

Oracle® Enterprise Manager Ops Center

Adding InfiniBand Switches

12c Release 2 (12.2.0.0.0)

E48139-01

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This guide provides an end-to-end example for how to use Oracle Enterprise Manager Ops Center.

Introduction

Oracle Enterprise Manager Ops Center supports the following types of network switches:

- Sun Ethernet 10GbE Fabric Switch
- Sun Data Center InfiniBand Switch
- Cisco Catalyst 4948 Ethernet Switch

This document describes the procedure for discovering one or more Sun Datacenter InfiniBand switches. You discover the switches in these situations:

- A new switch is installed in an existing data center that is managed by Oracle Enterprise Manager Ops Center. You must discover the switch so that it becomes a managed asset. You can use this procedure to submit a job that targets the asset at the specific IP address.
- One or more switches are supporting a network in a data center when Oracle Enterprise Manager Ops Center is installed. You want to direct the product to discover all the switches. Because you know the subnet where the switches are attached, you can use this procedure to submit a job that targets any InfiniBand network switch on that subnet.

See [Related Articles and Resources](#) for links to related information and articles.

What You Will Need

You will need the following to deploy network switches:

- A working network switch that a Proxy Controller can reach.
- The credentials for the switch management controller's `ilom-admin` account. If you have the Network Admin role, you can create new credentials.
- The specific IP address of the switch or the range of IP addresses.

Hardware and Software Configuration

A Proxy Controller must be able to reach the switch:

- To discover a new switch in an existing site, connect the switch to a subnet that has a Proxy Controller.
- To discover the switches in a new installation, add a Proxy Controller to the same subnet where the switches are located.

Deploying Switches

When you manage a network switch, the operation identifies the switch, checks its configuration, and makes its fabrics available in the Default Network Domain. To manage a network switch, you create a discovery profile and then use the Add Assets action.

- [Create the Discovery Profile for the InfiniBand Switch](#)
- [Use the Discovery Profile](#)

Create the Discovery Profile for the InfiniBand Switch

The discovery profile can include a specific IP address and credentials to manage a specific network switch. If this information is not included, you can provide the specific information each time you use the profile, allowing the profile to be used more than one time.

1. In the Navigation pane, click **Plan Management**.
2. In the Profiles and Policies section, click **Discovery**.
3. In the Actions pane, click **Create Profile**.
4. Enter a name for the discovery profile and select the Networking type of asset. For InfiniBand, select **Magnum Family Switches**.

Identify Profile * Indicates Required f

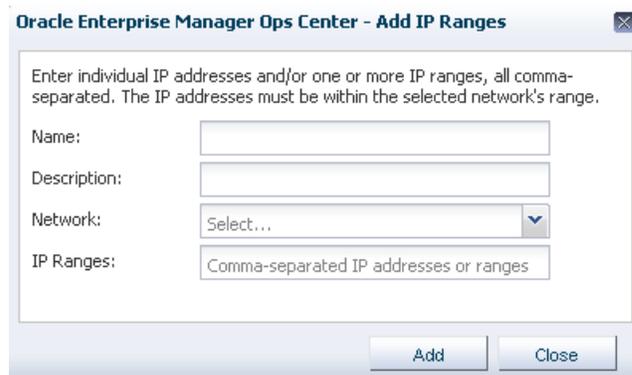
* Name:

Description:

Asset Type:

- Operating Systems
- Server Hardware
- Oracle Engineered Systems
- Oracle VM
- Storage
- Networking
- Magnum Family Switches
- Opus Family Switches
- Cisco IOS-based Switches
- Datacenter Infrastructure
- Cluster Products

5. You have the option of adding tags to identify the new assets, according to your site's policy. Click **Next**.
6. In the Add IP Ranges step, you define the target of the discovery operation, that is, the network switch:
 - If you are discovering a specific switch and you know its IP address or its host name, click **Next** to skip this step and provide the IP address or host name when you use the discovery profile. If you prefer to set the IP address in the discovery profile, enter the IP address of the switch in the IP Ranges field.
 - If you are discovering a switch but do not know its IP address or host name, or you are discovering a set of switches that reside on a subnet, click the **Add** icon to display the Add IP Ranges window.



Oracle Enterprise Manager Ops Center - Add IP Ranges

Enter individual IP addresses and/or one or more IP ranges, all comma-separated. The IP addresses must be within the selected network's range.

Name:

Description:

Network:

IP Ranges:

7. Add a name and description to identify the IP range, for example, a geography name.
8. In the Network list, select **Automatic** to route the job to the closest Proxy Controller.
9. Enter the IP range for the subnet that includes the network switches. During the discovery process, Oracle Enterprise Manager Ops Center searches the subnet for assets that are InfiniBand network switches. You can specify more than one subnet.
10. Click **Add**. When you are finished, click **Next**.
11. Authorize the discovery operation to probe the network switches. Provide the credentials to log in to the switch management controller's `ilom-admin` account.

Note: Do not use the `root` account.

Discovery Credentials

Optionally specify the discovery and/or management credential sets for each protocol. These credentials are used to probe the assets.

Discovery

Use system's default credentials

SSH:

New	Select	Clear
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IPMI:

New	Select	Clear
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- If you are discovering a specific switch, click **Next** to skip this step and provide credentials when you use the discovery profile.
- If you are discovering a set of switches, you can select the check box to direct Oracle Enterprise Manager Ops Center to use the network switch's default credentials or you can provide credentials.
- a. To specify ssh credentials, click **New** in the SSH row.

Oracle Enterprise Manager Ops Center - Create Credentials

Create Credentials ? ORACLE

* Indicates Required Field

* Name:

Description:

SSH

* Login User:

* Password:

* Confirm Password:

* SSH Port:

- b. To specify IPMI credentials, click **New** in the IPMI row.

Oracle Enterprise Manager Ops Center - Create Credentials

Create Credentials

* Indicates Required Field

* Protocol: IPMI

* Name:

Description:

IPMI

* Login User:

* Password:

* Confirm Password:

- When you are finished, click **Create** to complete the new credentials and view the summary of the discovery profile. Click **Finish** to create the discovery profile. The following is an example of a discovery profile for an InfiniBand network switch.

Name: Infiniband Switch @ slce02sw-ib03.us.oracle.com **Subtype:** ILOM Service Processor

Description: Infiniband Switch @ slce02sw-ib03.us.oracle.com; rack: slce02 **Version:** 1

Target Type: Hardware **Last Modified:** 06/23/2012 6:13:01 pm EDT

Profile Details

Hostnames/IP Addresses 10.240.22.73

Network Automatic

Tags

Tag Name	Value
oc.internal.rack.description.hidden	
oc.internal.rack.installtype.hidden	OVS
oc.internal.rack.name.hidden	slce02
oc.internal.rack.occupancy.hidden	1
oc.internal.rack.posx.hidden	1
oc.internal.rack.posy.hidden	23
oc.internal.rack.posz.hidden	1
oc.internal.rack.setup.hidden	Quarter
oc.internal.rack.systemidentifier.hi...	Oracle Exalogic X2-2 AK00000546

Discovery Credentials

Name	Protocol Type
slce02sw-ib03.us.oracle.com	IPMI
slce02sw-ib03.us.oracle.com	SSH

Use the Discovery Profile

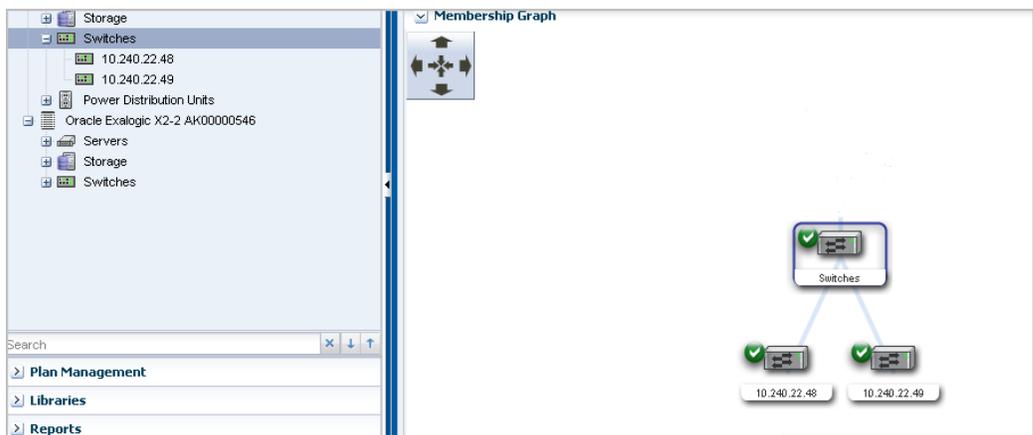
- In the Navigation pane, select **All Assets**.
- In the Actions pane, click **Add Assets**.

3. Select **Add and Manage Various Types of Assets via Discovery Probes**.
4. Select the new discovery profile, `new_switch`.
5. To change or add IP addresses defined in the discovery profile, enter them in the **Hostname/IP Address** field.
6. To use the credentials in the discovery profile, click **Select**. If you did not specify credentials in the profile, click **New** to provide them now. You can also use the **New** button to override the credentials in the profile. Specify the credentials to log in to the switch management controller's `ilom-admin` account.

Note: Do not use the `root` account.

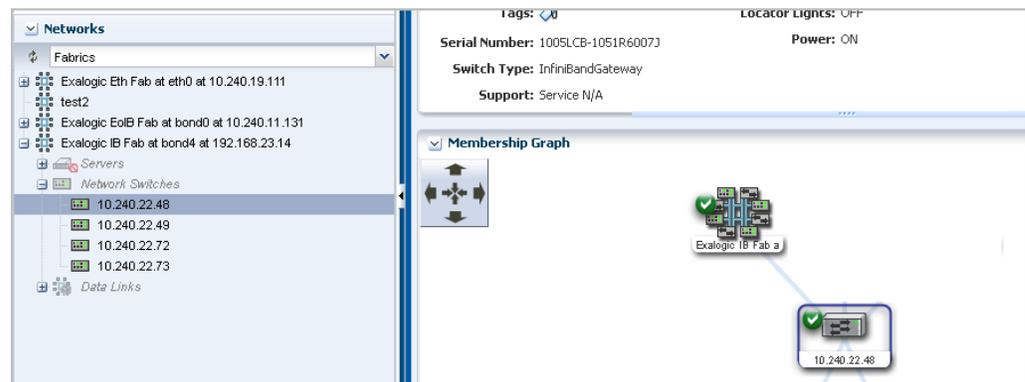
7. Click **Add Now** to start the discovery job.

When the discovery job is complete, the switches are displayed as managed assets in a way similar to the following:

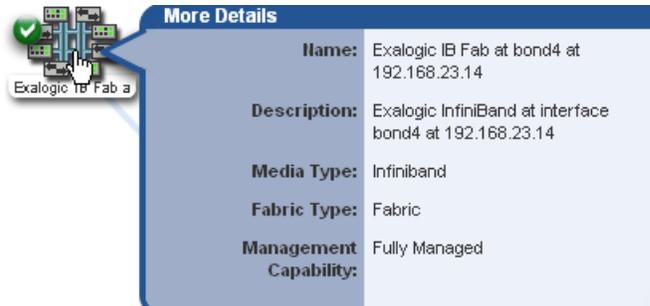


The tabbed windows in the center pane also contain information about the switches.

As part of becoming a managed network switch, any fabrics that existed on the network switch are also incorporated.



Hover the cursor over the fabric icon to see its details, similar to the following.



What's Next?

The fabrics are available in the Default Network Domain. To change the network domain, use the **Assign Fabric** action.

To maintain network switches with firmware upgrades, you must acquire the firmware images and create a profile from the Update Firmware template. See *Keeping Your Firmware Up-to-Date* in the Operate How To library at http://docs.oracle.com/cd/E40871_01/nav/operatehowto.htm.

Related Articles and Resources

For instructions in performing actions or to learn more about the role of this feature, go to one of the following resources.

- *Deploy Networks Workflow* in the Deploy How To library at http://docs.oracle.com/cd/E40871_01/nav/deployhowto.htm
- The following chapters in the *Oracle Enterprise Manager Ops Center Feature Reference Guide* contain more information:
 - Hardware
 - Networks
 - Asset Management

For more information about switches, see the product documentation:

- For the Sun Ethernet 10GbE Fabric switch, see <http://docs.oracle.com/cd/E19934-01/index.html>
- For the Sun Network QDR InfiniBand Gateway Switch, see http://docs.oracle.com/cd/E36256_01/.
- For the Sun Datacenter InfiniBand Switch 36, see http://docs.oracle.com/cd/E26698_01/

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