**Lab 3**

**Telnet and SSH**

**What is Telnet?**

Telnet is a protocol that allows you to connect to remote computers (called hosts) over a TCP/IP network.

**What is SSH?**

SSH is a secure remote login protocol. The major difference between ssh and other remote login programs is that ssh encrypts the password and other information so that it can't be "sniffed" by others as you type it.

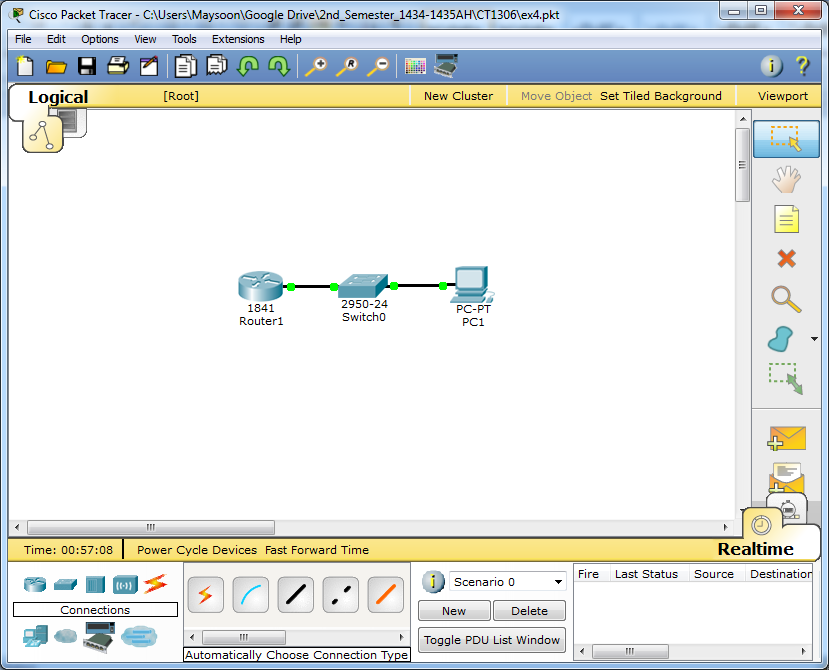
**How do we enable Telnet and SSH?**

To enable telnet, we start configuring VTY ports. VTY ports are specifically visual not physical ports used for remote access using Telnet or SSH.

**Telnet VS. SSH:**

1. SSH and Telnet commonly serves the same purpose
2. SSH is more secure compared to Telnet
3. SSH encrypts the data while Telnet sends data in plain text
4. SSH uses a public key for authentication while Telnet does not use any authentication
5. SSH adds a bit more overhead to the bandwidth compared to Telnet.
6. Telnet has been all but replaced by SSH in almost all uses.

**Telnet**

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address** | **Subnet Mask** | **Default Gateway** |
| **R1** | **Fa0/0** | 192.168.0.245 | /24 | N/A |
| **PC1** | **NIC** | 192.168.0.15 | /24 | 192.168.0.245 |

**Configuring Telnet:**

1. **Router1**

Router>en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#hostname R1

R1(config)#line vty 0

R1 (config-line)#password cisco

R1 (config)# enable secret Net302

1. **PC1**

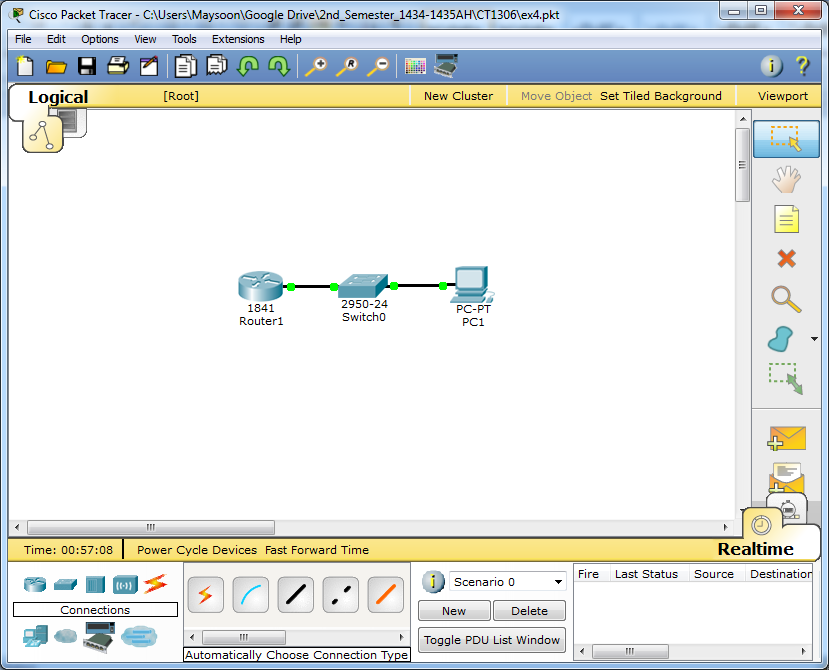
PC>telnet 192.168.0.245

Trying 192.168.0.245 …Open  
User Access Verification  
Password:  
R1>

R1> enable

R1#

**SSH**

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address** | **Subnet Mask** | **Default Gateway** |
| **R1** | **Fa0/0** | 10.0.0.1 | /8 | N/A |
| **PC1** | **NIC** | 10.0.0.2 | /8 | 10.0.0.1 |

1. **Router 1**.

Router>en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#hostname R1

R1(config)#ip domain-name example.com

R1(config)#crypto key generate rsa

How many bits in the modulus [512]: 800

R1(config)#username net302

R1(config)#line vty 0 15

R1(config-line)#password cisco

R1(config-line)#transport input ssh

R1(config-line)#login

R1(config-line)#exit

R1(config)#enable secret 123

1. **PC 1**

PC>ssh –l net302 10.0.0.1  
Open  
Password:

R1>enable

R1#