

## Lab – Remote Access

### Objectives

Compare SSH and Telnet for accessing a remote host.

### Background / Scenario

You will use SSH and Telnet to establish remote connections to a host. SSH is a secure method for remotely accessing an SSH host. Telnet is an insecure method for accessing a Telnet host.

### Required Resources

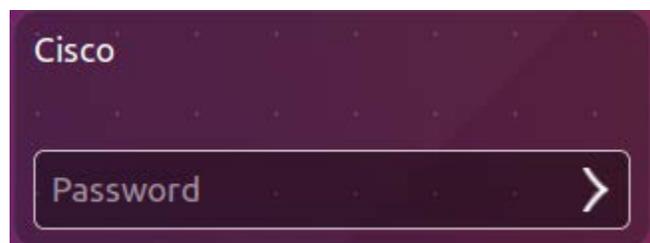
- PC with Ubuntu 16.04 Desktop LTS installed in a VirtualBox or VMware virtual machine.

### Step 1: Open a terminal window in Ubuntu

- Log in to Ubuntu using the following credentials:

User: **cisco**

Password: **password**



- Click on the terminal icon to open a terminal window.



### Step 2: Telnet to localhost

- At the command prompt, enter the following command:

```
cisco@ubuntu:~$ telnet localhost
```

- You are prompted for a login account and password for an account that exists on the host:

Ubuntu login: **cisco**

Password: **password**

```
cisco@ubuntu:~$ telnet localhost
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
Ubuntu 16.04 LTS
ubuntu login: cisco
Password:
Last login: Fri Jun  3 22:22:43 PDT 2016 from localhost on pts/22
Welcome to Ubuntu 16.04 LTS (GNU/Linux 4.4.0-21-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

13 packages can be updated.
7 updates are security updates.

cisco@ubuntu:~$
```

You have successfully logged into your own machine using Telnet.

- c. At the command prompt, enter the following command to exit this Telnet session:

```
cisco@ubuntu:~$ exit
```

```
cisco@ubuntu:~$ exit
logout
Connection closed by foreign host.
cisco@ubuntu:~$
```

### Step 3: SSH to localhost

- a. Type the following command in terminal to access the localhost using SSH:

```
cisco@ubuntu:~$ ssh localhost
```

```
cisco@ubuntu:~$ ssh localhost
cisco@localhost's password:
```

**Note:** If this is the first time connecting with SSH, the security keys will need to be saved to the system. If you are prompted as to whether to proceed, type **yes** to proceed with the connection.

- b. Use the password **password** for the user **cisco**.

```
cisco@localhost's password:
Welcome to Ubuntu 16.04 LTS (GNU/Linux 4.4.0-21-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

13 packages can be updated.
7 updates are security updates.

Last login: Fri Jun  3 22:29:58 2016 from localhost
cisco@ubuntu:~$
```

- c. You have successfully logged in to your machine using SSH.

### Step 4: Accessing a Remote Host

- a. Pick a partner and change the network adapters on both of your virtual machines to bridged. To do this you will need to release your cursor from the virtual machine, go to **Machine > Settings** and click **Network** and change **Attached to: NAT** to **Attached to: Bridged Adapter**. Wait for the network to reconnect. Now check your IP address by typing in the following command:

```
cisco@ubuntu:~$ ifconfig
```

```
cisco@ubuntu:~$ ifconfig
ens33  Link encap:Ethernet  HWaddr 00:0c:29:f9:1f:e3
       inet addr:192.168.68.130  Bcast:192.168.68.255  Mask:255.255.255.0
       inet6 addr: fe80::8b70:7396:899:7dc1/64  Scope:Link
       UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
       RX packets:4499  errors:0  dropped:0  overruns:0  frame:0
       TX packets:484  errors:0  dropped:0  overruns:0  carrier:0
       collisions:0  txqueuelen:1000
       RX bytes:774294 (774.2 KB)  TX bytes:313660 (313.6 KB)

lo     Link encap:Local Loopback
       inet addr:127.0.0.1  Mask:255.0.0.0
       inet6 addr: ::1/128  Scope:Host
       UP LOOPBACK RUNNING  MTU:65536  Metric:1
       RX packets:5900  errors:0  dropped:0  overruns:0  frame:0
       TX packets:5900  errors:0  dropped:0  overruns:0  carrier:0
       collisions:0  txqueuelen:1
       RX bytes:345057 (345.0 KB)  TX bytes:345057 (345.0 KB)

cisco@ubuntu:~$
```

**Note:** If you did not receive a new IP address, click the network icon (). Disconnect and reconnect the wired connection.

- b. Repeat the SSH and Telnet commands but this time instead of localhost use your partner's IP address.