

Safe harbor statement

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Apps and in the Middle Stuff

Angelo Rosado

Product Management Director

Application Technology

E-Business Suite Development, Oracle

Agenda

- 1 Overview – EM, EBS, AMS
- 2 Oracle E-Business Suite on Oracle Cloud
- 3 Application Management Suite 13c

Agenda

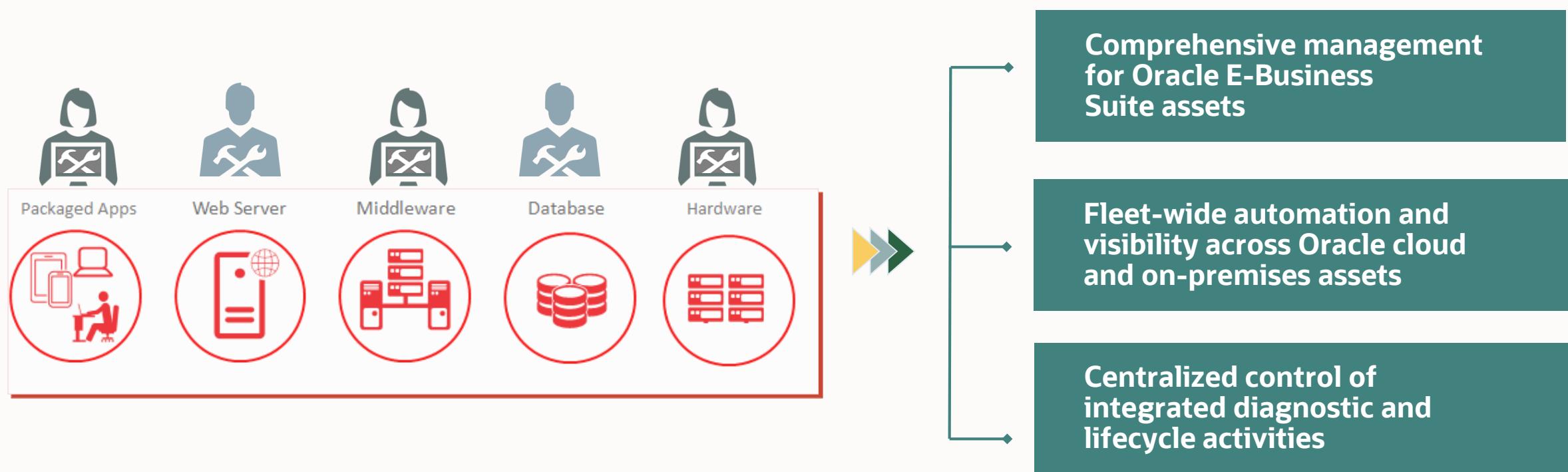
- 1 Overview – EM, EBS, AMS
- 2 Oracle E-Business Suite on Oracle Cloud
- 3 Application Management Suite 13c

Monitoring EBS with Enterprise Manager

- Foundation for monitoring all components of the IT infrastructure
- Integrated management of the entire Oracle stack
- Automated solution for managing Oracle E-Business Suite across On-premises and Oracle Cloud



Unified Management using Oracle Enterprise Manager 13c



New Update! Oracle Enterprise Manager in Oracle Cloud Marketplace

Oracle Enterprise Manager 13.4 with Oracle Database 19c as the OMR, all installed on Oracle Linux 7

[Spring 2020 Update to Oracle Enterprise Manager App on Oracle Cloud Infrastructure and New Multi Node Configurations Now Available](#)



CONTINUOUS INNOVATION ON EBS 12.2 WITH PREMIER SUPPORT THROUGH AT LEAST 2031

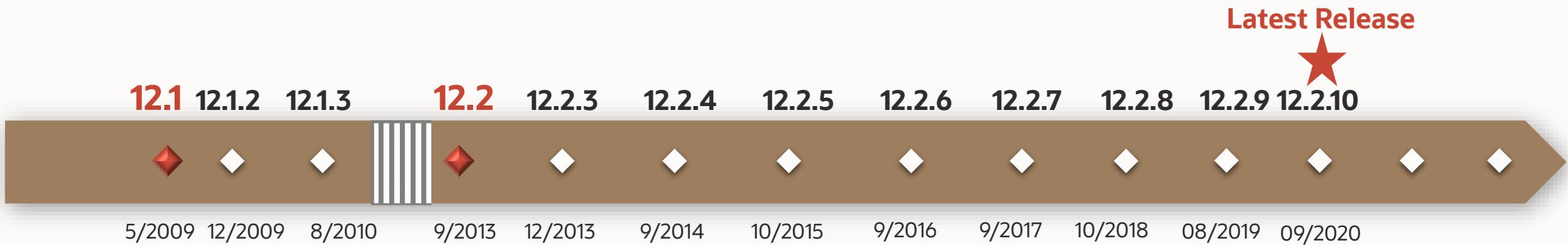
Delivering Ongoing Innovation and
Underlying Technology Stack Updates
without Major Upgrade

Oracle E-Business Suite (EBS) innovations in 2020

Announcing Continuous Innovation on Oracle E-Business Suite 12.2 (PDF)

EBS Roadmap: Continuous Innovation on EBS 12.2

Continued Investment and Support for Years to Come without Major Upgrade



PREMIER SUPPORT THROUGH:

- **Release 12.1:** Dec. 2021
- **Release 12.2:** At least 2031

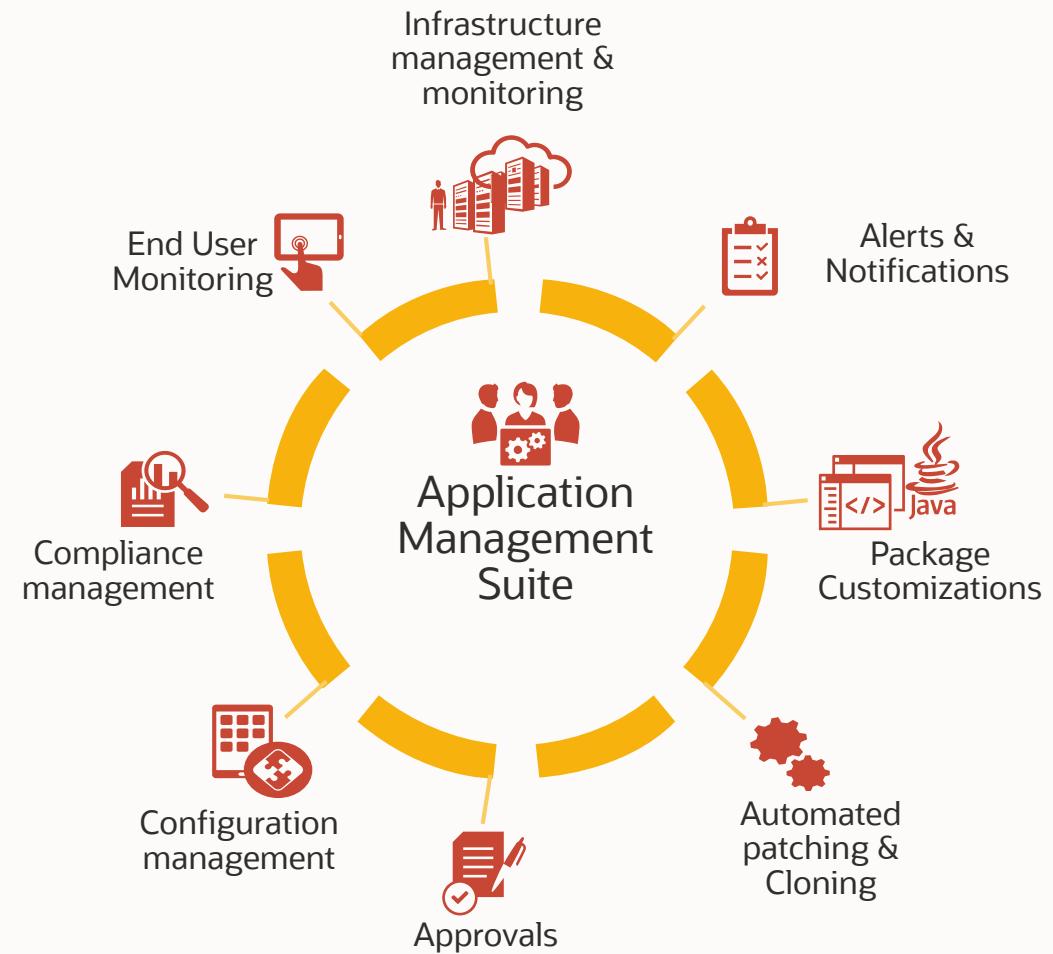
Application Management Suite for Oracle E-Business Suite

Application Management Pack

- System Management and Monitoring
 - For On-Premises
 - For Oracle Cloud Infrastructure
 - For Oracle Cloud at Customer
- Change Management
 - Customization Management
 - Patch Management
 - Approvals & Cloning

Real User Experience Insight

- Tracing end user transactions through all layers of EBS Technology Stack



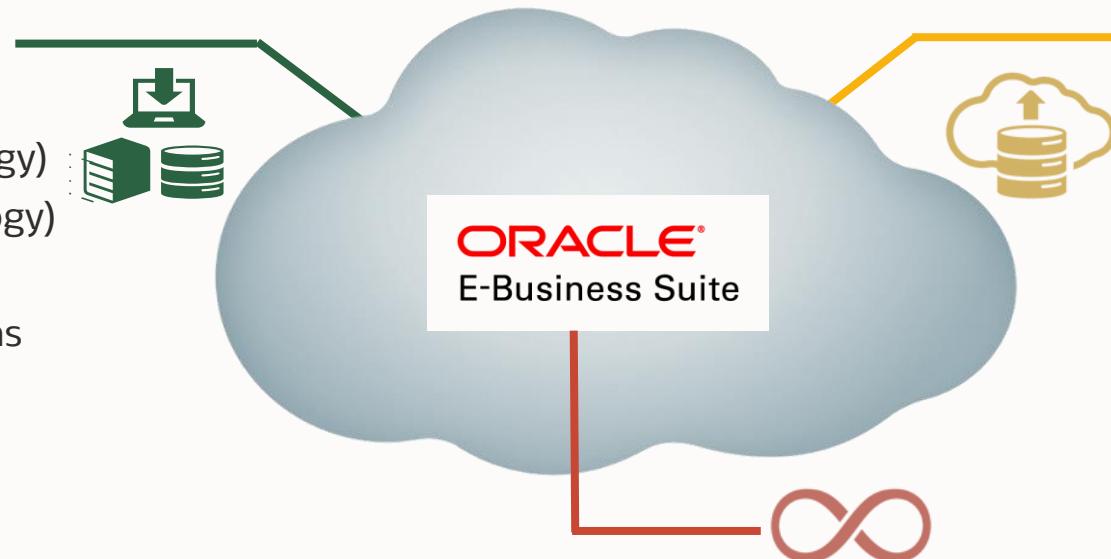
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EBS on Oracle Cloud Infrastructure - Areas of Investment

Provisioning

- One-click (pre-set topology)
- Advanced (flexible topology)
- Scenarios:
 - New implementations
 - Demo environments



Lift and shift fully configured ebs systems

- Lift and shift your on-premises environments to oracle cloud infrastructure, including:
 - EBS configuration
 - Historical data
 - Customizations

Lifecycle management

- Fast clone, backup and restore
- Environment elasticity (managed server, JVM memory, delete/add nodes)
- Disaster recovery (DR) configuration
- Monitor, patch and manage customizations using application management suite

Oracle E-Business Suite Cloud Manager

New UI for EBS Provisioning, Lift & Shift, and Lifecycle Management

- Environment deployment
 - One-Click provisioning with pre-populated deployment options
 - Advanced provisioning with user-selected deployment options
 - Lift and Shift to OCI from on-premises backup
- Lifecycle management
 - Clone environment: minutes vs hours
 - Perform backup and restore
 - Delete environment
 - Planned: Elasticity, DR, Refresh

The image displays three screenshots of the Oracle E-Business Suite Cloud Manager interface, specifically the Environments section. Each screenshot shows a summary of environments and a dropdown menu for actions.

- Provision Environment:** The first screenshot shows a dropdown menu with "Provision Environment" selected, with sub-options "One-Click" and "Advanced". The "One-Click" option is highlighted with a red oval.
- Clone:** The second screenshot shows a dropdown menu with "Clone" selected, along with "Create Backup" and "Delete". The "Clone" option is highlighted with a red oval.
- Backup:** The third screenshot shows a dropdown menu with "Create Backup" selected, along with "Clone" and "Delete". The "Create Backup" option is highlighted with a red oval.

Summary Data (Top Screenshot):

Category	Value
Environments	3
Exadata DB Systems	0
DB System Databases	0
Database on Compute	1
App Tier Node on Compute	1
Single Node Environments on Compute	2

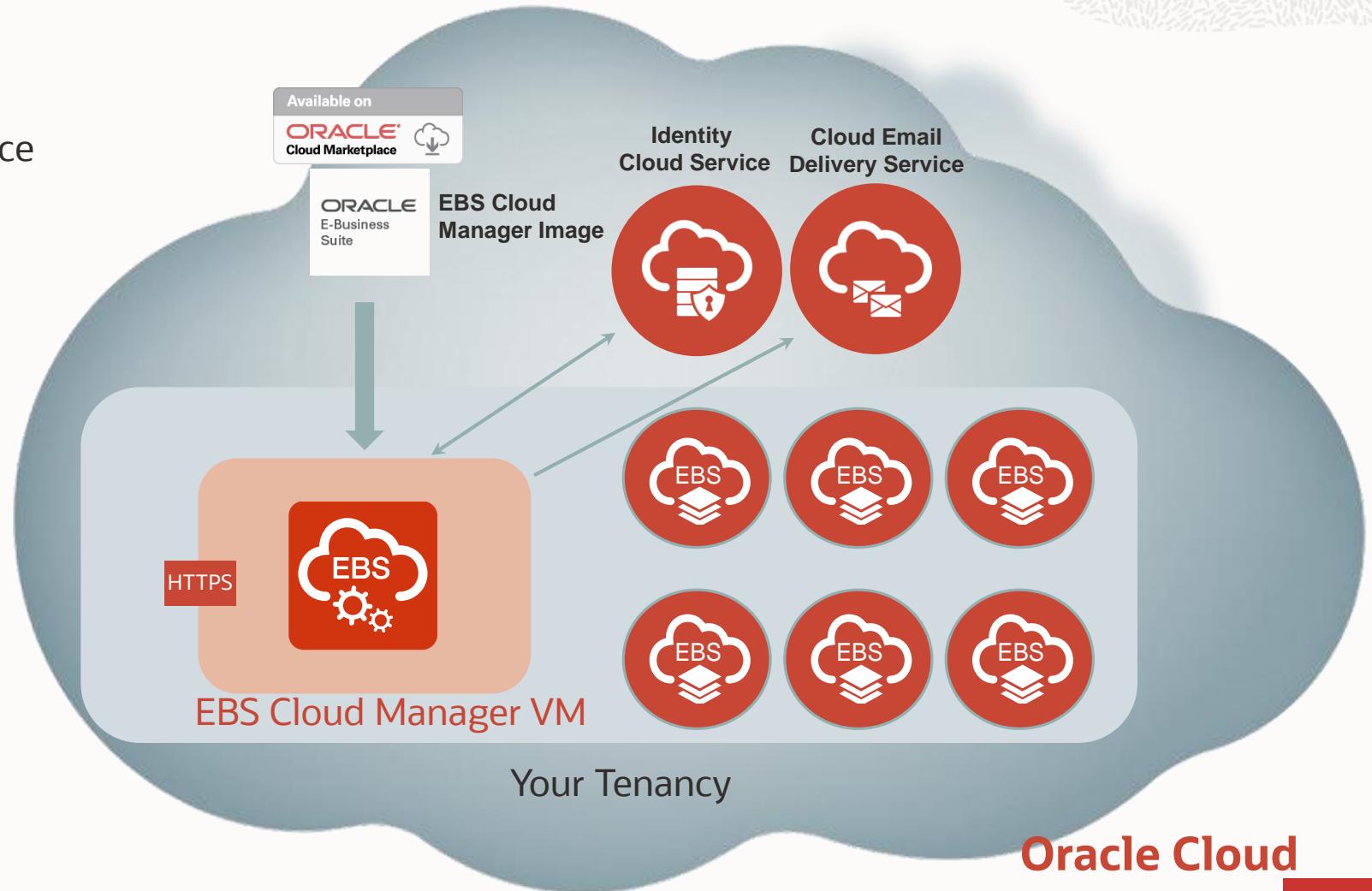
Environment Details (Bottom Screenshots):

- ebsholenv3:** Network Profile: DEFAULT_PROFILE_ONECLICK, EBS Compartment: ebs_hol_compartment, DB Service Type: Compute VM, DB Name: ebsdb, Creation Date: Sat, 06 Apr 2019 02:01:17 GMT, Application Tier Nodes: 1, Lastest Activity: clone-snapshot (Successful).
- ebsholenv2:** Network Profile: DEFAULT_PROFILE_ADVANCE, EBS Compartment: ebs_hol_compartment, DB Service Type: Compute VM, DB Name: ebsenv2, Creation Date: Sat, 06 Apr 2019 01:14:25 GMT, Application Tier Nodes: 1, Lastest Activity: create-ebs (Successful).
- ebsholenv1:** Network Profile: DEFAULT_PROFILE_ONECLICK, EBS Compartment: ebs_hol_compartment, DB Service Type: Compute VM, DB Name: ebsdb, Creation Date: Fri, 05 Apr 2019 18:11:35 GMT, Application Tier Nodes: 1, Lastest Activity: create-ebs (Successful).

Oracle E-Business Suite Cloud Manager

Deployment

- EBS Cloud Manager
Image available in OCI Marketplace
- Authentication
IDCS (Identity Cloud Service)
- Notification
Cloud Email Delivery Service
- Parallel Activities
 - Multiple Users
 - Multiple Request

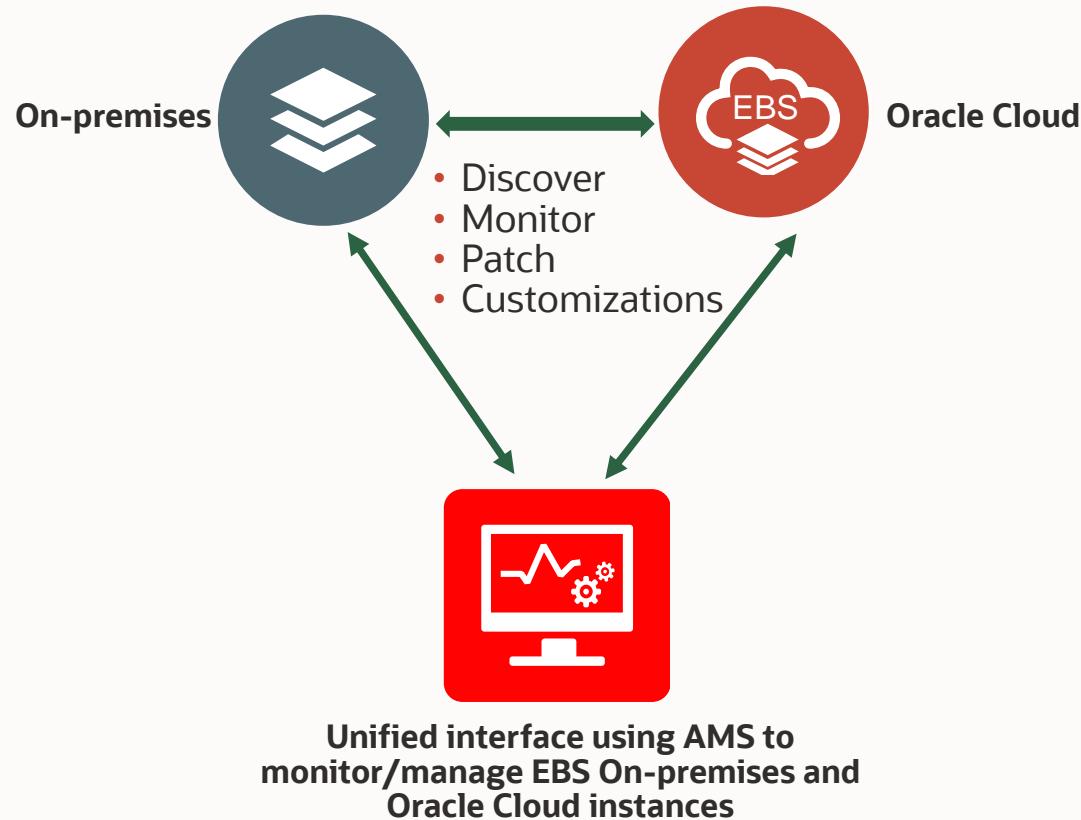


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AMS for On-Premises & Cloud Management

Flexible, Reusable, Extensible



Hybrid Cloud Management

- Single pane of glass monitoring and management of cloud and on-premises EBS environments

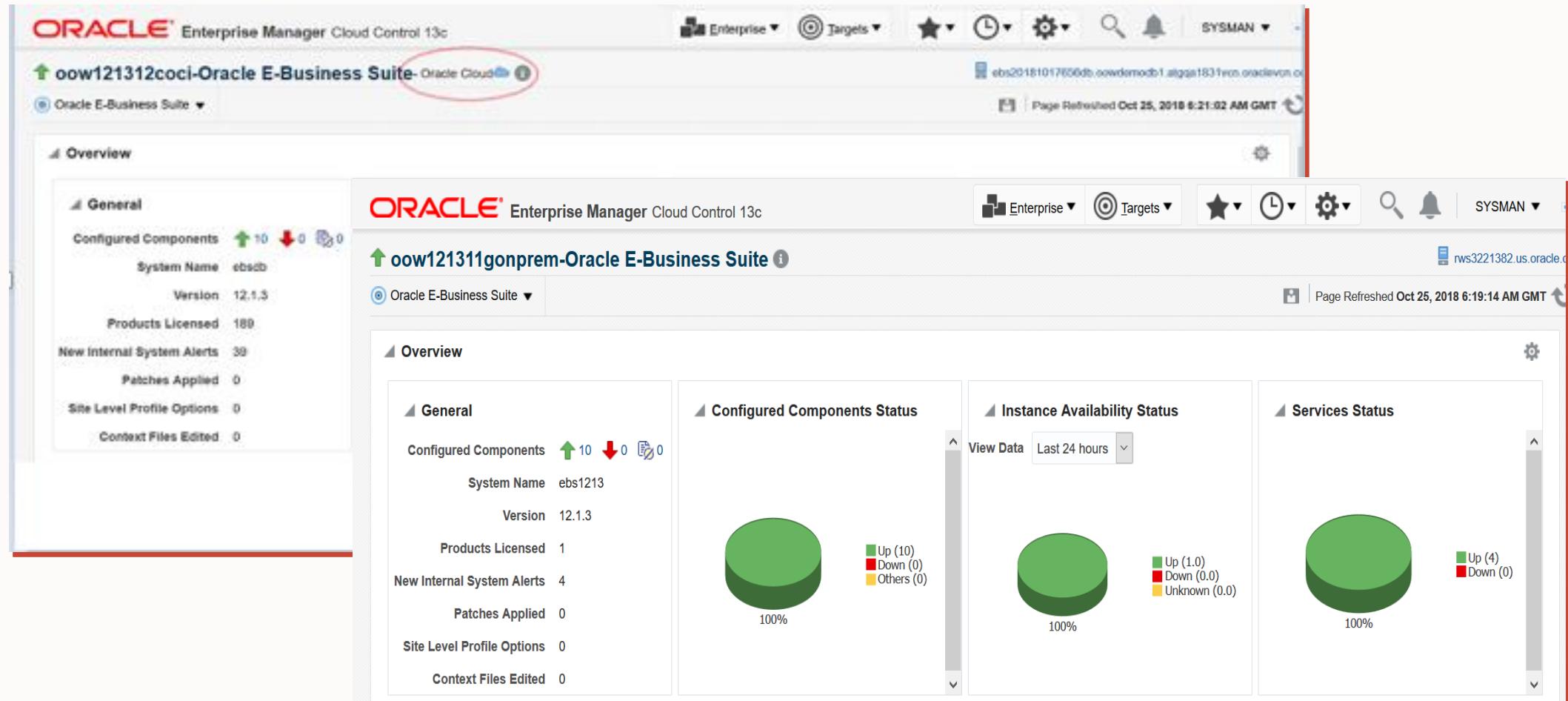
Change Management

- Migrate patches and customizations seamlessly between cloud and on-premises

Automation of key processes using EMCLI

- Improve user experience
- Eliminate / reduce manual steps by 90%
 - Reusable deployment procedures and properties files
- Flexibility to extend / customize the standard EM deployment procedures

AMS for On-Premises & Cloud Management



ORACLE Enterprise Manager Cloud Control 13c

oow121312oci-Oracle E-Business Suite - Oracle Cloud

Oracle E-Business Suite

Overview

General

- Configured Components: 10 (Up: 10, Down: 0, Unknown: 0)
- System Name: ebscb
- Version: 12.1.5
- Products Licensed: 189
- New Internal System Alerts: 39
- Patches Applied: 0
- Site Level Profile Options: 0
- Context Files Edited: 0

ORACLE Enterprise Manager Cloud Control 13c

oow121311gonprem-Oracle E-Business Suite

Oracle E-Business Suite

Overview

General

- Configured Components: 10 (Up: 10, Down: 0, Unknown: 0)
- System Name: ebs1213
- Version: 12.1.3
- Products Licensed: 1
- New Internal System Alerts: 4
- Patches Applied: 0
- Site Level Profile Options: 0
- Context Files Edited: 0

Configured Components Status

View Data: Last 24 hours

100% (Up: 10, Down: 0, Others: 0)

Instance Availability Status

View Data: Last 24 hours

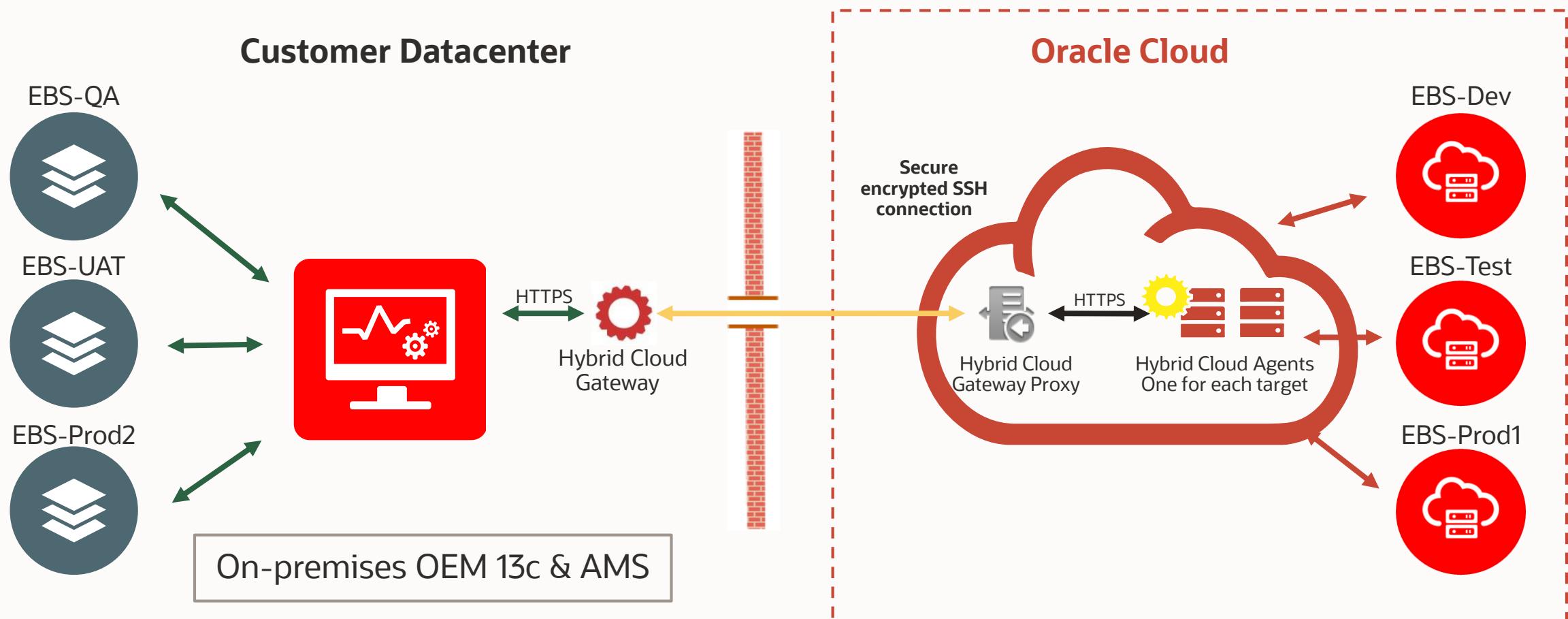
100% (Up: 1.0, Down: 0.0, Unknown: 0.0)

Services Status

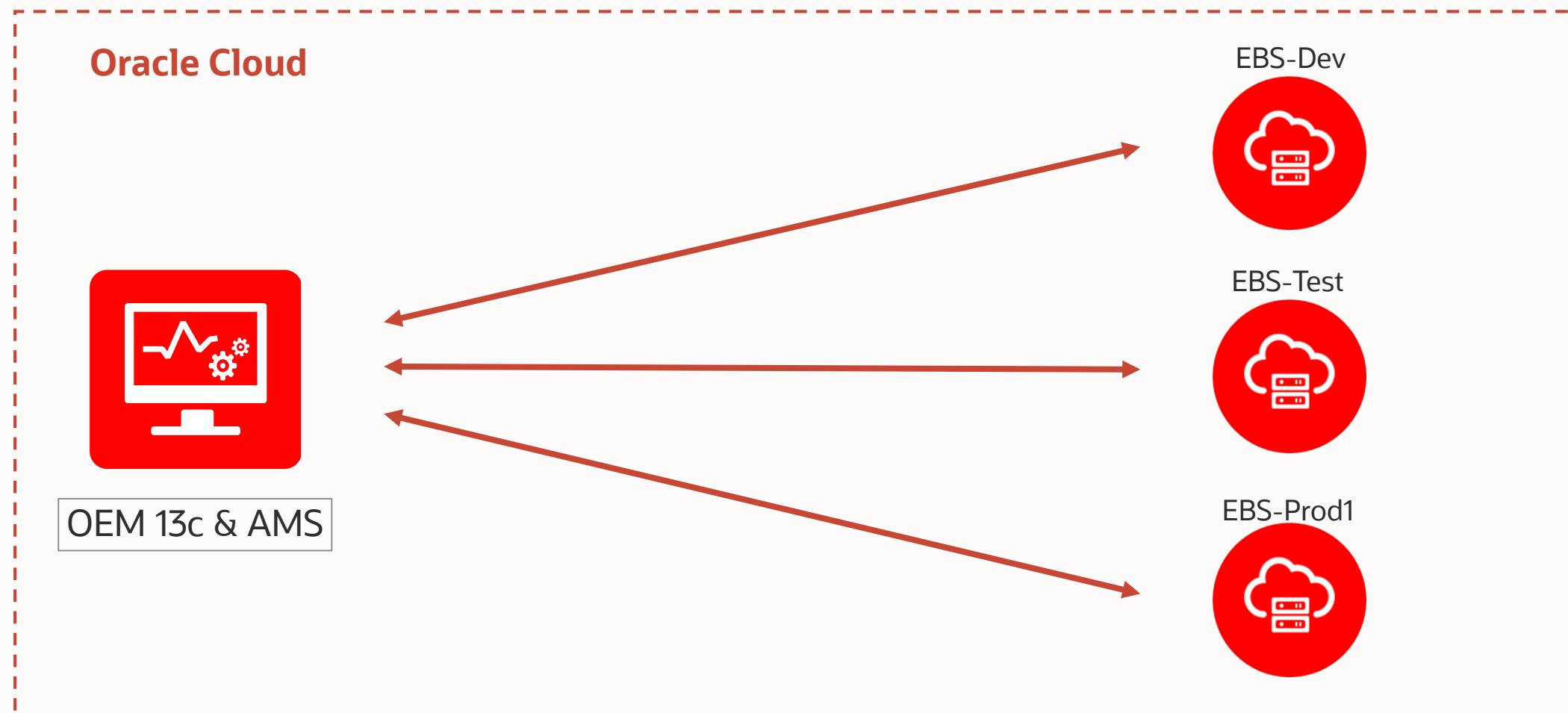
View Data: Last 24 hours

100% (Up: 4, Down: 0)

Deploying AMS for Hybrid Cloud Management



Deploying AMS On OCI to Manage EBS on OCI



Hybrid Cloud Management

Automation using EMCLI

System Management

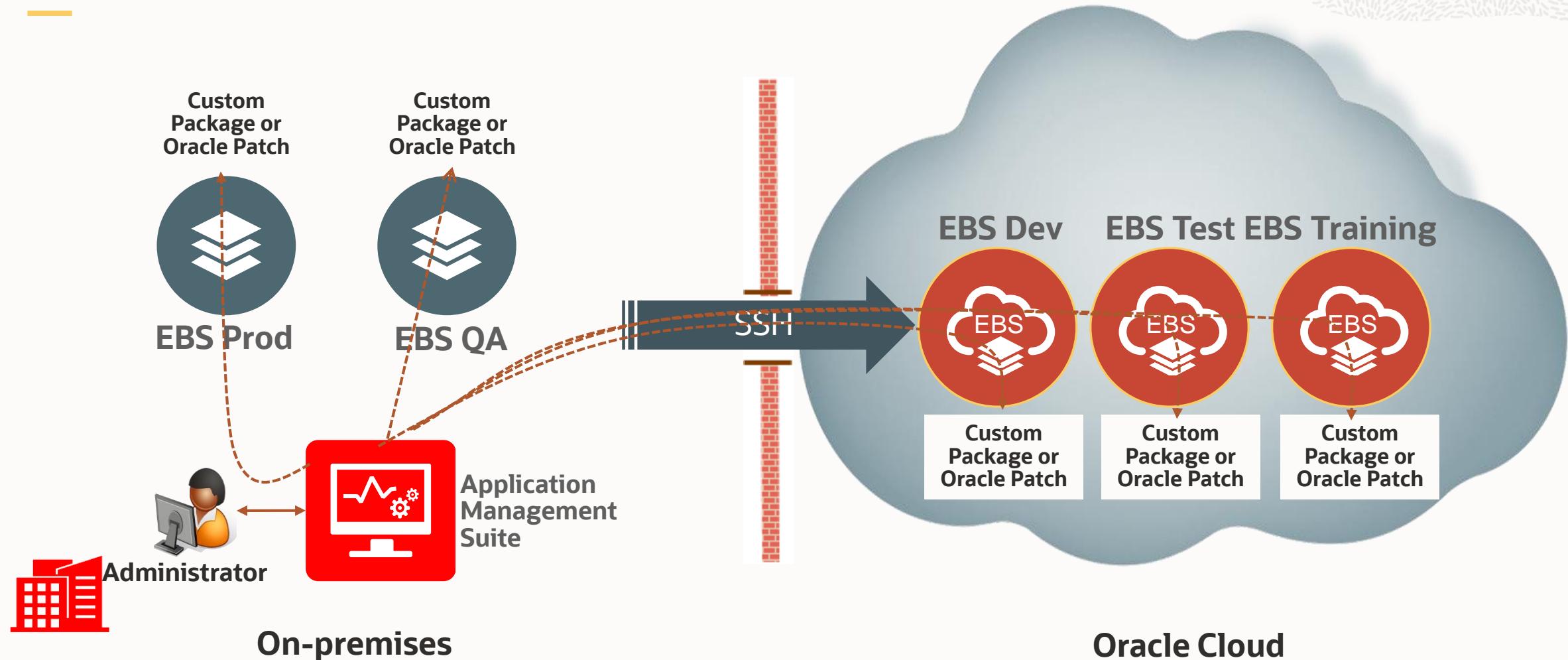
- Discover and Monitor Cloud EBS environments
- Auto deployment of Hybrid Cloud Agent during EBS discovery
- Start and End Blackouts
- Start and Stop Services

Change Management

- Creating Custom Packages
- Deploying EBS & Custom patches
- Patch multiple environments using a single procedure
- View and apply recommended patches for EBS Applications and Database

Hybrid Cloud Management

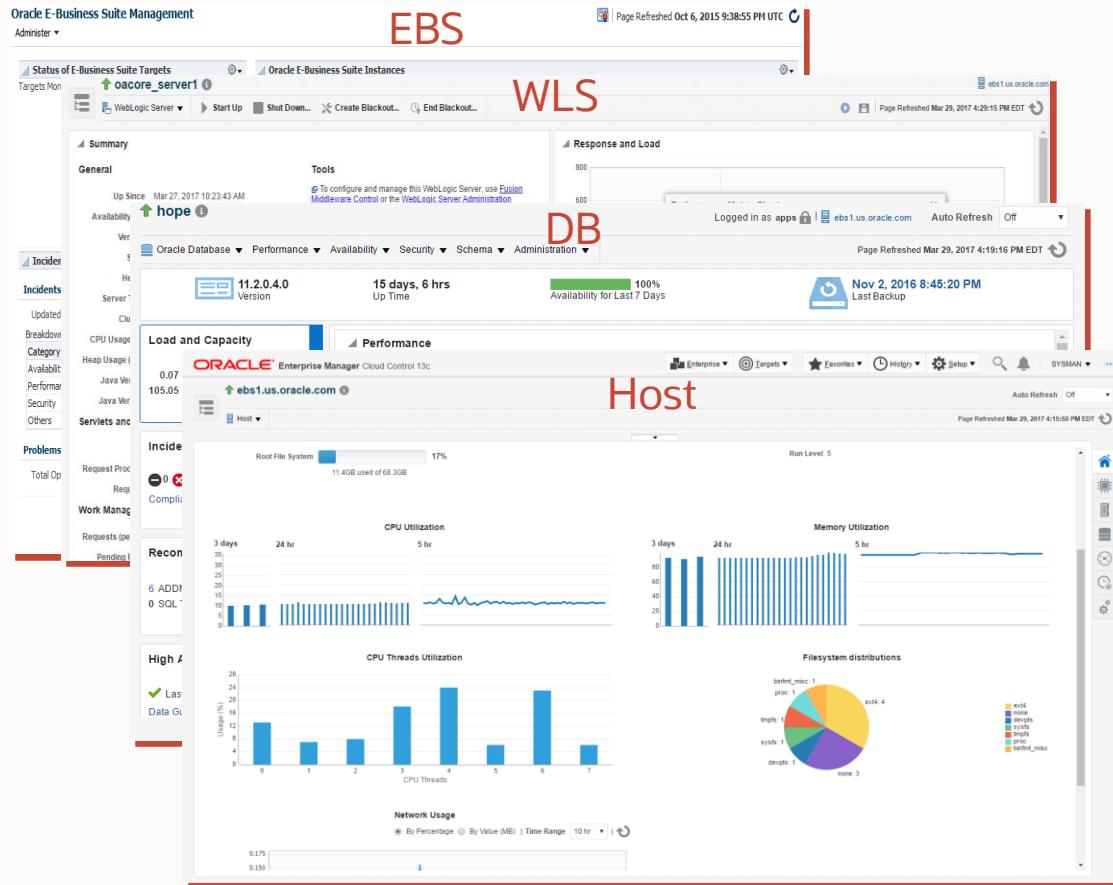
Migrate Custom Package or Apply Oracle Patch



Application Management Suite 13c

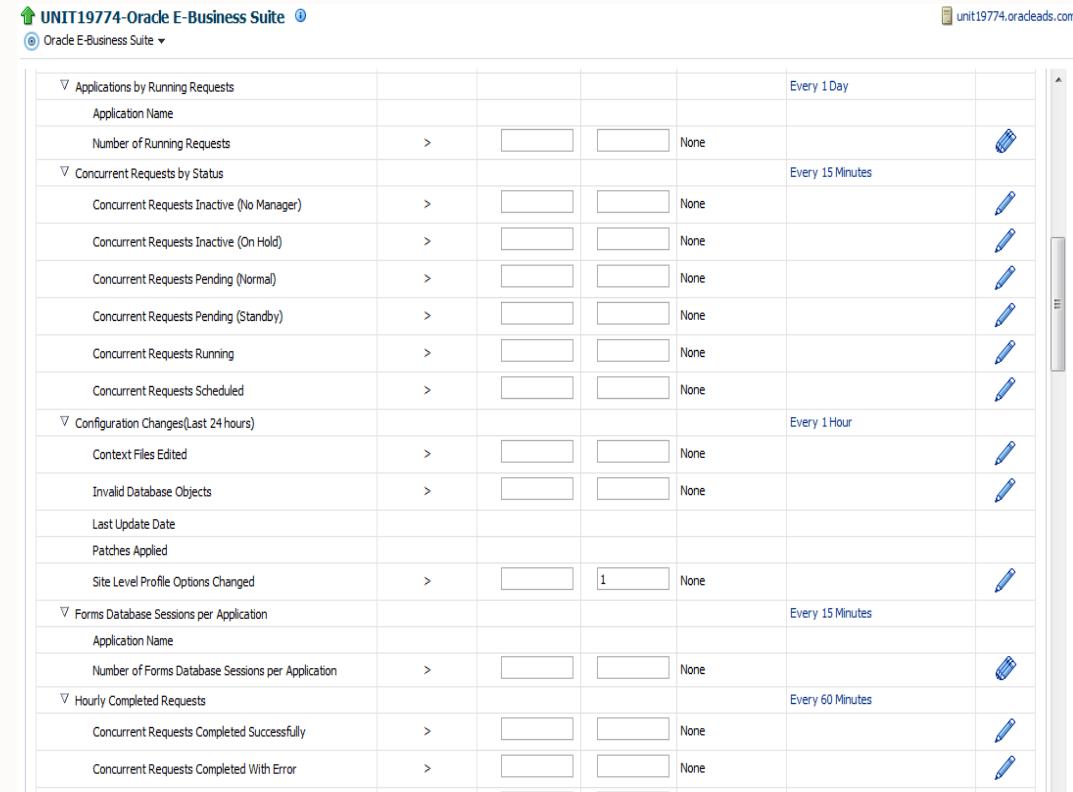
System Management Features

System Management Dashboards



- Discovery Wizard / EMCLI support
- Monitor and manage all EBS Services & Tech Stack Components
- EBS Specific Monitoring Templates & Metrics
- Extending EBS Target Model
- Supports Privilege Propagation on EBS Targets
- Configurable Automated Service Tests
- EBS Seeded Compliance Standards
- Stop & Start EBS Services
- Support for Gold Agent

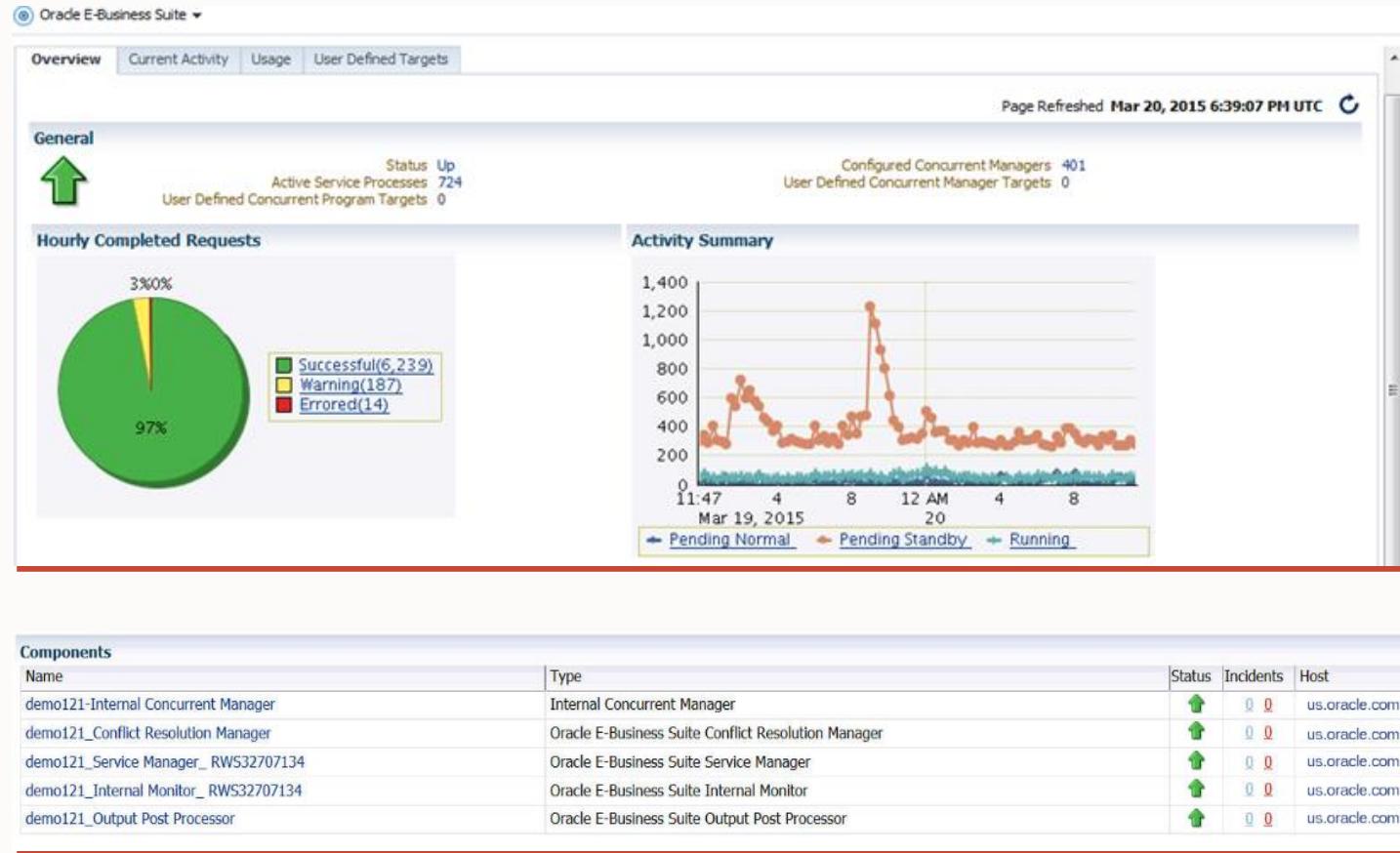
Monitoring: Metric and Collection Settings



The screenshot shows the Oracle E-Business Suite Monitoring interface. The left sidebar lists categories: Applications by Running Requests, Concurrent Requests by Status, Configuration Changes (Last 24 hours), Forms Database Sessions per Application, and Hourly Completed Requests. The main area displays metrics for each category, including Application Name, Number of Running Requests, Concurrent Requests Inactive (No Manager), Concurrent Requests Inactive (On Hold), Concurrent Requests Pending (Normal), Concurrent Requests Pending (Standby), Concurrent Requests Running, Concurrent Requests Scheduled, Context Files Edited, Invalid Database Objects, Last Update Date, Patches Applied, Site Level Profile Options Changed, Application Name, Number of Forms Database Sessions per Application, Concurrent Requests Completed Successfully, and Concurrent Requests Completed With Error. Each metric has a status indicator (green, yellow, red), a value, a threshold (e.g., None, Every 1 Day, Every 15 Minutes, Every 1 Hour, Every 15 Minutes), and a edit icon.

- Metrics based incidents & notifications
- Set EBS metrics collection schedules to meet business goals
- Set warning and critical thresholds based on instance type (e.g. Production, QA, Dev)
- Add corrective actions
- Metric Reference Manual

Concurrent Processing Dashboard



- Monitor Current Activity & Usage
- Number of Executions & Failed Executions
- Average Running Time Minutes
- Total Running Time Minutes
- Watch list for:
 - Concurrent Programs
 - Concurrent Managers
- Incidents & Notifications

Compliance Dashboard

Compliance Dashboard

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The dashboard includes the following sections:

- Compliance Framework Summary:** Shows a gauge for the Oracle E-Business Suite Framework with a current compliance score of 61%.
- Least Compliant Generic Systems:** A table with columns: Generic System Name, Standard Evaluations (with icons for red, yellow, green), Violations (with icons for red, yellow, green), and Average Compliance Score (%). It displays "No data to display".
- Most Recently Discovered Unmanaged Hosts:** A table with columns: Host Name, IP Address, Discovered Time, and Operating System. It displays "No data to display." and a link to "Click here to see more discovered unmanaged hosts..."
- Least Compliant Targets:** A table with columns: Target Name, Target Type, Standard Evaluations (with icons for red, yellow, green), Violations (with icons for red, yellow, green), and Average Compliance Score (%). It lists two targets: EBSSRV_Oracle E-Busin... (Score 61) and UNIT19774-Oracle E-Bu... (Score 64).
- Compliance Summary:** A table showing compliance data for various checks across different frameworks and standards. The table includes columns: Name, Target Evaluations (with icons for red, yellow, green), Violations (with icons for red, yellow, green), and Average. Examples include "Checks for default ..." (Score 0), "Checks for profile ..." (Score 2), "Compliance for Or..." (Score 0), "Security Recomme..." (Score 33), and "Checks for Hashed..." (Score 2).

- Integration with EM Compliance Framework
- Out-of-box Security Compliance Standards for EBS
- Checks for mandatory database configuration parameters for EBS (init.ora)
- View violations & trends
- Real-time observations

Out-of-the-box Oracle E-Business Suite Compliance Standards

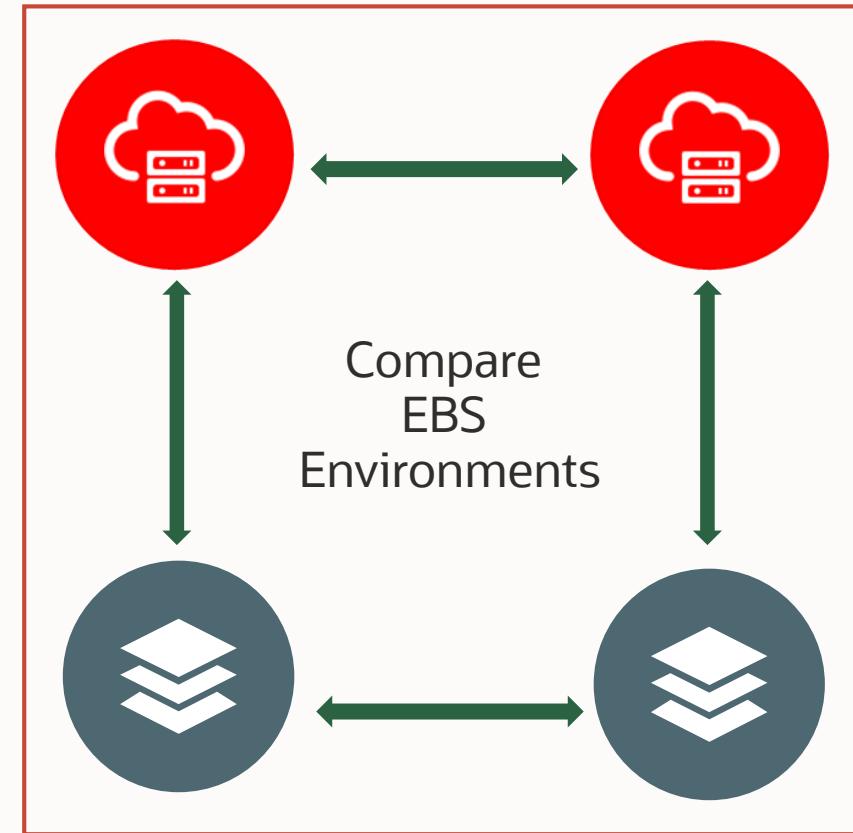
Compliance Standard	Rules mapped to the standard	Severity
Profile Settings	Check if all critical profiles are set correctly.	Critical
Profile Settings	Check if other profiles are set correctly.	Warning
Profile Settings	Check if no profile is missing.	Critical
Change Default Passwords	Checks if any database user with a default password exists.	Critical
Change Default Passwords	Checks if any application user with a default password exists.	Critical
Secure APPLSYSPUB	Checks if there is any unwanted privilege in the APPLSYSPUB account.	Warning
Use Secure Flag on DBC File	Checks if server security is on.	Warning
Migrate to Password Hash	Checks if the setting for hashed passwords are on.	Warning

Configuration Management

Compare Oracle E-Business Suite Technology Stack



- Applications system
- Workflow
- Concurrent Processing
- Patch information
- Custom objects
- Apps context
- Database context
- Database
- Hosts



Configuration Management

Compare Oracle E-Business Suite Technology Stack

Comparison Results: test 3 

Comparison & Drift Management > test3 > hope_Oracle E-Business Suite

Show Only Differences  

Configuration Properties for Oracle E-Business Suite

View Side By Side List

Configuration Item	Identifier	Property Name	Reference Target	Compared Target	Reference Value	Compared Value
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:A...	SQL_VALIDATION	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	SQL="SELECT LOOKUP...	 SQL="SELECT LOOKUP...
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:B...	PROFILE_OPTION_VALUE	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	http://ebs1.us.oracle.com...	 http://bama1.us.oracle.co...
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...		hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	Present	 Not Present
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	DESCRIPTION	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	Bank Account Security A...	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	LEVEL_ID	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	10001	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	PROFILE_OPTION_ID	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	3232	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	PROFILE_OPTION_VALUE	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	INTERNAL	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	SQL_VALIDATION	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	SQL="SELECT meaning ...	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	USER_PROFILE_OPTIO...	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	CE: Bank Account Securi...	
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...		hope_Oracle E-Business...	PURPLE-Oracle E-Busin...	Not Present	 Present
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	DESCRIPTION	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...		 Licensed to use CRL Ass
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	LEVEL_ID	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...		 10001
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	PROFILE_OPTION_ID	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...		 1009221
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	PROFILE_OPTION_VALUE	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...		 N
EBS_PROFILE_OPTION...	APPLICATION_SHORT_NAME:C...	SQL_VALIDATION	hope_Oracle E-Business...	PURPLE-Oracle E-Busin...		 SQL="SELECT lookup_c...

- Application Configuration Console integrated into EM
- Configuration Comparison Templates
 - Control how and what is compared
 - Ability to ignore certain differences
- Ad-hoc or schedule comparisons
- Automatic detection & notification
- 12.2 Run/Patch edition comparisons
- Periodic Snapshot comparisons

Application Management Suite 13c

Change Management Features

Change Management Features

- Change Management Approval
- Customization Management
- Patch Management
- Smart Clone

Change Approval Framework

Oracle E-Business Suite Management

Update Request: both approvers test_drop8 Thu Mar 12 09:03:58 UTC 2015

* Indicates required field

Module	Patch Manager
Requester Name	REQUEST_PM
Justification	test drop 8
Action	Approve
* Comments	Approve
	Reject

Targets

Target Name: UNIT19774-Oracle E-Business Suite

Notification E-mail(s)

E-mail Address: angelo.rosado@oracle.com

Related History

Name	Action	Comments	Updated By	Updated Date
both approvers test_drop8 Thu Mar 12 09:03:58 UTC 2015	Submitted for Approval	test drop 8	REQUEST_PM	Mar 12, 2015 9:15:18 AM UTC

[Cancel](#) [View Details](#) [Submit](#)

- Approvals for Customizations & Patches
- Role based privileges
- Reporting and auditing capabilities
- Provides notifications on pending approval requests and status of changes to specific users or user groups

Customization Management

Oracle E-Business Suite Management

Oracle E-Business Suite Management > Customization Manager

Customization Manager

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Packages

Search Name Go Advanced Search

Procedure	Patch Oracle E-Business Suite Online	Deploy	Update Metadata	Report	Create Like	Create	Upload			
Select	Name	ID	Release	Product	Type	Status	Owner	Last Updated	Update	Delete
<input checked="" type="radio"/>	TestPack1	100000000013	R12	oam	AOL	Succeeded	SYSMAN	May 31, 2015 5:29:18 AM PDT		
<input type="radio"/>	Copy of TestPack1	100000000021	R12	xxco	AOL	Failed	SYSMAN	May 29, 2015 3:06:03 AM PDT		
<input type="radio"/>	pack5	100000000009	R12	xxco	AOL	Released	SYSMAN	May 27, 2015 11:25:37 PM PDT		
<input type="radio"/>	pack3	100000000005	11i	xxco	AOL	Succeeded	SYSMAN	May 7, 2015 3:05:46 AM PDT		
<input type="radio"/>	pack2	100000000004	R12	xxco	AOL	Succeeded	SYSMAN	May 7, 2015 12:01:16 AM PDT		
<input type="radio"/>	pack1	100000000002	R12	xxco	AOL	Succeeded	SYSMAN	May 6, 2015 4:57:18 AM PDT		

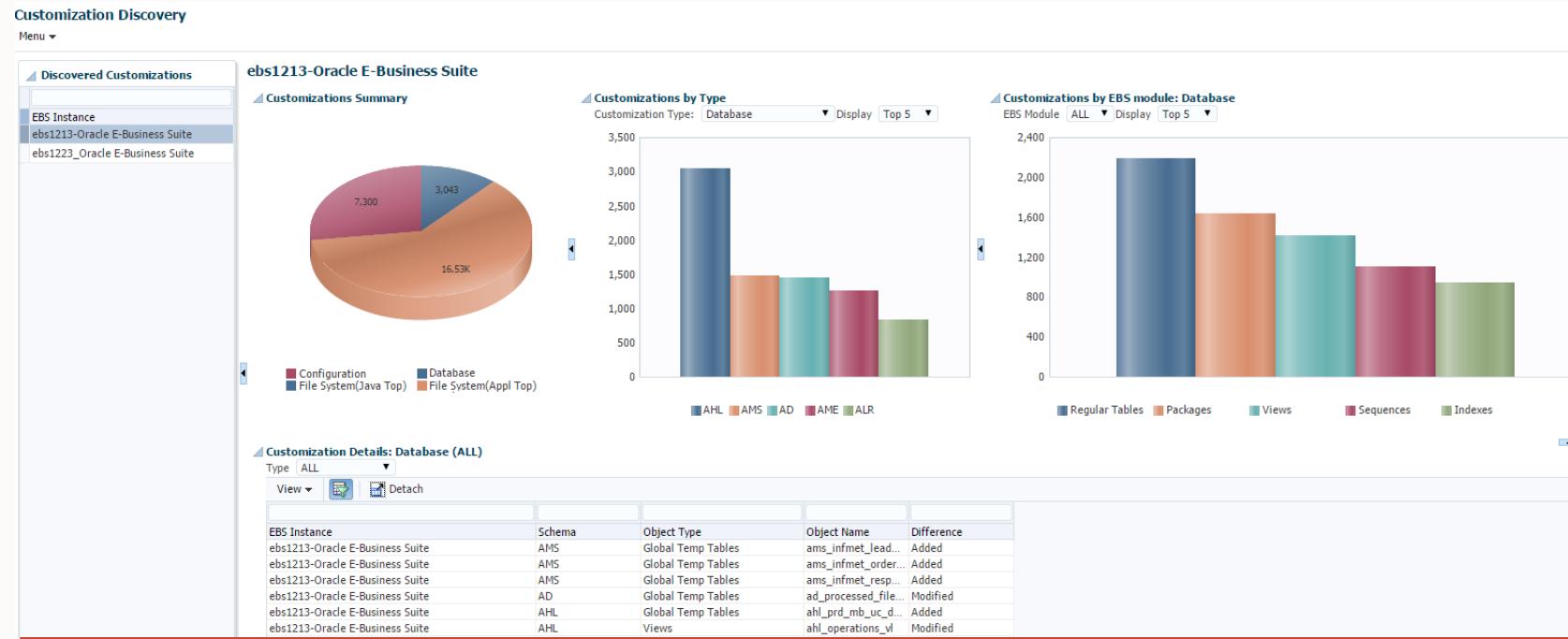
Related Links

File Source Mapping Custom Applications Custom Standards
E-Business Suite Mapping Custom Application Requests Customization Discovery
Package Report File Metadata Repository Customization Discovery Requests

- Ability to package, deploy and promote customizations across EBS instances
- Over 175 customization file types supported
- Interface with external Source Code Version Control systems
- Validation of the custom objects using:
 - Oracle Defined Standards
 - Optionally, User Defined Standard
- Validates and reports readiness of customizations for Online Patching
- Discovery & reporting of inventory of EBS customizations

Customization Discovery & Reporting

Application & Database Objects



- Custom Files (APPL_TOP & JAVA_TOP)
- Custom Configurations (Custom Menus, Functions, Grants, Profiles, etc.)
- Database Objects (Regular Tables, Partitioned Tables, Views, Indexes, etc.)

Patch Management

Patch Oracle E-Business Suite

Deployment Details Patch Details Options Review

Patch Oracle E-Business Suite: Review

Deployment Details

Patch Deployment Name: ADOP Run#3
Target System Name: tst1225_Oracle E-Business Suite
Deployment Procedure: Patch Oracle E-Business Suite Online
Description: Justification: Go
Requestor: SYSMAN
Notification Email(s):

Patch Application Deployment Procedure

Start Option: Start Immediately
Indefinite Grace Period: ✓

Prepare
Pause After Prepare: —

Apply
Pause After Apply: —
Hotpatch: —
Actualize All Objects: —
Disable checkfile feature: —

Finalize
Finalize Mode: Quick
Pause After Finalize: —

Cutover Deployment Procedure

Cutover Choice: Start Immediately
Indefinite Cutover Grace Period: ✓

Cutover
Restart Middle Tier: ✓
Pause After Cutover: —
Error out if EBS has abandon node(s): —

Cleanup
Cleanup Mode: Quick

FS Clone
Run Full File System Synchronization: —

Notifications

Action Required: ✓
Problems: ✓
Succeeded: —
Running: —
Suspended: —

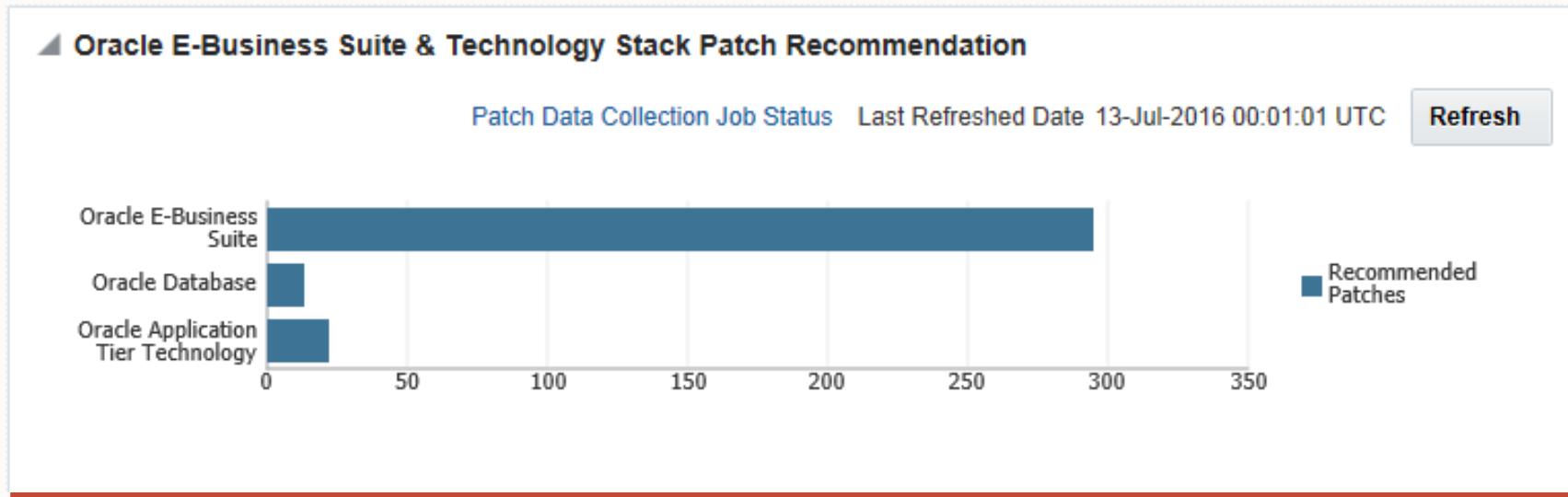
Selected Patches

Merge Patches: ✓

Patch Number	Platform	Language	Description	Readme	Created By	Replaced By	Patch Name	Product	Release	Files
17766337	Linux x86	American English	R12.AD.C.delta.4	60		18283295 19197270	Oracle Application...	Applications R12 ...	p17766337_R12.AD.C...	
17893964	Generic Platform	American English	R12.TXK.C.DELTA.4	60		18288881 19330775	Oracle Application...	Applications R12.2	p17893964_R12.TXK.C...	
19270816	Generic Platform	American English	1OFF:12.2.24:16...	60			Oracle Application...	Applications R12.2	p19270816_R12.OAM.C...	

- Simplified online patching:
 - Patch deployment procedure
 - Cutover deployment procedure
 - FS clone
 - Advanced search filtering
 - Set number of workers
 - "No Cutover" is the new default option
 - Set Internal Concurrent Manager duration before shutting down
- Check patch prerequisites
- Patch options, merge, scheduling
- Status Notifications
- View logs online
- View & search applied patches

Patch Recommendations Summary



- Complete inventory of unapplied recommended E-Business Suite patches including, Database, Forms and Reports, WebLogic Server, FMW Web tier, and FMW Common.
- Code level recommendations for EBS products and product families
- EBS recommendations integrated with Patch Management
- EBS Database and WebLogic recommendations integrated with EM Patch Plan

Patch Recommendations

Sample Screen Shots

EBS Applications

Oracle E-Business Suite & Technology Stack Patch Recommendation

Patches Recommended for Oracle E-Business Suite

Product Short Name	Product Name	Patch Count	Patch Number	Readme	Description
ad	Oracle Application	3			
ado	Oracle Application	1			
ap	Oracle Payables	1			
	22590844.R12.AP.C		22590844	○○	New Patch to handle missed dependency registration in Patch 21415235
ben	Oracle Advanced	1			
	20056665.R12.BEN.C		20056665	○○	ICD FUNCTION IN SSHR FAILS

Database

Oracle E-Business Suite & Technology Stack Patch Recommendation

Patches Recommended for Oracle Database

Patch Number	Patch Version	Footnote	Description
13417321	11.2.0.4.0	○○	DST 18 : HALF YEARLY DST PATCHES, MAY 2012
20488666	11.2.0.4.0	○○	MERGE REQUEST ON TOP OF 11.2.0.4.0 FOR BUGS 17912217 20294666
20523280	11.2.0.4.0	○○	N-APPLY BUNDLE PATCH II FOR RDBMS 11.2.0.4.0 WITH EBS RELEASE 12.2
20678391	11.2.0.4.0	○○	MERGE REQUEST ON TOP OF 11.2.0.4.0 FOR BUGS 16992075 17901041
21286665	11.2.0.4.0	○○	EXPORT IS SLOW WAITING FOR "STREAMS AO ENQUEUE BLOCKED ON LOW MEMORY"
21321429	11.2.0.4.0	○○	STATE STATS ON SUMDELTA'S CAUSING PERFORMANCE ISSUE
21864513	11.2.0.4.0	○○	EBS12.2 : ORA 6544 [PHF_FAST_VALIDATE:KGLDIN DEP NUM DIFFERS] W/ ULRP

Apps Tier Technology

Oracle E-Business Suite & Technology Stack Patch Recommendation

Patches Recommended for Oracle Forms and Reports 10.1.2.3 Home

Patch Number	Patch Version	Footnote	Description
rws27071...			
89...	10.1.2.3.0	○○	APPS1012. ALIGNMENT INCORRECT WHEN USING VIETNAMESE COMBINING CHARACTERS
22...	10.1.2.3.2	○○	MERGE REQUEST ON TOP OF 10.1.2.3.2PSU FOR BUGS 22283356 21024122 22351071
batch			
89...	10.1.2.3.0	○○	APPS1012. ALIGNMENT INCORRECT WHEN USING VIETNAMESE COMBINING CHARACTERS
22...	10.1.2.3.2	○○	MERGE REQUEST ON TOP OF 10.1.2.3.2PSU FOR BUGS 22283356 21024122 22351071

WLS patches

Oracle E-Business Suite & Technology Stack Patch Recommendation

Patches Recommended for Oracle Weblogic Server

Patch Number	Patch Version	Footnote	Description
run	10.3.6	○○	SU Patch [YVD2]: 12C DEMO CERTS NOT GENERATED
13...	10.3.6.0.12	○○	SU Patch [L34Q]: 10.3.6.0.12 Overlay: STATEMENT CACHE SETUP IMPROVEMENTS USING WEBLOGIC CONSOLE
17...	10.3.6	○○	SU Patch [XECL]: P57 PATCH SET WITH JDK 7 - NATIVE LIBRARY STACKDUMP.DLL IS MISSING
20...	10.3.6	○○	SU Patch [EJUW]: WLS PATCH SET UPDATE 10.3.6.0.12
22...	10.3.6.0.12	○○	SU Patch [GK5N]: 10.3.6.0.12 Overlay: MERGE REQUEST ON TOP OF WLS PSU 10.3.6.0.12 FOR BUGS 13337000 21562338
22...	10.3.6	○○	SU Patch [D18E]: UPDATE JAVAMAIL API LIBRARY VERSION TO 1.5.4 WITHIN WLS 10.3.6

Deploying DB & WLS patches using EM patch plans

ORACLE Enterprise Manager Cloud Control 13c

Enterprise Targets Favorites History Setup

Oracle E-Business Suite & Technology Stack Patch Recommendation

Page Refreshed Jun 24, 2016 10:29:30 AM PDT

Oracle E-Business Suite Management > cln7_Oracle E-Business Suite > Oracle E-Business Suite & Technology Stack Patch Recommendation

E-Business Suite Application Tier Technology Database

Patches Recommended for Oracle Database

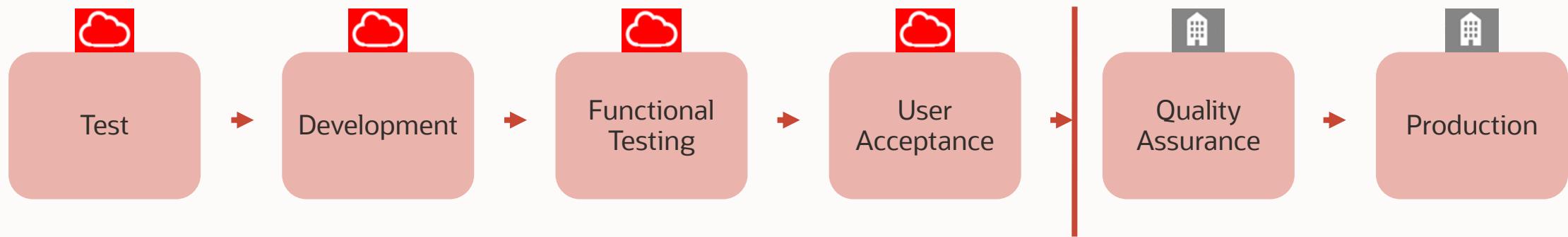
Patch Recommendation Information Creation Date 31-May-2016 14:52:47 UTC Last Refreshed Date 24-Jun-2016 00:01:19 UTC

Distinct Unapplied Patches 20

View Create EM Patch Plan Add To Existing EM Patch Plan Schedule EM Patch Plan Refresh Export Detach

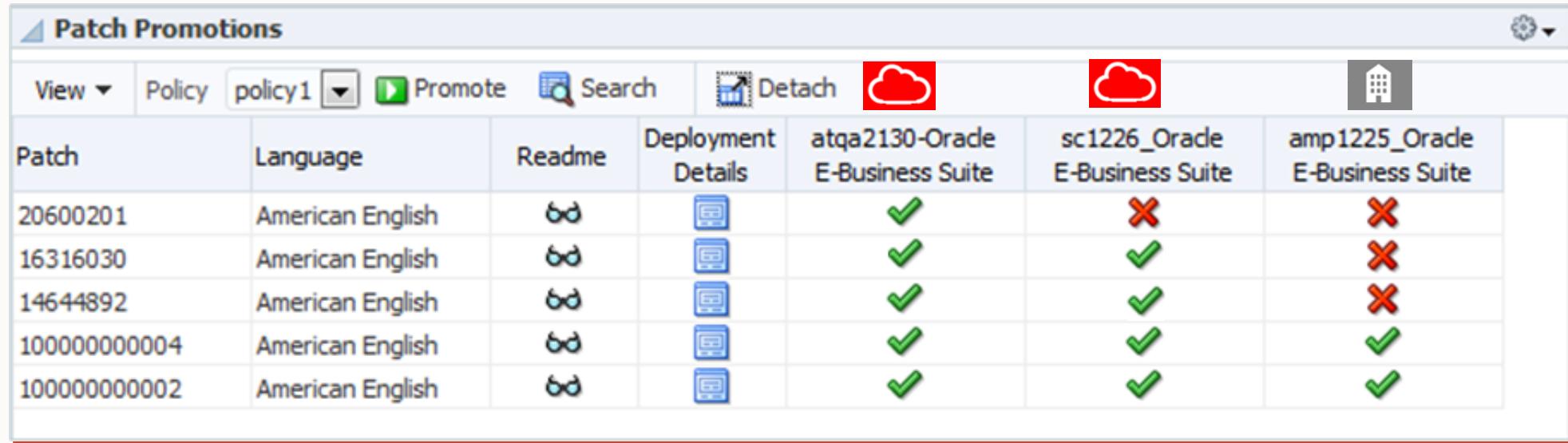
Patch Number	Patch Version	Footnote	Description
rw322143...			
cln7			
18...	12.1.0.2.0		DBMS_PARALLEL_EXECUTE PERFORMANCE DELAY AFTER UPGRADE TO 11.2.0.4
19...	12.1.0.2.0		INTERMITTENT WRONG RESULTS WHEN USING PLSQL RESULT CACHE FUNCTION
20...	12.1.0.2.0		ORA-39126, ORA-1427 ON EXPDP
20...	12.1.0.2.0		ORA-8103 ON QUERIES AGAINST BLOCK TYP=58, NO DDLS
20...	12.1.0.2.0		MERGE REQUEST ON TOP OF 12.1.0.2.0 FOR BUGS 18607546 19791273
20...	12.1.0.2.0		ADD 4 NEW DEFAULT DB USERS FOR EBS TO SYS.DEFAULT_PWD\$
21...	12.1.0.2.0		ORA-00600-[QSMKZSI_SETUP_IVQBC:1] ERROR WITH ALTER MATERIALIZED VIEW

Patch Promotion Policies



- Promote Oracle Patches & Custom Packages from pre-production to production instance
- Approvals required for each target prior to patch application
- View all the patches applied/not-applied for each target in a single UI
- Bundle patches while promoting patches to each target
- Only Super Administrators can define patch promotion policy
- Only Super Administrators can bypass patch promotion policy for emergency patching

Patch Promotion Policies: Patches Applied or Not?

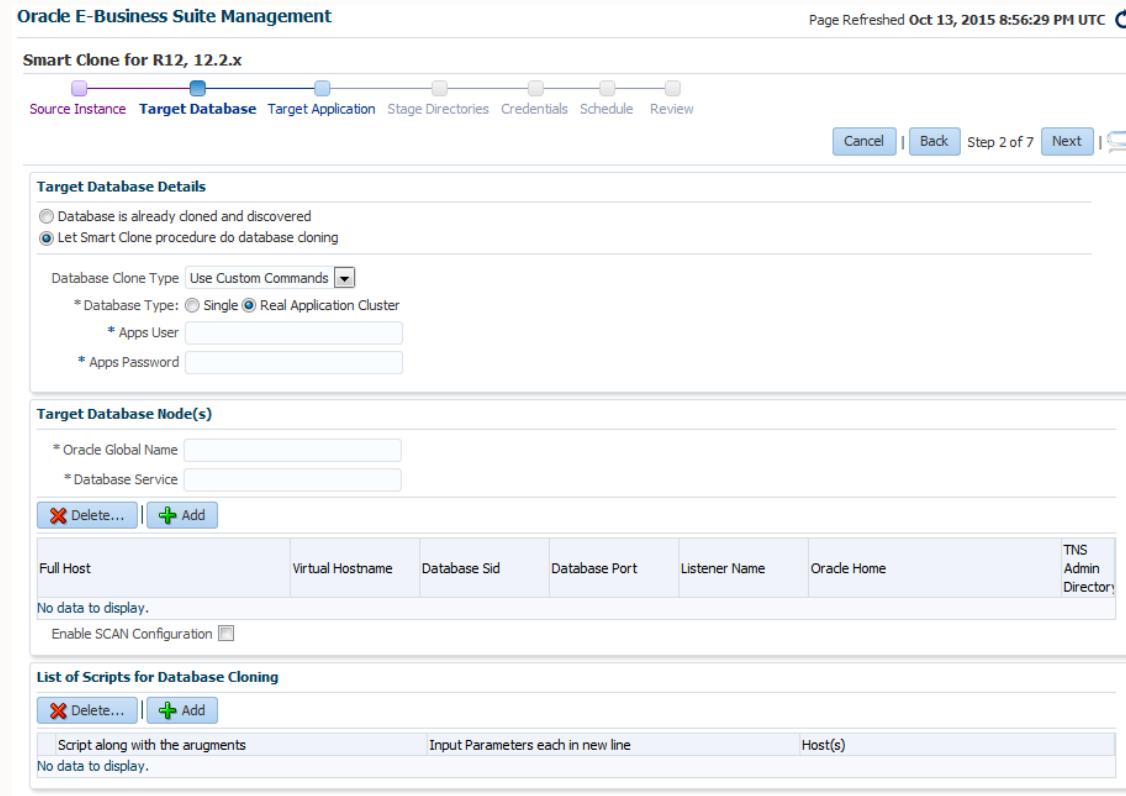


The screenshot shows a user interface for managing patch promotions. At the top, there is a toolbar with buttons for 'View', 'Policy' (set to 'policy1'), 'Promote', 'Search', 'Detach', and three cloud icons representing different environments: 'atqa2130-Oracle E-Business Suite', 'sc1226_Oracle E-Business Suite', and 'amp1225_Oracle E-Business Suite'. The main area is a table with the following data:

Patch	Language	Readme	Deployment Details	atqa2130-Oracle E-Business Suite	sc1226_Oracle E-Business Suite	amp1225_Oracle E-Business Suite
20600201	American English	🔗	💻	✓	✗	✗
16316030	American English	🔗	💻	✓	✓	✗
14644892	American English	🔗	💻	✓	✓	✗
100000000004	American English	🔗	💻	✓	✓	✓
100000000002	American English	🔗	💻	✓	✓	✓

- Ability to define a promotion policy that allows users to apply patches in a sequence to the pre-production instances prior to applying the patches to production instance.

Automated Cloning & Scalability



Oracle E-Business Suite Management

Smart Clone for R12, 12.2.x

Page Refreshed Oct 13, 2015 8:56:29 PM UTC

Source Instance **Target Database** Target Application Stage Directories Credentials Schedule Review

Cancel | Back Step 2 of 7 Next | 

Target Database Details

Database is already cloned and discovered
Let Smart Clone procedure do database cloning

Database Clone Type: Use Custom Commands

* Database Type: Single Real Application Cluster

* Apps User:

* Apps Password:

Target Database Node(s)

* Oracle Global Name:
* Database Service:

 Delete...  Add

Full Host	Virtual Hostname	Database Sid	Database Port	Listener Name	Oracle Home	TNS Admin Directory
No data to display.						

Enable SCAN Configuration

List of Scripts for Database Cloning

 Delete...  Add

Script along with the arguments	Input Parameters each in new line	Host(s)
No data to display.		

- Automated Cloning:
 - On-premises only
 - Facilitates EBS database & Apps tier cloning using single procedure
 - Single-Node, Multi-Node
 - Shared File System, RAC support
 - Customize pre & post cloning steps
 - Schedule cloning during off hours
 - Save interview templates for reuse
 - Supports dual file system configurations
- Scale in / Scale out managed servers & application tier nodes

Application Management Suite: Key capabilities summary

Lifecycle Management for Oracle Cloud and On-premises

Monitoring & Management

- Hybrid Cloud Management
- Monitoring
 - Based on metric thresholds
 - Concurrent Processing, Users, Performance
- Configuration Management and Comparisons
- Enforce Compliance Standards
- Instance Administration
- Real User Experience Insight
- JVMD integration (EBS 12.2)

Change Management

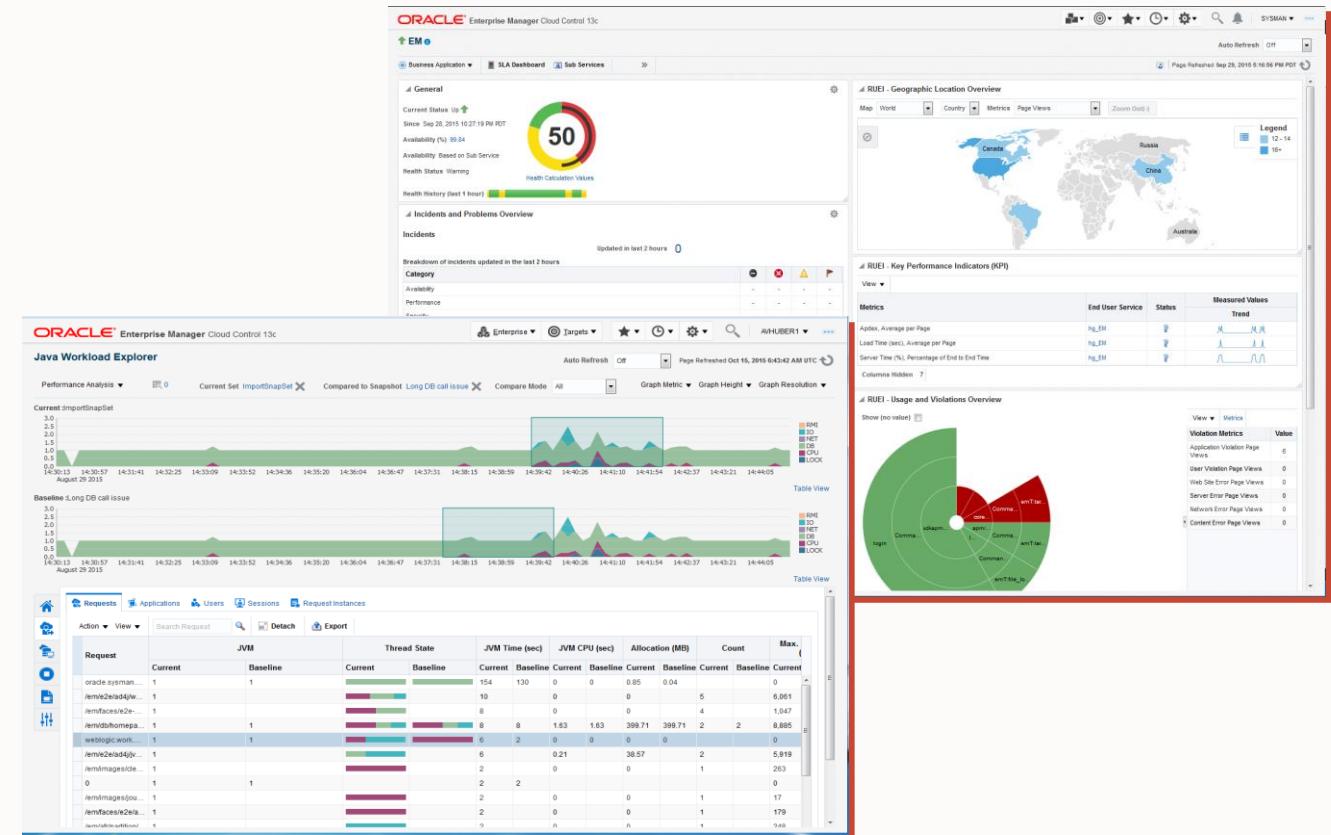
- Customization Management
 - Discover and view all EBS customizations
 - Validate, Package and Migrate customizations
- Patch Management
 - Automated 12.1.3 & 12.2 patching process
 - EBS and Tech Stack patch recommendations
 - Patch Promotion Policies for migration
- Cloning (On-premises)
 - UI to facilitate DB and Apps tier cloning
 - Scale out: Add managed application servers

Application Management Suite 13c

Real User Experience Insight

Real User Experience Insight for E-Business Suite

- End User Management
 - Real User monitoring: full, all sessions capture and alerting capabilities
 - Synthetic monitoring and SLA management
 - Geo-location Reporting
- Integration with JVM Diagnostics
 - Thread and code-line level Java Diagnostics
 - Drilldown to DB diagnostics



Leveraging Enterprise Manager 13c

Packaged Apps

- Application Management Suite for EBS
- Application Management Suite for PSFT
- Application Management Suite for JDE
- Application Management Suite for (Siebel, or Fusion)

Database Management

- Oracle Diagnostics Pack
- Oracle Tuning Pack
- Database Lifecycle Management Pack
- Data Masking Pack

Middleware & Identity Management

- WebLogic Server Management Pack EE
- SOA Management Pack EE
- Management Pack Plus for Identity Management

Cloud Management

- Oracle Cloud Management Pack for Oracle Database
- Oracle Cloud Management Pack for Oracle Fusion Middleware
- Oracle Cloud Management Pack for Testing

Application Management Suite 13c

Benefits

Benefits of Application Management Suite

Benefits

Enablers

Reduce Complexity

- Automation of Hybrid Cloud Management processes
- Seamless management of on-premises and Oracle cloud EBS environments

Increase Efficiency

- Automation of routine monitoring tasks
- Enforce Standardization & Compliance across the Enterprise

Lower Costs

- Efficient resource utilization
- Automation of Cloning, Scaling, Patching, and Customizations

Reduce Risks

- Proactively manage high availability of applications
- Manage & Diagnose End-to-End technology stack Performance

Learn More

Additional Resources

Getting Started - AMS

- Application Management Suite Getting Started MOS Note (Doc ID [2676355.1](#))

Documentation

- [Oracle Application Management Pack for Oracle E-Business Suite Guide Release 13.4.1.0.0](#)
- [Oracle Application Management Pack for Oracle E-Business Suite Metric Reference Manual](#)

AMS Collateral

- [DataSheet](#)
- [Enterprise Manager Portal](#)

Support Resources

- Support Policy Quick Reference (Doc ID [1603898.1](#))
- [Oracle E-Business Suite Technology Blog](#)
- [Oracle E-Business Suite and Oracle Cloud Blog](#)

Where to Find EBS News and Information

www.oracle.com/ebs



Applications / Oracle E-Business Suite Applications

Oracle E-Business Suite

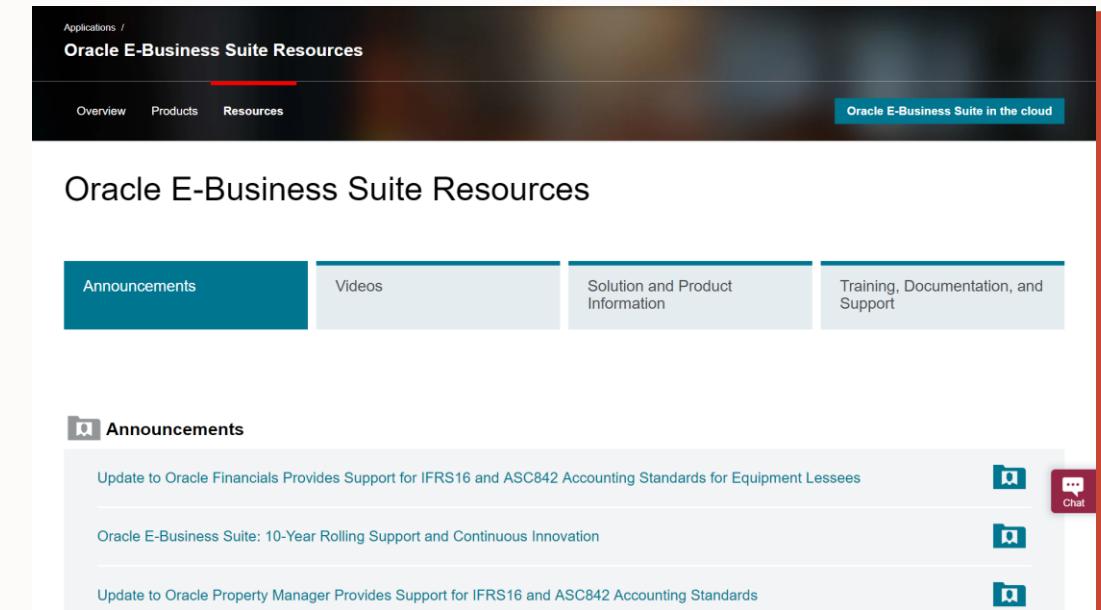
Oracle E-Business Suite supports today's evolving business models, drives productivity, and meets the demands of the modern mobile user.

Watch the video →

Overview Products Resources Oracle E-Business Suite in the cloud Chat

Continued Investment for Years to Come

Strategy ~ Roadmap ~ Path to Cloud ~ Featured Resources



Applications / Oracle E-Business Suite Resources

Oracle E-Business Suite Resources

Overview Products Resources Oracle E-Business Suite in the cloud

Announcements Videos Solution and Product Information Training, Documentation, and Support

Announcements

Update to Oracle Financials Provides Support for IFRS16 and ASC842 Accounting Standards for Equipment Lessees

Oracle E-Business Suite: 10-Year Rolling Support and Continuous Innovation

Update to Oracle Property Manager Provides Support for IFRS16 and ASC842 Accounting Standards

Announcements ~ Videos ~ Product Info ~ Training ~ Doc



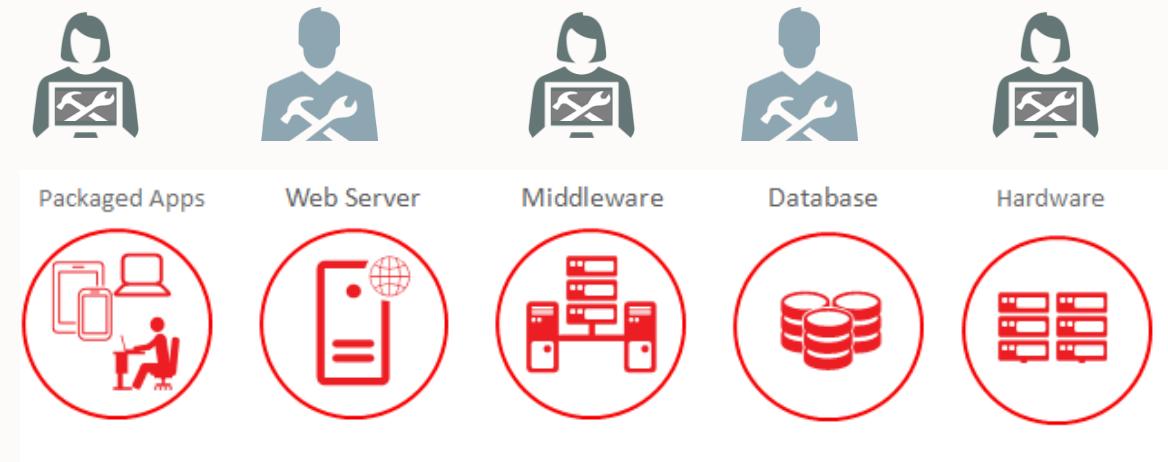
Oracle Enterprise Manager Application Management Pack for Siebel

Agnes Zhang

Director, Oracle Product Management

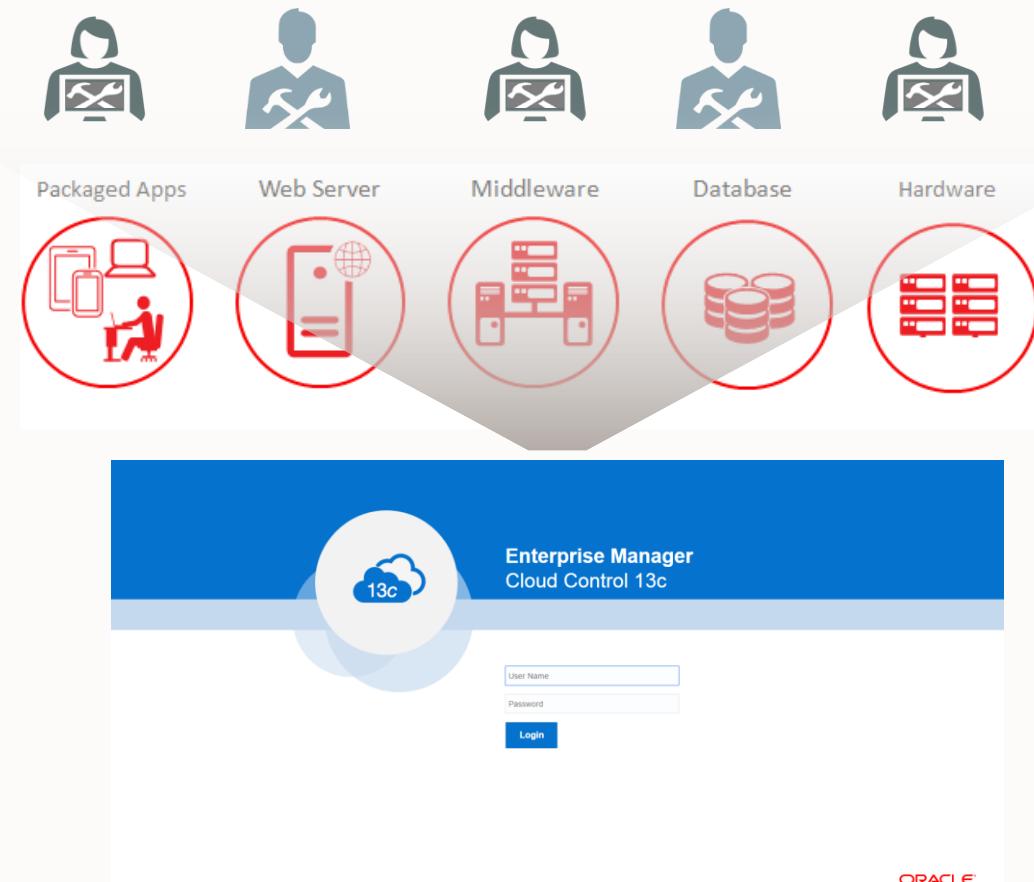
Monitoring Challenges for Siebel Environment

- Highly distributed multi-target environment
- No centralized repository or management point
- Lack of application performance analysis
- Hard to track configuration changes



Application Management Pack for Siebel

- Consists of two products
 - **Siebel Plug-in:** server side monitoring
 - **Real User Experience Insight (RUEI):** client side monitoring
- An integrated solution for managing the entire Siebel Enterprise
- Leverages the capabilities of Oracle Enterprise Manager Cloud Control in configuration, management, application performance management, automation, and service-level management



Application Management Pack for Siebel – Key Functionalities

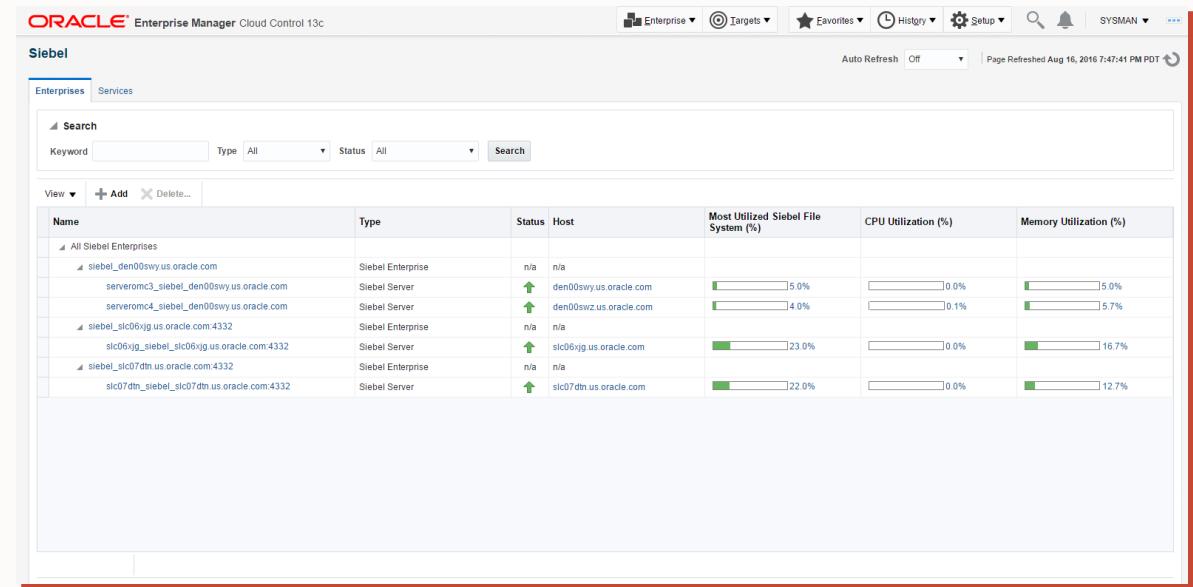
- Centralized console that helps IT administrators manage Siebel multi-target environment. Intuitive user interface to display environment information in an organized way
- Monitor the health and capacity utilization of your Siebel Server environment, the hosts for these servers, and the Server Components deployed within the Siebel Application Servers
- Track configuration changes you have made to Siebel Application Servers and Server Component parameters
- Monitor actual end-user response time as well as response time from synthetic service test transactions
- Diagnose performance and availability problems through performance analysis
- Monitor Event Logs

Siebel Specific Metrics

Siebel Metrics	Examples
Siebel Component Metrics	Average Object Manager Response Time, Average Connect Time for Object Manager Sessions, Average # of Requests Per Object Manager Session, Process ID, etc.
Siebel Component Group Target Metrics	Start Time, Status
Siebel Gateway Target Metrics	Start Time, Response
Siebel Server Target Metrics	File System Usage (%), Average Time for SQL Execute Operations, CPU Usage, Memory Usage, etc.
Siebel Workflow Target Metrics	# of Monitored Process Instances Failed State, Total # of Workflow Policy Instances in Waiting State, etc.

Siebel Enterprise Discovery Process

- Display Siebel Enterprise topology in a single view of EM console
- Siebel Enterprise is displayed in a hierarchical manner:
 - List all Siebel Enterprises
 - List all Siebel Servers under each Enterprise
 - Display key metrics for Siebel Enterprises and Siebel Servers
- Allow system administrators to have a quick overview about Siebel target system health



Siebel Environment Monitoring

Siebel Enterprise Dashboard

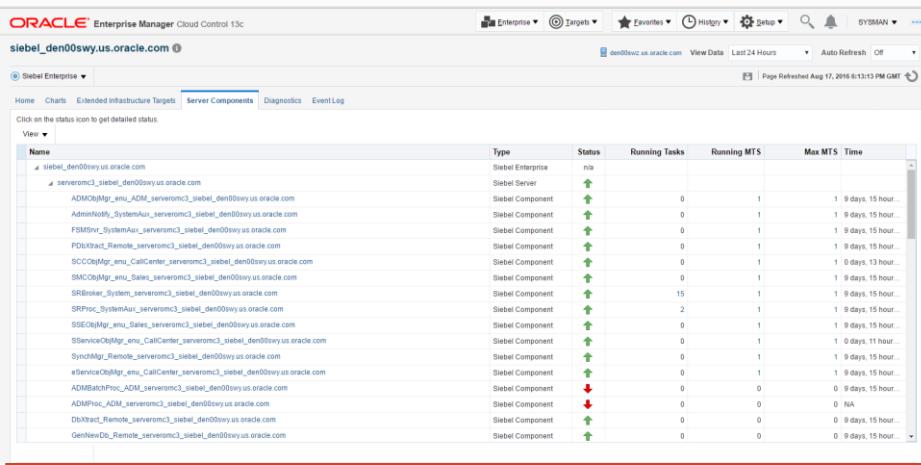
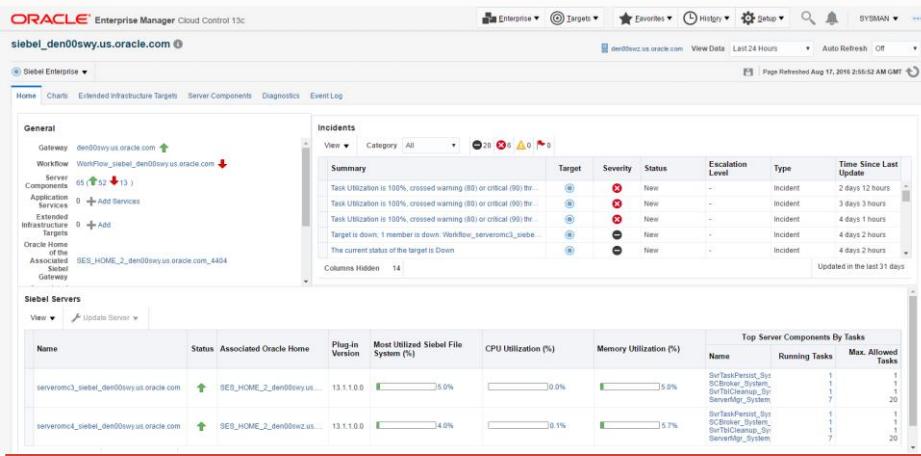
- Enterprise general status
- Incidents tracking
- Siebel Server status

Siebel Server Dashboard

- Siebel Server general status
- Incidents tracking
- Siebel Server Component status

Siebel Server Components Dashboard

- Status, Running Tasks, Running MTS, etc.



Siebel Service Monitoring

- A service is an entity that provides a useful function to its users. It is used to model one or more business functions or applications in an enterprise.
 - E.g. Siebel Call Center, Siebel Services
- Service in EM defines the key measurements (availability, performance, and usage) required for service level management. Once defined, a service can be logically combined with other services to form an aggregate service.
- Applications supported by Siebel Servers can be monitored as services in EM
 - E.g. monitor Siebel Call Center application as a Call Center service

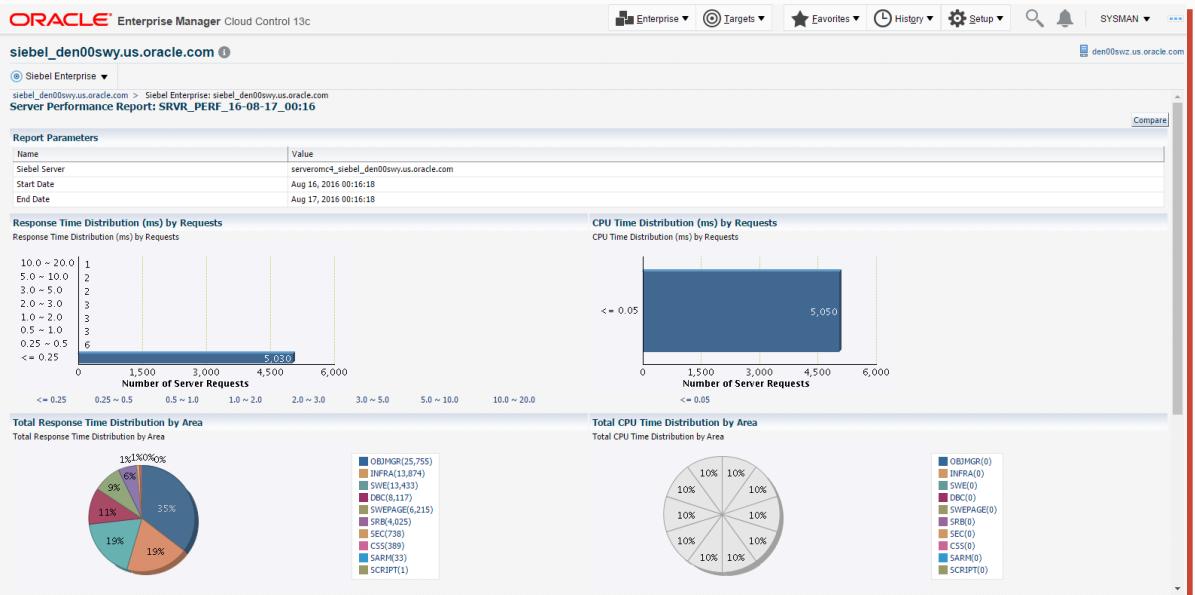
Performance Analysis

Server Performance Report

- Diagnose and identify Siebel Server performance issues, one server at a time
- Providing access to response time, CPU usage, and memory data for selected server components

User Performance Report

- Diagnose and identify user session performance issues for requests that a specific user initiates





Monitor Real End-User & Diagnose in Production using Real User Experience Insight (RUEI) and Enterprise Manager 13.4

Enterprise Manager Middleware Management

Enterprise Manager

Product Management Team

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

End User Application Monitoring & Production Diagnostics

Monitor from business perspectives with application-centric functionalities

- **Real User Experience Insight (RUEI)**
 - Captures all the end user activity
 - Monitors the performance of applications from the end-user perspectives
 - Proactive alerting and thresholds
 - Now runs on Oracle cloud as RUEI App in Oracle Marketplace
- **Java Workload Explorer (JWE)**
 - Diagnoses performance problems in Java application in the production environment
 - No need to reproduce in QA environment.
 - Identifies Java problems or Database issues without application downtime
 - RUEI and JWE together provides APM solution in Enterprise Manager (EM)
- **EM app for Grafana**
 - Quickly create custom EM dashboards in Grafana
 - Integrated with Enterprise Manager schema
 - Out-of-the-box WebLogic dashboards based on the data monitored by EM

End User Application Monitoring - Real User Experience Insight (RUEI)

RUEI answers your questions for...

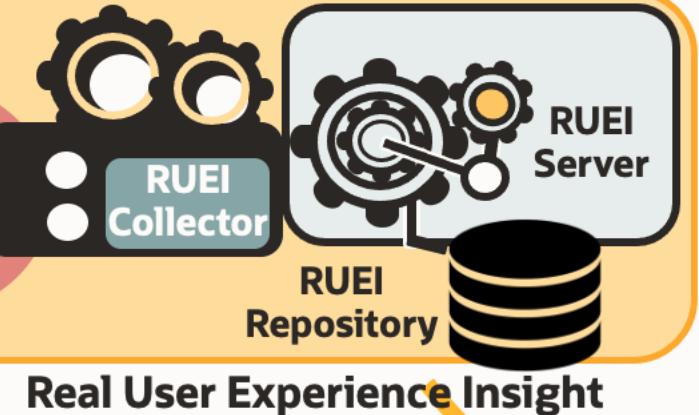
Internal Business Application



Page Load error



Online Shopping Website



I cannot reproduce.
What was the error
they saw?

?



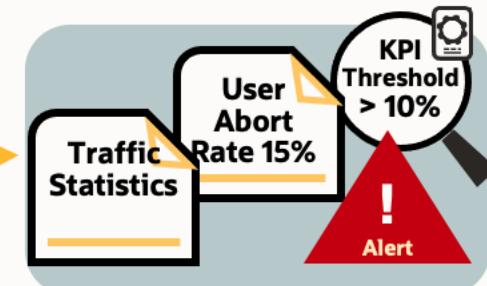
IT Administrator

How many customers
came to my store, and
what % of them actually
purchased products?

?



Business Application owner



User Session Diagnostics - Full Session Replay

Review complete user sessions

- Complete set of HTTP requests & response, raw and rendered HTML content
- Filter the sessions by Application, User-id, IP address or ECID (Execution Context ID) for a specified timeframe

ORACLE Enterprise Manager Cloud Control 13c

A_WineCellar

End User Service

Session Diagnostics

View ▾ Export as Zip Export as XLS Spurious Hit

Activity	Time	Timing	Info
WineCellar BackendUpdates UpdateLevel1	6/19/2020 11:59:59 ...	5.8 s	
http://de...us.oracle.com:7703/wineCellar/wineUpdateService.jsp		5840 ms	
WineCellar BackendUpdates UpdateLevel1	6/19/2020 12:00:08 ...	7.4 s	
WineCellar BackendUpdates UpdateLevel1	6/19/2020 12:00:18 ...	5.6 s	
WineCellar BackendUpdates UpdateLevel2	6/19/2020 12:00:27 ...	6.6 s	

User ID NGOperator Client IP 148.87.19.206 6/19/2020 11:59 AM 6/19/2020 12:01 PM

Full Session Replay

Source View

Request Headers (5)

Name	Value
User-Agent	Wget/1.12 (linux-gnu)
Accept	/*
Host	de...us.oracle.com:7703
Connection	Keep-Alive
X-Forwarded-For	148.87.19.206

Response Headers (6)

Name	Value
Connection	Keep-Alive
Date	Fri, 19 Jun 2020 18:59:59 GMT
Content-Length	342
Content-Type	text/html; charset=ISO-8859-1
X-ORACLE-DMS-ECID	fe288664-847f-42e3-94ce-efc4a40dd184-005e94c0
Set-Cookie	JSESSIONID=J3jN87BPcxSi98168UtzY-zSUAPBVA9OKK9PBGhDtkwvf006Pv1!-824918004; path=/; HttpOnly

Response Content

```
<html>
  <head>
    <title>NewGen Wine Cellar app - Upadte data and reload the cache</title>
    <script type="text/javascript">var myVar = setInterval(function(){location.reload()}, 5000);</script>
  </head>
  <body>
    <h1>Wine Cellar</h1>
    <table border="1">
      <thead>
        <tr>
          <th>ID</th>
          <th>Name</th>
          <th>Type</th>
          <th>Grapes</th>
          <th>Vintage</th>
          <th>Region</th>
          <th>Description</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>107067750</td>
          <td>Ass Kisser Shiraz</td>
          <td>Red Wine</td>
          <td>Syrah/Shiraz</td>
          <td></td>
          <td>Australia</td>
          <td>A bold wine with lots of dark berries, chocolat...</td>
        </tr>
        <tr>
          <td>129091750</td>
          <td>DeSante Cabernet Sauvign Oakville Terraces</td>
          <td>Red Wine</td>
          <td>Cabernet Sauvignon</td>
          <td></td>
          <td>California</td>
          <td>Oakville, Napa, CA- Aromas of cassis, spiced pl...</td>
        </tr>
        <tr>
          <td>88386750</td>
          <td>Gaja Sori San Lorenzo, 2001</td>
          <td>Red Wine</td>
          <td>Nebbiolo</td>
          <td>2001</td>
          <td>Italy</td>
          <td>James Suckling - Langhe, Piedmont, Italy- "What...</td>
        </tr>
        <tr>
          <td>93281750</td>
          <td>Montaudon Extra Dry</td>
          <td>Champagne/Sparkling Wine</td>
          <td>Champagne</td>
          <td></td>
          <td>France</td>
          <td>Champagne, France- A delicious Champagne has a ...</td>
        </tr>
        <tr>
          <td>87630750</td>
          <td>Spier Cabernet Vintage</td>
          <td>Red Wine</td>
          <td>Cabernet Sauvignon</td>
          <td></td>
          <td>South Africa</td>
          <td>South Africa- Polished dark ruby in color with ...</td>
        </tr>
        <tr>
          <td>2190750</td>
          <td>Peju Province Cabernet Napa</td>
          <td>Red Wine</td>
          <td>Cabernet Sauvignon</td>
          <td></td>
          <td>California</td>
          <td>Napa, CA- This wine has notes of deep, dark bla...</td>
        </tr>
        <tr>
          <td>108209750</td>
          <td>Educated Guess Chardonnay, 2007</td>
          <td>White Wine</td>
          <td>Chardonnay</td>
          <td>2007</td>
          <td>California</td>
          <td>Napa Valley, CA- This is not your typical Napa ...</td>
        </tr>
        <tr>
          <td>11092750</td>
          <td>Maple Ridge Chardonnay</td>
          <td>White Wine</td>
          <td>Chardonnay</td>
          <td></td>
          <td>California</td>
          <td>California- This excellent value offers a rich ...</td>
        </tr>
        <tr>
          <td>88123750</td>
          <td>Horton Tower Series Blueberry</td>
          <td>Other Wine</td>
          <td>Fruit Wine & Wine</td>
          <td></td>
          <td>Virginia</td>
          <td>Virginia- Produced from 90% Blueberry, 10% R...</td>
        </tr>
        <tr>
          <td>116228750</td>
          <td>Ancien Pinot Noir Sonoma Mountain Dog Vineyard</td>
          <td></td>
          <td></td>
          <td></td>
          <td>California</td>
          <td>Sonoma, CA- elegantly...</td>
        </tr>
        <tr>
          <td>109350750</td>
          <td>I Greppi Greppiaca Bolgheri Superiore, 2007</td>
          <td></td>
          <td></td>
          <td></td>
          <td>Italy</td>
          <td>Italy- ...</td>
        </tr>
        <tr>
          <td>18686750</td>
          <td>Fonseca 20 Yr Tawny Porto</td>
          <td></td>
          <td></td>
          <td></td>
          <td></td>
          <td></td>
        </tr>
        <tr>
          <td>17031750</td>
          <td>Montecillo Rioja Reserva, 2006</td>
          <td></td>
          <td></td>
          <td></td>
          <td></td>
          <td></td>
        </tr>
      </tbody>
    </table>
  </body>
</html>
```

Response content in rendered HTML

HTTP Requests headers

HTTP Response headers and contents

User Session Diagnostics- Integration with Java Workload Explorer

Trace JVM transaction from session diagnostic

- Click out to open Java Workload Explorer (JWE)
- Brings the ECID* to open the same session in JWE
- Allows users to perform in-depth diagnosis
 - *ECID (Execution Context ID) is a unique identifier in WebLogic that groups related events in the same request execution flow

ORACLE Enterprise Manager Cloud Control 13c

A_WineCellar

End User Service

Session Diagnostics

View ▾ Search In No Search Export as Zip Export as XLS Spurious Hit

Activity	Time	Timing
WineCellar BackendUpdates	6/19/2020 11:59:59 ...	5.8 s
http://de...us.oracle.com:7703/wineCellar/wineUpdateService.jsp		5840 ms
WineCellar BackendUpdates	6/19/2020 12:00:08 ...	7.4 s
WineCellar BackendUpdates	6/19/2020 12:00:18 ...	5.6 s
WineCellar BackendUpdates	6/19/2020 12:00:27 ...	6.6 s

User ID NGOperator Client IP 148.87.19.206 6/19/2020 11:59 AM 6/19/2020 12:01 PM

ORACLE Enterprise Manager Cloud Control 13c

Java Workload Explorer

Performance Analysis 21 1

1 hour

Auto Refresh Off Page Refreshed Jun 19, 2020 12:05:36 PM PDT

Graph Metric ▾ Graph Height ▾ Graph Resolution ▾

All Day 2 hours 1 hour 15 minutes

Zoom : Time Selected : Friday, June 19, 2020 11:45:01 AM PDT - Friday, June 19, 2020 12:03:01 PM PDT (18 Minutes)

Table View

Action ▾	View ▾	Search JVM	Detach	Export	Resource (%)	Host CPU (%)	JVM CPU (%)	JVM Heap (%)	GC Overhead (%)		
JVM		Thread State	JVM Time (sec)	Diagnostic Findings	0	100.0	0.0	51.14	19.93	83.0	2.11
WC_prod1213_domain/prod1213_domain/MS1_p1213_jvm											

Time Bar

Opens JWE page for the selected ECID for deep-dive analysis

Java Workload Explorer – Visualize JVM stack by Time and resource

- Time and Resource model
 - Time by resource: DB, CPU, GC, File I/O etc.
 - Resource utilization in terms of CPU time and MB allocated

The screenshot shows the Java Workload Explorer interface with a timeline of thread states and a detailed table of sampled thread data.

Timeline View: The top half of the interface displays a timeline from 04:12:24 PM to 04:19:44 PM on August 25, 2019. The timeline shows various colored bars representing different thread states. A red arrow points to a specific bar on the timeline, with a callout box stating: "Each bar represents all non-idle threads, grouped by state, in one sample".

Toolbar: On the left, a toolbar with several icons is shown, with the "Requests" icon highlighted. A red box encloses this toolbar, and a callout box states: "Multi- dimensional view - Select the icons in the toolbar to show other dimensions:" followed by a list of dimensions.

Table View: The bottom half of the interface displays a table titled "Sampled" showing thread data for various JVMs. The table includes columns for JVM, Thread State, JVM Time (sec), Count, Avg. Duration (ms), Allocation (MB), JVM CPU (sec), and Max. Duration (ms). A red box encloses the table, and a callout box lists the metrics: "Duration", "Memory Allocation", "Count", and "CPU".

JVM	Sampled		Count	Avg. Duration (ms)	Allocation (MB)	JVM CPU (sec)	Max. Duration (ms)
	Thread State	JVM Time (sec)					
MS1_p1213_jvm	406	248	1,925	7,697.3	11.25	9,700	
MS1_p1213_jvm	316	37	8,543	4	n/a	n/a	
MS1_p1213_jvm	122	73	1,346	1,240	1,240	1,240	
MS1_p1213_jvm	80	46	1,408	6	6	6	
MS3_p1213_jvm	44	n/a	n/a	n/a	n/a	n/a	
MS2_p1213_jvm	38	n/a	n/a	n/a	n/a	n/a	
MS3_p1213_jvm	16	n/a	n/a	n/a	n/a	n/a	
MS2_p1213_jvm	12	n/a	n/a	n/a	n/a	n/a	
AS_p1213_jvm	12	n/a	n/a	n/a	n/a	n/a	
MS3_p1213_jvm	2	n/a	n/a	n/a	n/a	n/a	
MS1_p1213_jvm	2	n/a	n/a	n/a	n/a	n/a	
MS2_p1213_jvm	2	n/a	n/a	n/a	n/a	n/a	

Java Workload Explorer – Compare Data Sets to identify the cause

- Compare the problem load with the baseline load
- Identify the differences

The Java Workload Explorer interface is shown, divided into several sections:

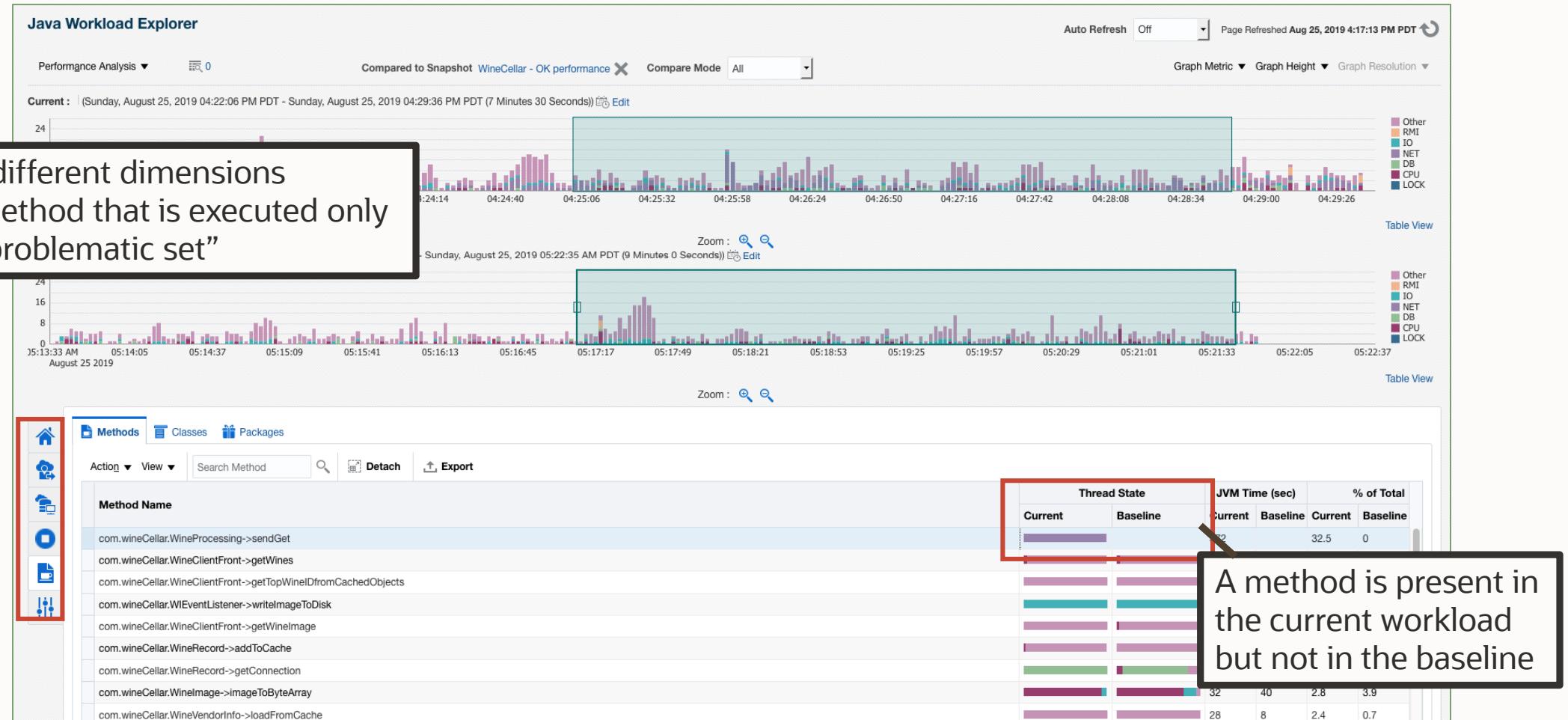
- Top Left:** A bar chart showing current workload metrics over time (August 25, 2019, 04:22:04 PM to 04:25:00). A red box highlights this area.
- Top Center:** A zoomed-in view of the current workload from 04:25:00 to 04:29:40. A red box highlights this area.
- Top Right:** A bar chart showing baseline workload metrics over time (August 25, 2019, 04:25:00 to 04:29:40). A red box highlights this area.
- Bottom Left:** A table view of requests, showing current and baseline JVM thread states. A red box highlights this area.
- Bottom Right:** A detailed table comparing current and baseline JVM metrics across various categories. A red box highlights this area.

Annotations:

- Left Annotation:** "Compare "Problem set" vs. "Good Set"
Look for the items that make the difference
- Right Annotation:** Current workload and baseline workload for comparison
- Bottom Annotation:** Two sets of columns, Current and Baseline, side by side

Java Workload Explorer – Deep dive analysis from different dimensions

- Compare the problem load with the baseline load
- Identify the differences



Java Workload Explorer – Drill down the problem to code

The screenshot shows the Java Workload Explorer interface. On the left, a sidebar lists requests: /wineCellar/wineSearch.jsp, /wineCellar/wineUpdateService.jsp, /wineCellar/wineCheckout.jsp, /wineCellar/wineView.jsp, com.wineCellar.WLEventListerner->onEvent, com.wineCellar.WREventListerner->onEvent, oracle.dms.jmx.app.AggregMBean, and oracle.dms.util.DmsThreadFactory\$1->run. A red arrow points from this list to the 'Request' column in the central table. The central area displays a 'Call Tree' for the request /wineCellar/wineSearch.jsp. A red box highlights the row for 'com.wineCellar.WineVendorInfo->getVendorInfoFromSource'. A callout box with a red border and the text 'File name where the method resides' points to the 'File Name' column for this row, which shows 'WineVendorInfo.java'. The right side of the interface shows a 'Table View' of JVM samples, with a red box highlighting the same row. The top right corner shows a 'Page Refreshed Aug 25, 2019 4:17:13 PM PDT' message.

Java Workload Explorer

Performance Analysis ▾

Compared to Snapshot WineCellar - OK performance X

Compare Mode All

Graph Metric ▾

Graph Height ▾

Graph Resolution ▾

Page Refreshed Aug 25, 2019 4:17:13 PM PDT

Call Tree : /wineCellar/wineSearch.jsp

Method Name

Method Name	Samples (count)	JVM Time (% of Total)	File Name			
	Current	Baseline	Current	Baseline	Current	File Name
oracle.security.jps.jmx.jpsAbsFilter\$1->run	271	147	100%	100%	Native Method	WineVendorInfo.java
java.security.AccessController->doPrivileged	271	147	100%	100%	Native Method	Native Method
oracle.security.jps.ee.http.JpsAbsFilter\$1->run	271	147	100%	100%	JpsAbsFilter.java	JpsAbsFilter.java
weblogic.servlet.internal.TailFilter->doFilter	271	147	100%	100%	TailFilter.java	TailFilter.java
weblogic.servlet.internal.ServletStubImpl\$->execute	271	147	100%	100%	ServletStubImpl.java	ServletStubImpl.java
weblogic.servlet.internal.StubSecurityHelper\$->invokeServlet	271	147	100%	100%	StubSecurityHelper.java	StubSecurityHelper.java
weblogic.servlet.internal.StubSecurityHelper\$ServletServiceAction->run	271	147	100%	100%	StubSecurityHelper.java	StubSecurityHelper.java
weblogic.servlet.jsp.JspBase->service	271	147	100%	100%	JspBase.java	JspBase.java
jsp.servelet._wineSearch->_jspService	271	144	100%	98%	__wineSearch.java	__wineSearch.java
com.wineCellar.WineClientFront->getVendorInfo	206	4	76.1%	2.8%	WineClientFront.java	WineClientFront.java
com.wineCellar.WineVendorInfo->getVendorInfo	206	4	76.1%	2.8%	WineVendorInfo.java	WineVendorInfo.java
com.wineCellar.WineVendorInfo->getVendorInfoFromSource	186	0	68.7%	0%	WineVendorInfo.java	WineVendorInfo.java
com.wineCellar.WineVendorInfo->loadFromCache	14	4	5.2%	2.6%	WineVendorInfo.java	WineVendorInfo.java
com.wineCellar.WineVendorInfo->addToCache	6	0	2.3%	0%	WineVendorInfo.java	WineVendorInfo.java
com.wineCellar.WineClientFront->getWines	65	140	24%	95.3%	WineClientFront.java	WineClientFront.java
com.wineCellar.WineClientFront->getTopWineIDfromCachedObjects	57	131	21.1%	89.2%	WineClientFront.java	WineClientFront.java
com.tangosol.coherence.component.util.SafeNamedCache->get	8	9	3%	6.2%	SafeNamedCache.CD	SafeNamedCache.CD

File name where the method resides

OK

Rows Selected 1 Columns Hidden 10

Total Rows : 8

Real User Experience Insight is Now Available on Oracle Cloud Marketplace!

What is RUEI?

- Enterprise Manager family product
- Passive monitoring tool
- Captures all the end user activity
- Monitors the performance of applications from the end-user perspectives
- Proactive alerting and thresholds
- Diagnose performance problems from EM console
- Wide experience with enterprise customers for many years

RUEI App on Oracle Cloud Marketplace

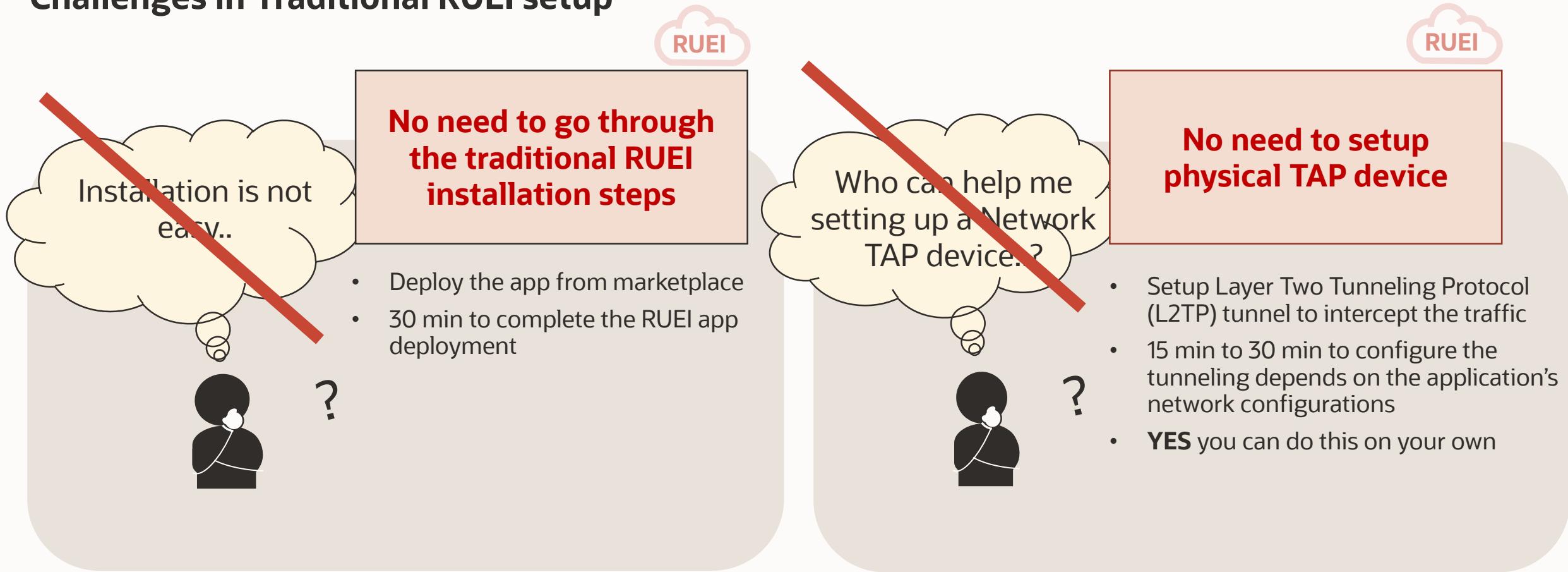


- Now available on Oracle Cloud Marketplace
- Pre-configured stack contains RUEI server and repository, deployed on a single Linux host
- Monitors real-user experience of cloud applications
- Drastically simplified installation and network setup process

The screenshot shows the Oracle Cloud Marketplace interface. At the top, there is a navigation bar with 'ORACLE Cloud', 'Applications >', 'Search for resources, services, and documents', 'US East (Ashburn) < >', and various user icons. Below the navigation is a breadcrumb trail: 'Marketplace > Oracle Real User Experience Insight'. The main content area features a large image of the RUEI logo, the title 'Oracle Real User Experience Insight', and a brief description: 'User Experience Management. Oracle Real User Experience Insight provides you with powerful analysis of network and business infrastructure. RUEI monitors real-user experience, KPIs and SLAs, and sends alerts when the thresholds are reached.' Below the description are 'Categories: Cloud Management' and a checkbox for accepting terms and conditions. To the right, there is a sidebar with 'Type: Stack', 'Version: 13.4.1.0.1 (Stack ver...)', 'Compartment: demoApps', and a note 'Software Price per OCPU BYOL (Bring Your Own License)'. It also includes a note about additional fees for infrastructure usage and a 'Launch Stack' button. At the bottom of the page are tabs for 'Overview' (which is selected), 'Provider', 'More Apps', and 'Usage Instructions'.

Real User Experience Insight is Now Available on Oracle Cloud Marketplace!

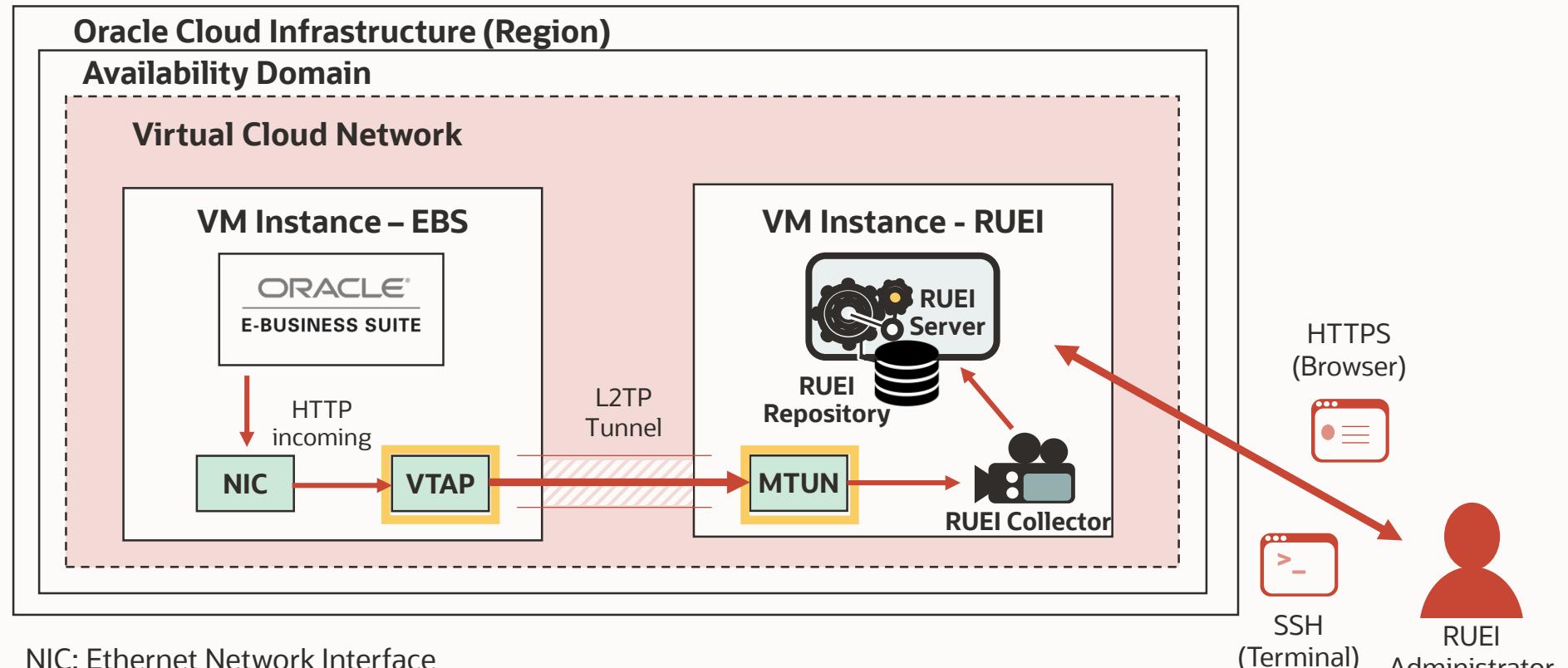
Challenges in Traditional RUEI setup



Monitor real-user experience of cloud applications

Sample deployment RUEI and EBS deployed on Oracle Cloud in the same VCN

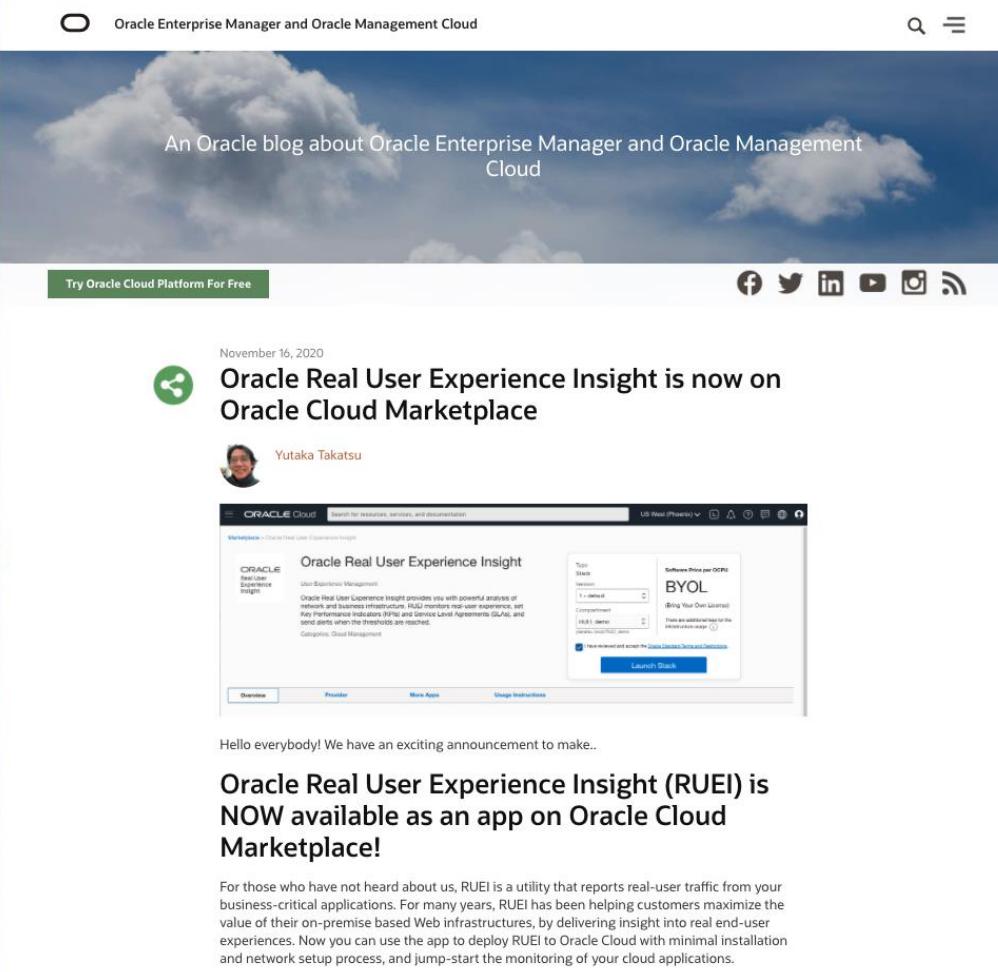
- Setup Virtual Ethernet Network TAP and Layer Two Tunneling Protocol (L2TP) tunnel
- Traffic flows from the EBS instance, to RUEI instance
- Application can be in the same or different VCN, Domain or Region



NIC: Ethernet Network Interface
VTAP: Virtual Ethernet Network TAP
L2TP: Level 2 Tunnel Protocol
MTUN: L2TP Multiple Tunnel Aggregator Virtual Network Interface

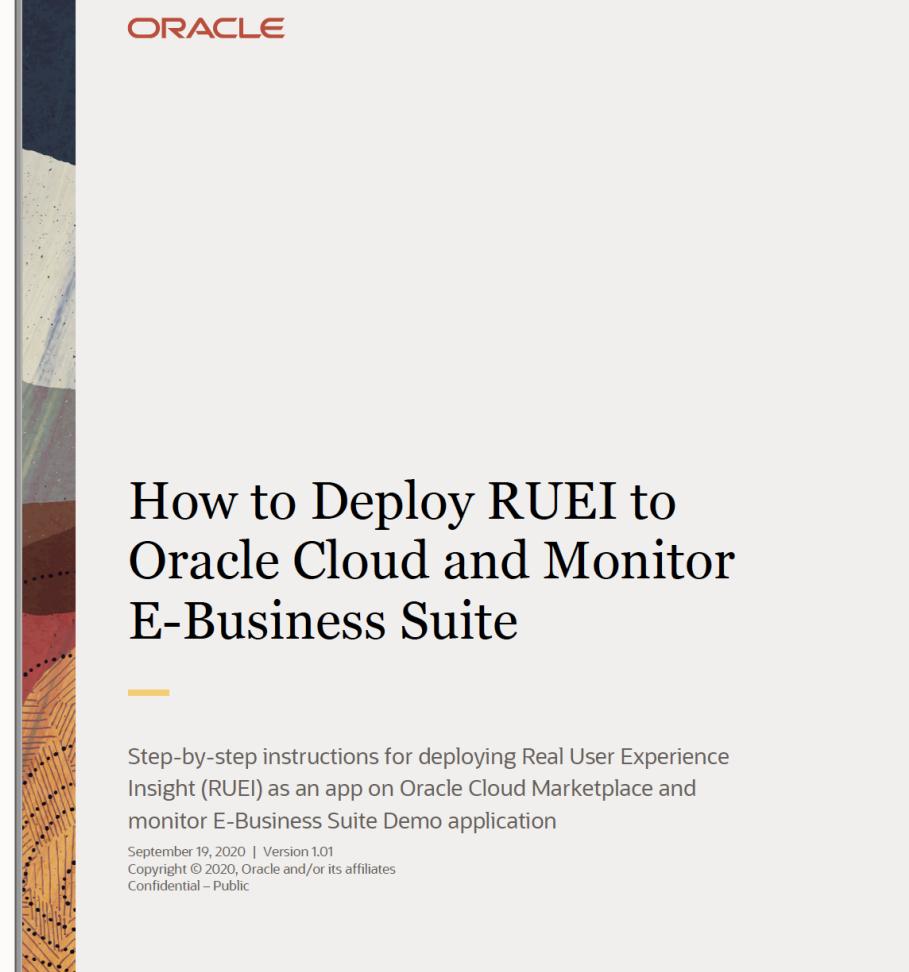
Additional Information

- **BLOG:** Oracle Real User Experience Insight is now on Oracle Cloud Marketplace
- **White Paper:** How to Deploy RUEI to Oracle Cloud and Monitor E-Business Suite



The screenshot shows a blog post on the Oracle Enterprise Manager and Oracle Management Cloud website. The post is titled "Oracle Real User Experience Insight is now on Oracle Cloud Marketplace" and is dated November 16, 2020. It features a photo of Yutaka Takatsu and a screenshot of the Oracle Cloud Marketplace interface for RUEI. The post text announces the availability of RUEI as an app on Oracle Cloud Marketplace and provides a brief description of the tool.

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



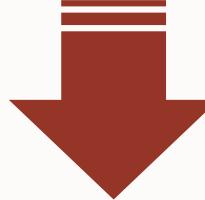
The screenshot shows the cover page of a white paper titled "How to Deploy RUEI to Oracle Cloud and Monitor E-Business Suite". The page features the Oracle logo and a decorative background. The title is prominently displayed in large, bold, black text. Below the title, a subtitle reads "Step-by-step instructions for deploying Real User Experience Insight (RUEI) as an app on Oracle Cloud Marketplace and monitor E-Business Suite Demo application". The page also includes the date (September 19, 2020), version (1.01), copyright information (Copyright © 2020, Oracle and/or its affiliates), and a confidentiality statement (Confidential – Public).

<https://www.oracle.com/a/otn/docs/enterprise-manager/deploy-ruei-to-oracle-cloud-and-monitor-ebs.pdf>



- Certification history

- EM 13.2 with FMW plugin 13.2.2
 - ✓ Support for FMW 12.2.1.1 & 12.2.1.2
- EM 13.3 with FMW plugin 13.3.1
 - ✓ Support for FMW 12.2.1.3
- EM 13.4 with FMW plugin 13.4.1
 - ✓ Support for FMW 12.2.1.4



Continues to future versions of FMW...

Support for Oracle Fusion Middleware 12.2.1.4

NEW in
13.4

The screenshot shows the Oracle Enterprise Manager 13.4 interface with the following sections:

- Summary:** Displays "Up Since May 29, 2020 12:29:44 AM" and "OK Health".
- Monitoring:** Shows "Request Processing Time (ms) 8.13" and "Requests (per minute) 3".
- Deployments:** Shows "26 Up" and deployment details for "bi_cluster": CPU Usage (5.07%), Heap Usage (2,477.16 MB), Java Vendor (Oracle Corporation), and Java Version (1.8.0_251).
- Most Requested:** Shows requests for "oracle.bi.servicelcm_v2.webserv" and "BI Search REST Services".

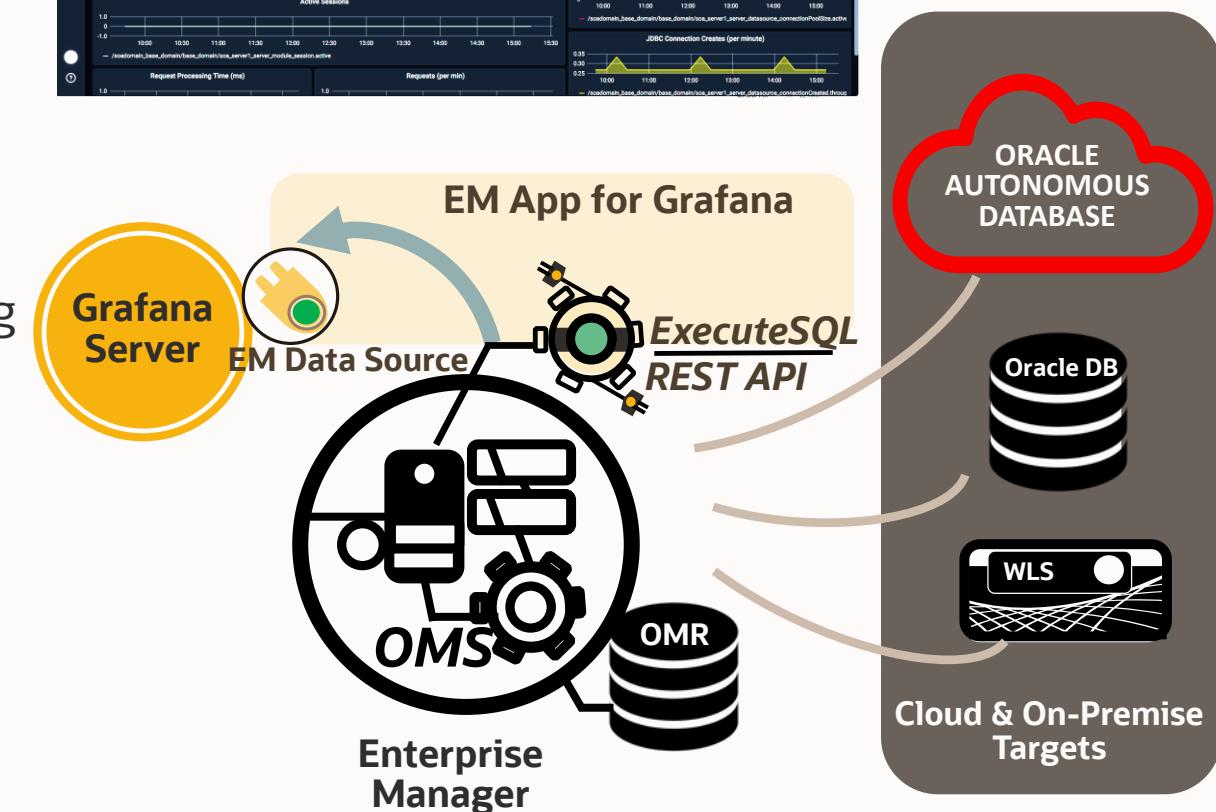
- Discover, monitor and manage FMW 12.2.1.4
 - Certified capabilities include..
 - View summary of status & health at target home pages
 - Monitor targets, resources and logs
 - Targets include: domains, clusters, servers, apps, Node managers
 - Utilize predefined performance and availability metrics
 - Real time and historical monitoring
 - Diagnose problems with JVMD
 - Start, stop or restart targets
 - Provision, apply patch, manage configuration and compliance

FMW 12.2.1.4 products certified by EM 13.4

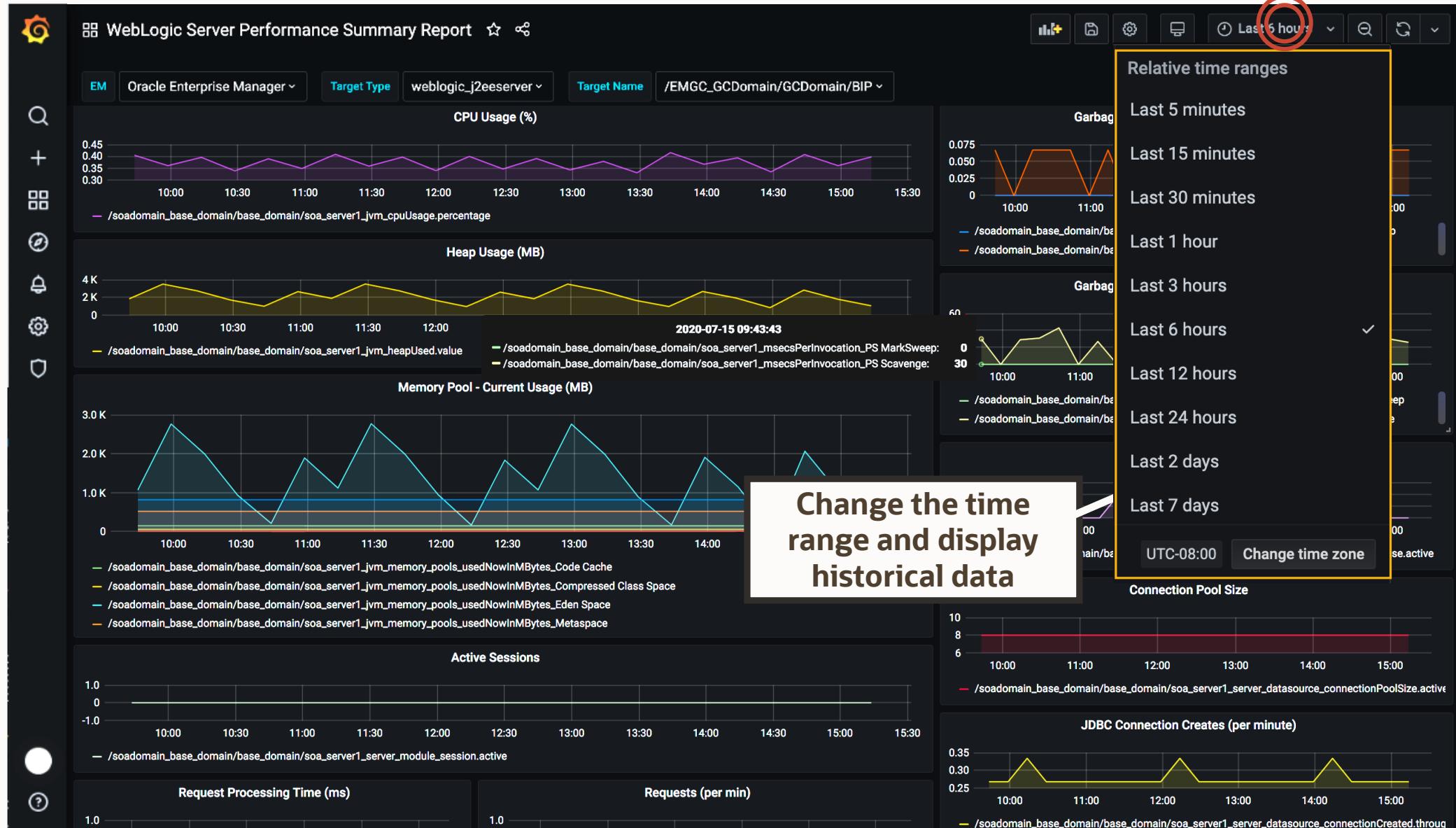
Oracle Access Manager	Oracle Reports
Oracle Business Intelligence EE	Oracle Service Bus
Oracle Coherence	Oracle SOA Suite
Oracle Directory Integration Platform	Oracle Traffic Director
Oracle Forms	Oracle WebCenter Content
Oracle HTTP Server	Oracle WebCenter Portal
Oracle Identity Governance	Oracle WebLogic Server
Oracle Internet Directory	

Enterprise Manager App for Grafana

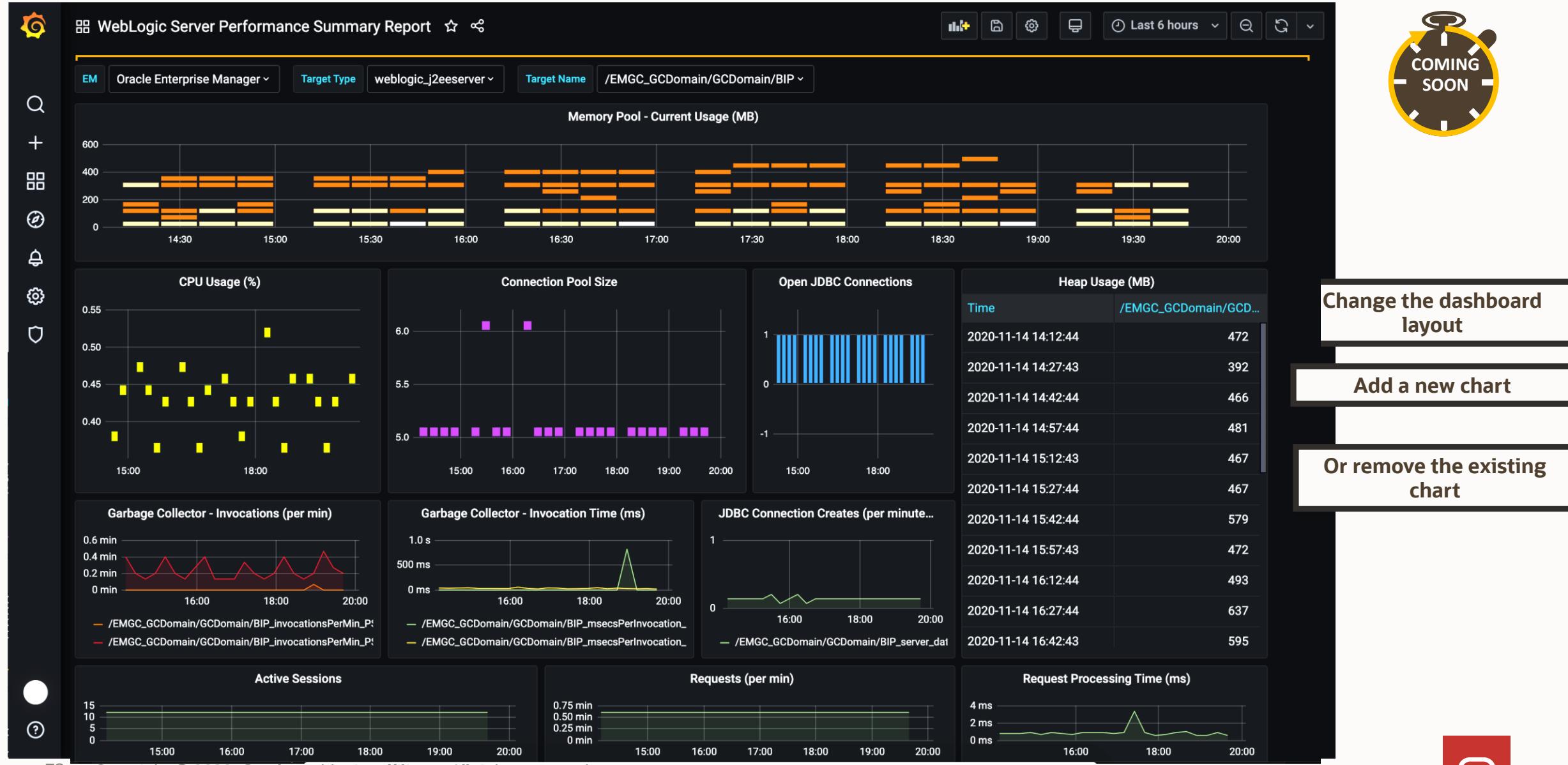
- Oracle Enterprise Manager App for Grafana (EM 13.4 RU3)
- Quickly create custom EM dashboards
 - Out-of-the-box integration with EM schema (query by target, metric group, metric name)
 - Execute SQL via REST API: standards-based access
 - Sample EM dashboards included to get you started
- Federate multiple EMs into a single view
 - Easily pull data from multiple EM instances by reusing useful dashboards against new EMs
 - Combine EM and third-party data sources
- Out-of-the-box DB and MW dashboards
 - **Middleware dashboards Coming Soon!**
 - WebLogic Performance Summary
 - JVM Performance Report



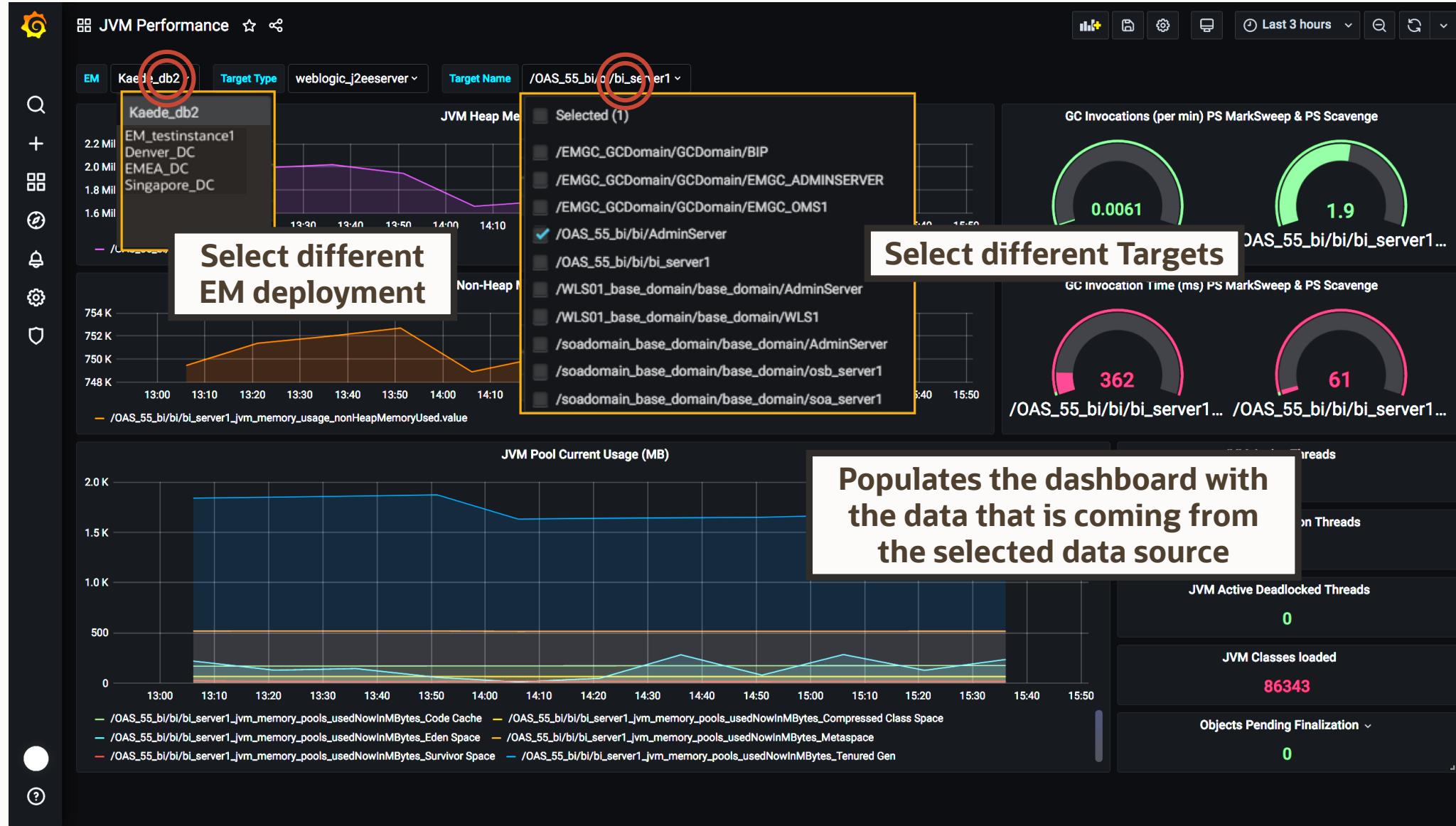
Enterprise Manager App for Grafana– WebLogic Performance Summary



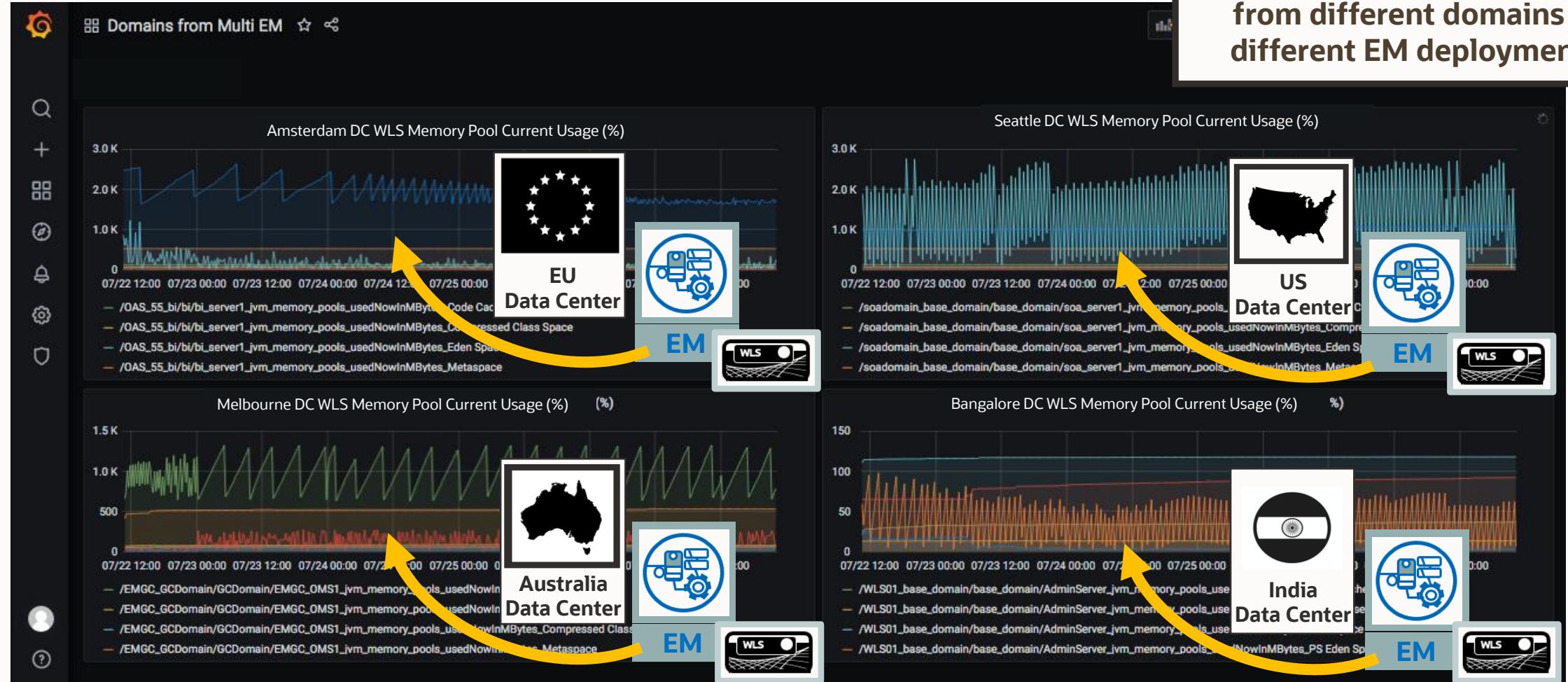
Enterprise Manager App for Grafana– WebLogic Performance Summary



Enterprise Manager App for Grafana- JVM Performance Dashboard



Enterprise Manager App for Grafana- Multi-Domains / EM instances



Enterprise Manager App for Grafana

Two types of Queries

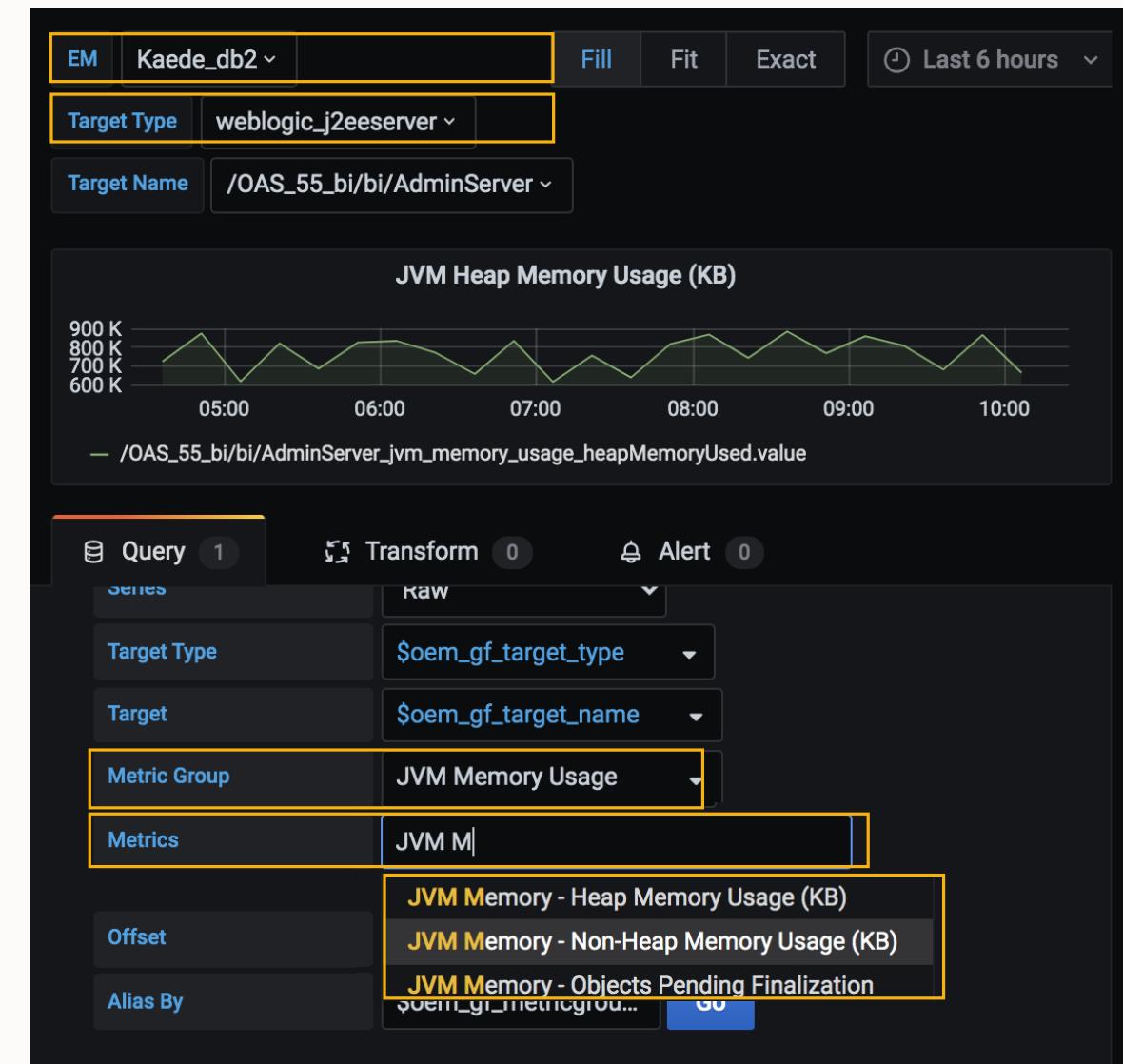
- Use Built-in Time Series Queries
 - No need to write a SQL query
 - Build the query from the UI using pre-defined EM fields (Target Type, Target, Metrics)
- Build your own Time Series queries
 - Write your own SQL query
 - Pull data from EM repository based on your own query

Query Type: Non-time series

Series: Custom(Repository)

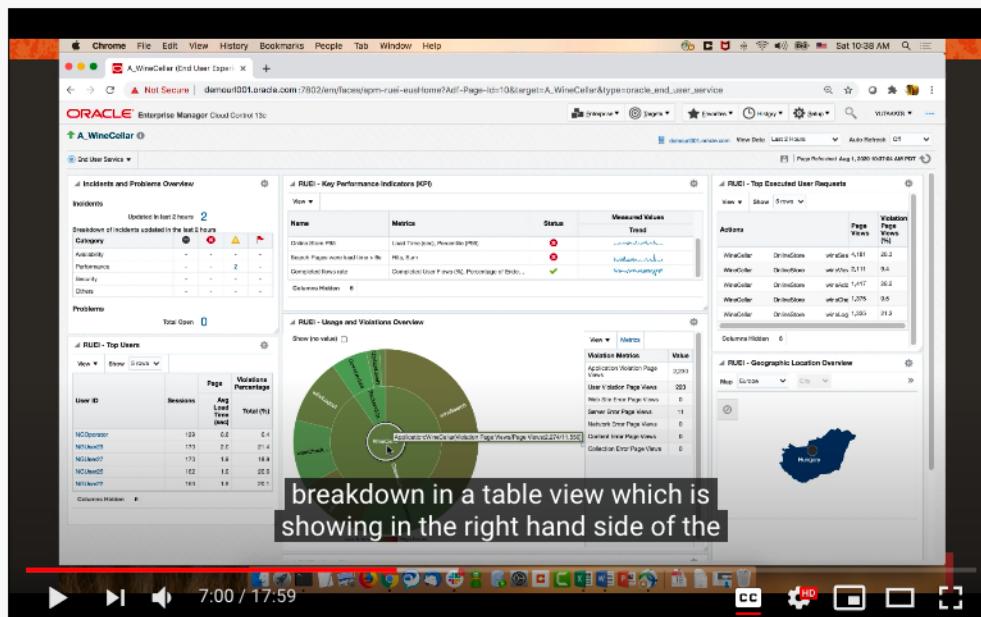
Query:

```
SELECT target_type, availability_status, count(*)  
FROM MGMT$AVAILABILITY_CURRENT  
WHERE lower(availability_status)  
like "%target down%"  
group by target_type, availability_status  
order by count(*) desc;
```



More Information on YouTube

Oracle Real User Experience Insight (RUEI) Demo



breakdown in a table view which is showing in the right hand side of the

7:00 / 17:59

Oracle Real User Experience Insight (RUEI) Demo

316 views • Aug 18, 2020

4 0 SHARE SAVE ...

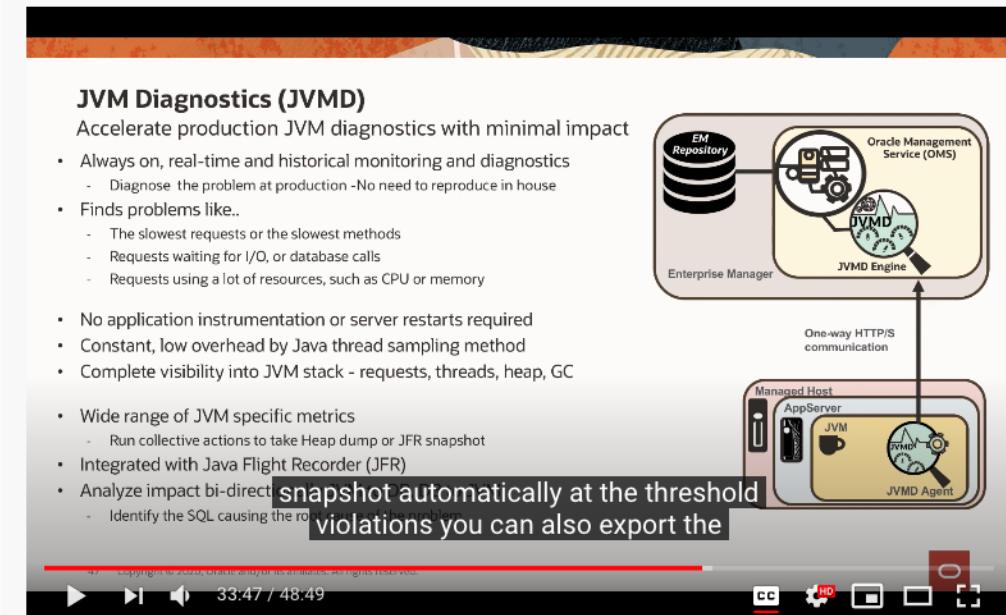


Oracle Learning
105K subscribers

2 min Intro + 15 min product demo (2:20). Covered topics are RUEI dashboard, full session replay view, integration with Java Workload Explorer, KPI, incident management, user flows and end user session diaanostics.

Managing Oracle WebLogic Server with Oracle Enterprise Manager

YouTube



JVM Diagnostics (JVMD)
Accelerate production JVM diagnostics with minimal impact

- Always on, real-time and historical monitoring and diagnostics
 - Diagnose the problem at production -No need to reproduce in house
- Finds problems like..
 - The slowest requests or the slowest methods
 - Requests waiting for I/O, or database calls
 - Requests using a lot of resources, such as CPU or memory
- No application instrumentation or server restarts required
- Constant, low overhead by Java thread sampling method
- Complete visibility into JVM stack - requests, threads, heap, GC
- Wide range of JVM specific metrics
 - Run collective actions to take Heap dump or JFR snapshot
- Integrated with Java Flight Recorder (JFR)
- Analyze impact bi-directly
 - Identify the SQL causing the violations you can also export the

snapshot automatically at the threshold

One-way HTTP/S communication

Managed Host AppServer JVM JVMD Agent

33:47 / 48:49

Managing Oracle WebLogic Server with Oracle Enterprise Manager

447 views • Aug 4, 2020

10 1 SHARE SAVE ...



Oracle Learning
105K subscribers

Covered topics are WebLogic discovery (3:02), middleware summary pages (4:49), Grafana dashboards (7:56), monitoring features (11:28), Real User Experience Insight (RUEI) (19:07), JVM Diagnostics (JVMD) (30:08), WebLogic configuration and compliance management (38:00), also patching and provisioning (44:25).

Thank you

