



## Using TIF Manager

---

This chapter contains the following sections:

- [About TIF Manager, page 1](#)
- [Creating a TIF Policy, page 1](#)
- [Editing a TIF Policy, page 3](#)
- [Removing TIF Policies, page 4](#)
- [Creating a Custom Path, page 4](#)
- [Viewing a Custom Path, page 5](#)
- [Removing Custom Paths, page 5](#)

## About TIF Manager

With the Topology Independent Forwarding (TIF) Manager, you can customize the path that a data flow takes through the network. TIF Manager can also be invoked by any network-aware business application that communicates with Cisco Extensible Network Controller (XNC) using REST APIs.

## Creating a TIF Policy

The Topology Independent Forwarding (TIF) Manager allows you to create paths between hosts and devices.

- 
- Step 1** On the menu bar, choose **TIF Manager**, and then click the **TIF Policies** tab.
- Step 2** Click **Create TIF Policy**.
- Step 3** In the **Create TIF Policy** dialog box, complete the following fields:

| Name                           | Description   |
|--------------------------------|---|
| <b>Name</b> field              | <p>The name that you want to assign to the TIF policy.</p> <p>The name can contain between 1 and 256 alphanumeric characters including the following special characters: underscore ("_"), hyphen ("-"), plus ("+"), equals ("="), open parenthesis ("("), closed parenthesis (")"), vertical bar (" "), period ("."), or at sign ("@").</p> <p><b>Note</b> The name cannot be changed after the TIF policy is saved.</p>   |
| <b>Source IP</b> field         | The source IP address of the host.  |
| <b>Destination IP</b> field    | The destination IP address of the host.   |
| <b>Protocol</b> drop-down list | <p>Choose the protocol to be used for the policy. This can be one of the following:</p> <ul style="list-style-type: none"> <li>• <b>any</b>—All protocols are used.</li> <li>• <b>ICMP</b>—Only the ICMP protocol is used.</li> <li>• <b>TCP</b>—Only the TCP protocol is used.</li> <li>• <b>UDP</b>—Only the UDP protocol is used.</li> <li>• <b>IPv6-ICMP</b>—Only the IPv6-ICMP protocol is used.</li> </ul>  |
| <b>Source Port</b> field       | The transport layer port number. If no source port is specified, any ports can be used.   |
| <b>Destination Port</b> field  | The destination port number. If no destination port is specified, any ports can be used.  |
| <b>Path Type</b> field         | <p>How the traffic will be routed between the source and destination IP.</p> <p>Click <b>Properties</b> to choose a property from one of the following categories:</p> <ul style="list-style-type: none"> <li>• <b>Latency</b></li> <li>• <b>Number</b></li> <li>• <b>Bandwidth</b></li> <li>• <b>String</b></li> </ul> <p><b>Note</b> Any custom property templates created in the <b>Network Properties</b> area is also displayed in this list.</p> <p>Click the <b>Custom Path</b> radio button to choose an existing path from the drop-down list.</p> |

#### Step 4 Click **Create TIF Policy**.

# Editing a TIF Policy



**Note** The name of the TIF policy cannot be changed.

## Before You Begin

Create one or more TIF policies.

**Step 1** On the menu bar, choose **TIF Manager**, and then click the **TIF Policies** tab.

**Step 2** Click **Edit** next to the name of the TIF policy that you want to change.

**Step 3** In the **Edit TIF Policy** dialog box, complete the following fields:

| Name                           | Description   |
|--------------------------------|---|
| <b>Name</b> field              | <p>The name that you want to assign to the TIF policy.</p> <p>The name can contain between 1 and 256 alphanumeric characters including the following special characters: underscore ("_"), hyphen ("-"), plus ("+"), equals ("="), open parenthesis ("("), closed parenthesis (")"), vertical bar (" "), period ("."), or at sign ("@").</p> <p><b>Note</b> The name cannot be changed after the TIF policy is saved.</p> |
| <b>Source IP</b> field         | The source IP address of the host.  |
| <b>Destination IP</b> field    | The destination IP address of the host.   |
| <b>Protocol</b> drop-down list | <p>Choose the protocol to be used for the policy. This can be one of the following:</p> <ul style="list-style-type: none"> <li>• <b>any</b>—All protocols are used.</li> <li>• <b>ICMP</b>—Only the ICMP protocol is used.</li> <li>• <b>TCP</b>—Only the TCP protocol is used.</li> <li>• <b>UDP</b>—Only the UDP protocol is used.</li> <li>• <b>IPv6-ICMP</b>—Only the IPv6-ICMP protocol is used.</li> </ul>          |
| <b>Source Port</b> field       | The transport layer port number. If no source port is specified, any ports can be used.   |
| <b>Destination Port</b> field  | The destination port number. If no destination port is specified, any ports can be used.  |

| Name            | Description   |
|-----------------|---|
| Path Type field | <p>How the traffic will be routed between the source and destination IP.</p> <p>Click <b>Properties</b> to choose a property from one of the following categories:</p> <ul style="list-style-type: none"> <li>• Latency</li> <li>• Number</li> <li>• Bandwidth</li> <li>• String</li> </ul> <p><b>Note</b> Any custom property templates created in the <b>Network Properties</b> area is also displayed in this list.</p> <p>Click the <b>Custom Path</b> radio button to choose an existing path from the drop-down list.</p> |

**Step 4** Click **Save TIF Policy**.

---

## Removing TIF Policies

- 
- Step 1** On the menu bar, choose **TIF Manager**, and then click the **TIF Policies** tab.
- Step 2** Check the check box next to the **Name** of each TIF policy that you want to remove, or check the top check box to select all TIF policies for removal.
- Step 3** Click **Remove TIF Policy**.
- Step 4** In the **Remove TIF Policy** confirmation dialog box, click **Remove TIF Policy**.
- 

## Creating a Custom Path

- 
- Step 1** On the menu bar, choose **TIF Manager**.
- Step 2** At the top of the topology diagram, enter the name that you want to give the custom path in the field next to the **Save Custom Path** button.
- Step 3** In the topology diagram, click the links that you want to include in the path.
- Step 4** Click **Save Custom Path** to save the path to the **Existing Custom Paths** table.
-

# Viewing a Custom Path

## Before You Begin

Create a custom path.

- 
- Step 1** On the menu bar, choose **TIF Manager**.
- Step 2** Click **View/Edit Path** in the **Existing Custom Paths** table next to the path that you want to display. The custom path links are displayed in the topology diagram.
- Step 3** In the **Links Information** tab, enter a node number in the **Search** box, and click the search icon to narrow the list of nodes displayed for the path.
- 

# Removing Custom Paths

- 
- Step 1** On the menu bar, choose **TIF Manager**.
- Step 2** Check the check box next to the path name of each custom path that you want to remove in the **Existing Custom Paths** tab, or check the top check box to choose all custom paths for removal.
- Step 3** Click **Remove**.
- Step 4** In the **Remove Path(s)** confirmation dialog box, click **Remove Path(s)**.
-

