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

a. Log in to Ubuntu using the following credentials:

User: **cisco**

Password: **password**

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

Step 2: Telnet to localhost

a. At the command prompt, enter the following command:

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

b. 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.