Custom EPG Name Configuration and Cisco ACI

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Configuring Custom EPG Names for VMM Domains

When you associate an endpoint group (EPG) to a Virtual Machine Manager (VMM) domain, Cisco Application Centric Infrastructure (ACI) automatically creates a VMware vCenter port group or a Microsoft VM network. Beginning in Cisco Application Policy Infrastructure Controller (APIC) Release 4.2(3), it is easier to manage the port groups or VM networks because you now have the option of giving the EPG a custom name.

In earlier Cisco APIC releases, Cisco ACI creates port group or VM network names using a specific format: `tenant|application|epg` for VMware vCenter-based domains and `tenant|application|epg|domain` for Microsoft System Center Virtual Machine Manager (SCVMM). The format can result in long, similar names that are difficult to distinguish from each other.

However, eginning in Cisco APIC Release 4.2(3), you can optionally give the EPG a custom name when you create the VMM domain association. The name is then carried over to the port group in VMware vCenter or the Microsoft VM network. Using a custom name enables you to associate a simple or meaningful EPG name in Cisco APIC with a VMware vCenter port group or a Microsoft VM network. It also enables consistent naming between port groups and VM networks. Also, for Microsoft SCVMM, using a custom EPG name provides the ability to create a VM network in situations where the VM network creation would fail due to the 64-character limit when concatenating `tenant|application|epg|domain`.

For VMware vSphere Distributed Switch (VDS) domains, you can configure, edit, and delete the custom EPG names through Cisco APIC GUI, REST API, or NX-OS Style CLI. For Microsoft SCVMM, you can configure, edit, and delete the custom EPG names through Cisco APIC GUI or REST API.

Guidelines for Using Custom Names for EPGs

The following are guidelines that you should follow when you configure or use custom endpoint group (EPG) names:

- The custom name limit is 80 characters for VMware vCenter port groups, and 61 characters for Microsoft System Center Virtual Machine Manager (SCVMM) VM networks.

  The Cisco Application Centric Infrastructure (ACI) SCVMM Agent adds extra characters to the object name depending on the object type. This is why the character limit for SCVMM is 61 characters instead of 80.

  Special character rule - each special character (not alphabets, digits) are considered three times the normal character length (A-Z, a-z, 0-9). This provides a consistent logic for special characters as VMM treats some special characters differently. Example: if an alphabet length is considered as one, special character length is considered as three.

- We require that all custom EPG names be removed before you downgrade Cisco Application Policy Infrastructure Controller (APIC) from Release 4.2(3) or earlier; custom names for EPGs were not supported in previous versions.

  Downgrading without removing custom EPG names does not directly cause a loss of traffic; however, later configuration of EPG policies does.

- When you use static IP address pools, we recommend that you use short custom names.

  The name of the `fvCepNetCfg` managed object is added to the SCVMM static IP address pool name, and a long name could prevent the SCVMM VM network from being deployed.

- The custom name should not overlap with another EPG name, custom or not.

Prerequisites for Configuring a Custom EPG Name

You must complete the following tasks before you can confirgure a custom endpoint group (EPG) name:

- Create a Virtual Machine Manager (VMM) domain for VMware vSphere Distributed Switch (VDS) or Microsoft System Center Virtual Machine Manager (SCVMM).

  For instructions, see the chapter "Cisco ACI with VMware VDS Integration" or "Cisco ACI with Microsoft SCVMM" in the *Cisco ACI Virtualization Guide*.

- Create a tenant, bridge domain, application profile, and at least one EPG.

  For instructions, see the *Cisco APIC Basic Configuration Guide*, the chapter "Cisco ACI with VMware VDS Integration" or "Cisco ACI with Microsoft SCVMM" in the *Cisco ACI Virtualization Guide*.

- Upgrade Cisco Application Policy Infrastructure Controller (APIC) and the Cisco ACI fabric to Cisco APIC Release 4.2(3).

  For information and instructions, see the *Cisco ACI Upgrade Checklist*, the *Cisco APIC Upgrade/Downgrade Support Matrix*, and the *Cisco APIC Installation, Upgrade, and Downgrade Guide*.

- (For SCVMM), upgrade the SCVMM and Hyper-V Cisco ACI agents to Cisco APIC Release 4.2(3).

  For instructions, see "Cisco ACI with Microsoft SCVMM" in the *Cisco ACI Virtualization Guide*.

Configuring Custom EPG Names

Configure a Custom EPG Name Using the GUI

Complete the following procedure to configure a custom endpoint group (EPG) name when you associate the EPG with a Virtual Machine Manager (VMM) domain. The procedure is the same for VMware vSphere Distributed Switch and Microsoft System Center Virtual Machine Manager (SCVMM).

Before you begin

You must have performed the tasks in the section Prerequisites for Configuring a Custom EPG Name, on page 2 in this chapter.

Procedure

Step 1 Log in to Cisco Application Policy Infrastructure Controller (APIC).

Step 2 Go to **Tenants** > ***tenant*** > **Application Profile** > ***application profile*** > **Application EPGs** > ***application EPG***.

Step 3 Right-click the application EPG that you want to associate with a VMM domain, and then choose **Add VMM Domain Association**.

Step 4 In the **Add VMM Domain Association** dialog box, complete the following steps:

a) From the **VMM Domain Profile** drop-down list, choose the VMM domain that you created earlier.

b) Configure the association as your setup requires.

c) In the **Custom EPG Name** field enter a name for the EPG, which will become the name of the VMware vCenter port group or the Microsoft VM network.

A custom name for a VMware vCenter port group is 80 characters; a custom name for a Microsoft VM network is 61 characters.

d) Click **Submit**.

What to do next

Verify the name, using one of the following procedures in this chapter:

- Verify the Port Group Name in VMware vCenter, on page 4
- Verify a VM Network Name Change in Microsoft SCVMM, on page 4

Change or Delete the Custom EPG Name Using the GUI

You can change or delete a custom endpoint group (EPG) name using the Cisco Application Policy Infrastructure Controller (APIC) GUI.

Procedure

Step 1 Log in to Cisco APIC.

Step 2 Go to **Tenants** > ***tenant*** > **Application Profile** > ***application profile*** > **Application EPGs** > ***application EPG***.

Step 3 Expand the folder for the application EPG associated with the Virtual Machine Manager (VMM) domain and then click **Domains (VMs and Bare-Metals)**.

Step 4 In the central work pane, right-click the domain that the EPG is associated with and choose **Edit VMM Domain Association**.

Step 5 In the **Edit VMM Domain Association** dialog box, change the custom name by typing a new one in the **Custom EPG Name** field or delete the name by emptying the field.

Step 6 Click **Update**.

What to do next

Verify the change, using one of the following procedures in this chapter:

- Verify the Port Group Name in VMware vCenter, on page 4
- Verify a VM Network Name Change in Microsoft SCVMM, on page 4

Verifying EPG Names

Verify the Port Group Name in VMware vCenter

You can verify the custom or deault endpoint group (EPG) name for the port group in VMware vCenter.

Procedure

Step 1 Launch the VMware vSphere vCenter client.

Step 2 Navigate to the Distributed Virtual Switch and the port group.
If there is no custom EPG name applied to the port group, the port group has the default name `tenant|application|epg`. If the custom EPG name is applied the port group will have that name—for example, `WebEPG`.

Verify a VM Network Name Change in Microsoft SCVMM

You can verify if the endpoint (EPG) name has changed in the Microsoft System Center Virtual Machine Manager (SCVMM) Agent.

Procedure

Step 1 Log in to the SCVMM server, and go to **SCVMM** > **Jobs** > **History**.

Step 2 Clish **Refresh** to see the most recent jobs.
The recent jobs window shows the following as **Completed**:

- **Change properties of static IP address pool**

  Note
  The static IP address pool is present only when the policy is present on Cisco Application Policy Infrastructure Controller (APIC).

- **Change properties of logical network definition**
- **Change properties of VM Network**
- **Change properties of VM subnet**