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Modern Business in the Cloud

Fast, Flexible Application Development with Oracle Database Cloud Service

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Safe Harbor Statement

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, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Database – All Signs Point to the Cloud

#1

DBaaS: Fastest growing PaaS over the next 5 years

52%

of businesses will adopt public DB Clouds by 2016

52%

of businesses will use public cloud for dev/test by 2016

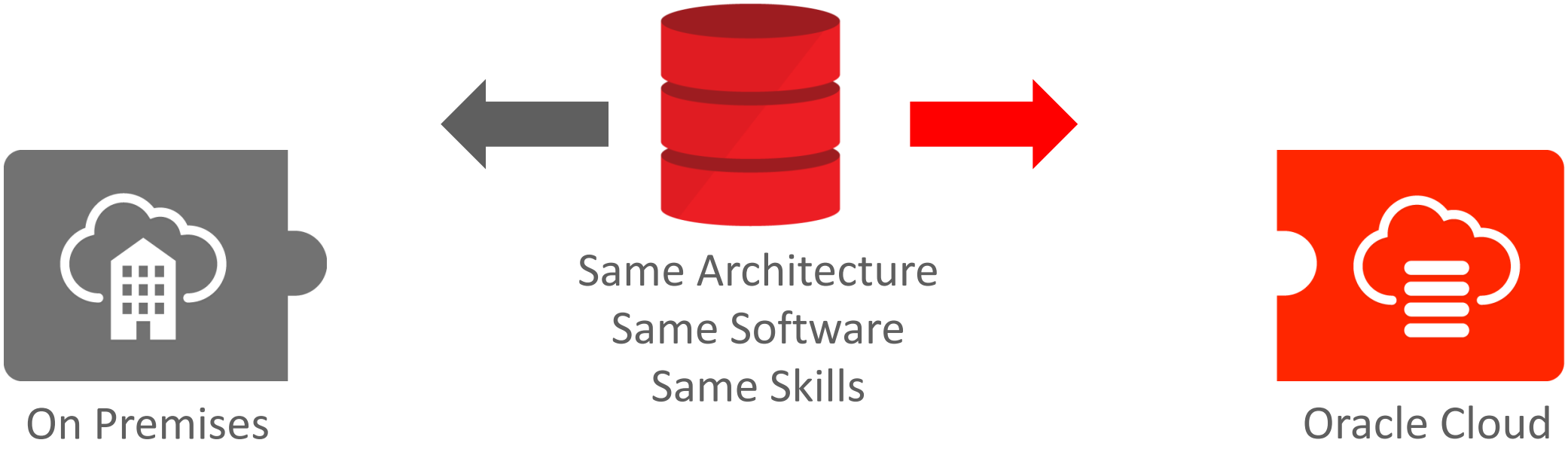
74%

of enterprises are pursuing hybrid cloud strategies

Source: 451 Group (Sept 2013)/Gartner (Sept 2014)/ComputerWorld (Mar 2014)

Oracle Database-as-a-Service Strategy

Full portability across the hybrid cloud



ORACLE ENTERPRISE MANAGER 12c

Enterprise Manager manages both On Premises and Cloud

Lift and Shift Applications Between On-premises and Cloud

Develop Your Apps in the Cloud and Deploy On-Premises

On-Premises

Quickly create databases using automated provisioning

Easily move data and workloads with a few clicks.

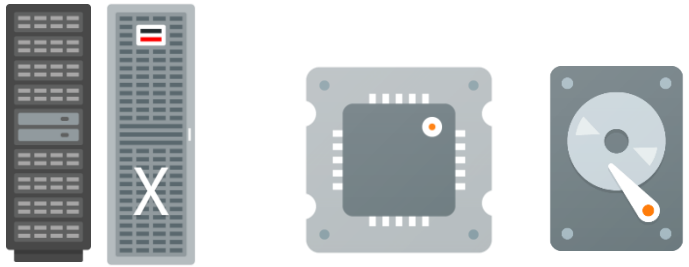
Oracle Cloud

Oracle Database Cloud

Extend the enterprise data center to the cloud

On Premises

- ✓ Instantly gain access to infrastructure
- ✓ Elastic CPU and memory
- ✓ Elastic block and object storage
- ✓ Backup database to the cloud



Oracle Cloud

Oracle Database Cloud Services

- **Oracle Database as a Service**
  - Full-featured dedicated 11gR2 or 12c single-node instance
  - Customer backs up, patches, manages Database with cloud tooling (Easy one-click management)
  - Full SQL*Net, root access, Enterprise Manager, all Database tools
  - Full portability – on-premises & cloud
  - **Primary Use Case:** Dev/test; build new applications; test 12c

- **Oracle Database Schema Service**
  - Each tenant gets dedicated schema(s)
  - Fully managed by Oracle
  - Application dev: Application Express, SQL Developer, Java, RESTful Web Services
  - **Primary Use Case:** Rapid web application development and production deployment of Oracle Application Express applications

Oracle Database Cloud – Management Level Overview

Virtual Image

- Database software ready for install
- Tenant has root privilege
- Does not provide automated orchestrations
- Only available on general purpose infrastructure

Automated

- Automated install, patch, upgrade, upsize/downsize, backup/restore, recovery, data guard configuration, TDE encryption, monitoring…
- Tenant has root privilege

Managed*

- Oracle monitors and is responsible for keeping the database available
- Oracle manages install, patch, upgrade, upsize/downsize, backup/restore, recovery
- Oracle maintains privileged user access, tenant controls data.

Greater Capabilities

* Planned for a future release.

Oracle Database Cloud – Full Instance Editions

Standard Edition

- Full database instance
- Limited to 16 OCPUs

Enterprise Edition

Adds…

- Transparent Data Encryption
- All standard EE features

EE High Performance

Adds…


Multitenant


Data Guard


Partitioning


Advanced Compression


Advanced Security, Label Security, Database Vault

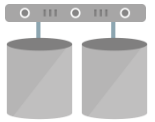

Real Application Testing


OLAP, Analytics, Spatial and Graph

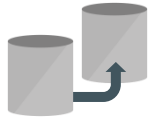

Management Packs

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 Cloud

Oracle Database and Infrastructure On-Premises Provisioning

On-Premises

1. Procure Data Center Floor space
2. Procure Servers
3. Procure Storage Devices
4. Procure SSL Certificates & Keys
5. Procure HSM Devices (for encryption)
6. Procure OS Licenses
7. Procure Anti-Virus Licenses
8. Procure SIEM Licenses
9. Allocate Storage Admin
10. Allocate System Admin
11. Allocate Database Admin
12. Allocate Network Admin
13. Install Server
14. Cable Server to Network
15. Install SSL Certificates & Keys
16. Acquire Public/Private IP Addresses
17. Acquire Domain Name (from internal DNS)
18. Install Storage Devices
19. Acquire IP Addresses
20. Install SSL Certificates and Keys
21. Create Physical Storage Volumes
22. Register Storage Devices with Server
23. Install Operating System
24. Create System Administrator Accounts
25. Register with Corporate LDAP Directory
26. Register with Audit Software
27. Add Users to System Administration Accounts
28. Register Servers with Redhat Administrative Console
29. Install Hypervisor
30. Create Virtual LAN Partitions
31. Allocate IP Addresses (Private)
32. Carry out Network Address Translation (NAT)
33. Register Virtual LANs with Network Switch
34. Add Users to Hypervisor Administrator Accounts
35. Register Guests with VMWare ESX Console
36. Run Clusterware Pre-requisite checks
37. Run Oracle DBMS Install Pre-requisite checks
38. Read database installation guild
39. Stage Oracle Database software
40. Configure Oracle Database
41. Log in to the system as root
42. Check HW, Memory, System, Disk, software, OS, OS Kernel, package, compiler, and additional software requirements
43. Create required OS Groups and Users, Oracle Inventory group, oracle software owner, OSDBA group, OSOPER group
44. Synchronize groups with LDAP repository
45. Configure Kernel parameters and resource limits, create required directories, configure user
46. Install oracle database; select clusterware/grid installation, specify base installation pathname
47. Specify software location, choose file system or ASM, specify file location, specify ASNSNMP password, database edition, OSDBA group, global name
48. Specify database name, database name domain, administrative password, confirm password
49. Verify database is functioning properly
50. Email developers access credentials and configuration details

Oracle Database Cloud

Oracle Database Provisioning On-Premises Comparison

On-Premises

1. Procure Data Center Floor space
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Days or Weeks

Oracle Database Cloud

1. Choose version of DBMS
2. Choose Edition SE, EE, EE High, EE Extreme
3. Choose Shape – storage, cores, memory
4. Choose Backup and Patching windows
5. Upload Public Key
6. Press Go

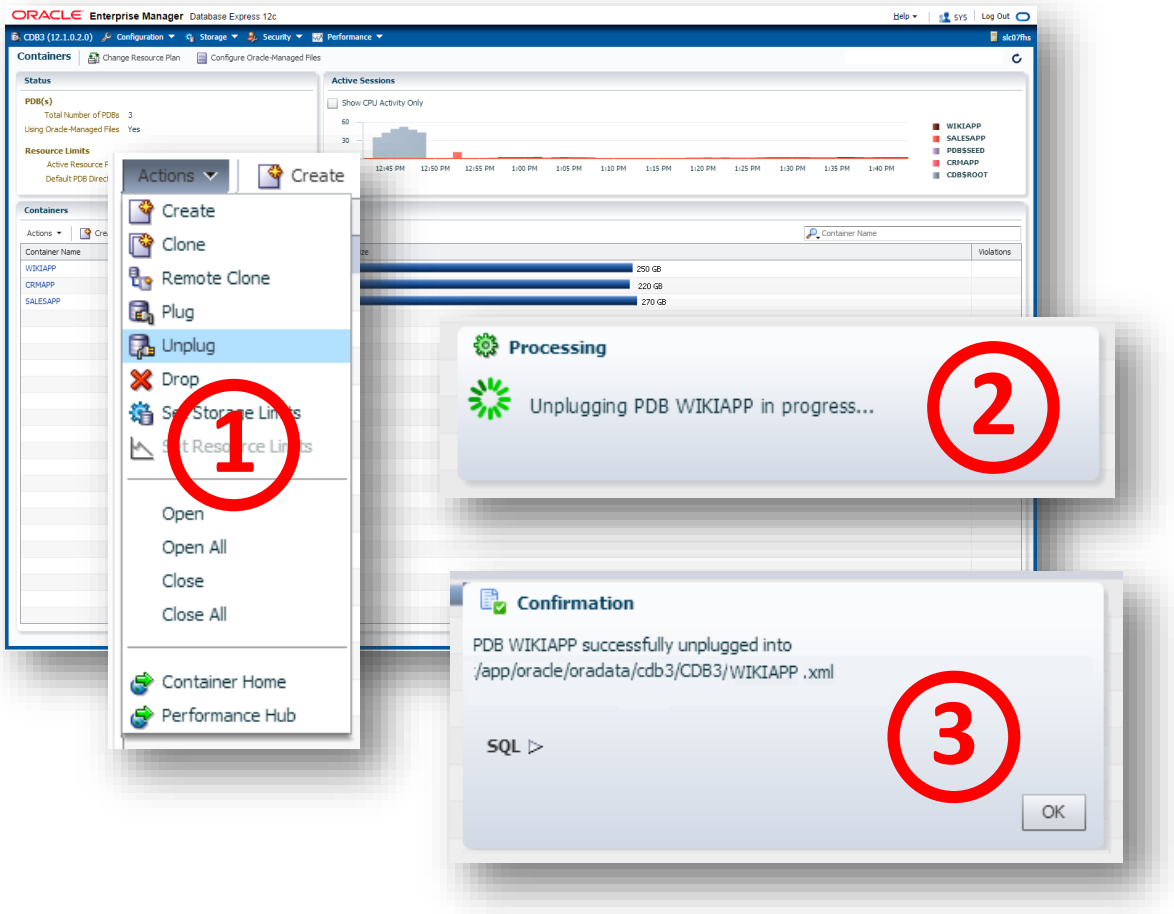
30 Minutes

Demo: Provisioning a Database Instance

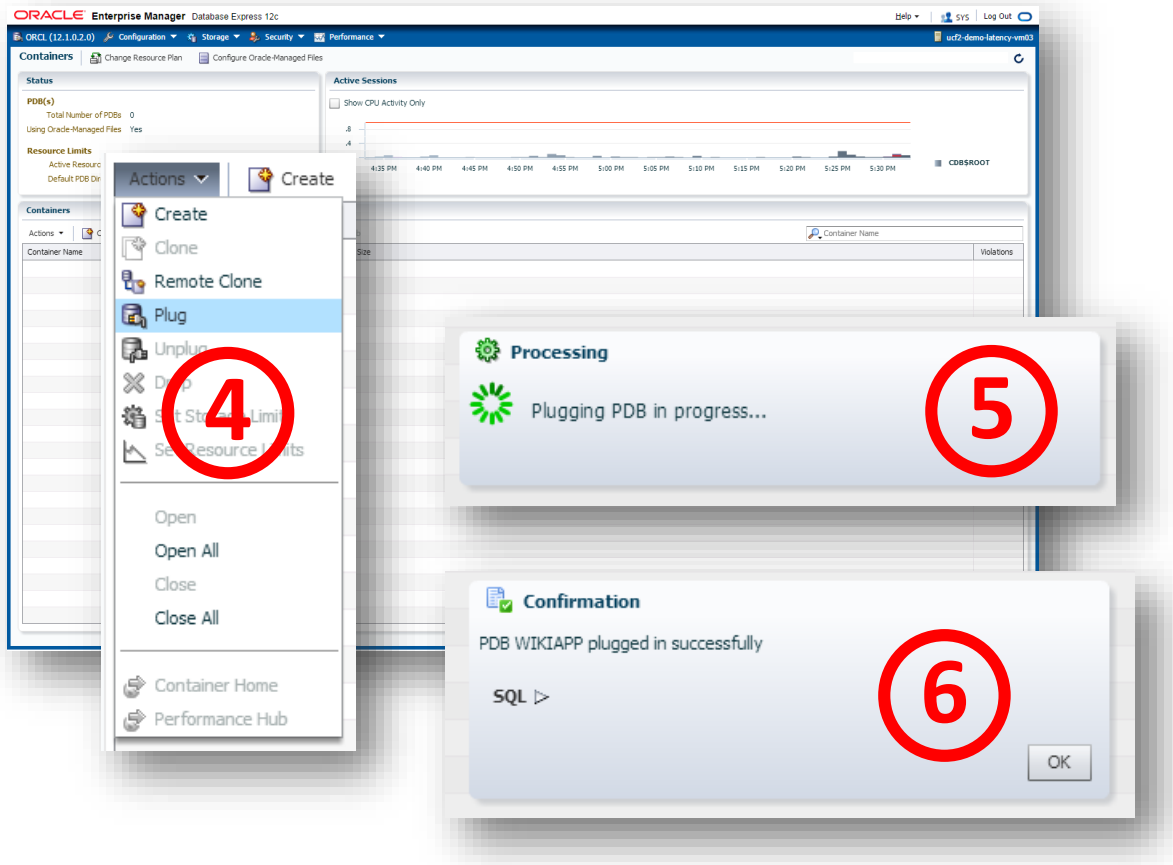
Oracle Database as a Service – EM Express 12c

Step by Step to Clone or Move your Pluggable Database to the Cloud

On-Premises Database

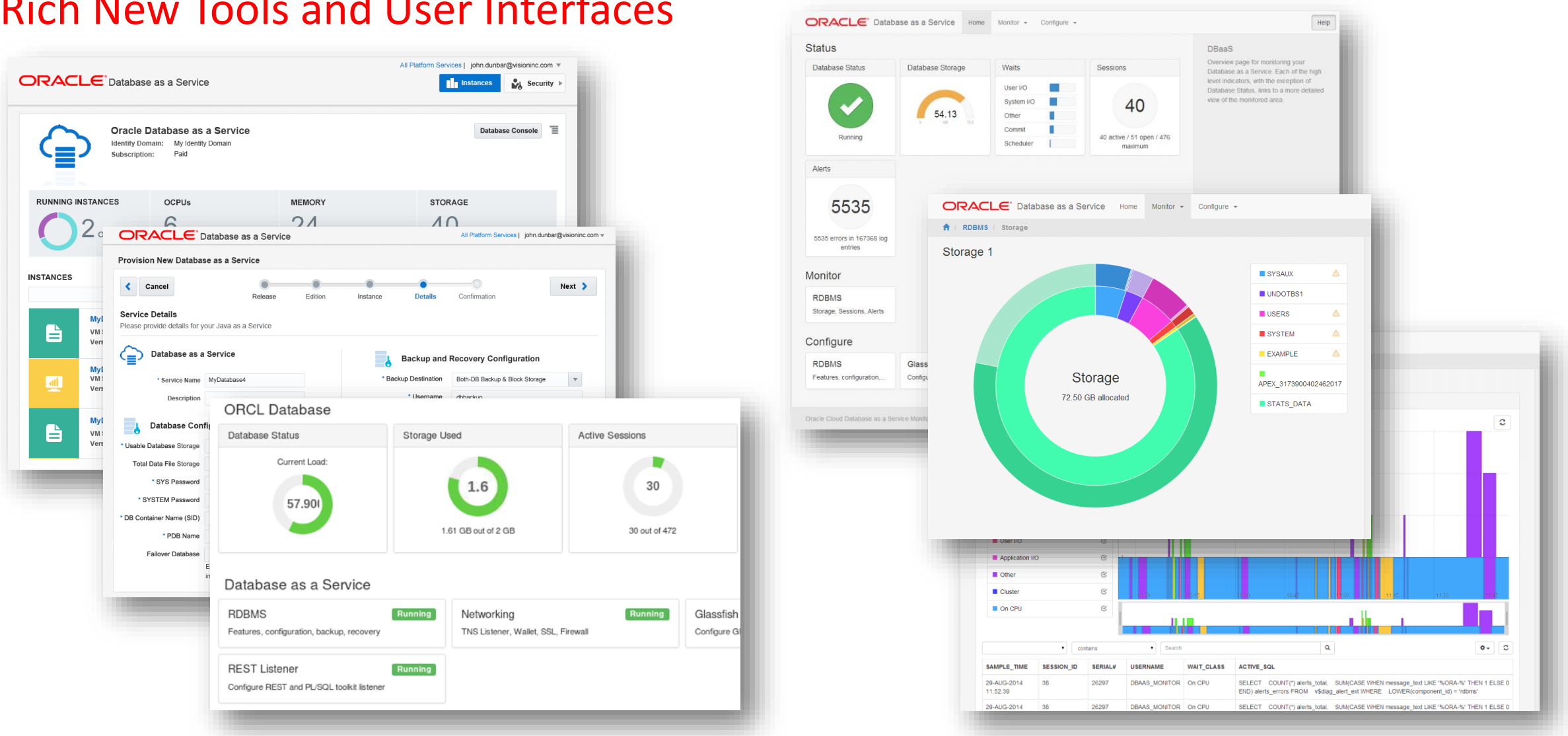


Oracle Cloud Database



Oracle Database as a Service

Rich New Tools and User Interfaces



Oracle Database Cloud Use Cases

Use Cases	Key Benefits
Dev/Test 	• Spin up a dedicated instance in minutes and accelerate dev/test in the cloud • Migrate databases between cloud and on-premises with a few clicks • Use the same tools as on-premises
Database 12c Testing 	• Fast and easy access to DB 12*c* test bed (POC) with all database options • Multitenant (PDBs), In-Memory • Test drive DB 12*c* without buying on-premises licenses
Application Express (APEX) Apps 	• Popular tool that comes free with Oracle Database; out of the box APEX environment • Rapidly build web apps on a complete development/deployment environment • Tool of choice for smaller, departmental apps running straight on Oracle Database
RESTful Web Services for HTML5, IoT and Mobile Apps 	• Access data in schema through RESTful web services • Covers interaction between mobile applications and the database through simple API • Run web, IoT and mobile apps in the cloud on the industry's #1 database

Key Differentiators

- Only public Oracle DBaaS to support RAC, Active Data Guard, Multitenant and In-Memory DB based on PAYG subscription
- DBaaS: unique Cloud Tooling provides automation not offered by other public Oracle DBaaS providers (AWS, Azure, Verizon)
- Based on Oracle's best-practices
- Seamlessly integrated other Oracle Cloud services (SaaS, PaaS, and IaaS)
- Streamlined support

Oracle Database Cloud Services - Customers

Database as a Service

Database Schema Service

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Oracle Database Cloud Service

Your strategic database in the cloud

- Self-service database development and deployment platform with advanced cloud automation tools
- All the power and flexibility of the Oracle Database in the cloud
- Choice of management options, from self-managed to fully-managed by Oracle
- Variety of database access methods including SQL*Net, RESTful web services, Java, APEX and more
- Pre-configured for Java and Business Intelligence Cloud Services

Oracle Database Cloud

Preserve Your Investment: No Pain, Big Gain

- Same software runs in cloud and on-premises
- No application code changes
- Easy migration to the cloud
- Modernize applications
- Cloud and on-premises databases co-exist and connect
- Leverage existing knowledge and skills

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