Oracle® Enterprise Manager Ops Center

Creating and Managing Network Domains

12*c* Release 2 (12.2.0.0.0)

E48136-01

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

Introduction

A network domain is a container for managed networks and handles the relationship between the physical fabrics that support the networks and the virtualization hosts or server pools that use the networks. The fabrics provide network resources such as links and IP subnets to the network domain. Within the network domain, networks that have been discovered or specified are available for assignment. These are called public networks. Their network resources have been defined. Another type of network is dynamic, that is, the network is created when it is needed, using an IP address space available to the network domain. Because they exist only for a specific purpose and only within a specific network domain, they are called private networks.

A fabric can be a member of more than one network domain. A network domain must by supported by at least one fabric. The type of fabric defines the capabilities of networks in the network domain. To use virtual datacenters, the network domain provides private networks to the server pool. For dynamic private networks, include a fully-managed fabric or a host-managed fabric in the network domain. To use existing public networks for a virtual datacenter, you must add each network to the network domain, making it a static private network. These networks are for the exclusive use of that network domain. Because existing public networks already have an IP subnet addresses and VLAN IDs or partition keys, they are static and cannot be assigned or attached to any other object.

The Oracle Enterprise Manager Ops Center software always has a Default Network Domain and all public networks are members of it. If you have upgraded your product software, the existing managed networks are now in the Default Network Domain. A new public network becomes a member of the default network domain. If you direct the new network to a user-defined network domain, the network is also a member of that network domain. Like the default network domain, a user-defined network domain provides network resources to a server pool or virtualization host.

In this document, you create a new network domain that supports virtual datacenters.

See Related Articles and Resources for links to related information and articles.

What You Will Need

You must have the role of Network Admin to create network domains.

To create a network domain that supports a virtual datacenter, use either a fully-managed fabric or a host-managed fabric to provide its network resources.To see the available fabrics, expand Networks in the Assets pane. Select Fabrics. For each fabric, the Dashboard in the center pane includes a Management Capability field. You can change an unmanaged Ethernet fabric to a host-managed fabric, using the Assign VLAN ID Range action to create VLAN IDs.

Hardware and Software Configuration

Although the network domain is providing the networks to the server pools, this is a logical association using VLAN IDs or partition keys. To use the network resources, each physical server that supports the virtualization hosts in the server pool must have a physical connection to each fabric in the network domain.

Creating a User-Defined Network Domain

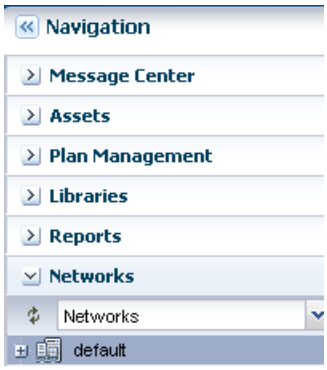
- Create a New Network Domain
- Associating a Network Domain with a Server Pool

Create a New Network Domain

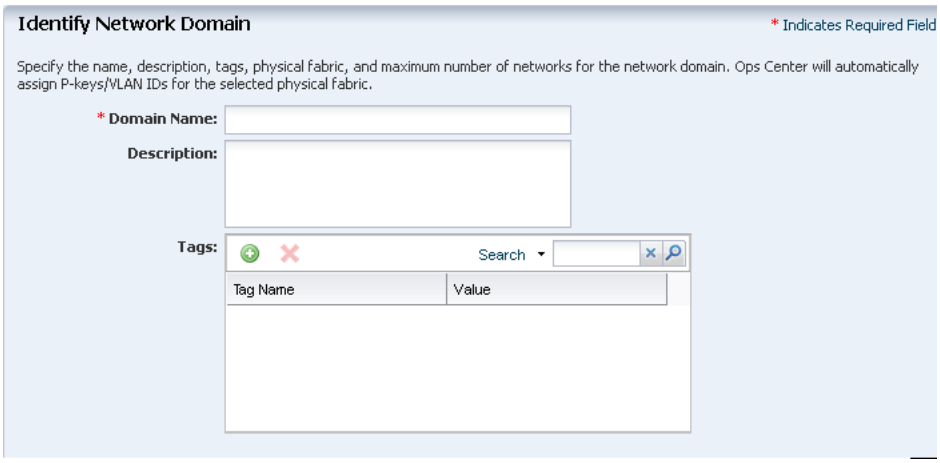
This task defines the new network domain and includes the fabrics that support its networks.

1. Expand Networks in the Navigation pane.
2. The Standard views shows Networks.

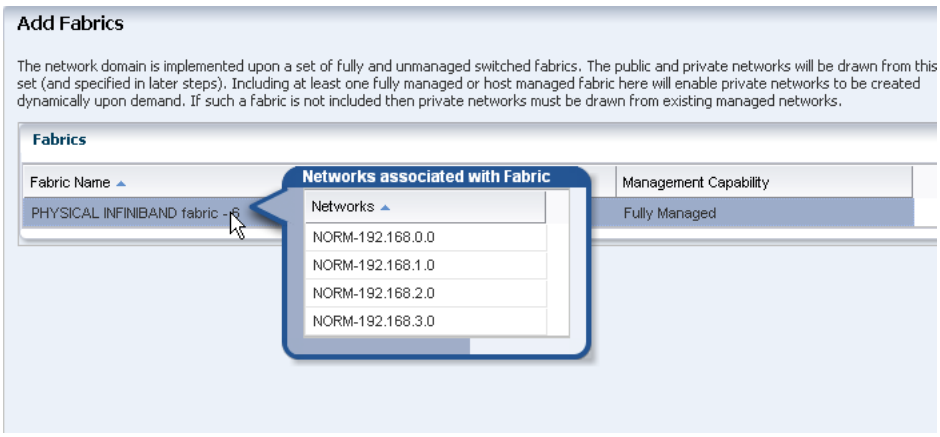
   The Default Network Domain is selected.



3. Click **Create Network Domain** in the Actions pane.
4. In the Identify Network Domain pane, enter the name and description of the network domain. You can also add tags.

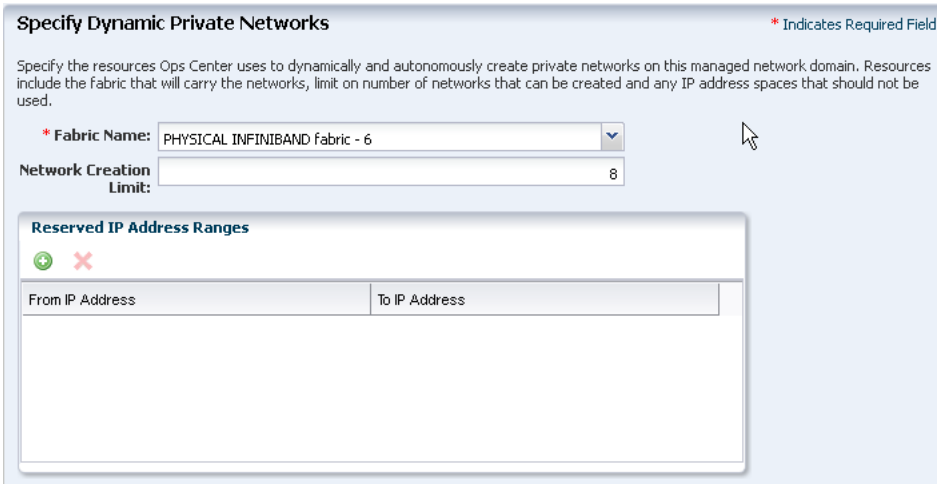


5. In the Add Fabrics step, choose at least one fully-managed fabric or a host-managed fabric.

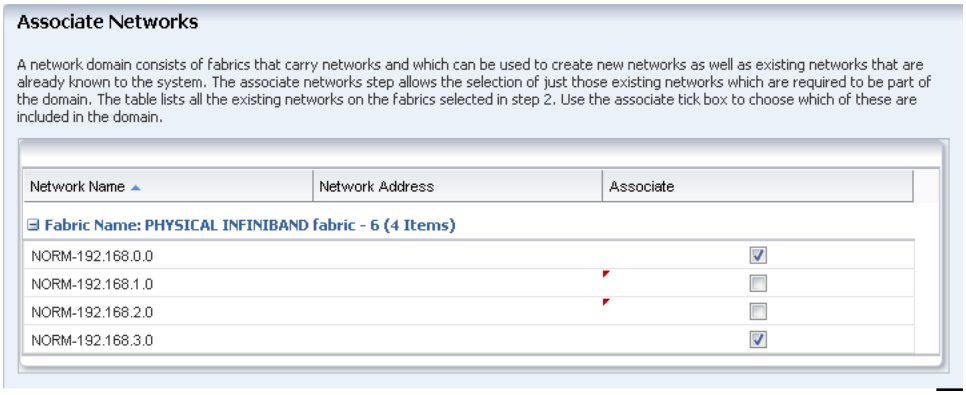


6. In this step, you set the maximum number of dynamic private networks that can be in use simultaneously. Because it is not possible to decrease the number of networks in a network domain after you create it, enter a low number in the Network Creation Limit field.

   A private network uses an IP address from the pool of available IP addresses in the network domain. To exclude IP addresses that your organization is using for other purposes, specify them in the Reserved IP Address Ranges table. These addresses will not be available to dynamic private networks.



7. In the Associate Networks step, you can add existing networks to the new network domain.

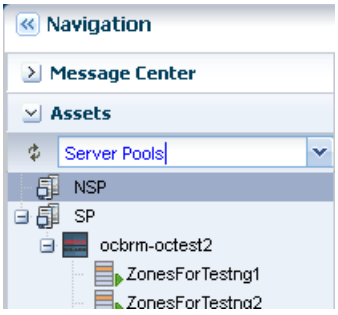


8. Review and click **Finish.**

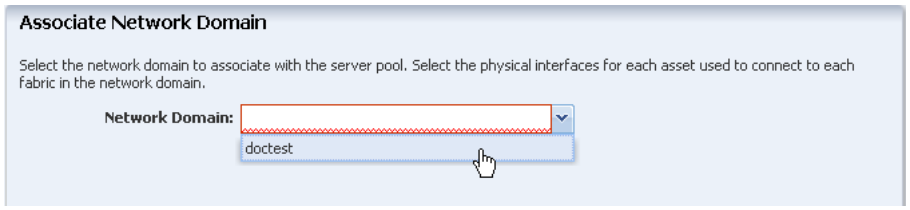
When the job is completed, the new network domain is listed in the Navigation pane.

Associating a Network Domain with a Server Pool

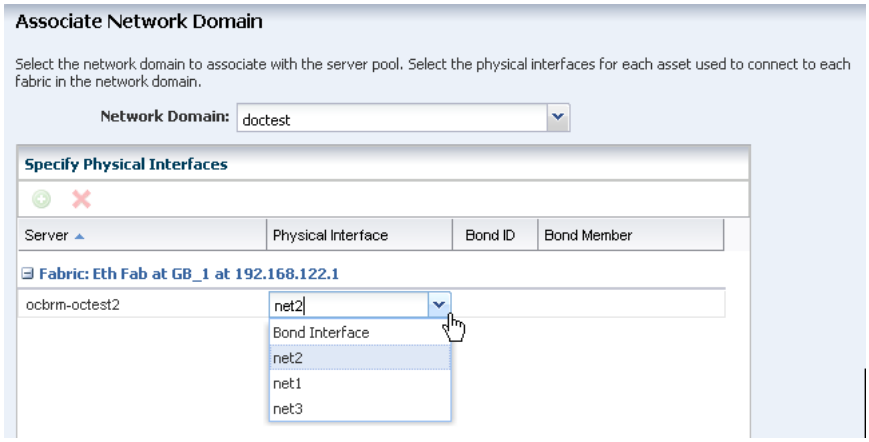
1. Expand Assets in the Navigation pane.
2. Select the server pool.



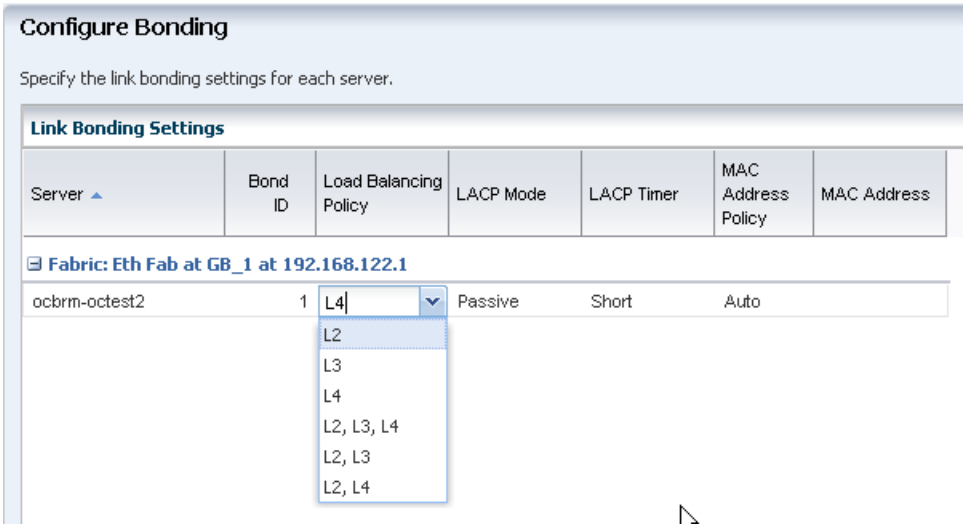
3. Click **Associate Network Domain** in the Actions pane.
4. Select a network domain from the drop-down list.



5. The Specify Physical Interfaces table shows each server in the server pool. For each one, select its physical connection to the fabric.



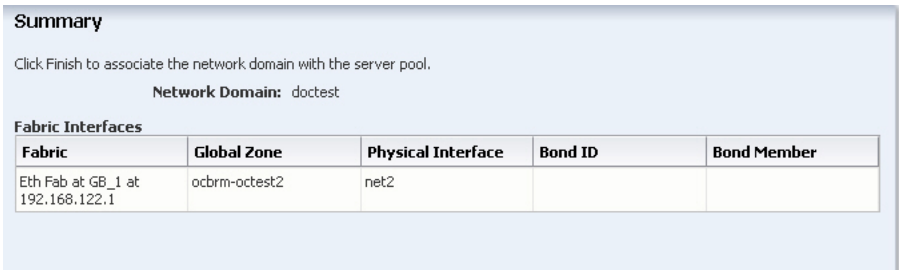
6. If the physical interface is an IPMP group or a link aggregation, specify the bond ID and the bond member that the server uses. The Configure Bonding step is displayed, showing the server and the Bond ID.



Specify the characteristics of the IPMP group or link aggregation or accept the default values.

Click **Next**.

7. Review the summary and click **Finish**.



When the job is completed, the server pool is associated with the network domain and, through the network domain, its fabrics.

What's Next?

If a virtual datacenter that relies on this network domain is unable to create vnets, you can increase the limit of private networks it can provide simultaneously.

If your organization uses this network domain for a specific purpose, for example, to support the server pool used exclusively by one department, you can edit the attributes of the network domain to identify this purpose.

Related Articles and Resources

The following chapters in the *Oracle Enterprise Manager Ops Center Feature Reference Guide* contain more information:

- Networks
- Networks for Virtualization
- Server Pools

See the *Deploy Networks Workflow* in the Deploy How To library at http://docs.oracle.com/cd/E40871_01/nav/deployhowto.htm

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