



CHAPTER 8

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, page 8-1](#)
- [Creating a VPLS Service Request, page 8-2](#)
- [Creating a VPLS Service Request with a CE, page 8-2](#)
- [Creating a VPLS Service Request without a CE, page 8-6](#)
- [Modifying the VPLS Service Request, page 8-9](#)
- [Saving the VPLS Service Request, page 8-12](#)

Introducing VPLS Service Requests

A VPLS service request consists of one or more attachment circuits, connecting various sites in a multipoint 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 7, “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 (ERMS/EVP-LAN or EMS/EP-LAN) 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. For more information, see [Defining VPNs, page 2-4](#).
- Add a link.
- 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.

Creating a VPLS Service Request

To create a VPLS service request, perform the following steps.

-
- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**.
The Service Requests window appears.
- 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 7, “Creating a VPLS Policy”](#)).
- Step 4** If more than one VPLS policy exists, a list of VPLS policies appears. Choose the button for the VPLS policy of choice.
- Step 5** After you make the choice, click **OK**.
The new service request inherits all the properties of that VPLS policy, such as all the editable and noneditable features and preset parameters.
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Creating a VPLS Service Request with a CE

This section includes detailed steps for creating a VPLS service request with a CE present. In this example, the service request is for an VPLS policy over an MPLS core with an ERMS (EVP-LAN) service type and CE present.

Perform the following steps.

-
- Step 1** Choose the appropriate VPLS policy.
The VPLS Service Request Editor window appears. (See [Figure 8-1](#).)

Figure 8-1 VPLS Service Request Editor

VPLS Service Request Editor

VPLS Link Editor

SR ID: New Job ID: New Policy Name: VplsMplsErsCe

VPN:

Description:

Showing 0 of 0 records

#	CE	CE Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
Showing 0 of 0 records						

Rows per page: 10 Go to page: 1 of 0

Note: * - Required Field

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Step 2 Click **Select VPN** to choose 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 (ERMS/EVP-LAN or EMS/EP-LAN) as the policy you chose appear. (See [Figure 8-2](#).)

Figure 8-2 Select a VPN

#	VPN Name	Service Type	Customer Name
1.	vpls_ers_vpn_1	ERS	Customer1
2.	vpls_ers_vpn_2	ERS	Customer2



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 check this check box, you can manually enter a VPN ID in a field provided. For more information on creating and modifying VPNs, see the [Cisco IP Solution Center Infrastructure Reference, 5.1](#).

Step 3 Choose a **VPN Name** in the Select column.

Step 4 Click **Select**. The VPLS Link Editor window appears with the VPN name displayed.

Step 5 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 8-3](#).

Figure 8-3 Select CE

#	CE	CE Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
1.	Select CE		Select one circuit	Circuit Details	-	Edit

- Step 6** 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 7** Click **Select CE** in the CE column.
The Select CPE Device window appears. (See [Figure 8-4](#).)

Figure 8-4 Select CPE Device

Showing 1 - 3 of 3 records

#		Device Name	Customer Name	Site Name	Management Type
1.	<input type="radio"/>	ce3	Customer1	east	Managed
2.	<input type="radio"/>	ce8	Customer1	east	Managed
3.	<input type="radio"/>	ce13	Customer1	east	Managed

Rows per page: 10 Go to page: 1 of 1

Select Cancel

This window displays the list of currently defined CEs.

- From the **Show CPEs with** drop-down list, you can display CEs by Customer Name, by Site, or by Device Name.
- You can use the **Find** button to either search for a specific CE, or to refresh the display.
- You can set the **Rows per page** to 5, 10, 20, 30, 40, or All.

- Step 8** In the Select column, choose a CE for the VPLS link.
Step 9 Click **Select**.

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

- Step 10** Choose the CE interface from the drop-down list. (See [Figure 8-5](#).)

Figure 8-5 Select the CE Interface

Showing 1-1 of 1 records

#	CE	CE Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
1.	<input type="checkbox"/> ce3	Select One	Select one circuit	Circuit Details	-	Edit

Rows per page: 10 Go to page: 1 of 1

Add Link Delete Link Save Cancel

Note: * - Required Field

**Note**

When you provision an ERMS (EVP-LAN) service (and when you choose 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 11 Click **Select one circuit** in the Circuit Selection column.

The Select NPC window appears. 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.

Step 12 Choose the name of the NPC from the Select column.

Step 13 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**. (See [Figure 8-6](#).) This means that you do not have to further specify the PE to complete the link.

Figure 8-6 NPC Selected

VPLS Service Request Editor

VPLS Link Editor

SR ID: New Job ID: New Policy Name: VplsMplsErsCe

VPN: vpls_ers_vpn_1

Description:

Showing 1-1 of 1 records

#	<input type="checkbox"/>	CE	CE Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
1.	<input type="checkbox"/>	ce3	Ethernet0/1	pe1:Ethernet4/3	Circuit Details	-	Edit

Rows per page: 10

Note: * - Required Field

Step 14 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.

Step 15 The Circuit ID is created automatically, based on the VLAN data for the circuit.

Step 16 To edit values that were set by the VPLS policy, that is, the values that were marked “editable” during the VPLS policy creation, click the **Edit** link in the Link Attributes column for a link.

The Link Attributes window appears. For more information on setting attributes in this window, see [Modifying the VPLS Service Request, page 8-9](#).

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. In this example, the service request is for an VPLS policy over an MPLS core with an EMS (EP-LAN) service type and no CE present.

Perform the following steps.

Step 1 Choose the appropriate VPLS policy.

The VPLS Service Request Editor window appears. (See [Figure 8-7](#).)

Figure 8-7 VPLS Service Request Editor

VPLS Service Request Editor

VPLS Link Editor

SR ID: New Job ID: New Policy Name: VplsEwsNoCe

VPN:

Description:

Showing 0 of 0 records

#	N-PE/PE-AGG/PE	UNI Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
Showing 0 of 0 records						

Rows per page: 10 Go to page: 1 of 0

Note: * - Required Field

Step 2 Click **Select VPN** to choose 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 (ERMS/EVP-LAN or EMS/EP-LAN) as the policy you chose appear. (See [Figure 8-8](#).)

Figure 8-8 Select a VPN

Show VPNs with matching

Showing 1 - 2 of 2 records

#	VPN Name	Service Type	Customer Name
1.	<input type="radio"/> vpls_ews_vpn_1	EWS	Customer3
2.	<input type="radio"/> vpls_ews_vpn_2	EWS	Customer4

Rows per page: 10 Go to page: 1 of 1



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 check this check box, you can manually enter a VPN ID in a field provided. For more information on creating and modifying VPNs, see the [Cisco IP Solution Center Infrastructure Reference, 5.1](#).

Step 3 Choose a **VPN Name** in the Select column.

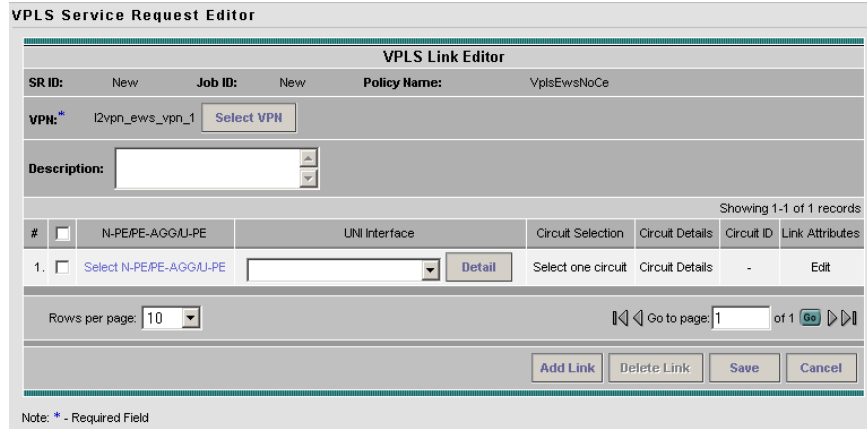
Step 4 Click **Select**.

The VPLS Link Editor window appears with the VPN name displayed.

Step 5 Click **Add Link**.

You specify the U-PE/PE-AGG/U-PE endpoints using the VPLS Link Editor. You can add one or more links from a window like the one in [Figure 8-9](#).

Figure 8-9 Select N-PE/PE-AGG/U-PE



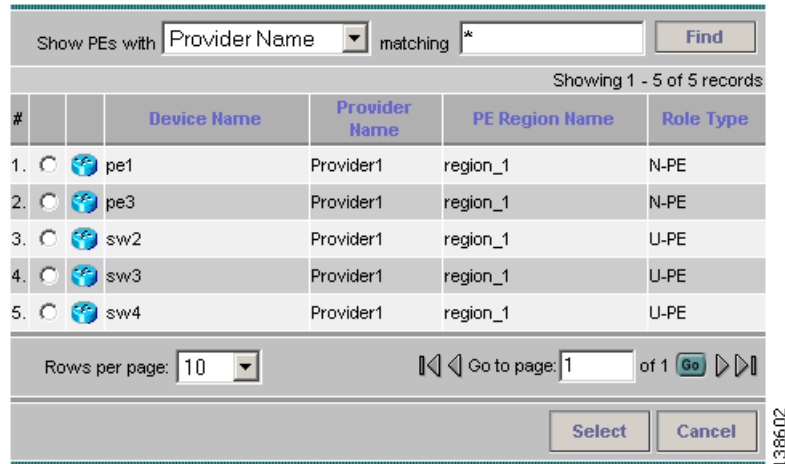
Step 6 You can enter a description for the service request in the first **Description** field.

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 7 Click **Select N-PE/PE-AGG/U-PE** in the N-PE/PE-AGG/U-PE column.

The Select PE Device window appears. (See [Figure 8-10](#).)

Figure 8-10 Select PE Device



This window displays the list of currently defined PEs.

- The **Show PEs with** drop-down list shows PEs by customer name, by site, or by device name.
- The **Find** button allows a search for a specific PE or a refresh of the window.
- The **Rows per page** drop-down list allows the page to be set to 5, 10, 20, 30, 40, or All.

Step 8 In the **Select** column, choose the PE device name for the VPLS link.

Step 9 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 10 Choose the UNI interface from the drop-down list. (See [Figure 8-11](#).)

Figure 8-11 Select the UNI Interface

The screenshot shows the 'VPLS Service Request Editor' window. At the top, it says 'VPLS Link Editor'. Below that, there are fields for 'SR ID: New', 'Job ID: New', 'Policy Name: VplsEwsNoCe', and 'VPN: l2vpn_ews_vpn_1'. There is a 'Select VPN' button and a 'Description' field. Below this is a table with columns: '#', 'N-PE/PE-AGG/U-PE', 'UNI Interface', 'Circuit Selection', 'Circuit Details', 'Circuit ID', and 'Link Attributes'. The first row shows '1.', a checkbox, 'sw3', a dropdown menu with 'Select One' selected, a 'Detail' button, 'Select one circuit', 'Circuit Details', '-', and 'Edit'. Below the table, there is a 'Rows per page: 10' dropdown, a 'Go to page: 1 of 1' field, and buttons for 'Add Link', 'Delete Link', 'Save', and 'Cancel'. A note at the bottom left says '* - Required Field'. A vertical number '138463' is on the right side of the window.



Note

When you provision an ERMS (EVP-LAN) service (and when you choose 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 11 If the PE role type is U-PE, click **Select one circuit** in the Circuit Selection column.

The Select NPC window appears. 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.

Step 12 Choose the name of the NPC from the **Select** column.

Step 13 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**. (See [Figure 8-12](#).) This means that you do not have to further specify the PE to complete the link.

Figure 8-12 NPC Created

VPLS Service Request Editor

VPLS Link Editor

SR ID: New Job ID: New Policy Name: VplsEwsNoCe

VPN: i2vpn_ews_vpn_1

Description:

Showing 1-1 of 1 records

#	<input type="checkbox"/>	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
1.	<input type="checkbox"/>	sw3	GigabitEthernet0/2 <input type="button" value="Detail"/>	pe1:FastEthernet0/0	<input type="button" value="Circuit Details"/>	-	<input type="button" value="Edit"/>

Rows per page: 10 Go to page: 1 of 1

Note: * - Required Field

- Step 14** 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. The Circuit ID is created automatically, based on the VLAN data for the circuit.
- Step 15** To edit values that were set by the VPLS policy, that is, the values that were marked “editable” during the VPLS policy creation, click the **Edit** link in the Link Attributes column for a link. The Link Attributes window appears. For more information on setting attributes in this window, see [Modifying the VPLS Service Request, page 8-9](#).
- Step 16** Continue to specify additional PEs, as in previous steps, if desired.
- Step 17** 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 or modify the VPLS links. This is also where you can associate templates and data files to a link.

Perform the following steps.

- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**. (See [Figure 8-13](#).)

Figure 8-13 VPLS Service Activation

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
1.	7	REQUESTED	L2VPN	MODIFY	admin	Customer1	L2vpnErsCe	8/14/06 3:49 PM	
2.	10	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnEwsCe	8/14/06 11:41 AM	
3.	12	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnErsNoCe	8/14/06 2:33 PM	
4.	14	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnEwsNoCe	8/14/06 3:31 PM	
5.	18	REQUESTED	L2VPN	ADD	admin	Customer1	L2tpv3AtmCe	8/15/06 12:03 PM	
6.	20	REQUESTED	L2VPN	ADD	admin	Customer2	L2tpv3AtmNoCe	8/15/06 1:53 PM	
7.	21	REQUESTED	VPLS	ADD	admin	Customer1	VplsMplsErsCe	8/18/06 11:46 AM	
8.	22	REQUESTED	VPLS	ADD	admin	Customer1	VplsMplsEwsNoCe	8/18/06 2:37 PM	

Step 2 Check a check box for a service request.

Step 3 Click **Edit**.

The VPLS Link Editor window appears. (See Figure 8-14.)

Figure 8-14 VPLS Link Editor

#	CE	CE Interface	Circuit Selection	Circuit Details	Circuit ID	Link Attributes
1.	ce3	Ethernet0/1	pe1:Ethernet4/3	Circuit Details	VLAN:26	Edit
2.	ce8	FastEthernet0/1	pe3:Ethernet1/1	Circuit Details	VLAN:25	Edit

Step 4 Specify remaining items in the End-to-End-Wire Editor window, as necessary for your configuration:

- Choose any of the blue highlighted values to edit the VPLS links.
- Click **Add Link** to add a VPLS link.
- Click **Delete Link** to delete a VPLS link.



Note If you are attempting to decommission a service request to which a template has been added, see [Monitoring Service Requests, page 9-10](#) for information on the proper way to do this.

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

Step 6 Edit the link attributes as desired.



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

Step 7 To add a template and data file to a link, choose a Device Name, and click **Add** under Templates. The Add/Remove Templates window appears.



Note To add a template to a link, you must have already created the template. For detailed steps to create templates, see the *Cisco IP Solution Center Infrastructure Reference, 5.1*. For more information on how to use templates and data files in service requests, see [Appendix B, “Working with Templates and Data Files.”](#)

Step 8 Click **Add**.

The Template Data File Chooser window appears.

Step 9 In the left pane, navigate to and select a template.

The associated data files are listed in rows in the main window.

Step 10 Check the data file that you want to add and click **Accept**.

The Add/Remove Templates window appears with the template displayed.

Step 11 Choose a Template name.

Step 12 Under Action, use the drop-down list and choose **APPEND** or **PREPEND**.

Append tells ISC to append the template generated CLI to the regular ISC (non-template) CLI. Prepend is the reverse and does not append the template to the ISC CLI.

Step 13 Choose Active to use this template for this service request.

If you do not choose Active, the template is not used.

Step 14 Click **OK**.

The Link Attributes with the template added appears.

Step 15 Click **OK**.

The Service Request Editor window appears.

Step 16 When you are finished editing the VPLS links, click **Save**.

Saving the VPLS Service Request

To save a VPLS service request, perform the following steps.

- Step 1** When you are finished with Link Attributes for all the Attachment Circuits, click **Save** to finish the VPLS service request creation.

If the VPLS service request is successfully created, you will see the service request list window. (See [Figure 8-15](#).) The newly created VPLS service request is added with the state of REQUESTED, as shown in the figure.

Figure 8-15 VPLS Service Request Created

Service Requests

Show Services with Job ID matching * of Type All Find

Showing 1 - 8 of 8 records

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
1.	7	REQUESTED	L2VPN	MODIFY	admin	Customer1	L2vpnErsCe	8/14/06 3:49 PM	
2.	10	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnEwsCe	8/14/06 11:41 AM	
3.	12	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnErsNoCe	8/14/06 2:33 PM	
4.	14	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnEwsNoCe	8/14/06 3:31 PM	
5.	18	REQUESTED	L2VPN	ADD	admin	Customer1	L2tpv3AtmCe	8/15/06 12:03 PM	
6.	20	REQUESTED	L2VPN	ADD	admin	Customer2	L2tpv3AtmNoCe	8/15/06 1:53 PM	
7.	21	REQUESTED	VPLS	ADD	admin	Customer1	VplsMplsErsCe	8/18/06 11:46 AM	
8.	22	REQUESTED	VPLS	ADD	admin	Customer1	VplsMplsEwsNoCe	8/18/06 2:37 PM	

Rows per page: 10 Go to page: 1 of 1

Auto Refresh: Create Details Status Edit Deploy Decommission Purge

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- Step 2** If, however, the VPLS service request creation failed for some reason (for example, a value chosen is out of bounds), you are warned with an error message.

In such a case, you should correct the error and save the service request again.