



Cisco ACI and Interleak of External Routes

[New and Changed Information](#) 2

[Overview](#) 2

[Configuring Interleak of External Routes Using the GUI](#) 2

[Configuring Interleak External Routes Using the NX-OS Style CLI](#) 3

[Configuring Interleak of External Routes Using the REST API](#) 4

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New and Changed Information

The following table provides an overview of the significant changes to this guide up to this current release. The table does not provide an exhaustive list of all changes made to the guide 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
Release 1.2(2g)	Setting attributes when there is interleak of routes from OSPF to BGP.	This guide was released. Enabled setting attributes for interleak or leaking of routes to BGP such as community, preference, and metric from OSPF.

Overview

This topic provides a typical example of how to configure an interleak of external routes such as OSPF when using Cisco APIC.

Interleak from OSPF has been available in earlier releases. The feature now enables the user to set attributes, such as community, preference, and metric for route leaking from OSPF to BGP.

Configuring Interleak of External Routes Using the GUI

The external routed network configured in the example can also be extended to support IPv4. Both IPv4 and IPv6 routes can be advertised to and learned from the external routed network.

Before You Begin

- The tenant, VRF, and bridge domain are created.
- The external routed domain is created.

Procedure

Step 1 On the menubar, click **TENANTS**.

Step 2 In the **Navigation** pane, expand the *Tenant_name* > **Networking** > **External Routed Networks** and perform the following actions:

- a) Right-click **External Routed Networks** and click **Create Routed Outside**.
- b) In the **Create Routed Outside** dialog box, in the **Name** field, enter a name for the routed outside.
- c) In the **VRF** field, from the drop-down list, choose the appropriate VRF.
- d) From the **External Routed Domain** drop-down list, choose the appropriate external routed domain.

- e) Check the checkbox for the desired protocol.
The options for the purpose of this task are OSPF.

- f) In the **Route Profile for Interleak** field, click **Create Route Profile**.

Step 3 In the **Create Route Profile** dialog box, in the **Name** field, enter a route profile name.

Step 4 In the **Type** field, you must choose **Match Routing Policy Only**.

Step 5 Click the + sign to open the **Create Route Control Context** dialog box and perform the following actions:

- a) **Populate the Order and the Name** fields as desired.
- b) In the **Set Attribute** field, click **Create Action Rule Profile**.
- c) In the **Create Action Rule Profile** dialog box, in the **Name** field, enter a name for the action rule profile.
- d) Choose the desired attributes, and related community, criteria, tags, and preferences. Click **OK**.
- e) In the **Create Route Profile** dialog box, click **Submit**.

Step 6 In the **Create Routed Outside** dialog box, expand the **Nodes and Interfaces Protocol Profiles** area.

Step 7 In the **Create Node Profile** dialog box, specify the node profile. Click **OK**.

Step 8 In the **Create Routed Outside** dialog box, click **Next**.

Step 9 In the **External EPG Networks** area, expand **External EPG Networks**.

Step 10 In the **Create External Network** dialog box, in the **Name** field, enter a name.

Step 11 Expand **Subnet**, and in the **Create Subnet** dialog box, in the **IP address** field, enter an IP address. Click **OK**.

Step 12 In the **Create External Network** dialog box, click **OK**.

Step 13 In the **Create Routed Outside** dialog box, click **Finish**.
The route profile for interleak is created and associated with the L3 Outside.

Configuring Interleak External Routes Using the NX-OS Style CLI

Before You Begin

- The tenant, VRF, and bridge domain are created.
- The external routed domain is created.

Procedure

Configure the route redistribution route policy using the NX-OS CLI:

- a) Create a route profile with tenant as the scope:

Example:

```
apic1(config-leaf)# template route-profile map_ospf tenant ExampleCorp
apic1(config-leaf-template-route-profile)# set tag 100
apic1(config-leaf-template-route-profile)# exit
```

- b) Configure the redistribute route profile under BGP for OSPF using one of the route profiles created in the previous step.

Example:

```
apic1(config-leaf)# router bgp 100
```

```
apic1(config-bgp)# vrf member tenant ExampleCorp vrf v1
apic1(config-leaf-bgp-vrf)# redistribute ospf route-map map_ospf
```

Note Note that the redistribute route map allows all routes and applies the route profile for the route-control actions. In the example, all OSPF learnt routes are redistributed into BGP with tag 100.

Configuring Interleak of External Routes Using the REST API

Before You Begin

- The tenant, VRF, and bridge domain are created.
- The external routed domain is created.

Procedure

Configure an interleak of external routes:

Example:

```
<l3extOut descr="" enforceRtctrl="export" name="out1" ownerKey="" ownerTag="" targetDscp="unspecified">
  <l3extLNodeP configIssues="" descr="" name="Lnodepl" ownerKey="" ownerTag="" tag="yellow-green"
targetDscp="unspecified">
    <l3extRsNodeL3OutAtt rtrId="1.2.3.4" rtrIdLoopBack="yes" tDn="topology/pod-1/node-101"/>
    <l3extLIfP descr="" name="lifpl" ownerKey="" ownerTag="" tag="yellow-green">
      <ospfIfP authKeyId="1" authType="none" descr="" name="">
        <ospfRsIfPol tnOspfIfPolName=""/>
      </ospfIfP>
      <l3extRsNdIfPol tnNdIfPolName=""/>
      <l3extRsIngressQosDppPol tnQosDppPolName=""/>
      <l3extRsEgressQosDppPol tnQosDppPolName=""/>
      <l3extRsPathL3OutAtt addr="12.12.7.16/24" descr="" encap="unknown" encapScope="local" ifInstT="l3-port"
llAddr="::" mac="00:22:BD:F8:19:FF" mode="regular" mtu="inherit" tDn="topology/pod-1/paths-101/pathep-[eth1/11]"
targetDscp="unspecified"/>
    </l3extLIfP>
  </l3extLNodeP>
  <l3extRsEctx tnFvCtxName="ctx1"/>
  <l3extRsInterleakPol tnRtctrlProfileName="interleak"/>
  <l3extRsL3DomAtt tDn="uni/l3dom-Domain"/>
  <l3extInstP descr="" matchT="AtleastOne" name="InstP1" prio="unspecified" targetDscp="unspecified">
    <fvRsCustQosPol tnQosCustomPolName=""/>
    <l3extSubnet aggregate="" descr="" ip="14.15.16.0/24" name="" scope="export-rtctrl,import-security"/>
  </l3extInstP>
  <ospfExtP areaCost="1" areaCtrl="redistribute,summary" areaId="0.0.0.1" areaType="nssa" descr=""/>
</l3extOut>
```




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