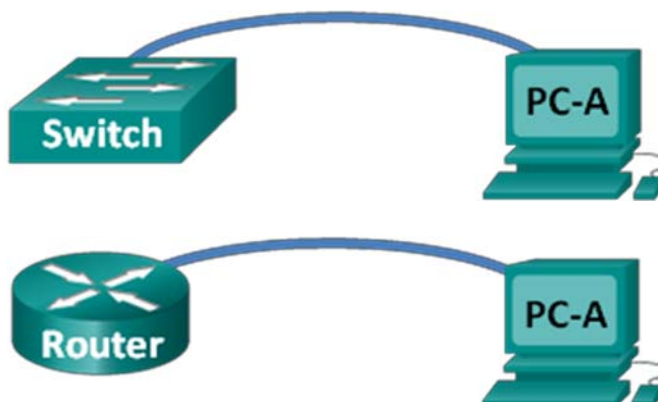# Lab - Establish a Console Session with Tera

Topology

Objectives

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

- Connect to a Cisco device using a serial console cable.
- Establish a console session using a terminal emulator, such as Tera Term.

Part 2: Erasing and Reloading the Cisco Device

- Erase previously saved settings to return the device to the default state.

Background / Scenario

Various models of Cisco routers and switches are used in networks of all types. These devices are initially managed using a local console connection and then routinely managed using a remote connection. Nearly all Cisco devices have a serial console port to which you can connect.

In this lab, you will learn how to access a Cisco device via a direct local connection to the console port, using a terminal emulation program, 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 will erase the saved configurations and reload the device.

Note: The routers used are Cisco 1941 ISRs with Cisco IOS Release 15.4(3) (universalk9 image). The switches used 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 output produced might vary from what is shown in the labs.
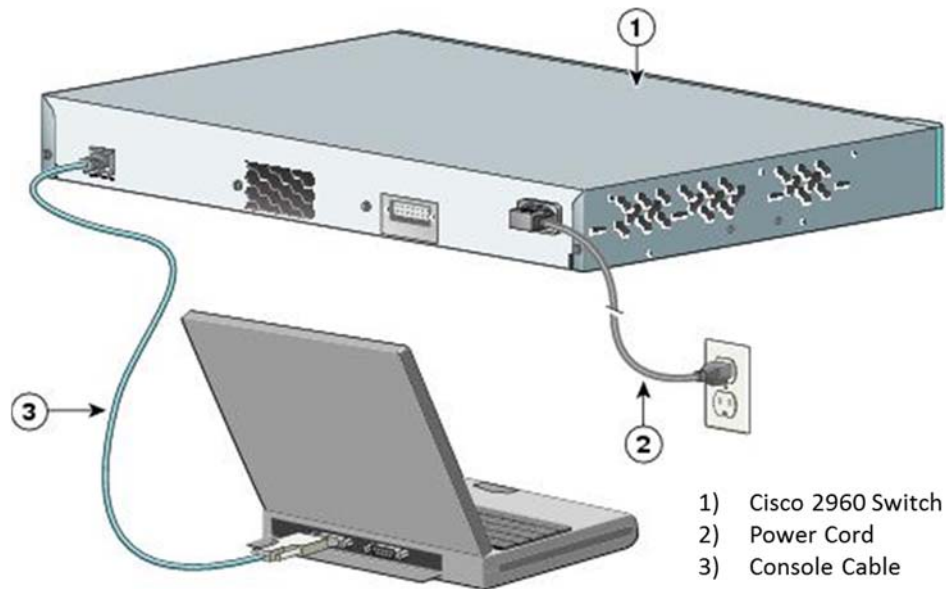
Required Resources

- 1 Router (Cisco 1941 with Cisco IOS software, release 15.4(3) universal image or comparable)
- 1 Switch (Cisco 2960 with Cisco IOS Release 15.0(2) lanbasek9 image or comparable)
- 1 PC (Windows 10) with terminal emulation program, such as Tera Term)
- DB-9 to RJ-45 console cable to configure the switch or router via the RJ-45 console port
- Mini-USB cable to configure the router via the USB console port if available

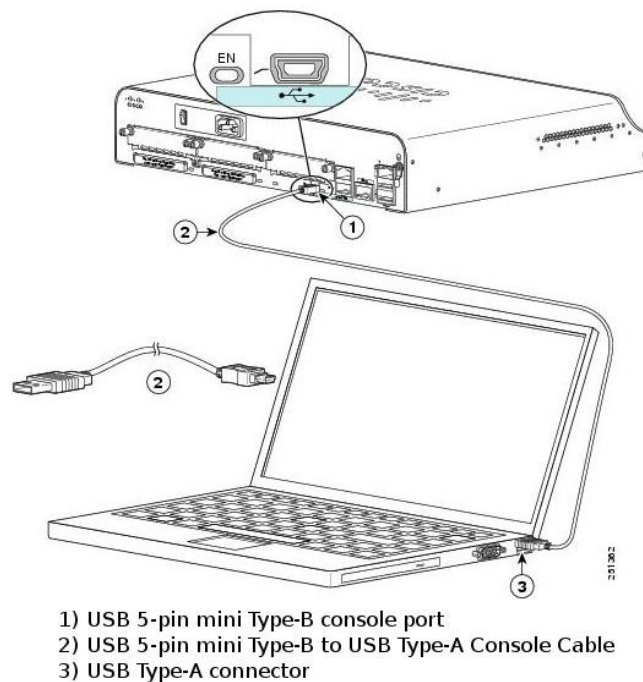# Part 1: Access a Cisco Device through the Serial Console Port

You will connect a PC to a Cisco switch or router using a console cable. This connection will allow you to access the command line interface (CLI) and display settings or configure the device

Step 1: Connect a Cisco device and computer using a console cable.

a. Connect the console cable to the RJ-45 console port of the switch or router.

1) Cisco 2960 Switch
2) Power Cord
3) Console Cable

If you are using a mini-USB console cable, connect it to mini-USB port of the device.

1) USB 5-pin mini Type-B console port
2) USB 5-pin mini Type-B to USB Type-A Console Cable
3) USB Type-A connector

b. Connect the other cable end to the serial COM port on the computer.

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

> 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 on your computer.

> **Note**: If you are using a mini-USB cable, you maybe prompted to install a driver.

c.   Power up the Cisco device and computer if these devices are not already on.

Step 2: Configure Tera Term to establish a console session with the device.

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.

a.   Right-click **Start**. Enter **Tera Term** and select **Tera Term** in the results list.

> **Note**: If the program is not installed on the system, Tera Term can be downloaded from the following link by selecting the latest **Tera Term** package release. Tera Term is open source free software.

> https://en.osdn.jp/projects/ttssh2/releases/
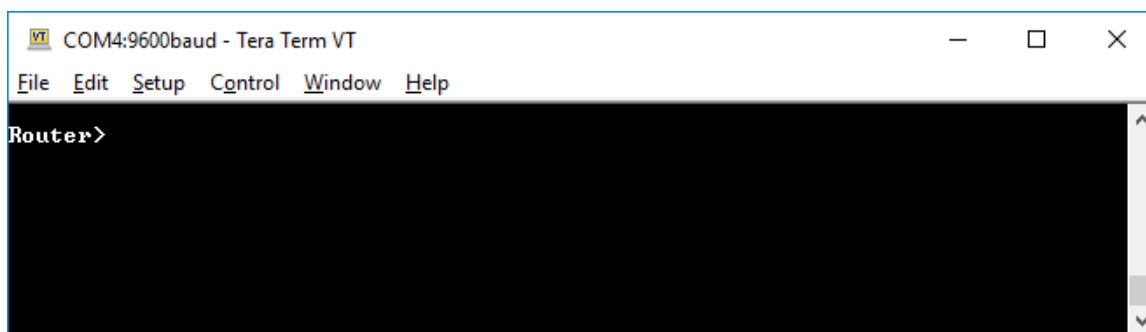
b.   Click **Serial**.

When using the USB-to-Serial cable, select the COM port associated with Prolific USB-to-Serial Comm Port. In this example, COM4 is the serial port used by the computer.
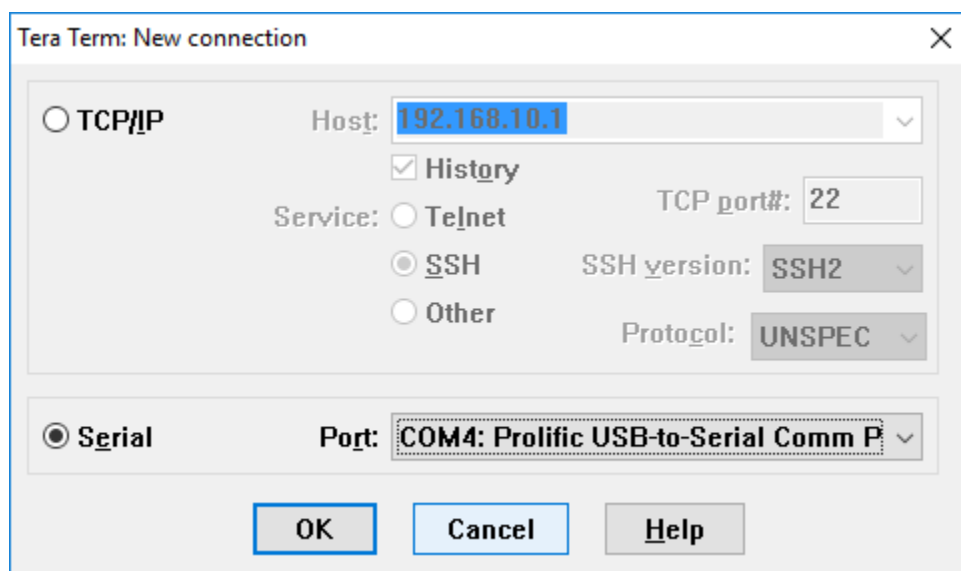
When using the mini-USB cable, select the COM port associated with the USB Serial Device. In this example, COM3 is the serial port used by the computer.
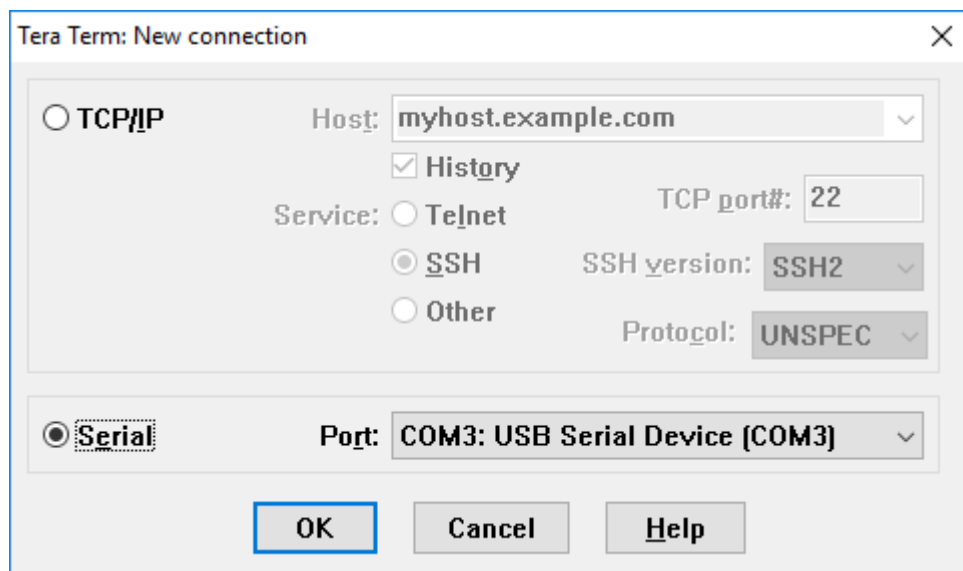
c. Click **OK** to connect to the device.

Part 2: Erasing and Reloading the Cisco Device

For the majority of the labs in this course, it is necessary to start with an unconfigured router and switch. Using a device with an existing configuration may produce unpredictable results. The following instructions prepare a switch or router prior to performing the lab so that previous configuration options do not interfere. Instructions are provided for the 2960 series switches.

a. Enter privileged EXEC mode by typing **enable**. If prompted for a password, refer to the instructor for assistance.

    Switch> **enable**

    or

    Router**> enable**

b. If you are using a switch, remove the VLAN database information file. This file exists only if changes were made to the switch VLAN configurations.

    Switch# **delete vlan.dat**
    Delete filename [vlan.dat]? **[Enter]**
    Delete flash:vlan.dat? [confirm] **[Enter]**

    If there was no VLAN file, this message is displayed:

    %Error deleting flash:vlan.dat (No such file or directory)

c. Remove the startup configuration file from NVRAM.

    ```
    Switch# erase startup-config
    ```

    or

    ```
    Router# erase startup-config
    ```

    The responding line prompt is:

    ```
    Erasing the nvram filesystem will remove all files! Continue? [confirm]
    ```

d. Press **Enter** to confirm. The response should be:

    ```
    Erase of nvram: complete
    ```

e. Restart the software using the **reload** command in privileged EXEC mode.

    ```
    Switch# reload
    ```

    or

    ```
    Router# reload
    ```

    The responding line prompt is:

    ```
    System configuration has been modified. Save? [yes/no]:
    ```

f. Type **n,** and then press **Enter**. The responding line prompt is:

    ```
    Proceed with reload? [confirm] [Enter]
    ```

    The first line of the response is:

    ```
    Reload requested by console.
    ```

    After the device has reloaded, the line prompt is:

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

g. Type **n,** and then press **Enter**. The responding line prompt is:

    ```
    Press RETURN to get started! [Enter]
    ```