Managing a VPLS Service Request

This chapter contains the basic steps to provision a VPLS service. It contains the following sections:

Introducing VPLS Service Requests

A VPLS service request consists of one or more attachment circuits, connecting various sites in a multi-point topology. When you create a service request, you enter several parameters, including the specific interfaces on the CE and PE routers and UNI parameters.

You can also integrate a Cisco IP Solution Center (ISC) template with a service request. You can associate one or more templates to the CE, PE, or any U-PE in the middle.

To create a service request, a service policy must already be defined, as described in Chapter 8, "Creating a VPLS Policy."

Based on the predefined VPLS policy, an operator creates a VPLS service request, with or without modifications to the VPLS policy, and deploys the service. The service request must be the same service type (ERS or EWS) as the policy selected.

Service creation and deployment are normally performed by regular network technicians for daily operation of network provisioning.

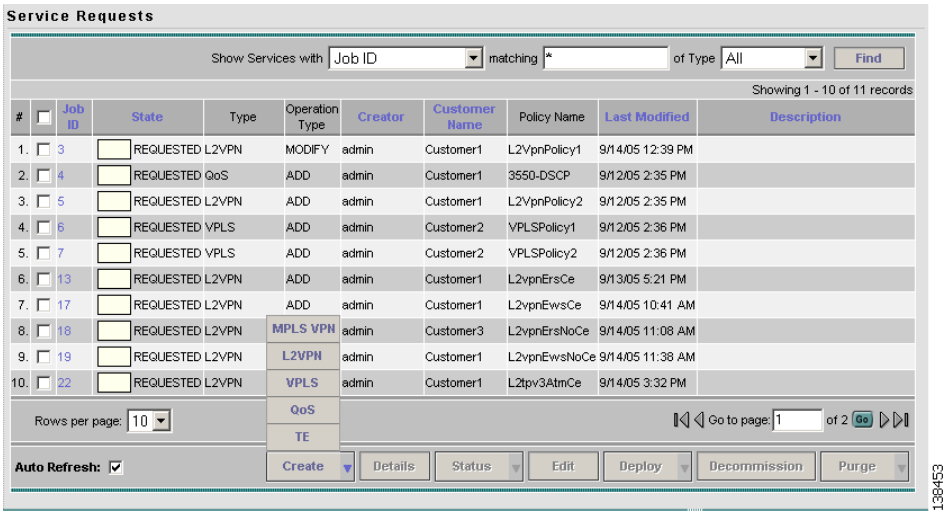
The following steps are involved in creating a service request for Layer 2 connectivity between customer sites:

- Choose a VPLS policy.
- Choose a VPN. See the Defining VPNs, page 3-4, for further information.
- Choose a CE or UNI interface.
- Choose a Named Physical Circuit (NPC) if more than one NPC exists from the CE or the UNI interface.
- Edit the link attributes.

Choosing a VPLS Policy

Step 1 Select **Service Inventory > Inventory and Connection Manager > Service Requests**. The Service Requests window appears as show in Figure 9-1.

Figure 9-1 VPLS Service Activation



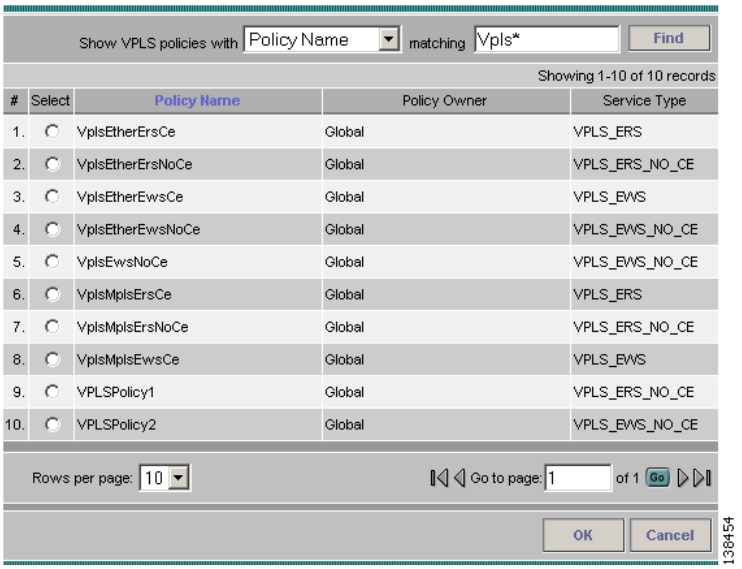
Step 2 Click **Create**.

Step 3 Choose **VPLS** from the drop-down list.

VPLS service requests must be associated with a VPLS policy. You choose a VPLS policy from the policies previously created (see Chapter 8, "Creating a VPLS Policy").

Step 4 Select the button for the VPLS policy of choice. See Figure 9-2. If more than one VPLS policy exists, a list of VPLS policies appears.

Figure 9-2 VPLS Policy Choice



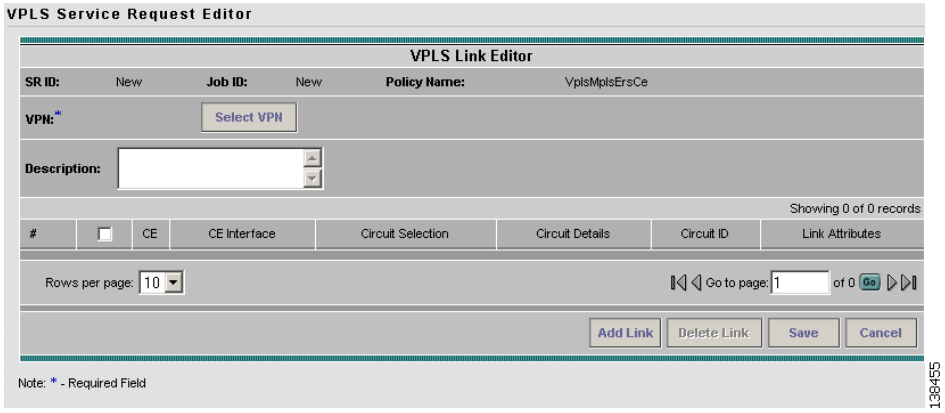
Step 5 After you make the choice, click **OK**.

As soon as you make the choice, the new service request inherits all the properties of that VPLS policy, such as all the editable and non-editable features and pre-set parameters.

Creating a VPLS Service Request with a CE

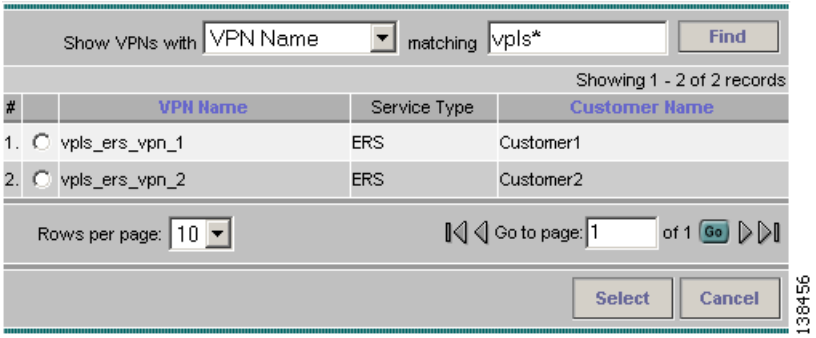
This section includes detailed steps for creating a VPLS service request with a CE present. After you choose a VPLS policy, the VPLS Service Request Editor window appears (see Figure 9-3).

Figure 9-3 VPLS Service Request Editor



Step 1 Click **Select VPN** to select a VPN for use with this CE. The Select VPN window appears with the VPNs defined in the system. Only VPNs with the same service type (ERS or EWS) as the policy you chose appear. See Figure 9-4.

Figure 9-4 Select a VPN



Note The VC ID is mapped from the VPN ID. By default, ISC will "auto pick" this value. However, you can set this manually, if desired. This is done by editing the associated VPN configuration. The Edit VPN window has an **Enable VPLS** check box. When you select this check box, you can manually enter a VPN ID in a field provided. For more information on creating and modifying VPNs, see *Cisco IP Solution Center Infrastructure Reference, 4.1*.

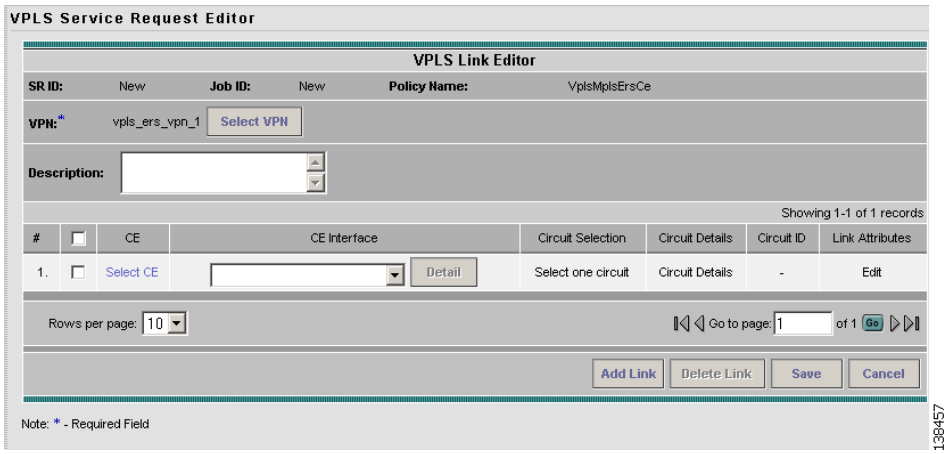
Step 2 Choose a **VPN Name** in the Select column.

Step 3 Click **Select**. The VPLS Link Editor window appears with the VPN name displayed.

Step 4 Click **Add Link**.

You specify the CE endpoints using the VPLS Link Editor. You can add one or more links from a window like the one in Figure 9-5.

Figure 9-5 Select CE



Step 5 You can enter a description for the service request in the first **Description** field. The description will show up in this window and also in the Description column of the Service Requests window. The maximum length for this field is 256 characters.

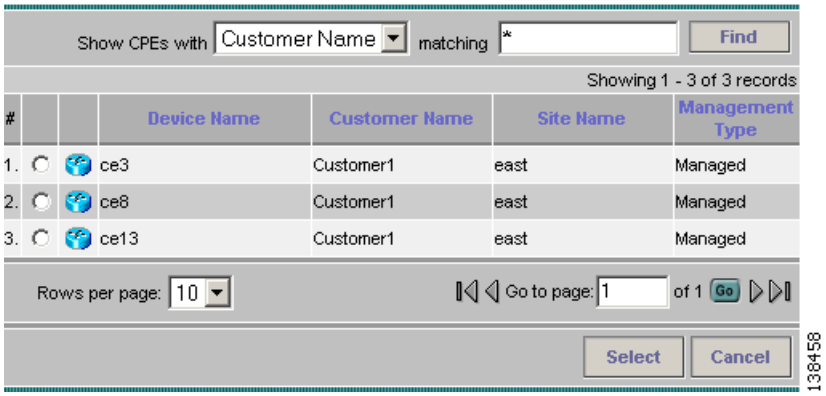
Step 6 Click **Select CE** in the CE column. The CPE for Attachment Circuit window appears (see Figure 9-6). This window displays the list of currently defined CEs.

a. From the **Show CPEs with** drop-down list, you can display CEs by Customer Name, by Site, or by Device Name.

b. You can use the **Find** button to either search for a specific CE, or to refresh the display.

c. You can set the **Rows per page** to 5, 10, 20, 30, 40, or All.

Figure 9-6 Select CPE Device



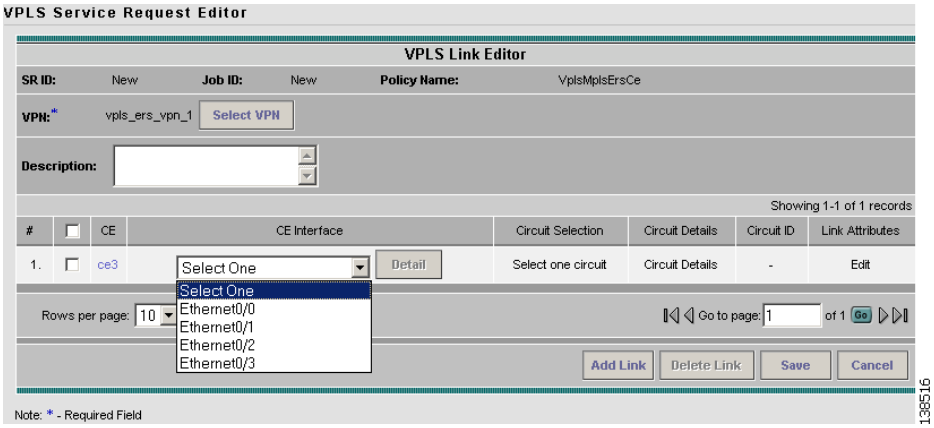
Step 7 In the Select column, choose a CE for the VPLS link.

Step 8 Click **Select**.

The VPLS Link Editor window appears displaying the name of the selected CE in the CE column.

Step 9 Select the CE interface from the drop-down list (see Figure 9-7).

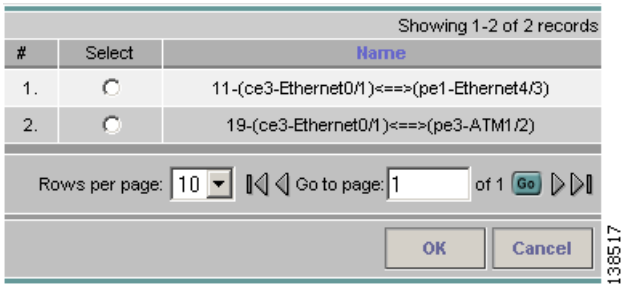
Figure 9-7 Select the CE Interface



Note When you provision an ERS service, when you select a UNI for a particular device, ISC determines if there are other services using the same UNI. If so, a warning message is displayed. If you ignore the message and save the service request, all of the underlying service requests lying on the same UNI are synchronized with the modified shared attributes of the latest service request. In addition, the state of the existing service requests is changed to the Requested state.

Step 10 Click **Select one circuit** in the Circuit Selection column. The NPC window appears (see Figure 9-8). If only one NPC exists for the chosen CE and CE interface, that NPC is automatically populated in the Circuit Selection column and you need not choose it explicitly.

Figure 9-8 Select NPC

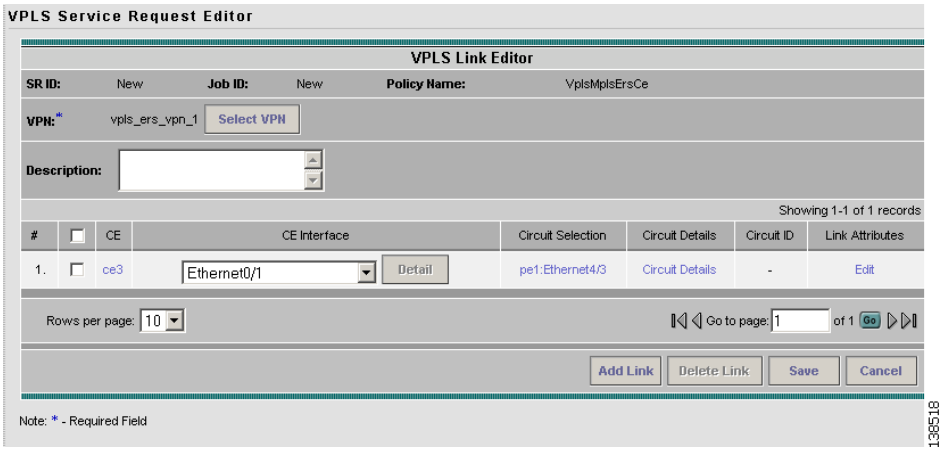


Step 11 Choose the name of the NPC from the Select column.

Step 12 Click **OK**.

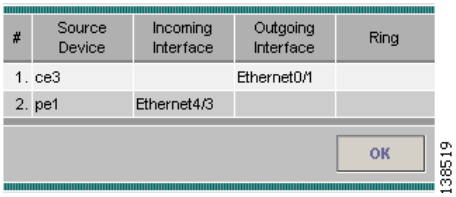
Each time you choose a CE and its interface, the NPC that was precreated from this CE and interface is automatically displayed under **Circuit Selection** as in Figure 9-9. This means that you do not have to further specify the PE to complete the link.

Figure 9-9 NPC Selected



Step 13 If you want to review the details of this NPC, click **Circuit Details** in the Circuit Details column. The NPC Details window appears and lists the circuit details for this NPC. In Figure 9-10, the CE and PE and their corresponding interfaces appear.

Figure 9-10 NPC Details

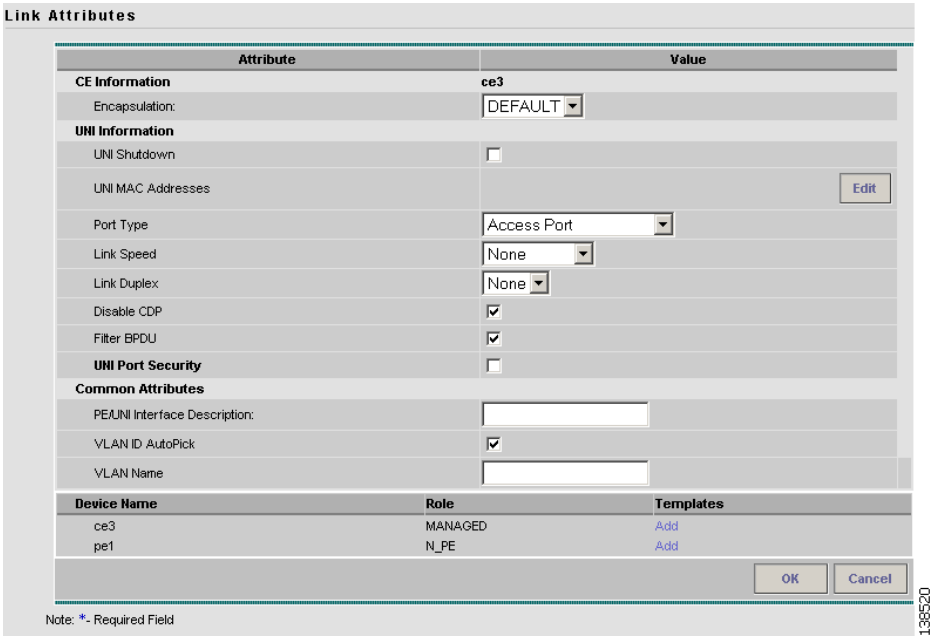


Step 14 The Circuit ID is created automatically, based on the VLAN data for the circuit.

Step 15 You can modify the values that were set by the VPLS policy, that is, the values that were marked "editable" during the VPLS policy creation.

To modify the link attributes, click **Edit** in the Link Attributes column as shown in the VPLS link editor. The Link Attributes window appears as shown in Figure 9-11

Figure 9-11 Modify CE Link Attributes



Step 16 Edit the link attributes.

Note If you did not select **VLANID AutoPick** in the VPLS policy, you are prompted to provide the VLAN in a **Provider VLAN ID** field as shown in Figure 9-11.

Step 17 Continue to specify additional CEs, as in previous steps, if desired.

Step 18 Click **OK**.

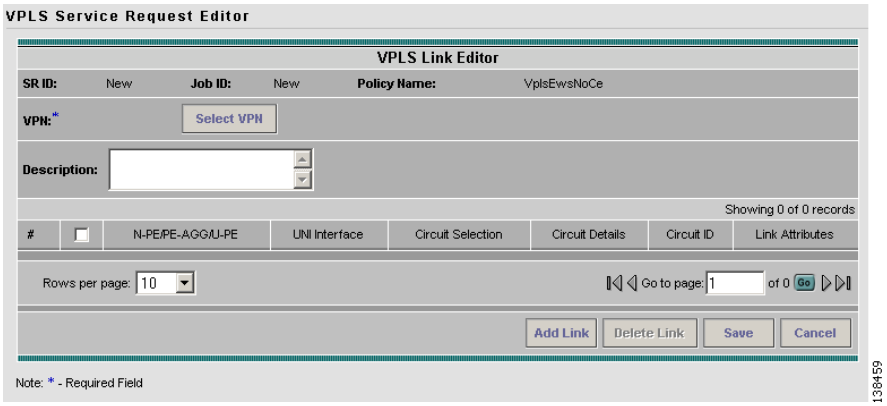
Step 19 Click **Save**.The service request is created and saved into ISC.

Creating a VPLS Service Request without a CE

This section includes detailed steps for creating a VPLS service request without a CE present.

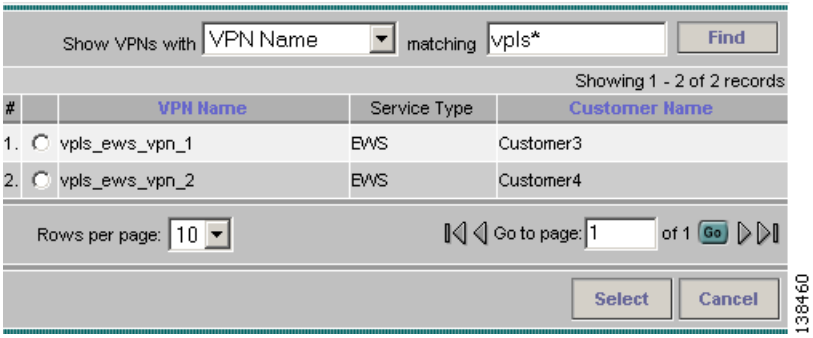
After you choose a VPLS policy, the VPLS Service Request Editor window appears (see Figure 9-12).

Figure 9-12 VPLS Service Request Editor



Step 1 Click **Select VPN** to select a VPN for use with this PE. The Select VPN window appears with the VPNs defined in the system. Only VPNs with the same service type (ERS or EWS) as the policy you chose appear. See Figure 9-13.

Figure 9-13 Select a VPN



Note The VC ID is mapped from the VPN ID. By default, ISC will "auto pick" this value. However, you can set this manually, if desired. This is done by editing the associated VPN configuration. The Edit VPN window has an **Enable VPLS** check box. When you select this check box, you can manually enter a VPN ID in a field provided. For more information on creating and modifying VPNs, see *Cisco IP Solution Center Infrastructure Reference, 4.1*.

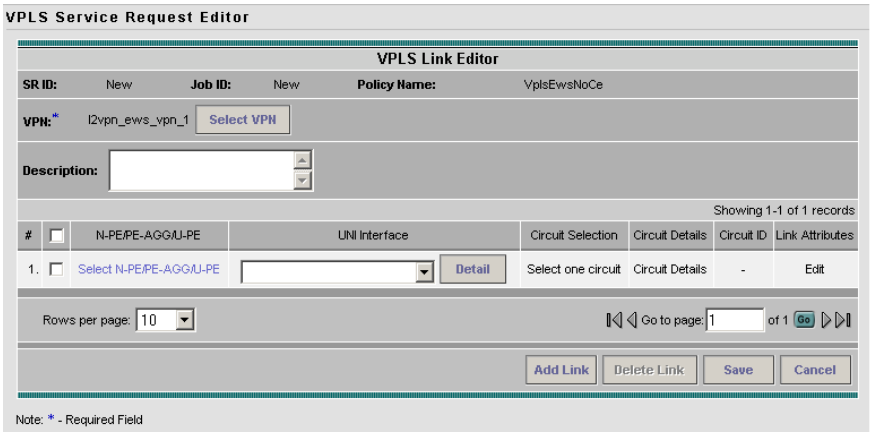
Step 2 Choose a **VPN Name** in the Select column.

Step 3 Click **Select**. The VPLS Link Editor window appears with the VPN name displayed.

Step 4 Click **Add Link**.

You specify the U-PE/PE-AGG/U-PE end points using the VPLS Link Editor. You can add one or more links from a window like the one in Figure 9-14.

Figure 9-14 Select N-PE/PE-AGG/U-PE



Step 5 You can enter a description for the service request in the first **Description** field. The description will show up in this window and also in the Description column of the Service Requests window. The maximum length for this field is 256 characters.

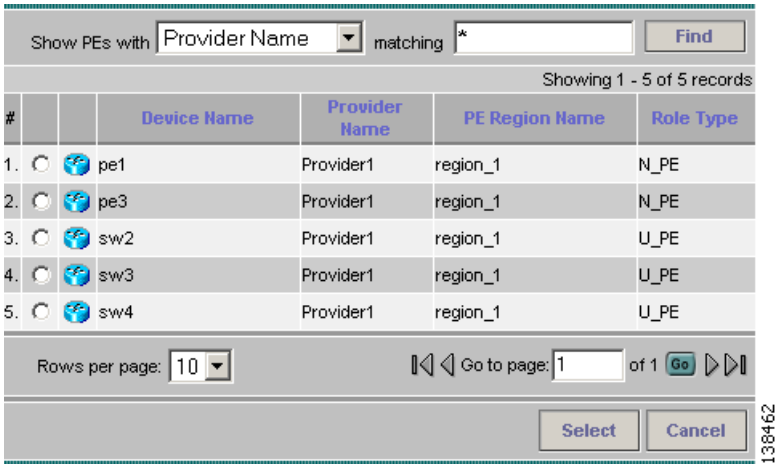
Step 6 Click **Select N-PE/PE-AGG/U-PE** in the N-PE/PE-AGG/U-PE column. The PE for Attachment Circuit window appears (see Figure 9-15). This window displays the list of currently defined PEs.

a. The **Show PEs with** drop-down list shows PEs by customer name, by site, or by device name.

b. The **Find** button allows a search for a specific PE or a refresh of the window.

c. The **Rows per page** drop-down list allows the page to be set to 5, 10, 20, 30, 40, or All.

Figure 9-15 Select PE Device



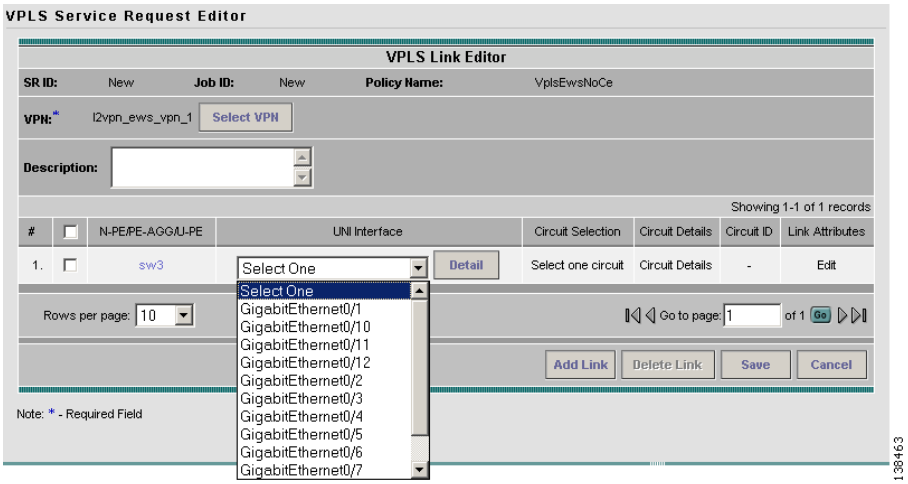
Step 7 In the **Select** column, choose the PE device name for the VPLS link.

Step 8 Click **Select**.

The VPLS Link Editor window appears displaying the name of the selected N-PE/PE-AGG/U-PE in the N-PE/PE-AGG/U-PE column

Step 9 Select the UNI interface from the drop-down list (see Figure 9-16).

Figure 9-16 Select the UNI Interface

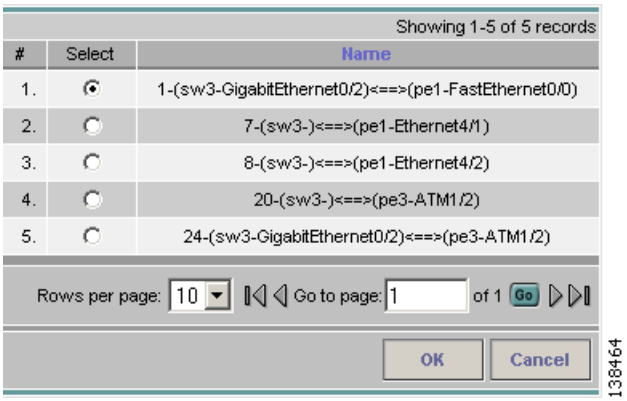


Note When you provision an ERS service, when you select a UNI for a particular device, ISC determines if there are other services using the same UNI. If so, a warning message is displayed. If you ignore the message and save the service request, all of the underlying service requests lying on the same UNI are synchronized with the modified shared attributes of the latest service request. In addition, the state of the existing service requests is changed to the Requested state.

Step 10 If the PE role type is U-PE, click **Select one circuit** in the Circuit Selection column. The NPC window appears (see Figure 9-17). If only one NPC exists for the chosen PE and PE interface, that NPC is automatically populated in the Circuit Selection column and you need not choose it explicitly.

Note If the PE role type is N-PE, the columns Circuit Selection and Circuit Details are disabled.

Figure 9-17 Select NPC

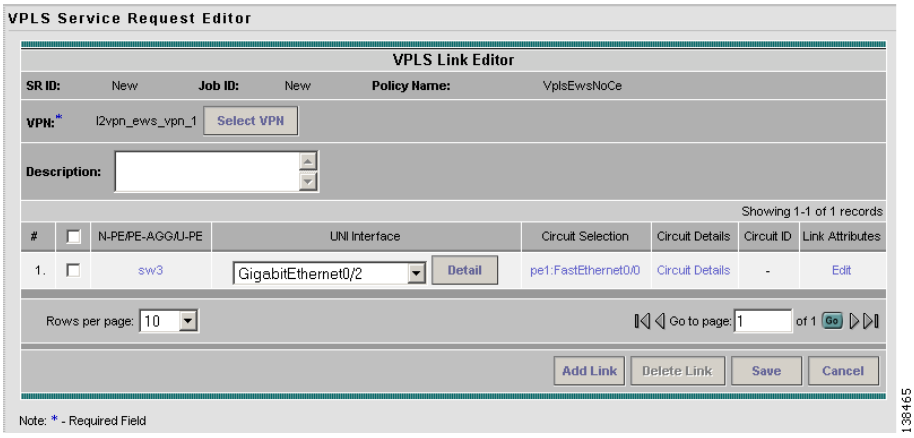


Step 11 Choose the name of the NPC from the **Select** column.

Step 12 Click **OK**.

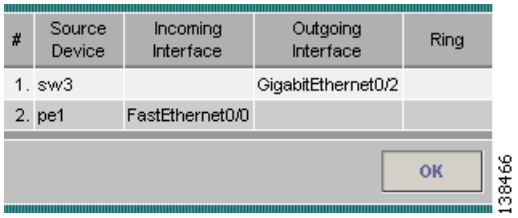
Each time you choose a PE and its interface, the NPC that was precreated from this PE and interface is automatically displayed under **Circuit Selection** as in Figure 9-18. This means that you do not have to further specify the PE to complete the link.

Figure 9-18 NPC Created



Step 13 If you want to review the details of this NPC, click **Circuit Details** in the Circuit Details column. The NPC Details window appears and lists the circuit details for this NPC. In Figure 9-19, the PE-CLE and PE and their corresponding interfaces appear.

Figure 9-19 NPC Details

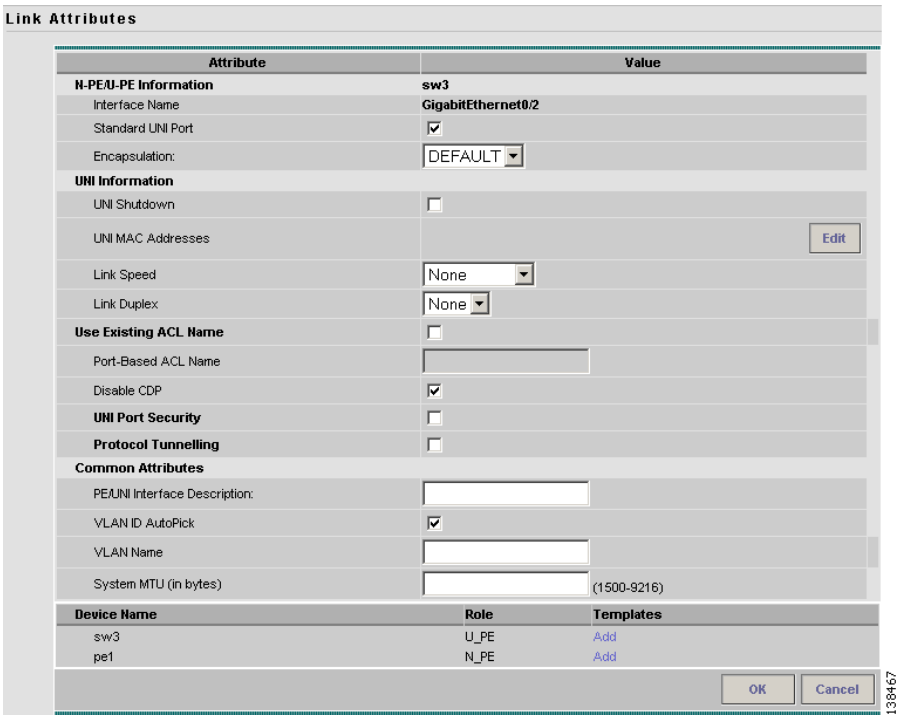


Step 14 The Circuit ID is created automatically, based on the VLAN data for the circuit.

Step 15 You can modify the values that were set by the VPLS policy, that is, the values that were marked "editable" during the VPLS policy creation.

To modify the link attributes, click **Edit** in the Link Attributes column in the VPLS link editor. The Link Attributes window appears as shown in Figure 9-20

Figure 9-20 Modify PE Link Attributes



Step 16 Edit the link attributes.

Note If you did not select **VLANID AutoPick** in the VPLS policy, you are prompted to provide the VLAN in a **Provider VLAN ID** field.

Step 17 Click **OK**.

Step 18 Continue to specify additional PEs, as in previous steps, if desired.

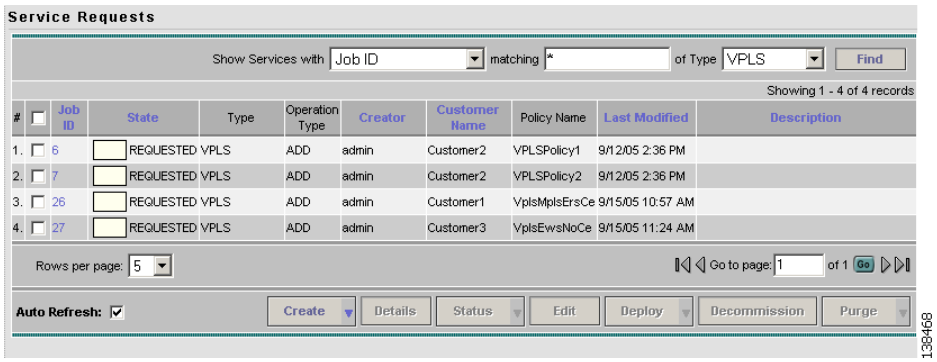
Step 19 Click **Save**. The VPLS service request is created and saved into ISC.

Modifying the VPLS Service Request

You can modify a VPLS service request if you must change the VPLS links.

Step 1 Select **Service Inventory > Inventory and Connection Manager > Service Requests**. See Figure 9-21.

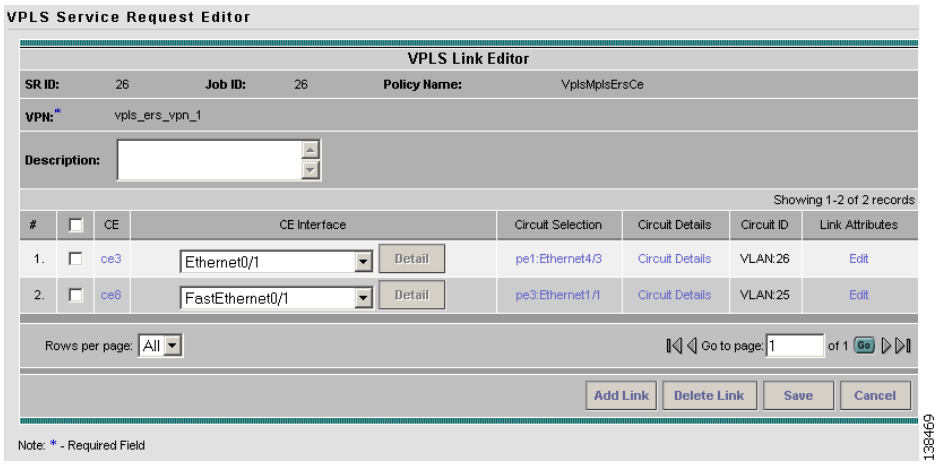
Figure 9-21 VPLS Service Activation



Step 2 Select a check box for a service request.

Step 3 Click **Edit**. The VPLS Link Editor window appears as shown in Figure 9-22.

Figure 9-22 VPLS Link Editor



You can choose any of the blue highlighted values to edit the VPLS links.

You can also click **Add Link** to add a VPLS link.

You can click **Delete Link** to delete a VPLS link.

You can enter a description for the service request in the first **Description** field. The description will show up in this window and also in the Description column of the Service Requests window. The maximum length for this field is 256 characters.

The Circuit ID is created automatically, based on the VLAN data for the circuit.

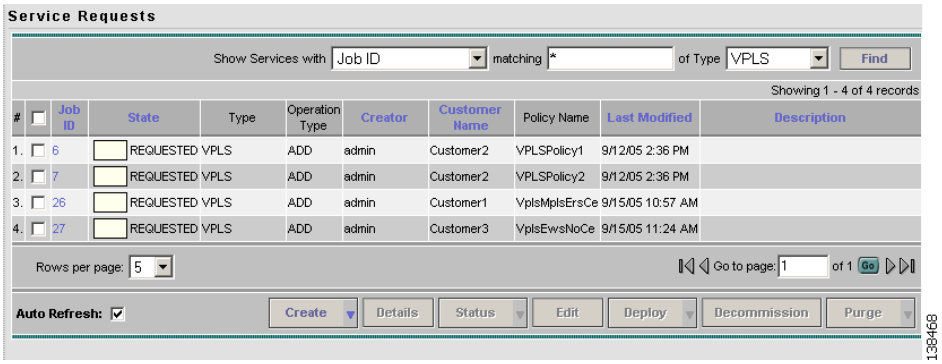
Step 4 When you are finished editing the VPLS links, click **Save**.

Saving the VPLS Service Request

When you are finished with Link Attributes for all the Attachment Circuits, click **Save** to finish the VPLS service request creation as shown in Figure 9-23.

If the VPLS service request is successfully created, you will see the service request list window where the newly created VPLS service request is added with the state of REQUESTED as shown in Figure 9-23. If, however, the VPLS service request creation failed for some reason (for example, the value chosen is out of bounds), you are warned with an error message. Go back to correct the error and click **Save** again.

Figure 9-23 VPLS Service Request Created



The VPLS service request is in Requested state. See Deploying Service Requests, page 12-1 for information on deploying VPLS service requests.