

Chapter 1

Configuring Remote Access to a C-series Controller with the C-Web Interface

This chapter describes how to use the C-Web interface to configure access to a C-series Controller.

You can also use the SRC CLI to configure access to a C-series Controller. See *SRC-PE Getting Started Guide, Chapter 7, Configuring Remote Access to a C-series Controller with the SRC CLI*.

Topics in this chapter include:

- Configuring External Interfaces on a C-series Controller on page 4
- Configuring Loopback Interfaces for IPv4 with the C-Web Interface on page 4
- Configuring Loopback Interfaces for IPv6 with the C-Web Interface on page 5
- Configuring Gigabit Ethernet Interfaces for IPv4 with the C-Web Interface on page 6
- Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface on page 7
- Configuring Tunnel Interfaces with the C-Web Interface on page 8
- Configuring a Static Route to Devices on Other Networks with the C-Web Interface on page 9
- Securing Connections Between a C-series Controller and Remote Hosts on page 9
- Configuring a C-series Controller to Accept SSH Connections with the C-Web Interface on page 10
- Configuring a C-series Controller to Accept Telnet Connections with the C-Web Interface on page 11
- Configuring a C-series Controller to Accept NETCONF Connections with the C-Web Interface on page 11

Configuring External Interfaces on a C-series Controller

The C-series Controller provides the following interfaces:

- Serial port—9600 baud

The serial port is enabled by default. You can use the serial port to connect to a console terminal and perform initial configuration as well as configuration updates.

- Two external Gigabit Ethernet interfaces—eth0 and eth1

The eth0 interface is designed to provide access from a network that is behind a firewall. This interface accepts connections from protocols supported by the SRC software. When you configure an SRC component, the specified port is opened on this interface.

The eth1 interface is designed to provide access for applications on an external network, such as the Internet. You can configure a limited number of ports on this interface. By default, no inbound ports are open.

- Optional two additional Gigabit Ethernet interfaces—eth2 and eth3

These interfaces require an additional input/output module. You can obtain a module to support either RJ-45 or optical connections.

- Two USB interfaces

Configuring Loopback Interfaces for IPv4 with the C-Web Interface

Loopback interfaces are for private use only by software running on the C-series Controller, to communicate with other software also running on the same C-series Controller.

To configure a loopback interface for IPv4:

1. Click **Configure**, expand **Interfaces**, and then click **Interface: lo**.

The Interface:lo pane appears.

2. To specify the unit:
 - a. From the Create new list, select **Unit**.
 - b. In the dialog box, type a number for the new unit, and click **OK**.

The Unit: *< number >* appears in the side pane.

3. To specify an IPv4 address for the interface, expand **Unit: < number >** , and then expand **Family** in the side pane.
 - a. Click **Inet**.
The Inet pane appears.
 - b. Click the **Create** button.
 - c. Enter information as described in the Help text in the main pane, and click **Apply**.

Related Topics

- *Configuring External Interfaces on a C-series Controller on page 4*
- *Configuring Loopback Interfaces for IPv6 with the C-Web Interface on page 5*
- *Configuring Gigabit Ethernet Interfaces for IPv4 with the C-Web Interface on page 6*
- *Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface on page 7*
- *Configuring Tunnel Interfaces with the C-Web Interface on page 8*

Configuring Loopback Interfaces for IPv6 with the C-Web Interface

Loopback interfaces are for private use only by software running on the C-series Controller, to communicate with other software also running on the same C-series Controller.

To configure a loopback interface for IPv6:

1. Click **Configure**, and expand **Interfaces > Interface: lo > Unit > Family**.
2. Click **Inet6**.
The Inet6 pane appears.
3. From the Create new list, select **Address**.
4. In the dialog box, type a name for the new address, and click **OK**.

Related Topics

- *Configuring External Interfaces on a C-series Controller on page 4*
- *Configuring Loopback Interfaces for IPv4 with the C-Web Interface on page 4*
- *Configuring Gigabit Ethernet Interfaces for IPv4 with the C-Web Interface on page 6*
- *Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface on page 7*
- *Configuring Tunnel Interfaces with the C-Web Interface on page 8*

Configuring Gigabit Ethernet Interfaces for IPv4 with the C-Web Interface

To allow remote access to the C-series Controller, you configure the Gigabit Ethernet interfaces. You can specify an IP address with mask or a broadcast address with mask for an interface.

To configure a Gigabit Ethernet interface for IPv4:

1. Click **Configure > Interfaces**.

The Interfaces pane appears.

2. From the Create new list, create an interface.
 - To create a new interface, select **Interface**, type a name for the new interface in the dialog box, and click **OK**.
 - To create an eth1, eth2, or eth3 interface, select **eth1**, **eth2**, or **eth3**, and click **OK**.
3. To specify the unit:
 - a. From the Create new list, select **Unit**.
 - b. In the dialog box, type a number for the new unit, and click **OK**.
4. To specify an IPv4 address for the new unit, expand **Unit: <number>**, and expand **Family** in the side pane.
 - a. In the side pane, click **Inet**.

The Interfaces pane appears.
 - b. Click the **Create** button.
 - c. Enter information as described in the Help text in the main pane, and click **Apply**.

Related Topics

- *Configuring External Interfaces on a C-series Controller on page 4*
- *Configuring Loopback Interfaces for IPv4 with the C-Web Interface on page 4*
- *Configuring Loopback Interfaces for IPv6 with the C-Web Interface on page 5*
- *Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface on page 7*
- *Configuring Tunnel Interfaces with the C-Web Interface on page 8*

Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface

To allow remote access to the C-series Controller, you configure the Gigabit Ethernet interfaces. You can specify an IP address with mask for an interface.

To configure a Gigabit Ethernet interface for IPv6:

1. Click **Configure > Interfaces**.
The Interfaces pane appears.
2. Create an interface from the Create new list.
 - To create a new interface, select **Interface**. In the dialog box, type a name for the new interface, and click **OK**.
 - To create an eth1, eth2, or eth3 interface, select **eth1**, **eth2**, or **eth3**, and click **OK**.
3. To specify the unit:
 - a. From the Create new list, select **Unit**.
 - b. In the dialog box, type a number for the new unit, and click **OK**.
4. To specify an IPv6 address for the new unit, expand **Unit: <number>**, and expand **Family** in the side pane.
 - a. In the side pane, click **Inet6**.
The Interfaces pane appears.
 - b. From the Create new list, select **Address**.
 - c. In the dialog box, type a name for the new address, and click **OK**.

Related Topics

- *Configuring External Interfaces on a C-series Controller on page 4*
- *Configuring Loopback Interfaces for IPv4 with the C-Web Interface on page 4*
- *Configuring Loopback Interfaces for IPv6 with the C-Web Interface on page 5*
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Configuring Tunnel Interfaces with the C-Web Interface

A tunnel allows direct connection between a remote location and an application running on the C-series Controller. A tunnel lets you use the redirect server in deployments where the JUNOSe router does not have a direct connection to the C-series Controller.

The C-series Controller supports three types of tunnel interfaces:

- GRE—Encapsulates traffic that can use various network protocols within IP. For C-series Controllers, the tunnel interface encapsulates IP packets.
- IP- over- IP—Encapsulates IP packets within IP packets.
- IPv6 in IPv4—Encapsulates IPv6 packet in IPv4 packets.

The other endpoint for the tunnel on a JUNOS or JUNOSe router must be configured for the tunnel to be operational.

To configure tunnel interfaces:

1. Click **Configure**, expand **Interfaces**, and expand the specified interface.
2. Click **Tunnel**.

The Tunnel pane appears.

3. Click the **Create** button.
4. Enter information as described in the Help text in the main pane, and click **Apply**.

Related Topics

- *Configuring External Interfaces on a C-series Controller on page 4*
- *Configuring Loopback Interfaces for IPv4 with the C-Web Interface on page 4*
- *Configuring Loopback Interfaces for IPv6 with the C-Web Interface on page 5*
- *Configuring Gigabit Ethernet Interfaces for IPv4 with the C-Web Interface on page 6*
- *Configuring Gigabit Ethernet Interfaces for IPv6 with the C-Web Interface on page 7*

Configuring a Static Route to Devices on Other Networks with the C-Web Interface

In some instances, the SRC software might need to connect to devices that reside on networks other than the one that the SRC software accesses directly. you can configure a static route for the software to be able to connect devices on other networks.

When you specify the IP address for a static route, include a mask.

To configure a static route to another network:

1. Click **Configure**, expand **Routing Options**, and click **Static**.

The Static pane appears.

2. From the Create new list, select **Route**.
3. In the dialog box, type a destination network/mask (using the form address/prefix length) for the new Route, and click **OK**.

The Route: < name > pane appears.

4. Enter information as described in the Help text in the main pane, and click **Apply**.

Securing Connections Between a C-series Controller and Remote Hosts

For security reasons, take care to limit the number of open ports you configure for applications and SRC components on the external interfaces. To review the default port settings for SRC components, see *SRC-PE Getting Started Guide, Chapter 34, Defining an Initial Configuration on a Solaris Platform* which provides information about an initial configuration on a Solaris platform.

By default, SSH for non-root users is enabled on C-series Controllers. Otherwise, you configure the C-series Controller to explicitly allow users on remote systems to access it. Table 1 lists the applications through which remote users can access a C-series Controller.

Table 1: Applications to Remotely Access the C-series Controller

Application	Information About Access Configuration
SSH	<i>Configuring a C-series Controller to Accept SSH Connections with the C-Web Interface on page 10</i>
Telnet	<i>Configuring a C-series Controller to Accept Telnet Connections with the C-Web Interface on page 11</i>
NETCONF	<i>Configuring a C-series Controller to Accept NETCONF Connections with the C-Web Interface on page 11</i>
C-Web interface	<i>SRC-PE Getting Started Guide, Chapter 6, Accessing and Using the C-Web Interface</i>
Policies, Services, and Subscribers C-Web interface	<i>SRC-PE Getting Started Guide, Chapter 6, Accessing and Using the C-Web Interface</i>

You can also configure security certificates for use by HTTPS connections.

See *SRC-PE Getting Started Guide, Chapter 7, Configuring Remote Access to a C-series Controller with the SRC CLI*.

You can connect from a C-series Controller to remote hosts through:

- SSH
- Telnet
- FTP by means of a file URL

Configuring a C-series Controller to Accept SSH Connections with the C-Web Interface

You can enable SSH to let users who have the appropriate privileges connect to a C-series Controller. For security reasons, we recommend that you do not allow remote users to access the C-Web interface as `root`.

1. Click **Configure**, expand **System > Services**, and then click **SSH**.

The SSH pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

Configuring a C-series Controller to Accept Telnet Connections with the C-Web Interface

You can enable Telnet to let users who have the appropriate privileges connect to a C-series Controller. The system does not allow `root` access over a Telnet connection.

To configure the C-series Controller to accept Telnet connections:

1. Click **Configure**, expand **System**, and then click **Services**.

The Services pane appears.

2. Select the Telnet checkbox to accept Telnet connections. (Leave the checkbox empty to disable Telnet connections.) Refer to the information in the Help text in the main pane.
3. Click **Apply**.

Configuring a C-series Controller to Accept NETCONF Connections with the C-Web Interface

To configure the C-series Controller to accept NETCONF connections:

1. Click **Configure**, expand **System > Services**, and then click **NETCONF**.

The NETCONF pane appears.

2. Click **Create**, enter information as described in the Help text in the main pane, and then click **Apply**.

