

SolarWinds Technical Reference

Setting up a Cisco Unified Computing System (UCS) within Orion Network Performance Monitor (NPM)

This paper provides the procedures for setting up a Cisco UCS within Orion NPM.

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Introduction

Cisco's Unified Computing System (UCS) is designed to provision and migrate internetworking systems in datacenters. When you add the primary Fiber Interconnect device for UCS into Orion NPM, you gain a view to all information that UCS provides.

Below is an example of what you see in Orion NPM upon adding the fiber interconnect device. The other sections in this paper include the procedures for setting-up a Cisco UCS with the properties shown in the example.

The screenshot shows the Orion NPM interface for UCS. At the top right, there is a 'Customize Page' button and the date 'Monday, March 29, 2010 4:25:27 PM'. Below this are several utility icons. The main content area is titled 'UCS Overview' and contains two sections: 'Fabric Interconnects' and 'Chassis 1'. Each section has a table with columns for NAME, CURRENT RESPONSE TIME, PERCENT LOSS, and STATUS. The 'Fabric Interconnects' table shows two switches, both with 0ms response time and 0% loss, and both are 'Up'. The 'Chassis 1' table shows four blade servers; Blade Server 3 is 'Down' with 100% loss, while the others are 'Up' with 0% loss. Below these tables is an 'Errors & Failures' section with a table showing two errors: 'Fan-1 on Blade Server Chassis 1' (Fan in unknown state) and 'PSU-1 on switch-A' (High temperature - PSU down).

NAME	CURRENT RESPONSE TIME	PERCENT LOSS	STATUS
Switch-A	0ms	0%	Up
Switch-B	0ms	0%	Up

NAME	CURRENT RESPONSE TIME	PERCENT LOSS	STATUS
Blade Server 1	0ms	0%	Up
Blade Server 2	0ms	0%	Up
Blade Server 3	0ms	100%	Down
Blade Server 4	0ms	0%	Up

NAME	ERROR
Fan-1 on Blade Server Chassis 1	Fan in unknown state
PSU-1 on switch-A	High temperature - PSU down

Setting up a Cisco UCS in Orion NPM

Follow these steps to setup a Cisco UCS in Orion NPM.

To setup Cisco UCS:

1. Verify in the UCS console that the fiber connects (Switch A and Switch B in the example) have external IP addresses:

```
Sys>Switch-A (or Switch-B)>Mgmt>if-1>
ExtGW    Not 0.0.0.0
ExtIP    Not 0.0.0.0
EXTMask  Not 0.0.0.0
```

2-Setting up UCS

2. Add the UCS Master node into Orion.

Note: If the node already showl up in the All Nodes list in italics or with '**n/a**' as the state, click on it; and then click '**Yes**' when Orion asks to manage the devices using Orion NPM.

- a. Click **Edit** in the All Nodes resource if the node is not in the list.
 - b. Click **Add Node** and provide the information:
 - Hostname or IP Address
 - Dynamic IP Address
 - ICMP (for Ping only)
 - External
 - **UCS Manager credentials**
 - Poll for Vmware
 - Polling Engine
 - UCS Port
 - UCS User Name
 - UCS Password
 - c. Click **Test** under the UCS fields.
 - d. Click **Next** if the test succeeds. (The wizard disallows progress to the next screen when the test fails.)
 - e. Check the resources to monitor on the node.
 - f. Add relevant pollers.
 - g. Review your information and when you're ready click **OK, ADD NODE**.
- ### 3. Add each fabric interconnect switch and all other UCS related devices into Orion.

Note: If the node already showl up in the All Nodes list in italics or with '**n/a**' as the state, click on it; and then click '**Yes**' when Orion asks to manage the devices using Orion NPM.

- a. Click **Edit** in the All Nodes resource if the node is not in the list.
 - b. Click **Add Node** and provide the information:
 - Hostname or IP Address
 - **Dynamic IP Address**
 - ICMP (for Ping only)
 - External
 - UCS Manager credentials
 - Poll for Vmware
 - Polling Engine
 - SNMP Version
 - SNMP Port
 - Community String
 - Read/Write Community String
 - c. Click **Test** under the **SNMP** fields.
 - d. Click **Next** if the test succeeds. (The wizard disallows progress to the next screen when the test fails.)
 - e. Check the resources to monitor on the node.
 - f. Add relevant pollers.
 - g. Review your information and when you're ready click **OK, ADD NODE**.
 - h. Perform **steps b-g** for each of the devices.
4. Double click on the UCS master node in All Nodes and, assuming each device status is still the same, you should see the UCS information as presented in the beginning of this document..

Note: To select the proper view we use the existing "View By Device Type" feature. To ensure that Standard Poller does not overwrite "MachineType" and other fields we use "EntityType" to identify UCS node in the Standard Poller (and so force Standard Poller not to overwrite our required fields). This same mechanism is also used for the ESX VMWare API.

Clicking on UCS details to UCS_Fabric or UCS_Blade adds those components to the Nodes table. The user is asked to confirm this insert; selecting "Ok" redirects to "Add Node Wizard" page.