

# Packet Tracer - Navigating the IOS

## Topology



## Objectives

**Part 1: Establish Basic Connections, Access the CLI, and Explore Help**

**Part 2: Explore EXEC Modes**

**Part 3: Set the Clock**

## Background

In this activity, you will practice skills necessary for navigating the Cisco IOS, such as different user access modes, various configuration modes, and common commands used on a regular basis. You will also practice accessing the context-sensitive Help by configuring the **clock** command.

## Part 1: Establish Basic Connections, Access the CLI, and Explore Help

In Part 1 of this activity, you will connect a PC to a switch using a console connection and explore various command modes and Help features.

### Step 1: Connect PC1 to S1 using a console cable.

- Click the **Connections** icon (the one that looks like a lightning bolt) in the lower left corner of the Packet Tracer window.
- Select the light blue Console cable by clicking it. The mouse pointer will change to what appears to be a connector with a cable dangling from it.
- Click **PC1**. A window displays an option for an RS-232 connection.
- Drag the other end of the console connection to the S1 switch and click the switch to access the connection list.
- Select the **Console** port to complete the connection.

### Step 2: Establish a terminal session with S1.

- Click **PC1** and then select the **Desktop** tab.
- Click the **Terminal** application icon. Verify that the Port Configuration default settings are correct. What is the setting for bits per second?
- Click **OK**.
- The screen that appears may have several messages displayed. Somewhere on the screen there should be a `Press RETURN to get started!` message. Press **ENTER**.

What is the prompt displayed on the screen?

### Step 3: Explore the IOS Help.

- The IOS can provide help for commands depending on the level accessed. The prompt currently displayed is called **User EXEC**, and the device is waiting for a command. The most basic form of help is to type a question mark (?) at the prompt to display a list of commands.

```
S1> ?
```

Which command begins with the letter 'C'?

- At the prompt, type **t** and then a question mark (?).

```
S1> t?
```

Which commands are displayed?

- At the prompt, type **te** and then a question mark (?).

```
S1> te?
```

Which commands are displayed?

This type of help is known as **context-sensitive** Help. It provides more information as the commands are expanded.

## Part 2: Explore EXEC Modes

In Part 2 of this activity, you will switch to privileged EXEC mode and issue additional commands.

### Step 1: Enter privileged EXEC mode.

- At the prompt, type the question mark (?).

```
S1> ?
```

What information is displayed that describes the **enable** command?

- Type **en** and press the **Tab** key.

```
S1> en<Tab>
```

What displays after pressing the **Tab** key?

This is called command completion (or tab completion). When part of a command is typed, the **Tab** key can be used to complete the partial command. If the characters typed are enough to make the command unique, as in the case of the **enable** command, the remaining portion of the command is displayed.

What would happen if you typed **te<Tab>** at the prompt?

- Enter the **enable** command and press ENTER. How does the prompt change?

- When prompted, type the question mark (?).

```
S1# ?
```

One command starts with the letter 'C' in user EXEC mode. How many commands are displayed now that privileged EXEC mode is active? (**Hint:** you could type `c?` to list just the commands beginning with 'C'.)

### Step 2: Enter Global Configuration mode.

- When in privileged EXEC mode, one of the commands starting with the letter 'C' is **configure**. Type either the full command or enough of the command to make it unique. Press the <Tab> key to issue the command and press ENTER.

```
S1# configure
```

What is the message that is displayed?

- Press Enter to accept the default parameter that is enclosed in brackets **[terminal]**.  
How does the prompt change?
- This is called global configuration mode. This mode will be explored further in upcoming activities and labs. For now, return to privileged EXEC mode by typing **end**, **exit**, or **Ctrl-Z**.

```
S1(config)# exit
```

```
S1#
```

## Part 3: Set the Clock

### Step 1: Use the clock command.

- Use the **clock** command to further explore Help and command syntax. Type **show clock** at the privileged EXEC prompt.

```
S1# show clock
```

What information is displayed? What is the year that is displayed?

- Use the context-sensitive Help and the **clock** command to set the time on the switch to the current time. Enter the command **clock** and press ENTER.

```
S1# clock<ENTER>
```

What information is displayed?

- The "% Incomplete command" message is returned by the IOS. This indicates that the **clock** command needs more parameters. Any time more information is needed, help can be provided by typing a space after the command and the question mark (?).

```
S1# clock ?
```

What information is displayed?

- Set the clock using the **clock set** command. Proceed through the command one step at a time.

```
S1# clock set ?
```

What information is being requested?

What would have been displayed if only the **clock set** command had been entered, and no request for help was made by using the question mark?

What would have been displayed if only the **clock set** command had been entered, and no request for help was made by using the question mark?

- e. Based on the information requested by issuing the **clock set ?** command, enter a time of 3:00 p.m. by using the 24-hour format of 15:00:00. Check to see if more parameters are needed.

```
S1# clock set 15:00:00 ?
```

The output returns a request for more information:

```
<1-31> Day of the month  
MONTH Month of the year
```

- f. Attempt to set the date to 01/31/2035 using the format requested. It may be necessary to request additional help using the context-sensitive Help to complete the process. When finished, issue the **show clock** command to display the clock setting. The resulting command output should display as:

```
S1# show clock  
*15:0:4.869 UTC Tue Jan 31 2035
```

- g. If you were not successful, try the following command to obtain the output above:

```
S1# clock set 15:00:00 31 Jan 2035
```

### Step 2: Explore additional command messages.

- a. The IOS provides various outputs for incorrect or incomplete commands. Continue to use the **clock** command to explore additional messages that may be encountered as you learn to use the IOS.
- b. Issue the following command and record the messages:

```
S1# cl
```

What information was returned?

```
S1# clock
```

What information was returned?

```
S1# clock set 25:00:00
```

What information was returned?

```
S1# clock set 15:00:00 32
```

What information was returned?

## Suggested Scoring Rubric

Activity Section	Question Location	Possible Points	Earned Points
Part 1: Establish Basic Connections, Access the CLI, and Explore Help	Step 2b	5	
	Step 2d	5	
	Step 3a	5	
	Step 3b	5	
	Step 3c	5	
<b>Part 1 Total</b>		<b>25</b>	
Part 2: Explore EXEC Modes	Step 1a	5	
	Step 1b	5	
	Step 1c	5	
	Step 1d	5	
	Step 2a	5	
	Step 2b	5	
<b>Part 2 Total</b>		<b>30</b>	
Part 3: Set the Clock	Step 1a	5	
	Step 1b	5	
	Step 1c	5	
	Step 1d	5	
	Step 2b	5	
<b>Part 3 Total</b>		<b>25</b>	
<b>Packet Tracer Score</b>		<b>20</b>	
<b>Total Score</b>		<b>100</b>	