



# CHAPTER 50

## Ping

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Ping is the way Cisco Prime Fulfillment monitors the VPN connectivity, that is, verifies the connectivity among various edge devices comprising the VPN.



**Note**

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Ping features are not supported on devices running IOS XR.

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To achieve this, you can perform a series of pings among these devices. Ping has the following benefits:

- Service independent and therefore can be used for functional auditing of MPLS applications.
- Can establish whether a service is working without doing a functional audit for that service.
- Can be used to verify IPv4 connectivity among CPEs prior to VPN service deployment.

However, Ping does not do the following:

- Ping does not work in environments where ICMP traffic is blocked, for example, in a Cisco IOS router with an access-list denying all ICMP traffic.
- Ping can only inform you that there is a connectivity problem. It does not offer any service-specific information. The connectivity problem can be due to many reasons, such as device failure, misconfiguration, and so on, which ping cannot distinguish.
- Only the immediate subnet behind the router's customer-facing (also, inside or nonsecured) interface is supported. Campus subnets cannot be supported.

The Ping GUI supports all possible pings for MPLS service requests. This section explains how to ping MPLS service requests.



**Note**

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Cisco Prime Fulfillment has a component Prime Diagnostics that might help you. See the [Cisco Prime Fulfillment User Guide 6.1](#).

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After you choose **Inventory > Device Tools > Ping**, you receive a window as shown in [Figure 50-1](#).

Figure 50-1 Services

| #  | Job ID                      | State     | Type | Operation Type | Creator | Customer Name | Policy Name       | Last Modified    | Description |
|----|-----------------------------|-----------|------|----------------|---------|---------------|-------------------|------------------|-------------|
| 1  | <input type="checkbox"/> 20 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsPeCe          | 2/16/11 12:51 PM |             |
| 2  | <input type="checkbox"/> 23 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsPeNoCe        | 2/16/11 12:49 PM |             |
| 3  | <input type="checkbox"/> 24 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsMvrCe         | 2/16/11 12:53 PM |             |
| 4  | <input type="checkbox"/> 25 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsMvrNoCe       | 2/16/11 12:53 PM |             |
| 5  | <input type="checkbox"/> 26 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsMgmtPeCe      | 2/16/11 12:52 PM |             |
| 6  | <input type="checkbox"/> 27 | DEPLOYED  | MPLS | ADD            | admin   |               | MplsCarrierPeCe   | 2/16/11 12:53 PM |             |
| 7  | <input type="checkbox"/> 30 | REQUESTED | MPLS | ADD            | admin   |               | Bundle_PE_NoCE_IP | 2/16/11 12:53 PM |             |
| 8  | <input type="checkbox"/> 31 | REQUESTED | MPLS | ADD            | admin   |               | Bundle_PE_CE_IPV4 | 2/16/11 12:53 PM |             |
| 9  | <input type="checkbox"/> 32 | REQUESTED | MPLS | ADD            | admin   |               | MplsPeCe          | 2/16/11 12:53 PM |             |
| 10 | <input type="checkbox"/> 33 | REQUESTED | MPLS | ADD            | admin   |               | MplsPeNoCe        | 2/16/11 12:53 PM |             |

The **Type** field indicates **MPLS**. Follow these steps:

- Step 1** Check the check box next to each row for which you want to configure ping parameters.
- Step 2** Click the **Configure Ping Parameters** button, which becomes enabled.

A window as shown in [Figure 50-2](#).

Figure 50-2 MPLS Parameters

MPLS Parameters

|                        |   |
|------------------------|---|
| <b>MPLS Parameters</b> |   |
| Ping Type:             | <input checked="" type="radio"/> Do PE to CE Ping<br><input type="radio"/> Do CE to CE Ping |
| Two-way Ping:          | <input type="checkbox"/>  |
| Packet Repeat Count:   | 5   |
| Datagram Size:         | 100   |
| Start Ping             |   |

Fill in the following and then click **Start Ping**:

- **Ping Type: Do PE to CE Ping**—When this radio button is chosen, a VRF ping occurs for all PE CE pairs that form an MPLS VPN link. The IP addresses taken for this ping are the link endpoint addresses. For example, assume that an MPLS service request has two linked PE1<>CE1 and PE2<>CE2. Then this selection initiates four VRF pings: (PE1, CE1), (PE2, CE2), (PE1, CE2), and (PE2, CE1). When this selection is chosen, then after you click **Start Ping**, you go directly to and receive a result page.
- **Ping Type: Do CE to CE Ping**—When this radio button is chosen, a ping occurs between all CEs that make the endpoint in the service request. When this selection is chosen, then after you click **Start Ping**, you go to [Step 3](#).
- **Two-way Ping** (default: unavailable and deselected)—This check box is only available when you select **Do CE to CE Ping**. When a ping occurs from device1 to device2 and this check box is checked, then a ping from device2 to device1 also occurs.
- **Packet Repeat Count** (default: 5)—This value indicates how many ICMP packets to use for a ping.
- **Datagram size** (default: 100)—This value is the packet size of ICMP used for ping.

**Step 3** For **Do CE to CE Ping**, you proceed to a window as shown in [Figure 50-3](#).

**Figure 50-3 MPLS CE Selection**

| Showing 1-1 of 1 records |                          |        |           |                   |             |                |                        |                  |             |
|--------------------------|--------------------------|--------|-----------|-------------------|-------------|----------------|------------------------|------------------|-------------|
| #                        | <input type="checkbox"/> | Job ID | Source CE | Source IP Address | Source Site | Destination CE | Destination IP Address | Destination Site | Ping Result |
| 1.                       | <input type="checkbox"/> | 2      | ence51    |                   | Site-ence51 | ence61         |                        | Site-ence61      | Incomplete  |

Rows per page: 10

Start MPLS CE Ping

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**Step 4** Check the check box next to each row for which you want to select a CE.

**Step 5** Click the **Start MPLS CE Ping** button, which becomes enabled.

You receive a results window as shown in [Figure 50-4](#).

**Figure 50-4 MPLS Ping Test Results**

| Showing 1-4 of 4 records |                     |                |
|--------------------------|---------------------|----------------|
| #                        | Property Name       | Property Value |
| 1.                       | Packet repeat count | 5              |
| 2.                       | Datagram size       | 100            |
| 3.                       | Two-way Ping        | no             |
| 4.                       | Do PE to CE ping    | no             |

  

| Showing 1-2 of 2 records |        |       |                   |               |       |                        |                  |             |
|--------------------------|--------|-------|-------------------|---------------|-------|------------------------|------------------|-------------|
| #                        | Job ID | PE    | Source IP Address | Source Region | CE    | Destination IP Address | Destination Site | Ping Result |
| 1.                       | 12     | m1pe2 | 40.40.40.13       | West          | m1ce3 | 40.40.40.14            | SJ               | 0/5 success |
| 2.                       | 27     | m1pe2 | 40.40.40.29       | West          | m1ce1 | 40.40.40.30            | SF               | 0/5 success |

Rows per page: 10

Auto Refresh:  Redo Ping View Job Logs Refresh Close

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The buttons at the bottom of the window are as follows:

- **Redo Ping**—When you click this button, you restart all the pings. The parameters used are the same as those specified in the last request.
- **View Job Logs**—When you click this button, you receive logs of all the Prime Fulfillment jobs created for doing ping. The ping application creates one job per selected service request.
- **Refresh**—To selectively refresh, turn off the **Auto Refresh** button and click this button whenever you want to update the results.
- **Close**—Click this button to close the current ping request. You return to the **Monitoring** page.



**Note**

Any column heading in blue indicates that by clicking that column header, you can sort on that column.

**Step 6** Click **Close** and you are finished with this Ping session.

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