



KB: Creating Domains, Attach Entity Profiles, and VLANs to Deploy an EPG on a Specific Port

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New and Changed Information

The following table provides an overview of the significant changes to this article up to this current release. The table does not provide an exhaustive list of all changes made to the article or of the new features up to this release.

Table 1: New Features and Changed Behavior in Cisco APIC

Cisco APIC Release Version	Feature	Description	What Changed
Release 1.3(1g)	--	Removed object model CLI procedure and replaced with NX-OS-Style CLI procedure.	This content is available here: Creating AEP, Domains, and VLANs to Deploy an EPG on a Specific Port Using the NX-OS Style CLI , on page 5 and includes examples.
Release 1.1	New steps when using APIC GUI.	Describes new set of steps following APIC GUI modifications.	
Release 1.0(1e)	--	This KB article was released.	

Creating Domains, Attach Entity Profiles, and VLANs to Deploy an EPG on a Specific Port

This topic provides a typical example of how to create physical domains, Attach Entity Profiles (AEP), and VLANs that are mandatory to deploy an EPG on a specific port.

**Note**

All endpoint groups (EPGs) require a domain. Interface policy groups must also be associated with Attach Entity Profile (AEP), and the AEP must be associated with a domain, if the AEP and EPG have to be in same domain. Based on the association of EPGs to domains and of interface policy groups to domains, the ports and VLANs that the EPG uses are validated. The following domain types associate with EPGs:

- Application EPGs
- Layer 3 external outside network instance EPGs
- Layer 2 external outside network instance EPGs
- Management EPGs for out-of-band and in-band access

The APIC checks if an EPG is associated with one or more of these types of domains. If the EPG is not associated, the system accepts the configuration but raises a fault. The deployed configuration may not function properly if the domain association is not valid. For example, if the VLAN encapsulation is not valid for use with the EPG, the deployed configuration may not function properly.

Creating Domains, and VLANs to Deploy an EPG on a Specific Port Using the GUI

Before You Begin

- The tenant where you deploy the EPG is already created.
- An EPG is statically deployed on a specific port.

Procedure

Step 1 On the menu bar, click **FABRIC > Access Policies**.

Step 2 In the **Navigation** pane, click **Quick Start**.

Step 3 In the **Work** pane, click **Configure an interface, PC, and vPC**.

Step 4 In the **Configure Interface, PC, and vPC** dialog box, click the + icon to select switches and perform the following actions:

- a) From the **Switches** drop-down list, check the check box for the desired switch.
- b) In the **Switch Profile Name** field, a switch name is automatically populated.
Note Optionally, you can enter a modified name.
- c) Click the + icon to configure the switch interfaces.
- d) In the **Interface Type** field, click the **Individual** radio button.
- e) In the **Interfaces** field, enter the range of desired interfaces.
- f) In the **Interface Selector Name** field, an interface name is automatically populated.
Note Optionally, you can enter a modified name.
- g) In the **Interface Policy Group** field, choose the **Create One** radio button.
- h) From the **Link Level Policy** drop-down list, choose the appropriate link level policy.
Note Create additional policies as desired, otherwise the default policy settings are available.
- i) From the **Attached Device Type** field, choose the appropriate device type.

- j) In the **Domain** field, click the **Create One** radio button.
- k) In the **Domain Name** field, enter a domain name.
- l) In the **VLAN** field, click the **Create One** radio button.
- m) In the **VLAN Range** field, enter the desired VLAN range. Click **Save**, and click **Save** again.
- n) Click **Submit**.

Step 5 On the menu bar, click **TENANTS**. In the **Navigation** pane, expand the appropriate *Tenant_name* > **Application Profiles** > **Domains (VMs and Bare-Metals)** > *EPG_name* and perform the following actions:

- a) Right-click **Domains (VMs and Bare-Metals)**, and click **Add Physical Domain Association**.
- b) In the **Add Physical Domain Association** dialog box, from the **Physical Domain Profile** drop-down list, choose the appropriate domain.
- c) In the **Deploy Immediacy** field, click the desired radio button.
- d) In the **Resolution Immediacy** field, click the desired radio button. Click **Submit**.

The AEP is associated with a specific port on a node and with a domain. The physical domain is associated with the VLAN pool and the Tenant is associated with this physical domain.

The switch profile and the interface profile are created. The policy group is created in the port block under the interface profile. The AEP is automatically created, and it is associated with the port block and with the domain. The domain is associated with the VLAN pool and the Tenant is associated with the domain.

Creating AEP, Domains, and VLANs to Deploy an EPG on a Specific Port Using the REST API

Before You Begin

- The tenant where you deploy the EPG is already created.
- An EPG is statically deployed on a specific port.

Procedure

Step 1 Create the interface profile, switch profile and the Attach Entity Profile (AEP).

Example:

```
<infraInfra>
  <infraNodeP name="<switch_profile_name>" dn="uni/infra/nprof-<switch_profile_name>" >
    <infraLeafS name="SwitchSeletor" descr="" type="range">
      <infraNodeBlk name="nodeBlk1" descr="" to_="1019" from_="1019"/>
    </infraLeafS>
    <infraRsAccPortP tDn="uni/infra/accportprof-<interface_profile_name>"/>
  </infraNodeP>
  <infraAccPortP name="<interface_profile_name>" dn="uni/infra/accportprof-<interface_profile_name>"
  >
    <infraHPortS name="portSelector" type="range">
      <infraRsAccBaseGrp tDn="uni/infra/funcprof/accportgrp-<port_group_name>" fexId="101"/>
      <infraPortBlk name="block2" toPort="13" toCard="1" fromPort="11" fromCard="1"/>
    </infraHPortS>
  </infraAccPortP>
  <infraAccPortGrp name="<port_group_name>" dn="uni/infra/funcprof/accportgrp-<port_group_name>"
  >
```

```

        <infraRsAttEntP tDn="uni/infra/attentp-<attach_entity_profile_name>" />
        <infraRsHIfPol tnFabricHIfPolName="1GHifPol" />
    </infraAccPortGrp>

    <infraAttEntityP name="<attach_entity_profile_name>"
dn="uni/infra/attentp-<attach_entity_profile_name>" >
        <infraRsDomP tDn="uni/phys-<physical_domain_name>" />
    </infraAttEntityP>

</infraInfra>

```

Step 2 Create a domain.

Example:

```

<physDomP name="<physical_domain_name>" dn="uni/phys-<physical_domain_name>">
    <infraRsVlanNs tDn="uni/infra/vlanns- [<vlan_pool_name>]-static" />
</physDomP>

```

Step 3 Create a VLAN range.

Example:

```

<fvnsVlanInstP name="<vlan_pool_name>" dn="uni/infra/vlanns- [<vlan_pool_name>]-static"
allocMode="static">
    <fvnsEncapBlk name="" descr="" to="vlan-25" from="vlan-10" />
</fvnsVlanInstP>

```

Step 4 Associate the EPG with the domain.

Example:

```

<fvTenant name="<tenant_name>" dn="uni/tn-" >
    <fvAEPg prio="unspecified" name="<epg_name>" matchT="AtleastOne"
dn="uni/tn-test1/ap-AP1/epg-<epg_name>" descr="">
        <fvRsDomAtt tDn="uni/phys-<physical_domain_name>" instrImedcy="immediate" resImedcy="immediate" />
    </fvAEPg>
</fvTenant>

```

Creating AEP, Domains, and VLANs to Deploy an EPG on a Specific Port Using the NX-OS Style CLI

Before You Begin

- The tenant where you deploy the EPG is already created.
- An EPG is statically deployed on a specific port.

Procedure

Step 1 Create a VLAN domain and assign VLAN ranges:

Example:

```

apic1(config)# vlan-domain domP
apic1(config-vlan)# vlan 10
apic1(config-vlan)# vlan 25

```

```
apic1(config-vlan)# vlan 50-60
apic1(config-vlan)# exit
```

Step 2 Create an interface policy group and assign a VLAN domain to the policy group:

Example:

```
apic1(config)# template policy-group PortGroup
apic1(config-pol-grp-if)# vlan-domain member domP
```

Step 3 Create a leaf interface profile, assign an interface policy group to the profile, and assign the interface IDs on which the profile will be applied:

Example:

```
apic1(config)# leaf-interface-profile InterfaceProfile1
apic1(config-leaf-if-profile)# leaf-interface-group range
apic1(config-leaf-if-group)# policy-group PortGroup
apic1(config-leaf-if-group)# interface ethernet 1/11-13
apic1(config-leaf-if-profile)# exit
```

Step 4 Create a leaf profile, assign the leaf interface profile to the leaf profile, and assign the leaf IDs on which the profile will be applied:

Example:

```
apic1(config)# leaf-profile SwitchProfile-1019
apic1(config-leaf-profile)# leaf-interface-profile InterfaceProfile1
apic1(config-leaf-profile)# leaf-group range
apic1(config-leaf-group)# leaf 1019
apic1(config-leaf-group)#
```



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