# Static Route on a Bridge Domain

This chapter contains the following sections:

# About Static Routes in Bridge Domains

With Cisco APIC Release 3.0(2), support is added to configure a static route in a pervasive bridge domain (BD) to enable routes to virtual services behind firewalls.

This feature enables endpoint (EP) reachability to IP addresses that are not directly connected to the pervasive bridge domain, using regular EPGs.

When a static route is configured, the APIC deploys it to all the leaf switches that use the bridge domain and all the leaf switches that have contracts associated to the bridge domain.

You can configure endpoint reachability using the APIC GUI, the NX-OS Style CLI, and the REST API.

### Guidelines and Limitations

- The subnet mask must be /32 (/128 for IPv6) pointing to one IP address out of the fabric. Do not add routes within bridge domain subnets that are already defined.

- The next hop must be inside the same bridge domain that this EPG is associated with.

- The feature is supported on Cisco Nexus 9000 series switches with names that end in EX, and later (for example, N9K-C93180LC-EX).

# Configuring a Static Route on a Bridge Domain Using the GUI

- When creating the subnet for the static route, it is configured under the EPG (fvSubnet object under fvAEPg), associated with the pervasive BD (fvBD), not the BD itself.

- The subnet mask must be /32 (/128 for IPv6) pointing to one IP address or one endpoint. It is contained in the EPG assoicated with the pervasive BD.

**Before you begin**

The tenant, VRF, BD, and EPG are created.

**Procedure**

| Step 1 | On the menu bar, click **Tenants** > *tenant-name* . |
| Step 2 | In the Navigation pane, expand **Application Profiles** and click the application profile name. |
| Step 3 | Click **Application EPGs** and expand the EPG for the static route. |
| Step 4 | Expand **Subnets**, right-click the subnet for the static route, and choose **Create Endpoints Behind EPG Subnet**. |
| Step 5 | Enter the **NextHop IP Address** for the endpoint and click **Update**. |
| Step 6 | Click **Submit**. |

# Configuring a Static Route on a Bridge Domain Using the NX-OS Style CLI

To configure a static route in a pervasive bridge domain (BD), use the following NX-OS style CLI commands:

**Before you begin**

The tenant, VRF, BD and EPG are configured.

- When creating the subnet for the static route, it is configured under the EPG (fvSubnet object under fvAEPg), associated with the pervasive BD (fvBD), not the BD itself.

- The subnet mask must be /32 (/128 for IPv6) pointing to one IP address or one endpoint. It is contained in the EPG assoicated with the pervasive BD.

**Procedure**

|  | **Command or Action** | **Purpose** |
| --- | --- | --- |
| Step 1 | **configure**<br><br>**Example:**<br><br>`apic1# configure` | Enters configuration mode. |
| Step 2 | **tenant** *tenant-name*<br><br>**Example:**<br><br>`apic1(config)# tenant t1` | Creates a tenant or enters tenant configuration mode. |
| Step 3 | **application** *ap-name*<br><br>**Example:**<br><br>`apic1(config-tenant)# application ap1` | Creates an application profile or enters application profile mode. |

| | Command or Action | Purpose |
|---|---|---|
| **Step 4** | **epg** *epg-name* <br><br>**Example:** <br>`apic1(config-tenant-app)# epg ep1` <br><br> ◇ <A.B.C.D> [scope <scope>] | Creates an EPG or enters EPG configuration mode. |
| **Step 5** | **endpoint ip** *A.B.C.D/LEN* **next-hop** *A.B.C.D* [scope *scope* ] <br><br>**Example:** <br>`apic1(config-tenant-app-epg)# endpoint ip 125.12.1.1/32 next-hop 26.0.14.101` | Creates an endpoint behind the EPG. The subnet mask must be /32 (/128 for IPv6) pointing to one IP address or one endpoint. |

### Example

The following example shows the commands to configure an endpoint behind an EPG.

```
apic1# config
     apic1(config)# tenant t1
     apic1(config-tenant)# application ap1
     apic1(config-tenant-app)# epg ep1
     apic1(config-tenant-app-epg)# endpoint ip 125.12.1.1/32 next-hop 26.0.14.101
```

# Configuring a Static Route on a Bridge Domain Using the REST API

- When creating the subnet for the static route, it is configured under the EPG (fvSubnet object under fvAEPg), associated with the pervasive BD (fvBD), not the BD itself.

- The subnet mask must be /32 (/128 for IPv6) pointing to one IP address or one endpoint. It is contained in the EPG associated with the pervasive BD.

### Before you begin

The tenant, VRF, BD, and EPG have been created.

### Procedure

To configure a static route for the BD used in a pervasive gateway, enter a post such as the following example:

**Example:**

```
     <fvAEPg name="ep1">
   <fvRsBd tnFvBDName="bd1"/>
         <fvSubnet ip="2002:0db8:85a3:0000:0000:8a2e:0370:7344/128"
ctrl="no-default-gateway"   >
             <fvEpReachability>
```

```
                    <ipNexthopEpP  nhAddr="2001:0db8:85a3:0000:0000:8a2e:0370:7343/128" />
                </fvEpReachability>
            </fvSubnet>
        </fvAEPg>
```