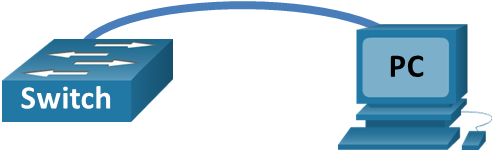
Lab 1 – Part a: Navigate the IOS by Using Tera Term for Console Connectivity

Group members

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# Topology



# Objectives

Part 1: Access a Cisco Switch through the Serial Console Port

Part 2: Display and Configure Basic Device Settings

# Background / Scenario

Various models of Cisco routers and switches are used in all types of networks. These devices are managed using a local console connection or a remote connection. Nearly all Cisco devices have a serial console port to which you can connect. Newer models used in this lab, such as Cisco 4221, also have a USB console port.

In this lab, you will learn how to access a Cisco device via a direct local connection to the console port, using the terminal emulation program called Tera Term. You will also learn how to configure the serial port settings for the Tera Term console connection. After you have established a console connection with the Cisco device, you can display or configure device settings. You will only display settings and configure the clock in this lab.

**Note**: The routers used with CCNA hands-on labs are Cisco 4221 with Cisco IOS XE Release 16.9.3 (universalk9 image). The switches used in the labs are Cisco Catalyst 2960s with Cisco IOS Release 15.0(2) (lanbasek9 image). Other routers, switches, and Cisco IOS versions can be used. Depending on the model and Cisco IOS version, the commands available and the output produced might vary from what is shown in the labs. Refer to the Router Interface Summary Table at the end of the lab for the correct interface identifiers.

**Note**: Make sure that the switch and router have been erased and have no startup configuration. If you are unsure, contact your instructor.

# Required Resources

* 1 Router (Cisco 4221 with Cisco IOS XE Release 16.9.3 universal image or comparable)
* 1 Switch (Cisco 2960 with Cisco IOS Release 15.0(2) lanbasek9 image or comparable)
* 1 PC (Windows with a terminal emulation program, such as Tera Term)
* Rollover (DB-9 to RJ-45) console cable to configure the switch or router via the RJ-45 console port

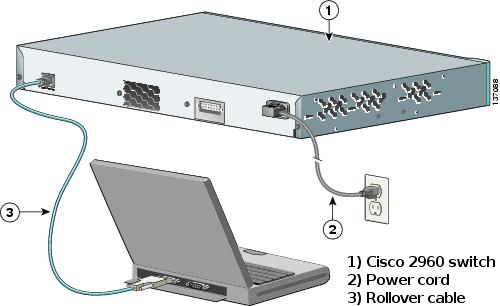
# Instructions

## Access a Cisco Switch through the Serial Console Port

You will connect a PC to a Cisco switch using a rollover console cable. This connection will allow you to access the CLI and display settings or configure the switch.

### Connect a Cisco switch and computer using a rollover console cable.

* + - 1. Connect the rollover console cable to the RJ-45 console port of the switch. Connect the other cable end to the serial COM port on the computer.



**Note**: Serial COM ports are no longer available on most computers. A USB-to-DB9 adapter can be used with the rollover console cable for console connection between the computer and a Cisco device. USB-to-DB9 adapters can be purchased at any computer electronics retailer.

**Note**: If using a USB-to-DB9 adapter to connect to the COM port, you may be required to install a driver for the adapter provided by the manufacturer of your computer. To determine the COM port used by the adapter, please see Part 3 Step 3. The correct COM port number is required to connect to the Cisco IOS device using a terminal emulator in Step 2.

* + - 1. Turn on the Cisco switch and computer.

### Configure Tera Term to establish a console session with the switch.

Tera Term is a terminal emulation program. This program allows you to access the terminal output of the switch. It also allows you to configure the switch.

* + - 1. Start Tera Term by clicking the **Windows Start** button located in the task bar. Locate **Tera Term** under **All Programs**.

**Note**: If the program is not installed on the system, Tera Term can be downloaded from the following link by selecting **Tera Term**:

<https://ttssh2.osdn.jp/>

* + - 1. In the New Connection dialog box, click the **Serial** radio button. Verify that the correct COM port is selected and click **OK** to continue.
      2. From the Tera Term **Setup** menu, choose the **Serial port…** to verify the serial settings. The default parameters for the console port are 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control. The Tera Term default settings match the console port settings for communications with the Cisco IOS switch.
      3. When you can see the terminal output, you are ready to configure a Cisco switch.

**Make sure you show your connections and the switch prompt to your Instructor to mark this part**

**Instructor Sign-off:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

## Display and Configure Basic Device Settings

In this section, you are introduced to the user and privileged EXEC modes. You will determine the IOS version, display the clock settings, and configure the clock on the switch.

### Display the switch IOS image version.

* + - 1. After the switch has completed its startup process, the following message is displayed. Enter **n** to continue.

Open Configuration Window

Would you like to enter the initial configuration dialog? [yes/no]: **n**

**Note**: If you do not see the above message, please contact your instructor to reset your switch to the initial configuration.

* + - 1. While you are in the user EXEC mode, display the IOS version for your switch.

Switch> **show version**

Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE, RELEASE SOFTWARE (fc1)

Technical Support: http://www.cisco.com/techsupport

Copyright (c) 1986-2012 by Cisco Systems, Inc.

Compiled Sat 28-Jul-12 00:29 by prod\_rel\_team

ROM: Bootstrap program is C2960 boot loader

BOOTLDR: C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(53r)SEY3, RELEASE SOFTWARE (fc1)

Switch uptime is 2 minutes

System returned to ROM by power-on

System image file is "flash://c2960-lanbasek9-mz.150-2.SE.bin"

**<output omitted>**

#### Question:

**Which IOS image version is currently in use by your switch?**

Type your answers here.

### Configure the clock.

As you learn more about networking, you will see that configuring the correct time on a Cisco switch can be helpful when you are troubleshooting problems. The following steps manually configure the internal clock of the switch.

* + - 1. Display the current clock settings.

Switch> **show clock**

\*00:30:05.261 UTC Mon Mar 1 1993

* + - 1. The clock setting is changed from within the privileged EXEC mode. Enter the privileged EXEC mode by typing **enable** at the user EXEC mode prompt.

Switch> **enable**

* + - 1. Configure the clock setting. The question mark (?) provides help and allows you to determine the expected input for configuring the current time, date, and year. Press Enter to complete the clock configuration.

Switch# **clock set ?**

hh:mm:ss Current Time

Switch# **clock set 15:08:00 ?**

<1-31> Day of the month

MONTH Month of the year

Switch# **clock set 15:08:00 Oct 26 ?**

<1993-2035> Year

Switch# **clock set 15:08:00 Oct 26 2012**

Switch#

\*Oct 26 15:08:00.000: %SYS-6-CLOCKUPDATE: System clock has been updated from 00:31:43 UTC Mon Mar 1 1993 to 15:08:00 UTC Fri Oct 26 2012, configured from console by console.

* + - 1. Enter the **show clock** command to verify that the clock setting has updated.

Switch# **show clock**

15:08:07.205 UTC Fri Oct 26 2012

Close Configuration Window

1. Upon lab completion do the following:

* Initialize your routers and switches.
* Remove All PCs Addresses.
* Unplug all cables and put them back neatly in their designated place inside the storeroom.
* Power off all equipment.

**Make sure you verify this to your Instructor to mark this part**

**Instructor Sign-off: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# Reflection Question

* 1. How do you prevent unauthorized personnel from accessing your Cisco device through the console port?

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