



Deploy Wide Area Bonjour on BGP EVPN Networks

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About Wide Area Bonjour on BGP EVPN Networks

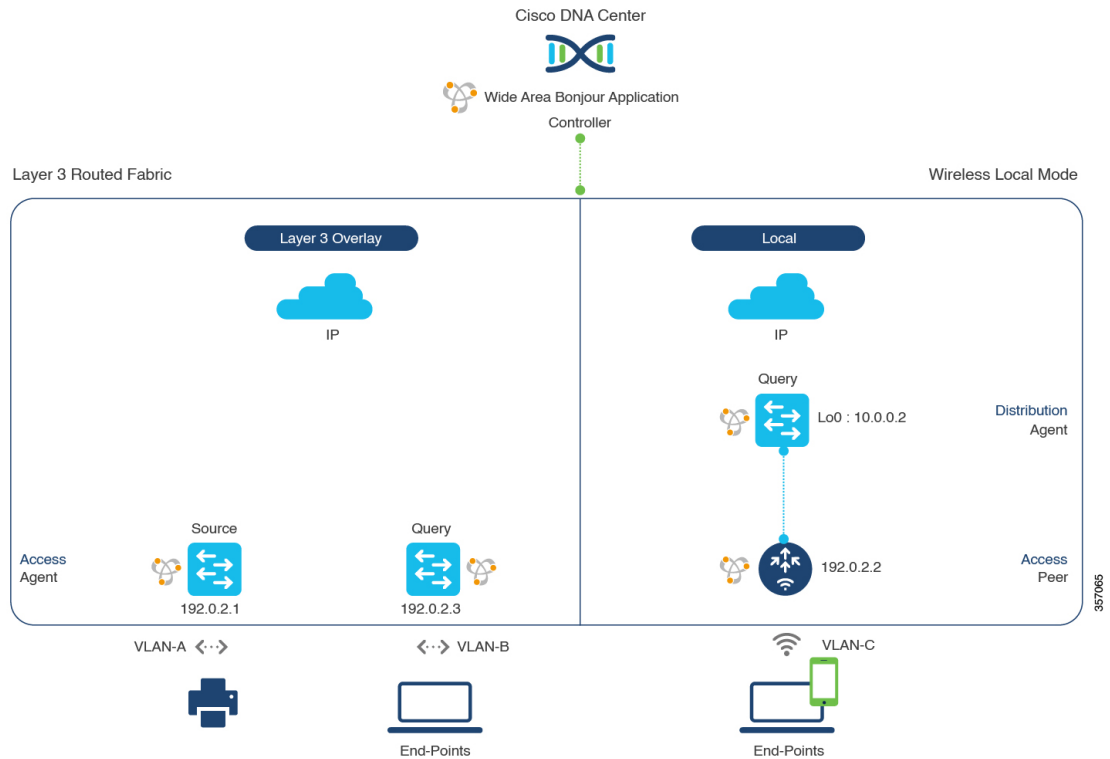
Cisco Wide Area Bonjour supports various types of BGP EVPN overlay networks for wired and traditional wireless LAN in Local mode network deployment models. This chapter provides step-by-step configuration to implement global service filter policies in the Cisco Wide Area Bonjour application, which enables network-wide service routing functions for Layer 3 or Layer 2 overlay virtual network environments, without extending the Layer 2 flood boundary.

BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode

This section provides step-by-step global configuration policy guidelines to enable Wide Area Bonjour between the BGP EVPN VTEP LAN switch, which provides different Bonjour services such as wired printers, and remotely connected wired users on different IP subnets and wireless users connected over Local mode wireless networks.

The following figure illustrates reference network topologies for BGP EVPN Layer 3 routed LAN and Local mode wireless networks with Bonjour source and receiver devices in virtual network devices.

Figure 1: BGP EVPN Layer 3 Routed LAN and Local Mode Wireless Virtual Network Service Routing



For more information about the Cisco Catalyst 9800 Series Wireless Controller configuration guidelines, see the [Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide, Cisco IOS XE Amsterdam 17.3.x](#).

Configure Service Filters for a BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode

This section lists the general steps to implement global service filters, which permit the Cisco Wide Area Bonjour application to dynamically discover and distribute service information between trusted Cisco Catalyst SDG agent switches across your IP network.

-
- Step 1** Navigate to the **Configuration** tab in the Cisco Wide Area Bonjour application.
 - Step 2** From the sidebar, select the subdomain for which you want to create the service filter.
 - Step 3** Ensure that the **Service Filter** box is checked.
 - Step 4** Click the service filter icon from the topology to view a list of the service filters for the selected domain.
You can also manually edit existing service filters from this list.
 - Step 5** Click **Create Service Filter**.
 - Step 6** From the **Network Mode** drop-down list, choose **Overlay**.
 - Step 7** Enter a unique name for the service filter.

- Step 8** (Optional) Enter a description for the service filter.
- Step 9** Choose one or more service types to permit announcements and queries.
- Step 10** Enable or disable service filters after creating them. By default, they are enabled.
-

Configure Source SDG Agents for BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode

This section provides additional configuration steps to enable discovering wired printer sources from the EVPN LAN VTEP Switch-1 in an SDG agent role. The wired printer can be discovered by remotely connected wired users in the EVPN LAN VTEP switch-2 in SDG agent role. The wireless distribution switches in a BGP EVPN VTEP role paired with a Cisco Catalyst 9800 Series Wireless Controller in a service-peer role receive query responses for wired printers when browsed over wireless Local mode networks.

A unidirectional service filter allows network-wide service discovery for operation and management purposes. However, the service can't be distributed across the IP network unless you configure the query SDG agent. For steps to configure a query SDG agent, see [Configure Query SDG Agents for BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode, on page 4](#).

Before you begin

Ensure you've completed the steps outlined in [Configure Service Filters for a BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode, on page 2](#).

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a source SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.1) that announces the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Uncheck the **Any** check box. By default, this check box is unchecked.
- Step 7** Select the source VLAN (Vlan-A) to discover services (printer) from a specific network.
- Step 8** Enable or disable a service from a selected IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable a service from a selected IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 11** Enter the L3 VNI ID mapped to the IP VRF. Select **Any** to accept services from any L3 VNI ID.
- Step 12** (Optional) Click **Add Next** to add more source SDG agents. (Repeat the preceding steps.)
- Step 13** Click **DONE**.
- Step 14** Click **CREATE**.
-

Configure Query SDG Agents for BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode

This section lists the additional configuration steps to distribute service to query SDG agents, based on a policy.

For instructions to configure a source SDG agent, see [Configure Source SDG Agents for BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode, on page 3](#).

Before you begin

Ensure that you've completed the steps in [Configure Service Filters for a BGP EVPN Layer 3 Routed Fabric and Wireless Local Mode, on page 2](#).

-
- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.3) that receives queries for the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 7** Select the query VLAN (Vlan-B) to distribute services (printer) to a specific network.
- Step 8** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 11** Enter the L3 VNI ID mapped to the IP VRF. Choose **Any** to match any L3 VNI ID.
- Step 12** From the **Service Layer** drop-down list, choose **Peer**.
- Step 13** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 14** Select the query VLAN (Vlan-C) to distribute services (printer) to a specific network.
- Step 15** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 16** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 17** Enter the service peer IPv4 address (192.0.2.2). Click the plus icon to add more peers. Choose **Any** to accept services from any peer on a selected VLAN.
- Step 18** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 19** (Optional) Click **Add Next** to add more query agents. (Repeat the preceding steps.)
- Step 20** Click **DONE**.

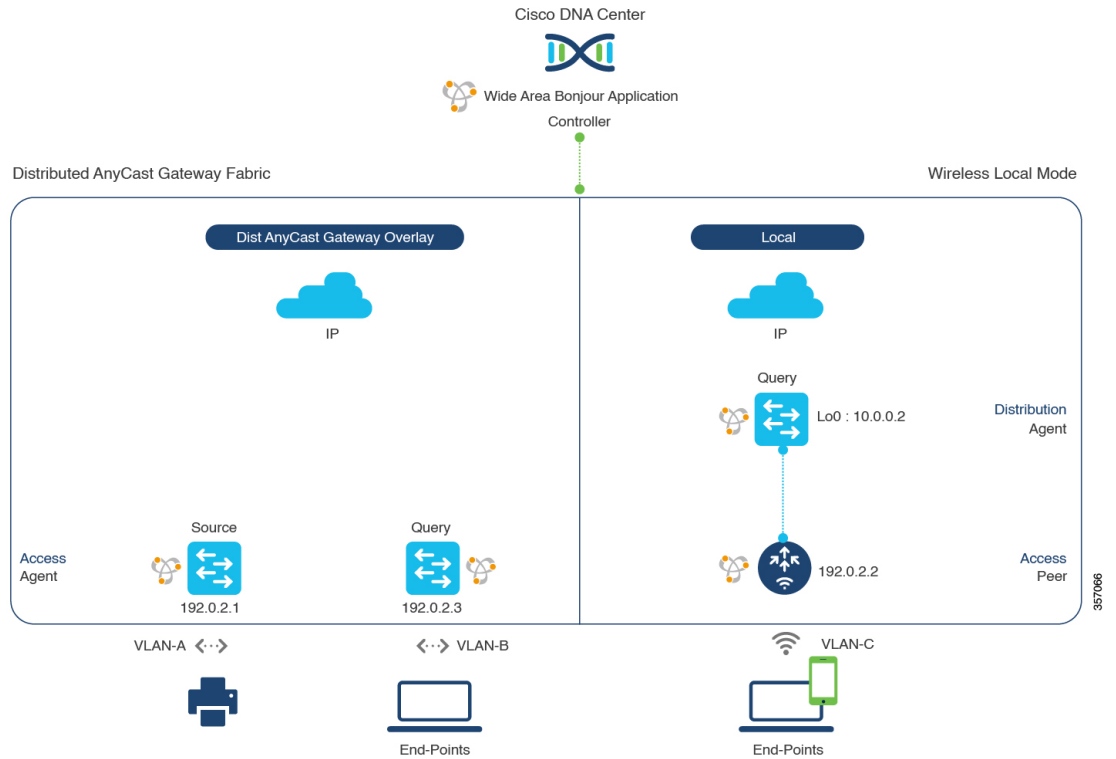
Step 21 Click CREATE.

BGP EVPN Distributed AnyCast Gateway Fabric and Wireless Local Mode

This section provides step-by-step global configuration policy guidelines to enable Wide Area Bonjour between the BGP EVPN VTEP LAN switch, which provides Bonjour services (such as wired printers) to remotely connected wired users on the same IP subnet, and wireless users connected over Local mode wireless networks.

The following figure illustrates reference network topologies for BGP EVPN Distributed AnyCast Gateway LAN and Local mode wireless networks with Bonjour source and receiver devices in the virtual network environment.

Figure 2: BGP EVPN Distributed AnyCast Gateway LAN and Local Mode Wireless Virtual Network Service Routing



For more information about the Cisco Catalyst 9800 Series Wireless Controller configuration guidelines, see the [Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide, Cisco IOS XE Amsterdam 17.3.x](#).

Configure Service Filters for BGP EVPN Distributed AnyCast Gateway Fabric and Wireless Local Mode

This section lists the general steps to implement global service filters, which permit the Cisco Wide Area Bonjour application to dynamically discover and distribute service information between trusted Cisco Catalyst SDG agent switches across your IP network.

-
- Step 1** Navigate to the **Configuration** tab in the Cisco Wide Area Bonjour application.
 - Step 2** From the sidebar, select the subdomain for which you want to create the service filter.
 - Step 3** Ensure that the **Service Filter** box is checked.
 - Step 4** Click the service filter icon from the topology to view a list of the service filters for the selected domain.
You can also manually edit existing service filters from this list.
 - Step 5** Click **Create Service Filter**.
 - Step 6** From the **Network Mode** drop-down list, choose **Overlay**.
 - Step 7** Enter a unique name for the service filter.
 - Step 8** (Optional) Enter a description for the service filter.
 - Step 9** Choose one or more service types to permit announcements and queries.
 - Step 10** Enable or disable service filters after creating them. By default, they are enabled.
-

Configure Source SDG Agents for BGP EVPN Distributed Anycast Gateway Fabric and Wireless Local Mode

This section provides additional configuration steps to enable discovering wired printer sources from the BGP EVPN LAN VTEP switch-1 in an SDG agent role. The wired printer can be discovered by remotely connected wired users in EVPN LAN VTEP switch-2 in an SDG agent role. The wireless distribution switches in a BGP EVPN VTEP role, paired with a Cisco Catalyst 9800 Series Wireless Controller in a service peer role, receive query responses for wired printers when browsed over wireless Local mode networks.

A unidirectional service filter allows network-wide service discovery for operation and management purposes. However, the services can't be distributed across the IP network unless you configure query SDG agents. For steps to configure a query SDG agent, see [Configure Query SDG Agents for BGP EVPN Distributed Anycast Gateway Fabric and Wireless Local Mode, on page 7](#).

Before you begin

Ensure you've completed the steps outlined in [Configure Service Filters for BGP EVPN Distributed AnyCast Gateway Fabric and Wireless Local Mode, on page 6](#).

-
- Step 1** Click **Add** in the upper-right corner of the window.
 - Step 2** Click the radio button to select a source SDG agent. By default, the source radio button is selected.
 - Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.1) that announces the services (printer).
 - Step 4** From the **Service Layer** drop-down list, choose **Local**.

- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Uncheck the **Any** check box. By default, this check box is unchecked.
- Step 7** Choose the source VLAN (Vlan-A) to discover services (printer) from a specific network.
- Step 8** Enable or disable a service from a selected IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable a service from a selected IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 11** Enter the L3 VNI ID mapped to the IP VRF. Choose **Any** to accept services from any L3 VNI ID.
- Step 12** (Optional) Click **Add Next** to add more source SDG agents. (Repeat the preceding steps.)
- Step 13** Click **DONE**.
- Step 14** Click **CREATE**.
-

Configure Query SDG Agents for BGP EVPN Distributed Anycast Gateway Fabric and Wireless Local Mode

This section lists the additional configuration steps to distribute services to query agents, based on a policy.

For instructions to configure a source SDG agent, see [Configure Source SDG Agents for BGP EVPN Distributed Anycast Gateway Fabric and Wireless Local Mode](#), on page 6.

Before you begin

Ensure that you've completed the steps in [Configure Service Filters for BGP EVPN Distributed AnyCast Gateway Fabric and Wireless Local Mode](#), on page 6.

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.3) that receives queries for the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 7** Select the query VLAN (Vlan-B) to distribute services (printer) to a specific network.
- Step 8** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.

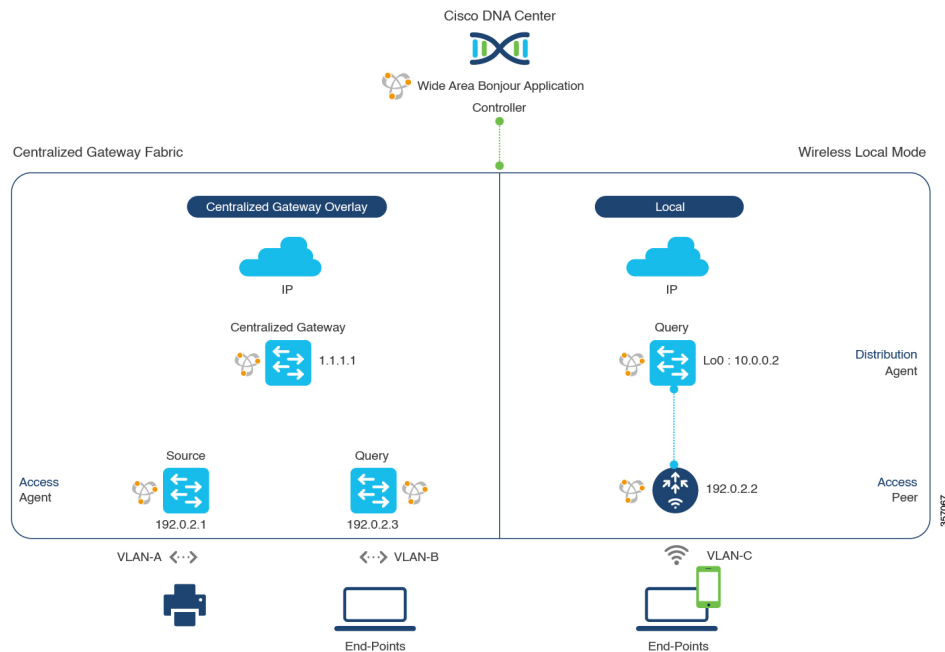
- Step 11** Enter the Layer 3 VNI ID mapped to the IP VRF. Choose **Any** to match any Layer 3 VNI ID.
- Step 12** From the **Service Layer** drop-down list, choose **Peer**.
- Step 13** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 14** Select the query VLAN (Vlan-C) to distribute services (printer) to a specific network.
- Step 15** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 16** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 17** Enter the service peer IPv4 address (192.0.2.2). Click the plus icon to add more peers. Choose **Any** to accept services from any peer on a selected VLAN.
- Step 18** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 19** (Optional) Click **Add Next** to add more query agents. (Repeat the preceding steps.)
- Step 20** Click **DONE**.
- Step 21** Click **CREATE**.
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BGP EVPN Centralized Gateway Fabric and Wireless Local Mode

This section provides step-by-step global configuration policy guidelines to enable Wide Area Bonjour between the BGP EVPN VTEP LAN switch which provides different Bonjour services (such as wired printers) and remotely connected wired users on the same Layer 2 overlay VLAN, and wireless users connected over Local mode wireless networks.

The following figure illustrates reference network topologies for BGP EVPN Centralized Gateway LAN and Local mode wireless networks with Bonjour source and receiver devices in a virtual network environment.

Figure 3: BGP EVPN Centralized Gateway LAN and Local Mode Wireless Virtual Network Service Routing



For more information about Cisco Catalyst 9800 Series Wireless Controller configuration guidelines, see [Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide, Cisco IOS XE Amsterdam 17.3.x](#).

Configure Service Filters for BGP EVPN Centralized Gateway Fabric and Wireless Local Mode

This section lists the general steps to implement global service filters, which permit the Cisco Wide Area Bonjour application to dynamically discover and distribute service information between trusted Cisco Catalyst SDG agent switches across your IP network.

- Step 1** Navigate to the **Configuration** tab in the Cisco Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the service filter.
- Step 3** Ensure that the **Service Filter** box is checked.
- Step 4** Click the service filter icon from the topology to view a list of the service filters for the selected domain.
You can also manually edit existing service filters from this list.
- Step 5** Click **Create Service Filter**.
- Step 6** From the **Network Mode** drop-down list, choose **Overlay**.
- Step 7** Enter a unique name for the service filter.
- Step 8** (Optional) Enter a description for the service filter.
- Step 9** Select one or more service types to permit announcements and queries.

Step 10 Enable or disable service filters after creating them. By default, they are enabled.

Configure Source SDG Agents in BGP EVPN Centralized Gateway Fabric and Wireless Local Mode

This section provides additional configuration steps to enable discovering wired printer sources from the EVPN Layer 2 Leaf LAN VTEP switch-1 in an SDG agent role. The wired printer can be discovered by remotely connected wired users in the EVPN Layer 2 Leaf LAN VTEP switch-2 in an SDG agent role. The wireless distribution switches in a BGP EVPN VTEP role, paired with a Cisco Catalyst 9800 Series Wireless Controller in a service peer role, receive query responses for wired printers when browsed over wireless Local mode networks.

A unidirectional service filter allows network-wide service discovery for operation and management purposes. However, the services can't be distributed across the IP network unless you configure query SDG agents. For steps to configure a query SDG agent, see [Configure Query SDG Agents for BGP EVPN Centralized Gateway Fabric and Wireless Local Mode, on page 10](#).

Before you begin

Ensure you've completed the steps outlined in [Configure Service Filters for BGP EVPN Centralized Gateway Fabric and Wireless Local Mode, on page 9](#).

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a source SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.1) that announces the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Uncheck the **Any** check box. By default, this check box is unchecked.
- Step 7** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 8** Enter the Layer 2 VNI ID mapped to the IP VRF. Choose **Any** to accept services from any Layer 2 VNI ID.
- Step 9** Click **DONE**.
- Step 10** Click **CREATE**.
-

Configure Query SDG Agents for BGP EVPN Centralized Gateway Fabric and Wireless Local Mode

This section lists the additional configuration steps to distribute service to query SDG agents, based on a policy.

For instructions to configure a source SDG agent, see [Configure Source SDG Agents in BGP EVPN Centralized Gateway Fabric and Wireless Local Mode](#), on page 10.

Before you begin

Ensure that you've completed the steps in [Configure Service Filters for BGP EVPN Centralized Gateway Fabric and Wireless Local Mode](#), on page 9.

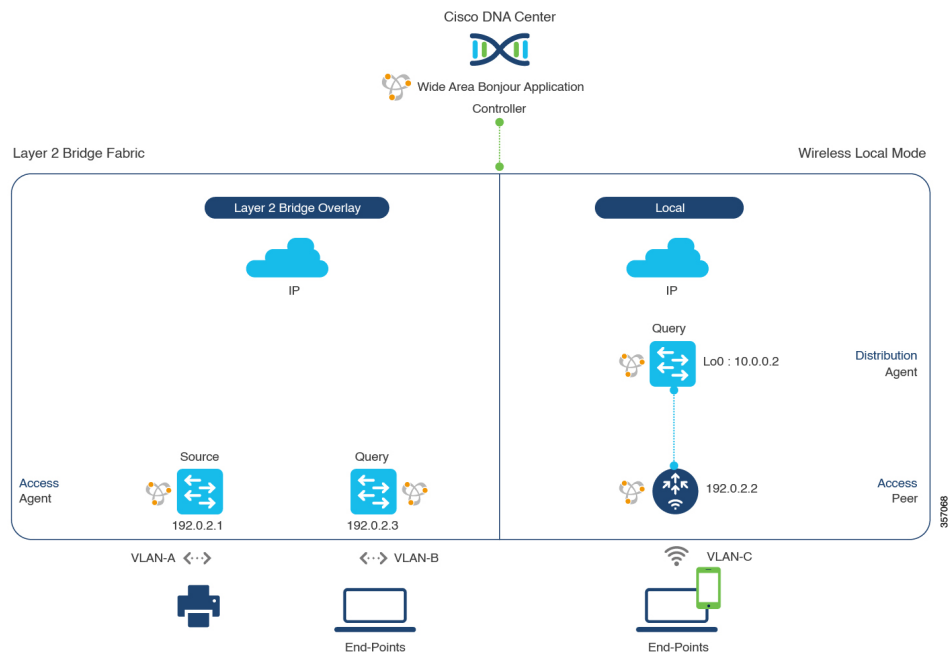
-
- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.3) that receives queries for the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 7** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 8** Enter the Layer 2 VNI ID mapped to the MAC VRF. Choose **Any** to match any Layer 2 VNI ID.
- Step 9** Click **DONE**.
- Step 10** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 11** From the **SDG Agent/IP** drop-down list, choose an SDG agent (10.0.0.2) that receives queries for the services (printer).
- Step 12** From the **Service Layer** drop-down list, choose **Peer**.
- Step 13** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 14** Select the query VLAN (Vlan-C) to distribute services (printer) to a specific network.
- Step 15** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 16** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 17** Enter the service peer IPv4 address (192.0.2.2). Choose **Any** to accept services from any peer on a selected VLAN.
- Step 18** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 19** (Optional) Click **Add Next** to add more query agents. (Repeat the preceding steps.)
- Step 20** Click **DONE**.
- Step 21** Click **CREATE**.
-

BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode

This section provides step-by-step global configuration policy guidelines to enable Wide Area Bonjour between the BGP EVPN VTEP LAN switch providing Bonjour services, such as wired printers, and remotely connected wired users on the same Layer 2 overlay VLAN and wireless users connected over Local mode wireless networks.

The following figure illustrates reference network topologies for BGP EVPN Layer 2 LAN and Local mode wireless networks with Bonjour source and receiver devices in virtual network environments.

Figure 4: BGP EVPN Layer 2 Leaf LAN and Local Mode Wireless Virtual Network Service Routing



For more information about the Cisco Catalyst 9800 Series Wireless Controller configuration guidelines, see the [Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide, Cisco IOS XE Amsterdam 17.3.x](#).

Configure Service Filters for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode

This section lists the general steps to implement global service filters, which permit the Cisco Wide Area Bonjour application to dynamically discover and distribute service information between trusted Cisco Catalyst SDG agent switches across your IP network.

-
- Step 1** Navigate to the **Configuration** tab in the Cisco Wide Area Bonjour application.
 - Step 2** From the sidebar, select the subdomain for which you want to create the service filter.
 - Step 3** Ensure that the **Service Filter** box is checked.

- Step 4** Click the service filter icon from the topology to view a list of the service filters for the selected domain. You can also manually edit existing service filters from this list.
- Step 5** Click **Create Service Filter**.
- Step 6** From the **Network Mode** drop-down list, choose **Overlay**.
- Step 7** Enter a unique name for the service filter.
- Step 8** (Optional) Enter a description for the service filter.
- Step 9** Select one or more service types to permit announcements and queries.
- Step 10** Enable or disable service filters after creating them. By default, they are enabled.
-

Configure Source SDG Agents for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode

This section provides additional configuration steps for global policies to enable discovering wired printer sources from the EVPN Layer 2 Leaf LAN VTEP switch-1 in an SDG agent role. The wireless distribution switches in a BGP EVPN VTEP role, paired with a Cisco Catalyst 9800 Series Wireless Controller in a service-peer role, receive query responses for wired printers when browsed over the wireless Local mode network.

A unidirectional service filter allows network-wide service discovery for operation and management purposes. However, the services can't be distributed across the IP network unless you configure query SDG agents. For steps to configure a query SDG agent, see [Configure Query SDG Agents for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode, on page 14](#).

Before you begin

Ensure you've completed the steps outlined in [Configure Service Filters for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode, on page 12](#).

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a source SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.1) that announces the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Uncheck the **Any** check box. By default, this check box is unchecked.
- Step 7** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 8** Enter the Layer 2 VNI ID mapped to the IP VRF. Choose **Any** to accept services from any Layer 2 VNI ID.
- Step 9** (Optional) Click **Add Next** to add more source SDG agents. (Repeat the preceding steps.)
- Step 10** Click **DONE**.

Step 11 Click **CREATE**.

Configure Query SDG Agents for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode

This section lists the additional configuration steps to distribute service to query SDG agents, based on a policy.

For instructions to configure a source SDG agent, see [Configure Source SDG Agents for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode, on page 13](#).

Before you begin

Ensure that you've completed the steps in [Configure Service Filters for BGP EVPN Layer 2 Bridge Fabric and Wireless Local Mode, on page 12](#).

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.3) that receives queries for the services (printer, for example).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 7** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 8** Enter the Layer 2 VNI ID mapped to the MAC VRF. Choose **Any** to match any Layer 2 VNI ID.
- Step 9** Click **Done**.
- Step 10** From the **SDG Agent/IP** drop-down list, choose an SDG agent (10.0.0.2) that receives queries for the service type (printer).
- Step 11** From the **Service Layer** drop-down list, choose **Peer**.
- Step 12** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 13** Select the query VLAN (Vlan-C) to distribute services (printer) to a specific network.
- Step 14** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 15** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 16** Enter the service peer IPv4 address (192.0.2.2). Click the plus icon to add more peers. Choose **Any** to accept services from any peer on a selected VLAN.
- Step 17** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.

- To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.

Step 18 (Optional) Click **Add Next** to add more query agents. (Repeat the preceding steps.)

Step 19 Click **DONE**.

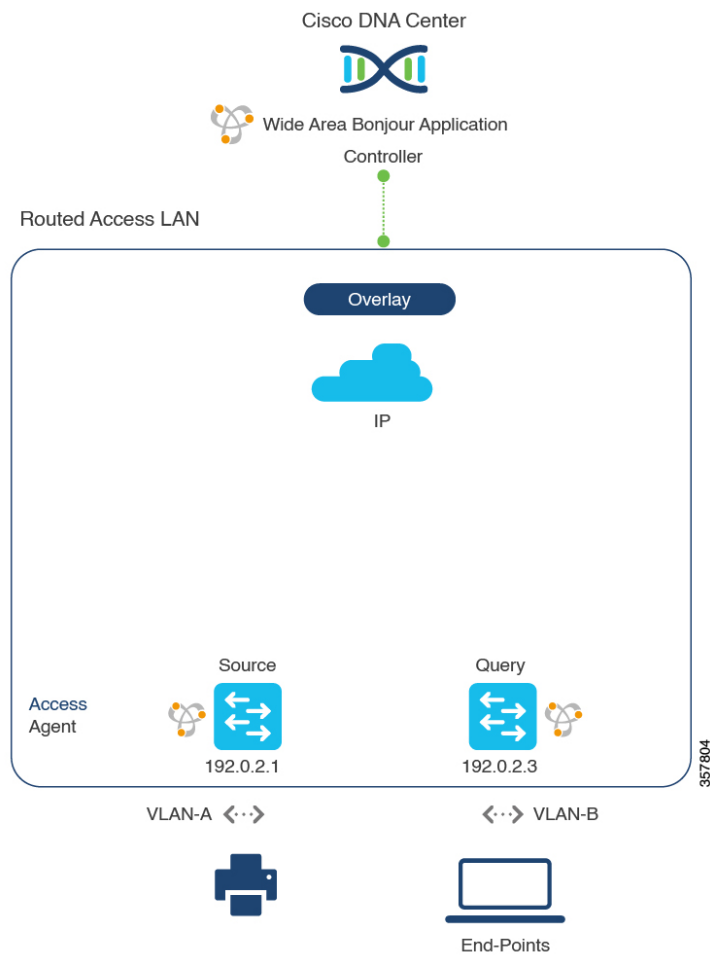
Step 20 Click **CREATE**.

BGP EVPN Routed Access LAN

This section provides step-by-step global configuration policy guidelines to enable Wide Area Bonjour between the BGP EVPN VTEP LAN switch, which provides different Bonjour services such as wired printers, and remotely connected wired users and wireless users on different IP subnets.

The following figure illustrates reference network topology for BGP EVPN routed access LAN with Bonjour source and receiver devices in virtual network devices.

Figure 5: BGP EVPN Routed Access LAN Service Routing



For more information about the Cisco Nexus switches configuration guidelines, see the [Cisco DNA Service For Bonjour Configuration Guide, Cisco Nexus 9000 Series NX-OS, Release 10.2\(3\)F](#).

Configure Service Filters for BGP EVPN Routed Access LAN

This section lists the general steps to implement global service filters, which permit the Cisco Wide Area Bonjour application to dynamically discover and distribute service information between trusted SDG agent switches across your IP network.

-
- Step 1** Navigate to the **Configuration** tab in the Cisco Wide Area Bonjour application.
 - Step 2** From the sidebar, select the subdomain for which you want to create the service filter.
 - Step 3** Ensure that the **Service Filter** box is checked.
 - Step 4** Click the service filter icon from the topology to view a list of the service filters for the selected domain.
You can also manually edit existing service filters from this list.
 - Step 5** Click **Create Service Filter**.
 - Step 6** From the **Network Mode** drop-down list, choose **Overlay**.
 - Step 7** Enter a unique name for the service filter.
 - Step 8** (Optional) Enter a description for the service filter.
 - Step 9** Choose one or more service types to permit announcements and queries.
 - Step 10** Enable or disable service filters after creating them. By default, they are enabled.
-

Configure Source SDG Agents for BGP EVPN Routed Access LAN

This section provides additional configuration steps to enable discovering wired printer sources from the EVPN LAN VTEP Switch-1 in an SDG agent role. The wired printer can be discovered by remotely connected wired users in the EVPN LAN VTEP switch-2 in SDG agent role.

A unidirectional service filter allows network-wide service discovery for operation and management purposes. However, the service can't be distributed across the IP network unless you configure the query SDG agent. For steps to configure a query SDG agent, see [Configure Query SDG Agents in Traditional Routed Access LAN](#).

Before you begin

Ensure you've completed the steps outlined in [Configure Service Filters for BGP EVPN Routed Access LAN, on page 16](#).

-
- Step 1** Click **Add** in the upper-right corner of the window.
 - Step 2** Click the radio button to select a source SDG agent. By default, the source radio button is selected.
 - Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.1) that announces the services (printer).
 - Step 4** From the **Service Layer** drop-down list, choose **Local**.
 - Step 5** Use the toggle switch to enable Symmetric IRB.
 - Step 6** Uncheck the **Any** check box. By default, this check box is unchecked.

- Step 7** Select the source VLAN (Vlan-A) to discover services (printer) from a specific network.
- Step 8** Enable or disable a service from a selected IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable a service from a selected IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 11** Enter the VNI ID mapped to the IP VRF. Select **Any** to accept services from any VNI ID.
- Step 12** (Optional) Click **Add Next** to add more source SDG agents. (Repeat the preceding steps.)
- Step 13** Click **DONE**.
- Step 14** Click **CREATE**.
-

Configure Query SDG Agents for BGP EVPN Routed Access LAN

This section lists the additional configuration steps to distribute service to query SDG agents, based on a policy.

For instructions to configure a source SDG agent, see [Configure Source SDG Agents for BGP EVPN Routed Access LAN](#), on page 16.

Before you begin

Ensure that you've completed the steps in [Configure Service Filters for BGP EVPN Routed Access LAN](#), on page 16.

- Step 1** Click **Add** in the upper-right corner of the window.
- Step 2** Click the radio button to select a query SDG agent. By default, the source radio button is selected.
- Step 3** From the **SDG Agent/IP** drop-down list, choose an SDG agent (192.0.2.3) that receives queries for the services (printer).
- Step 4** From the **Service Layer** drop-down list, choose **Local**.
- Step 5** Use the toggle switch to enable Symmetric IRB.
- Step 6** Ensure that the **Any** check box is unchecked. By default, this check box is unchecked.
- Step 7** Select the query VLAN (Vlan-B) to distribute services (printer) to a specific network.
- Step 8** Enable or disable services from the selected query IPv4 subnet. By default, this is enabled.
- Step 9** Enable or disable services from the selected query IPv6 subnet. By default, this is enabled.
- Step 10** For **Location Group**, do one of the following:
- To accept services from any location group, check the check box.
 - To accept services from location group 0, choose **Default** from the drop-down list.
 - To use a custom location group ID, choose **Custom** from the drop-down list and enter the location group ID. The valid range is from 1 to 4096.
- Step 11** Enter the VNI ID mapped to the IP VRF. Choose **Any** to match any VNI ID.
- Step 12** (Optional) Click **Add Next** to add more query agents. (Repeat the preceding steps.)

Step 13 Click **DONE**.

Step 14 Click **CREATE**.
