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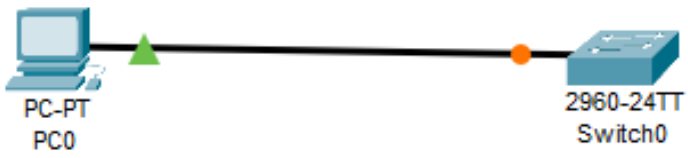
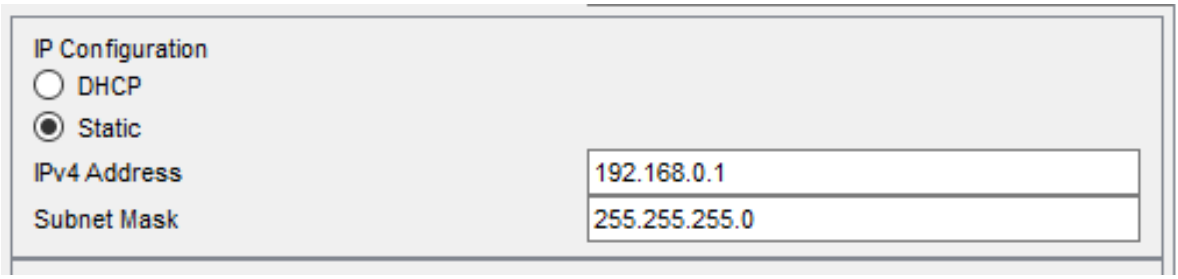
**Практическая работа 17 – Способы обезопасить доступ по Telnet**

1. Строю сеть




2. Настраиваю IP для ПК




3. И также IP для свитч

```
Switch(config-if)#int vlan 1
Switch(config-if)#no sh

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

Switch(config-if)#ip address 192.168.0.2 255.255.255.0
Switch(config-if)#ex
Switch(config)#
```

4. Создаю пользователей с привилегиями

```
Switch(config)#
Switch(config)#line vty 0 4
Switch(config-line)#user student privilege 1 pass 111
Switch(config)#line vty 0 4
Switch(config-line)#user admin privilege 15 pass 111
Switch(config)#line vty 0 4
Switch(config-line)#login local
Switch(config-line)#
```

5. Пингую

```
C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.0.2: bytes=32 time<1ms TTL=255
Reply from 192.168.0.2: bytes=32 time<1ms TTL=255
Reply from 192.168.0.2: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

6. Удалённо подключаюсь к свитчу под Student

```
C:\>telnet 192.168.0.2
Trying 192.168.0.2 ...Open


User Access Verification

Username: student
Password:
Switch>en
% No password set.
Switch>ex

[Connection to 192.168.0.2 closed by foreign host]
C:\>
```

***Задание:***

7. Создаю новых пользователей

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#
Switch(config)#line vty 0 4
Switch(config-line)#user student8 privilege 8 pass 111
```

8. Подключаюсь удалённо к ним и тестирую

```
Username: admin
Password:
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#ex
Switch#ex

[Connection to 192.168.0.2 closed by foreign host]
C:\>telnet 192.168.0.2
Trying 192.168.0.2 ...Open


User Access Verification

Username: student8
Password:
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#ex
Switch#ex

[Connection to 192.168.0.2 closed by foreign host]
C:\>
```

Разница между уровнями привилегий заключается в степени доступа и возможности выполнения команд. Уровень 0-1 предназначен для базового доступа, уровни 2-14— для промежуточного, а уровень 15 — для полного контроля над устройством.

9. Команда show running-config

```
Username: admin
Password:
Switch#show running-config
Building configuration...

Current configuration : 1323 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
username admin privilege 15 password 0 111
username student privilege 1 password 0 111
username student3 privilege 3 password 0 111
username student6 privilege 6 password 0 111
username student8 privilege 8 password 0 111
!
!
```

10. Создаю пользователя, пароль которого задаю с помощью secret

```
Switch(config-line)#
Switch(config-line)#user student2 privilege 15 secret 111
```

```
Username: student2
Password:
Switch#show running-config
Building configuration...

Current configuration : 1381 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
username admin privilege 15 password 0 111
username student privilege 1 password 0 111
username student2 secret 5 $1$mERr$W0yB.XmVL7E61EqvjIL7e1
username student3 privilege 3 password 0 111
username student6 privilege 6 password 0 111
username student8 privilege 8 password 0 111
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
```

При использовании команды show running-config,  пароль, заданный с помощью команды secret зашифрован