Configuring Tenants

This section includes the following topics:

Tenant Management

The topics in this section describe how to manage tenants when Prime Network Services Controller is installed in Standalone mode. For information on managing tenants when Prime Network Services Controller is installed in Orchestrator mode, see Integrating with DCNM.

Tenant Management and Multi-Tenant Environments

Prime Network Services Controller provides the ability to support multi-tenant environments. A multi-tenant environment enables the division of large physical infrastructures into logical entities called organizations. As a result, you can achieve logical isolation between organizations without providing a dedicated physical infrastructure for each organization.

The administrator can assign unique resources to each tenant through the related organization in the multi-tenant environment. These resources can include policies, pools, device profiles, service devices, and so on. The administrator can use locales to assign or restrict user privileges and roles by organization if access to certain organizations needs to be restricted.

Users with the tenant-admin role can see only those objects and resources that are related to their associated tenants as defined by the locales and organizations assigned to them. They cannot see the policies or resources of other tenants. Tenant-admin users can view faults only for the resources (such as firewalls or load balancers) that they manage. They cannot see diagnostic information or configure administrative options.

Users with the admin role add a user with the tenant-admin role by associating the user with a locale and organization. For more information about creating user accounts and assigning locales and organizations, see the following topics:

> • Creating a User Account
>
> • Creating a Locale

The tenant-admin role has the following privileges:

> • Policy management
>
> • Resource configuration
>
> • Tenant management

Prime Network Services Controller provides a strict organizational hierarchy as follows:

1 root

2 Tenant

3 Virtual Data Center

4 Application

5 Tier

The root can have multiple tenants. Each tenant can have multiple data centers. Each data center can have multiple applications, and each application can have multiple tiers.

The policies and pools created at the root level are systemwide and are available to all organizations in the system. However, any policies and pools created in an organization below the root level are available only to those resources that are below that organization in the same hierarchy.

For example, if a system has tenants named Company A and Company B, Company A cannot use any policies created in the Company B organization. Company B cannot access any policies created in the Company A organization. However, both Company A and Company B can use policies and pools in the root organization.

Name Resolution in a Multi-Tenant Environment

In a multi-tenant environment, Prime Network Services Controller uses the hierarchy of an organization to resolve the names of policies and resource pools. The steps that Prime Network Services Controller takes to resolve the names of policies and resource pools are as follows:

1 Prime Network Services Controller checks the policies and pools for the specified name within an organization assigned to the device profile or security policy.

2 If the policy or pool is found, Prime Network Services Controller uses that policy or pool.

3 If the policy or pool does not contain available resources at the local level, Prime Network Services Controller moves up the hierarchy to the parent organization and checks for a policy with the specified name. Prime Network Services Controller repeats this step until the search reaches the root organization.

Note The object name reference resolution takes an object name and resolves an object from an organization container to the object with the same name that is closest in the tree as it searches upward toward root. If an object with the specified name is not found, Prime Network Services Controller uses a corresponding default object. For example, assume that there is an SNMP policy under a data center named MySNMP and an SNMP policy in the tenant in the same tree that is also named MySNMP. In this case, the user cannot explicitly select the MySNMP policy under the tenant. If the user wants to select the SNMP policy under the tenant, they must provide a unique name for the object in the given tree.

4 If the search reaches the root organization and an assigned policy or pool is not found, Prime Network Services Controller looks for a default policy or pool starting at the current level and going up the chain to the root level. If a default policy or pool is found, Prime Network Services Controller uses it. If a policy is not available, a fault is generated.

Configuring Tenants

Creating a Tenant

Procedure

Step 1 Choose **Tenant Management > root > Create Tenant**.
Step 2 In the Create Tenant dialog box, enter a name and description for the tenant, and then click **OK**.

Editing a Tenant

Procedure

Step 1 Choose **Tenant Management > root >** *tenant* where *tenant* is the tenant that you want to edit.
Step 2 In the General tab, modify the description as required, and then click **Save**.

Deleting a Tenant

Note   When you delete an organization (such as a tenant, virtual data center, application, or tier), all data contained under the organization is deleted, including subordinate organizations, service devices, resource pools, and policies.

Procedure

Step 1   Choose **Tenant Management > root**.

Step 2   Right-click the tenant that you want to delete, and choose **Delete Tenant**.

Step 3   When prompted, confirm the deletion.

Configuring Virtual Data Centers

Creating a Virtual Data Center

Procedure

Step 1   Choose **Tenant Management > root >** *tenant*, where *tenant* is the location for the new virtual data center.

Step 2   Click **Create Virtual Data Center**.

Step 3   In the Create Virtual Data Center dialog box, enter a name and description for the virtual data center, and then click **OK**.

Editing a Virtual Data Center

Procedure

Step 1   Choose **Tenant Management > root >** *tenant* **>** *vdc* where *vdc* is the virtual data center that you want to edit.

Step 2   In the General tab, modify the description as required and click **Save**.

Deleting a Virtual Data Center

Note   When you delete a virtual data center, all data contained under the virtual data center is deleted, including subordinate organizations, service devices, resource pools, and policies.

Procedure

Step 1   Choose **Tenant Management > root >** *tenant* where *tenant* is the tenant with the virtual data center that you want to delete.

Step 2   Right-click the virtual data center that you want to delete and choose **Delete Virtual Data Center**.

Step 3   When prompted, confirm the deletion.

Configuring Applications

Creating an Application

Procedure

Step 1   Choose **Tenant Management > root >** *tenant > vdc* where *vdc* is the location for the new application.

Step 2   Click **Create Application**.

Step 3   In the Create Application dialog box, enter a name and description for the application, and then click **OK**.

Editing an Application

Procedure

Step 1   Choose **Tenant Management > root >** *tenant > vdc > application*, where *application* is the application that you want to edit.

Step 2   In the General tab, modify the description as required, and then click **Save**.

Deleting an Application

Note   When you delete an application, all data contained under the application is deleted, including subordinate organizations, service devices, resource pools, and policies.

Procedure

Step 1   Choose **Tenant Management > root >** *tenant* **>** *vdc* where *vdc* is the virtual data center with the application that you want to delete.

Step 2   Right-click the application that you want to delete, and choose **Delete Application**.

Step 3   When prompted, confirm the deletion.

Configuring Tiers

Creating a Tier

Procedure

Step 1   Choose **Tenant Management > root >** *tenant* **>** *vdc* **>** *application*, where *application* is the location for the new tier.

Step 2   Click **Create Tier**.

Step 3   In the Create Tier dialog box, enter a name and description for the tier, and then click **OK**

Editing a Tier

Procedure

Step 1   Choose **Tenant Management > root >** *tenant* **>** *vdc* **>** *application* **>** *tier* where *tier* is the tier you want to edit.

Step 2   In the General tab, modify the description as required, and then click **Save**.

Deleting a Tier

Note When you delete a tier, all data contained under it is also deleted, including service devices, resource pools, and policies.

Procedure

Step 1 Choose **Tenant Management > root >** *tenant > vdc > application* where *application* contains the tier that you want to delete.

Step 2 Right-click the tier that you want to delete and choose **Delete Tier**.

Step 3 When prompted, confirm the deletion.

Deleting a Tier