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# Enterprise Manager Cloud Control 12c Release3 (12.1.0.3)

## Agent Deployment

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ORACLE® 12<sup>c</sup>  
ENTERPRISE MANAGER

### Total Cloud Control




## Program Agenda

- Various Agent Deployment Methods
  - ❖ 12.1.0.1 Vs 12.1.0.2 Vs 12.1.0.3
- Manual Agent Deployment
- Add Host Wizard
  - What's new
  - Add host using EM CLI
  - Demo (screenshots)
  - Troubleshooting

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## Various Agent Installation Methods

Agent Deployment Method	12.1.0.1	12.1.0.2	12.1.0.3
<b>Agent Push Application (called as add host wizard)</b>	Yes (called as add host wizard) Various Agent Install supported through this method: 1.Fresh Install 2.Clone Agent 3.Shared Agent(NFS) 4. Agent Upgrade (not supported and is done via Agent upgrade console)	Yes (called as add host wizard) Various Agent Install supported through this method: 1.Fresh Install 2.Clone Agent 3.Shared Agent(NFS) 4. Agent Upgrade (not supported and is done via Agent upgrade console)	Yes (called as add host wizard) Various Agent Install supported through this method: 1.Fresh Install 2.Clone Agent 3.Shared Agent(NFS) 4. Agent Upgrade (not supported and is done via Agent upgrade console)
<b>Agent Push using EMCLI</b>	NO	NO	New: Ability to install multiple agents in a single session using EMCLI Various Agent Install supported through this method: 1.Fresh Install 2.Clone Agent 3.Shared Agent(NFS) 
<b>Using AgentDeploy.sh (Silent Agent Install)</b>	Yes, Done into 2 parts: 1.Login to emcli in OMS home to get the agent image and then transfer to destination host 2.Unzip the image to install the agent using agentDeploy.sh with the response file from target box	Yes, Done into 2 parts: 1.Login to emcli in OMS home to get the agent image and then transfer to destination host 2.Unzip the image to install the agent using agentDeploy.sh with the response file from target box	Yes, Done into 2 parts: 1.Login to emcli in OMS home to get the agent image and then transfer to destination host OR Login into destination host and use emcli to get the image 2. Unzip the image to install the agent using agentDeploy.sh with the response file from target box

## Various Agent Installation Methods

Agent Deployment Method	12.1.0.1	12.1.0.2	12.1.0.3
<b>Using AgentPull.sh (Agent Pull)</b>	Nothing new but similar to silent agent install using response file	New : Done in 2 parts: 1. Download the agent pull script using browser with the published url Or from command line 2. Use the script (AgentPull.sh) to install the agent	Same : Done in 2 parts: 1. Download the agent pull script using browser with the published url Or from command line 2. Use the script (AgentPull.sh) to install the agent
<b>Agent Software only Configure later</b>	Yes	Yes	Yes
<b>RPM</b>	Yes	Yes	Yes
<b>NFS</b>	Yes, GUI (Agent add host wizard) and command line( <b>AgentNFS.pl</b> )	Yes, GUI (Agent add host wizard) and command line( <b>AgentNFS.pl</b> )	Yes, GUI (Agent add host wizard) and command line( <b>AgentNFS.pl</b> )

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# ADD HOST TARGETS WIZARD (AGENT PUSH)



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## Add Host Targets Wizard (Agent Push)

### What's new

- Add Host Targets Wizard (Agent Push) support through EMCLI
  - All the verbs support the various formatting options like `--noheader`, `-format` (`pretty`, `script`, `csv`)
  - We can divide the add host verbs into 2 categories:
    - A. Perform Add Host verbs
      - » `submit_add_host` -- Submit an Add Host session
      - » `list_add_host_platforms` -- List the supported Add Host platforms
      - » `retry_add_host` -- Retry a failed Add Host session
      - » `continue_add_host` - Resume a failed Add Host session
    - B. Tracking Add Host verbs
      - » `get_add_host_status` -- Display the latest status of a submitted Add Host session.
      - » `list_add_host_sessions` -- List the submitted Add Host sessions

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# Add Host Targets Wizard (Agent Push)

## What's new

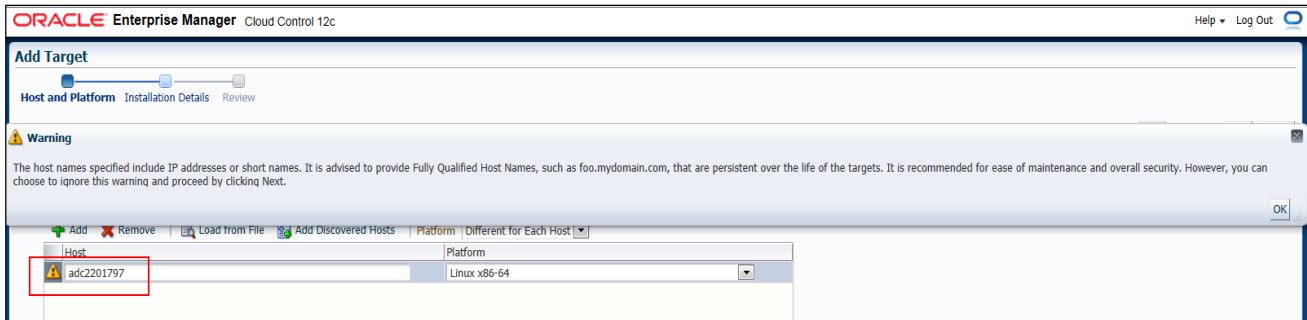
- Agent Push will support SSH keys through named credentials

The screenshot displays the 'Add Host Targets : Installation Details' wizard. On the left, the 'Create Credential' form is visible, showing fields for 'Credential name' (oracle\_ssh), 'Credential description' (ssh keys for user oracle), 'Authenticating Target Type' (Host), 'Credential type' (SSH Key Credentials), and 'Scope' (Global). Below this, 'Credential Properties' includes 'UserName' (oracle), 'SSH Private Key', and 'SSH Public Key'. On the right, the 'Add Host Targets : Installation Details' form is shown, with a table for 'Deployment Type' listing 'Linux x86-64' with 'Agent Software Version' 12.1.0.3.0 and 'Hosts' .us.oracle.com. Below the table, the 'Linux x86-64 : Installation Details' section has fields for 'Installation Base Directory', 'Instance Directory', 'Named Credential' (with a dropdown menu), 'Privileged Delegation Setting' (AS% %COMMAND%), and 'Port'. A red arrow points from the 'Named Credential' dropdown in the 'Installation Details' section to the 'Named Credential' dropdown in the 'Create Credential' section. A tooltip for the 'Named Credential' dropdown reads: 'Select the Named Credential that can be used for connecting to the remote hosts using SSH and installing the Management Agent.'

## Add Host Targets Wizard (Agent Push)

### What's new

- If you provide IP address or short name we throw a warning. We want users to use fully qualified hostname





# Add Host Targets Wizard (Agent Push)

## What's new

- We will be supporting revisions for agent software and this is integrated with self update
  - This will enable customers to download/apply agent software which are updated or re-released after EM 12.1.0.3 is released
  - Once the new revision is applied in Self update, it will be used for all agent life cycle operations : deployment, agent upgrade

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Enterprise Targets Favorites History Search Target Name

Self Update

Self Update > Agent Software

Agent Software Updates

Actions Download Apply Agent Software Search Description

Status	OS Platform	Revision	Version	Vendor	Size(MB)	Description
Downloaded	Linux x86-64	130417	12.1.0.3.0	Oracle	225,207	Agent Software (12.1.0.3.0) for Linux x86-64
Applied	HP-UX Itanium	0	12.1.0.3.0	Oracle	395,381	Agent Software (12.1.0.3.0) for HP-UX Itanium
Applied	HP-UX PA-RISC (64-bit)	0	12.1.0.3.0	Oracle	272,751	Agent Software (12.1.0.3.0) for HP-UX PA-RISC (64-bit)
Applied	IBM AIX on POWER	0	12.1.0.3.0	Oracle	322,200	Agent Software (12.1.0.3.0) for IBM AIX on POWER Systems (64-bit)
Applied	Linux x86-64	0	12.1.0.3.0	Oracle	225,207	Agent Software (12.1.0.3.0) for Linux x86-64
Applied	Oracle Solaris on SPARC	0	12.1.0.3.0	Oracle	250,632	Agent Software (12.1.0.3.0) for Oracle Solaris on SPARC (64-bit)

Past Activities

Actions	Status	OS Platform	Revision	Version	Administrator	Start Time
Available	Succeeded	Linux x86-64	130417	12.1.0.3.0	SYSMAN	Apr 17, 2013 12:23:48 AM PDT
Download	Succeeded	Linux x86-64	130417	12.1.0.3.0	SYSMAN	Apr 17, 2013 12:23:48 AM PDT

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## Add Host Targets Wizard (Agent Push)

### What's new

- Support for all standard pdp utilities sudo, pbrun, sesu , su.
- Support for pseudo terminals
- Secure sudo/pbrun/sesu policies

Example:

From : oracle ALL=(root) /bin/sh

To : oracle ALL=(root) /usr/bin/id, /home/oracle/agentibd/\*/agentdeployroot.sh

- Locked account user with secure umask setting and secure home directory permissions

Eg. Login user: seibel with umask 027 and home directory permission 700 Locked user : oracle

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# Add Host Targets Wizard (Agent Push)

## What's new

- Support addition of host/Agent target as non SYSMAN (EM login) user.

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface. The top navigation bar includes 'Enterprise', 'Targets', 'Favorites', and 'History'. The search bar shows 'Search Target Name'. The main content area is divided into several sections:

- Summary:** Shows the host name 'adk2201792.us.oracle.com'. The 'Status' section indicates the 'Owner' is 'PRAKASH' (circled in red). Other details include 'Lifecycle Status', 'Boot Time' (11-Apr-2013 13:45:43), and 'Diagnostics' (Incidents: 0, Configuration Changes: 1, Critical Patch Advisories: 0).
- Configuration:** Lists system details such as IP Address (10.233.22.214), Operating System (Windows Server (R) 2008 Enterprise Server), File System (124.99), Memory Size (7899), Address Length (64-bit), Disk Group Usage (0), and ADFS Usage (0).
- Model:** Shows Model Name (HVM domU) and CPU Implementation (Intel64 Family 6 Model 44 Stepping 2).
- Virtual Processor:** Indicates Total vCPUs (2).
- Job Activity:** A section for monitoring job activity.
- CPU and Memory:** Contains two line graphs. The 'CPU Utilization' graph shows 'CPU in User Mode (%)' and 'CPU in System Mode (%)' over time. The 'Memory Utilization' graph shows 'Memory Utilization (%)' over time.
- Filesystem and Network:** Contains two line graphs. The 'Filesystem Usage' graph shows usage over time. The 'Network Utilization (MB/sec)' graph shows network usage over time, with a note 'No data available'.

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## Add Host Targets Wizard (Agent Push)

### What's new

- Support rolling phase deployment
  - Agent deployment proceeds continuously from one deployment phase (Initialization, remote pre-req, agent deployment) to another, after ignoring the failed hosts in each deployment phase. The deployment process does not stop when a host fails a deployment phase.
  - To deploy Management Agents in a rolling manner with UI or EM CLI, ensure that you set the *oracle.sysman.prov.agentpush.continueIgnoringFailedHost* property to

Search Results						
Session Name	Session Date	Deployment Type	Host	Initialization Status	Remote Prerequisite Status	Agent Deployment Status
ADD_HOST_SYSMAN_Jun_24_2013_9:27:33_AM_PDT	2013-06-24	FRESH_AGENT_INSTALL	██████████.us.oracle.com	✓	✗	●
ADD_HOST_SYSMAN_Jun_24_2013_9:26:42_AM_PDT	2013-06-24	FRESH_AGENT_INSTALL	██████████.us.oracle.com	✓	✓	✓
ADD_HOST_SYSMAN_Jun_24_2013_9:23:13_AM_PDT	2013-06-24	FRESH_AGENT_INSTALL	██████████.us.oracle.com	✓	✓	✓
ADD_HOST_SYSMAN_Jun_24_2013_8:07:49_AM_PDT	2013-06-24	FRESH_AGENT_INSTALL	██████████.oracle.com	✓	✓	✓
ADD_HOST_SYSMAN_Jun_19_2013_9:05:01_AM_PDT	2013-06-19	FRESH_AGENT_INSTALL	██████████.us.oracle.com.adc6160163.us.oracle.com	✓	✓	✓

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## Add Host Targets Wizard (Agent Push)

### Major Requirement

- SSH daemon must run on the target host. The supported SSH Vendors are OpenSSH and Tectia
- Cygwin 1.7 must be installed on the target host in case of Windows
- EM login users require CREATE\_TARGET privilege to deploy agent through UI and EM CLI

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# MANUAL AGENT DEPLOYMENT



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## Agent deployment using AgentDeploy.sh

### What's new

- You can install a Management Agent using the agentDeploy.sh or agentDeploy.bat script in the following ways:
  - A. Using EM CLI from the Remote Destination Host
    - Set up EM CLI on the destination host
    - Download the Management Agent software from Software Library to a temporary directory on the destination host: `<emcli_install_location>/emcli get_agentimage -destination=<download_directory> -platform="<platform>" -version=<version>`
    - Invoke agentDeploy.sh
  - B. Using EM CLI from the OMS Host
    - Log into EM CLI on OMS and download Agent software from Software Library to a temporary directory on the OMS using `emcli get_agentimage`
    - Transfer the downloaded ZIP file to a temporary directory (/tmp) on all the destination hosts where you want to install agents. You can use any file transfer utility to transfer the file.
    - Invoke agentDeploy.sh

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HOW TO PUSH AGENT AND PLUG-IN  
PATCHES WHILE DOING FRESH  
AGENT DEPLOYMENT OR AGENT  
UPGRADE?



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## How to push Agent and Plug-in patches while doing Fresh Agent Deployment or Agent Upgrade?

### Agent Core patches

- Agent core patches can be applied as part of agent upgrade
- In case of multi-oms environment, user has to repeat the same steps on all the oms
- Steps to be followed:

1. After user has downloaded the agent one-offs from MOS, place them in a directory under OMS home
2. For any platform specific patches place them under :  
`$OMS_HOME/install/oneoffs/<agent version>/<platform>`

Where :

<agent version> - points to the version of the agent for which the patches are applicable.

<platform> - points to the platform for which the patches are compatible

The platform value should be mentioned in a table with the following values

Platform OS	Platform Directory Name
Linux x86	linux
Linux x86-64	linux_x64
Oracle Solaris on SPARC (64-bit)	solaris
HP-UX PA-RISC (64-bit)	hpunix
HP-UX Itanium	hpi
IBM S/390 Based Linux (31-bit)	linux_zseries64
IBM AIX on POWER Systems (64-bit)	aix
IBM: Linux on POWER Systems	linux_ppc64
Microsoft Windows x64 (64-bit)	windows_x64
Oracle Solaris on x86-64 (64-bit)	solaris_x64
Microsoft Windows (32-bit)	win32

## How to push Agent and Plug-in patches while doing Fresh Agent Deployment or Agent Upgrade?

### Agent Core patches

3. For any Generic patches place them under :  
    \$OMS\_HOME/install/oneoffs/<agent version>/Generic
- For example, lets say if user has downloaded 3 patches applicable on top of 12.1.0.3 agent version.

11180406 - Generic patch  
11878907 - Linux-x64 patch  
11993573 - Linux-x64 patch

Then the user will put these patches in the following location:

\$OMS\_HOME/install/oneoffs/12.1.0.3.0/Generic/11180406  
\$OMS\_HOME/install/oneoffs/12.1.0.3.0/linux\_x64/11878907  
\$OMS\_HOME/install/oneoffs/12.1.0.3.0/linux\_x64/11993573

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## How to push Agent and Plug-in patches while doing Fresh Agent Deployment or Agent Upgrade?

### Plug-in patches

- Select a test Management Agent on which the preferred plug-ins are already deployed and apply required patches
- Create a custom plug-in update using the following command:

```
emcli create_custom_plugin_update  
-agent_name="agent_name"  
-plugin_id="plugin_id"  
[-overwrite]
```

- Custom plug-in update will be for each plug-in type, it zips up the plug-in home on the target agent
- One can see a list of all custom plug-in updates created:

```
emcli list_custom_plugin_updates
```

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# How to push Agent and Plug-in patches while doing Fresh Agent Deployment or Agent Upgrade?

## Plug-in patches

- Custom plug-in update will appear in plug-in manager home page

The screenshot shows the Oracle Database plug-in manager interface. On the left, the 'General' tab is active, displaying details for the 'oracle.sysman.db' plug-in, including its version on the management server (12.1.0.4.0) and the latest available version (12.1.0.5.0). A red arrow points from the 'Custom plug-in update exists. Click to view details.' notification to the 'Custom Plug-in update' details panel on the right. This panel shows the update was created on May 6, 2013, and provides a detailed log of the patch installation process, including the Oracle Home path, OPatch version, and the list of installed products and interim patches.

- OMS will always have latest customer plug-in update, use `-overwrite` to replace it.

## Documentation

- Install guide is the single source of truth
- Always refer to the Install guide
- You can get the Install guide from:

<http://www.oracle.com/technetwork/indexes/documentation/index.html#em>

- Installation and Upgrade collateral page on OTN

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

- View EM 12.1.0.3 Agent Push using EM CLI demo recording from :

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

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