



## CHAPTER 12

# Provisioning Multiple Devices

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This chapter describes how to configure multiple devices, Layer 2 (L2) “switches” and Layer 3 (L3) “routers,” using the IP Solution Center (ISC) provisioning process. It contains the following sections:

- [NPC Ring Topology, page 12-1](#)
- [Ethernet-To-The-Home \(ETTH\), page 12-9](#)

## NPC Ring Topology

This section describes how to create a Ring Topology, connect the CE starting and PE-POP ending points, and configure the Named Physical Circuits (NPC) from end to end, using the IP Solution Center (ISC) provisioning process.

This section contains the following sections:

- [Ring Topology Overview, page 12-1](#)
- [Creating Ring of Three PE-CLEs, page 12-2](#)
- [Configuring NPC Ring Topology, page 12-5](#)

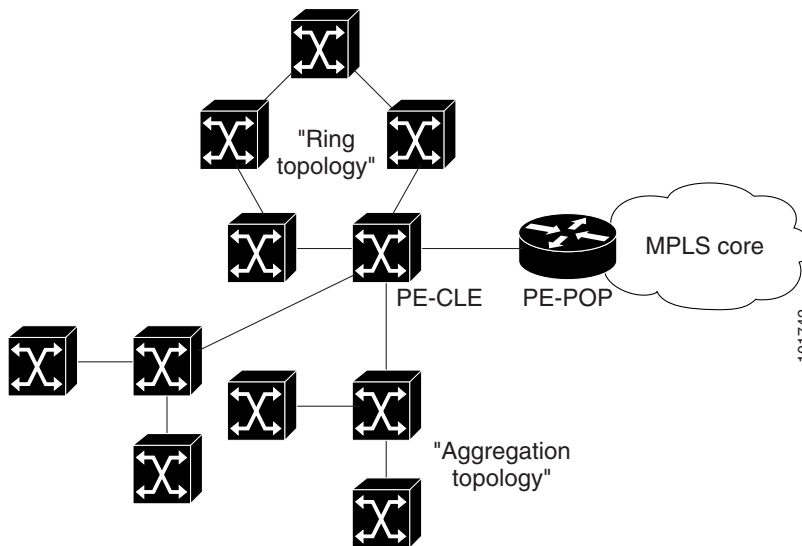
## Ring Topology Overview

Service providers are now looking to offer L2 and L3 services that must integrate with a common MPLS infrastructure. ISC supports two basic L2 topologies to access L3 MPLS networks:

- Ring Topology
- Aggregation Topology (“Hub and Spoke”)

[Figure 12-1](#) shows an example of these two basic L2 access topologies.

Figure 12-1 L2 Access Topologies

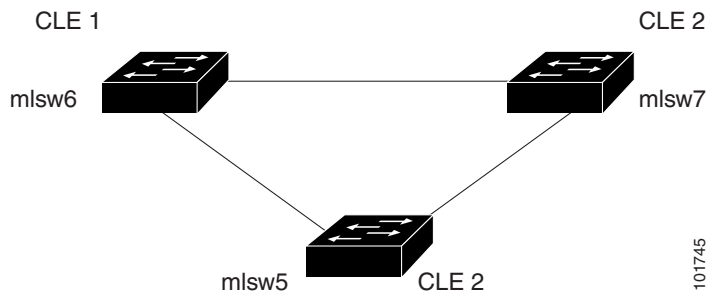


## Creating Ring of Three PE-CLEs

In its simplest form, the Ring Topology is a tripartite structure that comprises at least three PE- CLE. A PE-POP and a Multi-VRF CE can also be part of a Ring.

Figure 12-2 shows an example ring of three Catalyst 3550 switches: mlsw5, mlsw6, and mlsw7.

Figure 12-2 A Ring of Three PE-CLE



To create a ring of three PE-CLEs, perform the following steps.

- 
- Step 1** Choose **Service Inventory > Inventory and Connection Manager**.
  - Step 2** Click **NPC Rings** in the TOC under **Named Physical Circuits**.  
The NPC Rings window appears, as shown in [Figure 12-3](#).

Figure 12-3 NPC Rings

NPC Rings

Show NPC rings with name matching

Showing 0 of 0 records

#	Name
Rows per page: <input type="text" value="10"/>	
Go to page: <input type="text" value="1"/> of 0 <input type="button" value="Go"/>	
<input type="button" value="Create"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>	

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**Step 3** Click **Create** to continue.

The Create Ring window appears, as shown in Figure 12-4.

Figure 12-4 Create Ring

Create Ring

#	Source Device	Source Interface	Destination Device	Destination Interface
1.	<input type="checkbox"/> <a href="#">Select source device</a>	Select source interface	<a href="#">Select destination device</a>	Select destination interface
2.	<input type="checkbox"/> <a href="#">Select source device</a>	Select source interface	<a href="#">Select destination device</a>	Select destination interface
3.	<input type="checkbox"/> <a href="#">Select source device</a>	Select source interface	<a href="#">Select destination device</a>	Select destination interface

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**Step 4** Click **Select source device** in the first cell.

The Show Devices window appears, as shown in Figure 12-5.



**Note** The Show Devices drop-down window in Figure 12-5 should show *CLE* rather than *PE*. This is a known application error. You cannot initiate this process with a PE-POP or a CE. You must begin with a PE-CLE.

Figure 12-5 Show Devices

Show  devices where  matching

Showing 1-1 of 1 records

#	Select	Device Name	Provider Name	Region Name	PE Role Type
1.	<input type="checkbox"/>	mlsw6.cisco.com	PROVIDER-X	NORTH-X	PE_CLE

Rows per page:

Go to page:  of 1

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**Step 5** To search for a specific CLE, enter the *source device* in the **matching** dialog-box and click **Find**.

**Step 6** Choose the CLE and click **Select**.

The Create Ring window appears, as shown in Figure 12-6.

**Figure 12-6** Create Ring

#	<input type="checkbox"/>	Link ID	CE	CE Interface	MVRFCE CE Facing Interface	MVRFCE	MVRFCE PE Facing Interface	PE	PE Interface	Link Attribute	Logical Link
1.	<input type="checkbox"/>	0	mlce4	FastEthernet0/1	Ethernet0/2	mlce3	Select One	Select PE		Add	N/A

Showing 1 - 1 of 1 record

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

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

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- Step 7** Continue from left to right and from top to bottom to fill the table with the appropriate Device and Interface information, which would be based on a network diagram from your own environment.



**Note** If you had used the network diagram in [Figure 12-8](#) to populate the Create Ring table, it would contain the above information at the end of this process.

- Step 8** Click **Save** to save your ring in the Repository.

The NPC Rings window appears, as shown in [Figure 12-7](#)

**Figure 12-7** NPC Rings

Create a Named Physical Circuit				
#	<input type="checkbox"/>	Device	Incoming Interface	Outgoing Interface
1.	<input checked="" type="checkbox"/>	mlce14		Select outgoing interface
2.	<input type="checkbox"/>	mlpe4	Select incoming interface	

[Insert Device](#) [Insert Ring](#) [Add Device](#) [Add Ring](#) [Delete](#) [Save](#) [Cancel](#)

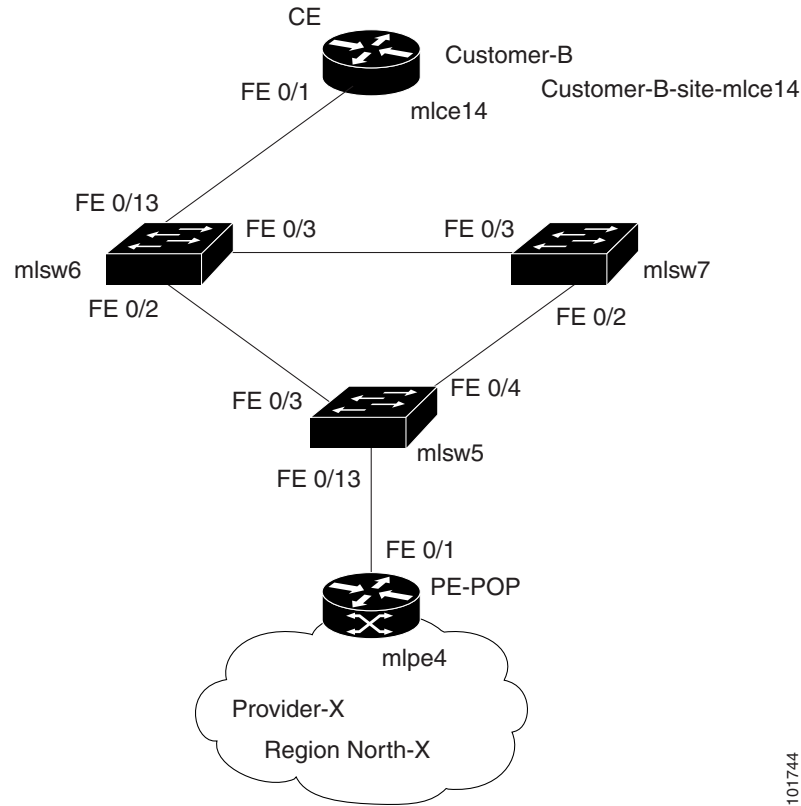
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Proceed to [Configuring NPC Ring Topology](#), page 12-5.

## Configuring NPC Ring Topology

Figure 12-8 shows an example of the Ring Topology (three CLE) inserted between a CE (mlce14) and a PE-POP (mlpe4).

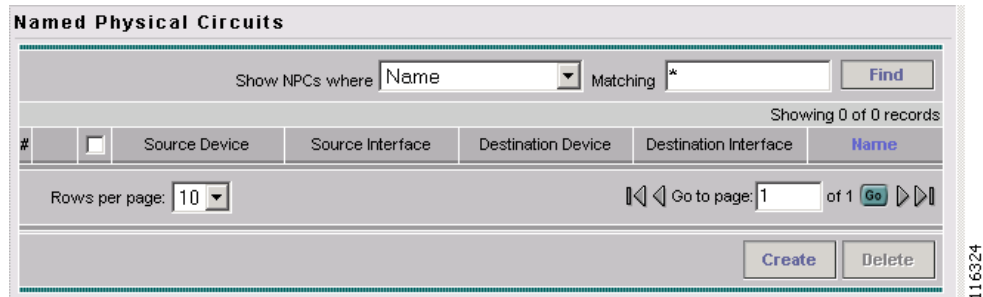
Figure 12-8 The Ring Topology



To configure end-to-end connectivity (CE > Ring (PE-CLE) > PE), perform the following steps.

- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Named Physical Circuits**. The Named Physical Circuits window appears, as shown in Figure 12-9.

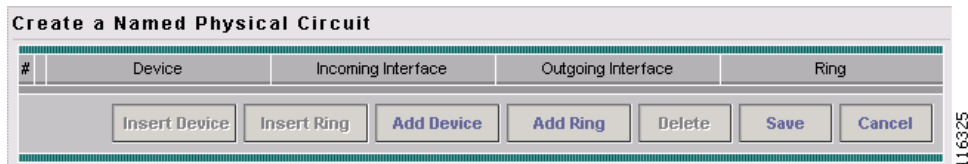
**Figure 12-9** *Named Physical Circuits*



**Step 2** Click **Create**.

The Create a Named Physical Circuit window appears, as shown in [Figure 12-10](#).

**Figure 12-10** *Create a Named Physical Circuit*



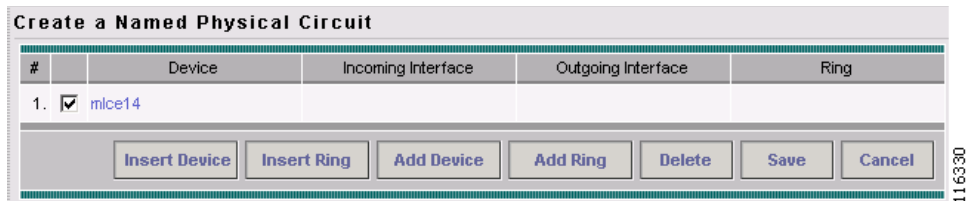
**Step 3** Click **Add Device**.

The Select Devices window appears.

**Step 4** Choose the CE and then click **Select**.

The Create a Named Physical Circuit window appears, as shown in [Figure 12-11](#).

**Figure 12-11** *Create a Named Physical Circuit*



**Step 5** Click **Add Device**.

The Select Devices window appears, as shown in [Figure 12-12](#).

Figure 12-12 Choose Devices

Showing 1 - 7 of 7 records

#	Device Name	Provider Name	Region Name	PE Role Type
1.	<input type="radio"/> mlpe1	Provider-X	West-X	PE_POP
2.	<input type="radio"/> mlpe2	Provider-X	West-X	PE_POP
3.	<input type="radio"/> mlpe3	Provider-X	West-X	PE_POP
4.	<input checked="" type="radio"/> mlpe4	Provider-X	West-X	PE_POP
5.	<input type="radio"/> mlsw5	Provider-X	North-X	PE_CLE
6.	<input type="radio"/> mlsw6	Provider-X	North-X	PE_CLE
7.	<input type="radio"/> mlsw7	Provider-X	North-X	PE_CLE

Rows per page: 50 Go to page: 1 of 1

Select Cancel

**Step 6** Choose the PE and then click **Select**.

The Create a Named Physical Circuit window appears, as shown in Figure 12-13.

Figure 12-13 Create a Named Physical Circuit

Create a Named Physical Circuit

#	Device	Incoming Interface	Outgoing Interface	Ring
1.	<input checked="" type="checkbox"/> mlce14		Select outgoing interface	
2.	<input type="checkbox"/> mlpe4	Select incoming interface		

Insert Device Insert Ring Add Device Add Ring Delete Save Cancel

**Step 7** Click **Insert Ring**.

The Show NPC Rings window appears, as shown in Figure 12-14.

Figure 12-14 Show NPC Rings

Showing 1 - 1 of 1 record

#	Ring Name
1.	1-mlsw6-FastEthernet0/3

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

Select Cancel

**Step 8** Choose an NPC Ring and click **Select**.

The Create a Named Physical Circuit window appears, as shown in Figure 12-15.

**Figure 12-15** Create a Named Physical Circuit

#	Device	Incoming Interface	Outgoing Interface	Ring
1.	<input type="checkbox"/> m1ce14		Select outgoing interface	
2.	<input checked="" type="checkbox"/> Select device	Select incoming interface		1-mlsw6-FastEthernet0/3
3.	<input type="checkbox"/> Select device		Select outgoing interface	1-mlsw6-FastEthernet0/3
4.	<input type="checkbox"/> m1pe4	Select incoming interface		

Buttons: Insert Device, Insert Ring, Add Device, Add Ring, Delete, Save, Cancel

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**Step 9** Choose a device with an available check box and click **Select device**.

The Show PE Devices window appears, as shown in [Figure 12-16](#).

**Figure 12-16** Show PE Devices

Show **PE** devices where **Device Name** Matching \*

Showing 1 - 3 of 3 records

#	Device Name	Provider Name	Region Name	PE Role Type
1.	<input type="radio"/> m1sw5	Provider-X	North-X	PE_CLE
2.	<input checked="" type="radio"/> m1sw6	Provider-X	North-X	PE_CLE
3.	<input type="radio"/> m1sw7	Provider-X	North-X	PE_CLE

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

Buttons: Select, Cancel

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**Step 10** Choose a PE-CLE and click **Select**.

The Create a Named Physical Circuit window appears.

**Step 11** Choose the incoming and outgoing interfaces for the CE, CLE, and PE until complete.

**Step 12** Choose the remaining device with the darkened check box.

The Create a Named Physical Circuit window appears, as shown in [Figure 12-17](#).

**Figure 12-17** Create a Named Physical Circuit

#	Device	Incoming Interface	Outgoing Interface	Ring
1.	<input checked="" type="checkbox"/> m1ce14		FastEthernet0/1	
2.	<input type="checkbox"/> m1sw6	FastEthernet0/13		1-m1sw6-FastEthernet0/3
3.	<input type="checkbox"/> m1sw5		FastEthernet0/13	1-m1sw6-FastEthernet0/3
4.	<input type="checkbox"/> m1pe4	FastEthernet0/1		

Buttons: Insert Device, Insert Ring, Add Device, Add Ring, Delete, Save, Cancel

**Step 13** Click **Save**.

The Named Physical Interfaces window appears, with the Ring Topology displayed, as shown in Figure 12-18.

**Figure 12-18** Named Physical Circuits

#	Source Device	Source Interface	Destination Device	Destination Interface	Name
1.	<input type="checkbox"/> m1sw5	FastEthernet0/13	m1pe4	FastEthernet0/1	1-(m1sw5-FastEthernet0/13)<==>(m1pe4-FastEthernet0/1)
2.	<input type="checkbox"/> m1sw6		m1pe4	FastEthernet0/1	2-(m1sw6-)<==>(m1pe4-FastEthernet0/1)
3.	<input type="checkbox"/> m1sw7		m1pe4	FastEthernet0/1	3-(m1sw7-)<==>(m1pe4-FastEthernet0/1)
4.	<input type="checkbox"/> m1ce14	FastEthernet0/1	m1pe4	FastEthernet0/1	4-(m1ce14-FastEthernet0/1)<==>(m1pe4-FastEthernet0/1)

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

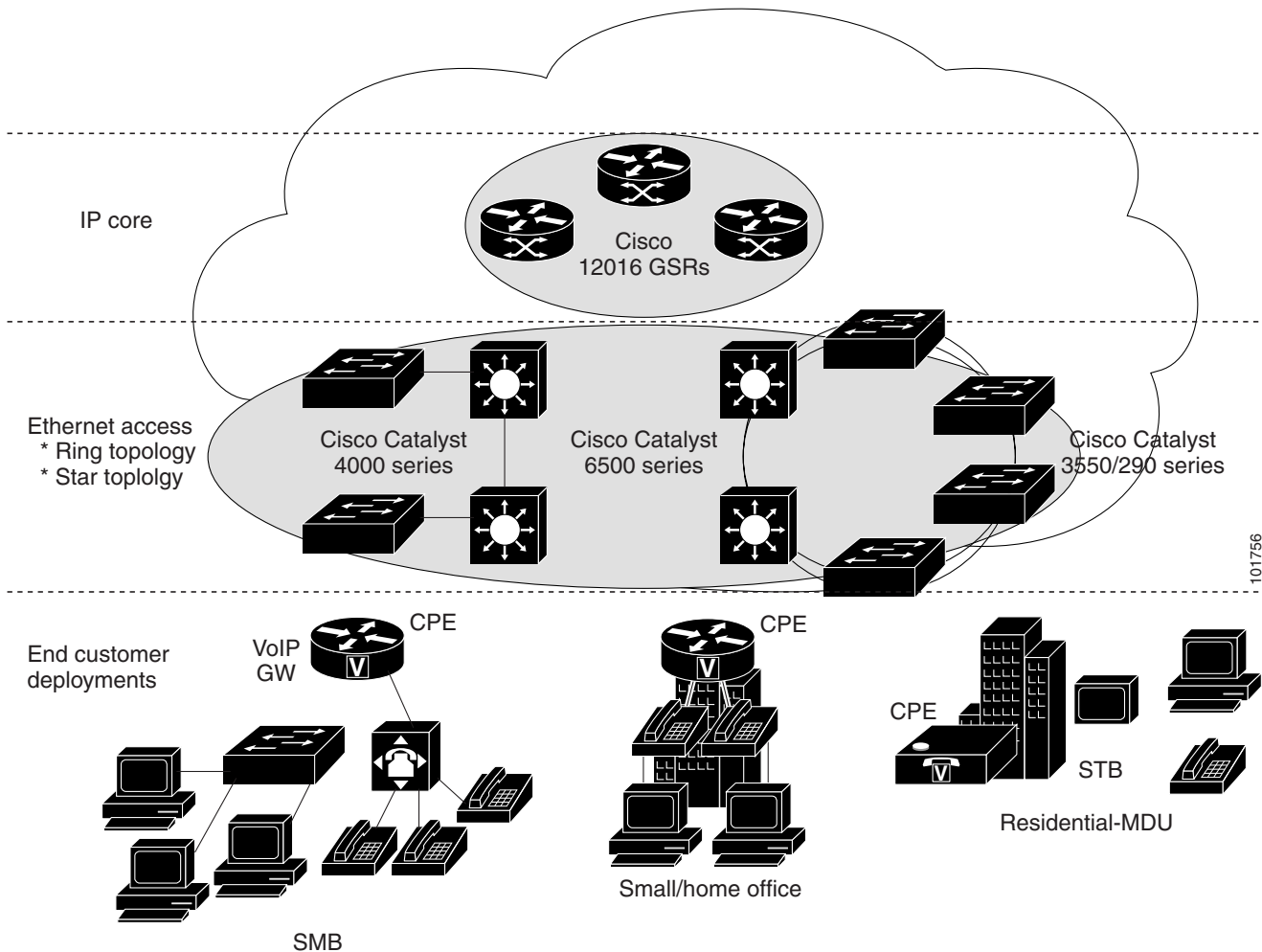
## Ethernet-To-The-Home (ETTH)

This section describes how to configure Ethernet-To-The-Home (ETTH) using the IP Solution Center (ISC) provisioning process.

ETTH is part of the Cisco ETTx solution, which contains both ETTH and Ethernet-to-the-Business (ETTB). ETTB is supported in ISC with the L2VPN Metro Ethernet service feature. Unlike ETTB, whose customers are mainly business customers, ETTH is targeted at residential customers.

Figure 12-19 shows an overview of the Cisco ETTx solution.

Figure 12-19 Cisco ETTx Solution



From a provisioning standpoint, the main difference between ETTB and ETTH is the consideration of resource scalability. For example, with ETTB, each business customer is allocated one or more VLAN(s).

With ETTH, it is not practical to assign a unique VLAN to each residential customer. The practical solution is to have all, or a group of residential customers, share the same VLAN and use common technology, such as a private VLAN (PVLAN) or a protected port, to guarantee traffic isolation.

Another difference between ETTB and ETTH is that most of the ETTB customers use an Ethernet trunk port while ETTH customers use an access port. In ISC, the access port is fully supported, with CE present or with no CE.

ETTH needs to support multicast based services, such as video, on a shared media such as a ring. Typically, Internet Group Management Protocol (IGMP) with Multicast VLAN Registration (MVR) would be the technology used to support these services.

## Access Domain Management

To provide more flexibility in managing an access domain, you can define a management VLAN. Once defined, the management VLAN is used to construct the list of VLANs allowed on the trunk port for all non-UNI ports.

You can also specify how the VLAN allowed list is constructed in a trunk port for a domain, if the list is not on the device. This feature is implemented for L2VPN DCPL parameter. It is available for Layer 2 access to MPLS VPN as well.

As a part of Layer 2 access management, ISC provides the ability to create MAC access lists by specifying the MAC addresses to be allowed or blocked.

## ISC ETTH Implementation

The ISC MPLS VPN implementation of ETTH consists of the following three subfeatures:

- [PVLAN or Protected Port, page 12-11](#)
- [Access Port, page 12-11](#)
- [IGMP with MVR, page 12-11](#)

### PVLAN or Protected Port

This feature is used to isolate traffic within a PVLAN. It prevents traffic from flowing between two UNIs.

- PVLAN is only supported on the Catalyst 4500/6500 switches and Cisco 7600 router.
- Protected Port is only supported on the Catalyst 2950/3550 switches.

### Access Port

In ISC, the untagged Ethernet default is supported in the CE present and no CE scenarios. You can choose between two encapsulations: DOT1Q and Default.

The Default encapsulation only indicates that the traffic coming in from the CE is untagged. The UNI, which is always a dot1q port, puts a tag on it before transmitting it. UNI has two options to handle this untagged traffic. It functions as an access port or a trunk port. For this reason, the GUI adds one more item for you to choose.

### IGMP with MVR

This feature applies to a very specific user service and network topology. It is used for multicast video on a hub and spoke or ring network. However, it is not up to ISC to decide when it is used. ISC only makes it available and the network application running above ISC must invoke it when needed.

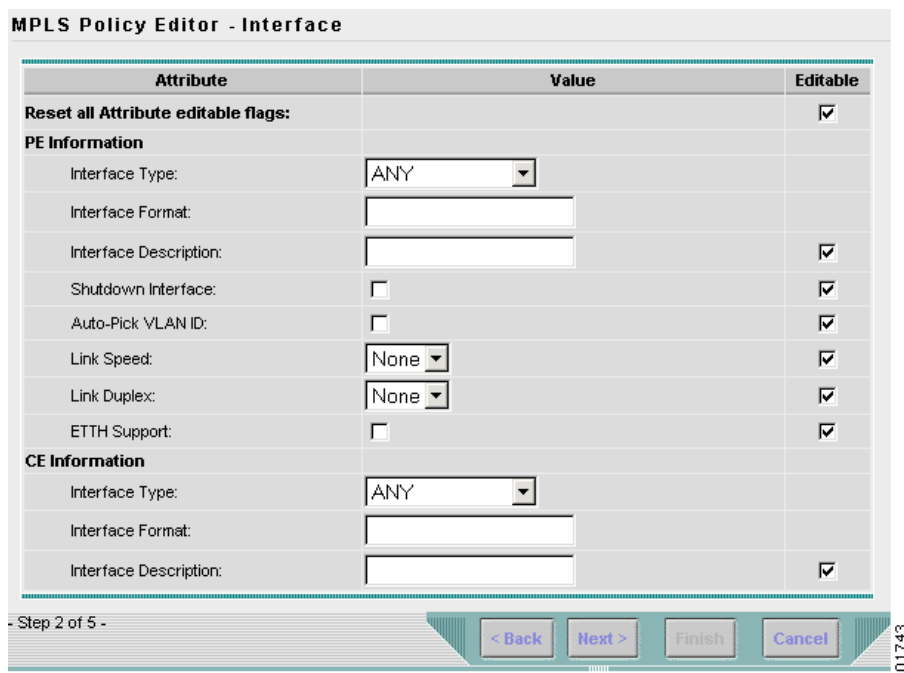
# Creating an ETTH Policy

To configure a policy to support ETTH, perform the following steps.

- Step 1** Choose **Service Design > Policies**.
- Step 2** From the Policies window, choose a Service Policy and click **Edit**.
- Step 3** From the Policy Type window, click **Next**.

The MPLS Policy Editor - Interface window appears, as shown in [Figure 12-20](#).

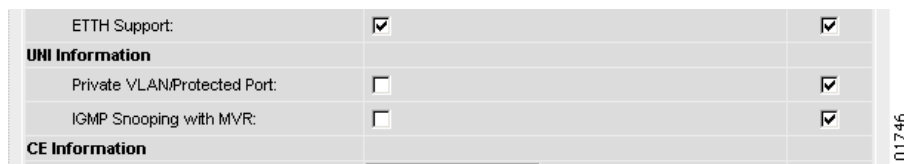
**Figure 12-20 MPLS Policy Editor - Interface**



- Step 4** To enable ETTH, check the **ETTH Support** check box.

The ETTH UNI Information check boxes appear between the **ETTH Support** check box and the CE Information, as shown in [Figure 12-21](#).

**Figure 12-21 ETTH UNI Information**



- Step 5** To enable Private VLAN or Protected Port, check the **Private VLAN/Protected Port** check box.
- Step 6** To enable IGMP Snooping with MVR, check the **IGMP Snooping with MVR** check box.

Three new UNI Information options appear, as shown in [Figure 12-22](#).

Figure 12-22 ETTH UNI Information Options

UNI Information		
Private VLAN/Protected Port:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IGMP Snooping with MVR:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mode:	<input checked="" type="radio"/> Compatible <input type="radio"/> Dynamic	<input checked="" type="checkbox"/>
Query Time:	<input type="text" value=""/> (1-100)	<input checked="" type="checkbox"/>
Immediate:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**Step 7** Choose UNI Information options:

- **Mode**
  - **Compatible**—Multicast addresses are statically configured on the device.
  - **Dynamic**—IGMP snooping is configured on the device.
- **Query Time**—Determines how often the device is queried for membership.
- **Immediate**—Removes the interface from the forwarding table immediately, when the session ends.

**Step 8** Complete the standard steps and click **Save**.

## Creating a Service Request for ETTH

To create a service request for ETTH, perform the following steps.

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

**Step 2** From the Service Requests window, choose a Service Request and click **Edit**.

**Step 3** From the MPLS Service Request Editor window, click the **Link Attribute** link.

The MPLS Link Attribute Editor - Interface window appears, as shown in [Figure 12-23](#).

Figure 12-23 MPLS Link Attribute Editor - Interface

MPLS Link Attribute Editor - Interface

Attribute	Value
<b>PE Information</b>	
PE	pe1
Interface Name:	Ethernet4/2. <input type="text"/> (1-4294967295)
Interface Description:	<input type="text"/>
Shutdown Interface:	<input type="checkbox"/>
PE Encapsulation: ⓘ	DOT1Q <input type="button" value="v"/>
VLAN ID *:	<input type="text"/> (1-4094)
Auto-Pick VLAN ID:	<input type="checkbox"/>
Second VLAN ID: ⓘ	<input type="text"/> (1-4094)
Use SVI:	<input type="checkbox"/>
ETTH Support:	<input checked="" type="checkbox"/>
Standard UNI Port:	<input type="checkbox"/>
<b>UNI Information</b>	
Shared VLAN:	<input type="checkbox"/>
Private VLAN/Protected Port:	<input checked="" type="checkbox"/>
Secondary VLAN ID: ⓘ	<input type="text"/> (1-4094)
IGMP Snooping with MVR:	<input checked="" type="checkbox"/>
Mode:	<input checked="" type="radio"/> Compatible <input type="radio"/> Dynamic
Query Time:	<input type="text"/> (1-100)
Multicast IP Address:	<input type="button" value="Edit"/>
Multicast VLAN ID:	<input type="text"/> (1-4094)
Immediate:	<input type="checkbox"/>

Note: \* - Required Field

- Step 1 of 3 -

**Step 4** Edit the following Link Attribute specific UNI Information:

- **Secondary VLAN ID**—Enter a *VLAN ID* for the Private VLAN, which is supported only on the Catalyst 4000 switch.
- **Multicast IP Address**—See [Step 5](#).
- **Multicast VLAN ID**—Enter a *VLAN ID* for the Multicast VLAN.

**Step 5** Click **Edit**.

The Multicast IP Addresses dialog box appears, as shown in [Figure 12-24](#).

Figure 12-24 Multicast IP Addresses

Select	Multicast IP Address (a.b.c.d)	Counter (1 - 256)
<input type="checkbox"/>	224.3.3.1	12

Buttons: Add, Delete, OK, Cancel

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**Step 6** Edit the following Link Attribute specific UNI Information:

- **Multicast IP Address**—Enter an *IP Address* for the join the multicast group, which allows users to have access to video on demand, for example.
- **Counter**—Enter a *count* to determine the number of contiguous IP addresses starting with the Multicast IP Address.

**Step 7** Click **OK**.

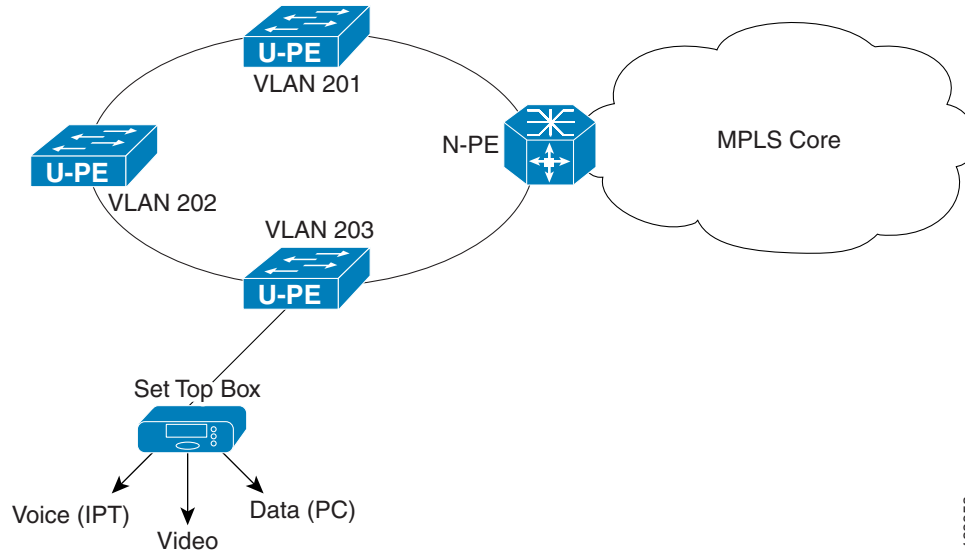
**Step 8** Complete the standard steps for creating a service request, and click **Save**.

The MPLS Service Requests window reappears showing that the service request is in the Requested state and ready to deploy.

## Residential Service

A group of residential customers can share the same VLAN on the same UNI switch with traffic isolation on different UNI interfaces. On an N-PE, a VRF SVI is defined for all the residential services from the same UNI switch, as shown in [Figure 12-25](#).

Figure 12-25 Residential Services



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## Creating a Policy for Residential Services Over Shared VLAN

A special policy must be created by enabling Shared VLAN. To do this, perform the following steps.

- Step 1** Choose **Service Design > Policies**.
- Step 2** From the Policies window, click **Create > MPLS Policy**.  
The Policy Type window appears, as shown in [Figure 12-26](#).

Figure 12-26 Policy Type

MPLS Policy Editor - Policy Type	
Attribute	Value
Policy Name *	mlResServ1
Policy Owner:	<input type="radio"/> Customer <input type="radio"/> Provider <input checked="" type="radio"/> Global Policy
Policy Type:	<input checked="" type="radio"/> Regular: PE-CE <input type="radio"/> MVRFCPE: PE-CE
CE Present:	<input type="checkbox"/>

Note: \* - Required Field

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- Step 3** In the Policy Name field, enter a policy name.
- Step 4** Under Policy Owner, click the **Global Policy** radio button.
- Step 5** Under Policy Type accept **Regular: PE-CE**.

- Step 6** Under CE Present, uncheck the check box, then click **Next**.  
The MPLS Policy Editor - Interface window appears, as shown in [Figure 12-27](#).

**Figure 12-27 Interface Settings**

MPLS Policy Editor - Interface

Attribute	Value	Editable
<b>Reset All Attribute Editable Flags:</b>		<input checked="" type="checkbox"/>
<b>PE Information</b>		
Interface Type:	ANY	
Interface Format:		
Interface Description:		<input checked="" type="checkbox"/>
Shutdown Interface:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Auto-Pick VLAN ID:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use SVI:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Link Speed:	None	<input checked="" type="checkbox"/>
Link Duplex:	None	<input checked="" type="checkbox"/>
ETTH Support:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Standard UNI Port:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>UNI Information</b>		
Shared VLAN:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Private VLAN/Protected Port:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IGMP Snooping with MVR:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>UNI Security Information</b>		
Disable CDP:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Filter BPDU:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use Existing ACL Name:	<input type="checkbox"/>	
UNI MAC Addresses:	Edit	<input checked="" type="checkbox"/>
UNI Port Security:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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- Step 7** Check the **Use SVI:** check box, then wait for the window to refresh.
- Step 8** Check the **ETTH Support:** check box, then wait for the window to refresh.
- Step 9** Check the **Standard UNI Port:** check box, then wait for the window to refresh.
- Step 10** Check the **Shared VLAN:** check box, then wait for the window to refresh. Some fields are now grayed-out.



**Note** Because this policy enables ETTH Support and Shared VLAN, these attributes become unavailable at the link level.

- Step 11** Check the **Private VLAN/Protected Port:** check box, wait for the window to refresh, then click **Next**.
- Step 12** In the IP Address Scheme window, you can continue by clicking **Next**.
- Step 13** In the Routing Information window, you can continue by clicking **Next**.
- Step 14** In the VRF and VPN Member window, you can continue by clicking **Next** to associate templates, or else finish creating this policy by clicking **Finish**.

## Creating a Service Request for Residential Services Over Shared VLAN

To create the service request, perform the following steps.

- 
- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**.
  - Step 2** From the Service Requests window, click **Create > MPLS VPN**.  
The Select MPLS Policy window appears.
  - Step 3** Choose the policy you configured for Shared VLAN Residential Services, then click **OK**. The MPLS Service Request Editor window appears.
  - Step 4** In the MPLS Service Request Editor window, click **Add Link**, then wait for the window to refresh.
  - Step 5** Click the active field **Select U-PE**.
  - Step 6** Choose a PE device, then click **Select**.
  - Step 7** From the active drop-down list, choose an interface, then wait for the window to refresh.
  - Step 8** Under Link Attributes column, click the active **Add** field.  
The Interface window appears, as shown in [Figure 12-28](#).



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**Note** Because the policy created for this feature enables ETTH Support and Shared VLAN, these attributes become unavailable at the link level.

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Figure 12-28 Interface Attributes

MPLS Link Attribute Editor - Interface

Attribute	Value
<b>PE Information</b>	
PE	pe1
Interface Name:	Ethernet4/2. <input type="text"/> (1-4294967295)
Interface Description:	<input type="text"/>
Shutdown Interface:	<input type="checkbox"/>
PE Encapsulation: ⓘ	DOT1Q <input type="button" value="v"/>
VLAN ID *:	<input type="text"/> (1-4094)
Auto-Pick VLAN ID:	<input type="checkbox"/>
Second VLAN ID: ⓘ	<input type="text"/> (1-4094)
Use SVI:	<input checked="" type="checkbox"/>
ETTH Support:	<input checked="" type="checkbox"/>
Standard UNI Port:	<input checked="" type="checkbox"/>
<b>UNI Information</b>	
Shared VLAN:	<input checked="" type="checkbox"/>
Private VLAN/Protected Port:	<input checked="" type="checkbox"/>
Secondary VLAN ID: ⓘ	<input type="text"/> (1-4094)
IGMP Snooping with MVR:	<input type="checkbox"/>
<b>UNI Security Information</b>	
Disable CDP:	<input type="checkbox"/>
Filter BPDU:	<input type="checkbox"/>
Use Existing ACL Name:	<input type="checkbox"/>
UNI MAC Addresses:	<input type="button" value="Edit"/>
UNI Port Security:	<input type="checkbox"/>

Note: \* - Required Field

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- Step 9** Enter a valid **VLAN ID** value, then click **Next**. The IP Address Scheme window appears.
- Step 10** Enter valid values for each required field, then click **Next**.
- Step 11** In the Routing Information window, check any applicable items, then click **Next**.
- Step 12** In the VRF and VPN window, for Maximum Route Threshold (required field), accept the default value, or enter a new value.



**Note** If you want to set the VRF and VPN attributes via a previously defined VRF object, check the **Use VRF Object** check box. For more information on this feature, see [Chapter 3, “Independent VRF Management.”](#) That chapter describes how to use independent VRF objects in MPLS VPN service policies and service requests.

- Step 13** Under VPN Selection (required), click **Add**.
- Step 14** From the CERC window, choose the desired PE VPN Membership, then click **Done**.
- Step 15** Back in the VRF and VPN window, click **Finish**.



**Note** If the policy on which the service request is based has template association enabled, a **Next** button is visible in the GUI. Click the **Next** button to add templates and data files to the devices defined in the service request. For instructions about associating templates with service requests, see [Appendix B, “Working with Templates and Data Files.”](#)

When you are finished setting the attributes for the service policy, the MPLS Service Request Editor window appears.

**Step 16** Click **Save**.

The MPLS Service Requests window reappears showing that the service request is in the Requested state and ready to deploy.

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