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**Qualification: Advanced Diploma of Information Technology**

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SUBJECT NAME: COMPUTER NETWORKS IVA

SUBJECT CODE: PNA117V

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DEPARTMENT NAME: IT

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**VLAN and Ports Planning**

|  |  |  |
| --- | --- | --- |
| **Vlan ID** | **Vlan Name** | **Ports** |
| 25 | PNA117V | G1/0/1-10 |
| 35 | NWP117V | G1/0/11-20 |
| 35 | Data Center VLAN1 | Fa0/1-10 |
| 50 | Data Center VLAN2 | Fa0/11-20 |
| 70 | Remote Branch | Fa0/1-20 |
| 80 | Recovery site | Fa0/1-20 |

**IPV6 address Planning**

|  |
| --- |
| **PNA117V Network** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:1::/64 | 2025:ACE:AD:1::1/64 | 2025:ACE:AD:1::2/64 |

|  |
| --- |
| **NWP117V** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:2::/64 | 2025:ACE:AD:2::1/64 | 2025:ACE:AD:2::2/64 |

|  |
| --- |
| **Data Center Network** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:3::/64 | 2025:ACE:AD:3::1/64 | 2025:ACE:AD:3::2/64 |
| 2025:ACE:AD:4::/64 | 2025:ACE:AD:4::1/64 | 2025:ACE:AD:4::2/64 |

|  |
| --- |
| **Remote Branch Network** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:5::/64 | 2025:ACE:AD:5::1/64 | 2025:ACE:AD:5::2/64 |

|  |
| --- |
| **Recovery Site Network** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:6::/64 | 2025:ACE:AD:6::1/64 | 2025:ACE:AD:6::2/64 |

|  |
| --- |
| **WAN 1** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:A::/64 | 2025:ACE:AD:A::1/64 | 2025:ACE:AD:A::2/64 |

|  |
| --- |
| **WAN 2** |

|  |  |  |
| --- | --- | --- |
| Subnet Address | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:B::/64 | 2025:ACE:AD:B::1/64 | 2025:ACE:AD:B::2/64 |

|  |
| --- |
| **WAN 3** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:C::/64 | 2025:ACE:AD:C::1/64 | 2025:ACE:AD:C::2/64 |

|  |
| --- |
| **WAN 4** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:D::/64   |  | | --- | |  | | 2025:ACE:AD:D::1/64 | 2025:ACE:AD:D::2/64 |

|  |
| --- |
| **WAN 5** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:E::/64 | 2025:ACE:AD:E::1/64 | 2025:ACE:AD:E::2/64 |

|  |
| --- |
| **WAN 6** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:F::/64 | 2025:ACE:AD:F::1/64 | 2025:ACE:AD:F::2/64 |

|  |
| --- |
| **WAN 7** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:10::/64 | 2025:ACE:AD:10::1/64 | 2025:ACE:AD:10::2/64 |

|  |
| --- |
| **WAN 8** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:11::/64 | 2025:ACE:AD:11::1/64 | 2025:ACE:AD:11::2/64 |

|  |
| --- |
| **WAN 9** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:12::/64 | 2025:ACE:AD:12::1/64 | 2025:ACE:AD:12::2/64 |

|  |
| --- |
| **WAN 10** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:13::/64 | 2025:ACE:AD:13::1/64 | 2025:ACE:AD:13::2/64 |

|  |
| --- |
| **WAN 11** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:14::/64 | 2025:ACE:AD:14::1/64 | 2025:ACE:AD:14::2/64 |

|  |
| --- |
| **WAN 12** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:15::/64 | 2025:ACE:AD:15::1/64 | 2025:ACE:AD:15::2/64 |

|  |
| --- |
| **WAN 13** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:16::/64 | 2025:ACE:AD:16::1/64 | 2025:ACE:AD:16::2/64 |

|  |
| --- |
| **WAN 14** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| **2025:ACE:AD:17::/64** | 2025:ACE:AD:17::1/64 | 2025:ACE:AD:17::2/64 |

|  |
| --- |
| **WAN 15** |

|  |  |  |
| --- | --- | --- |
| **Subnet Address** | **First Host Address** | **Second Host Address** |
| 2025:ACE:AD:18::/64 | 2025:ACE:AD:18::1/64 | 2025:ACE:AD:18::2/64 |

**IPv6 Address Assignment**

|  |  |  |  |
| --- | --- | --- | --- |
| **DEVICE** | **INTERFACE** | **IPV6 ADDRESS** | **IPV6 ADDRESS2** |
| Multilayer Switch 5 | G1/0/21 | 2025:ACE:AD:A::1/64 | N/A |
|  | G1/0/22 | 2025:ACE:AD:B::1/64 | N/A |
|  | Vlan25 | 2025:ACE:AD:1::1/64 | N/A |
|  | Vlan35 | **2025:ACE:AD:2::1/64** | N/A |
| Multilayer switch 4 | G1/0/21 | |  |  | | --- | --- | | 2025:ACE:AD:C::1/64 |  | | N/A |
|  | G1/0/22 | 2025:ACE:AD:D::1/64 | N/A |
|  | Vlan25 | 2025:ACE:AD:1::1/64 | N/A |
|  | Vlan35 | 2025:ACE:AD:2::1/64 | N/A |
| LAN Distribution 1 | G0/0 | 2025:ACE:AD:A::2/64 | N/A |
|  | G0/1 | 2025:ACE:AD:D::2/64 | N/A |
|  | S0/0/0 | 2025:ACE:AD:E::1/64 | N/A |
|  | S0/0/1 | 2025:ACE:AD:F::1/64 | N/A |
| LAN Distribution 2 | G0/0 | 2025:ACE:AD:C::2/64 | N/A |
|  | G0/1 | 2025:ACE:AD:B::2/64 | N/A |
|  | S0/0/0 | 2025:ACE:AD:10::1/64 | N/A |
|  | S0/0/1 | **2025:ACE:AD:11::1/64** | N/A |
| Core Router 1 | G0/0 | 2025:ACE:AD:3::1/64 | N/A |
|  | G0/1 | 2025:ACE:AD:4::1/64 | N/A |
|  | S0/0/0 | 2025:ACE:AD:E::2/64 | N/A |
|  | S0/0/1 | 2025:ACE:AD:12::1/64 | N/A |
|  | S0/1/0 | **2025:ACE:AD:13::1/64** | N/A |
| Core Router 2 | G0/0 | 2025:ACE:AD:3::1/64 | N/A |
|  | G0/1 | 2025:ACE:AD:4::1/64 | N/A |
|  | S0/0/0 | **2025:ACE:AD:10::2/64** | N/A |
|  | S0/0/1 | 2025:ACE:AD:11::2/64 | N/A |
|  | S0/1/0 | **2025:ACE:AD:14::1/64** | N/A |
|  | S0/1/1 | 2025:ACE:AD:15::1/64 | N/A |
| Edge Distr Router 1 | S0/0/0 | 2025:ACE:AD:13::2/64 | N/A |
|  | S0/0/1 | 2025:ACE:AD:15::2/64 | N/A |
|  | S0/1/0 | 2025:ACE:AD:16::1/64 | N/A |
| Edge Distr Router 2 | S0/0/0 | 2025:ACE:AD:12::2/64 | N/A |
|  | S0/0/1 | 2025:ACE:AD:14::2/64 | N/A |
|  | S0/1/0 | 2025:ACE:AD:17::1/64 | N/A |
| WAN Router | S0/0/0 | 2025:ACE:AD:16::2/64 | N/A |
|  | S0/0/1 | 2025:ACE:AD:17::2/64 | N/A |
|  | S0/1/0. 123 | 2025:ACE:AD:18::1/64 | N/A |
|  | S0/1/0. 456 | 2025:ACE:AD:19::1/64 | N/A |
| RB Router | Fa0/0 | 2025:ACE:AD:5::1/64 | N/A |
|  | S0/0/0.321 | 2025:ACE:AD:18::2/64 | N/A |
| RS Router | Fa0/0 | 2025:ACE:AD:6::1/64 | N/A |
|  | S0/0/0.654 | 2025:ACE:AD:19::2/64 | N/A |
| PNA117V-PC1 | NIC | **2025:ACE:AD:1::10/64** | N/A |
| PNA117V-PC2 | NIC | 2025:ACE:AD:1::11/64 | N/A |
| NWP117V-PC1 | NIC | |  |  | | --- | --- | | 2025:ACE:AD:2::10/64 |  | | N/A |
| NWP117V-PC2 | NIC | 2025:ACE:AD:2::11/64 | N/A |
| Server1 | NIC | 2025:ACE:AD:3::10/64 | 2024:ABC:AD:14::5/64 |
| Server2 | NIC | 2025:ACE:AD:4::10/64 | 2024:ABC:AD:14::6/64 |
| RB-PC | NIC | 2025:ACE:AD:5::10/64 | N/A |
| RS-Server | NIC | 2025:ACE:AD:6::10/64 | N/A |

Topology

A diagram of a network

AI-generated content may be incorrect.

**Show Vlan brief**

**Multilayer Switch5**

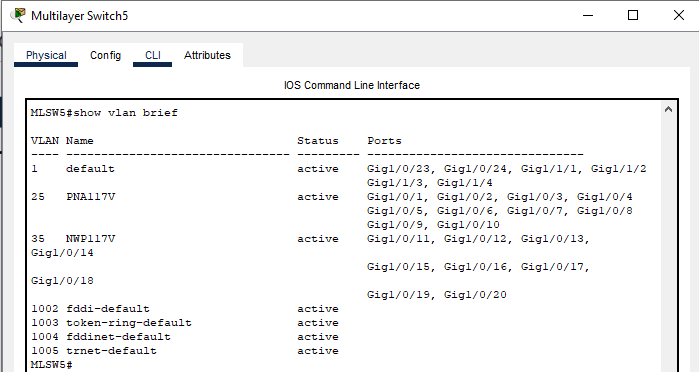
**Login details**

**User Access Verification**

**Password:** **cisco**

**MLSW5>enable**

**Password:class123**



**Multilayer Switch4**

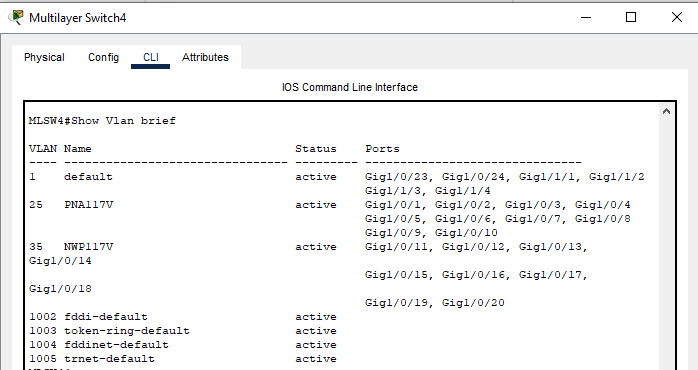
**Login details**

**User Access Verification**

**Password:** **cisco**

**MLSW4>enable**

**Password:class123**



**Multilayer Switch3**

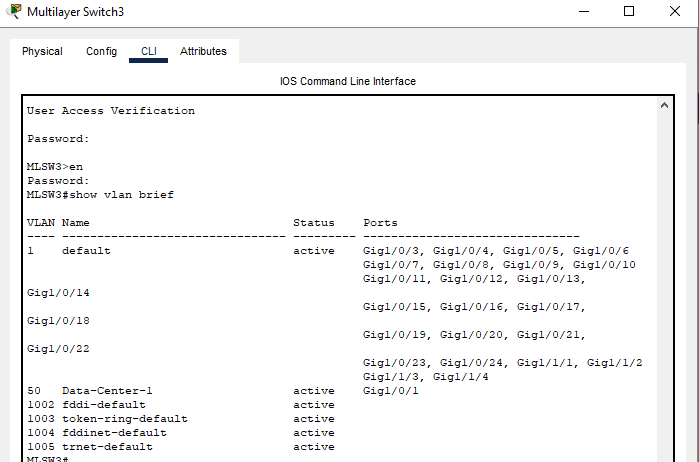
**Login details**

**User Access Verification**

**Password:** **cisco**

**MLSW3>enable**

**Password:class123**



**Multilayer Switch2**

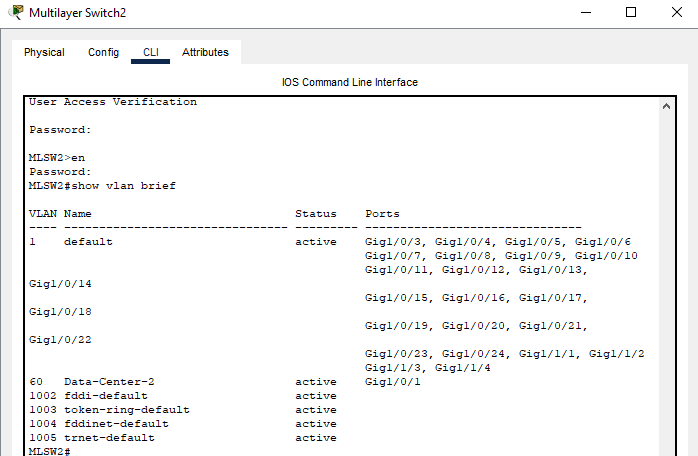
**Login details**

**User Access Verification**

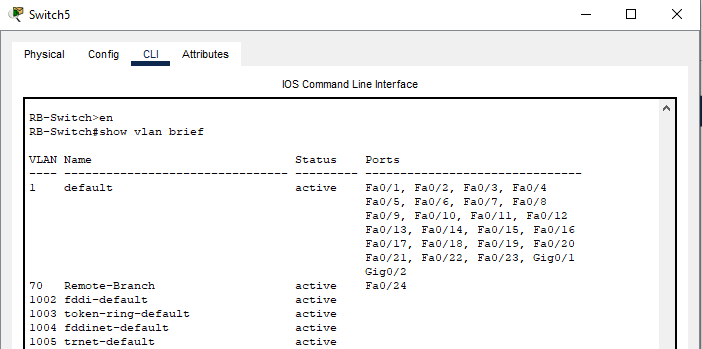
**Password:** **cisco**

**MLSW2>enable**

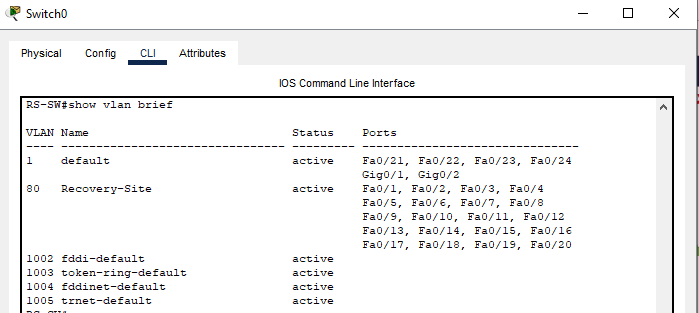
**Password:class123**



**RB Switch**

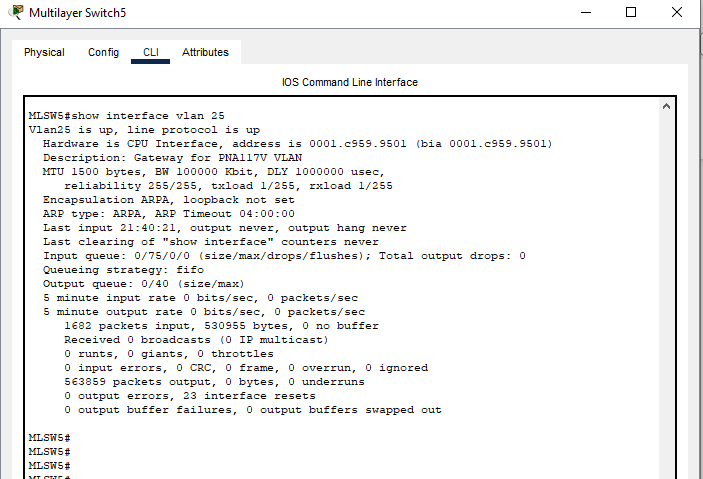


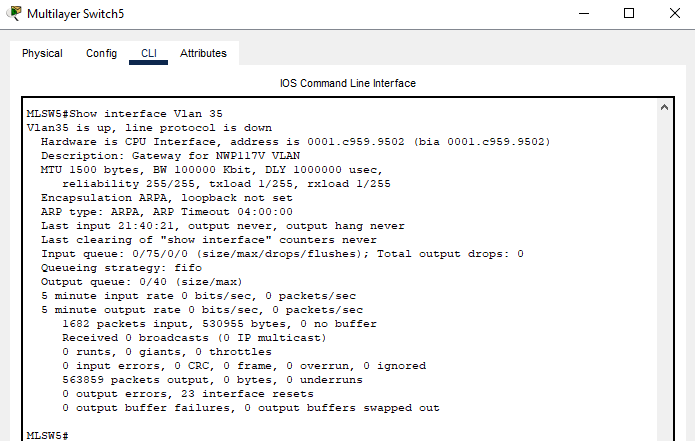
**RS switch**



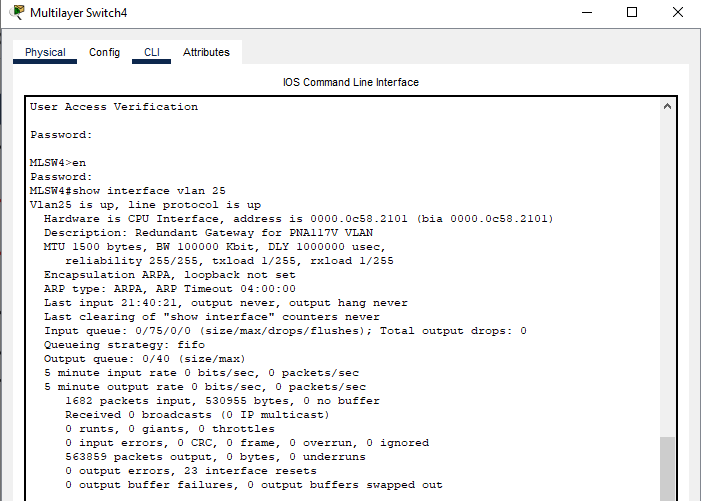
**Show interface Vlan**

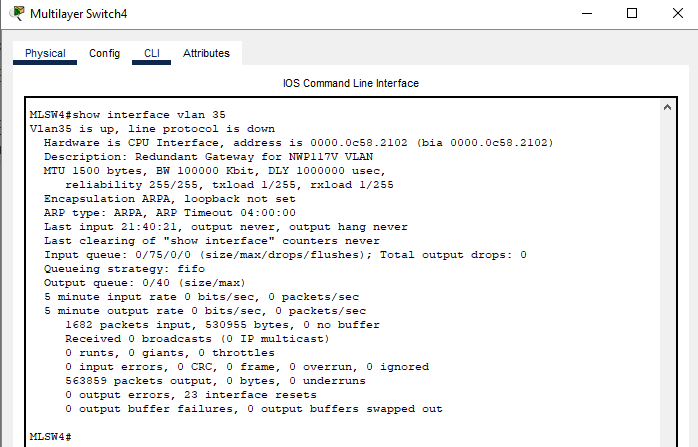
**Multilayer Switch5**





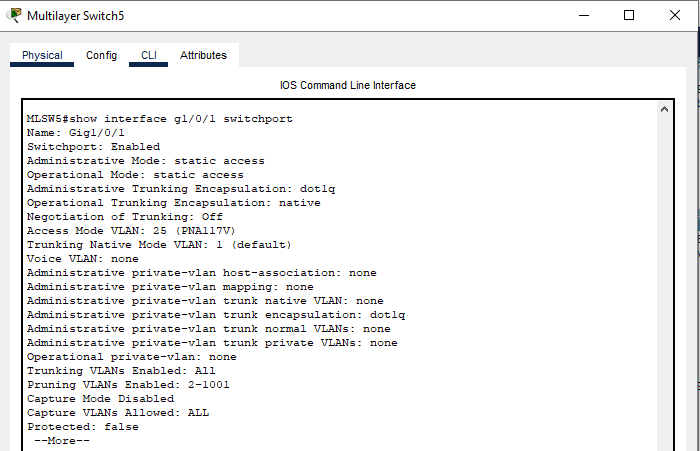
**Multilayer Switch4**

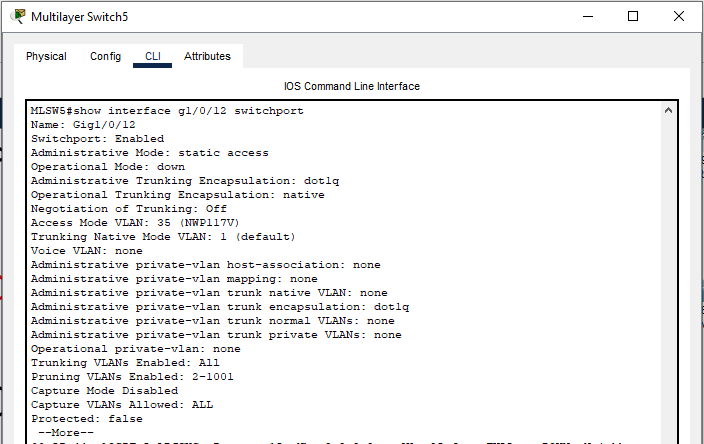




**Show interface Switchport**

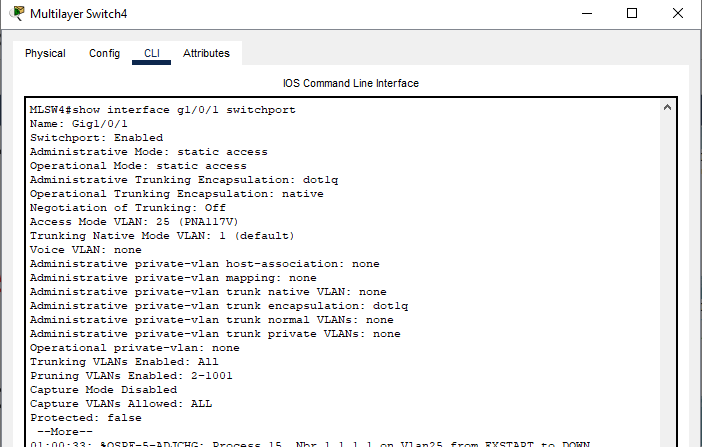
**Multilayer Switch5**

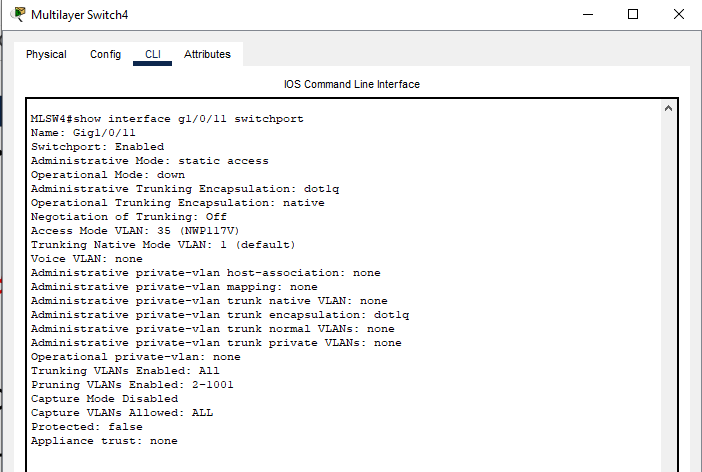




**Show interface Switchport**

**Multilayer Switch4**





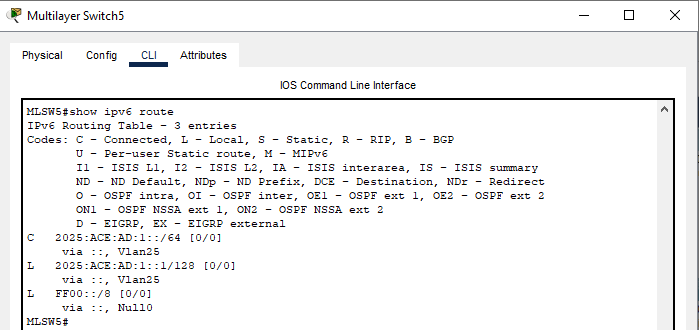
**Configurations screen dumps of the routers and L3 swatches**

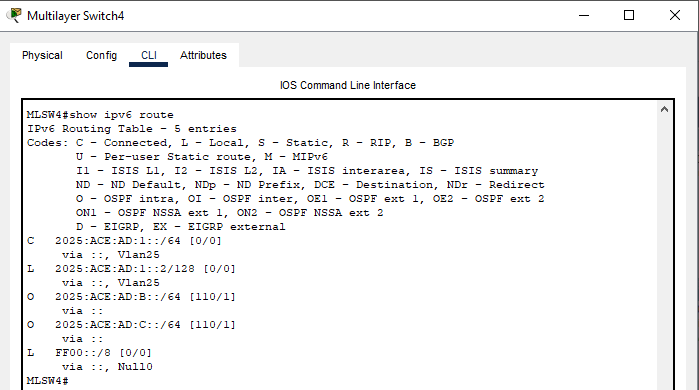
|  |  |  |  |
| --- | --- | --- | --- |
| **Multilayer switch5** | **Multilayer switch4** | **Multilayer switch3** | **Multilayer switch2** |
| MLSW5#show running-config  Building configuration...  Current configuration : 2076 bytes  !  version 15.2  hostname MLSW5  no ip domain-lookup  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123 ! (encrypted)  service password-encryption  !  ipv6 unicast-routing  !  vlan 25  name PNA117V  !  vlan 35  name NWP117V  !  interface GigabitEthernet1/0/1  switchport mode access  switchport access vlan 25  !  interface GigabitEthernet1/0/11  switchport mode access  switchport access vlan 35  !  interface GigabitEthernet1/0/21  description Uplink to LAN-Dist1  no switchport  ipv6 address 2025:ACE:AD:A::1/64  ipv6 ospf 15 area 0  !  interface GigabitEthernet1/0/22  description Uplink to LAN-Dist2  no switchport  ipv6 address 2025:ACE:AD:B::1/64  ipv6 ospf 15 area 0  !  interface Vlan25  ipv6 address 2025:ACE:AD:1::1/64  ipv6 ospf 15 area 0  !  interface Vlan35  ipv6 address 2025:ACE:AD:2::1/64  ipv6 ospf 15 area 0  !  ipv6 router ospf 15  router-id 5.5.5.5  !  line con 0  !  password 7 0822455D0A16  !  Login  !  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  !  !  end | MLSW4#show running-config  Building configuration...  hostname MLSW4  no ip domain-lookup  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  vlan 25  name PNA117V  !  vlan 35  name NWP117V  !  interface GigabitEthernet1/0/21  description Uplink to LAN-Dist2  no switchport  ipv6 address 2025:ACE:AD:C::1/64  ipv6 ospf 15 area 0  !  interface GigabitEthernet1/0/22  description Uplink to LAN-Dist1  no switchport  ipv6 address 2025:ACE:AD:D::1/64  ipv6 ospf 15 area 0  !  interface Vlan25  ipv6 address 2025:ACE:AD:1::2/64  ipv6 ospf 15 area 0  !  interface Vlan35  ipv6 address 2025:ACE:AD:2::2/64  ipv6 ospf 15 area 0  !  ipv6 router ospf 15  router-id 4.4.4.4  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | MLSW3#show running-config  Building configuration...  hostname MLSW3  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  vlan 50  name Data-Center-1  !  interface FastEthernet0/1  switchport mode access  switchport access vlan 50  !  interface GigabitEthernet0/1  description Uplink to Core1  no switchport  ipv6 address 2025:ACE:AD:3::3/64  ipv6 ospf 15 area 0  !  interface Vlan50  ipv6 address 2025:ACE:AD:3::4/64  ipv6 ospf 15 area 0  !  ipv6 router ospf 15  router-id 3.3.3.3  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | MLSW2#show running-config  Building configuration...  hostname MLSW2  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  vlan 60  name Data-Center-2  !  interface FastEthernet0/11  switchport mode access  switchport access vlan 60  !  interface GigabitEthernet0/1  description Uplink to Core1  no switchport  ipv6 address 2025:ACE:AD:4::3/64  ipv6 ospf 15 area 0  !  interface Vlan60  ipv6 address 2025:ACE:AD:4::4/64  ipv6 ospf 15 area 0  !  ipv6 router ospf 15  router-id 2.2.2.2  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end |

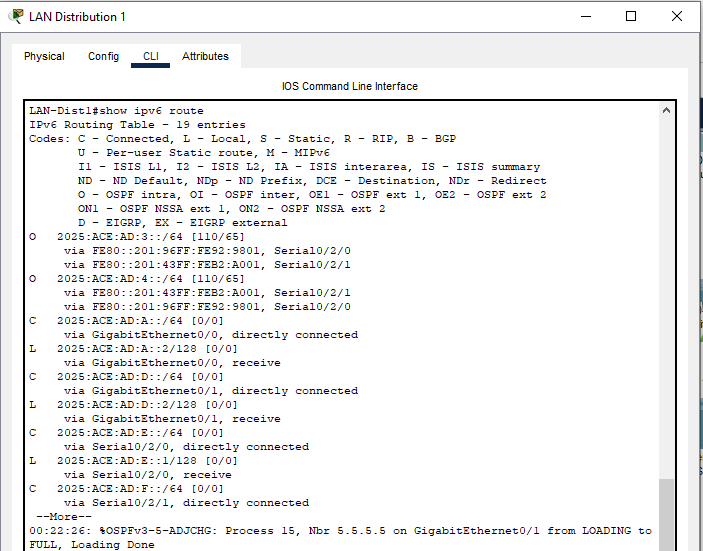
|  |  |  |  |
| --- | --- | --- | --- |
| **LAN Distribution 1** | **LAN Distribution 2** | **Core Router 1** | **Core Router 2** |
| LAN-Dist1#show running-config  Building configuration...  hostname LAN-Dist1  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface GigabitEthernet0/0  description Link to MLSW5 (WAN1)  ipv6 address 2025:ACE:AD:A::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface GigabitEthernet0/1  description Link to MLSW4 (WAN4)  ipv6 address 2025:ACE:AD:D::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0  description Link to Core1 (WAN5)  ipv6 address 2025:ACE:AD:E::1/64  ipv6 ospf 15 area 0  clock rate 64000  no shutdown  !  interface Serial0/0/1  description Link to Core2 (WAN6)  ipv6 address 2025:ACE:AD:F::1/64  ipv6 ospf 15 area 0  clock rate 64000  no shutdown  !  ipv6 router ospf 15  router-id 11.11.11.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | LAN-Dist2#show running-config  Building configuration...  hostname LAN-Dist2  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface GigabitEthernet0/0  description Link to MLSW4 (WAN3)  ipv6 address 2025:ACE:AD:C::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface GigabitEthernet0/1  description Link to MLSW5 (WAN2)  ipv6 address 2025:ACE:AD:B::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0  description Link to Core2 (WAN7)  ipv6 address 2025:ACE:AD:10::1/64  ipv6 ospf 15 area 0  clock rate 64000  no shutdown  !  interface Serial0/0/1  description Link to Core1 (WAN8)  ipv6 address 2025:ACE:AD:11::1/64  ipv6 ospf 15 area 0  clock rate 64000  no shutdown  !  ipv6 router ospf 15  router-id 22.22.22.2  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | Core1#show running-config  Building configuration...  hostname Core1  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface GigabitEthernet0/0  description Link to MLSW3  ipv6 address 2025:ACE:AD:3::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface GigabitEthernet0/1  description Link to MLSW2  ipv6 address 2025:ACE:AD:4::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0  description Link to LAN-Dist1 (WAN5)  ipv6 address 2025:ACE:AD:E::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/1  description Link to Core2 (WAN9)  ipv6 address 2025:ACE:AD:12::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/0  description Link to Edge-Dist1 (WAN10)  ipv6 address 2025:ACE:AD:13::1/64  ipv6 ospf 15 area 0  no shutdown  !  ipv6 router ospf 15  router-id 1.1.1.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | Core2#show running-config  Building configuration...  hostname Core2  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface GigabitEthernet0/0  description Link to MLSW3  ipv6 address 2025:ACE:AD:3::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface GigabitEthernet0/1  description Link to MLSW2  ipv6 address 2025:ACE:AD:4::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0  description Link to LAN-Dist2 (WAN7)  ipv6 address 2025:ACE:AD:10::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/1  description Link to LAN-Dist2 (WAN8)  ipv6 address 2025:ACE:AD:11::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/0  description Link to Edge-Dist2 (WAN11)  ipv6 address 2025:ACE:AD:14::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/1  description Link to Edge-Dist2 (WAN12)  ipv6 address 2025:ACE:AD:15::1/64  ipv6 ospf 15 area 0  no shutdown  !  ipv6 router ospf 15  router-id 2.2.2.2  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end |

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| **Edge Distribution 1** | **Edge Distribution 2** | **WAN Router** | **RB Router** | **RS Router** |
| Edge-Dist1#show running-config  Building configuration...  hostname Edge-Dist1  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface Serial0/0/0  description Link to Core1 (WAN10)  ipv6 address 2025:ACE:AD:13::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/1  description Link to Core2 (WAN12)  ipv6 address 2025:ACE:AD:15::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/0  description Link to WAN Router (WAN13)  ipv6 address 2025:ACE:AD:16::1/64  ipv6 ospf 15 area 0  no shutdown  !  ipv6 router ospf 15  router-id 10.10.10.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | Edge-Dist2#show running-config  Building configuration...  hostname Edge-Dist2  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface Serial0/0/0  description Link to Core1 (WAN9)  ipv6 address 2025:ACE:AD:12::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/1  description Link to Core2 (WAN11)  ipv6 address 2025:ACE:AD:14::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/0  description Link to WAN Router (WAN14)  ipv6 address 2025:ACE:AD:17::1/64  ipv6 ospf 15 area 0  no shutdown  !  ipv6 router ospf 15  router-id 10.10.10.2  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | WAN-Router#show running-config  Building configuration...  hostname WAN-Router  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface Serial0/0/0  description Link to Edge-Dist1 (WAN13)  ipv6 address 2025:ACE:AD:16::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/1  description Link to Edge-Dist2 (WAN14)  ipv6 address 2025:ACE:AD:17::2/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/1/0  no ip address  encapsulation frame-relay  ipv6 address 2025:ACE:AD:18::1/64  ipv6 ospf 15 area 0  frame-relay map ipv6 2025:ACE:AD:18::2 123 broadcast  frame-relay map ipv6 2025:ACE:AD:19::2 456 broadcast  no shutdown  !  ipv6 router ospf 15  router-id 70.70.70.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | RB-Router#show running-config  Building configuration...  hostname RB-Router  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface FastEthernet0/0  description LAN Interface (Branch VLAN 70)  ipv6 address 2025:ACE:AD:5::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0.321 point-to-point  description Frame Relay subinterface to WAN Router  encapsulation frame-relay  ipv6 address 2025:ACE:AD:18::2/64  ipv6 ospf 15 area 0  frame-relay interface-dlci 123  no shutdown  !  ipv6 router ospf 15  router-id 50.50.50.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end | RB-Router#show running-config  Building configuration...  hostname RB-Router  enable secret 5 $1$mERr$Vg8hQ/pc1ssw123  service password-encryption  !  ipv6 unicast-routing  !  interface FastEthernet0/0  description LAN Interface (Branch VLAN 70)  ipv6 address 2025:ACE:AD:5::1/64  ipv6 ospf 15 area 0  no shutdown  !  interface Serial0/0/0.321 point-to-point  description Frame Relay subinterface to WAN Router  encapsulation frame-relay  ipv6 address 2025:ACE:AD:18::2/64  ipv6 ospf 15 area 0  frame-relay interface-dlci 123  no shutdown  !  ipv6 router ospf 15  router-id 50.50.50.1  !  line con 0  password 7 0822455D0A16  login  exec-timeout 5 30  !  line vty 0 4  password 7 0822455D0A16  login  transport input ssh  !  ip domain-name tut.ac.za  crypto key generate rsa general-keys modulus 2048  username admin privilege 15 secret 5 $1$123abc$8slgA  end |

**Show ipv6 route**

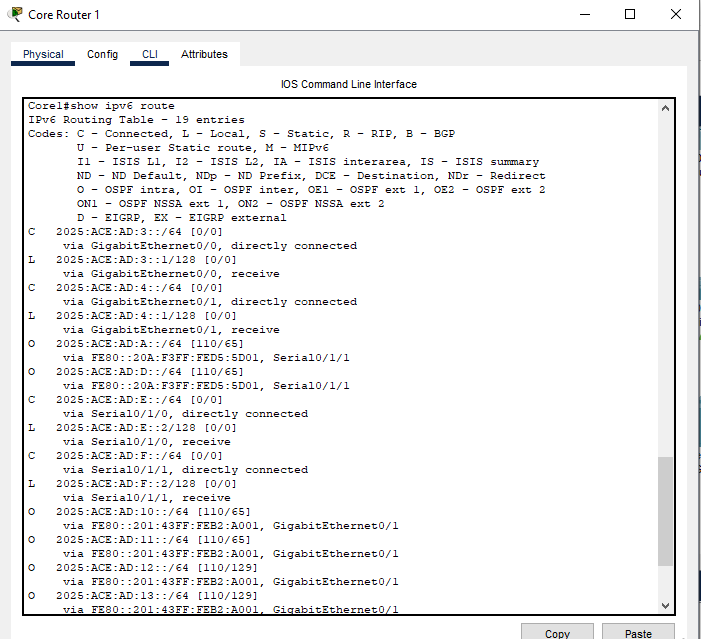


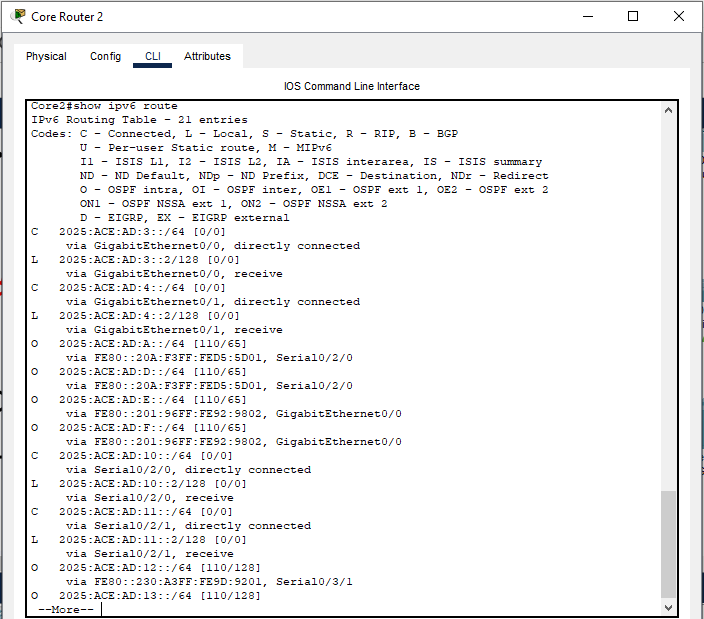


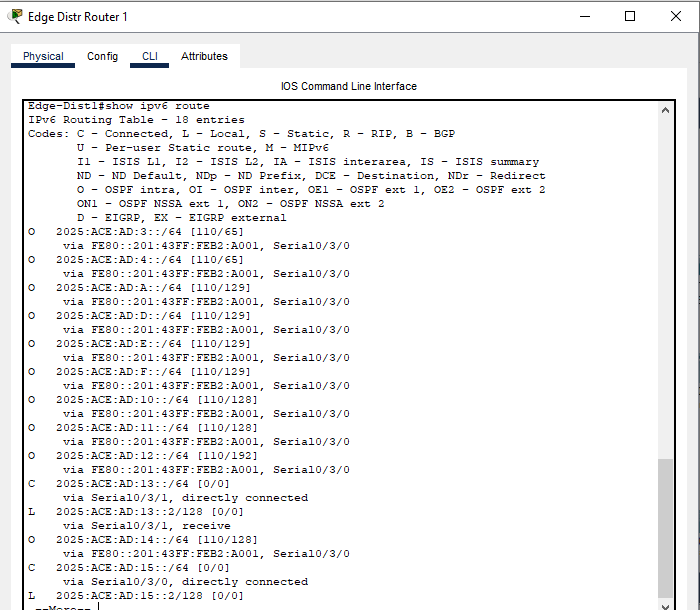


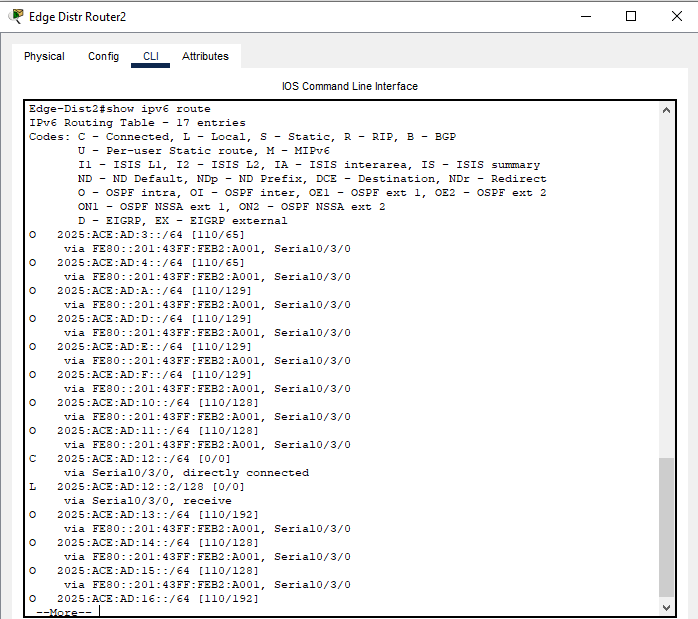
A screenshot of a computer

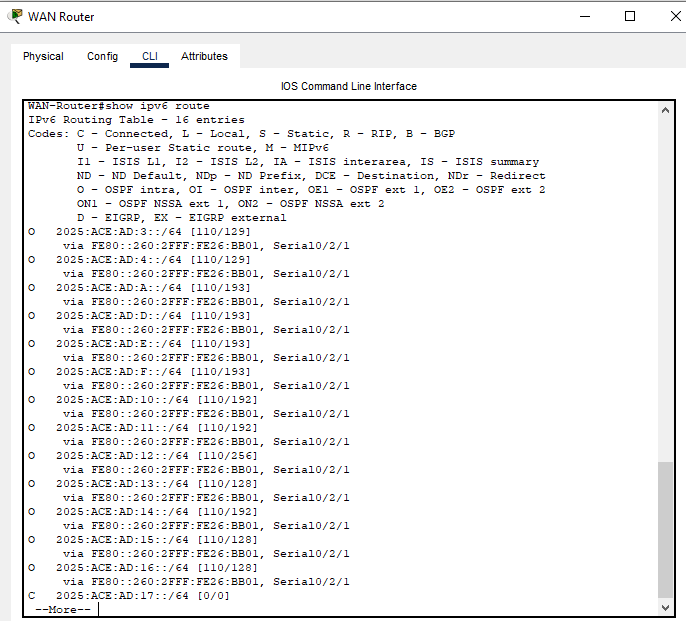
AI-generated content may be incorrect.





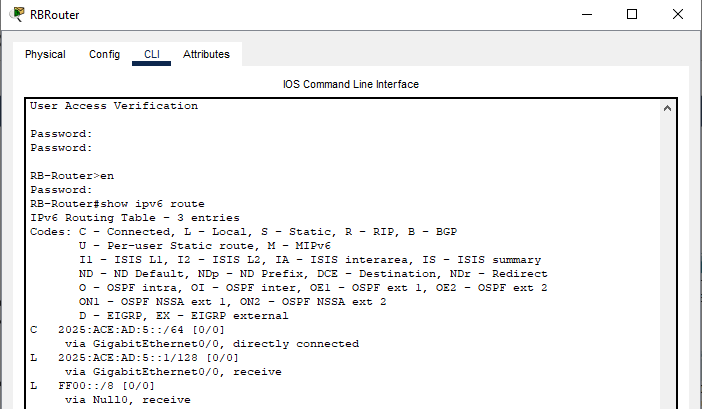




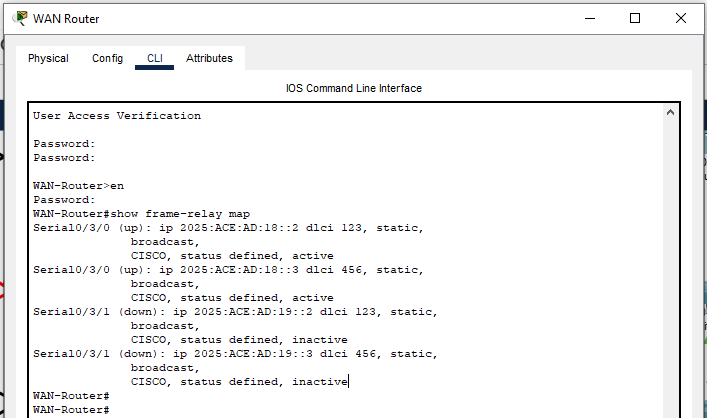


A screenshot of a computer program

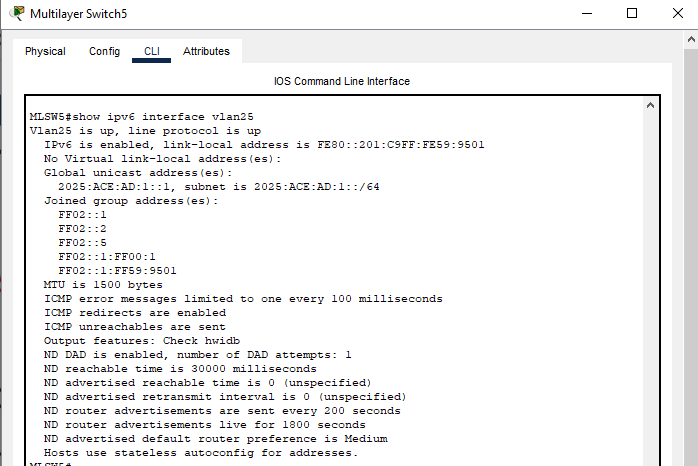
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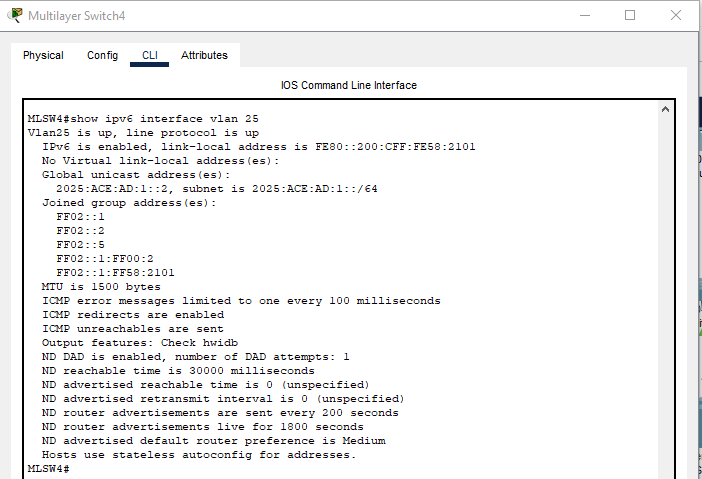


**Frame Relay**



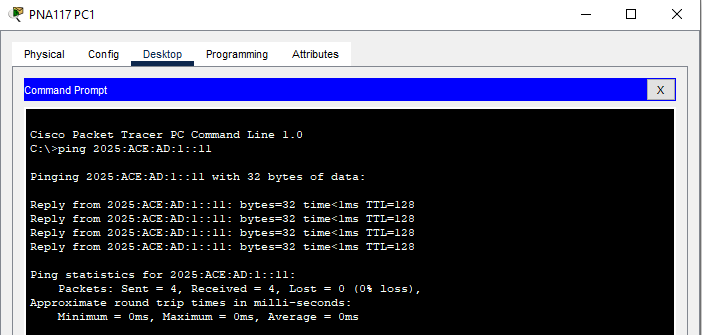
**ACLs Configuration**





**Ping Results**

**Communication between same VLAN and Different VLANs initiated by PNA117V PCs and NWP117V PCs**



A computer screen shot of a program

AI-generated content may be incorrect.

