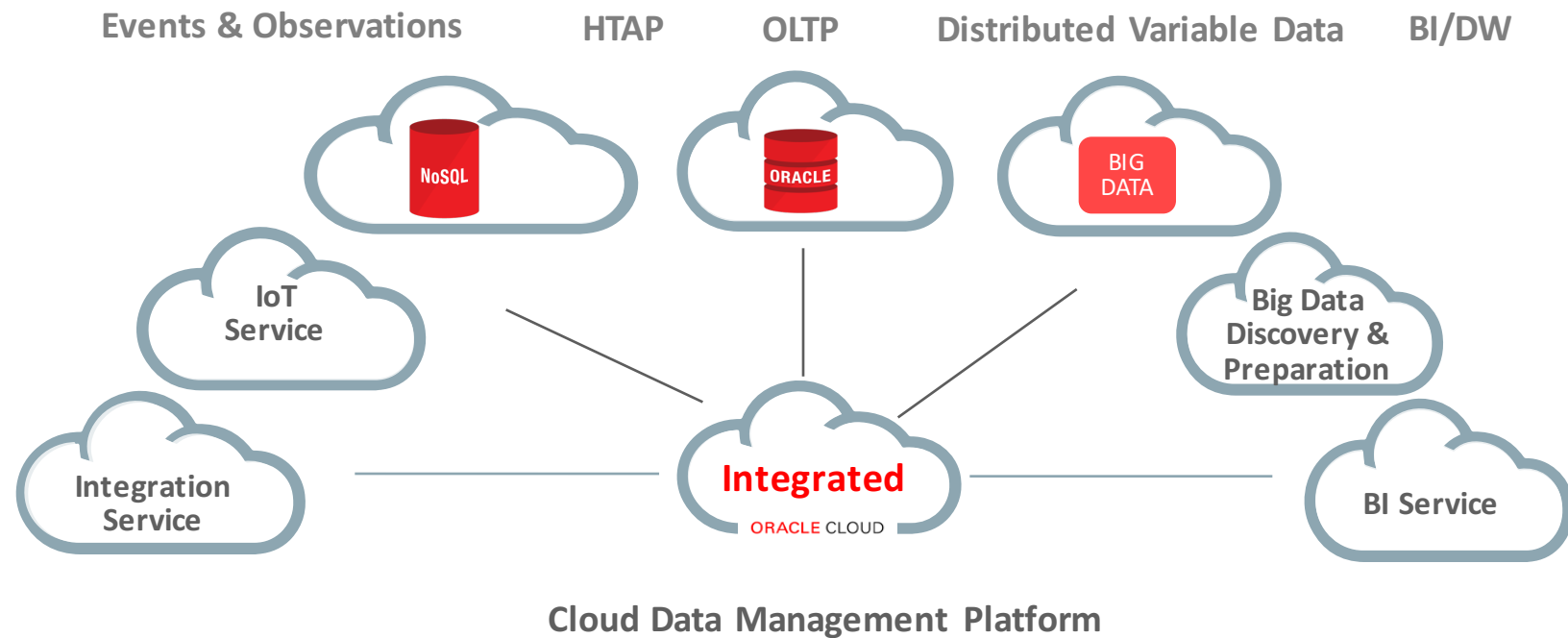
# Strategy – Unified Data Management Platform

Special purpose and standards based access



# Strategy – Integrated Data Management Platform

Cloud services integrated





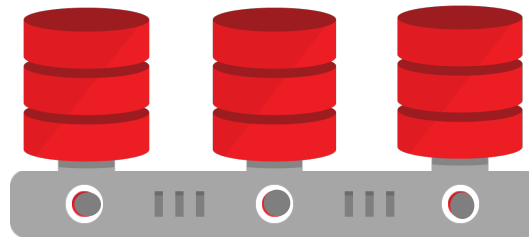
# Oracle Database Cloud Service

# Database Cloud Service

Integrated and Hybrid Cloud database solution



On Premises



Same Architecture  
Same Software  
Same Skills



Oracle Cloud

# Database Cloud Service

Automated database and infrastructure provisioning and administration



## Benefits



Reduced time and complexity to provision database services



Increased standardization of the “fleet”



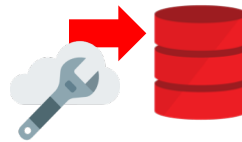
Also use to deploy Maximum Availability Architectures

# Database Cloud Service - Automation

Oracle Cloud – Security By Default



Simple Provisioning



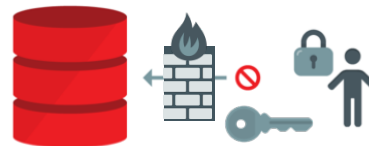
Automated  
DBA and Patching



Backup/Recovery  
plus HA & DR



Any Language



Maximum Security



Local and Remote  
Management

# Database Cloud Service - Security

Oracle Cloud – Security By Default



- Oracle delivers data security
  - Data encrypted by default in the Cloud
  - In transit, and at rest
- Customer maintains control of
  - Access keys using Oracle Key Vault
  - Audit trails using Oracle Audit Vault

# Database Cloud Service - High Availability

One click provisioning of higher levels of SLA and online maintenance operations



- Local fast failover
- Online rolling patches
- Scale-out OLTP



- Availability domain failover
- Rolling patches
- Active sites for reporting



- Active-Active replicas
- Online upgrades
- Data migration
- Heterogeneous

# Oracle Maximum Availability Architecture (MAA)

On-Prem, Cloud, Hybrid Cloud

## Production Site

### **RAC**

- Scalability
- Server HA

### ASM

- Local storage protection

### Flashback

- Human error correction

## **Enterprise Manager Cloud Control**

- Site Guard, Coordinated Site Failover
- Application Continuity
- Application HA
- Global Data Services
- Service Failover / Load Balancing

## Active Replica

### **Active Data Guard**

- Data Protection, DR
- Query Offload

### **GoldenGate**

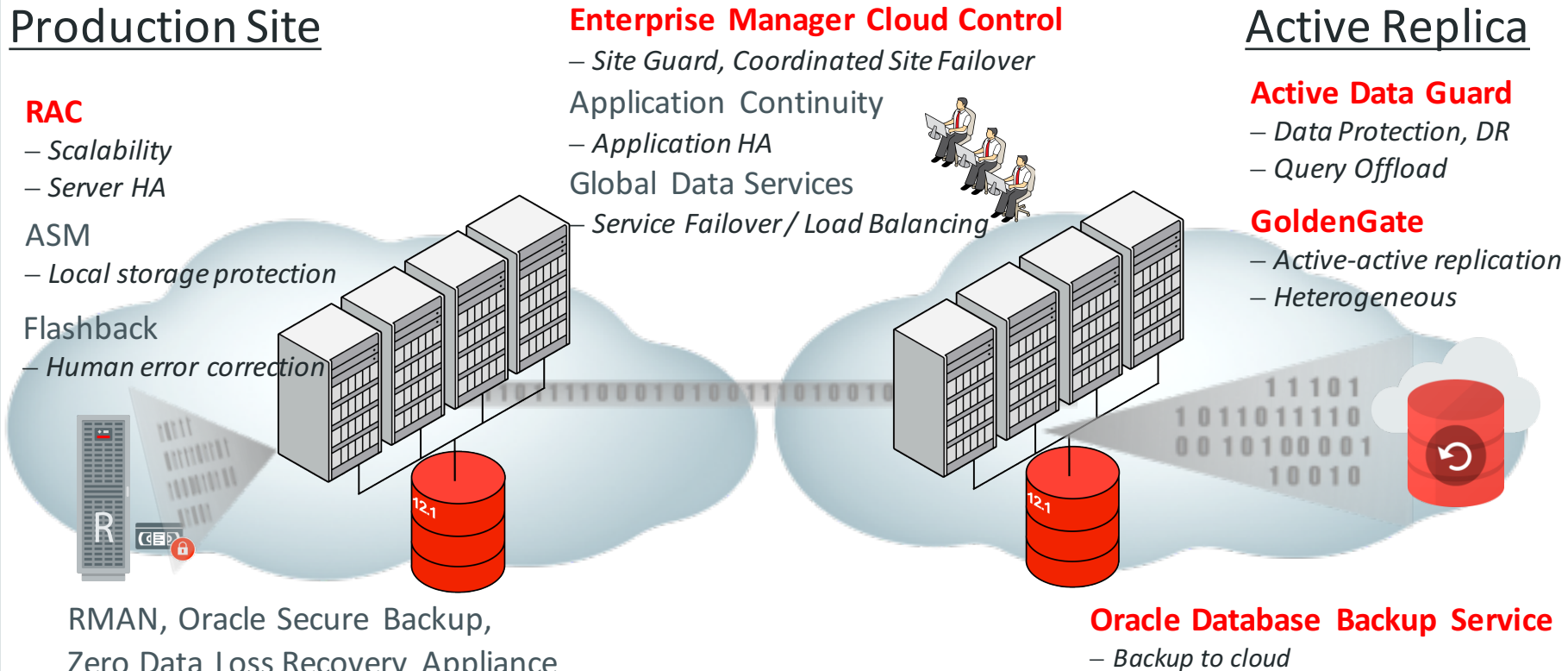
- Active-active replication
- Heterogeneous

## **Oracle Database Backup Service**

- Backup to cloud

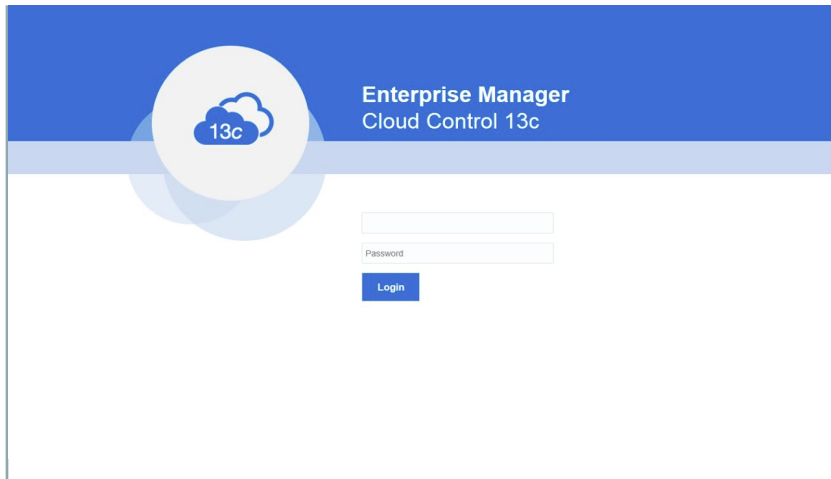
RMAN, Oracle Secure Backup,  
Zero Data Loss Recovery Appliance

- Backup to disk, tape, or to cloud



# Database Cloud Service – Hybrid Management

On-premises and cloud to cloud operations

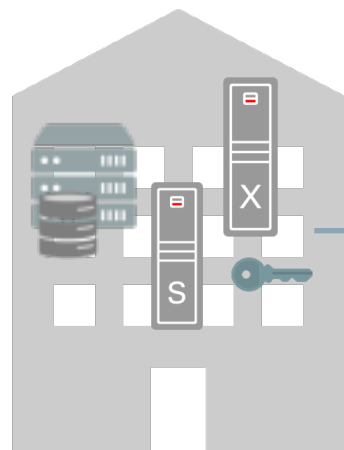


- Single view of resources
- Monitoring and alerting
- DevOps capabilities
- Scheduling



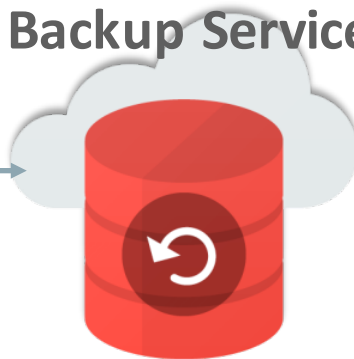
# Database Cloud Service – Backup Service

Cloud storage for Oracle Database backups



On-Premises Databases  
Oracle 10.2 and above

**Oracle Database  
Backup Service**



Instant Offsite Storage

Cost Effective

On-demand Scalability

End-to-End Security

Encryption

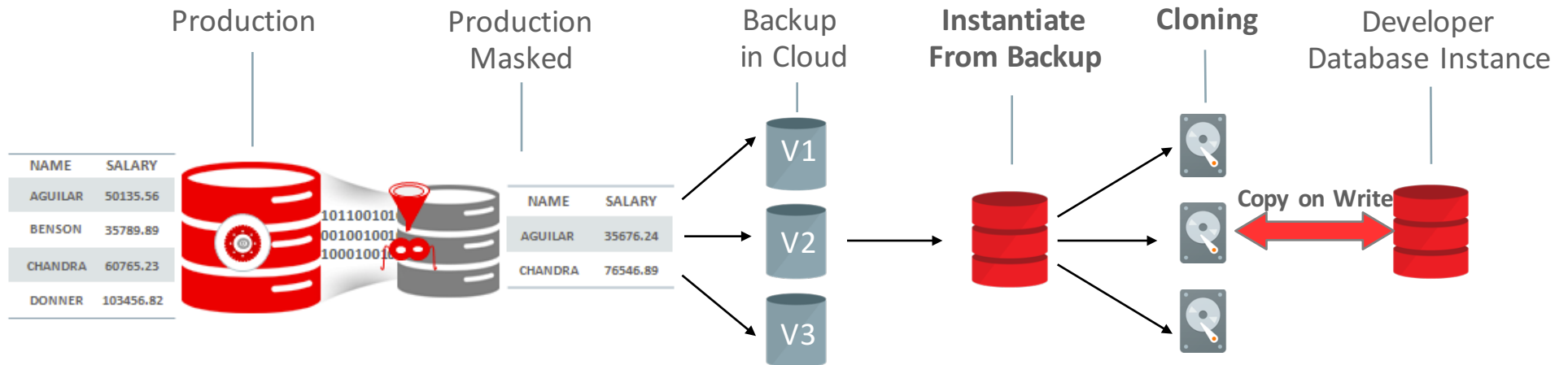
Compression

3-Way Protection

24x7 Data Availability

# Database Cloud Service – DevOps capabilities

Test master creation, cloning, instantiation from backup



Quick development iterations enabled by two new features

# Oracle Database Cloud **for Application Development**

- Choice of application development frameworks
- Same application tools as used in-house
- Suitable for new and existing applications
- Reduces capital and operational expenses



# Web Development Anywhere Using Oracle Database

Rapid web development using Oracle Application Express (APEX)



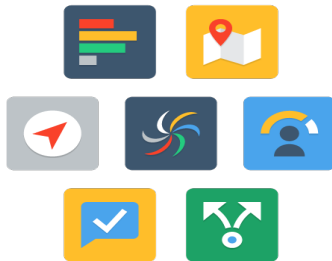
Develop web-based apps,  
deliver via desktop or  
mobile



Visualize and maintain  
database data



Leverage common SQL skills,  
industry-leading database



Developing web  
applications for any  
business requirement



Extending enterprise  
application solutions



Modernizing legacy  
applications

# Oracle Database Cloud - Typical Use Cases...

## Real World Use Cases

- Database Backup to the Cloud
- Disaster Recovery to the Cloud
- Business Critical Workloads in the Cloud
- Web Application Development Anywhere
- Testing Database Applications
- Testing Database Upgrades
- Analytic Sandboxes
- Production Database Deployments



# Database Cloud Service – Exadata Cloud Service

Engineered for extreme performance on dedicated Exadata infrastructure



- Engineered integration of software and Hardware
- RAC clusters for scale-out OLTP and DW
- Millions of IOPS
- 100's of terabytes of data
- Storage cell technology with smart scan
- All database options in a single bundle

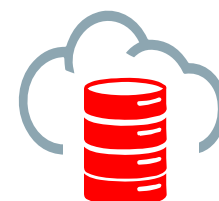
# Database Cloud Services for Enterprise



**Schema Service**



**Enterprise**



**Exadata**

Database Development and Test



SMB & Departmental Apps



Enterprise Apps



Highest availability,  
scalability and performance



# Oracle Database Cloud – Enterprise Editions

## Standard Edition 2

- Full database instance
- Up to 16 cores

## Enterprise Edition

Adds...

- Transparent Data Encryption
- All standard EE features

## EE High Performance

Adds...



Multitenant



Partitioning



Advanced Compression



Advanced Security, Label Security, Database Vault



Real Application Testing



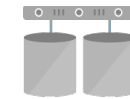
OLAP, Analytics, Spatial and Graph



Management Packs

## EE Extreme Performance

Adds...



RAC  
RAC One Node



In Memory



Active Data Guard



Same Oracle database software as available on premises offered with consolidated editions

Reference: <http://www.oracle.com/us/products/database/enterprise-edition/comparisons/index.html>



# Oracle Database 12c **Release 2**

## **Next Generation Data Management**

- Best in class enterprise database for the cloud
  - With RAC, Active Data Guard, Multitenant and In-Memory
- Only cloud offering with infrastructure optimized for data management
  - General Purpose and Engineered Systems
  - Extreme performance, availability, and security
- Full support for hybrid cloud
  - Graceful migration between on-premises and cloud
  - Single management console

# Some Enterprises cannot move Workloads to Public Cloud

Genuine constraints prevent the consumption of public cloud

## Latency

- Connect with back-end mainframes, databases, ERPs, etc. with near zero latency
- Dedicated infrastructure offers lower latency

## Data Sovereignty

- Comply with regulatory, legal and privacy requirements
- Sensitive data on premises
- Custom security standards

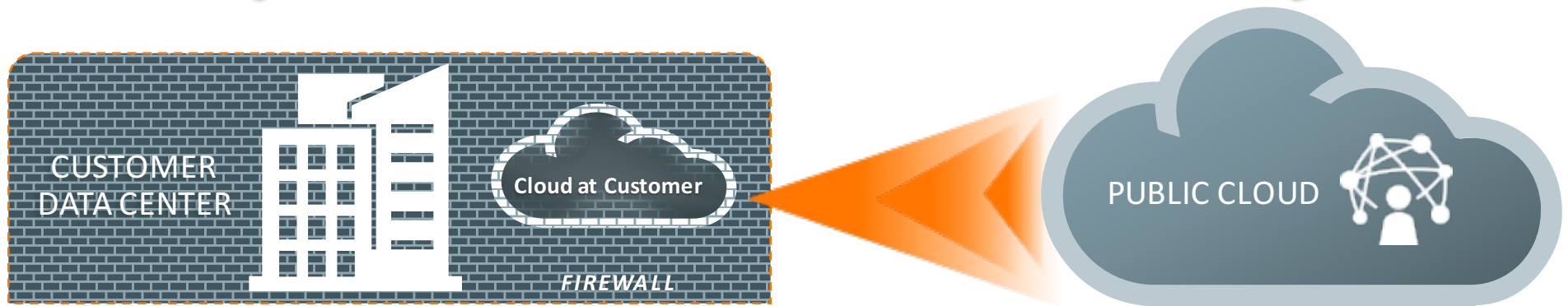
## Control

- Keep 100% control over business-critical systems
- Use your own firewalls, load balancers, hardware VPNs, etc.
- Extremely high SLAs

## Choice

- Run all of cloud on premises
- Use both public and on premises cloud as your business needs
- Same experience across public and on-premises clouds

# Cloud @ Customer Enhances Oracle's Hybrid Cloud Offering

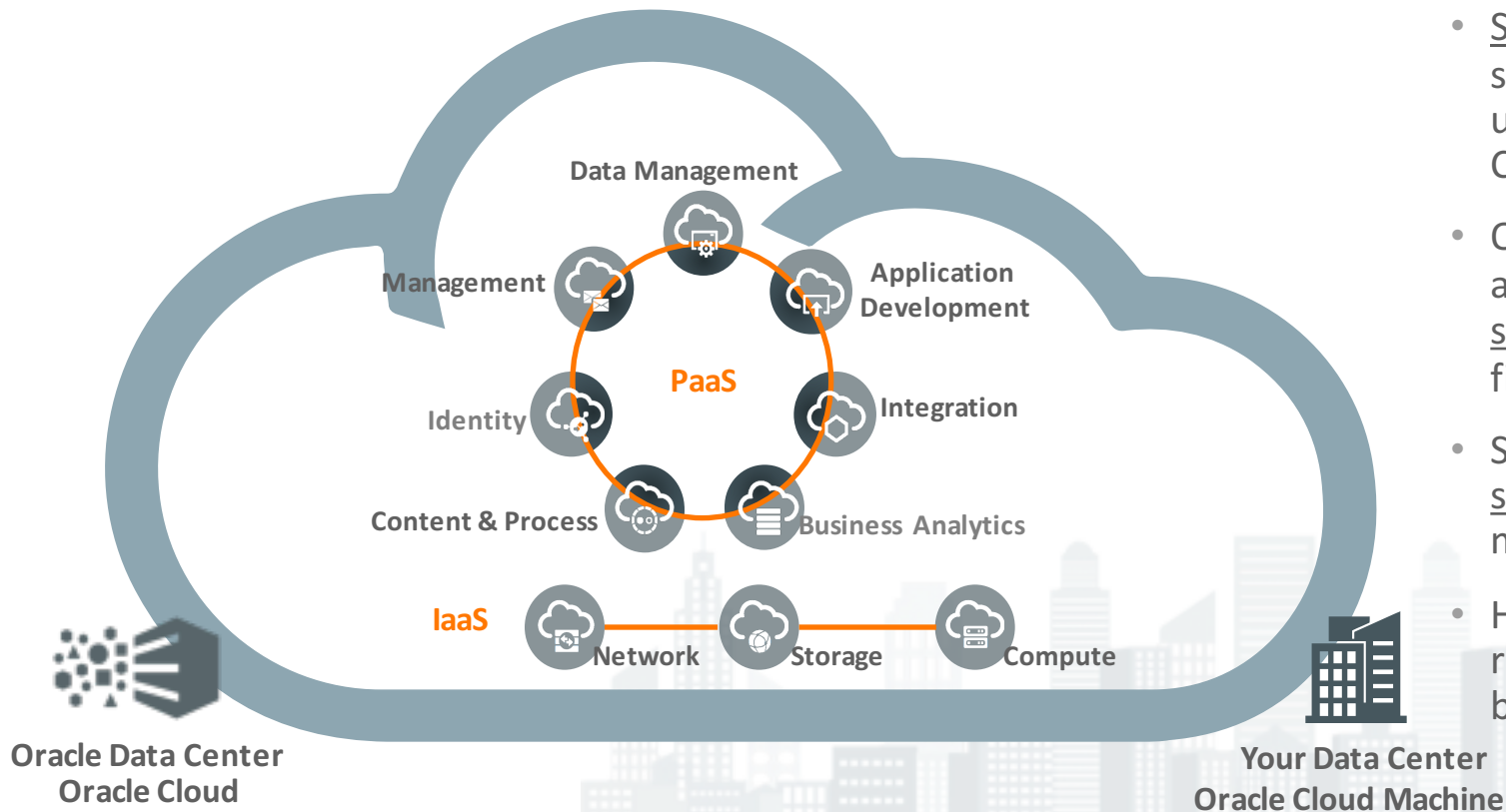


Oracle Public Cloud Delivered on Customers Premise

Delivers the best of both cloud models

# Oracle Cloud Machine

Provides Choice for Oracle Cloud IaaS & PaaS



- Same PaaS and IaaS software, same updates as Oracle Cloud
- Oracle Cloud operated and delivered as a service behind your firewall
- Same cost-effective subscription pricing model as Oracle Cloud
- Helps conform to regulatory, privacy, and business\_requirements

# Wrap Up

## Summary

# Oracle Database Cloud

## Key Points to Remember

- Take Advantage of Cloud Computing

- Oracle Database 12c - Designed for the Cloud
- Full range of SLAs via general purpose and engineered infrastructure
- Choice of management levels; automated and fully managed



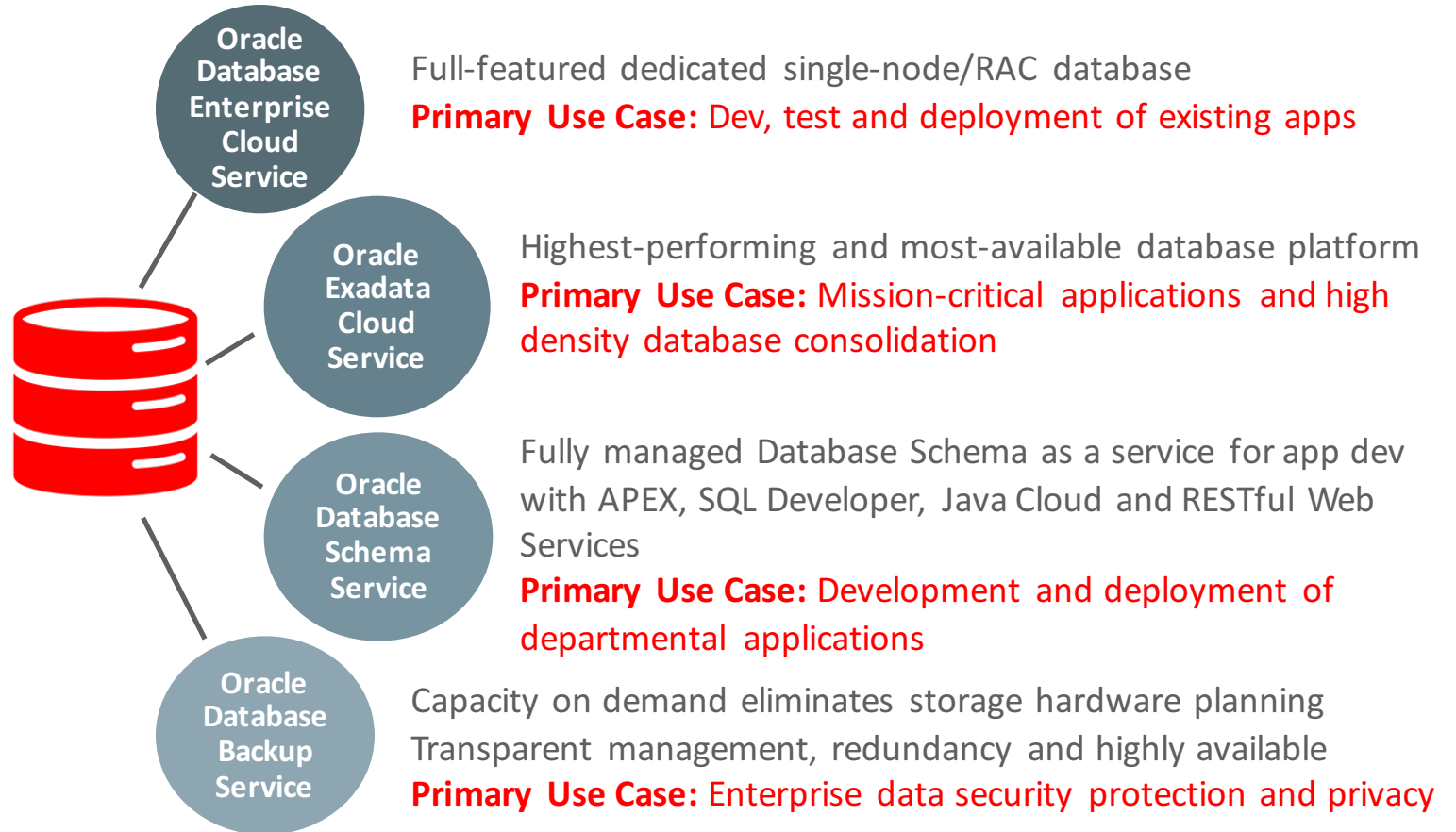
- Extend Enterprise Data Center to the Cloud

- Same database software and unified management on-premises and cloud
- Freedom of choice to deploy on premises, on Oracle Cloud, and 3<sup>rd</sup> party clouds
- Gracefully move workloads between on-premises and public cloud, and back
- Oracle Public Cloud Machine – for the cloud features on-premises



# Oracle Database Cloud – Summary of Services

- 100% compatibility with on-premises
- Fully automated or managed backups, patching and tooling
- Simple to move locations or create a hybrid cloud
- Simple provisioning in a few clicks



# For More Information

## About Oracle Database Cloud Service

<https://cloud.oracle.com/database>

## Oracle Database Cloud 30-Day Free Trial

<https://cloud.oracle.com/database>

## Join the Conversation



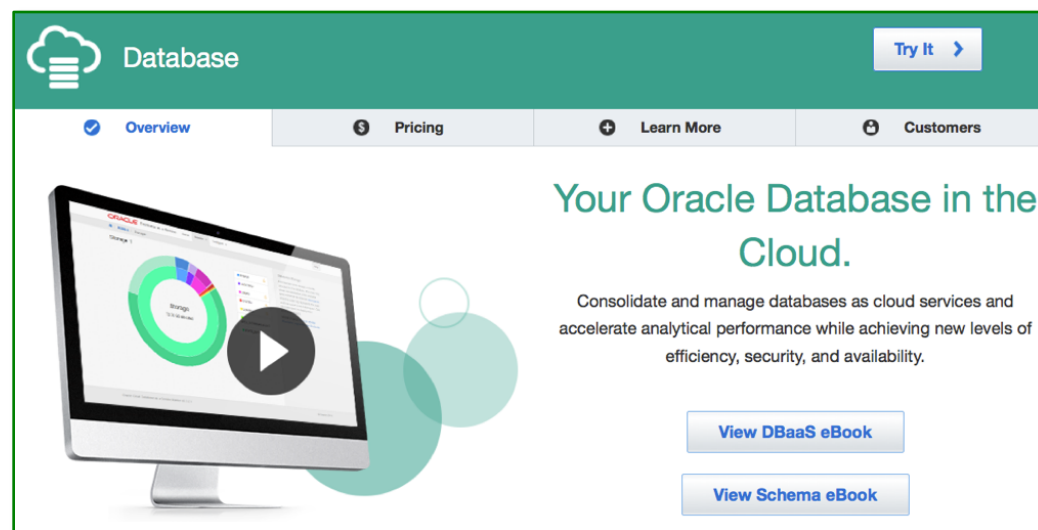
<https://blogs.oracle.com/dbaas>



[www.facebook.com/OracleCloudComputing](http://www.facebook.com/OracleCloudComputing)



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# Q & A



# Integrated Cloud

## Applications & Platform Services

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