



Configure the Wide Area Bonjour Application

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Service Policy Configurations

Controller service policy is implemented by configuring service filters. A service filter specifies the policies that allow the controller to accept and process service announcements and queries of specified service types and from specified SDG Agent subnets. A subdomain can be associated with one or more service-filters. A service filter has the following components:

- **Network Mode.** Either Traditional or Overlay, depending on the network mode.
- **Name.** A unique name of the service filter.
- **Description** (Optional).
- **Service Type.** Service announcements and queries of the specified service type will be permitted by the service filter.
- **A set of Source SDG Agents.** For each Source SDG Agent, the following are specified:
 - SDG Agent or IP address of the source agent. Service announcements will be accepted only from the specified SDG Agent
 - Service Layer. Whether the source agent is a local or a peer agent.
 - Symmetric or asymmetric IRB.
 - IPv4 and IPv6 Subnet and Mask of the SDG Agent, where applicable. Announcements will be accepted only when they originate from the specified subnet of the SDG Agent. These subnets pertain to the client VLANs, to which the Bonjour endpoints are connected.
 - Peer ID.
 - VNI ID.

If a service announcement is permitted by a service filter, the services being announced are accepted, and become eligible to be included in service response for any query that may match the same service filter.

Service announcements that do not match any service-filter are dropped.

- **A set of Query SDG Agents**, each specifying:
 - SDG Agent or IP address of the source agent. Service announcements will be accepted only from the specified SDG Agent.
 - Service Layer. Whether the source agent is a local or a peer agent.
 - Symmetric or asymmetric IRB.
 - IPv4 and IPv6 Subnet and Mask of the SDG Agent, where applicable. Announcements will be accepted only when they originate from the specified subnet of the SDG Agent. These subnets pertain to the client VLANs, to which the Bonjour endpoints are connected.
 - Peer ID.
 - VNI ID.

If a query is accepted by the service filter, then a response is sent to the service querier with the details of those services instances that were previously accepted through the same service filter (in other words, originating from the source SDG Agents and subnets, as specified in the service filter).

Service queries that do not match any service filter are dropped.

In the domain hierarchy, multiple domains may be configured with service filters. When the controller receives a service query, the query may match with more than one service filter, in which case each matching service filter is processed, and the aggregated response is sent back.



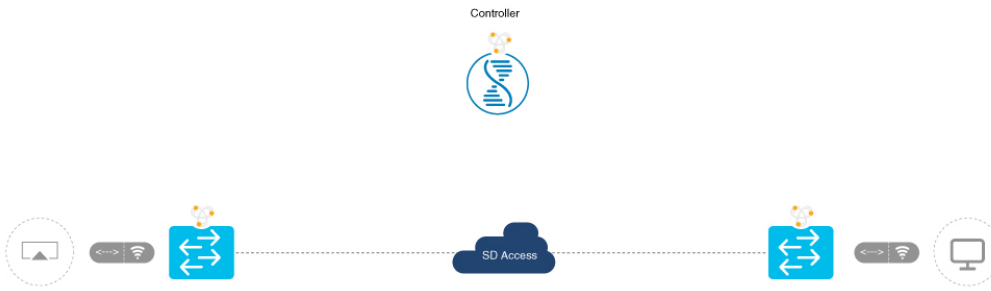
Note To see what information is applicable in a particular scenario, see [Configure Service Filters Using the GUI, on page 9](#).

Service Routing Topologies

Service routing policies can have multiple service filters to support the following types of service routing topologies:

Point-to-Point Service Routing Topology

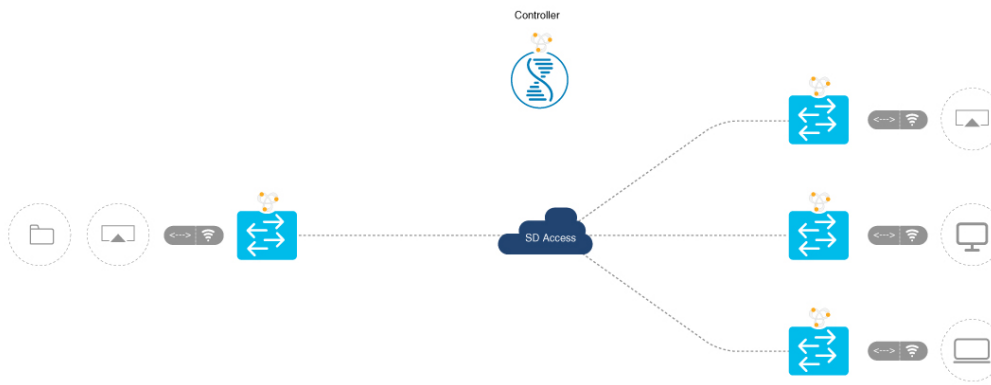
The Wide Area Bonjour application supports a point-to-point service routing topology, where there is a single source SDG Agent, which connects to a single other location for a specific service type on a specific network range.



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Point-to-Multipoint Service Routing Topology

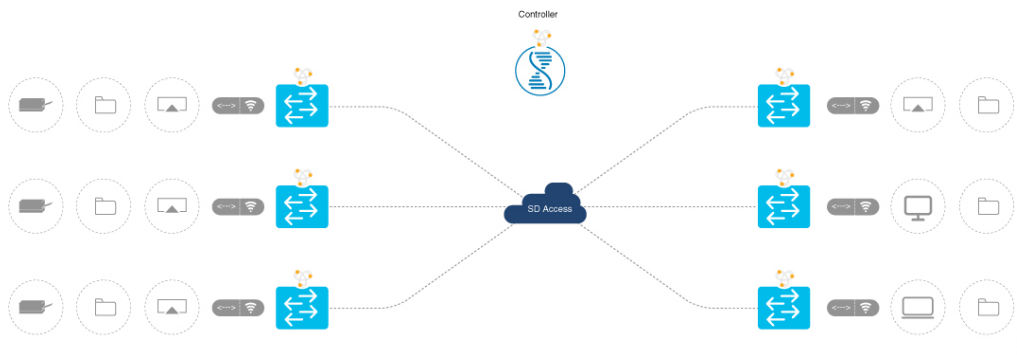
The Wide Area Bonjour application supports a point-to-multipoint service routing topology, where a single service source SDG Agent connects to multiple remote receiving SDG Agents (or vice versa), for granular service-types and network ranges.



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Multipoint-to-Multipoint Service Routing Topology

The Wide Area Bonjour application supports a multipoint-to-multipoint service routing topology, which is a full-mesh service-rich network with multiple sources and receivers on IT-controlled service types and specific or all network ranges.



Create Selective Service Instance Service Filter

The service policy, consisting of multiple filters, can support any of the topologies described above. Selective service is an additional way to restrict the services that can be announced. By configuring selective service on a service filter, you can specify a list of MAC addresses of endpoints that are allowed to announce services of the service type configured in the service filter.

This is optional. The configuration of selective services for the Wide Area Bonjour application can be done only through the XLS file. See [Build the XLS File](#), on page 6. After the selective services are configured, the application GUI shows the MAC addresses configured for a service filter.



Note Selective services cannot be configured through the GUI, although displaying the service filter displays the configured selective service MAC addresses.

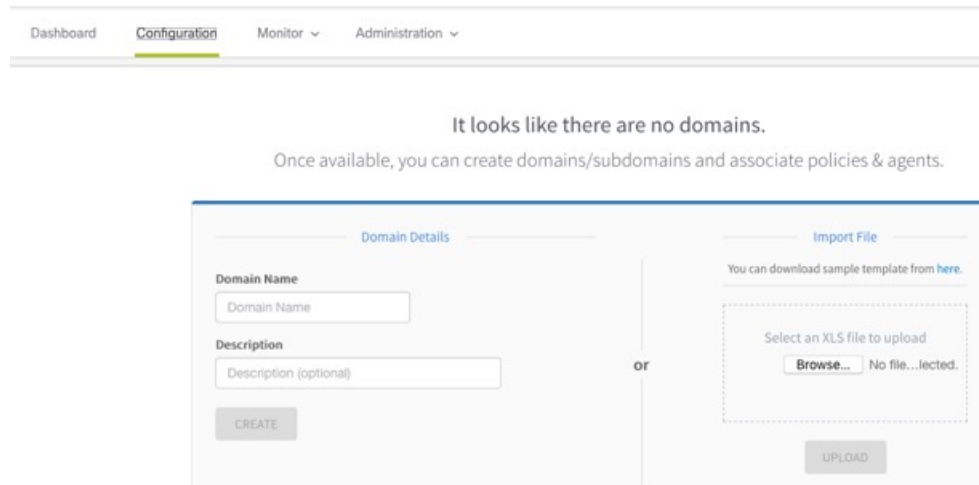
Create the Wide Area Bonjour Domain Hierarchy

The Wide Area Bonjour application uses a domain hierarchy to attach policies to individual nodes.



Note The Wide Area Bonjour application domain hierarchy is different from the Cisco DNA Center domain hierarchy. Creating the domain hierarchy is a prerequisite for adding service filters to domains.

Initially, when no domain is configured, navigating to the **Configuration** tab displays the following screen.



The **Configuration** tab displays a screen with fields for **Domain Name** and **Description**. Enter the Domain Name and an optional Description, and click **CREATE** to create your root domain.

Alternatively, you can create the root domain, subdomains, with the complete configuration by importing the configurations from a file. See [Import Configurations from a .XLS File, on page 8](#).

Once the initial domain is created, subsequent sub-domains can be added from the GUI by the following procedure.

-
- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
 - Step 2** From the **Subdomains** pane, click the domain under which you want to create a subdomain.
 - Step 3** Click **Create Subdomain** in the upper right corner of the page.
 - Step 4** Enter a name and description for the subdomain in the **Create Subdomain** dialog box.
 - Step 5** Click **Create**.

After the domain and subdomains are created, the domain hierarchy is displayed.

Build Wide Area Bonjour Service Filter Configurations

You can create service filter configurations through the following ways:

- [Build the XLS File](#) : Use this method for adding or updating bulk policy configurations for your initial setup. This method of creating service filter configurations allows for complete network policy automation.
- [Configure Service Filters Using the GUI, on page 9](#): From the Wide Area Bonjour application GUI, you can add or update policies during run-time. You can also export and import service filter configurations at any subdomain level.

Build the XLS File

Wide Area Bonjour application configurations can be imported from (and saved to) an Excel XLS file. The file has the following four sheets in a predefined format.

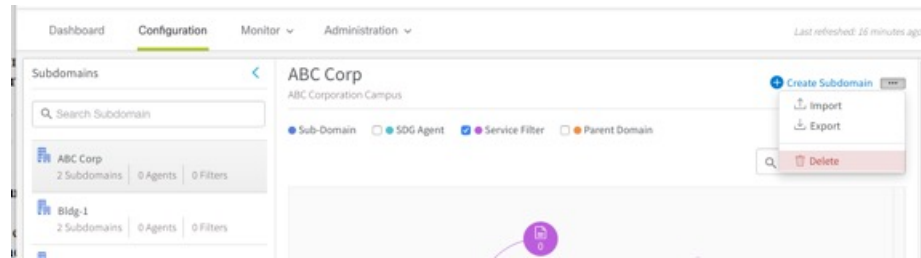
- Service Type
- Domain
- Policy
- Selective Services (Advanced)

To minimize errors, Cisco recommends that you download an empty configuration file from the controller to your laptop, and populate it, instead of creating the XLS file manually.

To download the template from the Wide Area Bonjour application, complete the following steps:

1. Click the icon with the three dots in the upper-right corner of the **Configuration** tab.

The following menu is displayed.



2. From the drop-down menu, click **Export**. This exports the existing configuration file. If you do not have a configuration in place, the file is an empty configuration file, which can serve as a template to enter the configurations.

Further details of each of the four sheets are given below.

Build the Service Type Sheet

The Service Type sheet populates the built-in Bonjour database.

After downloading a blank XLS template from the controller as described above, perform the following tasks:

- Open the Service Type sheet.
- Enter the user-friendly names of the service types in the **Service Type Name** column.
- Enter the lists of the actual Bonjour pointers in the **Bonjour Types** column. You can have up to 10 pointers for a single service type.

The following is an extract of a populated Service Type sheet.

	A	B
1	Service Type Name	Bonjour Types
2	Apple TV	_airplay._tcp.local, _raop._tcp.local.
3	AirPrint	_ipp._tcp.local.
4	NFS	_nfs._tcp.local.
5	FTP	_ftp._tcp.local.
6	iTunes Music	_daap._tcp.local.
7	Printer	_ipp._tcp.local, _lpps._tcp.local, _printer._tcp.local.
8		
9		



Note Each Bonjour pointer type must end with a ".".

Build the Domain Sheet

The Domain sheet shows the hierarchical domain structure of your network. This sheet shows the logical division of subdomains.

Enter a name, description, and parent domain for each domain in this sheet.

The following is an extract from a populated domain sheet.

	A	B	C
1	Domain Name	Description	Parent Domain
2	ABC Corp	ABC Corporation Campus	
3	Bldg-1		ABC Corp
4	Bldg-1-FL1		Bldg-1
5	Bldg-1-FI2		Bldg-1
6	Bldg-2		ABC Corp
7	Bldg-2-FL1		Bldg-2
8			



Note The Wide Area Bonjour application supports a structure with only a single root domain. The value for the parent of the root domain is left empty.

Build the Policy Sheet

Use the policy sheet to create service filters that control service routing from and to the various SDG Agents. The domain names and service type information from the previous sheets are used by the Policy sheet. The Wide Area Bonjour application allows for flexible Bonjour mappings, including point-to-point service routing, point-to-multipoint service routing, and multipoint-to-multipoint service routing.



Note The Wide Area Bonjour application supports IPv4 and IPv6.

The **Policy Name** is a unique name for the current Domain and for a particular Service Type. The policy name is not case sensitive.

The Source IP and Query IP are the SDG agent's IP address. These are the IP addresses of the Controller source interface configured under the controller configuration on the SDG agent. The IP address of the same SDG Agent cannot be used for both Source IP and Query IP fields. You must also create a new policy with values interchanged for bidirectional exchange of services.

The Source Network, Source Mask, Query Network, and Query Mask specify the Source and Query SDG Agents subnets (VLANs) on which the endpoints are connected. These help filter services based on VLAN.



Note Shorthand notations of IPv6 addresses are not valid. For example: 2001:10:100:221:: is not a valid entry, and will have to be entered as 2001:10:100:221:0:0:0:0.

You can also choose to enter "any" as the value for the Source Network or Query Network.



Note If the Source or Query IP is provided and the network and mask are left empty, then the Wide Area Bonjour application will consider the entry to be "any".

Peer ID, VNIID and IRB fields are optional.

Build Selective Services (Advanced) Sheet

This optional sheet can be left empty. When populated, it specifies a list of service policies and one or more endpoint MAC addresses for each. Service announcements matching the service policy are accepted by the SDG Agent only from the endpoints with these specific MAC addresses.

Selective service enables global service distribution of user-specified source end-points to the receivers.

To configure selective service, open the Selective Services (Advanced) sheet, and enter a policy name, and one or more MAC addresses of the Bonjour endpoints that this policy should allow.

Multiple MAC addresses for a policy are added in different rows.

You may also add data for multiple policies in separate rows.

The following is an extract from a completed selective services sheet.

Policy Name	Source MAC Address
BLDG9-ATV-PRT-AFP	01:02:03:04:05:06
	11:12:13:14:15:16

The **Source MAC Address** is the MAC address of the announcing device, which helps to filter services.

Import Configurations from a .XLS File

After creating the configuration on a .XLS file, as described in the previous sections, you need to import the file to create the policies. The file can be imported as a Day-0 operation to create policies on a new controller, or subsequently as a Day-N modification to the existing configuration.

To import service filter configurations using a .XLS file, complete the following steps:

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- Step 1** Navigate to the **Configuration** tab of the Wide Area Bonjour application.
- Step 2** From the left pane, select the domain or subdomain under which you want to import the service filter configurations.
- Step 3** Click the icon with the three dots, located to the right of the **Create Subdomains** menu.
- The **Upload Data to the domain** screen is displayed.
- Step 4** Click **Browse**.
- Step 5** Click **Choose file**.
- Step 6** Select the file from your local folder and click the **UPLOAD** button.
- When the upload is complete, the page is refreshed and displays a domain tree structure, representing the logical network.
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Back Up Configuration Data from the Wide Area Bonjour Application

You can export the configuration data from the Wide Area Bonjour application in the form of a .XLS file. To export the configuration, complete the following steps:

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** Click the domain or subdomain for which you want to export the configuration file.
- Step 3** Click the menu button in the upper-right corner of the Wide Area Bonjour application GUI, and select **Export**.
- The configuration is exported as a .XLS file, which can be saved, used later to import the configuration (possibly, after editing, to reflect policy changes, if any).
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Configure Service Filters Using the GUI

Instead of importing the configuration from XLS files, it is possible to create the configuration using the GUI. The Wide Area Bonjour application must be set up with service filters for every service type that is deployed in the network. Normally, a service filter should have a Source SDG Agent and a Query SDG Agent. However, the Query SDG Agent is optional.

Configure Service Filters for Traditional Networks With Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Traditional**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.

- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
- Note** You must have at least one source agent in a service filter.
- Step 12** Select the SDG Agent or IP Address from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory** to go to the Cisco DNA Center Inventory page. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Peer**.
- Step 14** From the **Interface** drop-down list, select the interface.
- The **IPv4 Subnet** and the **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 15** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any Peer ID**.
- Step 16** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
- Clicking the **x** icon under the **Actions** column deletes the SDG Agent.
- Step 17** Click **ADD NEXT** to add the query agent.
- Step 18** To add a query agent, select the **Query** radio button.
- Note** Empty query SDG agents are supported.
- Step 19** Select the SDG Agent or IP Address from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. To do so, click **Add the SDG Agent to Inventory**, and you will be directed to the Inventory page. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 20** From the **Service Layer** drop-down list, select **Peer**.
- Step 21** From the **Interface** drop-down list, select the interface.
- The **IPv4 Subnet** and the **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 22** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any Peer ID**.
- Step 23** Click the **Add** icon under the **Actions** column to create another Agent of the same type.
- Clicking the **x** icon under the **Actions** column deletes the SDG Agent.
- Step 24** Click **DONE** after you have added all the required agents.
- Step 25** Click **CREATE** to save the service filter.
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Configure Service Filters for Traditional Networks Without Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Traditional**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.
- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
Note You must have at least one source agent in a service filter.
- Step 12** Select the SDG Agent or IP Address from the drop-down list.
Note If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory** to go to the Cisco DNA Center Inventory page. For information about how to add a device to the Inventory, see *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Local**.
- Step 14** From the **Interface** drop-down list, select the interface.
The **IPv4 Subnet** and the **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 15** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
Clicking the **x** icon under the **Actions** column deletes the SDG Agent.
- Step 16** Click **ADD NEXT** to add the query agent.
- Step 17** To add a query agent, select the **Query** radio button.
Note Empty query SDG agents are supported.
- Step 18** Select the SDG Agent or IP Address from the drop-down list.
Note If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory** to go to the Cisco DNA Center Inventory page. For information about how to add a device to the Inventory, see *Cisco DNA Center User Guide*.
- Step 19** From the **Service Layer** drop-down list, select **Local**.
- Step 20** From the **Interface** drop-down list, select the interface.
The **IPv4 Subnet** and the **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.

- Step 21** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
Clicking the **x** icon under the **Actions** column deletes the SDG Agent.
- Step 22** Click **DONE** after you've added all the required agents.
- Step 23** Click **CREATE** to save the service filter.

Configure Service Filters for Asymmetric IRB Overlay Networks With Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Overlay**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.
- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
- Note** You must have at least one source agent in a service filter.
- Step 12** Select the SDG Agent from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For more information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Peer**.
- Step 14** Use the toggle switch to set **Symmetric IRB** to **No**.
- Step 15** From the **Interface** drop-down list, select the interface.
The **IPv4 Subnet** and **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 16** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any** Peer ID.
- Step 17** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 18** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 19** Click **ADD NEXT** to add the query agent.
- Step 20** To add a query agent, select the **Query** radio button.
- Note** Empty query SDG agents are supported.

- Step 21** Select the SDG Agent or IP Address from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 22** From the Service Layer drop-down list, select **Peer**.
- Step 23** Use the toggle switch to set **Symmetric IRB** to **No**.
- Step 24** From the **Interface** drop-down list, select the interface.
- The **IPv4 Subnet** and **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 25** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any Peer ID**.
- Step 26** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 27** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
- Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 28** Click **DONE** after you have added all the required agents.
- Step 29** Click **CREATE** to save the service filter.
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Configure Service Filters for Asymmetric IRB Overlay Networks Without Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Overlay**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.
- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
- Note** You must have at least one source agent in a service filter.
- Step 12** Select the SDG Agent from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For more information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Local**.

- Step 14** Use the toggle switch to set **Symmetric IRB** to **No**.
- Step 15** From the **Interface** drop-down list, select the interface.
- Step 16** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 17** Click the **Add** icon under the **Actions** column to add another SDG Agent.
Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 18** Click **ADD NEXT** to add the query agent.
- Step 19** To add a query agent, select the **Query** radio button.
Note Empty query SDG agents are supported.
- Step 20** Select the SDG Agent or IP Address from the drop-down list.
Note If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For more information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 21** Use the toggle switch to set **Symmetric IRB** to **No**.
- Step 22** From the **Interface** drop-down list, select the interface.
- Step 23** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 24** Click the **Add** icon under the **Actions** column to add another SDG Agent.
Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 25** Click **DONE** after you've added all the required agents.
- Step 26** Click **CREATE** to save the service filter.

Configure Service Filters for Symmetric IRB Overlay Networks With Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.
- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Overlay**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.
- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
Note You must have at least one source agent in a service filter.

- Step 12** Select the SDG Agent or IP Address from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Peer**.
- Step 14** Use the toggle switch to set **Symmetric IRB** to **Yes**.
- Step 15** From the **Interface** drop-down list, select the interface.
- The **IPv4 Subnet** and **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 16** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any Peer ID**.
- Step 17** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 18** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
- Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 19** Click **ADD NEXT** to add the query agent.
- Step 20** To add a query agent, select the **Query** radio button.
- Note** Empty query SDG agents are supported.
- Step 21** Select the SDG Agent or IP Address from the drop-down list.
- Note** If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 22** From the **Service Layer** drop-down list, select **Peer**.
- If the **Any** check box for **Subnet** is checked, you do not have to specify the Service Layer.
- Step 23** Use the toggle switch to set **Symmetric IRB** to **Yes**.
- Step 24** From the **Interface** drop-down list, select the interface.
- The **IPv4 Subnet** and **IPv6 Subnet** fields are automatically populated based on the details in the Cisco DNA Center Inventory.
- Step 25** Specify a **Peer ID**. Alternatively, you can check the check box to include **Any Peer ID**.
- Step 26** Click the **Add** icon under the **Actions** column to add another SDG Agent of the same type.
- Click the **x** icon under the **Actions** column deletes the SDG Agent.
- Step 27** Click **DONE** after you have added all the required agents.
- Step 28** Click **CREATE** to save the service filter.

Configure Service Filters for Symmetric IRB Overlay Networks Without Service Peers

- Step 1** Navigate to the **Configuration** tab in the Wide Area Bonjour application.

- Step 2** From the sidebar, select the subdomain for which you want to create the filter.
- Step 3** Ensure that the **Service Filter** check box is selected.
- Step 4** Click the purple 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, select **Overlay**.
- Step 7** Enter a name and a description (optional) for the service filter you're creating.
- Step 8** From the **Service Type** drop-down list, select one or more service types.
- Step 9** Check the **Enable service filter** check box to enable the service filter immediately after creating it.
- Step 10** Click the **Add** icon in the upper-right corner of the **Source/Query** pane to add source and query agents.
- Step 11** To add a source agent, select the **Source** radio button.
Note You must have at least one source agent in a service filter.
- Step 12** Select the SDG Agent or IP Address from the drop-down list.
Note If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 13** From the **Service Layer** drop-down list, select **Local**.
- Step 14** Use the toggle switch to set **Symmetric IRB** to **Yes**.
- Step 15** From the **Interface** drop-down list, select the interface.
- Step 16** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 17** Click the **Add** icon under the **Actions** column to add another SDG Agent.
Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 18** Click **ADD NEXT** to add the query agent.
- Step 19** To add a query agent, select the **Query** radio button.
Note Empty query SDG agents are supported.
- Step 20** Select the SDG Agent or IP Address from the drop-down list.
Note If you cannot find the SDG Agent in the drop-down list, you need to manually add it to the Cisco DNA Center Inventory. Click **Add the SDG Agent to Inventory**, to go to the Cisco DNA Center Inventory. For more information about how to add a device to the Inventory, see the *Cisco DNA Center User Guide*.
- Step 21** Use the toggle switch to set **Symmetric IRB** to **Yes**.
- Step 22** From the **Interface** drop-down list, select the interface.
- Step 23** Specify the VNI ID. Check the check box to set the value of the **VNI ID** to **Any**.
- Step 24** Click the **Add** icon under the **Actions** column to delete the SDG Agent.
Click the **x** icon under the **Actions** column to delete the SDG Agent.
- Step 25** Click **DONE** after you have added all the required agents.

Step 26 Click **CREATE** to save the service filter.
