Cisco Packet Tracer Practical: OSPF MD5 & AAA Authentication

Step 1: Topology Setup

1. Add Devices:

   - 1 Router (R1)

   - 1 Switch

   - 2 PCs (PC0 & PC1)

2. Connections:

   - PC0 to Switch (Fa0)

   - PC1 to Switch (Fa0)

   - Router (R1) Gig0/0 to Switch (Fa0/2)

Step 2: IP Addressing

Router R1 (CLI):

   enable

   configure terminal

   interface gig0/0

   ip address 192.168.1.1 255.255.255.0

   no shutdown

   exit

PC0 & PC1 (Desktop > IP Configuration):

   PC0: IP 192.168.1.2 Subnet 255.255.255.0 Gateway 192.168.1.1

   PC1: IP 192.168.1.3 Subnet 255.255.255.0 Gateway 192.168.1.1

Step 3: OSPF MD5 Authentication

Router R1 (CLI):

   enable

   configure terminal

   router ospf 1

   network 192.168.1.0 0.0.0.255 area 0

   exit

```
interface gig0/0
ip ospf message-digest-key 1 md5 Cisco123
ip ospf authentication message-digest
exit
```

Step 4: AAA Authentication Configuration

Router R1 (CLI):

```
enable
configure terminal
username admin privilege 15 secret Admin@123

aaa new-model
aaa authentication login default local

line console 0
login authentication default
exit

line vty 0 4
login authentication default
exit
```

Step 5: Verification Commands

Check OSPF MD5:

```
show ip ospf interface gig0/0
```

Check AAA Configuration:

```
show running-config | include aaa
```

Ping Test (PC0 & PC1):

```
ping 192.168.1.1
```

Telnet Login Test (PC0 or PC1):

telnet 192.168.1.1

Username: admin

Password: Admin@123

Conclusion

If all tests pass, your configuration is successful!