Using the Cisco UCS Provider for Proactive High Availability (HA)

This chapter includes the following sections:

Cisco UCS Provider for Proactive HA

Cisco UCS Provider for Proactive HA feature allows the system to assess the health of the server running the ESXi host. It assess if the server is healthy, moderately or severely degraded. Any fault which occurs from the Cisco approved predefined list of faults with critical or major severity is reported to the vCenter. For more information on Proactive HA feature and providers, see VMware documentation.

Prerequisites and User Privileges

To use Cisco UCS Provider for the Proactive HA, we recommend that you enable the following:

- vSphere DRS

- Proactive HA

You must have the following privileges to use Cisco UCS Provider for the Proactive HA:

- **Health Update Provider**

  - Register

  - Unregister

  - Update

- **Host**

- Inventory

    - Modify Cluster

- Configuration

    - Quarantine

    - Maintenance

- **Storage Views**

    - View

Registering a Cisco UCS Provider

Procedure

Step 1   Launch the vSphere HTML Client.

Step 2   From the **Shortcuts** page, launch Cisco UCS plug-in.

Step 3   Click **Proactive HA Registration** tab.

Step 4   In the **Register Cisco UCS Provider** area, enter the following:

Name	Description
Username	Enter the vCenter username
Password	Enter the vCenter password

Note   If you want to update the vCenter credentials for Cisco UCS Provider, then enter a new password and click **Update**.

Step 5   Click **Register**.

The Cisco UCS Provider is visible when the domains which manage all the hosts in the cluster are registered.

Important   To upgrade the registered Cisco UCS Manager plug-in, unregister the Cisco UCS Provider for Proactive HA, upgrade the registered plug-in and register the Cisco UCS Provider for Proactive HA. For more information on how to unregister the Cisco UCS Provider, and upgrade the plug-in, see Unregistering a Cisco UCS Provider, on page 4 and Upgrading Cisco UCS Manager Plug-In for vSphere HTML Client.

Enabling Cisco UCS Provider

Before you begin

- Enable vSphere DRS

- From the **vSphere Availability**, enable Proactive HA

- Register all the UCS domains which manage all the hosts in the cluster. To register the domains, see Registering the UCS Domains

Procedure

Step 1 Click **Hosts and Clusters** > **Cluster** > **Configure** > **vSphere Availability** > **Proactive HA** > **Edit**.

Step 2 On the **Proactive HA Failures and Responses** tab, complete the following:

Name	Description
Automation Level drop-down list	Whether to migrate the VMs automatically or manually in case of hosts failure. This can be one of the following: • **Manual** • **Automated** We recommend that you select **Automated** level.
Remediation drop-down list	The action to be taken depending on the severity of the failure, This can be one of the following: • **Quarantine mode for all failures** • **Quarantine mode for moderate and Maintenance Mode for sever failures (Mixed)** • **Maintenance mode for all failures** We recommend that you select **Mixed** mode.

Step 3 From the list, check the **Cisco UCS Provider** check box, and click **OK**.

Unregistering a Cisco UCS Provider

Procedure

Step 1   Launch the vSphere HTML Client.

Step 2   From the Shortcuts page, launch Cisco UCS plug-in.

Step 3   Click **Proactive HA Registration** tab.

Step 4   Click **Unregister**.

Modifying Cisco UCS Failure Conditions

Before you begin

- Enable vSphere DRS

- From the **vSphere Availability**, enable Proactive HA

- Register all the UCS domains which manage all the hosts in the cluster. To register the domains, see Registering the UCS Domains

Procedure

Step 1   Click **Hosts and Clusters** > **Cluster** > **Configure** > **vSphere Availability** > **Proactive HA** > **Edit**.

Step 2   From the list of providers under **Providers** tab, check the **Cisco UCS Provider** check box, and click **Edit**.

A list of Cisco UCS Provider failure conditions appears.

Step 3   To block a failure condition on a host in the cluster, check the failure condition and the associated host check box.

Step 4   To select all current and future hosts in the cluster, check the **Cluster-level** check box.

Step 5   Click **OK**.

List of Cisco UCS Provider Failure Conditions for Proactive HA

Table 1: Fault Conditions in Cisco UCS Provider

Sl. No.	Fault ID	Component Type	Description
1.	F0190	Memory	Memory array voltage exceeds the specified hardware voltage
2.	F0539	Network	IO controller temperature is outside the upper or lower critical threshold
3.	F0185	Memory	Memory Unit Inoperable
4.	F0313	Power	Compute Physical BIOS POST Timeout
5.	F0317	Storage	Compute Physical Inoperable
6.	F0373	Fan	Equipment Fan Inoperable
7.	F0374	Power	Equipment PSU Inoperable
8.	F0484	Fan	Equipment Fan Performance Threshold Lower Non Recoverable
9.	F0187	Memory	Memory Unit Thermal Threshold Critical
10.	F0188	Memory	Memory Unit Thermal Threshold Non Recoverable
11.	F0312	Storage	Compute Physical Thermal Problem
12.	F0382	Fan	Equipment Fan Module Thermal Threshold Critical
13.	F0384	Fan	Equipment Fan Module Thermal Threshold Non Recoverable
14.	F0383	Power	Equipment PSU Thermal Threshold Critical

Sl. No.	Fault ID	Component Type	Description
15.	F0385	Storage	Equipment PSU Thermal Threshold Non Recoverable
16.	F0540	Network	Compute IOHub Thermal Threshold Non Recoverable
17.	F0191	Memory	Memory Array Voltage Threshold Non Recoverable
18.	F0389	Power	Equipment PSU Voltage Threshold Critical
19.	F0391	Power	Equipment PSU Voltage Threshold Non Recoverable
20.	F0425	Power	Compute Board CMOS Voltage Threshold Non Recoverable
21.	F0310	Power	Compute Board Power Error
22.	F0311	Power	Compute Physical Power Problem
23.	F0369	Power	Equipment PSU Power Supply Problem
24.	F37600	Memory	Memory temperature beyond threshold
25.	F35962	Power	Motherboard power consumption beyond threshold
26.	F0174	Power	Processor is inoperable
27.	F0181	Power	Local disk has become inoperable
28.	F1004	Power	Storage controller is inaccessible
29.	F0209	Network	Network facing adapter interface is down
30.	F1007	Power	Virtual drive has become inoperable

Sl. No.	Fault ID	Component Type	Description
31.	F1706	Memory	ADDDC Memory RAS Problem

Adding Custom Faults for Proactive HA Monitoring

Before you begin

Perform the following steps only if Proactive HA is already registered:

- Disable the HA provider and turn off Proactive HA from vSphere availability in cluster settings.

- Unregister the Proactive HA. To unregister the proactive HA in the domains, see Unregistering a Cisco UCS Provider, on page 4.

Procedure

Step 1 Launch the vSphere HTML Client.

Step 2 From the **Shortcuts** page, launch Cisco UCS plug-in.

Step 3 Click **Proactive HA Registration** tab.

Step 4 In the **Fault Monitoring Details** area, enter the following:

Name	Description
ID	Fault Code
Description	Description for the fault
Component Type	Component type of the fault

Step 5 Click **ADD**.

Important The **ADD** button is enabled only when Proactive HA is unregistered. To unregister the proactive HA, see Unregistering a Cisco UCS Provider, on page 4.

Step 6 Register the Proactive HA. To register the proactive HA in the domains, see Registering a Cisco UCS Provider, on page 2.

Step 7 Turn on Proactive HA and enable the HA provider from vSphere availability in cluster settings.