**Configuring IPv4 and IPv6 Interfaces** Int Fa0/1 -> ip/ipv6 address [address] [subnet mask] -> no sh

**Configuring IPv6 Static and Default Routes (unknown network)**

ipv6 route [network/prefix] [::/0(not directly)] [exit interface/next hop address]

**(Configure an IPv4 static default route)** ip route 0.0.0.0 0.0.0.0 [exit interface]

**(Configure an IPv4 floating static route)** ip route 0.0.0.0 0.0.0.0 [exit interface] [administrative distance]

**(Configure an IPv6 floating static route)** ipv6 route ::/0 [address of ex int] [administrative distance]

**(Configure Layer 3 Switching)** Int (int name) -> no switchport -> ip address [address] [subnet mask]

**(Configure Inter-VLAN Routing) (Configure SVI on MLS)**

vlan [number] -> name [name of vlan]

int vlan [number] -> ip/ipv6 address [address] [subnet mask)

**(Configure Trunking on MLS)** int [fa0/1] -> switchport mode trunk -> switchport trunk native vlan [99] -> switchport trunk encapsulation dot1q

**Configure trunking on Switch of connect MLS**

Int [g0/1] -> switchport mode trunk -> switchport trunk native vlan [99]

**(Enable routing)** ip routing

**(Enable IPv6 routing)** ipv6 unicast-routing

**(Create a Secure Trunk)** interface [range] [GigabitEthernet0/1 – 2] -> switchport mode trunk -> switchport nonegotiate -> (Configure Inter-VLAN Routing) -> interface [range] [GigabitEthernet0/1 – 2] -> switchport trunk native vlan [99]

**(Secure Unused Switchports)** interface [range] [GigabitEthernet0/1 – 2] -> shutdown -> (Configure Inter-VLAN Routing) -> interface [range] [GigabitEthernet0/1 – 2] -> switchport mode access

**(Port Security)** switchport mode [access] **->** switchport port-security

**(number of maximum of MAC addresses)** switchport port-security maximum [4]

**(Statically MAC address)** switchport port-security mac-address [mac-address]

**(automatically add the MAC addresses)** switchport port-security mac-address sticky

**(drop packets from MAC addresses)** switchport port-security violation [restrict]

**(Configure DHCP Snooping)** interface fa0/1 -> ip dhcp snooping trust -> ip dhcp snooping limit rate [5] -> ip dhcp snooping -> ip dhcp snooping vlan [10,20,99]

**(Configure PortFast, and BPDU Guard)** interface fa0/1 -> spanning-tree portfast -> spanning-tree bpduguard enable -> (other switch) spanning-tree portfast [default]

**(Configure HSRP)** int [g0/0] -> sta -> standby ver 2 -> standby 1 ip [192.168.1.254] (HSRP Virtual Gateway) -> standby 1 priority 150 -> standby 1 preempt

**(switch default gateway**) ip default-gateway [192.168.1.254] (default-gateway address)

(Use a TFTP Server to Upgrade a Cisco IOS Image) copy tftp: flash: -> boot system flash [c1900-universalk9-mz.SPA.155-3.M4a.bin] -> copy running-config startup-config -> reload

copy flash: tftp:

(enable CDP of globally) [no] cdp run || (enable CDP of int) cdp enable

(enable LLDP of globally) lldp run || (only receive LLDP messages) int [fa0/1] -> [no] lldp transmit -> lldp receive || (only receive LLDP messages) lldp transmit -> [no] lldp receive

(set NTP server) ntp server [192.168.1.254]