



## Using Cisco E-DI

---

This chapter details how to configure and use Cisco E-DI features:

- [Setting up the Terminal](#)
- [Keyboard Shortcuts](#)
- [Cisco E-DI Services](#)
- [Commonly Used Commands](#)
- [File System Commands](#)
- [Comparing Files](#)
- [Restarting the Server or a Device](#)

## Setting up the Terminal

The commands used to set up the terminal are detailed in [Table 2-1](#). The commands can be given in server or network mode.

**Table 2-1**      **Commands to Setup the Terminal**

| Action                                                                                                                                                       | Command                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To set the terminal color mode.<br><br>You can also use the key combination <b>Ctrl-T</b> from the server EXEC level to toggle between gray and color modes. | <code>[SRV:/server NET:/network]#<b>terminal color</b></code>                                                                                                                                                                                                |
| The terminal display settings can be configured to use either hostname, DNS name, or the IP address of the device.                                           | <code>[SRV:/server NET:/network]#<b>terminal device-id</b> {<b>dns-name</b>   <b>dns-name-short</b>   <b>ip</b>   <b>name</b>}</code>                                                                                                                        |
| To define the FTP Authentication credentials.                                                                                                                | <code>[SRV:/server NET:/network]#<b>terminal ftp-auth username</b> {<b>word</b>}</code><br>Password                                                                                                                                                          |
| To define the HTTP Authentication credentials.                                                                                                               | <code>[SRV:/server NET:/network]#<b>terminal http-auth username</b> {<b>word</b>}</code><br>Password                                                                                                                                                         |
| To make the session interactive.                                                                                                                             | <code>[SRV:/server NET:/network]#<b>terminal interactive</b></code>                                                                                                                                                                                          |
| To specify the number of lines that are displayed on the terminal.                                                                                           | <code>[SRV:/server NET:/network]#<b>terminal length</b> {<b>0-1</b>   {<b>2-256</b>}</code>                                                                                                                                                                  |
| When terminal monitor is enabled, any action on the Cisco E-DI server carried out on another session is displayed on the terminal.                           | <code>[SRV:/server NET:/network]#<b>terminal monitor message filter</b> {<b>word</b>}</code>                                                                                                                                                                 |
| To disable the relevant terminal mode.                                                                                                                       | <code>[SRV:/server NET:/network]#<b>terminal no</b> {<b>color</b>   <b>http-auth</b>   <b>interactive</b>   <b>monitor</b>   <b>monitor message-filter</b>   <b>skip-locked</b>   <b>skip-unauth</b>   <b>status-codes</b>   <b>suppress-repeats</b>}</code> |
| To set the terminal environment variable value.                                                                                                              | <code>[SRV:/server NET:/network]#<b>terminal set</b> {<b>word</b>} {<b>word</b>}</code>                                                                                                                                                                      |
| To skip all devices locked by some other user.                                                                                                               | <code>[SRV:/server NET:/network]#<b>terminal skip-locked</b></code>                                                                                                                                                                                          |
| To skip all devices that are not authorized to be included in a task.                                                                                        | <code>[SRV:/server NET:/network]#<b>terminal skip-unauth</b></code>                                                                                                                                                                                          |
| To display the status code after command implementation.                                                                                                     | <code>[SRV:/server NET:/network]#<b>terminal status-codes</b></code>                                                                                                                                                                                         |

**Table 2-1**      *Commands to Setup the Terminal (continued)*

| Action                                                    | Command                                                                                                                     |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| To set the terminal stream control type.                  | [SRV:/server NET:/network]# <b>terminal stream-ctl {read-file filename   write-file filename   xml-data-channel {word}}</b> |
| To turn the toggle options using the Ctrl key on and off. | [SRV:/server NET:/network]# <b>terminal supress-repeats</b>                                                                 |
| To unset the terminal environment variable.               | [SRV:/server NET:/network]# <b>terminal unset {word}</b>                                                                    |
| To specify the text width displayed on the screen.        | [SRV:/server NET:/network]# <b>terminal width {16-256}</b>                                                                  |
| <b>Note</b> The default terminal width is 24.             |                                                                                                                             |

## Keyboard Shortcuts

Table 2-2 details the keyboard shortcuts available in Cisco E-DI.

**Table 2-2**      *Keyboard Shortcuts and Associated Actions*

| Shortcut | Action                                                                                                                                              |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| ?        | Opens context sensitive help                                                                                                                        |
| Ctrl A   | The cursor goes to the beginning of the line                                                                                                        |
| Ctrl B   | The cursor moves one character to the left                                                                                                          |
| Ctrl C   | Discards the current line                                                                                                                           |
| Ctrl D   | Deletes the character at the cursor                                                                                                                 |
| Ctrl E   | The cursor goes to the end of line                                                                                                                  |
| Ctrl F   | The cursor moves one character to the right                                                                                                         |
| Ctrl G   | Displays the devices selected, the knowledge base applied and the applicability of the command to the devices selected in device configuration mode |
| Ctrl K   | Deletes all characters from the cursor to the end of the command line                                                                               |
| Ctrl N   | Returns more recent commands in the history buffer after recalling commands with Ctrl-P or the Up Arrow key                                         |

**Table 2-2**      **Keyboard Shortcuts and Associated Actions (continued)**

| Shortcut  | Action                                                                                              |
|-----------|-----------------------------------------------------------------------------------------------------|
| Ctrl P    | Recalls commands in the history buffer, beginning with the most recent command                      |
| Ctrl R    | Refreshes the current line                                                                          |
| Ctrl T    | Toggles between terminal color display                                                              |
| Ctrl U    | Deletes all characters before the cursor to the beginning of the command line                       |
| Ctrl W    | Deletes the word to the left of the cursor                                                          |
| Ctrl X    | Deletes all characters before the cursor to the beginning of the command line                       |
| Ctrl Z    | Exit from configuration mode                                                                        |
| Enter     | For paginated messages (more than one page), message scrolls one line up                            |
| Space bar | For paginated messages (more than one page), message scrolls one page up (equal to terminal length) |
| Tab       | Completes a partial command                                                                         |

## Cisco E-DI Services

Cisco E-DI includes a number of services, see [Table 2-3](#). These services can be enabled or disabled, see [Table 2-4](#).

**Table 2-3**      **Cisco E-DI Services**

| Service  | Default | Description                                                                                                                                           |
|----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| asset    | Enabled | Device asset collection service.<br>Periodically collects information on device hardware assets such as chassis, cards, slot, power-supply, and fans. |
| editor   | Enabled | Text editor service for CLI.<br>Allows editing/creating files on Cisco E-DI using a vi editor.                                                        |
| exec-cmd | Enabled | Direct network EXEC command service.<br>Enables implementing commands on a device using <b>exec-cmd</b> command.                                      |

**Table 2-3 Cisco E-DI Services (continued)**

| Service        | Default  | Description                                                                                          |
|----------------|----------|------------------------------------------------------------------------------------------------------|
| perl-scripting | Disabled | Perl scripting service for CLI.<br>Enables implementation of perl scripts using <b>perl</b> command. |
| telnet         | Disabled | Enable/disable Telnet service.<br>Enables login to the Cisco E-DI server using Telnet.               |
| trap-receiver  | Enabled  | SNMP trap receiver service.<br>Enables the receiving and processing of SNMP traps.                   |

**Table 2-4 Commands to Enable Cisco E-DI Services**

| Action                                            | Command                                               |
|---------------------------------------------------|-------------------------------------------------------|
| To enable the device asset collection service     | [SVR:/server] (config)# <b>service asset</b>          |
| To enable the text editor service for the CLI     | [SVR:/server] (config)# <b>service editor</b>         |
| To enable the direct network EXEC command service | [SVR:/server] (config)# <b>service exec-cmd</b>       |
| To enable perl-scripting for the CLI              | [SVR:/server] (config)# <b>service perl-scripting</b> |
| To enable the telnet service                      | [SVR:/server] (config)# <b>service telnet</b>         |
| To enable the SNMP trap receiver service          | [SVR:/server] (config)# <b>service trap-receiver</b>  |

## Commonly Used Commands

Table 2-5 details commands which are commonly used in Cisco E-DI.

**Table 2-5 Commonly Used Commands**

| Action                                                   | Command             |
|----------------------------------------------------------|---------------------|
| To enter the configure setup mode.                       | <b>config setup</b> |
| To enter the configure terminal mode.                    | <b>config t</b>     |
| To perform various diagnostic activities on the network. | <b>diag</b>         |

**Table 2-5**      *Commonly Used Commands (continued)*

| Action                                                                                           | Command           |
|--------------------------------------------------------------------------------------------------|-------------------|
| To download files using HTTP or FTP onto Cisco E-DI.                                             | <b>download</b>   |
| To exit out of the configuration mode.<br>You can also use Ctrl-Z                                | <b>end</b>        |
| To exit from the current configuration view and move to the parent view.                         | <b>exit</b>       |
| To find the managed devices that match a certain criteria.                                       | <b>find</b>       |
| To show help on different topics based on the text input.                                        | <b>help</b>       |
| To put the discovered devices into the managed state.                                            | <b>import</b>     |
| To collect device(s) inventory. Used in network mode.                                            | <b>inventory</b>  |
| To logout of the server.                                                                         | <b>logout</b>     |
| To query a DNS server to lookup and find IP address information for a host or device.            | <b>nslookup</b>   |
| To ping a element in the network using its IP address or name.                                   | <b>ping</b>       |
| To synchronize the file system, device configuration and archives on the devices and the server. | <b>sync</b>       |
| To trace a route to a network element using its IP address or name.                              | <b>traceroute</b> |
| To save the server running configuration to start-up configuration.                              | <b>write</b>      |

## File System Commands

Cisco E-DI creates a virtual file system to represent the file systems on the managed devices. The virtual file system contains server, network and users directories in the root of the file system:

- **/server** directory contains directories and files related to Cisco E-DI such as directories for storing configuration archives, images and temporary files.

- **/network** directory contains the virtual file system representing file systems for all the devices currently managed.

This is a read only file system. Files can be read from the devices, but cannot be written or deleted. The file systems of the devices are learned when the device is managed and are kept up-to-date with the device whenever a device inventory is performed. The file systems can also be kept up to date with the **sync filesystem** command.

- **/users** directory contains one directory for each user of Cisco E-DI, which can be used to store user specific files.

Table 2-6 details commands to manage the file system.

**Table 2-6** *Commands to Manage the File System*

| Action                                                                                                                                                         | Command                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| To change the current directory.                                                                                                                               | [SVR:/server NET:/network]# <b>cd</b><br>{/}[name{/name/name...}]                                |
| To switch to the server root directory.                                                                                                                        | [SVR:/server]# <b>cd</b> /                                                                       |
| To switch to the user's home directory.                                                                                                                        | [SVR:/server]# <b>cd</b>                                                                         |
| To display the current working directory.                                                                                                                      | [SVR:/server NET:/network]# <b>pwd</b>                                                           |
| To create a directory with a specified name.                                                                                                                   | [SVR:/server NET:/network]# <b>mkdir</b><br>/{ <b>server/</b>   <b>network/</b> } name           |
| To remove the specified directory.                                                                                                                             | [SVR:/server NET:/network]# <b>rmdir</b><br>/{ <b>server/</b>   <b>network/</b> } name           |
| To show the contents of the current directory.                                                                                                                 | [SVR:/server NET:/network]# <b>dir</b>                                                           |
| To view the contents of the specified file.                                                                                                                    | [SVR:/server NET:/network]# <b>more</b><br>/{ <b>server/</b>   <b>network/</b> } name            |
| To delete the specified file.                                                                                                                                  | [SVR:/server NET:/network]# <b>delete</b><br>{/ <b>force</b>   <b>/recursive</b>   <b>name</b> } |
| To copy a file.                                                                                                                                                | [SVR:/server NET:/network]# <b>copy</b><br>{ <b>source file destination file</b> }               |
| To rename a file.                                                                                                                                              | [SVR:/server NET:/network]# <b>rename</b> name                                                   |
| To synchronize the file system on the server with the file system on the device. You can choose to synchronize the device in the background or the foreground. | [NET:/network]# <b>sync filesystem</b> { <b>bg</b>   <b>fg</b> }                                 |

**Note**

You can also manage the file system using perl scripts. See [Chapter 10, “Using Perl Scripts”](#).

## Comparing Files

Cisco E-DI gives the option to compare two files and deduce the differences with appropriate color codes. [Table 2-7](#) details the commands.

Changes will be highlighted in color, if enabled. Additions are shown in **green** and deletions are shown in **red**. Else, deletions will be marked by "-" and additions by "+".

**Note**

CTRL-T enables the color mode.

**Table 2-7**      *Commands to Compare Files*

| Action                                              | Command                                                            |
|-----------------------------------------------------|--------------------------------------------------------------------|
| To compare files. File 1 is the reference.          | [SVR:/server]# <b>diff file-name1 file-name2</b>                   |
| To compare the start-up and running configurations. | [SVR:/server]# <b>show running-config diff-with startup-config</b> |

## Restarting the Server or a Device

The commands to restart the Cisco E-DI server or a device are detailed in [Table 2-8](#).

**Table 2-8**      *Commands to Restart Server and Devices*

| Description                    | Command                                                               |
|--------------------------------|-----------------------------------------------------------------------|
| Restart the Cisco E-DI server. | [SVR:/server]# <b>reload server</b>                                   |
| Restart the specified devices. | [SVR:/server]# <b>reload device</b> ip-address1<br>[ip-address2.....] |