

ORACLE®

Welcome to the Oracle Enterprise Manager Technical Webcast Series

Please ensure that you are connected to the audio portion of this event which is available by dialing:

Dial-in US/Canada	:	(888) 794 - 4691
Dial-In Int'l/Local Toll	:	(706) 679 - 9955
Password	:	<i>cloud</i>

For local toll free numbers for other countries please visit the following page,
<http://www.oracle.com/technetwork/oem/grid-control/intercall-audio-dialin-182843.html>

The meeting will begin in a few minutes.

ORACLE
ENTERPRISE MANAGER **12^c**

Total Cloud Control



ORACLE[®]

Enterprise Manager Cloud Control 12c

Technical Webcast Series:

Upgrade Smoothly to Oracle Enterprise Manager Cloud Control 12c

Akanksha Sheoran, Product Management

ORACLE[®]



Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Agenda

- Enterprise Manager 12.1 Overview – Total Cloud Control
- Introduction to 12.1 Upgrade Process
 - Considerations and Requirements
- Pre-upgrade Console
- Upgrade Approaches
 - One System Upgrade Approach
 - Two System Upgrade Approach
 - Post Upgrade Console and Checks



Total Cloud Control

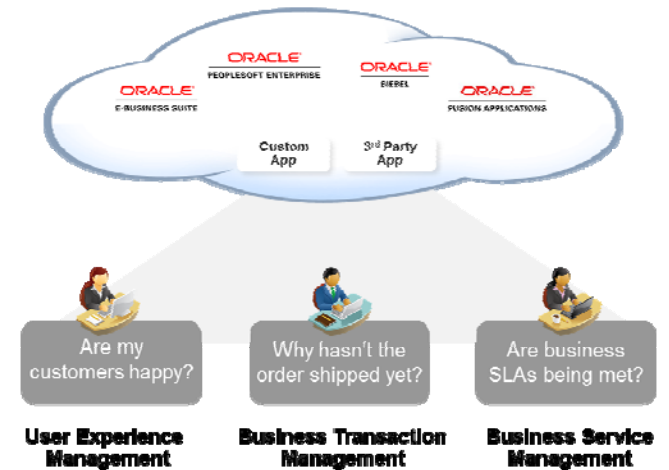
ORACLE[®] ENTERPRISE MANAGER 12^c



Complete Lifecycle Management



Integrated Cloud Stack Management



Business-Driven Application Management

Self-Service IT

Simple and Automated

Business Driven

ORACLE[®]

Upgrade Considerations and Requirements

- New capabilities necessitate that the older version of agents (<12.1) will not work with 12.1 OMS
- Minimum Infrastructure Requirement for Linux-64 bit



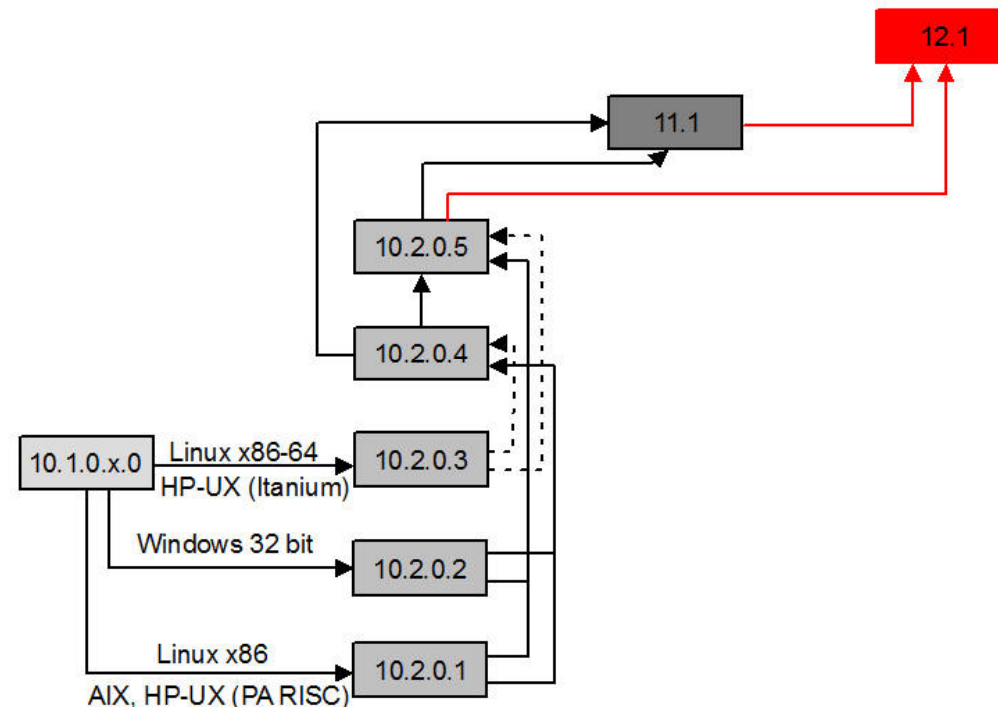
Minimum Requirements	12.1 OMS (per OMS)	12.1 Management Agent (per Agent)
RAM	4GB	512 MB
Hard Disk	7GB	1GB*

* May vary with plug-in software

ORACLE

Upgrade Considerations and Requirements

- Direct upgrade from 10.2.0.5 /11.1.0.1 Grid Control
- Out-of-place upgrade
- Upgrades from previous releases, determined by your base release
 - Example, Windows 32 bit platforms you can upgrade from 10.1.0.x to 10.2.0.2, bypassing the 10.2.0.1 installation
- Refer to Certification Matrix available in [My Oracle Support](#)



*Only 12.1 agents will work with 12.1 OMS

ORACLE

12.1 Key Upgrade Improvements

- ✓ Guided workflow and automation for upgrade process
- ✓ Reporting functionality to administer and manage upgrade process
- ✓ Near zero downtime
- ✓ Pre-deployment checks and validations
- ✓ Ability to upgrade agents in phases
- ✓ Ability to restore/revert to old Grid Control quickly
- ✓ Clarity and well defined upgrade path
- ✓ Details on what Software/Plug-in versions are required
- ✓ OS Migration along with upgrade
- ✓ Clarity on data that is migrated as part of upgrade process

Simplified Pre-upgrade Console

- Download the Pre-upgrade console patch10044087 for 10.2.0.5 or 11.1.0.1 Grid Control
- Apply patch on your 10.2.0.5 or 11.1.0.1 OMS Oracle home to get the Pre-upgrade console
- Pre-upgrade Console:
 - ✓ Provides a guided workflow for your upgrade
 - ✓ Single source of truth for upgrade impact(reports)
 - ✓ Provide different upgrade options
 - ✓ Perform 12.1 mass agent deployment
 - ✓ Software Management for 12.1 Agent and plug-ins
 - ✓ Runs pre-upgrade repository specific checks
 - ✓ Run readiness checks on 12.1 agents before they are activated



Upgrade Approaches

Complete Cutover With Higher Downtime (Using One System)*

- EM OMS and all agents are upgraded at the same time, with some downtime
- Both pre-12.1 and 12.1 installations co-exist and only one of them can be active at any given point in time
- Entire system (agents, OMS, Repository) gets upgraded to 12.1 simultaneously

Phased Cutover With Minimal Downtime (Using Two Systems)*

- Upgrade can be staggered over time, but this incurs minimal monitoring downtime
- Both pre-12.1 and 12.1 systems co-exist and can be active simultaneously until all targets from 'pre-12.1' are migrated to 12.1 system in an orderly fashion.
- 12.1 system will only contain 12.1 agents/targets

* Henceforward referred to as One-system and Two-system approaches, respectively

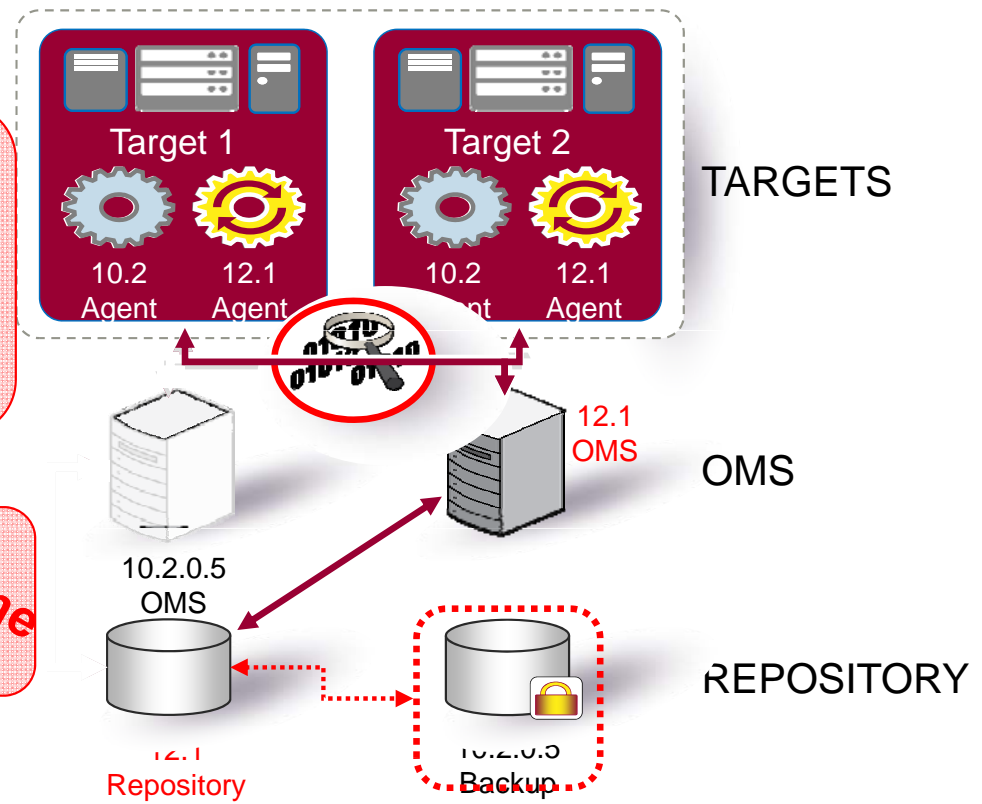
One System Upgrade

1. Start with existing 10.2.0.5 / 11.1 system
2. Apply the Pre-upgrade console patch
3. Deploy 12.1 agents from Pre-upgrade console
4. Run health-check on 12.1 agents
5. Switchover
 - Quiesce pre-12.1 agent queues
 - Shutdown the pre-12.1 agents
 - Start 12.1 agents
6. Backup the repository (Manual)
7. Shutdown the old OMS (10.2.0.5 / 11.1)
8. Install 12.1 OMS and upgrade the repository
9. Start the 12.1 OMS
10. Start accepting 12.1 agent connections

Agent Upgrade

Downtime

One-System Approach

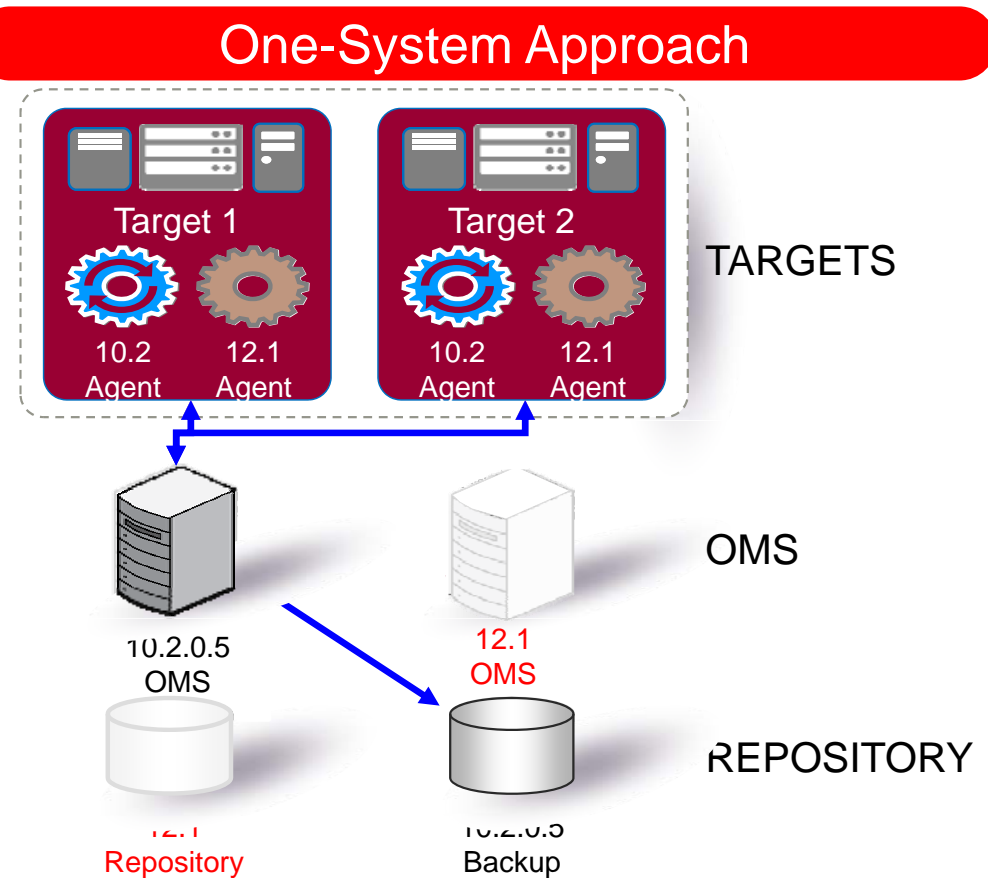


ORACLE

One System Upgrade Failure

What if the upgrade process, or the upgraded system, 'fizzled'?

- Shut down the 12.1 system
- Restart the old OMS with the backup repository
- Restart your old agents



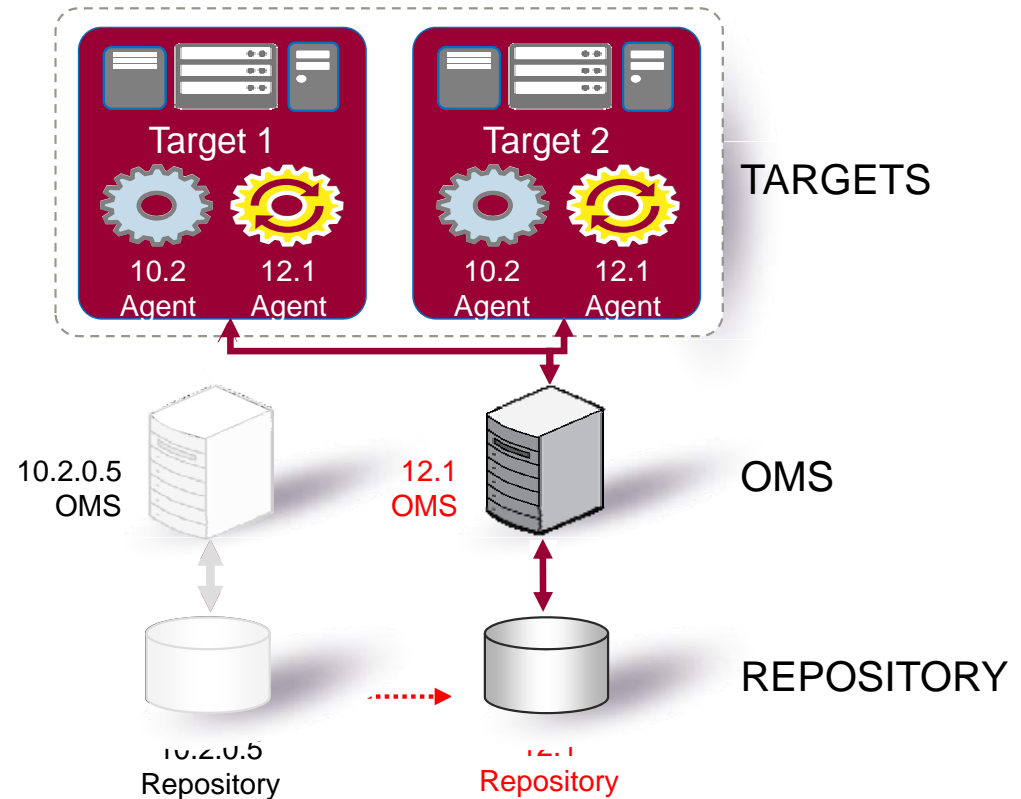
One System Approach vs Prior Upgrades

One System Approach	Prior Version Upgrades
Automated agent upgrade through pre-upgrade console	Doesn't use the job system, major version agent upgrade required SSH
Health checks and monitoring console available	No health checks or monitoring of upgrade
Out of place upgrade	Agent patching was in-place
Fallback possible	Fallback requires restore
All agent platforms being monitored must be available prior to starting upgrade process (Oracle will make sure that all 12.1 agent software release is in shorter period of time)	Agent upgrades can be staggered
OMS and Repository related downtime	OMS and Repository related downtime

Two System Upgrade

1. Start with existing 10.2.0.5 / 11.1 system
2. Apply the Pre-upgrade console patch
3. Deploy 12.1 agents from Pre-Upgrade console
4. Backup the repository (Manual)
5. Deploy/configure 12.1 OMS
6. Upgrade backed-up repository to 12.1
7. Start the 12.1 OMS
8. Shutdown the pre-12.1 agents incrementally and activate 12.1 agents
9. Verify Data Migration from Post Upgrade console
10. When all agents are successfully switched, decommission the 10.2.0.5 / 11.1 OMS

Two-Systems Approach

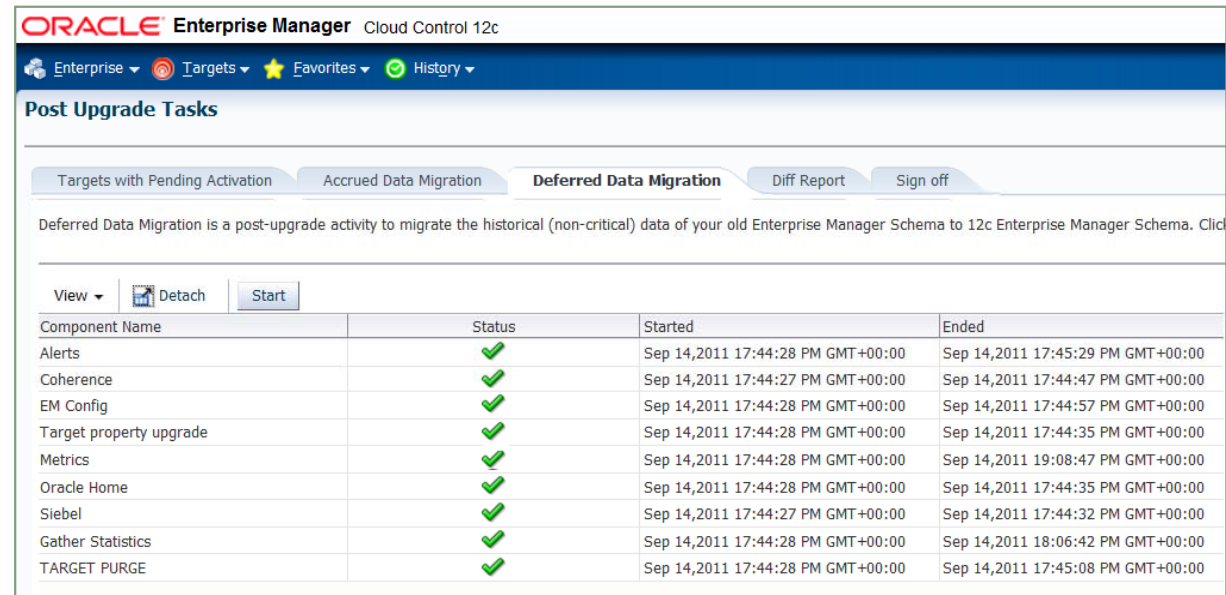


One System Vs Two System

One System Approach	Two Systems Approach
Entire system goes through downtime	Zero downtime for monitoring
All agents switched at once	Agents can be switched over incrementally
Fallback possible	Relatively easy fallback if needed
No need for additional systems	Requires additional systems
All agent platforms need to be available for upgrade	Agent upgrades can be staggered
No additional firewall ports need to be opened for agent	Additional ports to be opened (firewall rule edits needed)
Data migration not needed	Data Migration happens through the post upgrade accrued data migration phase

Post Upgrade Best Practices

- Deferred Data Migration
 - Job to perform lazy migration of historical data
 - Status tracking from 12.1 post upgrade console
 - By default jobs will run automatically at the end of the upgrade
 - User can choose to turn-off automatic DDMP jobs and run manually based on system load



ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Post Upgrade Tasks

Targets with Pending Activation Accrued Data Migration **Deferred Data Migration** Diff Report Sign off

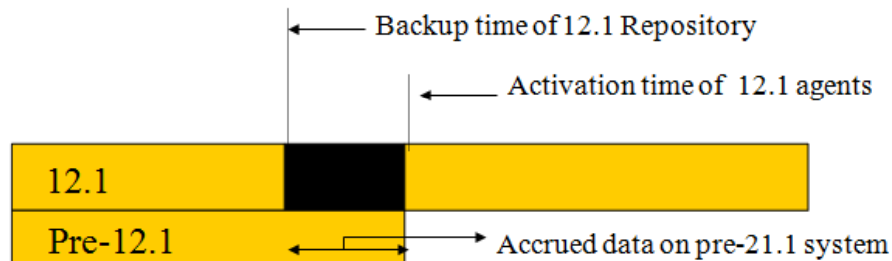
Deferred Data Migration is a post-upgrade activity to migrate the historical (non-critical) data of your old Enterprise Manager Schema to 12c Enterprise Manager Schema. Click

View Detach Start

Component Name	Status	Started	Ended
Alerts	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 17:45:29 PM GMT+00:00
Coherence	✓	Sep 14,2011 17:44:27 PM GMT+00:00	Sep 14,2011 17:44:47 PM GMT+00:00
EM Config	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 17:44:57 PM GMT+00:00
Target property upgrade	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 17:44:35 PM GMT+00:00
Metrics	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 19:08:47 PM GMT+00:00
Oracle Home	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 17:44:35 PM GMT+00:00
Siebel	✓	Sep 14,2011 17:44:27 PM GMT+00:00	Sep 14,2011 17:44:32 PM GMT+00:00
Gather Statistics	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 18:06:42 PM GMT+00:00
TARGET PURGE	✓	Sep 14,2011 17:44:28 PM GMT+00:00	Sep 14,2011 17:45:08 PM GMT+00:00

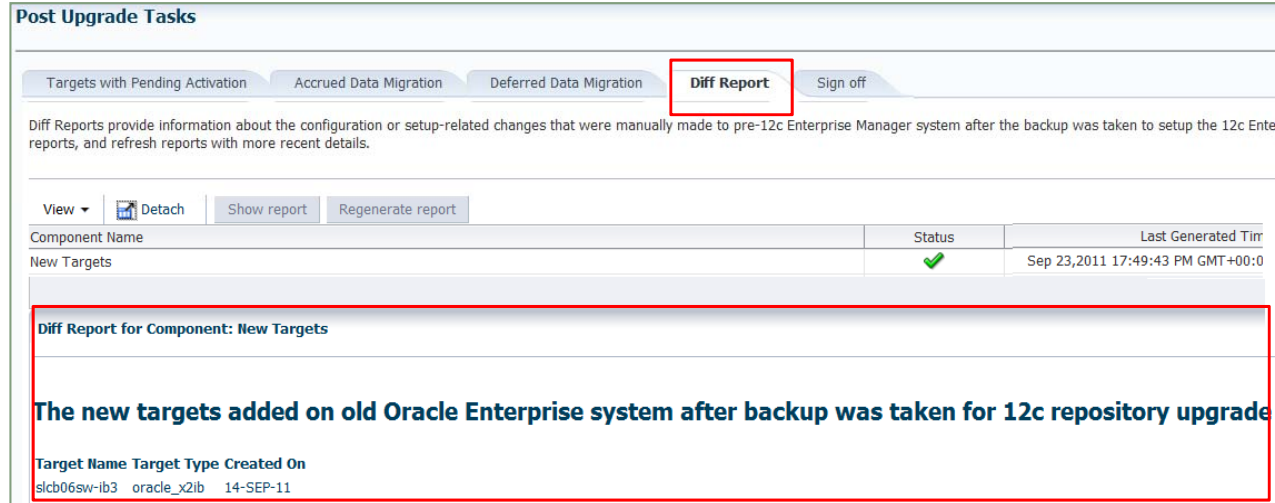
Post Upgrade Best Practices

- Accrued Target Data Migration
 - Applicable for two-system approach only
 - Targets continue to accrue data on 'pre-12.1' system even after backup of repository, until they are migrated to 12.1 system. As a result, on 12.1 repository, we will not be able to see this accrued target data, until it got migrated.
 - View/Retry status of accrued data migration jobs for all the targets



Post Upgrade Best Practices


- Diff reports
 - Configuration, setup-related changes that were manually made to the old system while 2-system upgrade was happening



Post Upgrade Tasks

Tabs: Targets with Pending Activation | Accrued Data Migration | Deferred Data Migration | **Diff Report** | Sign off

Diff Reports provide information about the configuration or setup-related changes that were manually made to pre-12c Enterprise Manager system after the backup was taken to setup the 12c Enterprise Manager system, and refresh reports with more recent details.

View ▾ |  Detach | Show report | Regenerate report

Component Name	Status	Last Generated Time
New Targets	✓	Sep 23, 2011 17:49:43 PM GMT+00:00

Diff Report for Component: New Targets

The new targets added on old Oracle Enterprise system after backup was taken for 12c repository upgrade

Target Name	Target Type	Created On
slcb06sw-ib3	oracle_x2lb	14-SEP-11

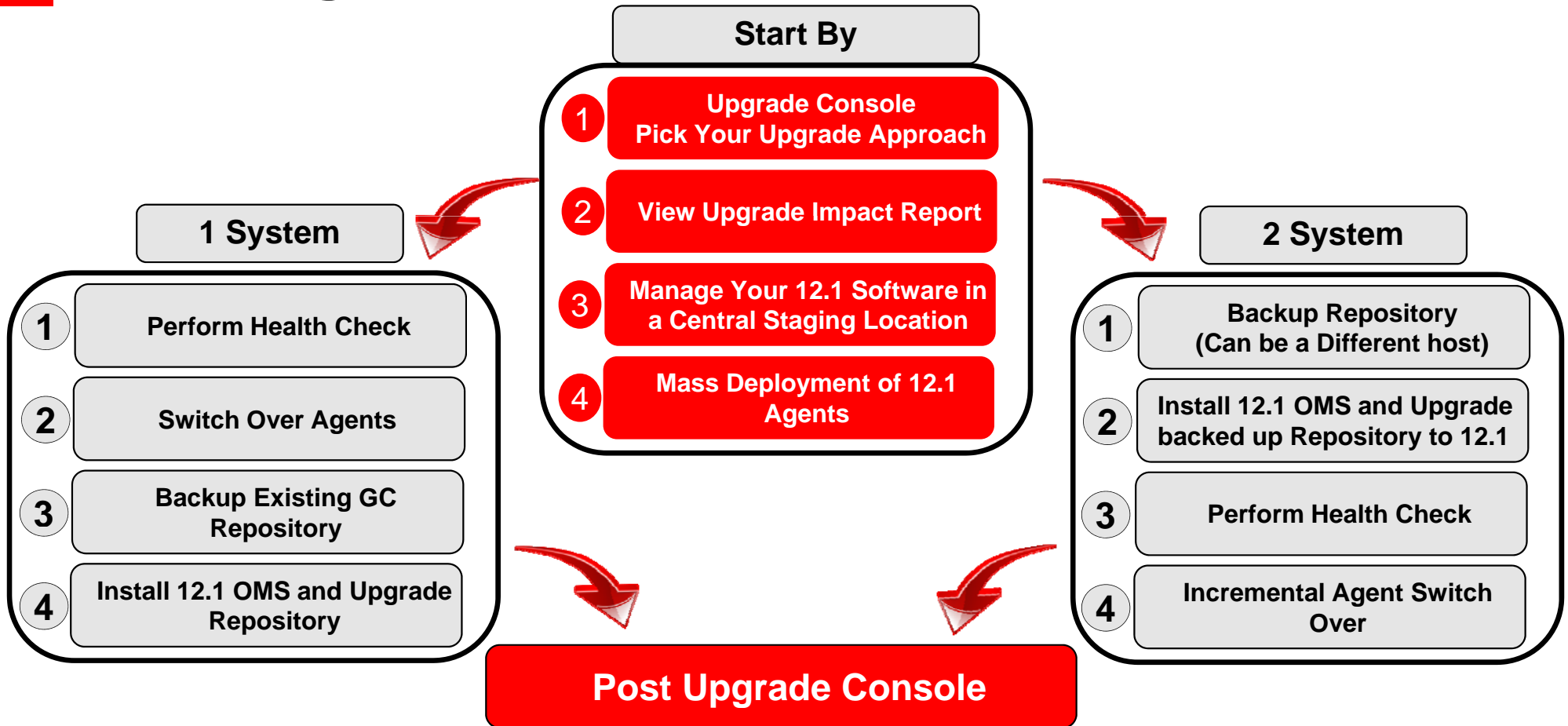
- Deleting Old Agents (Sign Off)
 - Ability to perform deletion of old agent installations



Post Upgrade Checks

- Check 12.1 Agents are up and running after switch over
- Check if Notification Rules are automatically migrated to corresponding Incident Rule sets
- Make sure that your Software library is configured
- Ensure that your historical data (Metric and ECM) got migrated
 - Deferred
 - Accrued
- Ensure sysman maintenance jobs are running

12.1 Upgrade Workflow



Documentation

- You can get the Upgrade guide from:

http://download.oracle.com/docs/cd/E24628_01/index.htm

- Installation and Upgrade collateral page on OTN

<http://www.oracle.com/technetwork/oem/install-upgrade-496677.html>

- OTN Upgrade page to get the required binaries

<http://www.oracle.com/technetwork/oem/grid-control/downloads/oem-upgrade-console-502238.html>

- Post your queries on forum for any help:

<https://forums.oracle.com/forums/forum.jspa?forumID=220&start=0>

For More Information...

- **Oracle Enterprise Manager Cloud Control 12c home page**
<http://www.oracle.com/technetwork/oem/index.html>
- **Installation and Upgrade on OTN**
<http://www.oracle.com/technetwork/oem/install-upgrade-496677.html>
- **Enterprise Manager 12c live and recorded webcasts**
http://www.oracle.com/technology/products/oem/events/webcasts_index.html
- **Enterprise Manager 12c Screenwatches**
<http://www.oracle.com/technetwork/oem/grid-control/webcasts-index-090211.html>

Connect with Oracle Enterprise Manager:

[Facebook](#) | [YouTube](#) | [Linkedin](#) | [Blog](#) | [Twitter](#)

ORACLE

Q&A

ORACLE®