

TUGAS 1 PERANCANGAN SISTEM JARINGAN KOMPUTER KONFIGURASI DASAR SWITCH

Disusun Guna Memenuhi Tugas Perancangan Jaringan Komputer
Semester VI

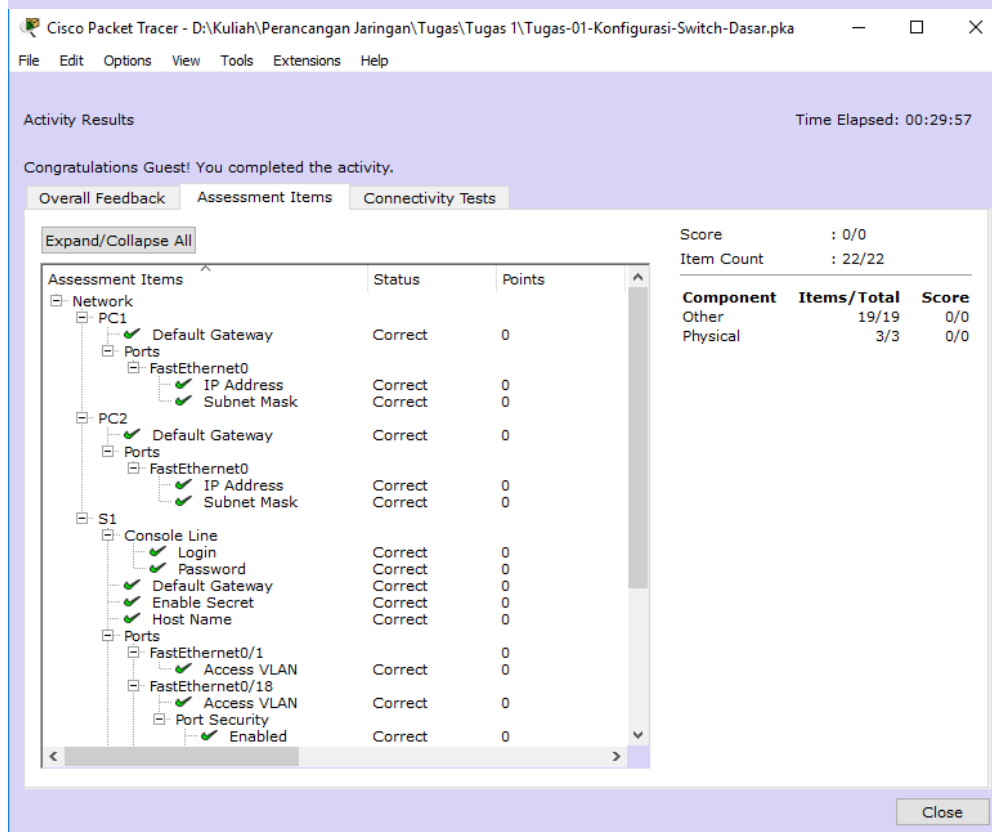
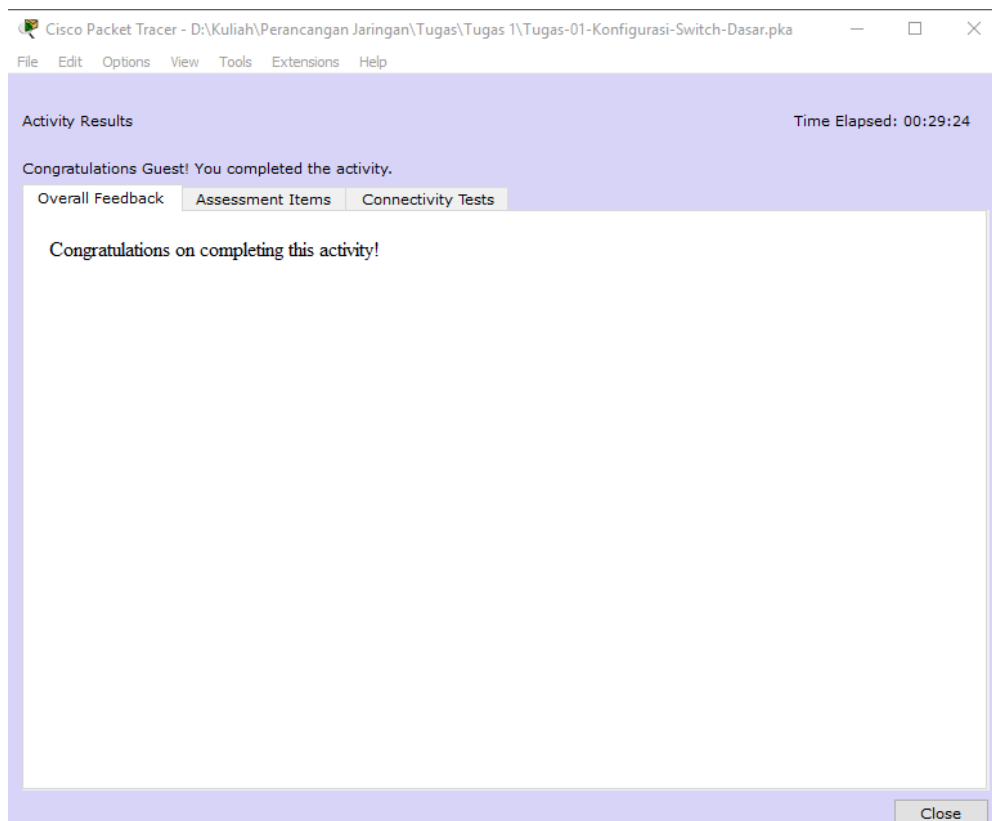
Pengampu: Ir. Bana Handaga, M.T., PhD



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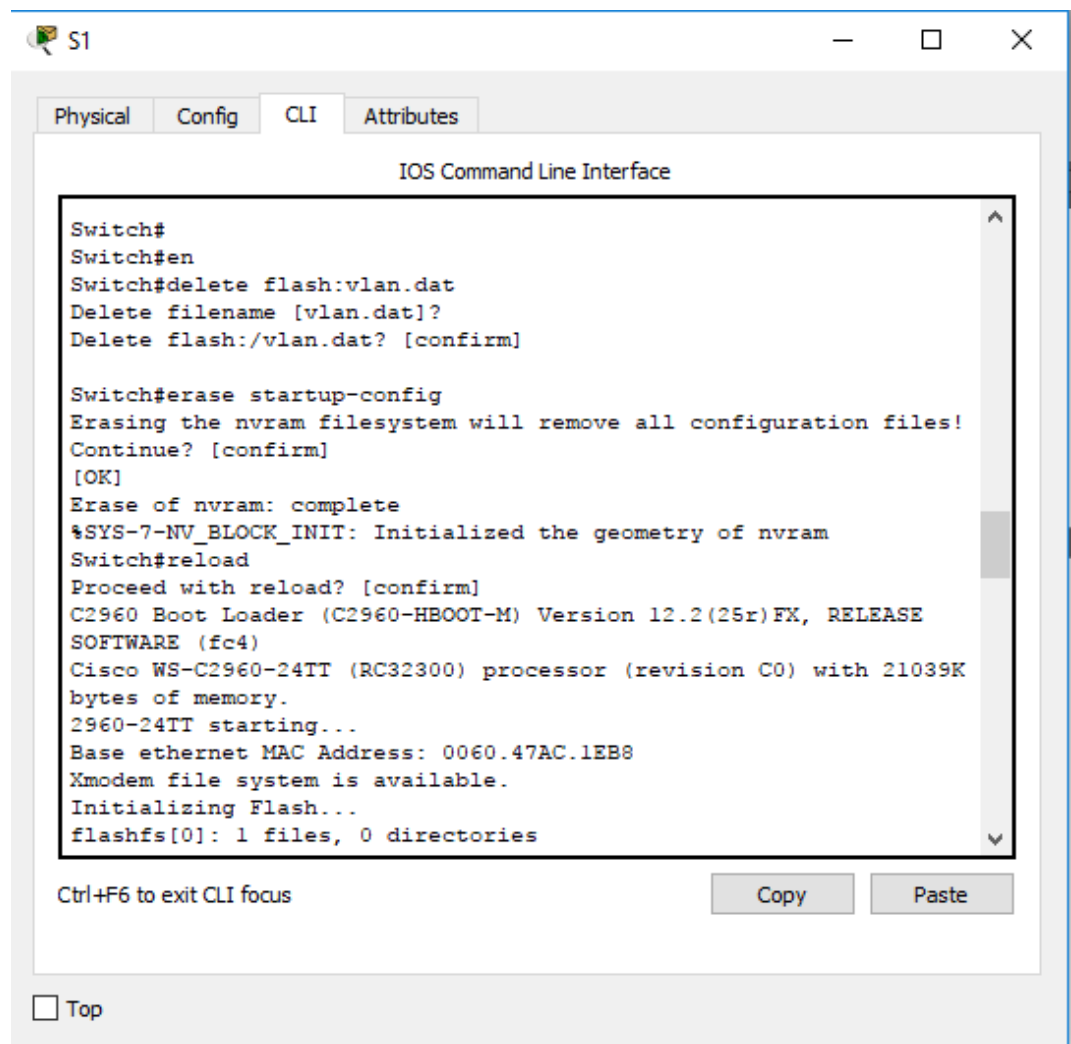
**PROGRAM STUDI INFORMATIKA
FAKULTAS KOMUNIKASI DAN INFORMATIKA
UNIVERSITAS MUHAMMADIYAH SURAKARTA
2018**



Tugas 1 : Menghapus Konfigurasi yang sudah ada pada Switch

Langkah langkah :

1. Masuk privileged EXEC mode dengan perintah enable
2. Menghapus Vlan database information file
3. Menghapus switch startup configuration file dari NVRAM
4. Memastikan informasi VLAN sudah dihapus
5. Reload switch



The screenshot shows a Cisco switch CLI interface with the following commands and output:

```
Switch#
Switch#en
Switch#delete flash:vlan.dat
Delete filename [vlan.dat]?
Delete flash:/vlan.dat? [confirm]

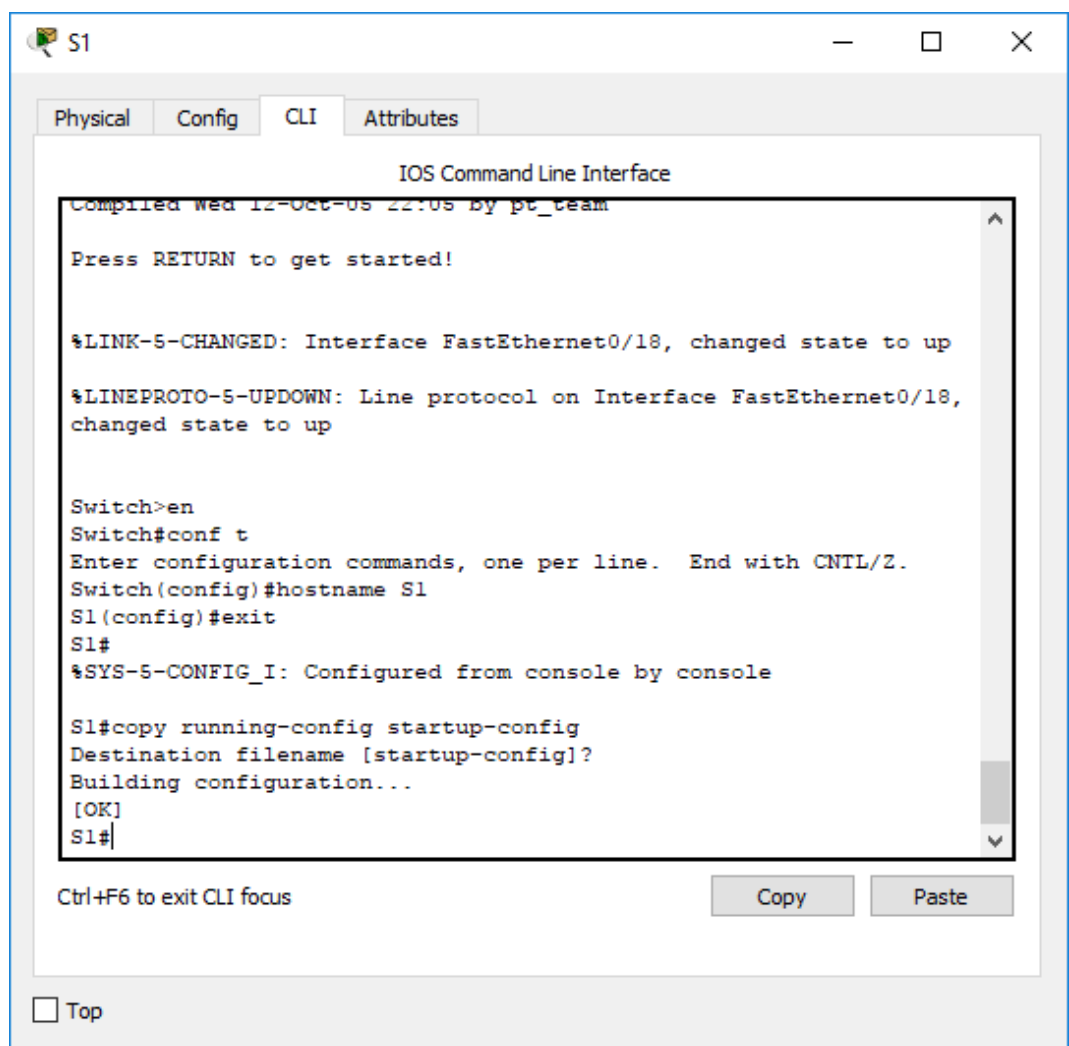
Switch#erase startup-config
Erasing the nvram filesystem will remove all configuration files!
Continue? [confirm]
[OK]
Erase of nvram: complete
%SYS-7-NV_BLOCK_INIT: Initialized the geometry of nvram
Switch#reload
Proceed with reload? [confirm]
C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(25r)FX, RELEASE
SOFTWARE (fc4)
Cisco WS-C2960-24TT (RC32300) processor (revision C0) with 21039K
bytes of memory.
2960-24TT starting...
Base ethernet MAC Address: 0060.47AC.1EB8
Xmodem file system is available.
Initializing Flash...
flashfs[0]: 1 files, 0 directories
```

Below the CLI window, there is a text prompt "Ctrl+F6 to exit CLI focus" and two buttons: "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".

Tugas 2 : Memeriksa Default Switch Configuration

Langkah langkah :

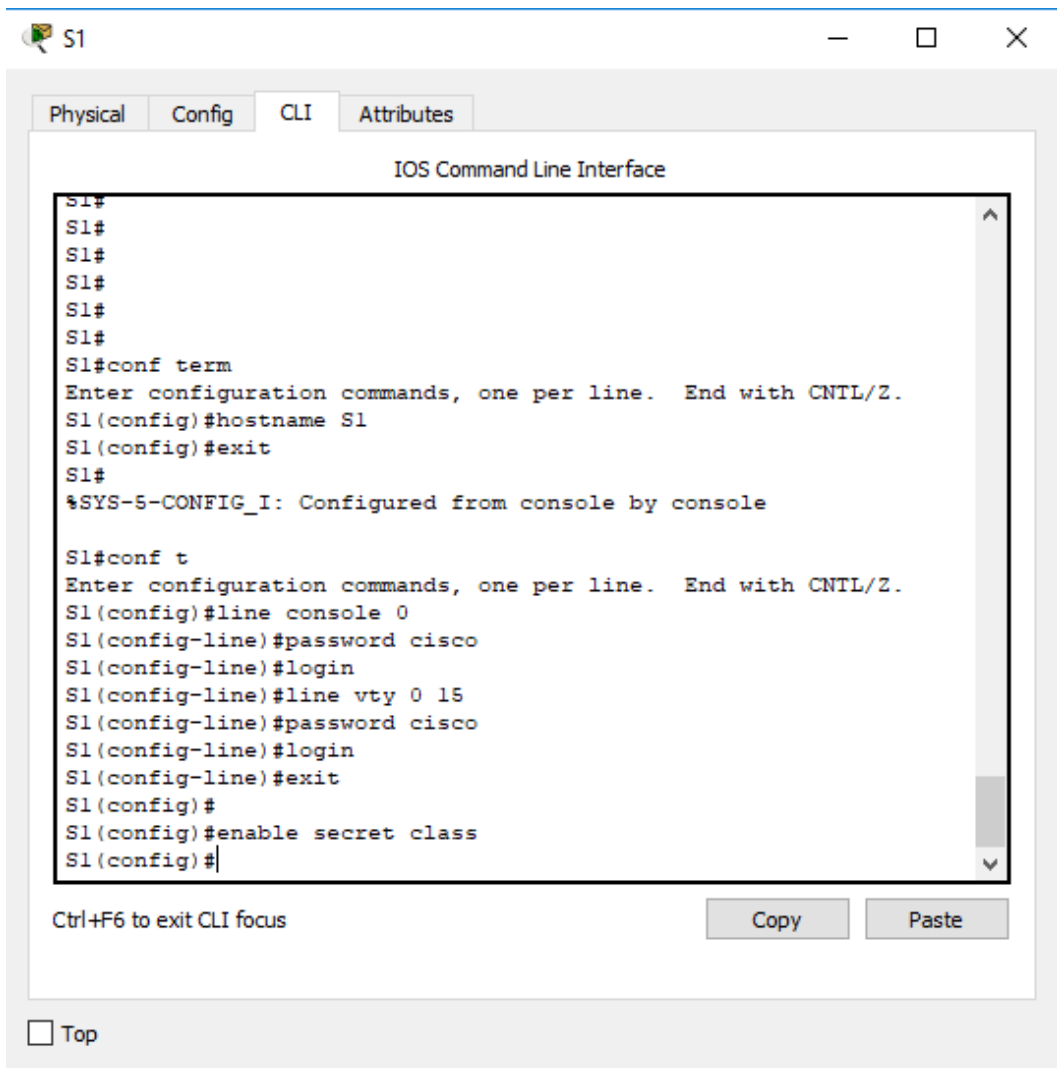
1. Masuk privileged
2. Mempelajari konfigurasi switch saat ini
3. Menampilkan Informasi Cisco IOS
4. Mempelajari fast ethernet interface
5. Mempelajari informasi VLAN
6. Mempelajari Flash memory
7. Mempelajari dan menyimpan file konfigurasi startup



Tugas 3 : Membuat sebuah Basic Switch Configuration

Langkah langkah :

1. Memberikan nama untuk switch
2. Mengatur Access Password
3. Mengatur command mode password
4. Mengkonfigurasi layer 3 address dari switch
5. Menempatkan port pada switch VLAN
6. Mengatur switch default gateway
7. Memastikan management LANs settings
8. Mengkonfigurasi IP address dan default gateway pada PC1
9. Memastikan Konektifitas
10. Mengatur pengaturan Port speed dan duplex setting untuk fast ethernet interface
11. Menyimpan file Startup configuration
12. Mempelajari file Startup configuration



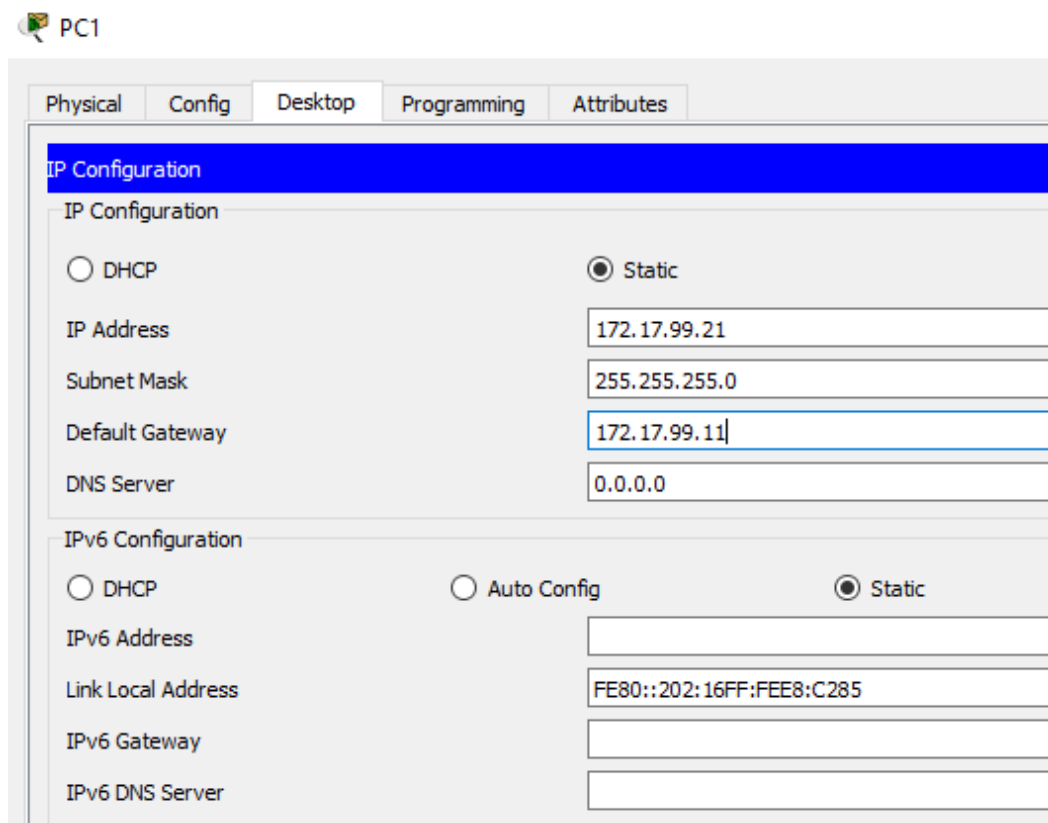
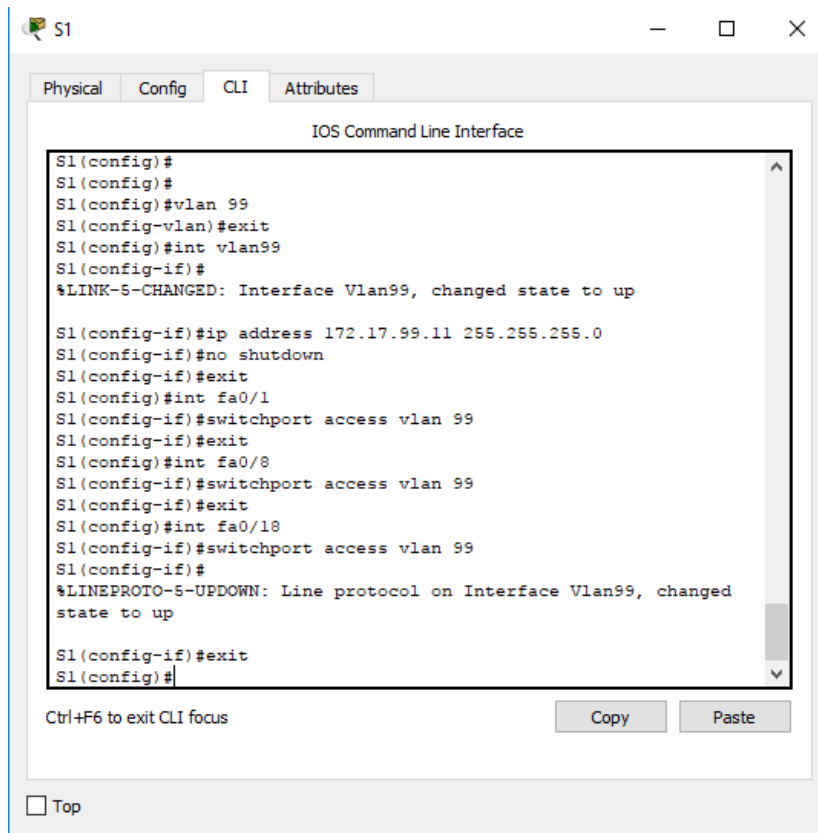
```
S1#
S1#
S1#
S1#
S1#
S1#
S1#conf term
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#hostname S1
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#line console 0
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#line vty 0 15
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#exit
S1(config)#
S1(config)#enable secret class
S1(config)#
```

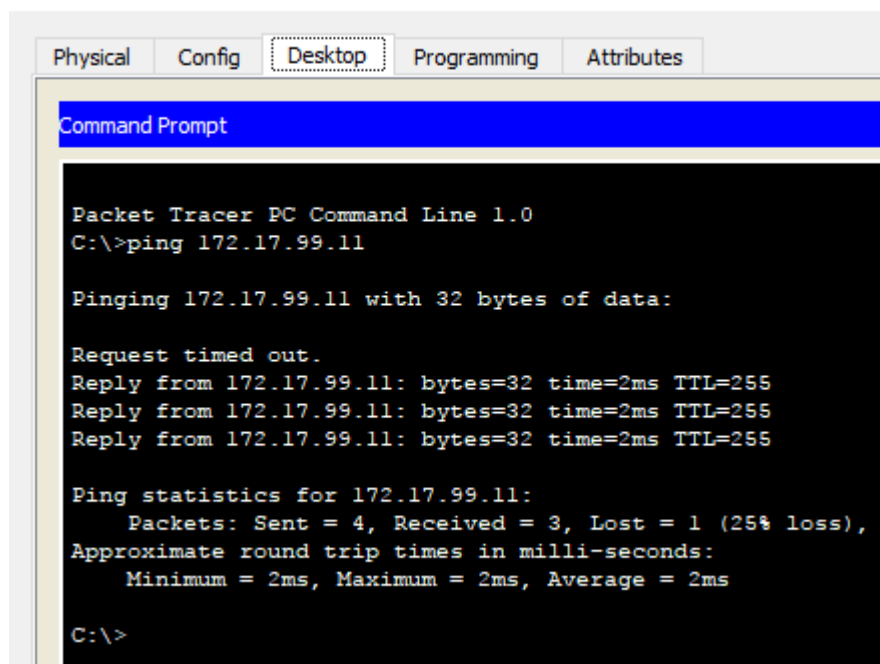
Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top



PC1



The screenshot shows the Packet Tracer interface for PC1. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The window has a blue title bar and a black background with white text. The text shows the execution of a 'ping' command to the IP address 172.17.99.11. The output indicates that the first packet timed out, while the next three were received successfully with a 2ms round trip time. The statistics show a 25% loss of one packet.

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.17.99.11

Pinging 172.17.99.11 with 32 bytes of data:

Request timed out.
Reply from 172.17.99.11: bytes=32 time=2ms TTL=255
Reply from 172.17.99.11: bytes=32 time=2ms TTL=255
Reply from 172.17.99.11: bytes=32 time=2ms TTL=255

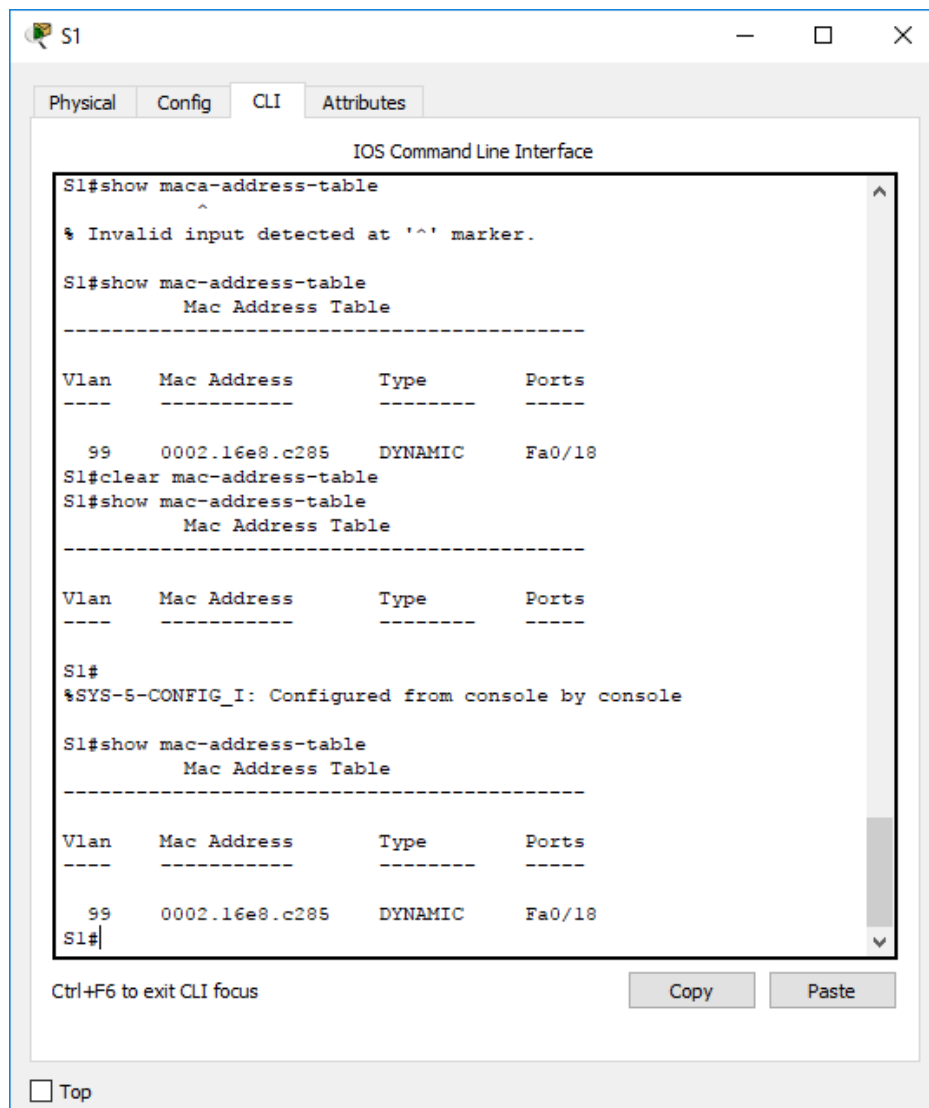
Ping statistics for 172.17.99.11:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 2ms, Average = 2ms

C:\>
```

Tugas 4 : Mangatur MAC Address Table

Langkah langkah :

1. Mencatat MAC address dari host
2. Memastikan MAC address pada switch sudah dipelajari
3. Menghapus MAC address table
4. Memastikan Hasilnya
5. Mempelajari MAC table lagi
6. Mengatur static MAC address
7. Memastikan Hasilnya
8. Menghapus static MAC entry
9. Memastikan Hasilnya



```
S1#show maca-address-table
^
% Invalid input detected at '^' marker.

S1#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type    Ports
----    -
99      0002.16e8.c285   DYNAMIC Fa0/18

S1#clear mac-address-table
S1#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type    Ports
----    -
99      0002.16e8.c285   DYNAMIC Fa0/18

S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type    Ports
----    -
99      0002.16e8.c285   DYNAMIC Fa0/18

S1#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

S1

Physical

Config

CLI

Attributes

IOS Command Line Interface

Vlan	Mac Address	Type	Ports
99	0002.16e8.c285	DYNAMIC	Fa0/18

```

S1#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#mac-address-table static 0002.16E8.C285 vlan 99
interface fastethernet 0/18
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
99      0002.16e8.c285   STATIC    Fa0/18
S1#

```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

```

interface fastethernet 0/18
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

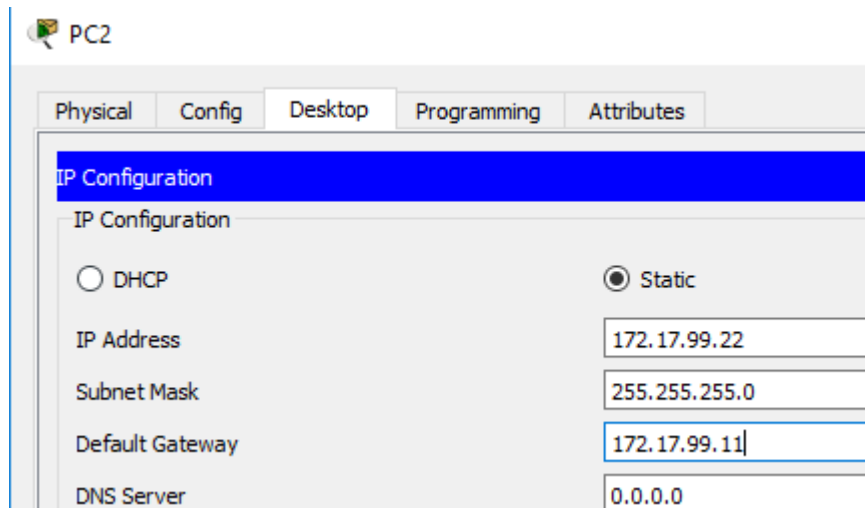
S1#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
S1#

```

Tugas 5 : Konfigurasi Port Security

Langkah langkah :

1. Konfigurasi Second Host
2. Memastikan Konektifitas
3. Memastikan MAC address pada switch sudah di pelajari
4. Daftar port security options
5. Konfigurasi port security pada access port
6. Memastikan hasilnya
7. Mempelajari file konfigurasi yang berjalan
8. Merubah pengaturan port security pada sebuah port
9. Memastikan hasil
10. Memperkenalkan rouge host
11. Mengaktifkan kembali port
12. Memastikan konektifitas



S1

Physical Config CLI Attributes

IOS Command Line Interface

```
S1#en
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#int fa0/18
S1(config-if)#switchport mode access
S1(config-if)#switchport port-security
S1(config-if)#switchport port-security maximum 2
S1(config-if)#switchport port-security mac-address sticky
S1(config-if)#switchport port-security violation shutdown
S1(config-if)#exit
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#show port security int fa0/18
^
% Invalid input detected at '^' marker.

S1#show port-security int fa0/18
Port Security          : Enabled
Port Status            : Secure-up
Violation Mode         : Shutdown
Aging Time             : 0 mins
Aging Type             : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses  : 2
Total MAC Addresses    : 0
Configured MAC Addresses : 0
Sticky MAC Addresses   : 0
Last Source Address:Vlan : 0000.0000.0000:0
Security Violation Count : 0
```

Ctrl+F6 to exit CLI focus

Copy Paste

S1

Physical Config CLI Attributes

IOS Command Line Interface

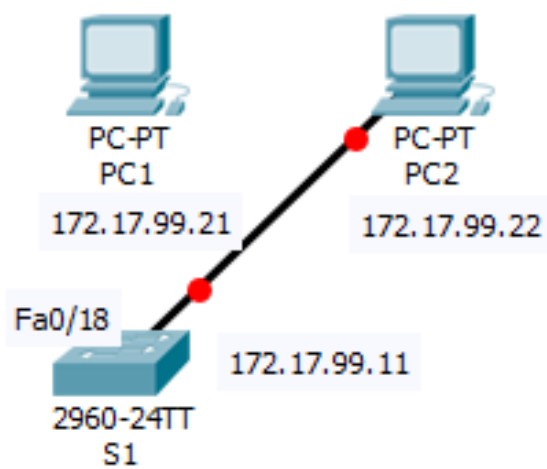
```
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#int fa0/18
S1(config-if)#switchport port-security maximum 1
S1(config-if)#end
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#show port-security int fa0/18
Port Security          : Enabled
Port Status            : Secure-up
Violation Mode         : Shutdown
Aging Time             : 0 mins
Aging Type             : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses  : 1
Total MAC Addresses    : 1
Configured MAC Addresses : 0
Sticky MAC Addresses   : 1
Last Source Address:Vlan : 0002.16E8.C285:99
Security Violation Count : 0

S1#
```

Ctrl+F6 to exit CLI focus

Copy Paste



```
S1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#int fa0/18
S1(config-if)#no shutdown

%LINK-5-CHANGED: Interface FastEthernet0/18, changed state to
down
S1(config-if)#
```
