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*Under 45
Minutes*

September 28–
October 2, 2014
San Francisco

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OPEN
WORLD

Zero to Manageability in ~~One Hour~~

Build a Solid Foundation for Oracle Enterprise Manager 12c

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October 1, 2014

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Enterprise Manager Strategic Customer Programs



Work with global customers on biggest, most mission critical implementations

80+ Enterprise Manager 12c implementations



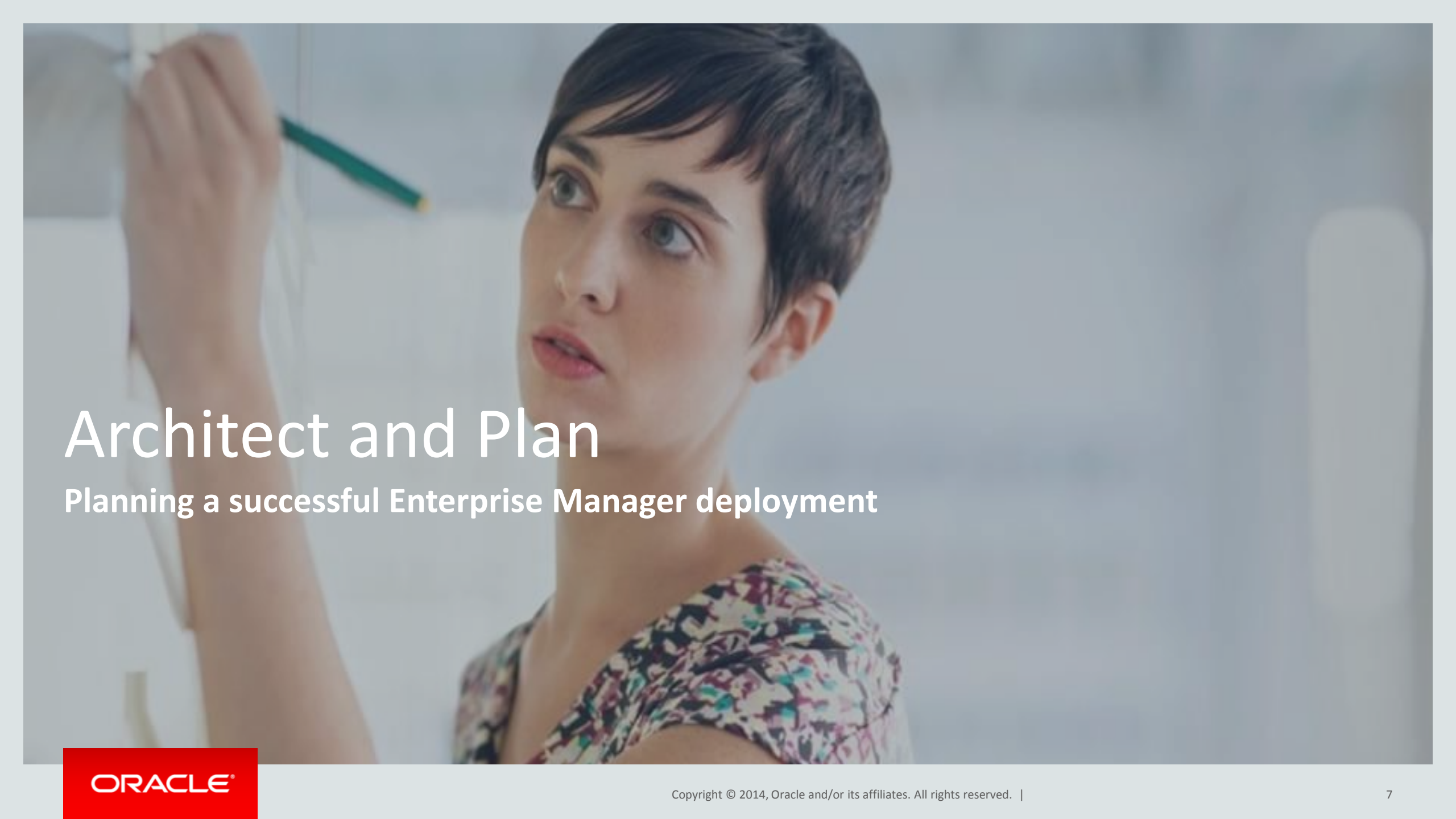
Combined years of experience working with Enterprise Manager in all capacities (dev, support, user)



Promote battle tested recommendations by presenting, writing, and working with more customers

Program Agenda

- 1 ➤ Architecture and Planning
- 2 ➤ Deploy and Configure
- 3 ➤ Monitoring Framework
- 4 ➤ Summary
- 5 ➤ Customer Case Study: SUNY



Architect and Plan

Planning a successful Enterprise Manager deployment

Total Cloud Control

ORACLE®
ENTERPRISE MANAGER **12^c**



**Complete Cloud Lifecycle
Management**



**Expanded Cloud Stack
Management**



**Superior Enterprise-Grade
Management**

Agile, Automated

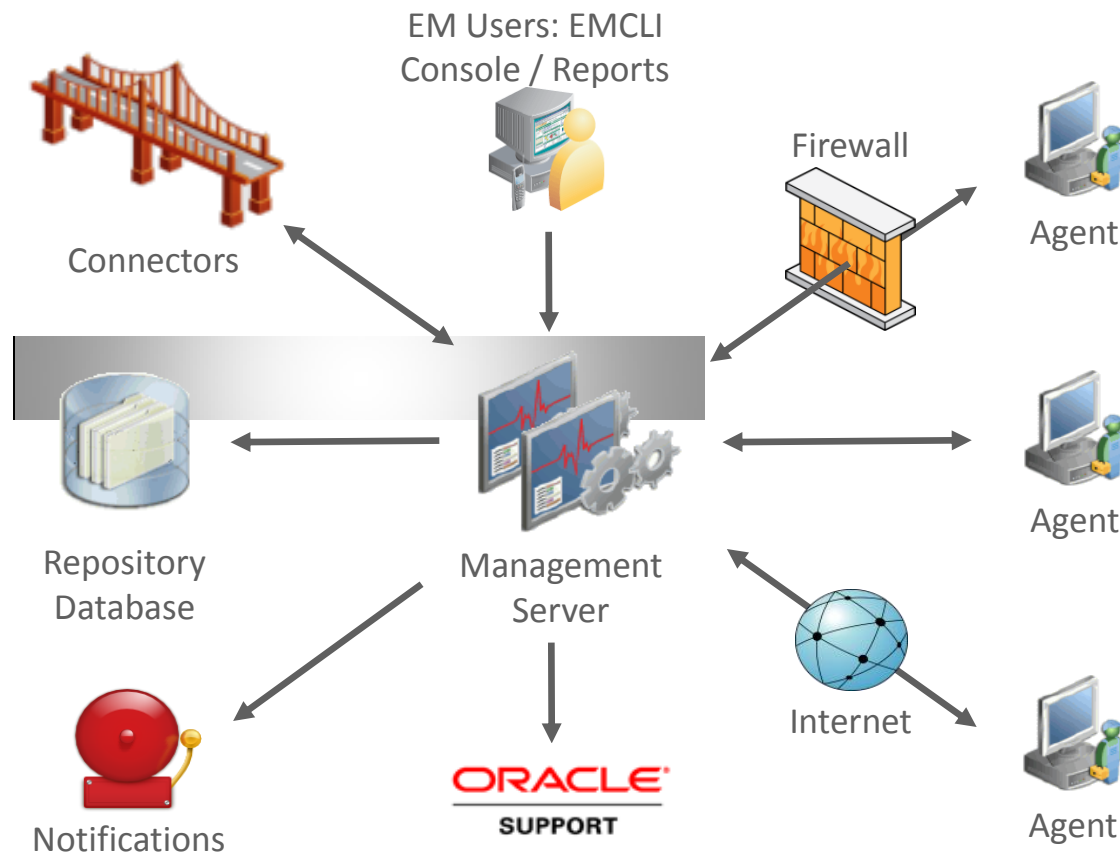
Optimized, Efficient

Scalable, Secure

Laying a Foundation for Success

- Do Your Research
 - Learn about EM 12c and the features you plan to implement
- Define a schedule
 - Small bites and early accomplishments
 - Consider company structure and change processes
 - Include process definition/documentation
- Define a test plan and success criteria

Enterprise Manager Infrastructure Overview



Repository (OMR):

- *Heart*
- Data storage, rollup and purging

Management Server (OMS):

- *Brains*
- Handles management data from Agents
- Handles administration requests from UI
- Sends out notifications

Agents (OMA):

- *Nerve endings*
- Gather management information
- Perform administration task

Design with Growth in Mind

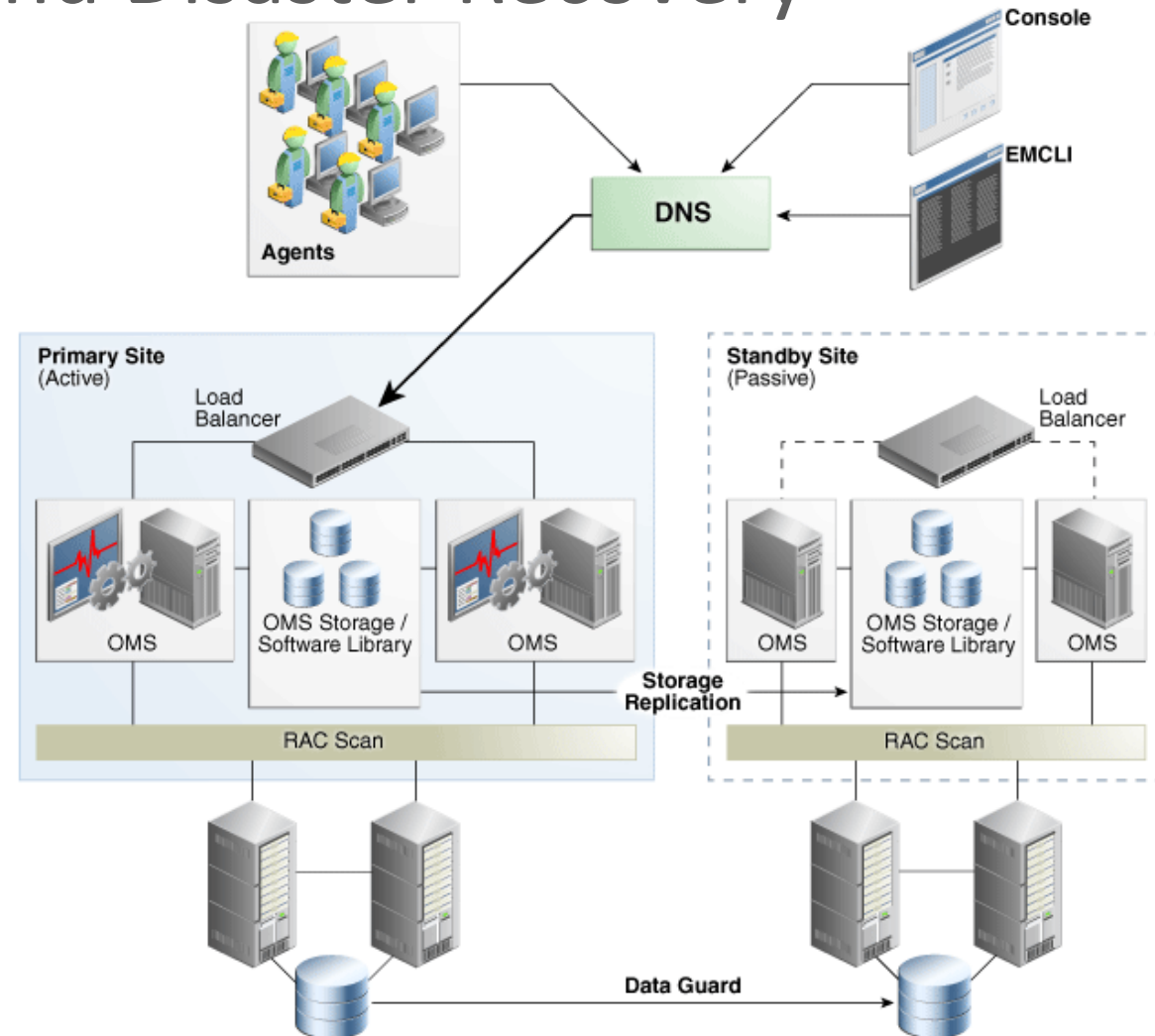
- What features will be used?
- What kind of targets and how many?
 - Identify sizing criteria and plug-ins required
 - Check certification matrix
- How many users and what are their job functions?
- High Availability requirements?

- Read [Advanced Installation Guide](#) chapter on sizing, forecast for growth
 - Consider sizing guidelines as minimums
 - Size up when on the border
- Storage recommendations

OMS Install		64gb	
Software Library	50gb basic		
	250gb patch/provisioning		
	500gb Cloud/VM images		
Agent		2-4gb	
Repository Data	Small	Medium	Large
	100gb	350gb	500gb

Plan for High Availability and Disaster Recovery

- Zero or minimal data loss depending on configuration
 - Level 3 - HA using RAC and multi-OMS with Load Balancer
 - Level 4 - DR using Data Guard and Standby OMS(s)
- Planning ahead
 - Global VIP for DNS/LB
 - Sharable SWLIB location
 - Replicable storage for OMS Binaries



Identifying Network Requirements

- Load balancer or VIP (highly recommended)
- Firewalls and Ports
 - Between OMS and Agent, OMS and Targets (Listener, Admin Server, JMX, etc.)
 - Additional ports required for add-on components (JVMD, BIP, etc.)
- Proxy for access to Oracle via https
 - Offers direct access to patches, plug-ins, Oracle Support knowledge/SRs
 - Highly recommended

support.oracle.com
login.oracle.com
aru-akam.oracle.com
ccr.oracle.com
updates.oracle.com
servicecentral.sun.com*
loginadc.oracle.com*
* Certain firewall configurations
require these

[Doc: Using Self Update in Offline Mode](#)
[Blog: Network Ports Used in Oracle Enterprise Manager 12c](#)

Agent and Host Permissions

- Agent Installation
 - Typically same owner as product install owner (oracle, weblogic)
 - Root access to run root.sh, can be delayed
 - Privilege Delegation requires additional configuration
 - See [agent installation prerequisites](#)
- Post-Install Privilege Delegation (pbrun/sudo/su)
 - Add sudoers/pbrun configuration for nmosudo
 - Configure in EM for each agent and PDP method
 - 12cR4 new default sudo templates

12cR4

Create Template

Type Sudo

Create Sudo Setting Template

* Template Name Linux SUDO

Settings

* Sudo Command /usr/bin/sudo -u %RUNAS%

Default for Platforms

You can set the platforms for which this template will be applied by default as so is added. Select the platforms for which this template is to be applied as default.

Default for Platforms

Linux

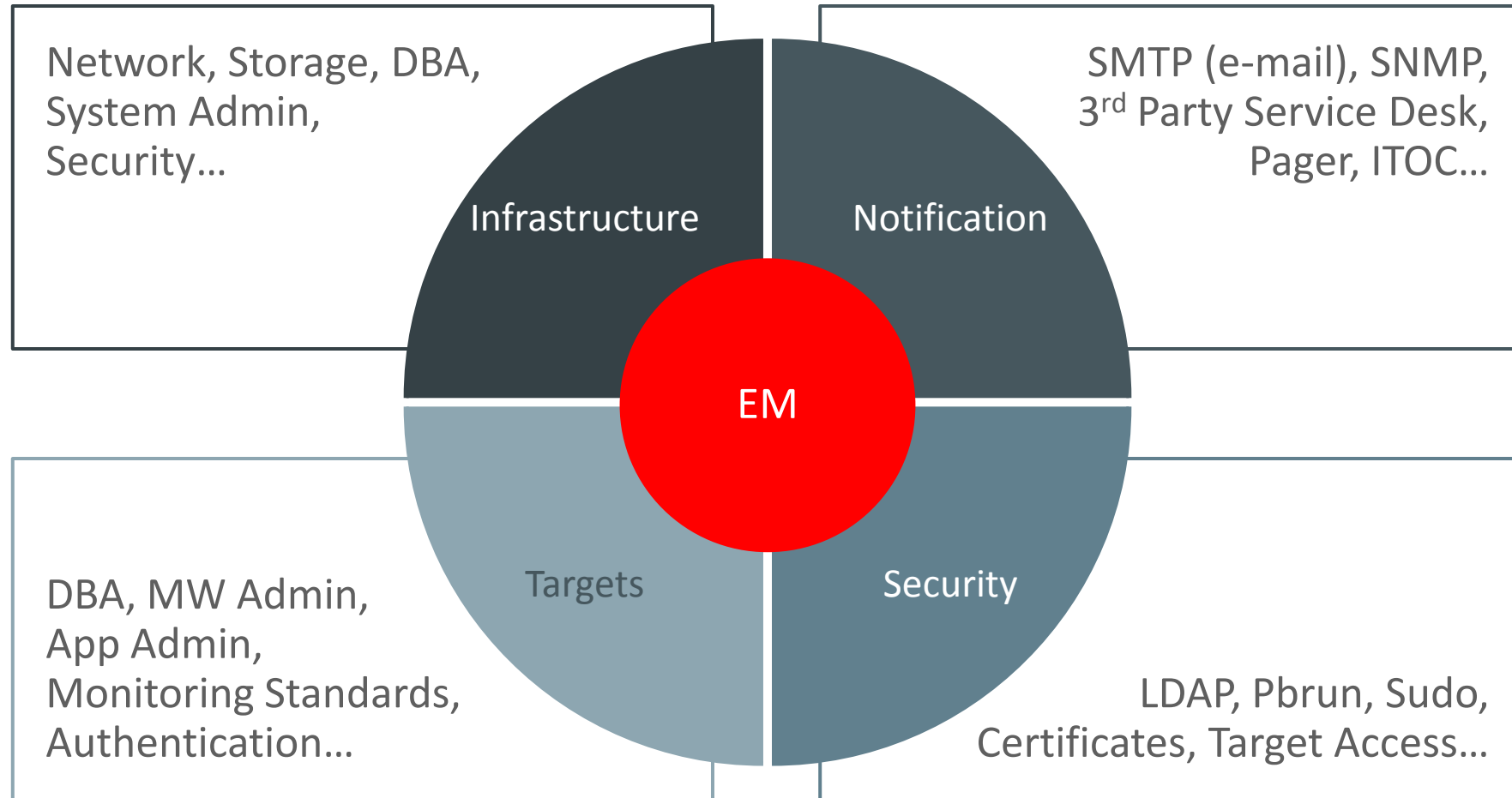
Parameters

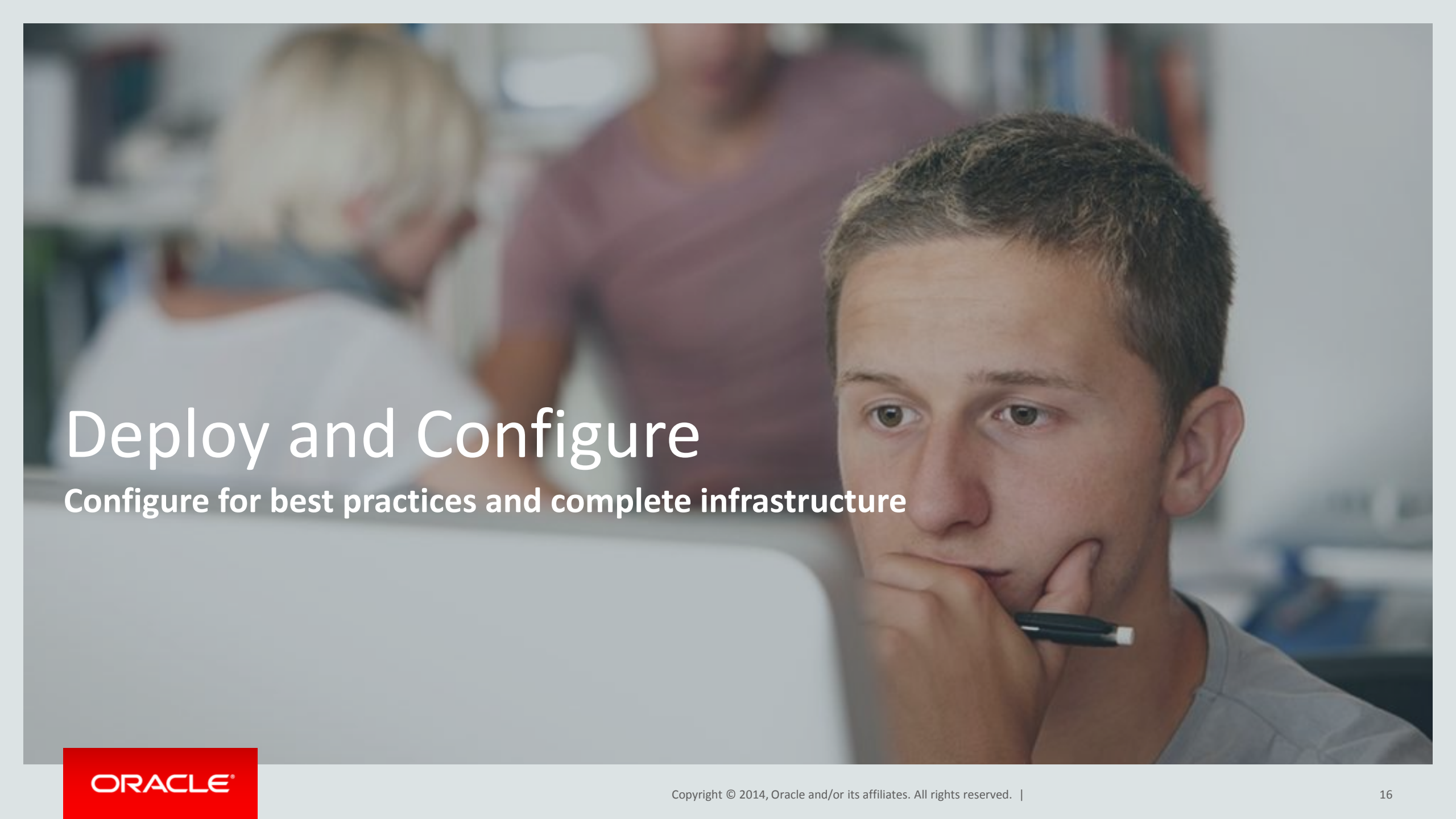
Setting properties can be used in parameters.

Name	Description
%COMMAND%	Sudo Command
%RUNAS%	Run the command as this user.
%USERNAME%	Name of the user running the command.

[Doc: Oracle Enterprise Manager Cloud Control Security Guide](#)

Engagement with Other Resources





Deploy and Configure

Configure for best practices and complete infrastructure

Create a Solid Oracle Management Repository

- Recommend 11.2.0.3 or later + latest PSU patch
 - Use the EM provided DBCA templates (OTN, Basic Install Guide) or
 - Or convert an existing DB by running the DBCA sql scripts
`set_repo_param_11.2.0.3_Database_SQL_for_EM12c_Large_deployment.sql`
- Apply required patches per Install/Upgrade guide
- Disable OPTIMIZER_USE/CAPTURE_SQL_PLAN BASELINES
- Recommend isolating OMR from monitored targets and OMS
- Review Master Index for Cloud Control Oracle Management Service (OMS) and Repository Installation, Upgrade and Patching ([Doc ID 1363769.1](#))

Installation Tips

- Consider Exakit for one-click installation or install on ODA
 - Obtaining the Oracle Enterprise Manager Setup Automation kit for Exadata (Doc ID 1440951.1)
 - [Solution-in-a-box: Deploying Highly Available Monitoring Infrastructure using Oracle Enterprise Manager Cloud Control 12c and Oracle Database Appliance](#)
- Double check prerequisites in advance

```
$. /runInstaller -prereqchecker -entrypoint "oracle.sysman.top.oms_Core"  
PREREQ_CONFIG_LOCATION=<../stage/prereqs> -detailedExitCodes -prereqLogLoc  
<prereqLog_location> -silent -waitForCompletion -invPtrLoc <invPtrLoc>
```
- Download latest installer Auto Updates to prevent known install issues
- Use VNC for performance and recoverability
 - If using Xterm, ensure install stage is not on NFS

Favorite runInstaller Options

- Run in debug to get additional diagnostics

```
$ runInstaller -debug
```

- Download auto-updates from a connected system (Doc ID 1099123.1)

- Unzip install binaries on connected system (i.e. desktop)

```
$ runInstaller -downloadUpdates
```

- Copy entire updates folder /tmp/OraInstall<date_time>/updates and stage on server

- Select local directory to search for updates

- Show proxy options for Auto Updates

```
$ runInstaller -showProxy
```

- Use a non-default Inventory location

```
$ runInstaller -invPtrLoc <full path of oraInst.loc>
```

Backups, Backups, Backups! Recovery, Recovery, Recovery!

- Repository
 - [MAA Best Practices](#): weekly full, daily incremental and archive logs, flashback enabled
- OMS
 - Binary Install, Software Library, EMKey
`$ORACLE_HOME/sysman/config/emkey.ora`
 - OMS Configuration from all OMSeS
`$ORACLE_HOME/bin/emctl exportconfig oms`
- Agent
 - Recoverable from the OMS, except for emd.properties tweaks
- Test your Recovery!

Installing Plug-ins and Agents

- Order is important
 - Setup / Provisioning and Patching / Offline Patching
 - Setup / My Oracle Support / Proxy
 - Setup / My Oracle Support / Set Credentials
- Download current catalog
- Download and apply agents and plug-ins
 - 12cR4 – Deploy multiple plug-ins in one step via UI or EMCLI

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update

Status

Connection Mode **Online**

Last Download Time J

Most Recent Refresh Time  Sep 17, 2014 8:09:23 AM PDT

Last Download Type A

Actions ▾				Open	Check Updates	Plug-in
Type	Available Updates	Downloaded Updates	Applied Updates			
Agent Software	38	0	2			
BI Publisher Reports	0	0	0			

Deploy Plug-ins on Management Servers: Plug-ins

12cR4

Step 1 of 5

Next

Cancel

Name	Version			Downtime Required	Use Last Successful Prerequisite
	Latest Available	Currently Deployed	To Deploy		
Oracle Audit Vault	12.1.0.4.0	None	12.1.0.4.0 ▾		☐
Oracle Fusion Applications	12.1.0.6.0	None	12.1.0.6.0 ▾	✓	☐

Configure Load Balancer/VIP

- Recommend always using a VIP to avoid rework in future when adding additional OMSes

- Secure OMS, full stop/start

```
$ emctl secure oms -sysman_pwd <sysman_pwd> -reg_pwd <agent_reg_password> -host  
oms.example.com -secure_port 4900 -slb_port 4900 -slb_console_port 443 -console -lock -  
lock_console  
$ emctl stop oms  
$ emctl start oms
```

- Resecure all agents

```
$ emctl secure agent -emdWalletSrcUrl https://oms.example.com:4900/em
```

- Resecure EM CLI

```
$ emcli setup -url=https://oms.example.com/em -username=em_user
```

- Console URL in MTM Health Overview

Import Custom Certificate for Console

- Create wallet with custom certificate
[MOS Note 1367988.1](#) and secure the console

Without Load Balancer

```
$ emctl secure console -wallet <wallet_loc>
```

With Load Balancer

```
$ emctl secure oms -host oms.example.com  
-secure_port 4900 -slb_port 4900  
-slb_console_port 443 -console  
-wallet <wallet_loc>
```

```
$ emctl stop oms -all
```

```
$ emctl start oms
```



This Connection is Untrusted

You have asked Firefox to connect securely to **ha-em.us.oracle.com**, but we can't confirm that your connection is secure.

Normally, when you try to connect securely, sites will present trusted identification to prove that you are going to the right place. However, this site's identity can't be verified.

What Should I Do?

If you usually connect to this site without problems, this error could mean that someone is trying to impersonate the site, and you shouldn't continue.

[Get me out of here!](#)

► **Technical Details**

► **I Understand the Risks**

[Doc: Oracle Enterprise Manager Cloud Control Security Guide](#)

Optimize for Your Environment

- Increase JAVA Heap Size

- Default 1.7gb, Recommend 2-4gb

```
$ emctl set property -name OMS_HEAP_SIZE -value 4096M
```

- Adjust Console Timeout value

```
$ emctl set property -name oracle.sysman.eml.maxInactiveTime -value 60
```

- Additional Configurations

- Increase Stuck Thread Timeout
- Reduce duplicate/excessive logging
- Run repvfy execute optimize

MOS Note 1553342.1 - Oracle Enterprise Manager 12c Configuration Best Practices

Clone OMS for High Availability

- Requires Load Balancer, shared Software Library
- Use Deployment Procedure to clone the OMS

Deployment Procedure Manager

Procedure Library Procedure Activity Recycle Bin

Procedures are best practices provided by Oracle for various Provisioning and Patching tasks. Procedures created by Oracle cannot be edited or extended using 'Create Like', so that you can customize the procedure to fit your environment.

Search Text Fields [Advanced Search](#)

Launch

Previous 1-25

Select	Procedure ▲	Type	Parent	Version	Last Updated	Description	La Mi By
☒	Add Management Service	Enterprise Manager High Availability Operations	None	1.2	Apr 3, 2012 1:25:28 PM UTC	Procedure to add an additional Management Service to an existing Enterprise Manager system.	Or
						This procedure installs or clones	

[Doc: Oracle Enterprise Manager Cloud Control Advanced Installation and Configuration Guide](#)



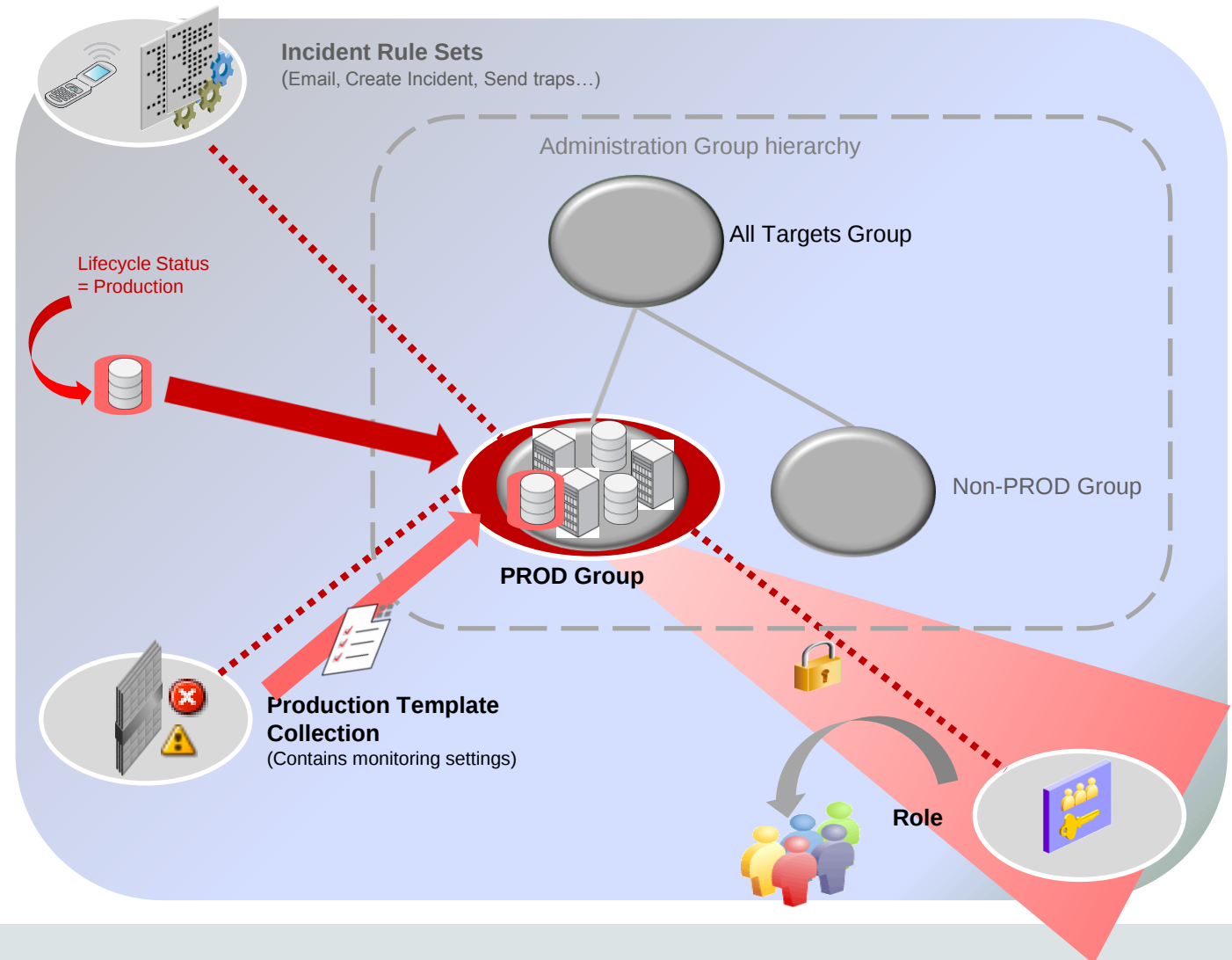
Setting up Monitoring Framework

Configure monitoring framework and discover targets

Modern
Business
in the
Cloud

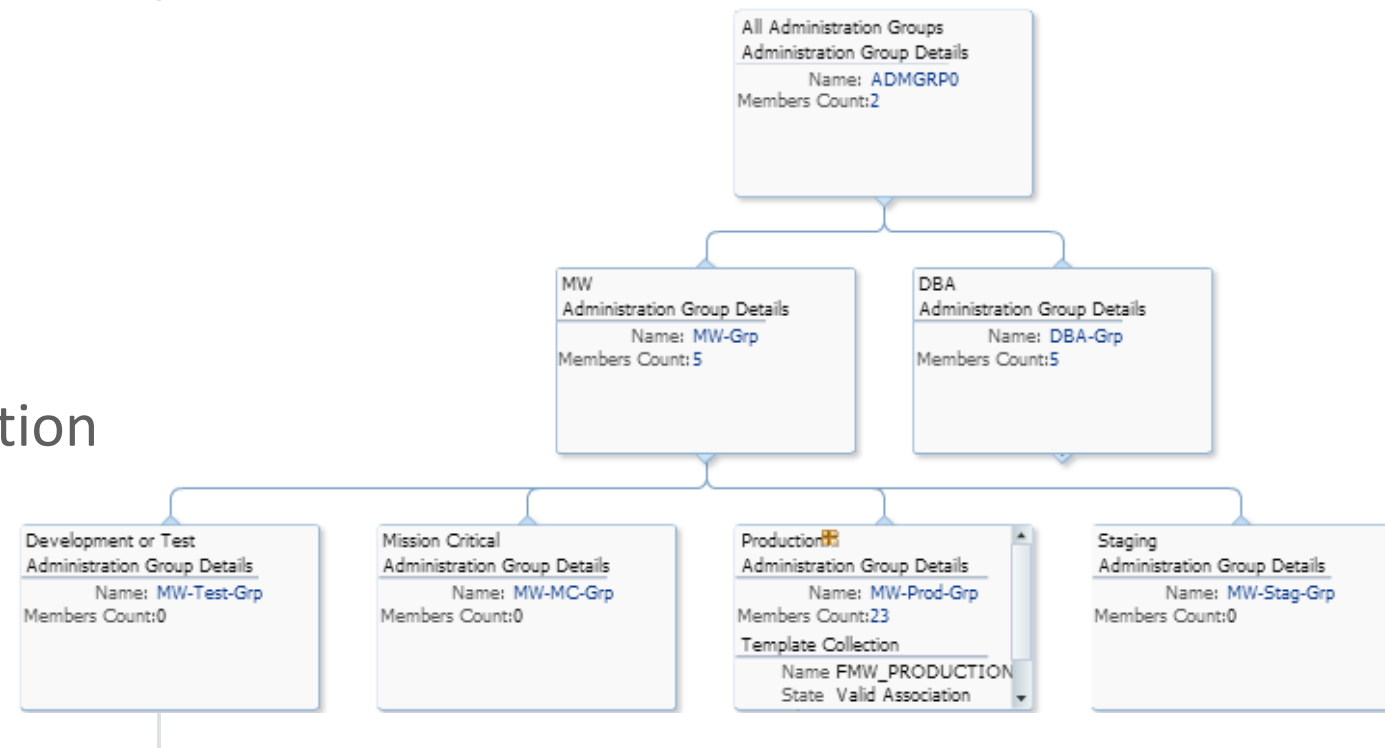
Components of the Monitoring Framework

- Groups
- Target Properties
- Templates
- Template Collections
- Roles
- Incident Rules
- Agents
- Targets



Group Targets with Common Attributes

- Think about how your targets will be Accessed? Monitored? Notified?
- Define Organizational structure (DB, MW, Host, etc) as well as LifeCycle Status (Dev, Prod)
- Monitoring Settings
 - Admin Group for template automation
- Security, Notifications
 - If Admin Group doesn't work, use dynamic groups



[Whitepaper: Strategies for Scalable, Smarter Monitoring using Oracle Enterprise Manager Cloud Control 12c](#)

Importance of Target Properties

- Control membership to Administration Groups/Dynamic Groups, filters in Incident Rules and Notification Methods, Reports
- LifeCycle Status now helps prioritize OMS workload in back logged system/agents
- Set at container level for WLS Farm, Systems, Clusters, Groups, etc.
`emcli set_target_property_value - propagate_to_members`

Name	Value
Comment	
Contact	
Cost Center	
Customer Support Identifier	
Department	
Lifecycle Status	None ▾
Line of Business	
Location	
Operating System	Linux
Platform	x86_64
Target Version	12.1.0.1.0

Department	Marketing
Lifecycle Status	None ▾
Line of Business	
Location	
Operating System	Linux
Platform	x86_64
Target Version	5.8.0.0.0

None

Mission Critical

Production

Staging

Test

Development

Unassigned Targets Report

- Check often for targets not added to administration group, correct target properties
- Non privilege propagating aggregate targets won't get added
 - Convert to privilege-propagating

```
$ emcli modify_system -  
  privilege_propagation=true
```
 - Exclude: group, generic system, generic service

Administration Groups and Template Collections

Overview | Hierarchy | Template Collections | **Associations**

Actions ▾ | ⇄ Associate Template Collection | ✕ Disassociate Template Collection

Unassigned Targets Report
Out of Synchronization Targets Report

Unassigned Targets

This table lists all the targets that are not part of any Administration Group member of Administration Groups.

> Search

View ▾ | Detach

Target Name	Non Privilege Propagating Aggregate
eChannelObjMgr_enus_eChannel_solserver2_siebel_stuz	
eServiceObjMgr_enus_CallCenter_solserver2_siebel_stuz	
szymon	☒
/Farm05_fod_domain/fod_domain/soa_server1/jaxrpc-	☒
SHAppComposite	☒
LG	☒

Templates

- Standardize your metrics!
 - Limit alerts (metrics with thresholds) to actionable metrics
 - Use reports for non-urgent metrics and trending
- Ways to Create Templates
 - Customize a target and create from that target
 - Create by Target Type using Oracle Recommended settings
 - Oracle Certified Templates

Search

Name Target Type

☒ Display Oracle Certified Templates

Actions ▾ View ▾  Create  Edit  Delete...

Name	Target Type
Oracle Provided Payables Template for Cloud	Payables
Oracle Provided Payments Template for Cloud	Payments
Oracle Provided Payroll Template for Cloud	
Oracle Provided Project Billing Template for Cloud	
Oracle Provided Project Costing Template for Cloud	
Oracle Provided Purchasing Template for Cloud	
Oracle Provided Sales Forecasting Template for Cloud	
Oracle Provided Sales Prediction Template for Cloud	
Oracle Provided Self Service Procurement Template for Cloud	
Oracle Provided Shipping Template for Cloud	
Oracle Provided Supplier Model Template for Cloud	
Oracle Provided Territory Management Template for Cloud	

Create Monitoring Template: Copy Monitoring Settings

Copy Monitoring Settings using ☐ Target ☒ Target Type

Select a representative target type with monitoring settings you want copied into

Target Type Category

Target Type

- Cluster
- Cluster Database**
- Database Instance
- Global Data Services
- Global Data Services Pool
- Global Service Manager
- IBM DB2 Database
- Listener
- Microsoft SQL Server
- Oracle High Availability Service
- Oracle Secure Backup Domain
- Pluggable Database
- Sybase Adaptive Server Enterprise

Template Collections

- Group of templates that can be associated to an administration group tier
 - DBA Dev, DBA MC/Prod, FMW Prod
- Last applied wins
- Check Synchronization Status

Administration Groups and Template Collections > Create Template Collection

Create Template Collection

* Name

Description

Monitoring Templates (6)		Compliance Standards (3)	Cloud Policies (0)
View ▾	+ Add	✎ Remove	Go To Monitoring Templates Home
Name	Target Type		
Oracle Certified Template for Agent targets	Agent		
Oracle Certified FMW Base Template for Weblogic Domain	Oracle WebLogic Domain		
Oracle Certified Fusion Apps Template for Weblogic Cluster	Oracle WebLogic Cluster		
Oracle Certified Template for JTA Metrics for Weblogic Server	Oracle WebLogic Server		
Oracle Certified Template for Host targets			
Oracle Certified Fusion Apps / FMW Template for JEE App			

Production

Administration Group Details

Name: MW-Prod-Grp

Members Count: 22

Template Collection

Name FMW_PRODUCTION

State Valid Association

Synchronization Status for MW-Prod-Grp

Each target in the Administration Group is synchronized with the items in the Template Collection where applicable. If an error occurred during synchro the link under 'Failed Targets' to see the details in the message column of opened pop-up.

Last Synchronization Sep 17, 2014 11:23:55 AM PDT

Next Synchronization N/A

All targets under the administration group are synchronized with Template Collections.

View ▾	Start Synchronization	Exclude from Synchronization	View Synchronization History			
Name	Synchronized Targets	Pending Targets	Running Targets	Failed Targets	Excluded Targets	N/A Targets
Monitoring Templates	11	0	0	0	0	11
Compliance Standards	5	0	0	0	0	17
Cloud Policies	0	0	0	0	0	22

Create Function/Job Based Roles

- Grant roles to users not direct privileges
- Grant **Target Privileges** on groups of targets to restrict access in multi-organization environments
 - Use the Connect Target Read-Only
- Limit the use of the “Any”s
- Utilize the Out-of-Box Roles for examples

Target Privileges

Select targets and grant privileges on those targets explicitly. Any Administrator granted with this role will have these target privileges. Use "Grant to All" button to assign privileges to all targets. Use "Grant to Selected" button to assign privileges to multiple targets. Targets will be replaced by the batch settings. To edit individual privileges use the "Edit" icon.

Name Type

| ☐ Advanced Privilege Settings

|

Select	Name	Type	Manage Target Privilege Grants
☐	Host group	Group	Connect Target Read-only 

Incident Rule Sets and Notifications

- Rule Set contains 1+ rules and actions
 - Customize out-of-box Rule Set
 - Group by function or organization
 - Filter on Groups to target notifications
 - Out-of-box has no action on Warnings
- Create incidents, e-mail, SNMP, custom notification scripts or send to 3rd party connectors
- Simulate Rules in 12cR4
 - Test rules against targets or alert types

12cR4

Simulating Rules (applies to events only)

Follow the two steps below to initiate simulation of all rules for selected sample event.

1. Search and select for event to be used as sample in simulation of rules. The event will be passed through rules as if setting.
2. Review simulation results

Step 1: Select Event, Review Event and Start Simulation

Target Name  Event Type
Target Type

Select event to be used as sample to simulate rules. You can tweak the target name, if needed, to match any specific rule.

View

Event Type	Internal Event Name	Message
Target Availability	Status	Host Up (Unmonitored) - Detected by Partner Agent
Target Availability	Status	Host Up (Unmonitored) - Detected by Partner Agent
Target Availability	Status	Agent has stopped monitoring. The following errors are reported : Read timed o
Target Availability	Status	The current status of the target is Agent Unreachable
Target Availability	Status	Agent has stopped monitoring. The following errors are reported : Read timed o

Step 2: Review Simulation Results

If expected result does not appear below, refer to "Troubleshooting" section under "Setting Up Rule sets" in Administrator's

- Incident created by rule (Name = Incident management rule set for all targets, Incident creation rule for down and

Agent Deployment

- Push, pull, clone, rpm, emcli
 - Test before mass deploy
- Apply latest Agent/Plugin Patches
 - Stage agent patches in
\$OMS_HOME/install/oneoffs
 - Create custom plug-in updates
`$emcli create_custom_plugin_update`
`agent_name="agent_name"`
`-plugin_id="plugin_id" [-overwrite]`

 **Custom Plug-in update**

Creation Date September 23, 2014 1:40:41 PM PDT
Source Agent slc05ptb.us.oracle.com:3872

▲ **Plug-in Oracle Home Patch Inventory at creation time**

Oracle Interim Patch Installer version 11.1.0.11.0
Copyright (c) 2014, Oracle Corporation. All rights reserved.

Oracle Home : /scratch/cllamas/view_storage/oracle/agent/plugins/oracle.sysman.db.agent.plugin_12.1.0.6.0
Central Inventory : /scratch/cllamas/view_storage/oracle/oraInventory
from : /scratch/cllamas/view_storage/oracle/agent/core/12.1.0.4.0/oraInst.loc
OPatch version : 11.1.0.11.0
OUI version : 11.1.0.12.0
Log file location : /scratch/cllamas/view_storage/oracle/agent/plugins/oracle.sysman.db.agent.plugin_12.1.0.6.0

OPatch detects the Middleware Home as "/scratch/cllamas/view_storage/oracle/em/12.1.0.4"

Lsinventory Output file location : /scratch/cllamas/view_storage/oracle/agent/plugins/oracle.sysman.db.agent.pl

Installed Top-level Products (1):

Enterprise Manager plug-in for Oracle Database 12.1.0.6.0
There are 1 products installed in this Oracle Home.

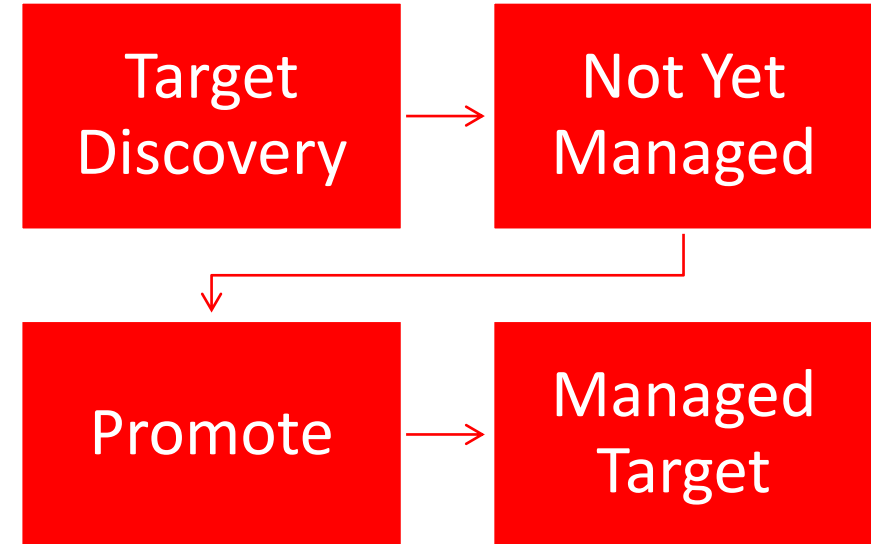
Interim patches (1) :

Patch 19391503 : applied on Tue Sep 23 12:40:23 PDT 2014
Unique Patch ID: 17992033
Patch description: "EM DB PLUGIN BUNDLE PATCH 12.1.0.6.3 (AGENT SIDE)"
Created on 13 Aug 2014, 01:49:37 hrs PST8PDT
Bugs fixed:
19308132, 19391503, 19176706, 19179088, 19135307, 19002534, 18539790
19075972, 18308719

[Blog: Simplified Agent and Plug-in Deployment](#)

Target Discovery

- Discover or promote via UI or EMCLI
- Auto Discovery
 - Searches for new targets on existing agents daily
 - Check often for unmanaged targets and promote
 - Set target properties during promote
- Promote all Oracle Homes (for patching)
- If host is static, auto-discovery is just extra noise
 - Setup / Add Targets / Configure Auto Discovery, Select Targets on Host tab, select Host, click Collection Schedule



Collection Schedule: For selected host slc05ptb.us.oracle.com

Configure or disable collection schedule on hosts.

☒ Enable Collection ☐ Disable Collection

Repeat: Every N days

Frequency: Every 1 day(s)



Summary

Summary

- Start with a strong foundation
 - Plan
 - Deploy
 - Monitor
 - Then Extend...
- Tips for Keeping EM Happy
 - Like any other application, requires care and feeding
 - Need an EM admin or team who owns responsibility
 - Read [Operational Considerations and Troubleshooting for OEM 12c](#)
 - Get to know EMDIAG Troubleshooting Kits Master Index (MOS Note 421053.1)

Social

- Blogs:

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

<http://dbakevlar.com>

<http://courtneyllamas.com>

- Twitter

@oracle_EM

@dbakevlar

@courtneyllamas

Dan Brint – State University of New York

Customer Case Study



ITEC | Information Technology
Exchange Center

Daniel Brint • iT Architect
Daniel.Brint@itec.suny.edu

State University of New York



Brief History

- Using since EM 9i
- 10g, skipped 11g and now 12c
- Roughly 8200 targets now
 - Hosts, Databases, Middleware (WebLogic and Tomcat), Services, Systems, OVM
- WAS a DBA only tool

All Targets

Refine Search

▼ Target Type

▼ Cloud

Middleware and Database Cloud (1)

▼ Databases

Database Instance (401)

Listener (150)

▼ Groups, Systems and Services

Database System (380)

Generic Service (187)

Generic System (166)

Group (107)

Aggregate Service (3)

EM Service (2)

Management Servers (1)

▼ Middleware

Application Deployment (953)

Oracle WebLogic Server (660)

Clustered Application Deployment (431)

Oracle WebLogic Cluster (355)

Oracle HTTP Server (243)

Oracle Reports Server (178)

Forms (117)

Oracle Reports Tools (116)

Oracle Reports Application (114)

Oracle WebLogic Domain (93)

Apache Tomcat (85)

Oracle Fusion Middleware Farm (80)

Microsoft IIS (18)

Web Cache (5)

Metadata Repository (4)

Apache HTTP Server (2)

Oracle BI Instance (2)

▼ Servers, Storage and Network

Host (745)

Oracle VM Guest (329)

Oracle VM Server (40)

Oracle VM Zone (8)

Oracle VM Server Pool (7)

Oracle VM Manager (3)

Infrastructure Cloud (1)

and Now

- Make use of Lifecycle Status, Line of Business to drive our Notifications
- Make use of SLM with services, systems and service tests and just starting to work with SLAs (proper)
- Beta campuses using EM to 'look over our shoulders'
- Most certainly NO LONGER a DBA only tool.

All Targets

Refine Search

- ▼ **Internal**
- ▼ **Target Status**
- ▼ **Target Version**
- ▼ **Lifecycle Status**
 - Production (3171)
 - Development (2046)
 - Staging (122)
 - Mission Critical (11)
 - Test (10)
- ▼ **Line of Business**
 - SIS (4096)
 - LMS (466)
 - SUNYConnect (283)
 - DegreeWorks (226)
 - Infrastructure (99)
 - DGW (57)
 - Base (18)
 - EMAIL (18)
 - Confluence (16)
 - Collaborate (6)
 - DR (5)
 - Ensemble (5)
 - INTERNAL (5)
 - VDI (5)
 - Attask (3)
 - Email (3)
 - Internal (2)
 - Lyris (2)
 - AtTask (1)
 - Illuminate (1)
 - Infrastructure (1)
 - OEM (1)
 - OIT (1)
 - SPSS (1)
 - Shared (1)
- ▼ **Department**
- ▼ **Location**
- ▼ **Contact**
- ▼ **Platform**
- ▼ **Operating System**
 - Linux (6841)
 - Windows (486)
 - AIX (38)
 - SunOS (5)

The (12c) Challenge?

- Too many new and enhanced features and not enough time or resources to fully exploit
- Our relatively immature adoption of 10g - using not much more than BASIC capabilities

but we want to :

- Manage RMAN and DataGuard via EM
- Fully exploit SLM with proper SLAs, Business Dashboards, Chargeback for our IaaS, Compliance Management
- Enterprise Topology with RCA (root cause analysis).
- MOS Integration
- Patching, Provisioning, Cloning, ...

Tried it on our own...

- Struggled to gain traction
- Were not really seeing any substantive results
- Felt a bit too much like a science project that never really got anywhere
- Resources spent managing 10g and 12c environments ...

We needed Help !

- Oracle SCP to the rescue
 - Stabilize - our environment
 - Organize - our work
 - Focus - our efforts
 - Support + Support

Stabilize

- Got us through 12.1.0.2 to 12.1.0.3 upgrade
 - Fixed OMS communication problem (minutes not weeks)
- Verified our HA implementation
- Found performance problems using EMDIAG tools (repvfy)
 - Interestingly one was pertaining to our host template collecting configuration data every 5 minutes. Default is every 24 hours.
- Our fault - millions of rows.

Organize

- Took our 'six big things' and classified as basic, operational, next level, REAL value
- Determined dependencies between them and a good order of attack
- 'Why solve X now when you need some experience to understand it better first?'
- 'Addressing Y will force you to solve X as well.'

First of our SIX

- RMAN and DataGuard monitored and managed via EM
- Was manual, with scripts, email, silo'd understanding and responsibilities
- Developed a process :)

A process you say

- To get REAL value and REAL buy in ...
- Gap Analysis
 - Our technical understanding +
 - Our business drivers +
 - Oracle's expertise plus OTHER customer experiences
 - an Action plan

Why a process

- Without this, (in prior engagements with ‘others’) we would get involved in academic discussions ...
 - “You COULD do it THIS way.”
 - “Yes, THAT way should also work.”
 - “But what about ...”
- And round and round we would go
- By involving the business side via senior management needs and desires our academic discussions are dramatically lessened
- By using Oracle and their customers experiences we are less likely to head down paths less trodden

WRITE IT DOWN !

- Our circular discussions were too often exactly that.
- By forcing ourselves to WRITE DOWN and COMMIT TO
 - OUR current technical understanding (*this is how we do it today*)
 - OUR business drivers (*this is why we want to do it*)
 - OUR understanding of product capabilities (*we THINK EM does it this way because*)
- Interaction with Oracle was more focused
- The end goal became that much more obvious and 'actionable'.

quid pro quo

- It's a partnership.
- Like your time, their time is valuable too.
- Don't just ask questions.
- Structure your engagement.
- By coming to the table with concrete desires AND some experience in a product area you get more actionable results.
- And you offer more in return

Why do they offer this?

- They are bored and have plenty of time to kill?
- NO, they want you to succeed.
- They want the product to gain broader adoption.
- They want to improve the product
- They want your real world experiences to add to their own.

Theme - Build upon a solid foundation

- Technical bits plus
- Your peoples skills and understanding plus
- Your team
 - Our EM team now consists of member from ALL teams
 - DBAs, Systems, Networking, Applications, Service Managers, CTO, CISO
- Senior management support

Summation

- Great to have a partner you can lean on.
 - Which we have by the way.
- Craft a focused engagement.
- Add your experiences, explain your desires and needs ... because ultimately it helps all of us.

A black and white photograph of a checkered floor, possibly a pool table, with a curved, tunnel-like perspective. The text is overlaid in the center.

We have managed to weave EM
into the very fabric of who we are
and what we do and we stand on
the precipice of a new level of
service offerings ...

IaaS

EMaaS

DBaaS

Doing Cloud before Cloud was Cool!

ITEC Infrastructure as a Service (IaaS) allows our members in the SUNY community to build, test, and deploy computing environments at your leisure. IaaS supports single purpose virtual machines as well as multi-tier applications requiring multiple virtual machines. ITEC IaaS is designed to quickly and easily facilitate enterprise-level cloud computing in order to meet key campus objectives such as provisioning of infrastructure, creation of test environments for developers, and setting up teaching lab environments for faculty.

Good news! ITEC Base Membership now includes the following IaaS components: 12 Virtual CPUs, 16GB RAM, 300GB storage, 4 External IP addresses and options for increased sizing.

Members can now create on-demand, self-managed virtual machines based on Oracle VM Manager with Oracle Enterprise Manager 12c Cloud Control. Customize CPU, memory, storage, and network resources dynamically. ITEC IaaS uses a pay-as-you-go pricing model, so you can seamlessly scale to meet your technology demands and manage your budget. The service includes the SUNY Cloud Control Portal that allows users to manage their resources, interact with their virtual machines, monitor performance and track monthly consumption charges.

IaaS Benefits at a Glance

- Ensure all data on your servers stays in New York State within SUNY's private cloud
- Keep your data local to other SUNY-wide services like Banner, SUNYConnect, Blackboard, ANGEL, and Degree Works
- Security leveraging Dell SecureWorks IDS & IPS
- Supports ITEC Best Practices for Security
- Auto-tiered storage on highly available hardware
- Optional Enhanced Managed Services
- On Demand Virtual Servers: auto-provisioning and self-service
- You size it for Storage, CPUs and RAM
- Pay as you go to minimize cost and maximize budget

Visit <http://tinyurl.com/sunycloud> for:

- Service Descriptions
- Quick Start Guide
- Answers to Frequently Asked Questions
- STC 2013 Session Slide Deck: ITEC Self-Service Cloud
- Other ITEC SUNY Cloud offerings

Enterprise Manager Sessions – Monday, September 29th

ID	Title	Time	Location
CON8217	<u>Managing the Oracle Fusion Middleware Stack with Oracle Enterprise Manager</u>	11:45 AM - 12:30 PM	Moscone South - 200
CON8856	<u>Oracle Enterprise Manager: The Complete Solution and Oracle's Best Kept Secrets</u>	11:45 AM - 12:30 PM	Moscone South - 301
CON8449	<u>Automatic Workload Repository Warehouse: Helping DBAs Make Sure History Never Repeats Itself</u>	1:30 PM - 2:15 PM	Moscone South - 104
CON8018	<u>Best Practices from Oracle Cloud Delivered On-Premises with Oracle Enterprise Manager</u>	1:30 PM - 2:15 PM	Moscone South - 270
CON8225	<u>Under the Hood: Diagnosing and Troubleshooting Oracle Enterprise Manager 12c Release 4</u>	1:30 PM - 2:15 PM	Moscone South - 302
CON8138	<u>Beyond the Basics: Making the Most of Oracle Enterprise Manager 12c Monitoring</u>	1:30 PM - 2:15 PM	Moscone South - 304
CON8567	<u>Best Practices for Maintaining and Supporting Oracle Enterprise Manager</u>	2:45 PM - 3:30 PM	Intercontinental - Grand Ballroom C
CON8178	<u>Best Practices for Managing Oracle WebLogic Server with Oracle Enterprise Manager 12c</u>	2:45 PM - 3:30 PM	Moscone South - 200
CON8177	<u>Private Database Clouds: A Standardized Service Catalog for Delivering DBaaS</u>	2:45 PM - 3:30 PM	Moscone South - 305
CON3178	<u>Database Software Currency: Using Oracle Enterprise Manager 12c Provisioning and Patching</u>	2:45 PM - 3:30 PM	Moscone South - 301

Enterprise Manager Sessions – Monday, September 29th

ID	Title	Time	Location
CON3111	Set Up Oracle Real User Experience Insight 12c to Monitor Oracle WebLogic Applications' UX	4:00 PM - 4:45 PM	Moscone South - 250
CON4102	SQL Tuning Without Trying	4:00 PM - 4:45 PM	Moscone South - 104
CON8212	Oracle Management Pack Plus for Identity Management Best Practices and Lessons Learned	4:00 PM - 4:45 PM	Moscone South - 200
CON7899	Oracle Data Integrator: Product Update and Future Strategy	4:00 PM - 4:45 PM	Moscone South - 252
CON2043	Consolidating to Database as a Service with Oracle Real Application Testing	5:15 PM - 6:00 PM	Moscone North - 130
CON5983	Full Visibility into Oracle WebLogic/Java Diagnostics with Oracle Enterprise Manager 12c	5:15 PM - 6:00 PM	Moscone South - 200
CON2436	Why Database as a Service Will Be a Breakaway Technology at Société Générale	5:15 PM - 6:00 PM	Moscone South - 301
CON7720	Advanced Management with Oracle Application Management Suite for Oracle E-Business Suite	5:15 PM - 6:00 PM	Moscone West - 2018
CON8214	Maximizing Reliability of Oracle Business Intelligence Enterprise Edition and Oracle Exalytics	5:15 PM – 8:00 PM	Moscone South – 262

Enterprise Manager Sessions – Tuesday, September 30th

ID	Title	Time	Location
GEN8250	General Session: Drive the Future of Self-Service IT with Oracle Enterprise Manager	Noon – 12:45 PM	Moscone South - 103
CON5748	Create a DBaaS Catalog in an Hour with a PaaS-Ready Infrastructure	Noon – 12:45 PM	Moscone South - 301
CON2586	Best Practices for Deploying a DBaaS in a Private Cloud Model	Noon – 12:45 PM	Moscone South - 310
CON7830	Solving Data Skew in Oracle Business Applications with Oracle's Flash-Optimized SAN Storage	3:45 PM - 4:30 PM	Intercontinental - Intercontinental C
CON8452	Future Now: Advanced Database Management for Today's DBA	3:45 PM - 4:30 PM	Moscone South - 104
CON4045	Provision Oracle Fusion Middleware Faster with Oracle Enterprise Manager 12c	3:45 PM - 4:30 PM	Moscone West - 3016
CON5875	Using Oracle Enterprise Manager to Deliver Multitenant DBaaS on Oracle Exadata: Lessons Learned	5:00 PM - 5:45 PM	Moscone South - 301
CON8450	SQL (and PL/SQL) Tuning Experts Panel	5:00 PM - 5:45 PM	Moscone South - 308

Enterprise Manager Sessions – Wednesday, October 1st

ID	Title	Time	Location
CON4954	<u>Oracle Infrastructure Systems Management with Oracle Enterprise Manager and Ops Center</u>	10:15 AM - 11:00 AM	Intercontinental - Telegraph Hill
CON7961	<u>Streamline Utility IT Operations with Oracle Enterprise Manager</u>	10:15 AM - 11:00 AM	Marriott Marquis - Salon 14/15
CON8139	<u>Database Time-Based Performance Tuning: From Theory to Practice</u>	10:15 AM - 11:00 AM	Moscone South - 104
CON8173	<u>Management of Oracle SOA Suite and Oracle Service Bus with Oracle Enterprise Manager 12c</u>	10:15 AM - 11:00 AM	Moscone South - 200
CON8121	<u>Databases to Oracle Exadata: The Saga Continues for Oracle Enterprise Manager–Based Patching</u>	10:15 AM - 11:00 AM	Moscone South - 300
CON3182	<u>Deployment of Oracle Exadata and Oracle Exalogic Increases Business Efficiency</u>	10:15 AM - 11:00 AM	Moscone South - 310
CON8133	<u>Behind the Scenes of Managing the Engineered Systems Showcase</u>	11:30 AM – 12:15 PM	Intercontinental - Telegraph Hill

Enterprise Manager Sessions – Wednesday, October 1st

ID	Title	Time	Location
CON2927	Oracle Enterprise Manager 12c: Maximize ROI via a Single Pane of Glass Across a Data Center	11:30 AM - 12:15 PM	Moscone South - 200
CON8247	DBA's New Best Friend for Mistake-Free Administration: Oracle Real Application Testing	11:30 AM - 12:15 PM	Moscone South - 301
CON8245	Tips for Successful Oracle Exadata Management with Oracle Enterprise Manager 12c	11:30 AM - 12:15 PM	Moscone South - 303
CON8451	Next-Generation Testing with Oracle Application Testing Suite	11:30 AM - 12:15 PM	Moscone West - 3002
CON8091	Middleware as a Service: Converged Solution for Administrators and DevOps	12:45 PM - 1:30 PM	Moscone South - 301
CON8134	Zero to Manageability in One Hour: Build a Solid Foundation for Oracle Enterprise Manager 12c	12:45 PM - 1:30 PM	Moscone South - 303
CON5489	Deploy Oracle Fusion Middleware as a Service (MWaaS) on a Shared-Services Cloud	12:45 PM - 1:30 PM	Moscone South - 309

Enterprise Manager Sessions – Wednesday, October 1st

ID	Title	Time	Location
CON8185	Use Oracle Enterprise Manager in a Box to Easily Manage the Enterprise	2:00 PM - 2:45 PM	Moscone North - 131
CON8130	Deployment Best Practices for Private Cloud: Fast Track to DBaaS and MWaaS	2:00 PM - 2:45 PM	Moscone South - 301
CON8248	Trouble-Free Upgrade to Oracle Database 12c with Oracle Real Application Testing	2:00 PM - 2:45 PM	Moscone South - 303
CON8016	DBaaS 2.0: Rapid Provisioning, Richer Services, Integrated Testing, and More	3:30 PM – 4:15 PM	Moscone South - 301
CON7726	Oracle Exadata Database Machine Administration and Monitoring Made Easy	4:45 PM – 5:30 PM	Moscone South - 104
CON8260	Database as a Service (DBaaS) Cookbook: Strategies and Tips for Successful Deployment	4:45 PM – 5:30 PM	Moscone South - 301

Enterprise Manager Sessions – Thursday, October 2nd

ID	Title	Time	Location
CON2561	<u>You've Got It; Flaunt It: Oracle Enterprise Manager Cloud Control Extensibility</u>	9:30 AM - 10:15 AM	Marriott Marquis - Golden Gate C3
CON8273	<u>Management and Monitoring of Oracle Tuxedo: Integrated, Automated</u>	9:30 AM - 10:15 AM	Marriott Marquis - Salon 14/15
CON7940	<u>Building an On-Premises Java Cloud: Oracle WebLogic Server and Oracle Enterprise Manager</u>	9:30 AM - 10:15 AM	Moscone South - 200
CON8243	<u>Oracle Enterprise Manager 12c Security Cookbook: Best Practices for Large Data Centers</u>	9:30 AM - 10:15 AM	Moscone South - 300
CON3028	<u>Enterprise Architecture Approach to Developing a DBaaS Private Cloud at Boeing</u>	9:30 AM - 10:15 AM	Moscone South - 301
CON8184	<u>What's New and Best Practices for Oracle Data Masking and Subsetting</u>	9:30 AM - 10:15 AM	Moscone South - 306
CON5451	<u>Highly Available, Highly Scalable: Oracle Enterprise Manager 12c for Large Enterprises</u>	10:45 AM - 11:30 AM	Marriott Marquis - Golden Gate C3
CON4114	<u>Advanced Diagnostics and Monitoring with Oracle Enterprise Manager 12c</u>	10:45 AM - 11:30 AM	Moscone South - 301

Enterprise Manager Sessions – Thursday, October 2nd

ID	Title	Time	Location
CON2699	Oracle Exadata's Exachk and Oracle Enterprise Manager 12c: Keeping Up with Oracle Exadata	10:45 AM - 11:30 AM	Moscone South - 310
CON4448	PDBaaS with Oracle Enterprise Manager 12c	12:00 PM - 12:45 PM	Marriott Marquis - Golden Gate C3
CON10038	Customer Panel: Private Cloud Consolidation, Standardization, and Automation	12:00 PM - 12:45 PM	Moscone South - 301
CON8244	Manage the Manager: Tips on How to Best Manage Oracle Enterprise Manager 12c	1:15 PM - 2:00 PM	Marriott Marquis - Golden Gate C3
CON8015	Security Compliance and Data Governance: Dual Problems, Single Solution	1:15 PM - 2:00 PM	Moscone South - 301
CON7718	Managing and Monitoring Oracle GoldenGate	1:15 PM - 2:00 PM	Moscone South - 302
CON7697	Oracle Enterprise Manager 12c Cloud Control for Managing Oracle E-Business Suite 12.2	1:15 PM - 2:00 PM	Moscone West - 2018
CON6083	Real-World Operation Excellence with Oracle Enterprise Manager 12c: Taking It to the Next Level	2:30 PM - 3:15 PM	Marriott Marquis - Golden Gate C3
CON8493	Odyssey of DBaaS: A UBS Story	2:30 PM - 3:15 PM	Moscone South - 301

Hardware and Software

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