

Administration and Installation Guide v12.1.0.3.0

Symantec VCS
MONITORING PLUG-IN
FOR ORACLE ENTERPRISE MANAGER

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Prerequisites

- Oracle Enterprise Manager 12c R3 or above
- The agent side host should be an EM supported Linux 32 or 64 bit platform, or SPARC Solaris.
- An Oracle EM 12.1.0.3.0 or higher agent deployment is required on each VCS host. This should be local to the VCS installation.
- Access should be given to the agent OS user to run VCS ha* commands. These can either be enabled directly, through a privilege control mechanism (such as sudo), or through a dedicated VCS user account, authenticating through halogin. This is used by EM to remotely monitor the target, discover targets and perform component control operations.

Plug-in installation (OMS)

The plug-in should be installed into the EM environment using emcli.

Following download of the opar file from <http://www.aidev.uk> please import using the following command as SYSMAN:

```
emcli import_update -file={full path to opar file} -omslocal
```

This imports the plug-in into the EM environment and makes it visible within the EM console

eg:

```
$ emcli import_update -file=/home/oracle/12.1.0.3.0_aidev.vcs.xvcs_2000_0.opar -omslocal
```

```
Processing update: Plug-in - Aidev VCS system monitoring plugin for Oracle Enterprise Manager
```

```
Successfully uploaded the update to Enterprise Manager. Use the Self Update Console to manage this update.
```

Within Oracle Enterprise Manager, deploy the plug-in.

Navigate to **"Setup"** , **"Extensibility"**, **"Plugins"** then expand the **"Servers, Storage and Network"** section:

Select the Symantec VCS Cluster plugin.

ORACLE Enterprise Manager Cloud Control 13c

Plug-ins
This page lists the plug-ins available, downloaded, and deployed to the Enterprise Manager system. Use this page to deploy or undeploy plug-ins.

Actions ▾ View ▾ Deploy On Undeploy From Check Updates Deployment Activities

Name	Version			Management Agent with Plug-in	Description
	Latest Available	Latest Downloaded	On Management Server		
▲ Servers, Storage and Network					
Oracle Storage Managen	13.1.1.0.0	13.1.1.0.0		N/A	Enterprise Manager Storage Mana Copy-on-Write (CoW) features of tl
Oracle Virtual Infractu	13.1.1.0.0	13.1.1.0.0		0	Enables direct monitoring of Orack
Oracle Virtual Networkin	12.1.0.2.0	12.1.0.2.0		0	Enterprise Manager for Oracle Virtu
Oracle Virtualization	13.1.1.0.0	13.1.1.0.0		0	Enables management capabilities
Symantec VCS Cluster	12.1.0.3.0	12.1.0.3.0		0	Symantec VCS Cluster plugin prov VCS nodes, VCS resources, VCS c
Systems Infrastructure	13.1.1.0.0	13.1.1.0.0	13.1.1.0.0	1	Enterprise Manager Systems Infras
					Enterprise Manager for Oracle Auc

left click on "Deploy on" then "Management Servers"

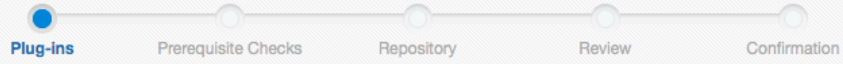
ORACLE Enterprise Manager Cloud Control 13c

Plug-ins

This page lists the plug-ins available, downloaded, and deployed to the Enterprise Manager Cloud Control.

Actions ▼ View ▼ **Deploy On ▼** Undeploy From ▼ Check ▼

Name	Available	Latest Downloaded	Version



Deploy Plug-ins on Management Servers: Plug-ins

Back Step 1 of 5 Next Cancel

+ Add... ✕ Remove

Name	Version			Downtime Required	Use Last Successful Prerequisite
	Latest Available	Currently Deployed	To Deploy		
Symantec VCS Cluster	12.1.0.3.0	None	12.1.0.3.0		<input type="checkbox"/>

Ensure the correct version is shown

Click Next

ensure the prerequisites succeed then click "Next"

ORACLE Enterprise Manager Cloud Control 13c

Progress bar: Plug-ins, **Prerequisite Checks**, Repository, Review, Confirmation

Deploy Plug-ins on Management Servers: Prerequisite Checks

▲ Prerequisite Status

✓ Prerequisite Checks - Successfully Completed

Name	Version	Status (%)
[-] Symantec VCS Cluster	12.1.0.3.0	100

Enter the repository SYS password or use an existing named credential

Click Next



ORACLE Enterprise Manager Cloud Control 13c

Progress: Plug-ins, Prerequisite Checks, **Repository**, Review, Confirmation

Deploy Plug-ins on Management Servers: Repository

▲ SYS Credential

Specify repository SYS credentials

Credential Named New

* **Username**

* **Password**

* **Confirm Password**

Role

Save As

Review the information shown

If all is correct, click Deploy

NB. No outage is required for this operation

The screenshot shows the Oracle Enterprise Manager Cloud Control 13c interface. At the top, the title bar reads "ORACLE Enterprise Manager Cloud Control 13c" and "SYSMAN". Below the title bar is a progress bar with five steps: "Plug-ins", "Prerequisite Checks", "Repository", "Review" (highlighted in blue), and "Confirmation".

The main content area is titled "Deploy Plug-ins on Management Servers: Review". It includes navigation buttons: "Back", "Step 4 of 5", "Deploy", and "Cancel".

Under the "Management Servers" section, there is a table with the following data:

Name	Status
em13.aidev.uk:4889_Management_Service	↑

Under the "Plug-ins" section, there is a table with the following data:

Name	Version			Downtime Required
	Latest Available	Currently Deployed	To Deploy	
Symantec VCS Cluster	12.1.0.3.0	None	12.1.0.3.0	

after a few minutes, this should succeed:

The screenshot displays the Oracle Enterprise Manager Cloud Control 13c interface. The top navigation bar includes the Oracle logo, the text "Enterprise Manager Cloud Control 13c", and several utility icons: Enterprise, Targets, Star, Clock, Gear, Search, Bell, and a user profile dropdown for "SYSMAN".

The main content area is titled "Plug-ins" and shows a breadcrumb "Plug-ins > Deployment Activities". Below this, the "Deployment Activities" section is active, with an "Auto Refresh" dropdown set to "Off".

On the left, a "Recent Activities" sidebar lists various activity categories, including "All Activities", "Successful Activities", "Failed Activities", "Discovery Activities", "Activities on Management Server", "Activities on Management Agent", "Deployment Activities", and "Undeployment Activities".

The central table displays a single deployment record with the following details:

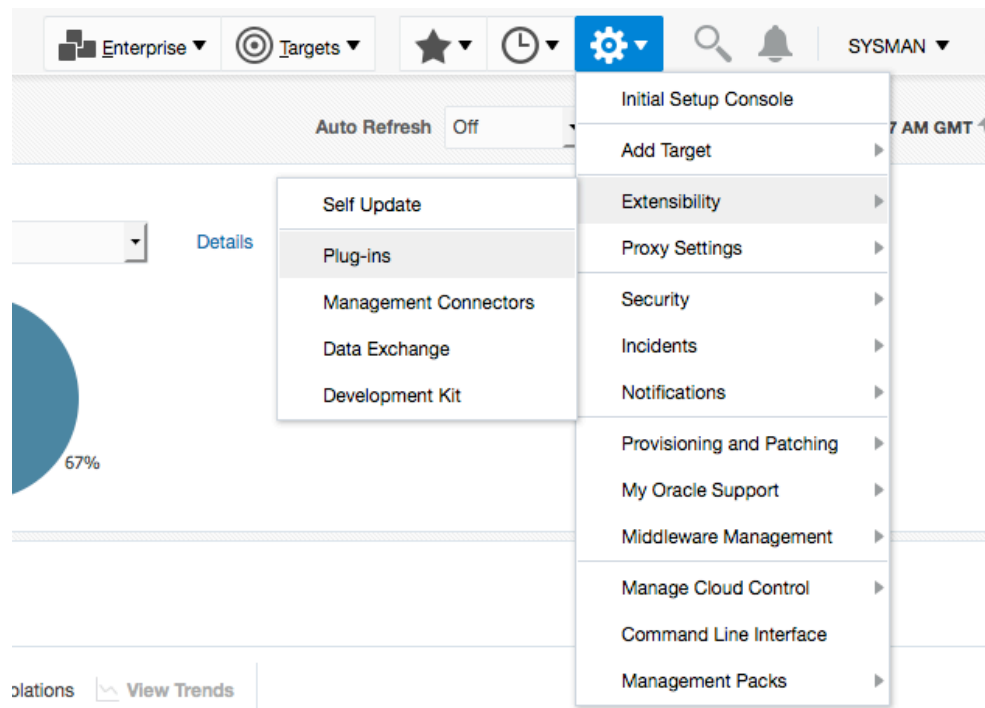
Name	Version	Status	Content Type	Destination	Job Name
Symantec VCS Cluster	12.1.0.3.0	✓	Plug-in	em13.aidev.uk:4889_Management_Service	PLUGIN_DEPLOYMENT_47_AIDEV.VCS.XVCS

Plug-in installation (Agent)

Each monitoring agent requires the VCS plugin to be deployed to it before it can monitor VCS targets.

This should be undertaken prior to adding targets.

From the EM homepage, Setup ->Extensibility -> Plugins



expand the "Servers, Storage and Network" section:

Select the Symantec VCS Cluster plugin.

ORACLE Enterprise Manager Cloud Control 13c

Plug-ins

This page lists the plug-ins available, downloaded, and deployed to the Enterprise Manager system. Use this page to deploy

Actions ▾ View ▾ Deploy On ▾ Undeploy From ▾ Check Updates Deployment Activities

Name	Version			Management Agent with Plug-in
	Latest Available	Latest Downloaded	On Management Server	
▶ Databases				
▶ Engineered Systems				
▶ Middleware				
▲ Servers, Storage and Network				
Oracle Storage Managen	13.1.1.0.0	13.1.1.0.0		N/A
Oracle Virtual Infrastruct	13.1.1.0.0	13.1.1.0.0		0
Oracle Virtual Networkin	12.1.0.2.0	12.1.0.2.0		0
Oracle Virtualization	13.1.1.0.0	13.1.1.0.0		0
Symantec VCS Cluster	12.1.0.3.0	12.1.0.3.0	12.1.0.3.0	
Systems Infrastructure	13.1.1.0.0	13.1.1.0.0	13.1.1.0.0	1

Select Deploy On -> Management Agent

The screenshot shows the Oracle Enterprise Manager Cloud Control 13c interface. The page title is "ORACLE Enterprise Manager Cloud Control 13c". Below the title is the section "Plug-ins" with a subtitle "This page lists the plug-ins available, downloaded, and deployed to the Enterprise M".

At the top of the table area, there are several action buttons: "Actions", "View", "Deploy On", "Undeploy From", and "Check". The "Deploy On" button is highlighted in blue and has a dropdown menu open. The dropdown menu contains two items: "Management Servers..." and "Management Agent...".

The table below has the following columns: "Name", "Latest Available", "Version", and "Latest Downloaded".

Name	Latest Available	Version	Latest Downloaded

Deploy Plug-in on Management Agent [X]

Name: Symantec VCS Cluster

Version: 12.1.0.3.0 [v]

Target Types

Name	Supported Target Versions
VCS Cluster	1.0
VCS Cluster Node	1.0
VCS Cluster Resource	1.0
VCS Group	1.0
VCS Group Member	1.0

[Continue] [Cancel]

Click Continue

Select the agents to deploy to, click Continue

Deploy Plug-in on Management Agent ✕

Select Management Agents

Name Symantec VCS Cluster

Version 12.1.0.3.0

Management Agents

Management Agent	Agent Version	Operating System	Deployed Version	Status
vcs2.localdomain:3879	12.1.0.3.0	Linux x86-64		↑
vcs1.localdomain:3879	12.1.0.3.0	Linux x86-64		↑
em13.aidev.uk:3872	13.1.0.0.0	Linux x86-64		↑

Back Continue Cancel

Ensure the prerequisite checks succeed, click Next

Deploy Plug-in on Management Agent [X]

Prerequisite Checks

Name Symantec VCS Cluster

Version 12.1.0.3.0

Management Agent	Operating System	Status	Error Message
vcs2.localdomain:3879	Linux x86-64	✓	
vcs1.localdomain:3879	Linux x86-64	✓	

* - Dependent Agents

Back Next Cancel

Review and click Deploy:

Deploy Plug-in on Management Agent ✕

Review

Name Symantec VCS Cluster

Version 12.1.0.3.0

Management Agents that passed the prerequisite checks.

Management Agent	Operating System	Deployed Plug-in Version	Status	Restart Required
vcs2.localdomain:3879	Linux x86-64		↑	No
vcs1.localdomain:3879	Linux x86-64		↑	No

* - Dependent Agents

Click Show Status to see the job:

Deploy Plug-in on Management Agent ✕

Confirmation

✔ Started deploying plug-in "Symantec VCS Cluster" version 12.1.0.3.0 on the selected Management Agents.
You can monitor the status of the deployment operation in the Deployment Activities page.
You can also monitor the progress using the following command:
emcli get_plugin_deployment_status

Show Status Close

This should complete after a period of time:

ORACLE Enterprise Manager Cloud Control 13c Enterprise ▾ Targets ▾

Plug-ins

[Plug-ins > Deployment Activities](#)
Deployment Activities

Recent Activities

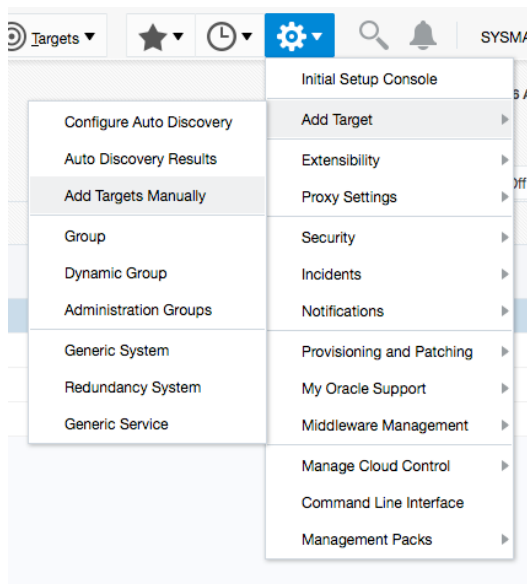
- [All Activities](#)
- [Successful Activities](#)
- [Failed Activities](#)
- [Discovery Activities](#)
- [Activities on Management Server](#)
- [Activities on Management Agent](#)
- [Deployment Activities](#)
- [Undeployment Activities](#)

View ▾					
Name	Version	Status	Content Type	Destination	
Symantec VCS Cluster	12.1.0.3.0	✓	Discovery	vcs2.localdomain:3879	
Symantec VCS Cluster	12.1.0.3.0	✓	Plug-in	vcs2.localdomain:3879	
Symantec VCS Cluster	12.1.0.3.0	✓	Discovery	vcs1.localdomain:3879	
Symantec VCS Cluster	12.1.0.3.0	✓	Plug-in	vcs1.localdomain:3879	

Target Addition

Targets are added from the EM user interface.


Setup->Add Target-> Add Targets Manually



Choose Add Using Guided Process:

Add Non-Host Targets Using Guided Process



 **Add Using Guided Process**

Run guided discovery on a host to find manageable targets. Choose to promote some or all discovered targets to become managed.

Select Symantec VCS Discovery

Click Add

Add Using Guided Process ✕

Guided Discovery Discovered Target Types

Guided Discovery	Discovered Target Types
Oracle Directory Server Enterprise Edition	null, null, null
Oracle Exadata Database Machine	null, null, null, null, null, null, null, null, null, null, null, null
Oracle Fusion Middleware/WebLogic Domain	Oracle WebLogic Domain
Oracle GlassFish Domain	null
Oracle SuperCluster	null, null, null, null, Systems Infrastructure Server, null
Standalone Oracle HTTP Server	Oracle HTTP Server
Symantec VCS Target Discovery	VCS Cluster, VCS Group, VCS Cluster Node, VCS Gr...
Systems Infrastructure Cisco Switch	Systems Infrastructure Cisco Switch
Systems Infrastructure Oracle InfiniBand Switch	Systems Infrastructure Oracle InfiniBand Switch
Systems Infrastructure PDU	null
Systems Infrastructure Rack	null
Systems Infrastructure Server ILOM	Systems Infrastructure Server ILOM
Systems Infrastructure ZFS Storage Appliance Controller	Systems Infrastructure ZFS Storage Appliance Contr...

Targets will be discovered and displayed.

Please select all targets in the table, then click Next

ORACLE Enterprise Manager Cloud Control 13c

Enterprise Targets

Symantec VCS Target Discovery Discovery

Add VCS Targets.

Tips:

Select Agents:
 Select the agents you wish to add VCS targets to - typically this should include all cluster hosts.
 Agents must have the VCS management agent plugin deployed beforehand.
 Click Next to proceed to the Configure Inputs stage.

Configure Inputs:
 If required, provide a naming tag for the associated VCS targets in the cluster.
 This may be used to auto generate target names to ensure unique naming across the EM estate.
 To add targets to an existing EM managed cluster, ensure that this is set correctly.
 This may be left blank if cluster names are unique across your estate.
 Confirm whether a privilege access tool is to be used.
 This influences the use of a tool, eg. sudo, by both the target discovery process and target metric collection.
 Click Next to proceed to target discovery.

Configure Targets:
 Target discovery results are displayed.
 Click the Properties button to view detected target properties.
 Select the targets you wish to add into EM and click Next.

Summary:
 Ensure targets have been added correctly.

Add VCS Targets: Configure Targets Step 3 of 4 **Next** **Cancel**

Select Targets To Add to Console

Status	Agent	Target Name	Target Type	Set Proper...
Unmanaged	vcs2.localdomain:3879	ClusterService.cluster1.CLUS1	vcs_group	Properti...
Unmanaged	vcs1.localdomain:3879	ClusterService.cluster1.CLUS1	vcs_group	Properti...
Unmanaged	vcs1.localdomain:3879	ClusterService.vcs1.cluster1.C	vcs_node_group	Properti...
Unmanaged	vcs2.localdomain:3879	ClusterService.vcs2.cluster1.C	vcs_node_group	Properti...
Unmanaged	vcs1.localdomain:3879	ORCL-IP.oraGroup.vcs1.cluste	vcs_resource	Properti...
Unmanaged	vcs2.localdomain:3879	ORCL-IP.oraGroup.vcs2.cluste	vcs_resource	Properti...
Unmanaged	vcs1.localdomain:3879	ORCL-NetIsnr.oraGroup.vcs1.c	vcs_resource	Properti...
Unmanaged	vcs2.localdomain:3879	ORCL-NetIsnr.oraGroup.vcs2.c	vcs_resource	Properti...
Unmanaged	vcs1.localdomain:3879	ORCL-vol.oraGroup.vcs1.clust	vcs_resource	Properti...
Unmanaged	vcs2.localdomain:3879	ORCL-vol.oraGroup.vcs2.clust	vcs_resource	Properti...

Targets will be added

Click Exit

The screenshot shows the Oracle Enterprise Manager Cloud Control 13c interface. The page title is "Symantec VCS Target Discovery Discovery". The breadcrumb trail is "Add VCS Targets." with four steps: "Select Agents", "Configure Inputs", "Configure Targets", and "Summary" (which is the current step). The page is titled "Add VCS Sample Targets: Summary" and is "Step 4 of 4". There are "Next" and "Exit" buttons. A table titled "Summary Of Targets Added To EM" lists the following targets:

Target Name	Target Type
webip.ClusterService.vcs2.cluster1.CLUSTER_HR	vcs_resource
webip.ClusterService.vcs1.cluster1.CLUSTER_HR	vcs_resource
vxfsckd.cvm.vcs2.cluster1.CLUSTER_HR	vcs_resource
vxfsckd.cvm.vcs1.cluster1.CLUSTER_HR	vcs_resource
vcs2.cluster1.CLUSTER_HR	vcs_node
vcs1.cluster1.CLUSTER_HR	vcs_node
oramountres.oraGroup.vcs2.cluster1.CLUSTER_HR	vcs_resource
oramountres.oraGroup.vcs1.cluster1.CLUSTER_HR	vcs_resource
oradgres.oraGroup.vcs2.cluster1.CLUSTER_HR	vcs_resource
oradgres.oraGroup.vcs1.cluster1.CLUSTER_HR	vcs_resource
oraGroup.vcs2.cluster1.CLUSTER_HR	vcs_node_group
oraGroup.vcs1.cluster1.CLUSTER_HR	vcs_node_group

Targets should now be visible:

ORACLE Enterprise Manager Cloud Control 13c

Enterprise Targets

All Targets Auto Refresh Off

View Search Target Name HR Save Search Saved Searches

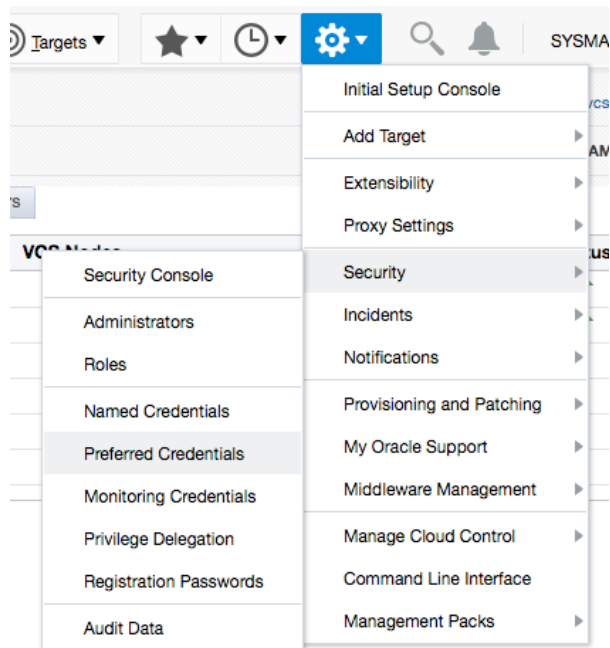
Target Name	Target Type	Target Status
cluster1.CLUSTER_HR	VCS Cluster	↑
ClusterService.cluster1.CLUSTER_HR	VCS Group	↑
ClusterService.vcs1.cluster1.CLUSTER_HR	VCS Group Member	↑
ClusterService.vcs2.cluster1.CLUSTER_HR	VCS Group Member	↓
csgnic.ClusterService.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
csgnic.ClusterService.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
cvm_clus.cvm.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
cvm_clus.cvm.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
cvm_vxconfigd.cvm.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
cvm_vxconfigd.cvm.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
cvm.cluster1.CLUSTER_HR	VCS Group	↑
cvm.vcs1.cluster1.CLUSTER_HR	VCS Group Member	↑
cvm.vcs2.cluster1.CLUSTER_HR	VCS Group Member	↑
dgres1.VVRGrp.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
dgres1.VVRGrp.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↓
mountres1.VVRGrp.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↑
mountres1.VVRGrp.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↓
oradgres.oraGroup.vcs1.cluster1.CLUSTER_HR	VCS Cluster Resource	↓
oradgres.oraGroup.vcs2.cluster1.CLUSTER_HR	VCS Cluster Resource	↑

Columns Hidden 14 Discovered Targets 12 Targets Found 41

Setting OS credentials

To be able to control VCS components from with EM, OS credentials are required for each target.

To do this, Setup-> Security -> Preferred Credentials



Select the target type and then Manage Preferred Credentials

ORACLE Enterprise Manager Cloud Control 13c

Security

Preferred Credentials

You can use preferred credentials to simplify access to targets that you manage. If a target has preferred credentials set, applications that You can set default credentials for each target type. Default credentials are used for any targets that do not have preferred credentials exp

Target type

[Manage Preferred Credentials](#)

Target Type ▲ ▼	Total Targets	Targets with Credentials Set	Default Cred
Systems Infrastructure Network	1	0	No
Systems Infrastructure Server	1	0	No
VCS Cluster	1	0	No
VCS Cluster Node	2	0	No
VCS Cluster Resource	26	0	No
VCS Group	4	0	No
VCS Group Member	8	0	No
mongoDB Database	6	0	No

For the **Host Credentials** credential set, you can set for each target or as a default for all targets of this type:

ORACLE Enterprise Manager Cloud Control 13c Enterprise ▼ Target

Security

Preferred Credentials > VCS Cluster Resource

VCS Cluster Resource Preferred Credentials

This page lists preferred credential preferences. There are 2 kinds of preferences, User Preferences and Global Preferences. Under "My Preferences" tab, one can set default level. Click on "Global Preferences" tab to view/set Global preferences. To get/set "Global Preferences" user needs certain minimum privilege. Check "Global" not require any additional privilege. Preferred credentials are resolved in a specific order. User scoped preferences will always take precedence. First we search at target credential. When not found, we repeat the same lookup in Global preferences scope.

My Preferences | Global Preferences

To set preferred credentials, click "Set" in the appropriate table. Click "Test" to test the credential. Click "View References" to see all references to the credential. Use `emcli create_credential_set verb` to create an additional credential set.

Default Preferred Credentials

Default credentials are used for targets that do not have credentials set in the Target Credentials table below.

Clear

Credential Set	Target Username	Credential Name	Credential Owner
Host Credentials			

Target Preferred Credentials

Target credentials can be specified for each target. If set, target credentials override the default credentials for that target.

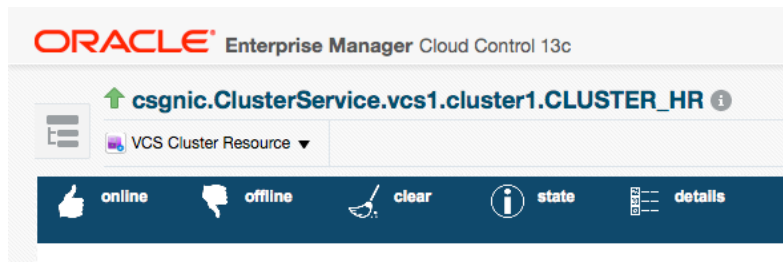
Target Name Credential Set

View ▼ Clear Test View References

Target Name	Status	Credential Set	Configured Value			
			Target Username	Credential Name	Credential Owner	Target Username
ORCL-IP.oraGroup.vcs1.cluster...		Host Credentials				
ORCL-IP.oraGroup.vcs2.cluster...		Host Credentials				

Component Control

Components can be controlled from within the EM user interface.



A prerequisite of this functionality is the setting of Host Credentials for the target in question.

Additionally, the Command Prefix should be set correctly, and OS level execution of the ha command should be permitted for the agent OS user.

The agent side location of {agent base}/plugins/aidev.vcs.xvcs.agent.plugin_12.1.0.x.0/scripts holds the files that call the operation.

Please refer to mgo_ctl.sh for the commands that should be allowed.

OS Side Configuration issues

The majority of issues with metric collection or component control are a result of OS side configuration for the agent -> VCS calls.

Metric collection is controlled by {agent base}/plugins/aidev.vcs.xvcs.agent.plugin_12.1.0.x.0/scripts/vcs.sh

Target discovery is controlled by {agent base}/plugins/aidev.vcs.xvcs.discovery.plugin_12.1.0.x.0/discover_vcs.sh

Component operations are controlled by {agent base}/plugins/aidev.vcs.xvcs.agent.plugin_12.1.0.x.0/scripts/mgo_ctl.sh

Halopin access:

If you require use of halopin authentication, please edit the relevant script according to site standards. An example of a simple call to halopin is contained in each script.

Sudo access:

Sudo access can be controlled through Command Prefix property of a target. Alternatively the above scripts can be customised to site standards.

An example sudoers configuration is held at {agent base}/plugins/aidev.vcs.xvcs.agent.plugin_12.1.0.x.0/scripts

Please use this as a reference for the commands that require agent access to allow normal functionality.



NEED FURTHER INFORMATION? contact info@aidev.uk for more details on this product and how to join up with us.

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