

ORACLE

Speed Development With Self-Service Database Provisioning

Oracle Enterprise Manager
Cloud Management Pack

Mike Meyers

Master Principal Security and Management Platform Specialist

Timothy Mooney

Product Marketing Director

oracle.com/corporate/events/enterprise-manager-webcast-series.html

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WEBCAST SERIES

Deep Dive
Enterprise
Manager

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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.

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Program Agenda

- 1 Oracle Enterprise Manager 13c
- 2 Pivot to Database as a Service
- 3 Cloud Management Pack Overview
- 4 Demonstration
- 5 Business Value
- 6 Q&A

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Oracle Enterprise Manager

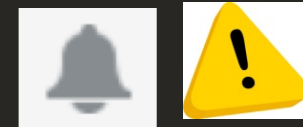
Integrated Lifecycle Management



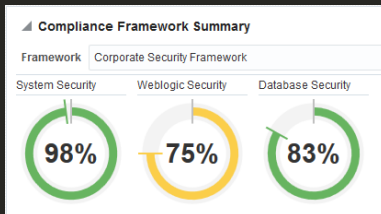
Discover & Monitor



Manage & Administer



Notification & Alerts



Compliance



Automation



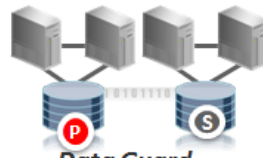
Credentials & RBAC



Standalone Databases



Real Application Clusters



Data Guard



Multitenant (PDBs)



Database Appliance (ODA)*



Exadata*



Database Cloud (DBaaS) **

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Database Provisioning

DBA Driven Process

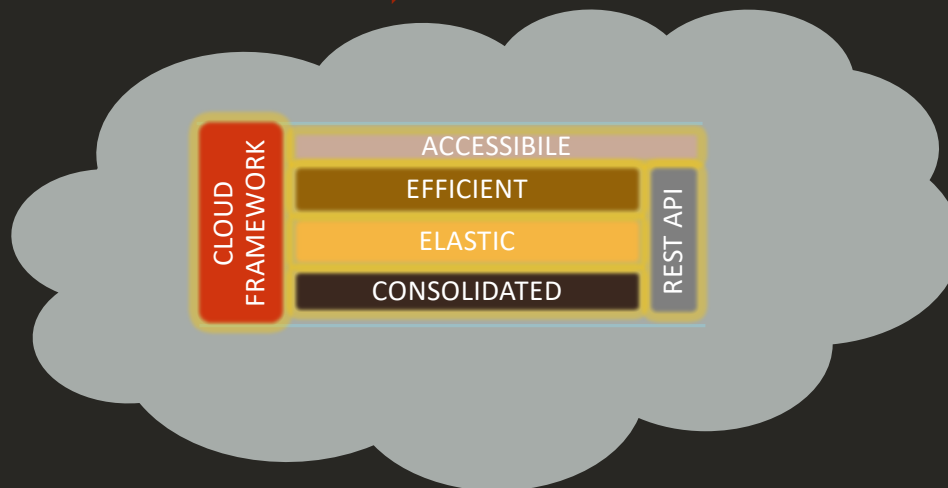


- Reactive
- Tactical

Self Service Database Provisioning

~~DBA Driven Process~~ → Database Engineer Driven Process

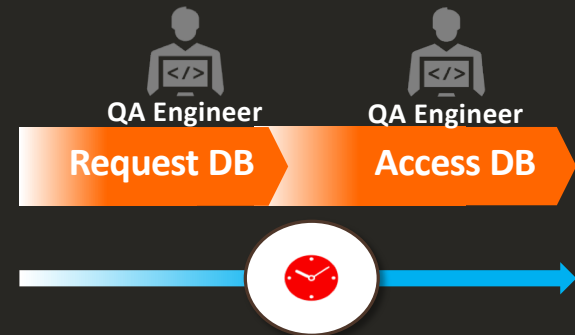
Database Engineer



- ~~Reactive~~
- ~~Tactical~~



- Proactive
- Strategic



Database as a Service : Key Use Cases

A Developer or a Project Owner requiring a new database service with or without seed data

QA Engineer requiring a full database refresh for intense load testing

QA Engineer requiring to create multiple clones for functional testing on subset of data

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Database as a Service with EM

Consolidation, Elasticity & Accessibility

Self Service

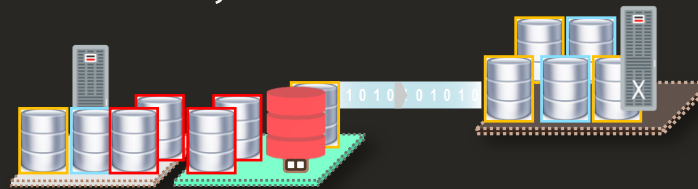
Serve the infrastructure requests from users directly. Provide optimized performance based on service levels. Meter Usage. Standardize deployments, Reduce maintenance.

Auto Scaling

CPU and Memory On-Demand. Partition into Zones and Pools for High availability. On demand scale up, scale down and relocation.

Consolidation

Consolidate the compute & storage to maximize utilization. Include any general purpose h/w, engineered systems, and even virtual machines.



Database as a Service Layer



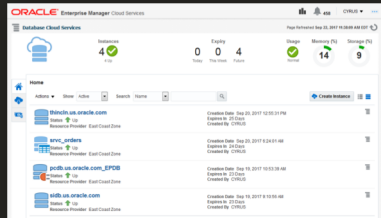
Cloud abstraction Layer



Base Infrastructure Layer

On Premise - Physical, Virtual, or Engineered Systems

Database as a Service : How to Set Up



GOLD Create Oracle 19c PDB on Exadata Infrastructure with standby

PDB Shapes

Placement Algorithms



SILVER Create Oracle 12c container Database

Service Settings

Quota Management



BRONZE Create Oracle 12.2 Database

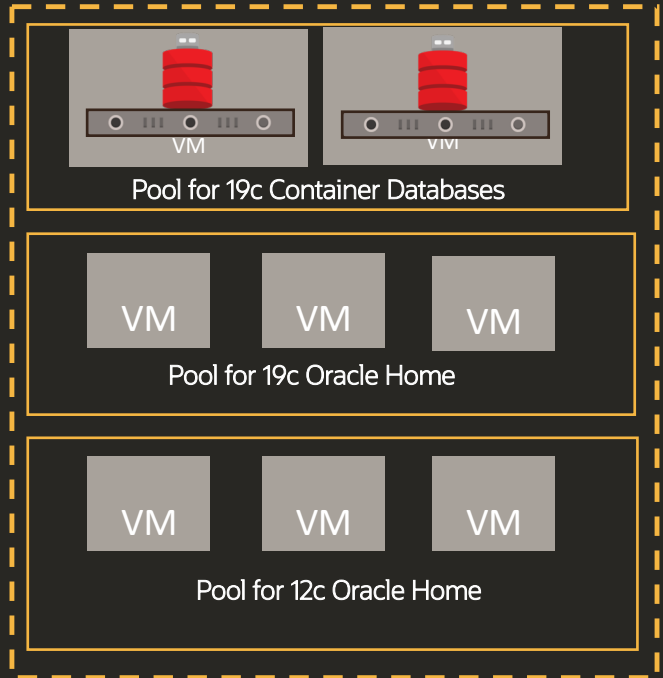
Access to Service Catalog and Features for users

Self Service Portal
(REST API)

Service Catalog

PaaS Infrastructure Zone

Database Engineer



Database as a Service : Self Service Portal

Unified Provisioning

Provision

- Non-Container DB
- Non-Container DB Clone
- Container DB
- Empty PDB
- PDB with Schema
- PDB using SSA user data profiles

The screenshot displays the Oracle Enterprise Manager Cloud Services interface for Database Cloud Services. The top navigation bar includes the Oracle logo, the title 'Enterprise Manager Cloud Services', a user profile 'CYRUS', and a notification bell with 458 alerts. The main header shows 'Database Cloud Services' and a refresh button. Below this, a summary section provides key metrics: 4 instances are up (indicated by a green checkmark), with 0 expiring today, 0 this week, and 4 in the future. Usage is normal, memory is at 14%, and storage is at 9%. The main content area, titled 'Home', features a sidebar with navigation icons and a table of database instances. The table lists four instances: 'thincln.us.oracle.com', 'srvc_orders', 'pcdb.us.oracle.com_EPDB', and 'sidb.us.oracle.com'. Each instance shows its status as 'Up', its resource provider as 'East Coast Zone', and its creation and expiration details. A 'Create Instance' button is located in the top right of the table area.

Instance Name	Status	Resource Provider	Creation Date	Expires In	Created By
thincln.us.oracle.com	Up	East Coast Zone	Sep 20, 2017 12:55:31 PM	25 Days	CYRUS
srvc_orders	Up	East Coast Zone	Sep 20, 2017 6:24:01 AM	24 Days	CYRUS
pcdb.us.oracle.com_EPDB	Up	East Coast Zone	Sep 19, 2017 10:53:39 AM	23 Days	CYRUS
sidb.us.oracle.com	Up	East Coast Zone	Sep 19, 2017 9:10:56 AM	23 Days	CYRUS

Self Service Portal : PDB Management

Control → Shutdown, Startup, Update Database

Performance Monitoring → Load and Capacity

Resource Usage → Resource Usage Table

Database Cloud Self Service Portal > Pluggable Database Instance: cdbold_EMPDB

Auto Refresh: Off

18.10.0.0 Version

1 Days, -3 Hours Up Time

Availability for Last 7 Days: 100%

N/A Last Backup

Summary

PDBADMIN User Name

Load and Capacity

0.71 Storage (GB)

0.02 Memory (GB)

High Availability

N/A Last Backup Status

Connection Details

Connect (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=String (PROTOCOL=TCP)(HOST=den01gyb.us.oracle.com)(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=svrc_empdb)(INSTANCE_NAME=cdbold)(UR=A)(SERVER=DEDICATED)))

User Name PDBADMIN

Resource Usage

Resource	Expected Workload	Actual Workload
Memory (GB)	0.2	0.02
Storage (GB)	1	0.71

Database as a Service : Snap Clone

Rapid Cloning

- Minutes to provision a 1 TB database

Space Efficient

- Over 95% storage savings

Powerful Storage

- Supports ZFS snapshots and Exadata sparse clones

Integrated DB Lifecycle Mgmt.

- Lineage and Association

Data Management

- Masking, subsetting
- Continuous refresh

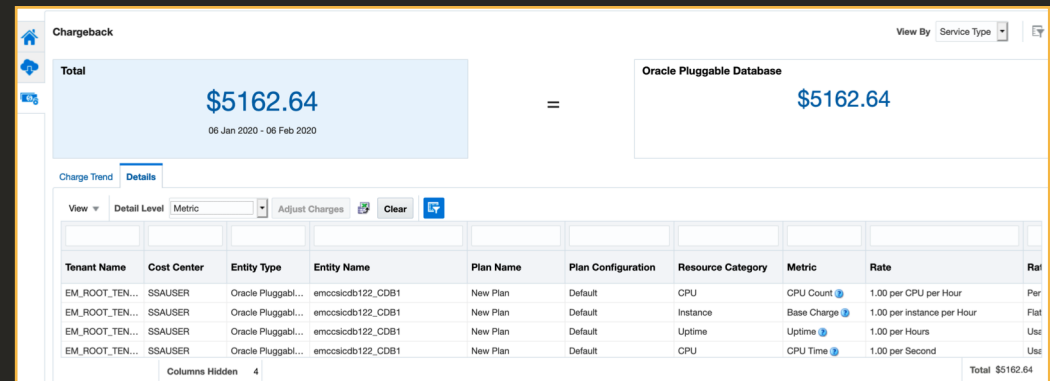
Support for Administrator and Self Service User workflows



Self Service Portal: Chargeback/Showback

Monitor Resource Usage for Self Service User

- Flexible Charge Plans
- Self Service Portal View
- Reports by Cost Center / Department



Tenant Name	Cost Center	Entity Type	Entity Name	Plan Name	Plan Configuration	Resource Category	Metric	Rate	Rate Type	Peak Rate Type	Rate Formula Type	Usage	Unit	Charge (\$)	Uptime (Hours)	Adjustment (\$)	Adjusted Charge (\$)
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	CPU	CPU Count	1.00 per CPU per Hour	Per Unit	All	Standard	2.00	CPU	1488	21	-494.7	993.3
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	Instance	Base Charge	1.00 per instance per Hour	Flat	All	Standard	N/A		744	21	-247.35	496.65
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	Uptime	Uptime	1.00 per Hours	Usage	All	Standard	496.66	Hours	496.66	21	0	496.66
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	CPU	CPU Time	1.00 per Second	Usage	All	Standard	210.30	Second	210.3	21	0	210.3
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	Instance	DB Time	1.00 per Second	Usage	All	Standard	2,965.73	Second	2965.73	21	0	2965.73
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	Storage	Tablespace Size	1.00 X Universal Rate	All	Standard	1.15	GB	0	21	0	0	
EM_ROOT_TENANT	SSAUSER	Oracle Pluggable Database	emccscdb122_CDB1	New Plan	Default	CPU	CPU Utilization	1.00 X Universal Rate	All	Standard	0.02	%	0	21	0	0	



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Fleet-wide Database Automation

- On-demand database provisioning
- On-demand database patching
- Standardization for compliance

Solution: Enterprise Manager

Minutes

Down from 2-3
months for
provisioning

2100

Databases
patched
automatically

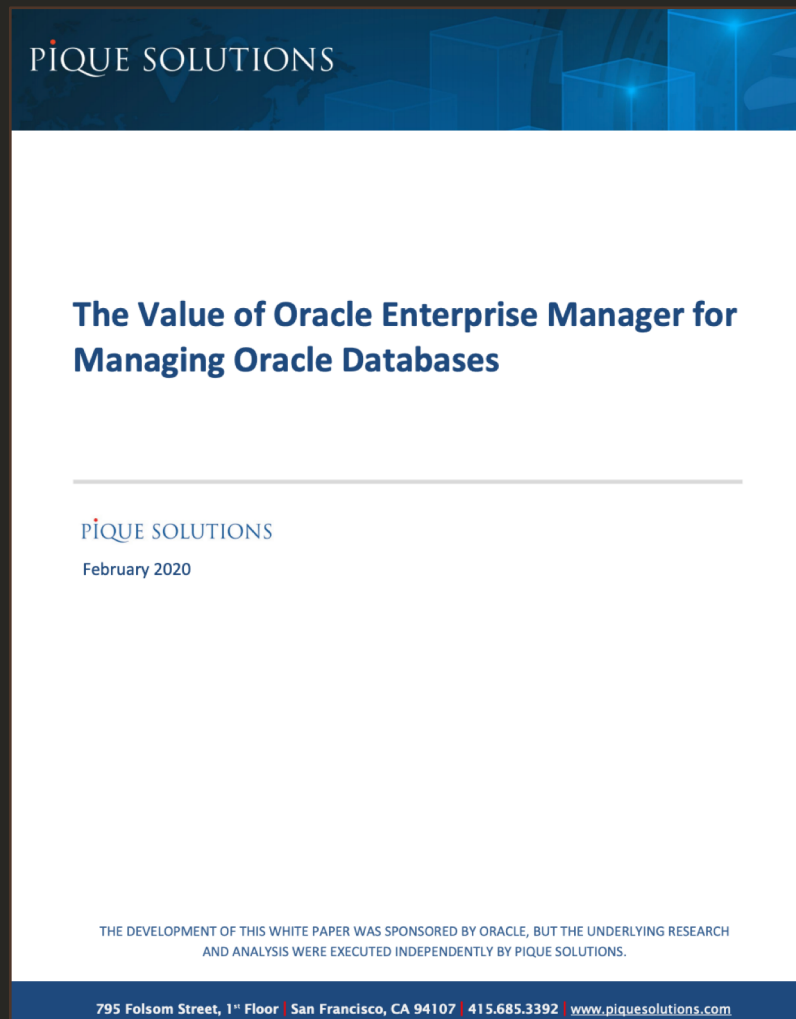
Reduced

Database
maintenance
downtime

Pique Solutions Report Findings

- **Dramatic increase in DBA and IT staff productivity**
- **Quantifiable cost reduction and cost avoidance**
- **Increase in business agility**
- **Solution for monitoring and managing both on-premises and cloud deployments**
- **Improved security posture**
- **A dynamic shift: reactive to proactive IT processes**

<https://blogs.oracle.com/oem/the-roi-for-investing-in-database-lifecycle-management>



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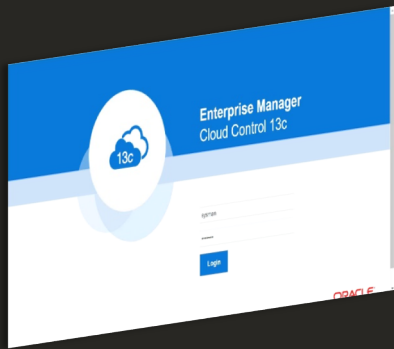
Q & A

Webcasts and Workshops:
[oracle.com/corporate/events/
enterprise-manager-webcast-series.html](https://oracle.com/corporate/events/enterprise-manager-webcast-series.html)

Blogs: <https://blogs.oracle.com/oem/>



Additional Resources



- [Enterprise Manager Page on Oracle.com](#)
- [Database Lifecycle Management on OTN](#)
- [Database as a Service Page on OTN](#)

Join the Conversation

- [Twitter.com/oracle_mgmt](https://twitter.com/oracle_mgmt)
- youtube.com/c/OracleManagementCloud/
- [Blogs.Oracle.com/OEM](https://blogs.oracle.com/OEM)

Thank You

