



CHAPTER 6

Managing an L2VPN Service Request

This chapter covers the basic steps to provision an ERS (EVPL), EWS (EPL), ATM, or Frame Relay L2VPN service. It contains the following sections:

- [Introducing L2VPN Service Requests, page 6-1](#)
- [Creating an L2VPN Service Request, page 6-2](#)
- [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request with a CE, page 6-2](#)
- [Creating an EWS \(EPL\) L2VPN Service Request with a CE, page 6-8](#)
- [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request without a CE, page 6-11](#)
- [Creating an EWS \(EPL\) L2VPN Service Request without a CE, page 6-16](#)
- [Modifying the L2VPN Service Request, page 6-20](#)
- [Saving the L2VPN Service Request, page 6-26](#)

Introducing L2VPN Service Requests

An L2VPN service request consists of one or more end-to-end wires, connecting various sites in a point-to-point topology. When you create a service request, you enter several parameters, including the specific interfaces on the CE and PE routers. You can also associate Cisco IP Solution Center (ISC) templates and data files with a service request. See [Appendix B, “Working with Templates and Data Files,”](#) for more about using templates and data files in service requests.

To create a service request, a Service Policy must already be defined, as described in [Chapter 5, “Creating an L2VPN Policy.”](#)

Based on the predefined L2VPN policy, an operator creates an L2VPN service request, with or without modifications to the L2VPN policy, and deploys the service. Service creation and deployment are normally performed by regular network technicians for daily operation of network provisioning.



Note

Not all of the attributes defined in an L2VPN policy might be applicable to a service request. For specific information, see L2VPN policy attribute descriptions in [Chapter 5, “Creating an L2VPN Policy.”](#)

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

- Choose a CE Topology for ERS (EVPL)/Frame Relay/ATM services.
- Choose the endpoints (CE and PE) that must be connected. For each end-to-end Layer 2 connection, ISC creates an end-to-end wire object in the repository for the service request.
- Choose a CE or PE interface.
- Choose a Named Physical Circuit (NPC) for the CE or PE.
- Edit the end-to-end connection.
- Edit the link attributes.
- (Optional) Associate templates and data files to devices in the service request.

Creating an L2VPN Service Request

To create an L2VPN service request, perform the following steps.

Step 1 Choose **Service Inventory > Inventory and Connection Manage > Service Requests**.

The Service Requests window appears.

Step 2 Click **Create**.

Step 3 Choose **L2VPN** from the drop-down list.

L2VPN service requests must be associated with an L2VPN policy. You choose an L2VPN policy from the policies previously created (see [Chapter 5, “Creating an L2VPN Policy”](#)).

Step 4 Choose the L2VPN policy of choice.

If more than one L2VPN policy exists, a list of L2VPN policies appears.

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

As soon as you make the choice, the new service request inherits all the properties of that L2VPN policy, such as all the editable and non-editable features and pre-set parameters.

To continue creating an L2VPN service request, go to one of the following sections:

- [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request with a CE, page 6-2.](#)
 - [Creating an EWS \(EPL\) L2VPN Service Request with a CE, page 6-8.](#)
 - [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request without a CE, page 6-11.](#)
 - [Creating an EWS \(EPL\) L2VPN Service Request without a CE, page 6-16.](#)
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Creating an ERS (EVPL), ATM, or Frame Relay L2VPN Service Request with a CE

This section includes detailed steps for creating an L2VPN service request with a CE present for ERS (EVPL), ATM, and Frame Relay policies. If you are creating an L2VPN service request for an EWS (EPL) policy, go to [Creating an EWS \(EPL\) L2VPN Service Request with a CE, page 6-8](#).

After you choose an L2VPN policy, the L2VPN Service Request Editor window appears. (See [Figure 6-1](#).)

Figure 6-1 L2VPN Service Request Editor

Perform the following steps.

- Step 1** Choose a **Topology** from the drop-down list. If you choose **Full Mesh**, each CE will have direct connections to every other CE.

If you choose **Hub and Spoke**, then only the Hub CE has connection to each Spoke CE and the Spoke CEs do not have direct connection to each other.



Note The full mesh and the hub and spoke topologies make a difference only when you choose more than two endpoints. For example, with four endpoints, ISC automatically creates six links with full mesh topology. With hub and spoke topology, however, ISC creates only three links.

- Step 2** Click **Add Link**.

You specify the CE endpoints using the Attachment Tunnel Editor. You can create one or more CEs from a window like the one in [Figure 6-2](#).

Figure 6-2 Select CE



Note All the services that deploy point-to-point connections (ERS/EVPL, EWS/EPL, ATMoMPLS, and FRoMPLS) must have at least two CEs specified.

- Step 3** Click **Select CE** in the CE column.

The CPE for Attachment Circuit window appears. (See [Figure 6-3](#).) 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.

Figure 6-3 Select CPE Device

#	Device Name	Customer Name	Site Name	Management Type
1.	ce3	Customer1	east	Managed
2.	ce8	Customer1	east	Managed
3.	ce13	Customer1	east	Managed

Step 4 In the Select column, choose a CE for the L2VPN link.

Step 5 Click **Select**.

The Service Request Editor window appears displaying the name of the selected CE in the CE column.

Step 6 Choose the CE interface from the drop-down list. (See [Figure 6-4](#).)

Figure 6-4 Select the CE Interface

#	CE	CE Interface	Circuit Selection	Circuit Details
1.	ce3	Select One	Select one circuit	Circuit Details



Note

When you provision an L2VPN ERS (EVPL) service, 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 relying 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.

**Note**

ISC only displays the available interfaces for the service, based on the configuration of the underlying interfaces, existing service requests that might be using the interface, and the customer associated with the service request. You can click the **Details** button to display a pop-up window with information on the available interfaces, such as interface name, customer name, VPN name and service request ID, service request type, VLAN translation type, and VLAN ID information.

- Step 7** If only one NPC exists for the Chosen CE and CE interface, that NPC is autopopulated in the Circuit Selection column and you need not choose it explicitly. If more than one NPC is available, click **Select one circuit** in the Circuit Selection column.

The NPC window appears, enabling you to choose the appropriate NPC.

- Step 8** 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 6-5](#).) This means that you do not have to further specify the PE to complete the link.

Figure 6-5 NPC Created

The screenshot shows the 'Attachment Tunnel Editor' window within the 'L2VPN(Point To Point) Service Request Editor'. The window has a title bar and a header section with the following fields: 'SR ID: New', 'Job ID: New', and 'Policy Name: L2vpnErsCe'. Below the header is a 'Select Topology:' dropdown menu set to 'Full Mesh'. A table below shows one record with columns: '#', 'CE', 'CE Interface', 'Circuit Selection', and 'Circuit Details'. The record shows '1.', a checkbox, 'ce3', 'Ethernet0/1' with a 'Detail' button, 'pe1.Ethernet4/3', and 'Circuit Details'. Below the table is a 'Rows per page:' dropdown set to '10' and a 'Go to page:' field set to '1' of '1'. At the bottom are buttons for 'Add Link', 'Delete Link', 'OK', and 'Cancel'. A note at the bottom left says 'Note: * - Required Field'. A vertical ID '138487' is on the right side.

#	CE	CE Interface	Circuit Selection	Circuit Details
1.	<input type="checkbox"/> ce3	Ethernet0/1 <input type="button" value="Detail"/>	pe1.Ethernet4/3	Circuit Details

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 9** Continue to specify additional CEs, as in previous steps.
ISC creates the links between CEs based on the Topology that you chose.
- Step 10** Click **OK** in [Figure 6-6](#).

Figure 6-6 *NPCs Created*

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnErsCe

Select Topology: Full Mesh

Showing 1-2 of 2 records

#	<input type="checkbox"/>	CE	CE Interface	Circuit Selection	Circuit Details
1.	<input type="checkbox"/>	ce3	Ethernet0/1 Detail	pe1.Ethernet4/3	Circuit Details
2.	<input type="checkbox"/>	ce8	FastEthernet0/1 Detail	pe3.Ethernet0/2	Circuit Details

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [OK](#) [Cancel](#)

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For ERS (EVPL), ATM, and Frame Relay, the End-to-End Wire Editor window appears. (See [Figure 6-7](#).)

Figure 6-7 *End-to-End Wire Editor*

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnErsCe (Core Type: MPLS)

VPN: * [Select VPN](#)

Description:

Showing 1-1 of 1 records

#	<input type="checkbox"/>	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	VC ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	<input type="checkbox"/>	-	<input type="text"/>	ce3-pe1	Edit	-	<input type="text"/>	ce8-pe3	Edit	-

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [Save](#) [Cancel](#)

Note: * - Required Field

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- Step 11** The VPN for this service request appears in the **VPN** field.
If there is more than one VPN, click **Select VPN** to choose a VPN. The VPN for L2VPN service request window appears.
- Step 12** Choose a **VPN Name** and click **Select**.
The L2VPN Service Request Editor window appears with the VPN name displayed.
- Step 13** If necessary, click **Add AC** in the Attachment Circuit AC2 column, and repeat Steps 3 to 10 for AC2.
The End-to-End Wire Editor window displays the complete end-to-end wire. (See [Figure 6-8](#).)

Figure 6-8 End-to-End Wire Created

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnErsCe (Core Type: MPLS)

VPN: * l2vpn_ers_vpn

Description:

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	VC ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	-	<input type="text"/>	ce3-pe1	<input type="button" value="Edit"/>	-	<input type="text"/>	ce8-pe3	<input type="button" value="Edit"/>	-

Rows per page: 10

Note: * - Required Field

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- Step 14** Specify remaining items in the End-to-End-Wire Editor window as necessary for your configuration:
- You can choose any of the blue highlighted values to edit the End-to-End Wire.
 - You can edit the AC link attributes to change the default policy settings. After you edit these fields, the blue link changes from Default to Changed. For more information, see the section [Modifying the L2VPN Service Request, page 6-20](#).
 - 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.
 - You can enter a description for each end-to-end wire in the **Description** field provided for each wire. The description shows up only in this window. The data in this field is not pushed to the device(s). The maximum length for this field is 256 characters.
 - The ID number is system-generated identification number for the circuit.
 - The Circuit ID is created automatically, based on the service. For example, for Ethernet, it is based on the VLAN number; for Frame Relay, it is based on the DLCI; for ATM, it is based on the VPI/VCI.
 - If the policy was set up for you to define a VC ID manually, enter it into the empty **VC ID** field. If policy was set to “auto pick” the VC ID, ISC will supply a VC ID, and this field will not be editable. In the case where you supply the VC ID manually, if the entered value is in the provider’s range, ISC validates if the entered value is available or allocated. If the entered value has been already allocated, ISC generates an error message saying that the entered value is not available and prompts you to re-enter the value. If the entered value is in the provider’s range, and if it is available, then it is allocated and is removed from the VC ID pool. If the entered value is outside the provider’s range, ISC displays a warning saying that no validation could be performed to verify if it is available or allocated.
 - You can also click **Add Link** to add an end-to-end wire.
 - You can click **Delete Link** to delete an end-to-end wire.
- Step 15** When you are finished editing the end-to-end wires, click **Save**.
The service request is created and saved into ISC.

Creating an EWS (EPL) L2VPN Service Request with a CE

This section includes detailed steps for creating an L2VPN service request with a CE present for EWS (EPL). If you are creating an L2VPN service request for an ERS (EVPL), ATM, or Frame Relay policy, go to [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request with a CE, page 6-2](#).

Perform the following steps.

Step 1 Create the L2VPN service request for EWS (EPL) with CE.

The L2VPN Service Request Editor window appears. (See [Figure 6-9](#).)

Figure 6-9 EWS (EPL) Service Request Editor

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsCe (Core Type: MPLS)

VPN: *

Description:

Showing 0 of 0 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
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 CE.

The Select VPN window appears with the VPNs defined in the system.

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

Step 4 Click **Select**.

The L2VPN Service Request Editor window appears with the VPN name displayed.

Step 5 Click **Add Link**. (See [Figure 6-10](#).)

Figure 6-10 End-To-End Wire Editor

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsCe (Core Type: MPLS)

VPN: l2vpn_ews_vpn [Select VPN](#)

Description:

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	-	<input type="text"/>	Add AC	Default	-	Add AC	Default	-

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [Save](#) [Cancel](#)

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- 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.
- You can enter a description for each end-to-end wire in the **Description** field provided for each wire. The description shows up only in this window. The data in this field is not pushed to the device(s). The maximum length for this field is 256 characters.
- The ID number is system-generated identification number for the circuit.
- The Circuit ID is created automatically, based on the service. For example, for Ethernet, it is based on the VLAN number; for Frame Relay, it is based on the DLCI; for ATM, it is based on the VPI/VCI.

Step 6 Click **Add AC** in the Attachment Circuit (A1) column.
The Attachment Tunnel Editor appears. (See [Figure 6-11](#).)

Figure 6-11 Select CE for Attachment Circuit

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsCe

Showing 1-1 of 1 records

#	CE	CE Interface	Circuit Selection	Circuit Details
1.	Select CE	<input type="text"/>	Detail	Select one circuit Circuit Details

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [OK](#) [Cancel](#)

Note: * - Required Field

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Step 7 Click **Select CE**.
The Select CPE window appears. (See [Figure 6-12](#).)

Figure 6-12 CPE for Attachment Circuit

#	Device Name	Customer Name	Site Name	Management Type
1.	ce3	Customer1	east	Managed
2.	ce8	Customer1	west	Managed
3.	ce13	Customer1	east	Managed

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 L2VPN link.

Step 9 Click **Select**.

Step 10 In the Attachment Tunnel Editor window, choose a CE interface from the drop-down list.

Step 11 If only one NPC exists for the Chosen CE and CE interface, that NPC is autopopulated in the Circuit Selection column and you need not choose it explicitly.

If more than one NPC is available, click **Select one circuit** in the Circuit Selection column. The NPC window appears, enabling you to choose the appropriate NPC. 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**. This means that you do not have to further specify the PE to complete the link.

Step 12 Click **OK**.

The EndToEndWire Editor window appears displaying the name of the selected CE in the AC1 column. (See Figure 6-13.)

Figure 6-13 NPC Created

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	-	ce3-pe1	ce3-pe1	Default	-	Add AC	Default	-

- Step 13** Click **AC1 Link Attributes** and edit the attributes if desired.
For more information, see the section [Modifying the L2VPN Service Request](#), page 6-20.
- Step 14** Click **OK**.
- Step 15** Repeat Steps 6 through 14 for **AC2**.
- Step 16** Click **OK**.
You see a window like [Figure 6-14](#).

Figure 6-14 Attachment Circuits Selected

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsCe (Core Type: MPLS)

VPN: * l2vpn_ews_vpn Select VPN

Description: []

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	-	[]	ce3-pe1	Default	-	ce8-pe3	Default	-

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

Add Link Delete Link Save Cancel

Note: * - Required Field

- Step 17** Click **Save**.
The EWS (EPL) service request is created and saved in ISC.

Creating an ERS (EVPL), ATM, or Frame Relay L2VPN Service Request without a CE

This section includes detailed steps for creating an L2VPN service request without a CE present for ERS (EVPL), ATM, and Frame Relay policies. If you are creating an L2VPN service request for an EWS (EPL) policy, go to [Creating an EWS \(EPL\) L2VPN Service Request without a CE](#), page 6-16.

Perform the following steps.

- Step 1** Create the L2VPN service request for ERS (EVPL) without a CE.
The L2VPN Service Request Editor window appears. (See [Figure 6-15](#).)

Figure 6-15 L2VPN Service Request Editor

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnErsNoCe

Select Topology: Full Mesh (dropdown menu open with options: Full Mesh, Hub and Spoke)

Showing 0 of 0 records

#	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details

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

Add Link Delete Link OK Cancel

Note: * - Required Field

Step 2 Choose a **Topology** from the drop-down list.

If you choose **Full Mesh**, each CE will have direct connections to every other CE. If you choose **Hub and Spoke**, then only the Hub CE has connection to each Spoke CE and the Spoke CEs do not have direct connection to each other.



Note The full mesh and the hub and spoke topologies make a difference only when you choose more than two endpoints. For example, with four endpoints, ISC automatically creates six links with full mesh topology. With hub and spoke topology, however, ISC creates only three links.

Step 3 Click **Add Link**.

The Attachment Tunnel Editor window appears. (See [Figure 6-16](#).)

Figure 6-16 Select U-PE/PE-AGG/N-PE

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnErsNoCe

Select Topology: Full Mesh

Showing 1-1 of 1 records

#	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details
1.	Select N-PE/PE-AGG/U-PE		Select one circuit	Circuit Details

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

Add Link Delete Link OK Cancel

Note: * - Required Field

Step 4 Specify the N-PE/PE-AGG/U-PE endpoints using the Attachment Tunnel Editor, as covered in the following steps.

Step 5 Click **Select U-PE/PE-AGG/N-PE** in the U-PE/PE-AGG/N-PE column.

The PE for Attachment Circuit window appears. (See [Figure 6-17](#)).

Figure 6-17 Select PE Device

#	Device Name	Provider Name	PE Region Name	Role Type
1.	pe1	Provider1	region_1	N_PE
2.	pe3	Provider1	region_1	N_PE
3.	sw2	Provider1	region_1	U_PE
4.	sw3	Provider1	region_1	U_PE
5.	sw4	Provider1	region_1	U_PE

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 6 In the **Select** column, choose the PE device name for the L2VPN link.

Step 7 Click **Select**.

The Service Request Editor window appears displaying the name of the selected PE in the PE column. (See Figure 6-18.)

Figure 6-18 Select the UNI Interface

#	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details
1.	sw2	Select One	Select one circuit	Circuit Details

Step 8 Choose the UNI interface from the drop-down list.



Note

When you provision an L2VPN ERS (EVPL) service, 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.

**Note**

ISC only displays the available interfaces for the service, based on the configuration of the underlying interfaces, existing service requests that might be using the interface, and the customer associated with the service request. You can click the **Details** button to display a pop-up window with information on the available interfaces, such as interface name, customer name, VPN name and service request ID, service request type, VLAN translation type, and VLAN ID information.

Step 9 If the PE role type is U-PE, click **Select one circuit** in the Circuit Selection column.

The NPC window appears. (See [Figure 6-19](#).)

Figure 6-19 Select NPC

Showing 1-2 of 2 records		
#	Select	Name
1.	<input type="radio"/>	5-(sw2)-<=>(pe1-Ethernet4/1)
2.	<input type="radio"/>	6-(sw2)-<=>(pe1-Ethernet4/2)

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

OK Cancel

If only one NPC exists for the Chosen PE and PE interface, that NPC is auto 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 10 Choose the name of the NPC from the **Select** column.

Step 11 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 6-20](#).) This means that you do not have to further specify the PE to complete the link.

Figure 6-20 NPC Created

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnErsNoCe

Select Topology: Full Mesh

Showing 1-1 of 1 records

#	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details
1.	sw2	FastEthernet0/1	pe1.Ethernet4/2	Circuit Details

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

Add Link Delete Link OK Cancel

Note: * - Required Field

Step 12 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 13** After you specify all the PEs, ISC creates the links between PEs based on the Topology that you chose.
- Step 14** Click **OK**.

For ERS (EVPL), ATM, and Frame Relay, the End-to-End-Wire Editor window appears. (See [Figure 6-21](#).)

Figure 6-21 End-to-End Wire Editor

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnErsNoCe (Core Type: MPLS)

VPN:

Description:

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	<input type="checkbox"/>	<input type="text"/>	sw2-pe1	Default	-	sw3-pe1	Default	-

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

Note: * - Required Field

- Step 15** The VPN for this service request appears in the Select VPN field.
- If there is more than one VPN, click **Select VPN** to choose a VPN.
- Step 16** Specify remaining items in the End-to-End-Wire Editor window, as necessary for your configuration:
- You can choose any of the **blue** highlighted values to edit the End-to-End Wire.
 - You can edit the AC link attributes to change the default policy settings. After you edit these fields, the **blue** link changes from Default to Changed. For more information, see the section [Modifying the L2VPN Service Request, page 6-20](#).
 - You can also click **Add Link** to add an end-to-end wire.
 - You can click **Delete Link** to delete an end-to-end wire.



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.
- You can enter a description for each end-to-end wire in the **Description** field provided for each wire. The description shows up only in this window. The data in this field is not pushed to the device(s). The maximum length for this field is 256 characters.
- The ID number is system-generated identification number for the circuit.
- The Circuit ID is created automatically, based on the service. For example, for Ethernet, it is based on the VLAN number; for Frame Relay, it is based on the DLCI; for ATM, it is based on the VPI/VCI.

- Step 17** When you are finished editing the end-to-end wires, click **Save**.
The service request is created and saved into ISC.

Creating an EWS (EPL) L2VPN Service Request without a CE

This section includes detailed steps for creating an L2VPN service request without a CE present for EWS (EPL). If you are creating an L2VPN service request for an ERS (EVPL), ATM, or Frame Relay policy, see [Creating an ERS \(EVPL\), ATM, or Frame Relay L2VPN Service Request without a CE, page 6-11](#).

- Step 1** Create the L2VPN service request for EWS (EPL) without a CE.
The L2VPN Service Request Editor window appears. (See [Figure 6-22](#).)

Figure 6-22 EWS (EPL) Service Request Editor

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsNoCe (Core Type: MPLS)

VPN: *

Description:

Showing 0 of 0 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
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 a VPN window appears with the VPNs defined in the system.
- Step 3** Choose a **VPN Name** in the Select column.
- Step 4** Click **Select**.
The End-To-End Wire Editor window appears with the VPN name displayed. (See [Figure 6-23](#).)

Figure 6-23 End-To-End Wire Editor

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsNoCe (Core Type: MPLS)

VPN*: l2vpn_ews_vpn [Select VPN](#)

Description:

Showing 1-1 of 1 records

#	<input type="checkbox"/>	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	<input type="checkbox"/>	-	<input type="text"/>	Add AC	Default	-	Add AC	Default	-

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [Save](#) [Cancel](#)

Note: * - Required Field

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- Step 5** Click **Add AC** in the Attachment Circuit (AC1) column.
The Attachment Tunnel Editor window appears. (See [Figure 6-24](#).)

Figure 6-24 Select the PE for the Attachment Circuit

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsNoCe

Showing 1-1 of 1 records

#	<input type="checkbox"/>	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details
1.	<input type="checkbox"/>	Select N-PE/PE-AGG/U-PE	<input type="text"/>	Detail	Select one circuit Circuit Details

Rows per page: 10 Go to page: 1 of 1 [Go](#)

[Add Link](#) [Delete Link](#) [OK](#) [Cancel](#)

Note: * - Required Field

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- Step 6** Click **Select N-PE/PE-AGG/U-PE**.
The Select PE Device window appears. (See [Figure 6-25](#).)

Figure 6-25 PE for Attachment Circuit

#	Device Name	Provider Name	PE Region Name	Role Type
1.	pe1	Provider1	region_1	N_PE
2.	pe3	Provider1	region_1	N_PE
3.	sw2	Provider1	region_1	U_PE
4.	sw3	Provider1	region_1	U_PE
5.	sw4	Provider1	region_1	U_PE

This window displays the list of currently defined PEs.

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

Step 7 In the Select column, choose a PE for the L2VPN link.

Step 8 Click **Select**.

The Attachment Tunnel Editor window appears. (See Figure 6-26.)

Figure 6-26 PE Interface

#	N_PE/PE_AGGU_PE	UNI Interface	Circuit Selection	Circuit Details
1.	sw3	Select One	Select one circuit	Circuit Details

Step 9 Choose a PE interface from the drop-down list.



Note

ISC only displays the available interfaces for the service, based on the configuration of the underlying interfaces, existing service requests that might be using the interface, and the customer associated with the service request. You can click the **Details** button to display a pop-up window with information on the available interfaces, such as interface name, customer name, VPN name and service request ID, service request type, VLAN translation type, and VLAN ID information.

- Step 10** If the PE role type is N-PE, the columns Circuit Selection and Circuit Details are disabled. In this case, skip to Step 13.
- Step 11** If the PE role type is U-PE, click **Select one circuit** in the Circuit Selection column. The Select NPC window appears. (See [Figure 6-27](#).)

Figure 6-27 Select NPC

Showing 1-3 of 3 records		
#	Select	Name
1.	<input type="radio"/>	1-(sw3-GigabitEthernet0/2)<==>(pe1-FastEthernet0/0)
2.	<input type="radio"/>	7-(sw3-)<==>(pe1-Ethernet4/1)
3.	<input checked="" type="radio"/>	8-(sw3-)<==>(pe1-Ethernet4/2)

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

OK Cancel



Note

If only one NPC exists for the Chosen PE and PE interface, that NPC is auto populated in the Circuit Selection column and you need not choose it explicitly.

- Step 12** If applicable, choose the name of the NPC from the Select column.
- Step 13** Click **OK**. The Attachment Tunnel Editor appears. (See [Figure 6-28](#).)

Figure 6-28 NPC Created

L2VPN(Point To Point) Service Request Editor

Attachment Tunnel Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsNoCe

Showing 1-1 of 1 records				
#	N-PE/PE-AGG/U-PE	UNI Interface	Circuit Selection	Circuit Details
1.	sw3	GigabitEthernet0/5	pe1:Ethernet4/2	Circuit Details

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

Add Link Delete Link OK Cancel

Note: * - Required Field



Note

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 6-28](#).) This means that you do not have to further specify the PE to complete the link.

- Step 14** Click **OK**. The Service Request Editor window appears displaying the name of the selected PE in the AC1 column. (See [Figure 6-29](#).)

Figure 6-29 Attachment Circuit Selected

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: New Job ID: New Policy Name: L2vpnEwsNoCe (Core Type: MPLS)

VPN: * l2vpn_ews_vpn Select VPN

Description: []

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	-	[]	sw3-pe1	Default	-	Add AC	Default	-

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

Add Link Delete Link Save Cancel

Note: * - Required Field

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Step 15 Click **AC1** Link Attributes and edit the attributes, if desired.

For more information, see the section [Modifying the L2VPN Service Request, page 6-20](#).

Step 16 Repeat Steps 5 through 14 for **AC2**.

Step 17 Specify remaining items in the End-to-End-Wire Editor window, as necessary for your configuration.

- 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.
- You can enter a description for each end-to-end wire in the **Description** field provided for each wire. The description shows up only in this window. The data in this field is not pushed to the device(s). The maximum length for this field is 256 characters.
- The ID number is system-generated identification number for the circuit.
- The Circuit ID is created automatically, based on the service. For example, for Ethernet, it is based on the VLAN number; for Frame Relay, it is based on the DLCI; for ATM, it is based on the VPI/VCI.

Step 18 Click **Save**.

The EWS (EPL) service request is created and saved in ISC.

Modifying the L2VPN Service Request

This section describes how to edit the L2VPN service request attributes. This is also where you can associate templates and data files to devices that are part of the ACs.

Perform the following steps.

Step 1 Choose **Service Inventory > Inventory and Connection Manager > Service Requests**. (See [Figure 6-30](#).)

Figure 6-30 L2VPN Service Activation

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
1.	7	REQUESTED	L2VPN	ADD	admin	Customer1	L2vpnErsCe	8/11/06 2:54 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	

Step 2 Check a check box for a service request.

Step 3 Click **Edit**.

The End-to-End-Wire Editor window appears. (See Figure 6-31.)

Figure 6-31 End-to-End Wire Editor

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	VC ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	8		ce3-pe1	Default	VLAN:1	104	ce8-pe3	Default	VLAN:1

Step 4 Modify any of the attributes, as desired:

- The VPN for this service request appears in the Select VPN field. If this request has more than one VPN, click **Select VPN** to choose a VPN.
- You can choose any of the **blue** highlighted values to edit the End-to-End Wire.
- You can edit the AC link attributes to change the default policy settings. After you edit these fields, the **blue** link changes from Default to Changed.
- 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.
- You can enter a description for each end-to-end wire in the **Description** field provided for each wire. The description shows up only in this window. The data in this field is not pushed to the device(s). The maximum length for this field is 256 characters.
- The Circuit ID is created automatically, based on the VLAN data for the circuit.

- If the policy was set up for you to define a VC ID manually, enter it into the empty **VC ID** field. If policy was set to “auto pick” the VC ID, ISC will supply a VC ID, and this field will not be editable. In the case where you supply the VC ID manually, if the entered value is in the provider’s range, ISC validates if the entered value is available or allocated. If the entered value has been already allocated, ISC generates an error message saying that the entered value is not available and prompts you to re-enter the value. If the entered value is in the provider’s range, and if it is available, then it is allocated and is removed from the VC ID pool. If the entered value is outside the provider’s range, ISC displays a warning saying that no validation could be performed to verify if it is available or allocated.
- You can also click **Add Link** to add an end-to-end wire.
- You can click **Delete Link** to delete an end-to-end wire.



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.

- The ID number is system-generated identification number for the circuit.
- The Circuit ID is created automatically, based on the service. For example, for Ethernet, it is based on the VLAN number; for Frame Relay, it is based on the DLCI; for ATM, it is based on the VPI/VCI.

Step 5 To edit AC attributes, click the **Default** button.

The Link Attributes window appears. (See [Figure 6-32](#).)

Figure 6-32 Link Attributes Window

The screenshot shows the 'Link Attributes' window with the following configuration:

Attribute	Value
PE Information	
Interface Name	pe1
Standard UNI Port	Ethernet4/3
PE/UNI Interface Description:	<input type="text"/>
Encapsulation:	DOT1Q
CE Information	
Interface Name	ce3
Encapsulation:	Ethernet0/1
Encapsulation:	DOT1Q
IP Address with Mask:	<input type="text"/> (x.x.x.x/xx)
UNI Shutdown	<input type="checkbox"/>
Keep Alive	<input type="checkbox"/>
VLAN and Other Information	
VLAN ID AutoPick	<input checked="" type="checkbox"/>
VLAN Name	<input type="text"/>
Link Speed	None
Link Duplex	None
Use Existing ACL Name	
Port-Based ACL Name	<input type="text"/>
UNI MAC Addresses	<input type="text"/> Edit
UNI Port Security	<input type="checkbox"/>
N-PE Pseudo-wire On SVI	<input checked="" type="checkbox"/>
VLAN Translation	<input checked="" type="radio"/> No <input type="radio"/> 1:1 <input type="radio"/> 2:1
PW Tunnel Selection	<input checked="" type="checkbox"/>
Interface Tunnel	<input type="text"/> (0 - 2147483647)
Device Name	
ce3	MANAGED Add
pe1	N-PE Add

Note: *- Required Field

Step 6 Edit any of the link attributes, as desired.

Step 7 To add a template and data file to an attachment circuit, choose a Device Name, and click **Add** under Templates.

The Add/Remove Templates window appears. (See [Figure 6-33](#).)



Note To add a template to an attachment circuit, 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.”](#)

Figure 6-33 Add/Remove Templates

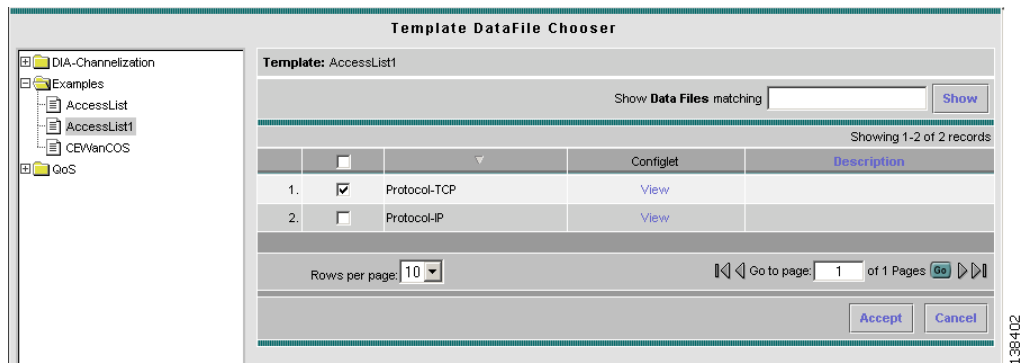
The screenshot shows the 'Add/Remove Templates' window with the following details:

- Showing 0 of 0 records
- Table with columns: #, Template, Data File, Action, Active
- Buttons: Add, Remove
- Rows per page: 10
- Go to page: 1 of 1
- Buttons: OK, Cancel

Step 8 Click **Add**.

The Template Data File Chooser window appears. (See [Figure 6-34](#).)

Figure 6-34 Template Datafile Chooser



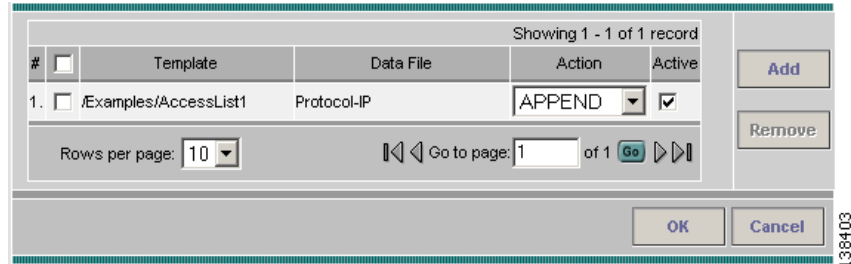
Step 9 In the left pane, navigate to and select a template.

The associated data files are listed in rows in the main window, as shown in [Figure 6-34](#).

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

The Add/Remove Templates window appears with the template displayed. (See [Figure 6-35](#).)

Figure 6-35 Add/Remove Templates with Templates Shown



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. (See [Figure 6-36](#).)

Figure 6-36 Link Attributes with Template Added

Link Attributes

Attribute	Value									
PE Information										
Interface Name	pe1 Ethernet4/3									
Standard UNI Port	<input checked="" type="checkbox"/>									
PE/UNI Interface Description:	<input type="text"/>									
Encapsulation:	DOT1Q									
CE Information										
Interface Name	ce3 Ethernet0/1									
Encapsulation:	DOT1Q									
IP Address with Mask:	<input type="text"/> (x.x.x.xxx)									
UNI Shutdown	<input type="checkbox"/>									
Keep Alive	<input type="checkbox"/>									
VLAN and Other Information										
VLAN ID AutoPick	<input checked="" type="checkbox"/>									
VLAN Name	<input type="text"/>									
Link Speed	None									
Link Duplex	None									
Use Existing ACL Name										
Port-Based ACL Name	<input type="text"/>									
UNI MAC Addresses	<input type="text"/> Edit									
UNI Port Security										
UNI Port Security	<input type="checkbox"/>									
N-PE Pseudo-wire On SVI ⓘ										
N-PE Pseudo-wire On SVI	<input checked="" type="checkbox"/>									
VLAN Translation										
VLAN Translation	<input checked="" type="radio"/> No <input type="radio"/> 1:1 <input type="radio"/> 2:1									
PW Tunnel Selection ⓘ										
PW Tunnel Selection	<input checked="" type="checkbox"/>									
Interface Tunnel										
Interface Tunnel	<input type="text"/> (0 - 2147483647)									
<table border="1"> <thead> <tr> <th>Device Name</th> <th>Role</th> <th>Templates</th> </tr> </thead> <tbody> <tr> <td>ce3</td> <td>MANAGED</td> <td>AccessList1/Protocol-TCP</td> </tr> <tr> <td>pe1</td> <td>N-PE</td> <td>Add</td> </tr> </tbody> </table>		Device Name	Role	Templates	ce3	MANAGED	AccessList1/Protocol-TCP	pe1	N-PE	Add
Device Name	Role	Templates								
ce3	MANAGED	AccessList1/Protocol-TCP								
pe1	N-PE	Add								

Note: *- Required Field

OK Cancel

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**Note**

For more information about using templates and data files in service requests, see [Appendix B, “Working with Templates and Data Files.”](#)

Step 15 Click **OK**.

The Service Request Editor window appears showing the default for AC1 changed. (See [Figure 6-37](#).)

Figure 6-37 Service Request Editor with Link Attributes Changed.

L2VPN(Point To Point) Service Request Editor

EndToEndWire Editor

SR ID: 7 Job ID: 7 Policy Name: L2vpnErsCe (Core Type: MPLS)

VPN: l2vpn_ers_vpn

Description:

Showing 1-1 of 1 records

#	ID	Description	Attachment Circuit1 (AC1)	AC1 Attributes	Circuit1 ID	VC ID	Attachment Circuit2 (AC2)	AC2 Attributes	Circuit2 ID
1.	<input checked="" type="checkbox"/>	<input type="text"/>	ce3-pe1	Changed	VLAN:22	104	ce8-pe3	Default	VLAN:22

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

Note: * - Required Field

Step 16 When you are finished editing the end-to-end wires, click **Save**.

Saving the L2VPN Service Request

To save an L2VPN 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 L2VPN service request creation. If the L2VPN service request is successfully created, you will see the service request list window. (See [Figure 6-38](#).) The newly created L2VPN service request is added with the state of REQUESTED, as shown in the figure.

Figure 6-38 L2VPN Service Request Created

Service Requests

Show Services with Job ID matching * of Type All

Showing 1 - 4 of 4 records

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
1.	7	<input type="checkbox"/>	REQUESTED L2VPN	MODIFY	admin	Customer1	L2vpnErsCe	8/14/06 3:49 PM	
2.	10	<input type="checkbox"/>	REQUESTED L2VPN	ADD	admin	Customer1	L2vpnEwsCe	8/14/06 11:41 AM	
3.	12	<input type="checkbox"/>	REQUESTED L2VPN	ADD	admin	Customer1	L2vpnErsNoCe	8/14/06 2:33 PM	
4.	14	<input type="checkbox"/>	REQUESTED L2VPN	ADD	admin	Customer1	L2vpnEwsNoCe	8/14/06 3:31 PM	

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

Auto Refresh

Step 2 If, however, the L2VPN 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.

For information on deploying L2VPN service requests, see [Deploying Service Requests, page 9-1](#).