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# **Cisco UCS Manager Plug-In**

For Oracle Enterprise Manager 12c Release 3 and 12c Release 4

# **User Guide**

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# 1 Overview

## 1.1 Unified Computing System (UCS)

UCS is a data center server that unifies network virtualization, storage virtualization and server virtualization, within open industry standard technologies and with the network as the platform.

UCS Manager (Unified Computing System Manager) provides a single point of management for all of the elements of a UCS system.

### 1.2 Oracle Enterprise Manager (OEM)

Oracle Enterprise Manager provides the most comprehensive management solution for Oracle products. The Oracle Enterprise Manager provides a single tool for monitoring and managing the environment. Apart from providing native support for a wide array of products, it also provides a framework for enabling partners and customers to easily build plug-ins for their components and applications.

### 1.3 Cisco UCS Manager Plug-In for Oracle Enterprise Manager

Cisco's UCS Manager Plug-In leverages the Enterprise Manager SDK (EMSDK) of the Oracle Enterprise Manager and XML API exposed by Cisco UCS Manager in order to integrate Enterprise Manager with the UCS domains. Users of Oracle Enterprise Manager on UCS servers will be able to make use of the UCS Manager Plug-In for Enterprise Manager to monitor the health, faults and summary information of physical and logical components on the UCS Domains

# **2** System Requirements

#### Oracle Enterprise Manager

This plug-in is supported on Oracle Enterprise Manager 12c R3 and Oracle Enterprise Manager 12c R4.

For more information, see the following in the Enterprise Manager Cloud Control documentation library:

- Oracle Enterprise Manager Cloud Control Advanced Installation and Configuration Guide
- o Oracle Enterprise Manager Cloud Control Upgrade Guide
- o Oracle Enterprise Manager Cloud Control Administrator's Guide

For the latest releases of these and other Oracle documentation, check the Oracle Technology Network at the following URL:

#### **OEM Resources**

**Note**: It is important to have ORACLE\_OMS variable added to oracle user. The value for this variable has to be "home/oracle/app/oracle/em"

If you do not see value for this variable on linux box on issuing **env** command, you may edit file /home/oracle/.bash\_profile and add below entry:

export ORACLE\_OMS=/home/oracle/app/oracle/em

After the file .bash\_profile has been edited, do source .bash\_profile

You need to also do agent restart after this.

- agent\_home/bin>./emctl stop agent The agent\_home is '/home/oracle/app/oracle/em\_agent/agent\_inst/bin'
- 2) agent\_home/bin>./emctl start agent

#### Cisco UCS Manager

This plug-in is compatible with UCS Manager Release 2.1, 2.2 and 3.0. Refer "UCS Manager" for more details.

Note: As of this release, the Cisco UCS Manager Plug-in is tested on Linux x86-64 platform.

# 3 Install UCS Manager Plug-In

## 3.1 Importing the OPAR File

- 1. The Oracle Plug-in Archive (OPAR) file is packaged in a zip file. Extract the contents of the zip file and make the OPAR available to the OMS.
- 2. At this point it is assumed that the Oracle emcli utility has been properly configured prior to installation.
- 3. Import the Cisco UCS Manager OPAR file into the Software Library of your OMS. The following is an example of an emcli command (in this example the contents of the downloaded file has been put into /home/oracle\_

```
emcli import_update -
file="/home/oracle/12.1.0.17.0_cisco.ucsm.oem_2000_0.o
par" -omslocal
```

After a successful import, you will see the following output:

Processing update: Plug-in - Cisco UCS Manager. Operation completed successfully. Update has been uploaded to Enterprise Manager. Please use the Self Update Home to manage this update.

4. Log into EM12c Web UI and navigate to Setup -> Extensibility -> Self Update.

Click the Plug-in folder, enter 'cisco' in the search box provided and hit 💌 button. Confirm that the Cisco UCS Manager Plug-In has been successfully downloaded to the software repository.

Actions 👻	🕹 Download	🙉 Apply 🛛 🖉	Plug-in 🛛 🛃	Sea	arch Description	cisco	)		>
tatus	Plu	ug-in Name	OS Platform		Revision		Version	Vendor	
Applied	Ci	sco UCSM Plugin	Generic Platforr	n	0		12.1.0.12.0	CISCO	

Figure 1: Self-update view after plug-in is imported.

## 3.2 Deploying the Plug-in:

### 3.2.1 Deploying the Cisco UCS Manager Plug-In onto an EM12c Management Server (OMS)

- 1. From the EM12c Web UI, navigate to Setup -> Extensibility -> Plug-Ins
- 2. Highlight the Cisco UCS Manager Plug-In (found in the Servers, Storage, and Network folder), Right-Click and Select **Deploy on Management Server.**

🗸 🚞 Servers, Storage and Networ	k 🕕			
💵 Cisco UCSM Plugin	12 1 0 12 0	-	12.1.0.12.0	12.1.0.12.0
🗐 EMC CLARiiON Array	🖳 Deploy On	•	Management Servers	
🔊 EMC Celerra Storage	🖳 Undeploy From	•	Management Agent	
🔊 EMC Symmetrix Array	🕍 Information		12.1.0.2.0 👰	
💵 Oracle Storage Manageme	Collapse		12.1.0.3.0 🚳	
🗐 Oracle Virtual Networking	Expand All Below		12.1.0.2.0 🚳	
Sa Anada Uluku aliaaki aa	Collapse All Below		121050	
Cisco UCSM Plugin	Show as Top			

Figure 2: Deploying plugin on management server.

- 3. The 'Deploy Plug-in on Management Servers Dialog General' dialog box will appear. Enter the 'Repository SYS Password' and click **Continue.**
- 4. The 'Deploy Plug-in on Management Servers Pre-requisite Checks' dialog box will appear. Assuming all the Pre-requisites have been verified, click **Next.**

- Next the 'Deploy Plug-in on Management Servers Review' dialog box will appear. Highlight the Management Service on which you want to deploy the plug-in and click Deploy.
- Next the 'Deploy Plug-in on Management Servers –Confirmation dialog box will appear. Note the information on the screen and click **Show Status** to monitor the deployment status or click Close to complete the deployment of the Cisco UCS Manager Plug-In onto an EM12c OMS.
- 7. In the case where 'Show status' is selected, the Deployment Activities screen will appear and will allow you to monitor the development status of the plug-in to the OMS. It

can take a few minutes - – you can refresh this panel using  $\heartsuit$  button in top right of screen to see the deployment progress.

### 3.2.2 Deploying the Cisco UCS Manager Plug-In onto an EM12c Management Server (OMS) - Release 12c R4

- 8. From the EM12c Web UI, navigate to Setup -> Extensibility -> Plug-Ins
- 9. Highlight the Cisco UCS Manager Plug-In (found in the Servers, Storage, and Network folder), Right-Click and Select **Deploy on Management Server.**

🗸 🚞 Servers, Storage and Networl	k 🕕			
💵 Cisco UCSM Plugin	1210120		12.1.0.12.0	12.1.0.12.0
🔊 EMC CLARiiON Array	🖳 Deploy On	•	Management Servers	
🗐 EMC Celerra Storage	🛐 Undeploy From	•	Management Agent	
🔊 EMC Symmetrix Array	🕍 Information	- 1	12.1.0.2.0 💁	
🔊 Oracle Storage Manageme	Collapse		12.1.0.3.0 🚳	
🔊 Oracle Virtual Networking	Expand All Below		12.1.0.2.0 👰	
n	Collapse All Below		121050	
Cisco UCSM Plugin	Show as Top			
Figure 2: Deploying pluging				

- Figure 3: Deploying plugin on management server.
- 10. The 'Deploy Plug-in on Management Servers Dialog Plug-ins' dialog box will appear. Do not check the option 'Use Last Successful Prerequisite' if the plugin is being deployed for the first time else we can check the option.

Aug-ins Prerequisite Checks Reposit	ory Review Confirmation					
Deploy Plug-ins on Manager	ment Servers: Plug-ins			Back St	ep 1 of 5 Next Cance	
💠 Add 💥 Remove						
Mana		Version		Downline Remined	Use Last Successful	
Name	Latest Available	Currently Deployed	To Deploy	Downtine Required	Prerequisite	
🚳 Cisco UCSM Plugin	12.1.0.12.0	None	12.1.0.12.0			

#### Figure 4: Deploying plugin on management server. Use Last Successful Prerequisite check box.

- 11. The 'Deploy Plug-in on Management Servers Pre-requisite Checks' dialog box will appear. Assuming all the Pre-requisites have been verified, click **Next**.
- 12. Next the 'Deploy Plug-in on Management Servers Repository' dialog box will appear. Click the New radio button. Enter 'sys' as username and give the password. Click **Next** button.

Plug-ins Prerequisite Checks	ise Manager Cloud Control 12c
Deploy Plug-ins on M	anagement Servers: Repository
specify repository 515 credential	s
Credential	Named  New
* Username	sys
* Password	•••••
* Confirm Password	*****
Role	SYSDBA 🔻
	✓ Save As NC_ORACLE_D_2015-05-22-115140
Figure 5: Deploying p	olugin on management server. Use of New button.

- 13. Next the 'Deploy Plug-in on Management Servers Review' dialog box will appear. Highlight the Management Service on which you want to deploy the plug-in and click **Deploy.**
- 14. Next the 'Deploy Plug-in on Management Servers –Confirmation dialog box will appear. Note the information on the screen and click Show Status to monitor the deployment status or click Close to complete the deployment of the Cisco UCS Manager Plug-In onto an EM12c OMS.
- 15. In the case where 'Show status' is selected, the Deployment Activities screen will appear and will allow you to monitor the development status of the plug-in to the OMS. It

can take a few minutes – you can refresh this panel using  ${}^{m C}$  button in top right of screen to see the deployment progress.

### 3.2.3 Deploying the Cisco UCS Manager Plug-In onto an EM12c Management Agent (OMA)

- 1. From the EM12c Web UI, navigate to Setup -> Extensibility -> Plug-Ins
- 2. Highlight the Cisco UCS Manager Plug-In (found in the Servers, Storage, and Network folder), Right-Click and Select **Deploy On Management Agent.**

v 🛄 bervers, blurage and Network 😈			
Cisco LCSM Plugin	12.1.0.12.0	12.1.0.12.0	12.1.0.12.0
💵 EMC ( 🖳 Deploy On	Management Serv	ers ,0.2.0 👰	
💵 EMC ( 🖳 Undeploy From	Management Age	nt0.2.0 🚳	
💵 EMC 🛿 🕍 Information	2.1.0.2.0	12.1.0.2.0 🙉	
Drack Collapse	2.1.0.3.0	12.1.0.3.0 📴	
Drack Expand All Below	2.1.0.2.0	12.1.0.2.0 🚳	
Collapse All Below	21050	121050 🖾	
Cisco UCSM P Show as Top			

Figure 6: Deploying plugin on management agent.

- The 'Deploy Plug-in on Management Agent dialog box will appear. Click **Continue.** The 'Deploy Plug-in on Management Agent Select Management Agents' dialog appears. Select the Management Agent you wish to un-deploy the Cisco UCSM Plug-In from. Click Continue.
- 5. The 'Deploy Plug-in on Management Agent Pre-requisite checks' dialog box will appear. Assuming all the Pre-requisites have been verified, click Next.
- 6. Next the 'Deploy Plug-in on Management Agent Review' dialog box will appear. Assuming the pre-requisite checks have passed, Click Deploy.
- 7. Next the 'Deploy Plug-in on Management Agent Confirmation' dialog will appear. Note the information on the screen and click either Show Status to monitor the deployment status or click Close to complete the deployment of Cisco UCS Manager Plug-In onto an EM12c OMA.
- In the case where 'Show status' is selected, the Deployment Activities screen will 8. appear and will allow you to monitor the development status of the plug-in to the OMA. It

can take a few minutes – – you can refresh this panel using  ${\bf \heartsuit}$  button in top right of screen to see the deployment progress.

Reference: Importing and deploying the Plug-in Archive into Enterprise Manager

## 3.3 Stop the OEMService upon upgrade:

You will need to kill the OEM Service if it is running. You can check that as: Login to the agent machine

- Open the terminal and lookup for the OEMService process using ps -ef | grep OEMService
- Note the process id of the OEMService and kill the process

# 4 Configuration of UCS Domain

After successful deployment of the UCS Manager plug-in, user will be required to add/ manage the UCS domains from the Oracle Enterprise Manager. The steps involve the following:

- Login to the Oracle Enterprise Manager Console Step 1.
- Browse to 'Setup' -> 'Add Target' -> 'Add Targets Manually' Step 2.



Figure 7: Add Targets Manually

Step 3. Choose 'Add Targets Using Guided Process (Also Adds Related Targets)' and select the Target Types as 'Cisco UCSM Target' and click 'Add Using Guided Process...".

#### Instruction

#### Add Targets Manually

- Add Host Targets
- Add Targets Using Guided Process (Also Adds Related Targets)
- Add Targets Declaratively by Specifying Target Monitoring Properties

Target Types Cisco UCSM Target	T
Add Using Guided Process	6

#### Figure 8: Select 'Cisco UCSM Target' Target Type

Step 4. This will bring up the guided discovery dialog. Select the 'Agent' on which you want to run the guided discovery and click 'Next'

	Select Agents Specify UCS Domain UCS Domain Discover Confirm Changes S	
Add UCS Domain Target: Select Agents		Back, Step 1 of 5 Next, Cancel
Select Agent to Run Discovery On		
	Agent Name	Status
oemoracle.com:3872		<b>û</b>
		Last Updated: Jan 15, 2016 6:46 am

#### Figure 9: UCSM Dashboard

Step 5. Enter the details of the UCS domain you want to add. No special characters can be entered in "Target Name". Only alphanumeric characters are allowed.

Hequired held validators	Select Agents	Specify UCS Domai UCS Domain Discover	Confirm Changes	Summary
Add UCS Domain Target: Specify UCS Domain				
		Taka Awaz		
Target Name: 🕷 💦 This field is	required.			
IP Address/Hostname: *		No Information		
Username: *				
T Hostname added				
		_		
Port: 443 Info Av	rea for information errors, 2.			
Enable SSL     Conne	ection validity, etc.			
Test Connection		-		

#### Figure 10: Provide UCS Domain Information

Add UCS Domain Target: UCS Domain Discovery		Back Step 3 of 5 Next Ex
Agent Name oem.cisco.com:3872	L3	
	Discovery Complete	
	<u>(</u>	
Discovered UCS Domains Summary		
Target Name	IP Address	Version
V testDomain	10.105.219.7	2.2(2c)
testDomain2	10.105.219.7	2.2(2c)
Municipal Density		
Managed Doman		
UnManaged Domain		

#### Figure 11: Choose the UCS domain to be managed by Enterprise Manager

0

Step 6. Click 'Next' and the summary screen is shown. Click 'Next' to update the changes and add the 'domain' and their targets into the OEM.

Add UCS Doma	ain Target: Confi	rm Changes								Back	Step 4 of 5 Next
gent oem.dsco.co	om:3872			ß							
Summary of dor	nain(s) which will be	added to EM				Summary of dom	ain(s) which will be	removed from EM			
Target Name	Host Name	IP Address	Version	Target Type	Current Status	Target Name	Host Name	IP Address	Version	Target Type	Current Status
testDomain2	savbu-tpi03	10.105.219.7	2.2(2c)	UCS Domain	? Not Managed	testDomain	savbu-tpi03	10.105.219.7	2.2(2c)	UCS Domain	🤣 Managed

Figure 12: Confirmation Screen

		Select Agents	Specify UCS Domain UCS Domain Discover Confirm	Changes Summary				
Add UCS Domain Targets: Ap	pply Changes					Back Ste	ep 5 of 5 Next E	
Agent oem.clsco.com:3872 Summary: 1 Domain(s) Added and 1 Do	main(s) Removed.			1	6			
Updates to Topology Completed								
Targets Being Updated		ort Nama	TD Address	Version	TernetTupe	Lindate	Current Statur	
testDomain	savbu-tpi03	10.105.219.7	2. 1990 600	2.2(2c)	UCS Domain	Option:	Not Managed	
testDomain2	savbu-tpi03	10.105.219.7		2.2(2c)	UCS Domain	~	✓ Managed	

Figure 13: Updates Complete Screen

# 5 Using UCS Manager Plug-In

After the UCS Manager plug-in is deployed and UCS Domain has been added, the added target shows up under the systems view:

	0			
🤹 Enterprise 🗸	🎯 Targets 🗸 숡 Eavorites 🗸 🥝 His	i@ry ▼		
Sustems	All Targets Ctrl+Shift+T			
	Groups			
A system is a coll	Systems	h together provide one or more business functions. Membe	rs of any system	can have well-defined relationships a
V Coards	Services			
Search	Hosts			
Search All	Databases	Advanced Search		
	Middlewere			
	Business Applications			
VIEW -	Composite Applications	ļ		1
Name			Privilege Propagation	Туре
⊳ /EMGC_GC	Domain/GCDomain		V	Oracle WebLogic Domain
/EMGC_GC	Domain/GCDomain/EMGC_ADMINSERVER/	FMW Welcome Page Application(11.1.0.0.0)	<b>v</b>	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/DMS App	lication(11.1.1.1.0)	$\checkmark$	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/emgc		<b>v</b>	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/empbs		<b>v</b>	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/OCMRep	eater	$\checkmark$	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/wsil-wls		$\checkmark$	Application Deployment
/EMGC_GC	Domain/GCDomain/EMGC_OMS1/wsm-pm		$\checkmark$	Application Deployment
DemoHost:	System		×	Demo Sample System
⊳ EMGC_GCE	Domain		~	Oracle Fusion Middleware Farm
⊳ Manageme	nt Services and Repository		×	OMS and Repository
UcsDomain	-10.105.219.23		×	UCS System

Figure 14:Systems View

## 5.1 System Target Home Page

The System target home page shows the Topology View, Summary of Fault events in the UCS Domain and also the cumulative status\* of the subcomponents within the system.

Only the faults for a particular target component and its sub-components are shown i.e. for a UCS System, we only show the faults of its sub-components namely, chassis, blades, racks, fab interconnects, FI-IO Modules, IO Module, Service Profile, PSU, Fans and FEX. Also, the FSM faults are not being supported. The faults with severities as Cleared and Info have been filtered out.

\*Refer to Appendix A for details

ORACLE Enterprise Manager Cloud Control 12c Striker - Help -   🔮 Striker - Log								
🤹 Enterprise 🔻 🔘 Iargets 👻 🐈 Eavorites 👻 🥝 Histo	ry <del>v</del>						Search Target Name 👻	÷
Target Navigation		10.65.183.10 Host System +	0			☐ cemorade.com     Page Refreshed May 22, 2015 2:56:29 PM IST		
Cost Blades     Cost Blades     Cost Chassis     Cost Chassis     Cost Chassis     Cost Chassis     Cost Cost Charles     Cost Cost Cost Cost Cost Cost Cost C	2	Summary Overall Statu Domain Name IP Address	s: OK e: tcs-tpi02 s: 10.65.183.10	Realtime Sta Overal Stat	atus and us - All in	Status Availability Fri M	lay 15 2015 02:56:39 PM	-1.0%
Cost of Model     Cost of		Chassi Blade Rack	s: 1 s: 4 s: 2	reaune		15 Members 🖶 Down	n 1 伦 Up 14 rs (Last 7 Days)	
						Name 10.65.183.10-rack- ucs 10.65.183.10-fev-2 ucs	Type Key Member racks	Status Availability
						10.65.183.10-blade ucs	blades	
		Fault Summary						
Faults		Fault Severity	Fault Code	Fault ID	Affected Object	Cause	Last Transition	Fault Description
		∡ ♥	F0277	2353675	sys/switch-A/slot-1/switch-ether/port-1	configuration-applying	2015-05-22T10:44:12.820	ether port 1/1 on fabric interconnect A c
			F0528	85655	sys/chassis-1/psu-1	equipment-offline	2015-04-09T13:37:35.617	Power supply 1 in chassis 1 power: off
		▲	F0403	85656	sys/chassis-1/slot-1	equipment-disconnected	2015-04-09T13:37:35.617	IOM 1/1 (A) peer connectivity: disconne
		<b>A</b>	F4528842	126150	sys/chassis-1/blade-2/fwsyncack	named-policy-unresolved	2015-04-09T18:24:39.548	Policy reference scheduler 0z does not n
		<b>A</b>	F4528842	151662	sys/chassis-1/blade-2/fault-suppress-ta:	named-policy-unresolved	2015-04-09T19:31:43.740	Policy reference scheduler WPU: does no
		Δ	F1454	155295	sys/chassis-1/blade-2/mgmt/iface-in-bar	named-inband-vlan-unresc	2015-04-09T19:45:25.209	Vlan '' resolved to unsupported VLA

Figure 15: System Home Page

Each sub-component such as Chassis, Fabric-Interconnect, Blade Server or Rack Mount Server, Associated Service Profile, Fabric-Extender, IO Module contains summary configuration information such as 'Serial Number', 'Firmware Version' under the Summary tab, 'Faults' under the Fault Summary tab, Fan metadata under Fan Data tab, PSU metadata under PSUs Data tab, FI-IO metadata under FI-IO Modules tab related to the sub-component, etc.

The fans are contained in **fan modules** for Chassis, Fabric Interconnects and Rack Units, so the Ids that we display for Fans should include the Ids of fan modules along with Ids of fans as well *to distinguish a particular fan* present in one fan module from the one present on another fan module.

For Fabric Extenders, fans are not a part of Fan Module. So, only fan ids will be displayed.

Starting release 12.1.0.12.0,

- FI-IO Modules will be shown as separate sub-target for UCS Mini but for classic UCS no FI-IO Modules sub-target will be shown.
- Icons are shown for faults, fans and PSUs as shown in UCS Manager. This includes property for faults like Severity. Properties for fans like Operability, Performance, Power and Temperature and properties for PSUs like Operability, Performance, Power, Thermal and Voltage.

• High Availability Details (Ready, State, Leadership and Cluster Link State) and VLAN Port count details (VLAN Port Limit, Access VLAN Port Count, Border VLAN Port Count and Allocation Status) are displayed with fabric interconnect target summary.

Starting release 12.1.0.17.0, performance parameters have been included for:

- Chassis:
  - Input Power, Output Power in Summary.
  - Speed (RPM) in fans.
  - PSU performance parameters.
  - Server:
    - Motherboard stats exposed using performance link in the drop-down.
    - PSU performance parameters.
  - Fabric Interconnects:
    - $\circ\;$  Load average, Mem Available average, Mem Cached average included in Summary.
    - PSU performance parameters.
    - o Inclusion of graphs.
- FI-IO Modules (For UCS Mini):
  - ASIC Temperature, Ambient Temperature, DIMM Temperature, Processor Temperature
- Fabric Extenders:
  - Speed (RPM) in fans.
  - PSU performance parameters.
- FI Port:
  - Inclusion of graphs.
  - Each port name classifies its type as network, server etc. Example: ucs176-**network**-port-17-54:7F:EE:59:23:38.
- FC Port:
  - o Inclusion of graphs.
  - Each port name classifies its type as network, server etc. Example: ucs176-**network**-port-15-20:4F:54:7F:EE:59:23:40.
- Service Profile:
  - Inclusion of graphs.

In all the components where graphs are included, graphs displayed in Fabric Interconnects, FI Ports, Fc ports or Service Profiles, delta stats are calculated after dividing the delta stats by collection interval fetched from Collection Policy.

Please refer to the figures below for clarification for respective components.

## 5.2 Chassis Home Page

🤹 Enterprise 🔻 🔞 Ijargets 👻 📩 Eavorites	👻 🕝 History 👻							Search Targe	t Name 🔻	-
Target Navigation	triangle and the second seco	FOX1641G7Q3 🐵							Page Refreshed Ja	🔋 cemorade.com n 13, 2016 11:39:16 AM IST 🖒
Verify         UCS Blodes           V ≥ UCS Blodes         V ≥ UCS Blodes           V ≥ UCS Cheasts         • UCS Inclusion           • UCS Inclusion         • UCS Procession           > UCS Procession         • UCS Procession           • UCS Procession         • UCS Procession	Summary PIU: Senial: User Label: PERFORMANCE Disput Power (Watts): Output Power (Watts): Style Data	NLO-LOUB FOX164167Q3 FOX164167Q3 968.0 968.0		H	Fan Data           Fan Totode: Fa         Coerab           2:1         \$ op           2:2         \$ op           4:1         \$ op           4:2         \$ op           5:1         \$ op           6:0         \$ op	iity erable erable erable erable erable erable erable	Performance ok	Power	Temperature	Speed (RPM)           9372         •           9636         =           9152         •           9548         •           9240         •           9274         •
् us176-bg91 Sus176-bs195ervet Sus176-bs195ervet Sus176-brigsRat1124 Us176-brigsRat1124	PSU Performance Parameter PSU ID 1 L 2 L 3 L 4 L	Model JCSB-PSU-2500ACPL JCSB-PSU-2500ACPL JCSB-PSU-2500ACPL JCSB-PSU-2500ACPL	Oper- O t O O	ability N/A operable N/A N/A	Performance NA tok NA NA NA		Power f off f on f off f off	Temperature		Voltage S N/A 1 ok N/A S N/A
	▼ Fault Summary Fault Seventy	Fault Code F0479 F0403 F0283 F0283 F0283	Fault ID 4840261 90144 4903935 4840260 4903938	sys/chassis- sys/chassis- sys/chassis- sys/chassis- sys/chassis-	Affected Object 1/blode=1/adaptor-1/host=eth-1/s/f-4420 1 1/blode=5/fabric-A/path-2/sc-4412 1/blode=5/fabric-A/path-1/sc-4414	Cause vif-down power-problem link-down link-down link-down		Last Transtion 2015-12-23702:10-03.965 2015-07.31T04:18:00.676 2015-12-23701:34-06.029 2015-12-23702:10:03.943 2015-12-23701:34-06.032	Fault Virtual interface 4420 Power state on chass ether VIF 4412 on ser- ether VIF 4420 on server fc VIF 4414 on server	Description Ink state is down is 1 is redundancy-failed Ver 1 / 5 of switch A down, reas 1 / 5 of switch A down, reason

Figure 16: Chassis Home Page with Fans and PSUs data along with icons.



Figure 17: Chassis Home Page with Fans and PSUs Performance Data

	ontrol 12c							Setup 🕶 🛛 👥 SYSMAN 👻 🕻	
🤹 Enterprise 🔻 🔘 Targets 👻 🃩 Eavorites 👻 😔 Histor							Search Target	Name	
Target Navigation	1 ucsmini177-sw-sk UCS FI-10 Module *	ot-1-FCH18523400	c 😐			erschoor Page Refreshed Jan 13, 2016 11:48:10 AM EST			
A BB ucsmini177	⊿ Summary				A Performance Stats				
C → Calass     C → Calass     C → Constant     C → Const     C → Const     C → Const     C → Constant     C → Constant	Overal Ratus: Operat ID: 1 Fahric ID: 8 Chasis ID: 1 Verdor: Cisco 5 Model: USSH Product Name: Cisco 1 Sede: USSH Revision: 0 Side: left	le vstems, Inc. 에너호24 CS 6324 22140C			ASIC Temperature(C): Anibinit Temperature(C): DIMM Temperature(C): Processor Temperature(C):	38.00 36.00 36.00 47.00			
	⊿ Fault Summary								
	Fault Severity	Fault Code	Fault ID	Affected Object	Cause	L	ast Transition	Fault Description	
Figure 18: FI-IO M	odules su	ib-targe	et pres	ent in case o	of UCS Mini	alon	g with	Performance	

Figure 18: FI-IO Modules sub-target present in case of UCS Mini along with Performance Stats

# 5.3 Blades Home page

🤹 Enterprise 👻 🞯 Iargets 👻 🐈 Eavorites 👻 🥝 History						Search Target Name 👻	+
Target Navigation	10.65.183.10-b UCS Blades +	lade-1-FCH1	.736JLGT			Page Rel	reshed May 22, 2015 3:42:21 PM IST 🖒
V ■ (0.65.183.10           V ■ (0.65.183.10 blde) - FCH17363.07           ● 10.65.183.10 blde) - FCH173750.07           ● 10.65.183.10 blde) - FCH172750.0           ● 10.65.183.10 blde) - FCH172750.0           ● 10.65.183.10 blde) - FCH17335RU           ● 10.05.183.10 blde) - FCH17335RU           ● 10.05 blde: FBH blde           ● 10.05 blde: FBH blde	Summary Overall Statu Stat II Chassis II Vendd UUII Serk Number Of Processor	s: Ok D: 1 D: 1 r: Cisco System D: 2a4072a1-1b d: FCH1736JLGT s: 2	s Inc 05-11e3-b9f6-e4c722 f	f14ecc	Cores Enabled Cores: Threads: Effective Memory (MB): Total Memory (MB): Operating Memory Speed: Adapters:	12 12 24 16384 16384 800 1	
UCS Service Profile	🕑 Fault Summary						
	Fault Severity	Fault Code F0181	Fault ID 1902674	Affected Object sys/chassis-1/blade-1/board/storage	-SA: equipment-inoperable	Last Transition 2015-05-14T21:46:19.5	Fault Description 71 Local disk 2 on server 1/1 operability: ino

#### Figure 19: Blades Home Page

ORACLE Enterprise Manager Cloud Control 12c							
📽 Enterprise 🔻 🎯 Iargets 👻 📩 Favorites 👻 🥝 Hist <u>o</u> ry 💌							
Target Navigation	<pre>     ucs176-blade-4-FCH174071MW ③     work     ucs176-blades ▼ </pre>						
View ▼           V BB ucs176           UCS Blades           wucs176-blade-1-JAF1445ALDA           wucs176-blade-3-QCI1623A1G3           wucs176-blade-4-FCH174071N           wucs176-blade-5-QCI1408A3D3           wucs176-blade-7-FCH16477Y0Z	Home Monitoring Control Job Activity Information Publisher Reports Performance	tems Inc a4d8-11e5-0001-00000000005					
<ul> <li>         wcs176-blade-8-FCH16207BMX         ✓ UCS Chassis         ✓ UCS Chassis         ✓ UCS Fabric Interconnect A         ✓ UCS FC Port         ✓ UCS FI Port         ✓ UCS IO Module         ✓ UCS Racks         ✓ UCS Service Profile         ✓ UCS Profile</li></ul>	Configuration 71 Compliance 7 Target Setup 7 Target Information	IMW					

Figure 20: Blades Home Page with Performance option under menu

ORACLE Enterprise Manage	r Cloud Control 12c	Setup 👻 Help 👻 🔢 SYSMAN 👻 🛛 Log Out
🔹 Enterprise 🔻 👩 Iargets 👻 📩 Eavorites	▼ 😕 Hidgy ▼	Search Target Name 🔻
Target Navigation	👚 ucs176-blade-4-FCH174071MW 🗕	🔲 oemorade. or
View -	🥪 UCS Blades 🝷	Page Refreshed Jan 13, 2016 11:53:13 AM IST
V ∰ ucs176 V ∭ UCS Blades	S Mother Board	
ucs176-blade-1-JAF1445ALDA	Name	Value
ucs176-blade-3-QL1623A1G3	🖃 🗢 MotherBoard	
ucs176-blade-5-QCI1408A3D3	MotherBoard Power Counters	2016-01-15T03:26:56.616
ucs176-blade-7-FCH16477Y0Z	Consumed Power (W)	72
ucs176-blade-8-FCH16207BMX	MotherBoard Input Current (A)	5.982054
V 🔄 UCS Chassis	MotherBoard Input Voltage (V)	12.036
UCS Fabric Interconnect A	MotherBoard Temperature Counters	2016-01-15T03:26:56.616
UCS FC Port	MotherBoard Front Temperature (C)	19
UCS FI Port	MotherBoard Rear Temperature (C)	25
UCS IO Module	m Mem Array 1	
UCS Racks VCS Racks	🖃 🜌 Memory 1 (A0)	
Sucs176-Is-For Server3	Environmental Counters	2016-01-15703:26:56.616
😅 ucs176-ls-GSP_normal	DOR Array Temperature (C)	21
restriction and the second sec	🖃 💷 Memory 13 (E0)	
ucs176-Is-LSP-server1	Environmental Counters	2016-01-15703:26:56.616
<ul> <li>ucs176-Is-LSPServer5</li> <li>ucs176-Is-Privarkat1100</li> </ul>	SDDR Array Temperature (C)	22
so ucs176-Is-tree4	🖃 🗊 Processor1	
-	Environmental Counters	2016-01-15703:26:56.616
	GPU Temperature (C)	31.5
	S Input Current (A)	5.46
	Processor2	
	Environmental Counters	2016-01-15T03:26:56.616
	CPU Temperature (C)	28

Figure 21: Mother Board Statistics page under Blade Home Page.

# 5.4 Fabric Interconnect Home Page

ORACLE Enterprise Manage	r Cloud Control 12c								Setup + Help +	🛛 🎎 SYSMAN 👻 🔤 Log Out 👂
🤹 Enterprise 🔻 👩 Iargets 👻 📩 Eavorites	🝷 📀 History 👻							Search Target I	Name 🔻	
Target Navigation	tucs176-switch-A	-SSI15430HEL 🔋							Page Refreshed Ja	📃 cemorade.co n 13, 2016 12:08:34 PM IST 🕻
♥ 🛱 ucs176 ▶ 🛅 UCS Blades	Summary			💌 Fan Data						
UCS Chassis     UCS Fabric Interconnect A		Overall Status: Operable ID: A	•	FanModule: Fa	Operabil	ty	Performance	Power	Temperature	Speed (RPM)
ucs176-switch-A-SSI15430H CS FC Port	Ove	rall Memory (MB): 16165 Vendor: Cisco Sv	steens Inc	1:2	* ope	rable	N/A	1 on	t ok	11973
UCS FI Port     UCS IO Module		Model: UCS-FI-	5248UP	1:3	i toperable	S N/A	1 on	t ok	16666	
UCS Radis		External IP: 10.106.	UHEL 233.176	• 2:1	1 ope	operable     N/A		1 on	t ok	15743
Ucs176-Is-For_Server3 Ucs176-Is-GSP_normal Ucs176-Is-gsp1	PSUs Data     PSU Performance Param	veters								
ucs176-is-LSP-server1	PSU ID	Model	Operabil	ity	Performance		Power	Temperature		Voltage
Sucs176-Is-Priyanka113AN	1	UCS-PSU-6248UP-AC	💙 inop	erable	🛇 N/A		V error	S N/A		S N/A
🥶 ucs176-ls-tree4	2	UCS-PSU-6248UP-AC	1 op	erable	🛇 N/A		<b>†</b> on	S N/A		🛇 N/A
	Fault Summary									
	Fault Severity	Fault Code	Fault ID	Affected Obje	ct		Cause	Last Transition	Fai	alt Description
		F0374	74957	sys/switch-A/psu-1		equipment-i	inoperable	2015-07-30714:45:58.467	Power supply 1 in f	abric interconnect A operability: inc
		F0369	74956	sys/switch-A/psu-1		power-prob	lem	2015-07-30714:45:58.467	Power supply 1 in f	abric interconnect A power: error





Figure 23: Fabric Interconnect Home Page along with PSUs Performance Data Page.

ORACLE Enterprise Manage	r Cloud Control 12c			
🎼 Enterprise 🔻 🎯 Iargets 🔻 📩 Eavorites	▼ 🕑 Hist <u>o</u> ry ▼			
Target Navigation	100 UCS Fabric Interconne	A-SSI15430HEL 🔅		
▼       iiii       ucs176         ▶       □       UCS Blades         ▶       □       UCS Chassis         ▼       □       UCS Fabric Interconnect A         □       □       UCS Fabric Interconnect A         □       □       UCS FC Port         ▶       □       UCS FC Port         ▶       □       UCS FI Port         ▶       □       UCS IN Module         ▶       □       UCS Racks         ▼       □       UCS Service Profile         □       □       UCS Fort-Is-casp1         □       □       ucs176-Is-GSP_normal         □       □       ucs176-Is-gap1	Home Monitoring Control Job Activity Information Publisher F Performance Channel Performance Configuration Compliance Target Setup Target Information	katus: Operable ID: A (MB): 16165 endor: Cisco Systems Model: UCS-FI-6248U Serial: S5115430HEL nal IP: 10.106.233.17	, Inc.  P 76	✓ Fan Data FanModule: Fan 1:1 1:2 1:3 1:4 2:1
弐 ucs176-ls-LSP-server1 弐 ucs176-ls-LSPServer5 弐 ucs176-ls-Priyanka11JAN 弐 ucs176-ls-tree4	PSU ID 1 2 Fault Summary Fault Severity	Model           UCS-PSU-6248UP-AC           UCS-PSU-6248UP-AC           Fault Code	Operability	Affected O

Figure 24: Fabric Interconnect Data Received (Rx) Performance Graphs

Target Navigation	🏦 ucs176-switch-A-SSI15430HEL 🕘	🧊 oemorade.c
View 👻	IN UCS Fabric Interconnect A V	Page Refreshed Jan 13, 2016 12:08:34 PM IST (
♥ ∰ ucs176     ►	Traffic Direction: Tx 👿 Sum of Stats: FI Uplink 💌	
V 🛅 UCS Fabric Interconnect A		
ucs176-switch-A-SSI15430H	Tv-Total(nackets)	Tv-Deba(packets(sec)
UCS FC Port		100
UCS FI Port		100
D CS 10 Module	8997000	80
V P LICS Service Profile		
Server3	8996000	60
🖑 ucs176-ls-GSP_normal		
ucs176-ls-gsp1	8995000	40
Control of the server 1		
urs176-k-Privanka1134N	8994000	20
ucs176-ls-tree4		0
	Jan 13, 11:16:00 am Jan 13, 11:28:00 am Jan 13, 11:40:00 am Jan 13, 11:52:00 am Jan 13, 12:04:00 pm	Jan 13, 11:16:00 am Jan 13, 11:28:00 am Jan 13, 11:40:00 am Jan 13, 11:52:00 am Jan 13, 12:04:00 pm
	7. 7.10.0.4.0	To Parkethenedara)
	1x-1ota(bytes)	1X-Detta(bytes/sec)
	8663000000	52
		48
	8662000000	44
		40
	8661000000	36
	0//000000	
	300000000	
	8659000000	
		24
< >	Jan 13, 11:16:00 am Jan 13, 11:28:00 am Jan 13, 11:40:00 am Jan 13, 11:52:00 am Jan 13, 12:04:00 pm	Jan 13, 11:16:00 am Jan 13, 11:28:00 am Jan 13, 11:40:00 am Jan 13, 11:52:00 am Jan 13, 12:04:00 pm
📀 🥝 🕑 🚞	🗧 💿 💿 💽 🕺 🖉 🔤 🖳	🔀 🍝 🧭 🚅 🖌 🕼 🖓 🕹 🖓

Figure 25: Fabric Interconnect Data Sent(Tx) Performance Graphs



#### Figure 26: Fabric Interconnect Data Received (Rx) Performance Graphs

Target Navigation	ucs176-switch-A-SSI15430HEL	g oemorade.c
View • View • View • UCS Blades	Traffic Direction: Error 💌 Sum of Rots: FI Uplink 💌	
UCS Chassis		
<ul> <li>Ucs Patric Interconnect A</li> <li>Ucs 176-switch-A-SST15430H</li> </ul>	2	2
> In UCS EC Port	Tx Error-Total(packets)	Tx Error-Delta(packets/sec)
UCS FL Port	100	100
UCS IO Module		
UCS Radis	80	80
UCS Service Profile		
	60	60
		40
	10	40
	20	20
	· · · · · · · · · · · · · · · · · · ·	
	3an 13, 1:41:00 pm Jan 13, 1:51:00 pm Jan 13, 2:01:00 pm Jan 13, 2:11:00 pm Jan 13, 2:21:00 pm Jan 13, 2:31:00 pm	Jan 13, 1:41:00 pm Jan 13, 1:49:00 pm Jan 13, 1:57:00 pm Jan 13, 2:05:00 pm Jan 13, 2:13:00 pm
	Rx Error-Total(packets)	Rx Error-Delta(packets/sec)
	100	100
	80	80
	60	60
	40	40
	20	20
	01	
< m >	Jan 13, 1:41:00 pm Jan 13, 1:49:00 pm Jan 13, 1:57:00 pm Jan 13, 2:05:00 pm Jan 13, 2:13:00 pm	Jan 13, 1:41:00 pm Jan 13, 1:49:00 pm Jan 13, 1:57:00 pm Jan 13, 2:05:00 pm Jan 13, 2:13:00 pm

Figure 27: Fabric Interconnect Error Performance Graphs

Enterprise      ORACLE     Enterprise Manage     Enterprise     Targets     Targets     Targets	<ul> <li>Cloud Control 12c</li> <li>✓ Ø History ▼</li> </ul>							
Target Navigation         View ▼         V ⊕ ∪ UCS Blades         ▷ ⊕ UCS Chassis         V ⊕ UCS Fabric Interconnect A         □ UCS FC Port         ▷ ⊕ UCS FI Port         ▷ ⊕ UCS FI Port         ▷ ⊕ UCS Service Profile	Ucs176-switch-A-S     Ucs Fabric Interconnect A     Home     Monitoring     Control     Job Activity     Information Publisher Report     Performance     Configuration     Configuration     Compliance     Target Setup     Target Information     PSU ID	SI1543	DHEL         Image: Control of the system           ID:         A           IB):         16165           IO::         Cisco System           del:         UCS-FI-6248           ial:         SSI15430HEL           IP:         10.106.233.1	s, Inc. UP 1.76 Oper	ability	✓ Fan Data       FanModule: FanID       Open       Image: State St		
	Fault Summary	Fau	It Code	Fault ID		Affe	cted Object	

🤹 Enterprise 🕶 🙆 Ijargets 👻 📩 Eavorites	▼ 🥝 Hist <u>o</u> ry ▼	Search Target Name 🔻
Target Navigation	👚 ucs176-switch-A-SSI15430HEL 🐵	🔲 cemorade
View +	IIII UCS Fabric Interconnect A -	Page Refreshed Jan 14, 2016 9:06:44 AM IST
∀ ∰ ucs176     ► 🛄 UCS Blades     ► 🛄 UCS Blades	Traffic Direction: Tx 💌 Channel: Eth Port Channel 💌	
V DCS Fabric Interconnect A		
ucs176-switch-A-55115430H	Tx-Total(packets)	Tx-Delta(packets/sec)
> OCS FLPort	100	100
UCS IO Module	80	80
UCS Racks		
UCS Service Profile	60	60
	40	40
	20	20
	v Jan 14, 8:11:00 am Jan 14, 8:19:00 am Jan 14, 8:27:00 am Jan 14, 8:35:00 am Jan 14, 8:43:00 am ■ Tr: r0xa[pscieds] (fabric[an/Aljoc:155) ■ Tr: r0xa[pscieds] (fabric[an/Aljoc.78)	Jan 14, 8:11:00 am Jan 14, 8:19:00 am Jan 14, 8:27:00 am Jan 14, 8:35:00 am Jan 14, 8:35:00 am — Tr-Ostrópsdetsjoed) (fabro(lan(Alpc-136) — Tr-Ostrópsdetsjoed) (fabro(lan(Alpc-78))
	Tx-Total(bytes)	Tx-Deita(bytes/sec)
	100	100
	80	80
	60	60
	40	40
	20	20
	0	0
	Jan 14, 8:11:00 am Jan 14, 8:22:00 am Jan 14, 8:33:00 am Jan 14, 8:44:00 am Jan 14, 8:55:00 am Jan 14, 9:06:00 am	Jan 14, 8:11:00 am Jan 14, 8:19:00 am Jan 14, 8:27:00 am Jan 14, 8:35:00 am Jan 14, 8:43:00 am
	<ul> <li>Tx-Total(bytes) (fabric/lan/A/pc-136)</li> <li>Tx-Total(bytes) (fabric/lan/A/pc-136)</li> </ul>	<ul> <li>Tx-Delta(bytes/sec) (fabric/lan/A/pc-136)</li> <li>Tx-Delta(bytes/sec) (fabric/lan/A/pc-136)</li> </ul>
к III	- IX- Iocatoryces) (rabric/JarvA/pc-78)	= ix-ueita(oyces(SeC) (fabric()an(Apc-78)

#### Figure 28: Fabric Interconnect Data Sent (Tx) Performance Graph of Eth Channel Port

Similarly, graphs are shown for fcoe and fc port channels for Tx, Rx and Error.

## 5.5 Fabric Extender Home Page

For Fabric Extenders, fans are not part of fan module, hence Fan Module Id will not be displayed for Fabric extenders. This is shown below:

🤹 Enterprise 👻 🎯 Iargets 👻 🐈 Eavorites 👻 😒 Histor	у <del>т</del>					Search Tar	jet Name 🛩	+
Target Navigation	10.65.183.1	)-fex-2-SSI172100	)XF (i)					📑 oemoracle.com
View -	i UCS Fabric Exten	der 🕶					Page Refreshed M	May 22, 2015 3:49:12 PM IST 💍
♥ ## 10.65.183.10 ▶	Summary			🕑 Fan Data	No fan r	module id in case of F	ex	
DCS Chassis	Overal Status:	Operable	<b>_</b>	FanID	Operability	Performance	Power	Temperature
V UCS Fabric Extender 10.65.183.10-fex-2-551172100XE	ID:	2		1	1 operat	ole 🛇 N/A	1 on	t ak
CS Fabric Interconnect A	Vendor: Revision:	Cisco Systems	=	2	1 operat	ole 🛇 N/A	1 on	S N/A
CS IO Module      CS Racks	Serial:	551172100XF	-	3	1 operat	ole 🛇 N/A	1 an	
UCS Service Profile	PSUs Data     PSU Performance	Parameters						
	PSU ID	Model	Operability	Pe	rformance	Power	Temperature	Voltage
	1	N2200-PAC-400W	1 operable		N/A	1 on	🛇 N/A	N/A
	2	N2200-PAC-400W	1 operable		⊗ N/A	1 on		S N/A
	Fault Summ	Fault Code	Fault ID	Affected Object		Cause Las	t Transition	Fault Description

Figure 29: Fabric Extender Home Page

# 5.6 Service Profile Home Page

ORACLE Enterprise Manage	r Cloud Control 12c				Setup 🖛 Help 🖛 🛛 🔝 SYSMAN 🖛 🛛 Log Out				
🤹 Enterprise 👻 🙆 Ijargets 👻 🊖 Eavorites	👻 🕝 History 👻					Search Target	Name 👻		
Target Navigation	tes176-ls-GSP_     UCS Service Profile ▼	normal 🖲					accom and a second seco		
♥         ♥         ■         ■         ●         ●	Summary Name: Overal Status: Associated Status: ServiceProfile Name: Associated Server:	GSP_normal ok Associated ucs176-blade-8-FCH162078I ucs176-blade-8-FCH162078I	eex						
UCS Racks      UCS Service Profile	Sealt Summary								
🖑 ucs176-ls-For_Server3	Fault Severity	Fault Code	Fault ID	Affected Object	Cause	Last Transition	Fault Description		
ucs176-ls-GSP_normal		F37610	5275978	sys/chassis-1/blade-8/board/cpu-1	threshold-crossed	2016-01-15T03:04:50.590	TCA: processorEnvStats temperature, current-value =		
Source 176-ls-gsp1		F37600	5275982	sys/chassis-1/blade-8/board/memarray-1/mem-10	threshold-crossed	2016-01-15T03:04:50.593	TCA: memoryUnitEnvStats temperature, current-value		
Sucs176-Is-LSPServer5		F37600	5275984	sys/chassis-1/blade-8/board/memarray-1/mem-18	threshold-crossed	2016-01-15T03:04:50.595	TCA: memoryUnitEnvStats temperature, current-value		
😅 ucs176-ls-Priyanka11JAN	8	F35962	5275979	sys/chassis-1/blade-8/board	threshold-crossed	2016-01-15T03:04:50.591	TCA: computeMbPowerStats consumedPower, current		
🖑 ucs176-ls-tree4		F37610	5275977	sys/chassis-1/blade-8/board/cpu-2	threshold-crossed	2016-01-15T03:04:50.589	TCA: processorEnvStats temperature, current-value =		
		F37600	5275981	sys/chassis-1/blade-8/board/memarray-1/mem-14	threshold-crossed	2016-01-15T03:04:50.593	TCA: memoryUnitEnvStats temperature, current-value		
	^	000/00		· · · · · · · · · · · · · · · · · · ·			the second of the second se		

Figure 30: Service Profile Home Page

ORACLE Enterprise Manage	r Cloud Control 12c				
🍓 Enterprise 🔻 🎯 Targets 🔻 🐈 Eavorites	▼ 🕑 Hist <u>o</u> ry ▼				
Target Navigation         View ▼         View State         >       UCS Blades         >       UCS Chassis         >       UCS Chassis         >       UCS Fabric Interconnect A         >       UCS FLPort          UCS FLPort          UCS FLPort          ucs176-nes-storage-port-9-54:7F:E          ucs176-server-port-17-54:7F:EE:          ucs176-server-port-2-54:7F:EE:          ucs176-server-port-3-54:7F:EE:          ucs176-server-port-4-54:7F:EE:          ucs176-server-port-4-54:7F:EE:          UCS 10 Module	Configuration     Configuration     Configuration     Configuration     Configuration     Compliance     Target Estup     Target Information	rmal (i)	1X		
V DUCS Racks	Fault Summary				
ucs176-ls-For_Server3	Fault Severity	Fault Code	Fault ID	Affected Object	
ucs176-ls-GSP_normal		F37600	5275985	sys/chassis-1/blade-8/board/memarray-1/mem-22	tł
statistics and statistical statistics and statis	8	F35962	5275979	sys/chassis-1/blade-8/board	th
⇒ ucs1/6-Is-LSP-server1 = ucs176 ls LSD5 erver5		F37600	5275980	sys/chassis-1/blade-8/board/memarray-1/mem-17	th
ULS176-IS-LSPSerVerS	A	F37600	5275986	sys/chassis-1/blade-8/board/memarray-1/mem-21	tł
🥮 ucs176-ls-tree4	A	F37600	5275984	svs/chassis-1/blade-8/board/memarrav-1/mem-18	tł

#### Figure 31: Service Profile Home Page with Performance Option

ORACLE Enterprise Manage	r Cloud Control 12c	Setup 👻 Help 👻 🔜 SVSMAN 👻 🛛 Log Out
🤹 Enterprise 👻 🙆 Targets 👻 🊖 Eavorites	▼ 🕑 Hstgry ▼	Search Target Name 💌
Target Navigation	Tucs176-Is-GSP_normal 0	cemoracle.
View +	Service Profile •	Page Refreshed Jan 14, 2016 10:56:34 AM IST
♥ 🛱 ucs176 ▷ 🧰 UCS Blades ▷ 🥅 UCS Chassis	Traffic Direction: Tx 💌 Vinic State: DCSI vhaCes 💌	
UCS Fabric Interconnect A	×	×
V DUCS FL Port	Tx-Total(packets)	Tx-Delta(packets/sec)
ucs176-nas-storage-port-9-54:7F	100	100
ucs176-network-port-17-54:7F:El ucs176-server-port-1-54:7F:EE:5	80	80
ucs176-server-port-2-54:7F:EE:S	60	60
ucs176-server-port-27-54:7F:EE:	40	40
ucs176-server-port-4-54:7F:EE:5	Tx-Tota	al(packets) (N/A)
UCS IO Module	20 Jan 14, 1	11:01:00 am
UCS Radis		
ULS Service Profile	Jan 14, 10:03:00 am Jan 14, 10:15:00 am Jan 14, 10:27:00 am Jan 14, 10:39:00 am Jan 14, 10:51:00 am	Jan 14, 10:03:00 am Jan 14, 10:13:00 am Jan 14, 10:23:00 am Jan 14, 10:33:00 am Jan 14, 10:43:00 am
😻 ucs176-ls-GSP_normal	<ul> <li>Tx-Total(packets) (N/A)</li> </ul>	<ul> <li>Tx-Delta(packets/sec) (N/A)</li> </ul>
😇 ucs176-k-gsp1		
Sucs176-Is-LSP-server1	×	
5 ucs176-ls-Privanka113AN	Tx-Tota(bytes)	Tx-Delta(bytes/sec)
Sucs176-Is-tree4	100	100
	80	80
	60	60
	40	40
	20	20
	0	0
	Jan 14, 10:03:00 am Jan 14, 10:13:00 am Jan 14, 10:23:00 am Jan 14, 10:33:00 am Jan 14, 10:43:00 am — Tx-Total(bytes) (N/A)	Jan 14, 10:03:00 am Jan 14, 10:13:00 am Jan 14, 10:23:00 am Jan 14, 10:33:00 am Jan 14, 10:43:00 am T:-Deka(bytes/sec) (N/A)

Figure 32: Service Profile Data Sent (Tx) Traffic on vNICs Graph

ORACLE Enterprise Manage	r Cloud Control 12c	Setup 🔻 Help 👻 🔣 SYSMAN 🖛 🛛 Log Out
🍓 Enterprise 🔻 🎯 Targets 👻 🏫 Eavorites	✓ Ø Hstgry ▼	Search Target Name 🖛
Target Navigation           Vew ▼           V ∰ ucs176           ▷ ☐ UCS Blades           ▷ ☐ UCS Chassis	tucs176-Is-GSP_normal      ©         UCS service hordle →         Traffic Direction: Rx          Weic States: SCSI vHICs	iii centrade. Page Refreshed Jan 14, 2016 10:56:34 AM IST +
>         >         UCS Pate: Interconet. A           >         UCS Pate:            UCS Pate: <td>Since Total(posterts)           100           60           40           20     <!--</td--><td>X         R-r-Celta(pastetz)(sec)           100        </td></td>	Since Total(posterts)           100           60           40           20 </td <td>X         R-r-Celta(pastetz)(sec)           100        </td>	X         R-r-Celta(pastetz)(sec)           100
Sus176-b19-serve1 Sus176-b1998ref5 Sus176-b1998ref5 Sus176-b1998ref1 Us176-b1999	Sci TotalOytes)           100           60           40           20           0           3an 14, 10:17:00 am 3an 14, 10:25:00 am 3an 14, 10:35:00 am 3an 14, 10:44:00 am           =Rx-TotalOytes) (((A))	Ro-Deltadytes/sec)           00

#### Figure 33: Service Profile Data Received (Rx) Traffic on vNICs Graph

Similarly, graphs for vHBAs and vNICs are shown for Tx, Rx and Error.

# Rack Server Home Page

	r Cloud Control 12c								Setup + Help +	🎎 SYSMAN 👻 🕴 Log Out 💈		
🤹 Enterprise 🔻 🎯 Iargets 👻 🊖 Eavorites	🔹 🕝 History 👻							Search Target N	ame 🔻			
Target Navigation	👚 ucs176-rack-unit	-1-FCH1841V1H9 🔋								📃 oemoracie.co		
View +	🐲 UCS Racks 🔻								Page Refreshed Jan	14, 2016 9:16:13 AM IST  C		
♥ ∰ ucs176 ▷ ☐ UCS Blades	Summary				🔄 Fan Data							
UCS Chassis	Overall Status:	Ok		<b>_</b>	FanModule: F	Operability	Performance	Power	Temperature	Speed (RPM)		
V 🛅 UCS Fabric Interconnect A	Vendor:	Cisco Systems Inc			1:1	N/A	1 ok	1 on	S N/A	7500		
ucs176-switch-A-SSI15430HEL	Revision:	0		=	6:1	S N/A	t ok	1 on	S N/A	8800		
IN COS PERMIT	Serial:	FCH1841V1H9			4:1	S N/A	t ok	1 on	O N/A	7500		
> Costo Module	Uud:	Uuid: cf334aec-61a8-4792-a29d-f64884ce2e63			5:1	N/A	t ok	1 00	N/A	8500		
V 🛅 UCS Racks	Overall Memory (MB):	2			3:1	N/A	t ok	1 00	N/A	7500		
🗢 ucs176-rack-unit-1-FCH1841	No of Cores:	12		-	2:1	N/0			N/A	7500		
UCS Service Profile	Col DOUL Date	LI REILE DAN										
	PSUs Data											
	PSU Performance Paran	neters										
	PSU ID	Model	Operabil	lity	Performance		Power	Temperature		Voltage		
	1	UCSC-PSU1-770W	1 op:	erable	t ok		1 on	t ok		1 ok		
	2		0	N/A	N/A		I off	N/A		N/A		
	Sault Summary											
	Fault Severity	Fault Code	Fault ID	Affec	ted Object	Cause		Last Transition	Fault	Description		
		F0378	82212	sys/rack-unit-1/psu-2		equipment-missing	2	015-07-31T03:17:57.213	Power supply 2 in serv	er 1 presence: missing		
		F0775	82766	sys/rack-unit-1/adapt	or-1/ext-eth-1	link-missing	2	015-07-31103:24:01.025	Connection to Adapte	1 eth interface 1 missing		
	♥	F0209	91906	sys/rack-unit-1/adapt	or-1/ext-eth-1	link-down	2	015-07-31T04:42:20.327	Adapter uplink interfa	e 1/1/1 link state: unavailable. I		
	8	F1325	1152838	sys/rack-unit-1/board	Controller/mgmt/fw-boot-def/bi	board-ctrl-upgraded	2	015-10-11T03:15:04.710	Board controller upgra	ded, manual a/c power cycle rei		

#### Figure 34: Rack Server Home Page

ORACLE Enterprise Manage	er Cloud Control 12c										Setup ▼ Help ▼	🔽 SYSMAN 🔻 🛛 Log Out
🔹 Enterprise 🔻 👩 Iargets 👻 🏫 Eavorites	▼								Search	Target Na	ame 🔻	
Target Navigation	👚 ucs176-rack-unit	-1-FCH1841V1H9	0									📃 cemoracie.
View +	🐲 UCS Racks 🔻										Page Refreshed <b>Jan</b>	14, 2016 9:16:13 AM IST
V ∰ucs176	V Summary					V Fan Data						
UCS Blades												
UCS Chassis	Overal Status:	Ok.			<u> </u>	FanModule: F	Operability	Performance	Power		Temperature	Speed (RPM)
<ul> <li>UCS Fabric Interconnect A</li> <li>UCS Fabric Interconnect A</li> </ul>	Vendor:	Cisco Systems Inc				1:1	🚫 N/A	1 ok.	1 0	1	S N/A	7500
In the second	Revision:	0				6:1	🚫 N/A	t ok	1 0	1	🚫 N/A	8800
Dest crat	Senal	PCHID41VIH9	564004			4:1	🚫 N/A	t ok	1 0	1	S N/A	7500
UCS IO Module	Outer all Memory (MII):	CT339880-6180-9792-82901 16394	164004062863			5:1	S N/A	t ok	1 0		S N/A	8500
V 🛅 UCS Radks	No OF CEAR:	2				3:1	N/A	t ek	1 0		N/A	7500
🗇 ucs176-rack-unit-1-FCH1841	No of Cores	12			*		A 1/A	*			N/A	7500
UCS Service Profile												
	🕑 PSUs Data		PSU	Js Performance Data					8			
	PSU Performance Param	eters										
	PSU ID	Model	PS	SU ID Model	Output Po	Output Voltage(	Output Current(	Internal Temper	Input Volta	re		Voltage
	1	UCSC-PSU1-770W	1	UCSC-P5U1	- 120.00	12.00	10.00	22.00	Not-Applicable	jk –		t ok
	2		2		0.00	Not-Applicable	0.00	0.00	Not-Applicable	Į(A		S N/A
	🕑 Fault Summary											
	Fack Severky	Fault Code							Close		Fault (	Description
		F0378	82212	system	ck-unit-1/psu-2		eq./pment-missing	2015	-07-31103:17:57.21		Power supply 2 in serv	er 1 presence: missing
	A	F0775	82766	system	ck-unit-1/adaptor	-1/ext-eth-1	link-missing	2015	-07-31103:24:01.02		Connection to Adapter	1 eth interface 1 missing
	V	F0209	91905	evely	ck-unit-1 (adaptor	-1 levt-eth-1	link-down	2015	-07-31104-42-20.32		Adapter unlek interfac	re 1/1/1 link state: unavailable
	0	E 1 2 2 2	1152020		should the selfs	- percent in heat dat	he hand the second	2015	-0-3110-12120.32		Paragoon optimization	e system water unavailable.
	•	P1365	1152838	syste	ck-unic-1/boardCo	rkroker/mgnk/tw-boot-det/	bo board-ctri-upgrad	ed 2015	-10-11103(15:04.71)		board controller upgrai	peo, manual arc power cycle n

Figure 35: Rack Server Home Page along with PSUs Performance Data

	r Cloud Control 12c			
🦂 Enterprise 🔻 🌀 Iargets 🔻 📩 Eavorites	▼ 🕑 Hist <u>o</u> ry ▼			
Target Navigation         View ▼         ♥ 💆 ucs176         ▷ UCS Blades         ▷ UCS Fabric Interconnect A         Image: UCS FC Port         ▷ UCS FC Port         ▷ UCS FI Port         ▷ UCS IN Module         ♥ UCS Racks         Image: UCS Service Profile	Lucs176-rack-ut     UCS Racks     Home     Monitoring     Control     Job Activity     Information Publisher     Performance     Configuration     Compliance     Target Setup     Target Information     Y PUS Paca     PSU Performance Pai	nit-1-FCH1841V1H9    mesi Inc  H9  1H9  1a8-4792-a29d-f64884c  meters	e2e63	<ul> <li>✓ Fan Data</li> <li>FanModule: F</li> <li>1:1</li> <li>6:1</li> <li>4:1</li> <li>5:1</li> <li>3:1</li> <li>2:1</li> </ul>
	PSU ID	Model	Operability	Performance
	1	UCSC-PSU1-770W	1 operable	1 ok
	2		♥ N/A	S N/A

🏟 Enterprise 🔻 🎯 Iargets 👻 📩 Eavorites 👻	e History ▼	Search Target Name 💌			
Target Navigation	👚 ucs176-rack-unit-1-FCH1841V1H9 🛛	📑 oema			
View -	ICS Radis 🔻	Page Refreshed Jan 14, 2016 9:16:13 AM			
V math display="block black; bl	🔄 Mother Board				
UCS Chassis	Name	Value			
V DUCS Fabric Interconnect A	➡ ◆ MotherBoard				
LICS EC Port	- Can MotherBoard Power Counters	2016-01-16700:47:34:450			
UCS FI Port	Consumed Power (W)	136			
UCS IO Module	MotherBoard Input Current (A)	0			
V 🛅 UCS Radis	MotherBoard Input Voltage (V)	0			
ucs176-rack-unit-1-FLH1841	E MotherBoard Temperature Counters	2016-01-16700:47:34.450			
	MotherBoard Front Temperature (C)	19			
	MotherBoard Rear Temperature (C)	not-applicable			
	- Mem Array 1				
	■ Image Memory 1 (DIMM_A1)				
1	Environmental Counters	2016-01-16700:47:34.450			
	DDR Array Temperature (C)	25			
	E Memory 13 (DIMM_E1)				
	Environmental Counters	2016-01-16700:47:34.450			
	DDR Array Temperature (C)	23			
	E Processor1				
	Environmental Counters	2016-01-16700:47:34.450			
	CPU Temperature (C)	32.5			
	Input Current (A)	0			
	E Processor2				
	Environmental Counters	2016-01-16T00:47:34.450			
	CPU Temperature (C)	29.5			
	S Input Current (A)	0			

#### Figure 36: Rack Server Home Page along with Mother Board Statistics Page

## 5.7 IO Module Home Page

ORACLE Enterprise Manager Cloud Co		Setup - F	telp 🕶 🛛 👥 SYSMAN 🕶 🗌 Log Out 🛛 📿				
🚓 Enterprise 👻 🎯 Iargets 👻 📩 Eavorites 👻 🥝 Histor					Se	arch Target Name 👻	+
Target Navigation           Vew ▼           7 ∰ 10.65.183.10           ▷ □ UCS Blades           ▷ □ UCS Chassis           ▷ □ UCS Chassis           ▷ □ UCS Pablic Interconnect           ∨ □ UCS Tablic Interconnect           ∨ □ UCS Tablic Interconnect           ♥ □ UCS Indes.183.10-slot-1-fCH1725712H           ▷ □ UCS Racks           ▷ □ UCS Service Profile	10.65.183.10     Summary     Overall Status:     ID:     Side:     Side:	O-slot-1-FCH172 Operable 1 left	85712H <sup>(1)</sup>			Page Refre	in oemorade.com
	Vendor: Model: Product Name: Serial: Revision:	Claco Systems Inc UCS-10M-2208XP Claco UCS 2208XP FCH1725712H 0					
	Fault Summa	Fault Code	Fault ID	Affected Object	Cause	Last Transition	Fault Description
		F0403	85656	sys/chassis-1/slot-1	equipment-disconnected	2015-04-09T13:37:35.617	IOM I/I (À) per connectivity: disconnec

Figure 37: IO Module Home Page

## 5.8 FI-IO Module Home Page

ORACLE Enterprise Manager Cloud Con	ntrol 12c									5	etup 🔻   🔽 SYSMAN 👻 🕻
🤹 Enterprise 🔻 🥥 Targets 👻 🃩 Eavorkes 🍷 🥝 History									Search Target	Name	
Target Navigation	👚 ucsmini17 🐚 UCS FI-IO Ma	'-sw-slot-1 lule ▼	-FCH18523400	: 0						Page Refreshed Jan 1	oracleoem.c 3, 2016 11:48:10 AM EST (
	🦼 Summary						/ Performance Stats				
CC Chassis     CC Chassis     COLOR Connect A     CC Charles Charles Charles     CC Charles Charles     CC Charles Charles     CC Charle	Overall Status ID Fabric ID Chassis ID Vendor Model	Operable 1 B 1 Cisco Syster UCS-FI-M-63	15, Inc.				ASIC Temperature(C): Ambient Temperature(C): DIMM Temperature(C): Processor Temperature(C):	38.00 36.00 36.00 47.00			
<ul> <li>D UCSF Invt</li> <li>D UCS Envice</li> <li>D UCS Service Profile</li> </ul>	Product Name Serial Revision Side	Cisco UCS 6 FCH1852340 0 left	324 IC								
	🔏 Fault Sum	nary									
	Fault Seve	Ry	Fault Code	Fault ID	Affected Ob	ect	Cause		Last Transition	Faul	t Description

Figure 38: IO Module Home Page along with Performance Stats present in case of UCS-Mini only

# 5.9 FC Port Home Page

ORACLE Enterprise Manage	Cloud Control 12c						Setup 👻 Help 👻 🔛 SYSMAN 👻 🛛 Log Out
🤹 Enterprise 🔻 🙆 Iargets 👻 📩 Eavorites	🔹 🕝 History 👻					Search Target Nar	ne 🛪
Target Navigation           Verv -           V € ust76.           V ⊕ ust76.bide-1-34714/58LDA	t ucs176-network-; ucs7C Part → Summary Overal Status: Sfp Hot stat ID: 2 Hode: n_prosy	ort-15-20:4F:54:7F	:EE:59:23:40 0				Comorado. e
UCS IO Module	🔄 Fault Summary						
UCS Service Profile	Fault Severity	Fault Code	Fault ID	Affected Object	Cause	Last Transition	Fault Description

Figure 39: FC Port Home Page

ORACLE Enterprise Manage	r Cloud Control 12c				
🐔 Enterprise 🔻 🎯 Iargets 👻 🐈 Favorites	▼ 📀 Hist <u>o</u> ry <del>▼</del>				
Target Navigation	1 ucs176-network	-port-15-20	):4F:54:7F:	EE:59:23:40	
View 👻	-UCS FC Port 🔻				
▼ 🗒 ucs176	Home				
V 🛅 UCS Blades	Monitoring	+			
ics176-blade-1-JAF1445ALDA	Control	+			
ics176-blade-3-QCI1623A1G3	Job Activity				
ics176-blade-4-FCH174071MW	Information Publisher R	eports			
ics176-blade-5-QCI1408A3D3	Performance				
ucs176-blade-7-FCH16477Y0Z	Configuration	•			
⇒ ucs176-blade-8-FCH16207BMX	Compliance				
UCS Chassis	Compliance				
V CS Fabric Interconnect A	Target Setup	•			
UCSTCFOR	Target Information				
ucs176-petwork-port-16-20:50:50					
UCS FI Port					
UCS IO Module	( ) router				
UCS Racks					
UCS Service Profile	Fault Severity	Fault	Code	Fault ID	Affected Object

ORACLE Enterprise Manage	er Cloud Control 12c	Setup 👻 Help 👻 🔛 SYSMAN 👻 🛛 Log Out
🤹 Enterprise 🔻 🎯 Iargets 👻 🏫 Eavorites	s≠ 🙁 Hittgy ≠	Search Target Name 🛩
Target Navigation       View ▼       ♥ 🛱 ucs176       ▼       ▼	UCS176-network-port-15-20:4F:54:7F:EE:59:23:40     UCSFCPort      Traffic Direction:     Tx	🥫 centro stále. Paga Rofreshed Jan 14, 2015 9:57:12 AM 15T 🕻
	S         The Tabl(padets)           100	S         Tx-beta(podets/sec)           100
	Jan 14, 90300 an Jan 14, 91400 an Jan 14, 92500 an Jan 14, 93500 an Jan 14, 94700 an Jan 14, 95500 an S Tx-tota(bytes) 100 60 40 20 0 Jan 14, 90100 an Jan 14, 91200 an Jan 14, 92100 an Jan 14, 9000 an Jan 14, 93900 an Jan 14, 94600 an	Jan 14, 900:00 am Jan 14, 912:00 am Jan 14, 921:00 am Jan 14, 950:00 am Jan 14, 950:00 am Jan 14, 946:00 am

Figure 40: FC Port Data Sent(Tx) Traffic Graph

ORACLE Enterprise Manage	Cloud Control 12c	Setup 🖛 Help 🖛 🔢 SYSMAN 🖛 🛛 Log Out
🐗 Enterprise 🔻 🎯 Iargets 👻 🊖 Eavorites	🕐 🕑 History 🔻	Search Target Name 🖛
Target Navigation		🧧 oemorade.o
View +	H UCS FC Port -	Page Refreshed Jan 14, 2016 9:57:12 AM IST
V B ucs176     V D UCS Blades     Urs176-blades1-10E144E01D0	Traffic Direction: Rx 💌	
wus176-blade-3-QCI1623A1G3		×
ucs176-blade-4-FCH174071MW ucs176-blade-5-QCI1408A3D3	Rx-Tota(paciets)	Rx-Delta(packets/sec)
<ul> <li>ucs176-blade-7-FCH16477Y0Z</li> <li>ucs176-blade-8-FCH16207BMX</li> </ul>	100	100
CCS Chassis  CCS Fabric Interconnect A  CCS Fabric Interconnect A  CCS Fabric Post	60	60
ucs176-network-port-15-20		
- ucs176-network-port-16-20:50:5-	40	40
UCS FI Port	20	20
UCS Racks		
UCS Service Profile	0 Jan 14, 9:03:00 am Jan 14, 9:12:00 am Jan 14, 9:21:00 am Jan 14, 9:30:00 am Jan 14, 9:39:00 am Jan 14, 9:48:00 am	0 Jan 14, 9:03:00 am Jan 14, 9:12:00 am Jan 14, 9:21:00 am Jan 14, 9:30:00 am Jan 14, 9:39:00 am Jan 14, 9:48:00 am
	Rv-Total/hutes)	Ry-Deba(hytes(sec)
	100	100 .
	80	80
	60	60
	40	40
	20	20
	0	0

#### Figure 41: FC Port Data Received (Rx) Traffic Graph

Similarly, the stats for Error are also shown.

# 5.10 FI Port Home Page

ORACLE Enterprise Manage	er Cloud Control 12c						Setup 🕶 Help 🕶 🛛 👥 SYSMAN 🕶 🛛 Log Out 🖞
🍓 Enkerprise 🔻 🙆 Iargets 👻 🏫 Eavorkes	▼ 🙁 History ▼					Search Target I	Name 👻
Target Navigation           Ver +           V € € USS Bakes           > ≧ USS Bakes           > ≧ USS Bakes           > ≧ USS Fanc Interconnet A           ■ USS Fanc Interconnet A           ■ USS FFont           ■ USS FFont	tucs176-network     ucs176-network     ucs176 - network     ucs176 - network     voral Status: Up     Skt10: 1     Vender: CISC     Servit: 0000     Hodel: \$P70     Type: sfp	-port-17-54:7F:EE: 0-METHODE 0MTC152708R5 41_Rev_F	59:23:38 0				emerode.o
III usi76-enveroit27647/EEE     III usi76-enveroit27647/EEE     III usi76-enveroit2647647/EEE     III usi76-enveroit264776EE     IIII usi76-enveroit264776EE     IIII usi76-enveroit264776EE     IIII usi76-enveroit264776EE     IIII usi76-enveroit264776EE     IIII usi76-enveroit264776EE     IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	v Fault Summary Fault Severity	Fault Code	Fact D	Affected Object	Cause	Last Transition	Fault Description

#### Figure 42: FI Port Home Page

ORACLE Enterprise Manage	r Cloud Control 12c	
🦂 Enterprise 🔻 🎯 Targets 🔻 🏫 Eavorites	🕶 🙁 History 🕶	
Target Navigation         View ▼         ▼ ■ UCS Dasis         > □ UCS Chassis         > □ UCS Fabric Interconnect A         > □ UCS FC Port         ▼ □ UCS FI Port         ■ UCS FI Port         ■ UCS FI-nas-storage-port-9-54:7F         ■ UCS FI-Server-port-1-54:7F:EE:5         ■ UCS FI-Server-port-1-54:7F:EE:5         ■ UCS FI-Server-port-2-54:7F:EE:5         ■ UCS FI-Server-port-2-54:7F:EE:5         ■ UCS FI-Server-port-2-54:7F:EE:5         ■ UCS FI-Server-port-4-54:7F:EE:5         ■ UCS FI-Server-port-4-54:7F:EE:5         ■ UCS FI-Server-port-4-54:7F:EE:5         ■ UCS FI-Server-port-4-54:7F:EE:5         ■ UCS FI-Server-port-4-54:7F:EE:5	UCS FI Port  Home Monitoring Control Dob Activity Information Publisher Reports Performance Configuration Compliance Target Setup Target Information	
CS Racks      CS Service Profile	✓ Fault Summary	
	Fault Severity     Fault Code     Fault ID       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -       -     -     -	Affected Object

Figure 43: FI Port Performance Graphs Option under FI Port Home Page



Figure 44: FI Port Data Sent (Tx) Traffic Graph



Figure 45: FI Port Data Received (Rx) Traffic Graph

Similarly, graphs are shown for Error.

# 6 Performance metrics supported

Componen t Type	Associated Component s	Componen t Type	Statistics Object/ Traffic Direction	Metric Representation in OEM
Fabric Interconnec t	Channels	Fcoe Port Channel	Error	Rx Error-Total(packets) Rx Error-Delta(packets/sec)

				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
			Тх	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
			Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)
				Rx-Delta(packets/sec)
	Fc	Port	Error	Rx Error-Total(packets)
	Ch	lannei		Rx Error-Delta(packets/sec)
				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
		ľ	Тх	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
		1	Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)
				Rx-Delta(packets/sec)
	Eth	hPortCha	Err	Rx Error-Total(packets)
	nne	el		Rx Error-Delta(packets/sec)
				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
			Тх	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
		ŀ	Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)
			Rx-Delta(packets/sec)	

FC Ports	N/A	N/A	Error	Rx Error-Total(packets)
				Rx Error-Delta(packets/sec)
				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
			Tx	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
			Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)
				Rx-Delta(packets/sec)
FI Ports	N/A	N/A	Error	Rx Error-Total(packets)
				Rx Error-Delta(packets/sec)
				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
			Tx	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
			Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)
				Rx-Delta(packets/sec)
FI	Summing of	Network	Error	Rx Error-Total(packets)
	port data	ports		Rx Error-Delta(packets/sec)
				Tx Error-Total(packets)
				Tx Error-Delta(packets/sec)
			Тх	Tx-Total(bytes)
				Tx-Delta(bytes/sec)
				Tx-Total(packets)
				Tx-Delta(packets/sec)
			Rx	Rx-Total(bytes)
				Rx-Delta(bytes/sec)
				Rx-Total(packets)

				Rx-Delta(packets/sec)
FI	N/A	N/A	Sys stats	Load average( cumulative)
				Mem Available average, cumulative (MB)
				Mem Cached average, cumulative (MB)
	N/A	N/A	Motherboard Power	Input Voltage (Volts)
Sonior			stats	Input Current (Amps)
Motherboard				Consumed Power (Watts)
Motherboard			Motherboard	Rear Temperature (Celcius)
			Temperature stats	Front Temperature (Celcius)
Server Motherboard	N/A	N/A	Memory	DDR Array Temperature (Celcius)
Server	NI/A	N/A	Processor	CPU Temperature (Celcius)
Motherboard Processor Unit		N/A	ricessor	Input Current (Amps)
Chassis	N/A	N/A	Power Stats	Output Power (W)
Chassis				Input Power(W)
	N/A	N/A	PSU	Output Power (W)
				Output Voltage (Volts)
Power State				Output Current (Amps)
Linit(PSLI)				Internal Temperature
01111(1 00)				(Celcius)
				Input Voltage (Volts)
				Power
Equipment Fan	N/A	N/A	Fan module	Speed (RPM)
FI-IO	N/A	N/A	Temperature	ASIC Temperature(C)
Modules				Ambient Temperature(C)
				DIMM Temperature(C)
				Processor Temperature(C)

# 7 Uninstall UCS Manager Plug-In

To uninstall the plug-in follow the steps in sequence as specified:

## 7.1 Undeploying the Cisco UCS Manager Plug-In from EM12c Management Agent (OMA)

- 1. From the EM12c Web UI, navigate to Setup -> Extensibility -> Plug-Ins
- 2. Highlight the Cisco UCS Manager Plug-In (found in the Servers, Storage, and Network folder), Right-Click and select, **Undeploy From -> Management Agent.**

🔻 🚞 Servers, Storage and Ne	etwork 🕕		
💵 Cisco UCSM Plugin	12 1 0 12 0	12.1.0.12.0	12.1.0.12.0
🔊 EMC CLARiiON Array	Beploy On	12.1.0.2.0 🚳	
💵 EMC Celerra Storage	🐴 Undeploy From 💦 🕨	Management Servers	
🔊 EMC Symmetrix Array	Market Information	Management Agent	
💵 Oracle Storage Mana	Collapse	12.1.0.3.0 🖳	
💵 Oracle Virtual Networ	Expand All Below	12.1.0.2.0 🚳	
Sa Analata (Calendara)	Collapse All Below	121050 🖾	
Cisco UCSM Plugin Figure 46: Undeploying	Show as Ton g plugin from manag	gement agent.	

3. The 'Undeploy Plug-in from Management Agent Dialog – General' dialog box will appear. Select the Management Agent you wish to undeploy the Cisco Ucsm Plug-In from by clicking add button and click **Continue** once you are done.

Search and Select: Tai	rgets - Ora	icle Enterprise N	1anager	×
Search and Select	t: Target	s		Q
Select Status Up	Agents wh	ere Cisco UCSM	Plugin is deployed	
Target Type	Agent		-	
Target Name				
On Host				
Configuration Search	<no configu<="" td=""><td>ration search sele</td><td>cted&gt; 🔍 🥢</td><td></td></no>	ration search sele	cted> 🔍 🥢	
				Search
Target Name		Target Type	On Host	Status
oemoracle.com:3872	:	Agent	oemoracle.com	1
				Mode Multi-Select
	Select Status Up Target Type Target Name On Host Configuration Search Target Name oemoracle.com:3872	<ul> <li>✓ Select Status Up Agents wh Target Type Agent Target Name On Host Configuration Search <no configu<br="">Target Name oemoracle.com:3872         </no></li> </ul>	✓ Select Status Up Agents where Cisco UCSM         Target Type         Agent         Target Name         On Host         Configuration Search         Target Name         Target Name         Target Name         Target Name         Target Name         Agent	✓ Select Status Up Agents where Cisco UCSM Plugin is deployed         Target Type         Target Name         On Host         Configuration Search         Target Name         Target Name         On Host         Configuration Search         Agent         On Host         On Host <tr< td=""></tr<>

Figure 47: Undeploying plugin from management agent, screen that appears after clicking the Add button.

- 4. The 'Undeploy Plug-in from Management Agent Pre-requisite checks' dialog box will appear. Assuming all the Pre-requisites have been verified, click **Next**.
- 5. Next the 'Undeploy Plug-in on Management Agent Review' dialog box will appear. Assuming the pre-requisite checks have passed, Click **Undeploy.**
- 6. Next the 'Undeploy Plug-in on Management Agent Confirmation' dialog will appear. Note the information on the screen and click either **Show Status** to monitor the deployment status or click **Close** to complete the deployment of Cisco UCS Manager Plug-In onto an EM12c OMA.
- 7. In the case where 'Show status' is selected, the Deployment Activities screen will appear and will allow you to monitor the un-deployment status of the plug-in from the

OMA. It can take a few minutes – you can refresh this panel using  $\bigcirc$  button in top right of screen to see the deployment progress.

## 7.2 Undeploying the Cisco UCS Manager Plug-In from EM12c Management Server (OMS)

- 1. From the EM12c Web UI, navigate to Setup -> Extensibility -> Plug-Ins
- 2. Highlight the Cisco UCS Manager Plug-In (found in the Servers, Storage, and Network folder), Right-Click and select, **Undeploy From -> Management Servers.**

🗸 🚞 Servers, St	orage and Network 🕕			
🗐 Cisco 🐪		12.1.0.12.0	12.1.0.12.0	12.1.0.12.0
💵 EMC (	Beploy On	2.1.0.2.0	12.1.0.2.0 👰	
🔊 EMC C	Undeploy From	Management Servers	50.2.0 🛐	
🗐 EMC S	🕍 Information	Management Agent.	0.2.0 👰	
🔊 Oracle	Expand	2.1.0.3.0	12.1.0.3.0 👰	
🗐 Oracle	Expand All Below	2.1.0.2.0	12.1.0.2.0 👰	
Sa anala	Collapse All Below	21050	121050	
Cisco UCSM P	Show as Top			

Figure 48: Undeploying plugin from management server.

- 3. The 'Undeploy Plug-in from Management Servers Dialog General' dialog box will appear. Enter the 'Repository SYS Password' and click **Continue.**
- 4. Next the 'Undeploy Plug-in from Management Servers Review' dialog box will appear. Highlight the Management Service on which you want to deploy the plug-in and click **Undeploy.**
- 5. Next the 'Undeploy Plug-in from Management Servers –Confirmation dialog box will appear. Note the information on the screen and click **Show Status** to monitor the deployment status or click Close to complete the deployment of the Cisco UCS Manager Plug-In onto an EM12c OMS.
- 6. In the case where 'Show status' is selected, the Deployment Activities screen will appear and will allow you to monitor the un-deployment status of the plug-in from the

OMS. It can take a few minutes – you can refresh this panel using  $\smile$  button in top right of screen to see the deployment progress.

## 7.3 Stop the OEMService:

You will need to kill the OEM Service if it is running. You can check that as:

- Login to the agent machine
- Open the terminal and lookup for the OEMService process using ps –ef | grep OEMService
- Note the process id of the OEMService and kill the process

## 7.4 Removing the plug-in from repository:

The instructions to delete the plug-in are as follows:

- Log into EM12c Web UI and navigate to Setup -> Extensibility -> Self Update.
- Click the Plug-in folder, enter 'cisco' in the search box provided and hit 🖻 button.
- Now from the 'Actions' tab choose delete.

Self Update	1										
Plug-in Upda	ates										
Actions 🗸 🖉	) Downloa	id 🛛 🔞 Apply	ତ୍ର	Plug-in	5	Sea	rch Description	cisco			+
🗄 🕒 Download		Plug-in Name		OS Platfo	orm		Revision		Version	Vendor	
Apply		Cisco UCSM Plu	gin	Generic P	latform	1	0		12.1.0.12.0	CISCO	
X Remove											
(i) Readme											
🟦 Export											
🔀 Delete											
igure 49: Und	eployir	ng plugin fi	om	manag	geme	nts	server, dele	ting	the plug-in		
ising self-upda	ate.										

# 8 Logging and Tracing

Apart from the regular log files that come with OEM, additional log files for the Cisco UCS Manager Plug-In can be found:

- 1. For the Plug-In Service, the logs will be available under /<TMP\_DIR >/OEM/OEMService.log
- For the Discovery Scripts, the logs will be available under /<TMP\_DIR >/OEM/OEMDiscovery.log and /<TMP\_DIR>/OEM/ OEMMetricCollection.log

# 9 References

- <u>UCS Manager XML API Guide</u>, Explains UCS Manager XML API. UCS Manager exposes an XML API which can be used to Monitor UCS.
- Installation and Configuration Guide for Oracle Enterprise Manager, Explains the OEM installation and configuration tasks

# **10 Troubleshooting**

If Oracle Enterprise Manager environment goes down, your oms may not be running:

You may follow following steps for this to resolve:

- 1) oms\_home/bin>./emctl stop oms -all
  - The oms\_home is '/home/oracle/app/oracle/em/oms/bin'
- 2) sqlplus "/ as sysdba"
- 3) shutdowm immediate to shutdown the database
- 4) startup
- 5) exit and issue Isnrctl start
- 6) ./emctl start oms

If Agent goes down and shows an icon 👋 with tooltip "Agent Unreacheable":

You may follow following steps for this to resolve:

3) agent\_home/bin>./emctl stop agent

The agent\_home is '/home/oracle/app/oracle/em\_agent/agent\_inst/bin'

4) agent\_home/bin>./emctl start agent

(Also include workaround for issue faced very frequently :

After restarting OEM server vm, while accessing the grid console seen this below: "Backend WLS or EM application seems to be down")

5) After restarting OEM server, while accessing the grid console following error appears sometimes:

"Backend WLS or EM application seems to be down".

Please refer to the link: <u>http://lefterhs.blogspot.in/2012/02/backend-wls-or-em-application-seems-to.html</u> to troubleshoot it.

# 11 Appendix

The status of the targets Chassis, Blade, Racks, IOModules, FIIO Modules and Fabric Extenders has been mapped to the operState.

The mapping of the target state to the operState property is done as per the table below for Chassis and FIIO Modules:

Target Status	OperState
Status (Down)	inoperable
	powered-off
	removed
	unknown
Status (Up)	operable
	thermal-problem
	power-problem
	voltage-problem
	performance-problem
	accessibility-problem
	identity-unestablishable
	bios-post-timeout
	disabled
	malformed-fru
	fabric-conn-problem
	fabric-unsupported-conn
	config
	equipment-problem
	decomissioning
	chassis-limit-exceeded
	not-supported
	discovery
	discovery-falled
	Identify
	post-failure
	link activate blocked
	degraded
	degraded

The mapping of the target state to the operState property is done as per the table below for Blades and Racks:

Target Status	OperState
Status (Down)	power-off
Status (Up)	ok
	discovery
	config
	unconfig
	restart

decomissioning
bios-restore
cmos-reset
diagnostics
pending-reassociation
pending-reboot
maintenance
test
compute-mismatch
compute-failed
degraded
discovery-failed
config-failure
unconfig-failed
test-failed
maintenance-failed
removed
inaccessible
thermal-problem
power-problem
voltage-problem
inoperable
diagnostics-failed
indeterminate
disabled
unassociated

The mapping of the target state to the operState property is done as per the table below for IO Modules and Fabric Extenders:

Target Status	OperState
Status (Down)	powered-off
	inoperable
	power-problem
	removed
	voltage-problem
	thermal-problem
	performance-problem
	accessibility-problem
	identity-unestablishable
	bios-post-timeout
	fabric-conn-problem
	fabric-unsupported-conn
	equipment-problem
	discovery-failed
	post-failure
	upgrade-problem
	peer-comm-problem
Status (Up)	operable
	decomissioning
	discovery
	identify
	auto-upgrade
	degraded
	not-supported
	unknown

The mapping of the target state to the operability property is done as per the table below for Fabric Interconnects, FI Ports and FC Ports:

Target Status	Operability
Status (Down)	inoperable
	removed
	Failed
	link-down
Status (Up)	operable
	unknown
	link-up
	Up
	sfp-not-present
	admin-down
	hardware-failure
	udld-aggr-down
	intermediate
	no-license
	software-failure
	operStateDesc
	error-disabled

For the Service profiles, the target status has been mapped to the assocState property. The mapping has been performed as per the table below.

Target Status	AssocState	
Status (Down)	Unassociated	
Status (Up)	associating	
	disassociating	
	associated	
	Failed	

For fans, the following table lists the property, its states and icon mapping:

Property	1	+	V	C	0
Operability	operable	powered-off	inoperable, degraded, power-problem, removed, voltage-problem, thermal-problem, performance- problem, accessibility- problem, identity- unestablishable, bios-post- timeout, disabled, fabric-conn- problem, fabric- unsupported- conn, equipment-	identify, decomissioning , discovery, config, auto-upgrade	not-supported, unknown

			problem, chassis-limit- exceeded, discovery-failed, post-failure, upgrade- problem, peer- comm-problem,		
Performance	Ok	Empty	upper-non- recoverable, upper-critical, upper-non- critical, lower-non- critical, lower-critical, lower-critical, error		not-supported, unknown
Power	on, online	off, offline, off-duty, power-save	error	Test	not-supported, unknown
Temperature	Ok	Empty	upper-non- recoverable, upper-critical, upper-non- critical, lower- non-critical, lower-critical, lower-non- recoverable, error		not-supported, unknown

For PSUs, the following table lists the property, its states and icon mapping:

Property	1	+	4	Q	0
Operability	operable	powered-off	inoperable, degraded, power- problem, removed, voltage- problem, thermal- problem, performance- problem, accessibility- problem, identity- unestablishabl e, bios-post- timeout, disabled, fabric-conn- problem, fabric- unsupported- conn	identify, decomissioning , discovery, config, auto-upgrade	not-supported, unknown

			equipment- problem, chassis-limit- exceeded, discovery- failed, post- failure, upgrade- problem, peer- comm- problem,		
Performance	Ok	Empty	upper-non- recoverable, upper-critical, upper-non- critical, lower-non- critical, lower-critical, lower-non- recoverable, error		not-supported, unknown
Power	on, online	off, offline, off-duty, power-save	Error	Test	not-supported, unknown
Temperature	Ok	Empty	upper-non- recoverable, upper-critical, upper-non- critical, lower- non-critical, lower-critical, lower-non- recoverable, error		not-supported, unknown
Voltage	Ōk	Empty	upper-non- recoverable, upper-critical, upper-non- critical, lower- non-critical, lower-critical, lower-non- recoverable, error		not-supported, unknown