

# **TUGAS 2 PERANCANGAN SISTEM JARINGAN KOMPUTER LAN BASIC**

Disusun Guna Memenuhi Tugas Perancangan Jaringan Komputer  
Semester VI

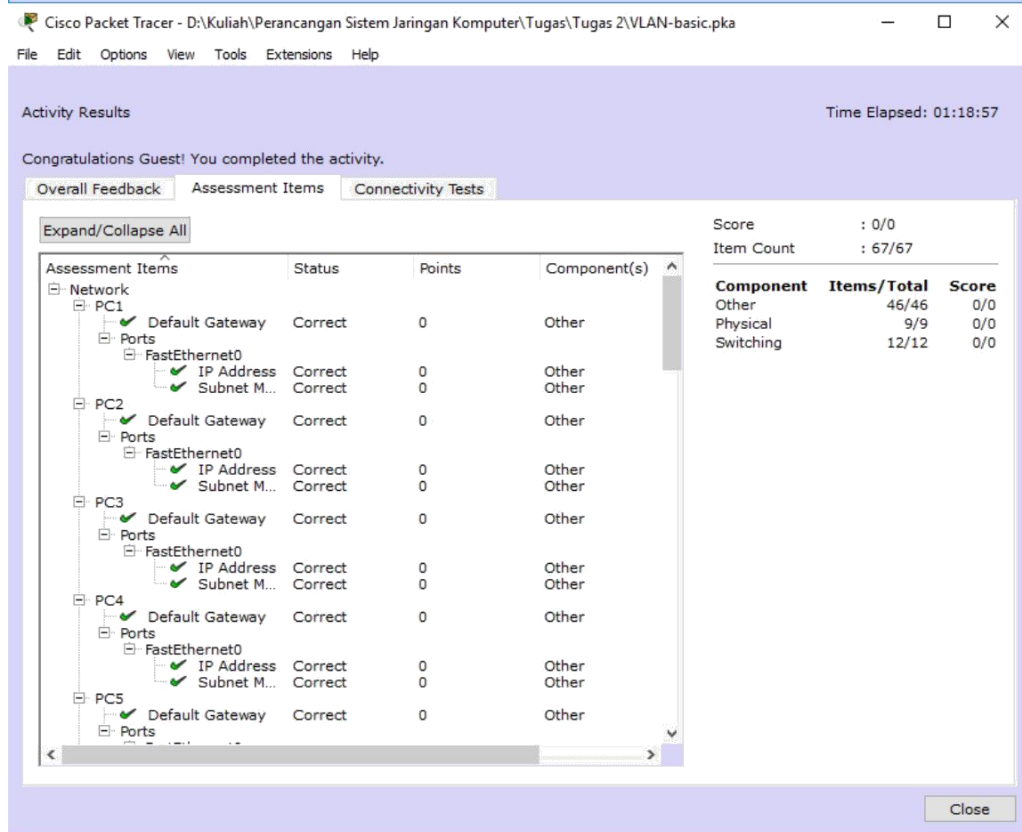
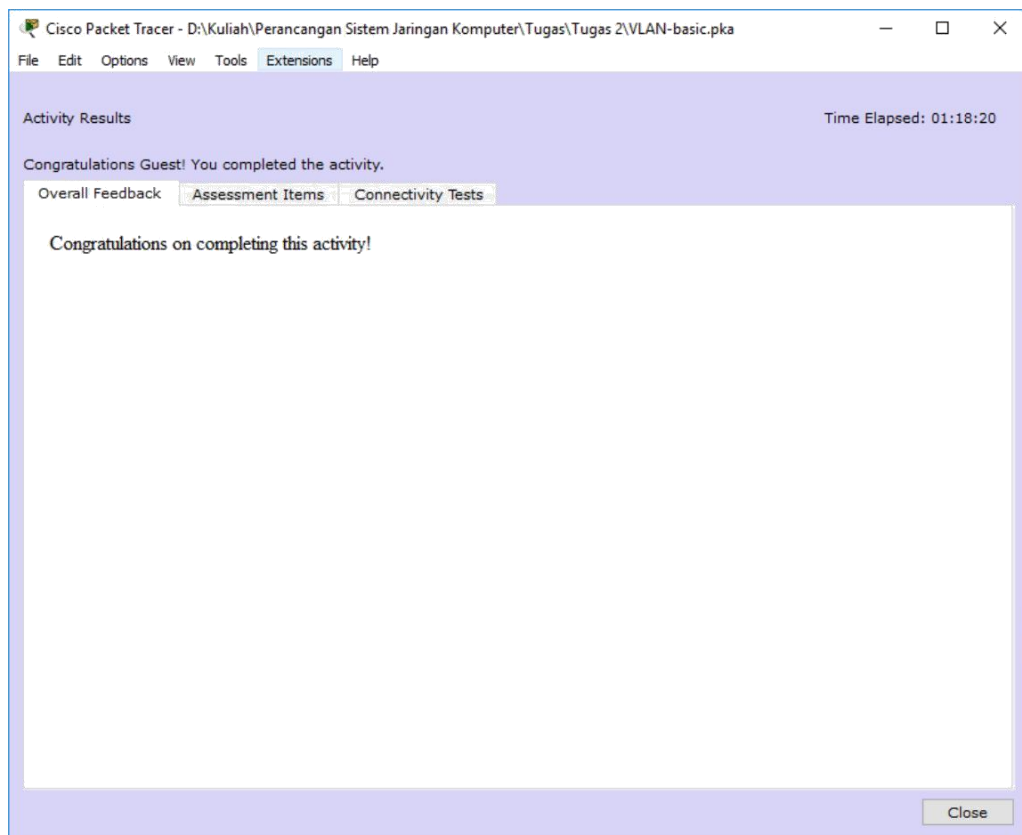
Pengampu: Ir. Bana Handaga, M.T., PhD



Oleh:

**MUARIF**  
**L 200150026**

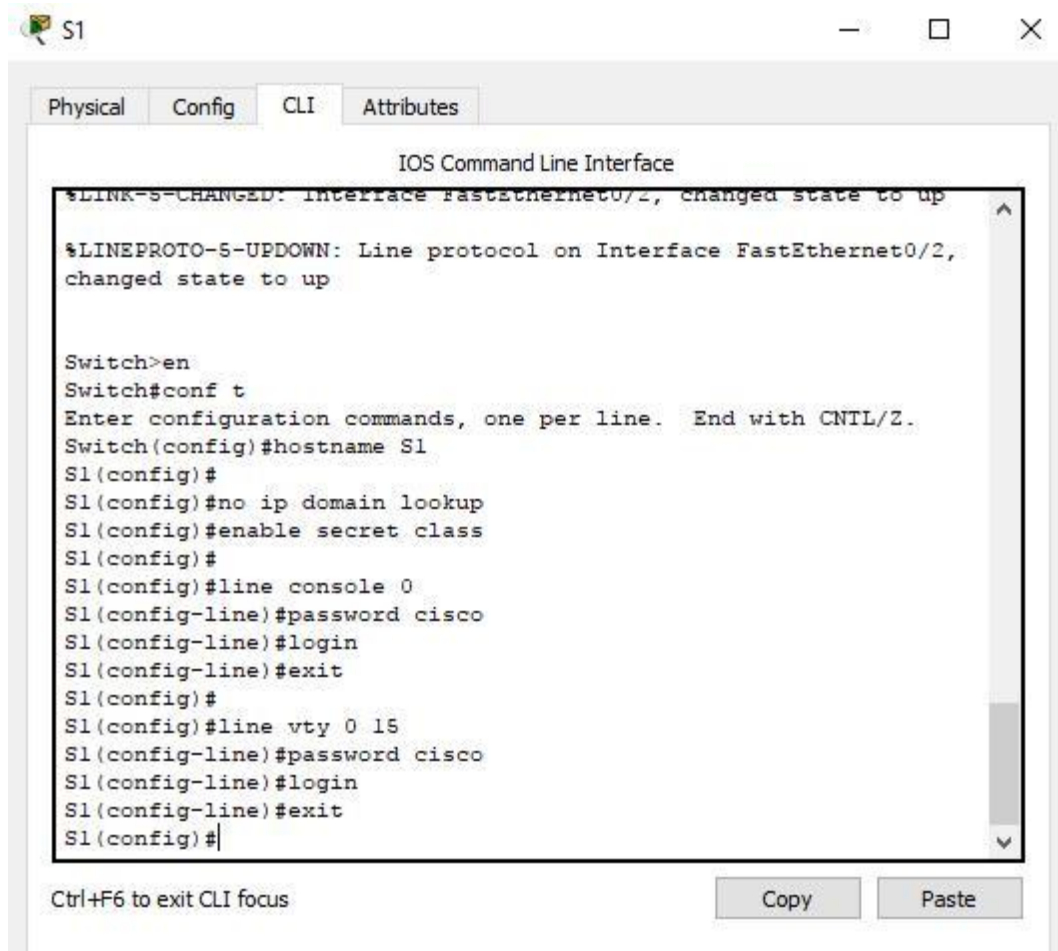
**PROGRAM STUDI INFORMATIKA  
FAKULTAS KOMUNIKASI DAN INFORMATIKA  
UNIVERSITAS MUHAMMADIYAH SURAKARTA  
2018**

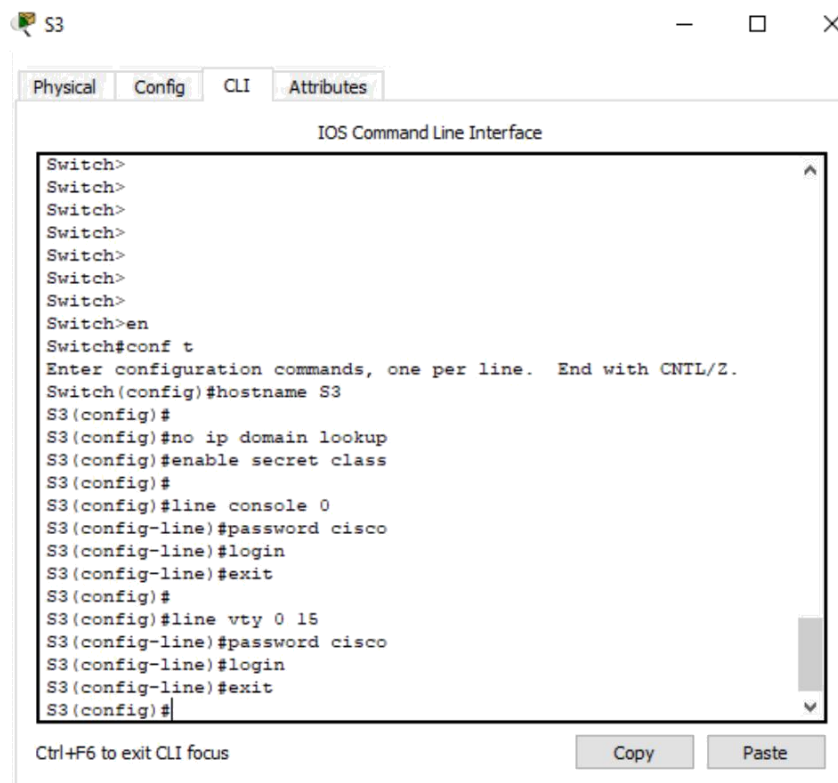
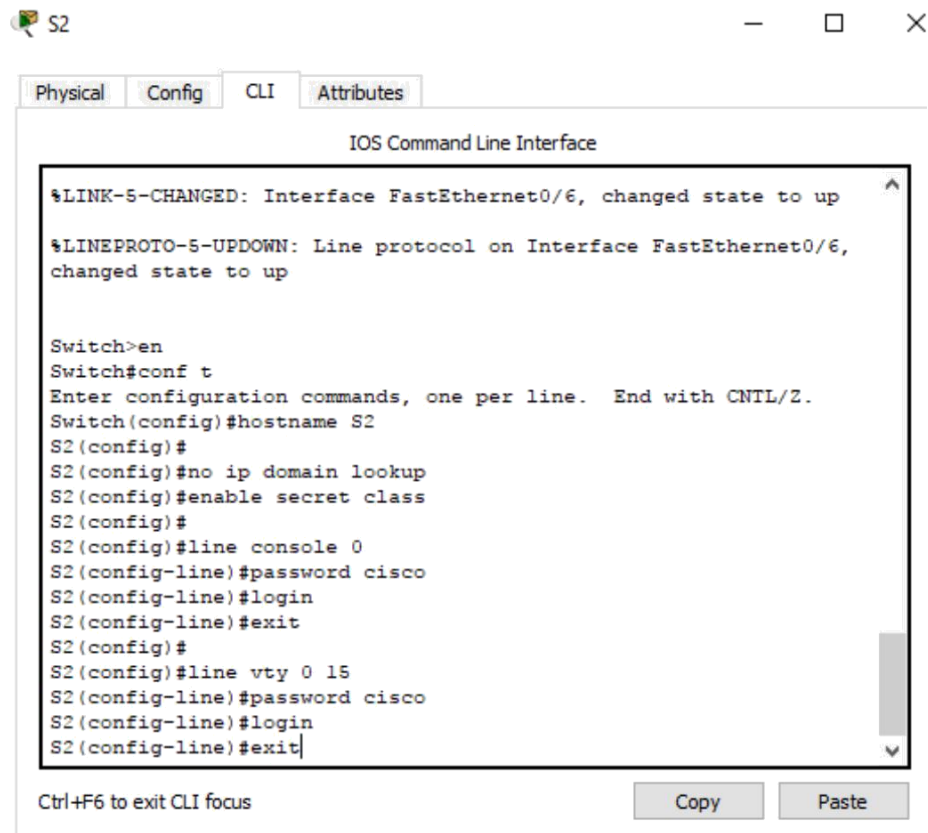


## Tugas 1 : Melakukan Konfigurasi Dasar switch

Langkah langkah :

1. Konfigurasi switch hostname
2. Mematikan DNS lookup
3. Konfigurasi password ECEX mode dari class
4. Konfigurasi password cisco untuk koneksi konsol
5. Konfigurasi password cisco untuk vty koneksi






## Tugas 2 : Konfigurasi dan mengaktifkan ethernet interface

Mengkonfigurasi ethernet interface dari keenam pc dengan ip address dan default gateway dari table addressing

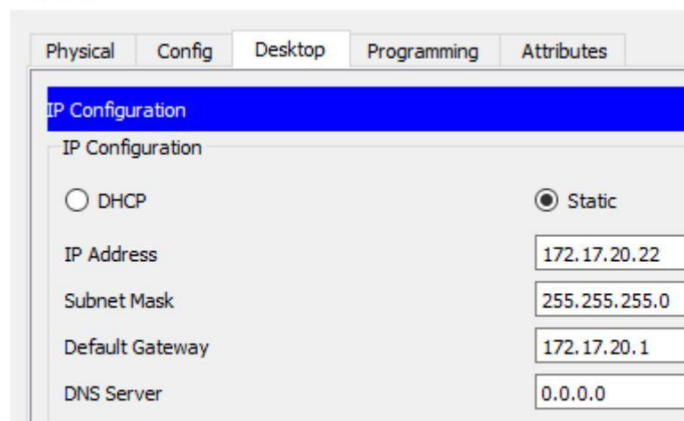
PC1



The screenshot shows the 'IP Configuration' window for PC1. The 'Desktop' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.17.10.21, Subnet Mask: 255.255.255.0, Default Gateway: 172.17.10.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.17.10.21
Subnet Mask	255.255.255.0
Default Gateway	172.17.10.1
DNS Server	0.0.0.0

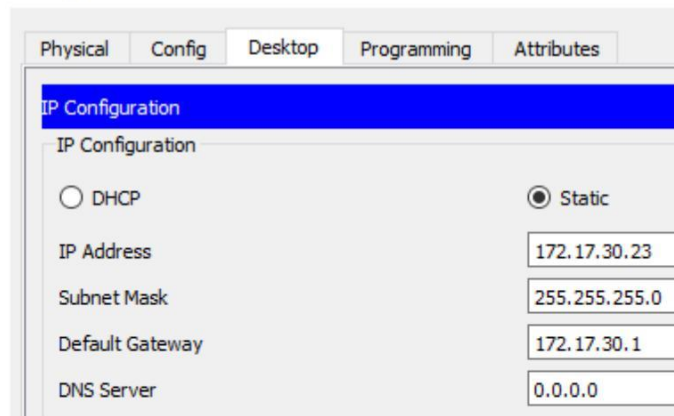
PC2



The screenshot shows the 'IP Configuration' window for PC2. The 'Desktop' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.17.20.22, Subnet Mask: 255.255.255.0, Default Gateway: 172.17.20.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.17.20.22
Subnet Mask	255.255.255.0
Default Gateway	172.17.20.1
DNS Server	0.0.0.0

PC3



The screenshot shows the 'IP Configuration' window for PC3. The 'Desktop' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.17.30.23, Subnet Mask: 255.255.255.0, Default Gateway: 172.17.30.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.17.30.23
Subnet Mask	255.255.255.0
Default Gateway	172.17.30.1
DNS Server	0.0.0.0

PC4

Physical	Config	Desktop	Programming	Attributes
<b>IP Configuration</b>				
IP Configuration				
<input type="radio"/> DHCP		<input checked="" type="radio"/> Static		
IP Address		172.17.10.24		
Subnet Mask		255.255.255.0		
Default Gateway		172.17.10.1		
DNS Server		0.0.0.0		

PC5

Physical	Config	Desktop	Programming	Attributes
<b>IP Configuration</b>				
IP Configuration				
<input type="radio"/> DHCP		<input checked="" type="radio"/> Static		
IP Address		172.17.20.25		
Subnet Mask		255.255.255.0		
Default Gateway		172.17.20.1		
DNS Server		0.0.0.0		

PC6

Physical	Config	Desktop	Programming	Attributes
<b>IP Configuration</b>				
IP Configuration				
<input type="radio"/> DHCP		<input checked="" type="radio"/> Static		
IP Address		172.17.30.26		
Subnet Mask		255.255.255.0		
Default Gateway		172.17.30.1		
DNS Server		0.0.0.0		

### Tugas 3 : Konfigurasi VLANs di Switch

Langkah langkah :

1. Membuat VLANs di switch 1
2. Memastikan VLANs sudah dibuat di S1
3. Konfigurasi dan nama VLANs di switch S2 dan S3
4. Memberikan switchport ke VLANs di S2 dan S3
5. Memastikan port yang sudah ditambahkan
6. Memberikan manajemen VLAN
7. Konfigurasi trunking dan native VLAN untuk trunking port pada semua switch
8. Memastikan switch dapat berkomunikasi
9. PING beberapa host dari PC2
10. Memindahkan PC1 ke sama VLAN dengan PC2
11. Merubah IP address dan network pada PC1



S1

Physical Config CLI Attributes

```
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#vlan 99
S1(config-vlan)#name Management&Native
S1(config-vlan)#exit
S1(config)#vlan 10
S1(config-vlan)#name Faculty/Staff
S1(config-vlan)#exit
S1(config)#vlan 20
S1(config-vlan)#name Students
S1(config-vlan)#exit
S1(config)#vlan 30
S1(config-vlan)#name Guest(Default)
S1(config-vlan)#exit
S1(config)#end
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/13, Fa0/14, Fa0/15, Fa0/16 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24 Gig0/1, Gig0/2
10 Faculty/Staff	active	
20 Students	active	
30 Guest(Default)	active	
99 Management&Native	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

S1#

S2

Physical Config CLI Attributes

```

Password:
S2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S2(config)#vlan 99
S2(config-vlan)#name Management&Native
S2(config-vlan)#exit
S2(config)#vlan 10
S2(config-vlan)#name Faculty/Staff
S2(config-vlan)#exit
S2(config)#vlan 20
S2(config-vlan)#name Students
S2(config-vlan)#exit
S2(config)#vlan 30
S2(config-vlan)#name Guest(Default)
S2(config-vlan)#exit
S2(config)#end
S2#

```

```

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

```

```

S2#show vlan brief

```

VLAN	Name	Status	Ports
1	default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/13, Fa0/14, Fa0/15, Fa0/16 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24 Gig0/1, Gig0/2
10	Faculty/Staff	active	
20	Students	active	
30	Guest(Default)	active	
99	Management&Native	active	
1002	fdi-default	active	
1003	token-ring-default	active	
1004	fdi-net-default	active	
1005	trnet-default	active	

```

S2#

```

S3

Physical Config CLI Attributes

```

S3>en
Password:
S3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S3(config)#vlan 99
S3(config-vlan)#name Management&Native
S3(config-vlan)#exit
S3(config)#vlan 10
S3(config-vlan)#name Faculty/Staff
S3(config-vlan)#exit
S3(config)#vlan 20
S3(config-vlan)#name Students
S3(config-vlan)#exit
S3(config)#vlan 30
S3(config-vlan)#name Guest(Default)
S3(config-vlan)#exit
S3(config)#end
S3#show vlan brief
%SYS-5-CONFIG_I: Configured from cons
S3#show vlan brief

```

VLAN	Name	Status	Ports
1	default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/13, Fa0/14, Fa0/15, Fa0/16 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24 Gig0/1, Gig0/2
10	Faculty/Staff	active	
20	Students	active	
30	Guest(Default)	active	
99	Management&Native	active	
1002	fdi-default	active	
1003	token-ring-default	active	
1004	fdi-net-default	active	
1005	trnet-default	active	

```

S3#

```



S2

Physical Config CLI Attributes

IOS Command Line Interface

```

1001 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active
S2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S2(config)#int fa0/6
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 30
S2(config-if)#int fa0/11
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 10
S2(config-if)#int fa0/18
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 20
S2(config-if)#end
S2#copy running-config startup-config
%SYS-5-CONFIG_I: Configured from console by console

Destination filename [startup-config]?
Building configuration...
[OK]
S2#show vlan id
% Incomplete command.
S2#show vlan id 10

VLAN Name                Status    Ports
-----
10    Faculty/Staff          active    Fa0/11

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Transl Trans2
-----
10    enet    100010  1500    -      -      -      -      -
0      0
S2#

```

S3

Physical Config CLI Attributes

IOS Command Line Interface

```

S3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S3(config)#int fa0/6
S3(config-if)#switchport mode access
S3(config-if)#switchport access vlan 30
S3(config-if)#int fa0/11
S3(config-if)#switchport mode access
S3(config-if)#switchport access vlan 10
S3(config-if)#int fa0/18
S3(config-if)#switchport mode access
S3(config-if)#switchport access vlan 20
S3(config-if)#end
S3#copy running-config startup-config
%SYS-5-CONFIG_I: Configured from console by console

Destination filename [startup-config]?
Building configuration...
[OK]
S3#show vlan id 10

VLAN Name                Status    Ports
-----
10    Faculty/Staff          active    Fa0/11

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Transl Trans2
-----
10    enet    100010  1500    -      -      -      -      -
0      0
S3#

```

S1

Physical Config CLI Attributes

IOS Command Line Interface

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

S1#
S1#
S1#
S1#
S1#
S1#
S1#
S1#
S1#
S1#
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#int vlan 99
S1(config-if)#ip address 172.17.99.11 255.255.255.0
S1(config-if)#no shutdown
S1(config-if)#int fa0/1
S1(config-if)#switchport mode trunk
S1(config-if)#switchport trunk native vlan 99
S1(config-if)#interface fa0/2
S1(config-if)#switchport mode trunk
S1(config-if)#switchport trunk native vlan 99
S1(config-if)#end
```

S2

Physical Config CLI Attributes

IOS Command Line Interface

```
password:
S2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S2(config)#int vlan 99
S2(config-if)#ip address 172.17.99.12 255.255.255.0
S2(config-if)#no shutdown
S2(config-if)#int fa0/1
S2(config-if)#switchport mode trunk
S2(config-if)#switchport trunk native vlan 99
S2(config-if)#end
%LINK-5-CHANGED: Interface Vlan99, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed
state to up
%SPANTRIE-2-UNBLOCK_CONSIST_PORT: Unblocking FastEthernet0/1 on
VLAN0099. Port consistency restored.

%SPANTRIE-2-UNBLOCK_CONSIST_PORT: Unblocking FastEthernet0/1 on
VLAN0001. Port consistency restored.

S2#
%SYS-5-CONFIG_I: Configured from console by console

S2#
```

S3

Physical Config CLI Attributes

IOS Command Line Interface

```
User Access Verification

Password:

S3>en
Password:
S3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S3(config)#int vlan 99
S3(config-if)#ip address 172.17.99.13 255.255.255.0
S3(config-if)#no shutdown
S3(config-if)#int fa0/1
S3(config-if)#switchport mode trunk
S3(config-if)#switchport trunk native vlan 99
S3(config-if)#end
%LINK-5-CHANGED: Interface Vlan99, changed state to up
|
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed
state to up

S3#
%SYS-5-CONFIG_I: Configured from console by console
```

S1

Physical Config CLI Attributes

IOS Command Line Interface

```
0/3/14 ms

S1#
S1#
S1#
S1#ping 172.17.99.12

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.17.99.12, timeout is 2
seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1
ms

S1#ping 172.17.99.13

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.17.99.13, timeout is 2
seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max =
0/3/13 ms

S1#
```