**Routers:**

HQ(config)#enable password admin

HQ(config)#banner motd #Please Login#

HQ(config)#no ip domain lookup

HQ(config)#line console 0

HQ(config-line)#password admin

HQ(config-line)#login

HQ(config-line)#exit

HQ(config)#

HQ(config)#service password-encryption

HQ(config)#ip domain name cisco.net

HQ(config)#username admin password admin

HQ(config)#crypto key generate rsa

The name for the keys will be: HQ.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

HQ(config)#line vty 0 15

\*Mar 1 0:17:2.113: %SSH-5-ENABLED: SSH 1.99 has been enabled

HQ(config-line)#login local

HQ(config-line)#transport input ssh

HQ(config)#interface GigabitEthernet0/0

HQ(config-if)#ip address 192.168.102.82 255.255.255.252

HQ(config-if)#exit

HQ(config)#interface GigabitEthernet0/1

HQ(config-if)#ip address 192.168.102.86 255.255.255.252

HQ(config-if)#exit

HQ(config)#interface GigabitEthernet0/2

HQ(config-if)#ip address 192.168.102.65 255.255.255.252

HQ(config-if)#exit

HQ(config)#interface Serial0/0/0

HQ(config-if)#clock rate 64000

HQ(config-if)#ip address 192.168.102.89 255.255.255.252

HQ(config)#interface Serial0/1/0

HQ(config-if)#ip address 195.136.17.5 255.255.255.252

HQ(config-if)#exit

HQ(config)#interface Serial0/0/1

HQ(config-if)#clock rate 64000

HQ(config-if)#ip address 195.136.17.1 255.255.255.252

HQ(config)#router ospf 10

HQ(config-router)#network 192.168.102.80 0.0.0.3 area 0

HQ(config-router)#network 192.168.102.84 0.0.0.3 area 0

HQ(config-router)#network 192.168.102.88 0.0.0.3 area 0

HQ(config-router)#network 192.168.102.64 0.0.0.15 area 0

HQ(config-router)#network 195.136.17.4 0.0.0.3 area 0

HQ(config-router)#network 195.136.17.0 0.0.0.3 area 0

HQ(config-router)#

HQ(config-router)#exit

HQ(config)#ip route 0.0.0.0 0.0.0.0 195.136.17.2

HQ(config)#ip route 0.0.0.0 0.0.0.0 195.136.17.6 70

HQ(config-if)#int g0/2.70

HQ(config-subif)#

%LINK-5-CHANGED: Interface GigabitEthernet0/2.70, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2.70, changed state to up

HQ(config-subif)#encapsulation dot1Q 70

HQ(config-subif)#ip add 192.168.102.65 255.255.255.240

HQ(config)#interface Serial0/1/0

HQ(config-if)#ip nat outside

HQ(config-if)#exit

HQ(config)#interface Serial0/0/1

HQ(config-if)#ip nat outside

HQ(config)#int range g0/0-2

HQ(config-if-range)#ip nat inside

HQ(config)#ip nat inside source list 1 interface Serial0/1/0 overload

HQ(config)#ip nat inside source list 1 interface Serial0/0/1 overload

HQ(config)#access-list 1 permit 192.168.100.0 0.0.0.63

HQ(config)#access-list 1 permit 192.168.100.64 0.0.0.63

HQ(config)#access-list 1 permit 192.168.100.128 0.0.0.63

HQ(config)#access-list 1 permit 192.168.100.192 0.0.0.63

HQ(config)#access-list 1 permit 192.168.100.192 0.0.0.63

HQ(config)#access-list 1 permit 192.168.101.0 0.0.0.63

HQ(config)#access-list 1 permit 192.168.101.64 0.0.0.63

HQ(config)#license boot module c2900 technology-package securityk9

HQ(config)#access-list 110 permit ip 192.168.100.0 0.0.0.255 192.168.101.128 0.0.0.255

HQ(config)#access-list 110 permit ip 192.168.101.0 0.0.0.127 192.168.101.128 0.0.0.255

HQ(config)#crypto isakmp policy 10

HQ(config-isakmp)#encryption aes 256

HQ(config-isakmp)#authentication pre-share

HQ(config-isakmp)#group 5

HQ(config-isakmp)#ex

HQ(config)#crypto isakmp key vpnpa55 address 192.168.102.90

HQ(config)#crypto ipsec transform-set VPN-SET esp-aes esp-sha-hmac

HQ(config)#crypto map VPN-MAP 10 ipsec-isakmp

% NOTE: This new crypto map will remain disabled until a peer

and a valid access list have been configured.

HQ(config-crypto-map)#description This VPN connects to Branch-Network.

HQ(config-crypto-map)#set peer 192.168.102.90

HQ(config-crypto-map)#set transform-set VPN-SET

HQ(config-crypto-map)#match address 110

HQ(config-crypto-map)#ex

HQ(config)#interface Serial0/0/0

HQ(config-if)#crypto map VPN-MAP

\*Jan 3 07:16:26.785: %CRYPTO-6-ISAKMP\_ON\_OFF: ISAKMP is ON

-------------------------------------------------------------------------------------

Branch(config)#enable password admin

Branch(config)#banner motd #Please Login#

Branch(config)#no ip domain lookup

Branch(config)#line console 0

Branch(config-line)#password admin

Branch(config-line)#login

Branch(config-line)#exit

Branch(config)#

Branch(config)#service password-encryption

Branch(config)#ip domain name cisco.net

Branch(config)#username admin password admin

Branch(config)#crypto key generate rsa

The name for the keys will be: Branch.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

Branch(config)#line vty 0 15

\*Mar 1 0:17:22.416: %SSH-5-ENABLED: SSH 1.99 has been enabled

Branch(config-line)#login local

Branch(config-line)#transport input ssh

Branch(config)#interface Serial0/0/0

Branch(config-if)#ip address 192.168.102.90 255.255.255.252

Branch(config-if)#exit

Branch(config)#interface Serial0/1/0

Branch(config-if)#ip address 195.136.17.9 255.255.255.252

Branch(config-if)#exit

Branch(config)#interface Serial0/0/1

Branch(config-if)#clock rate 64000

Branch(config-if)#ip address 195.136.17.13 255.255.255.252

Branch(config-if)#exit

Branch(config)#interface GigabitEthernet0/0

Branch(config-if)#ip address 192.168.102.94 255.255.255.252

Branch(config-if)#exit

Branch(config)#interface GigabitEthernet0/1

Branch(config-if)#ip address 192.168.102.98 255.255.255.252

Branch(config)#router ospf 10

Branch(config-router)#network 192.168.102.92 0.0.0.3 area 0

Branch(config-router)#network 192.168.102.96 0.0.0.3 area 0

Branch(config-router)#network 192.168.102.88 0.0.0.3 area 0

Branch(config-router)#network 195.136.17.12 0.0.0.3 area 0

Branch(config-router)#network 195.136.17.8 0.0.0.3 area 0

Branch(config-router)#

Branch(config-router)#exit

Branch(config)#ip route 0.0.0.0 0.0.0.0 195.136.17.14

Branch(config)#ip route 0.0.0.0 0.0.0.0 195.136.17.10 70

Branch(config)#interface Serial0/0/1

Branch(config-if)#ip nat outside

Branch(config-if)#exit

Branch(config)#interface Serial0/1/0

Branch(config-if)#ip nat outside

Branch(config-if)#int range g0/0-1

Branch(config-if-range)#ip nat inside

Branch(config)#ip nat inside source list 1 interface Serial0/0/1 overload

Branch(config)#ip nat inside source list 1 interface Serial0/1/0 overload

Branch(config)#access-list 1 permit 192.168.101.128 0.0.0.31

Branch(config)#access-list 1 permit 192.168.101.160 0.0.0.31

Branch(config)#access-list 1 permit 192.168.101.192 0.0.0.31

Branch(config)#access-list 1 permit 192.168.101.224 0.0.0.31

Branch(config)#access-list 1 permit 192.168.102.0 0.0.0.31

Branch(config)#access-list 1 permit 192.168.102.32 0.0.0.31

Branch(config)#license boot module c2900 technology-package securityk9

Branch(config)#access-list 110 permit ip 192.168.101.128 0.0.0.255 192.168.100.0 0.0.0.255

Branch(config)#access-list 110 permit ip 192.168.101.128 0.0.0.255 192.168.101.0 0.0.0.127

Branch(config)#crypto isakmp policy 10

Branch(config-isakmp)#encryption aes 256

Branch(config-isakmp)#authentication pre-share

Branch(config-isakmp)#group 5

Branch(config-isakmp)#ex

Branch(config)#crypto isakmp key vpnpa55 address 192.168.102.89

Branch(config)#crypto ipsec transform-set VPN-SET esp-aes esp-sha-hmac

Branch(config)#crypto map VPN-MAP 10 ipsec-isakmp

% NOTE: This new crypto map will remain disabled until a peer

and a valid access list have been configured.

Branch(config-crypto-map)#description VPN connection to HQ-Hospital

Branch(config-crypto-map)#set peer 192.168.102.89

Branch(config-crypto-map)#set transform-set VPN-SET

Branch(config-crypto-map)#match address 110

Branch(config-crypto-map)#ex

Branch(config)#interface Serial0/0/0

Branch(config-if)#crypto map VPN-MAP

\*Jan 3 07:16:26.785: %CRYPTO-6-ISAKMP\_ON\_OFF: ISAKMP is ON

Branch(config-if)#

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ISP1(config)#interface Serial0/2/0

ISP1(config)#clockrate 64000

ISP1(config-if)#ip address 195.136.17.2 255.255.255.252

ISP1(config-if)#exit

ISP1(config)#interface Serial0/2/1

ISP1(config-if)#ip address 195.136.17.10 255.255.255.252

ISP1(config)#router ospf 10

ISP1(config-router)#network 195.136.17.0 0.0.0.3 area 0

ISP1(config-router)#network 195.136.17.4 0.0.0.3 area 0

-------------------------------------------------------------------------------------

ISP2(config)#interface Serial0/2/1

ISP1(config)#clockrate 64000

ISP2(config-if)#ip address 195.136.17.6 255.255.255.252

ISP2(config-if)#exit

ISP2(config)#interface Serial0/2/0

ISP2(config-if)#ip address 195.136.17.14 255.255.255.252

router ospf 10

network 195.136.17.12 0.0.0.3 area 0

network 195.136.17.4 0.0.0.3 area 0

**Multilayer3 Switches:**

HQ\_M.Switch1(config)#enable password admin

HQ\_M.Switch1(config)#banner motd #Please Login#

HQ\_M.Switch1(config)#no ip domain lookup

HQ\_M.Switch1(config)#line console 0

HQ\_M.Switch1(config-line)#password admin

HQ\_M.Switch1(config-line)#login

HQ\_M.Switch1(config-line)#exit

HQ\_M.Switch1(config)#

HQ\_M.Switch1(config)#service password-encryption

HQ\_M.Switch1(config)#ip domain-name cisco.net

HQ\_M.Switch1(config)#username admin password admin

HQ\_M.Switch1(config)#crypto key generate rsa

The name for the keys will be: HQ\_M.Switch1.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

HQ\_M.Switch1(config)#line vty 0 15

\*Mar 1 0:3:21.15: %SSH-5-ENABLED: SSH 1.99 has been enabled

HQ\_M.Switch1(config-line)#login local

HQ\_M.Switch1(config-line)#transport input ssh

HQ\_M.Switch1(config)#vlan 10

HQ\_M.Switch1(config-vlan)#vlan 20

HQ\_M.Switch1(config-vlan)#vlan 30

HQ\_M.Switch1(config-vlan)#vlan 40

HQ\_M.Switch1(config-vlan)#vlan 50

HQ\_M.Switch1(config-vlan)#vlan 60

HQ\_M.Switch1(config-vlan)#ex

HQ\_M.Switch1(config)#int range gig1/0/2-7

HQ\_M.Switch1(config-if-range)#switchport mode trunk

HQ\_M.Switch1(config)#interface GigabitEthernet1/0/1

HQ\_M.Switch1(config-if)#no switchport

HQ\_M.Switch1(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.102.81 255.255.255.252

HQ\_M.Switch1(config)#ip routing

HQ\_M.Switch1(config)#router ospf 10

HQ\_M.Switch1(config-router)#network 192.168.100.0 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.100.64 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.100.128 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.100.192 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.101.0 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.101.64 0.0.0.63 area 0

HQ\_M.Switch1(config-router)#network 192.168.102.80 0.0.0.3 area 0

HQ\_M.Switch1(config)#ip route 0.0.0.0 0.0.0.0 192.168.102.82

HQ\_M.Switch1(config)#int vlan 10

HQ\_M.Switch1(config-if)#

%LINK-5-CHANGED: Interface Vlan10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan10, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.100.1 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch1(config-if)#int vlan 20

%LINK-5-CHANGED: Interface Vlan20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan20, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.100.65 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch1(config-if)#int vlan 30

%LINK-5-CHANGED: Interface Vlan30, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan30, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.100.129 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch1(config-if)#int vlan 40

%LINK-5-CHANGED: Interface Vlan40, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan40, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.100.193 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch1(config-if)#int vlan 50

%LINK-5-CHANGED: Interface Vlan50, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan50, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.101.1 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch1(config-if)#int vlan 60

%LINK-5-CHANGED: Interface Vlan60, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan60, changed state to up

HQ\_M.Switch1(config-if)#ip add 192.168.101.65 255.255.255.192

HQ\_M.Switch1(config-if)#ip helper-address 192.168.102.67

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HQ\_M.Switch2(config)#enable password admin

HQ\_M.Switch2(config)#banner motd #Please Login#

HQ\_M.Switch2(config)#no ip domain lookup

HQ\_M.Switch2(config)#line console 0

HQ\_M.Switch2(config-line)#password admin

HQ\_M.Switch2(config-line)#login

HQ\_M.Switch2(config-line)#exit

HQ\_M.Switch2(config)#

HQ\_M.Switch2(config)#service password-encryption

HQ\_M.Switch2(config)#ip domain name cisco.net

HQ\_M.Switch2(config)#username admin password admin

HQ\_M.Switch2(config)#crypto key generate rsa

The name for the keys will be: HQ\_M.Switch2.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

HQ\_M.Switch2(config)#line vty 0 15

\*Mar 1 0:6:55.870: %SSH-5-ENABLED: SSH 1.99 has been enabled

HQ\_M.Switch2(config-line)#login local

HQ\_M.Switch2(config-line)#transport input ssh

HQ\_M.Switch2(config)#vlan 10

HQ\_M.Switch2(config-vlan)#vlan 20

HQ\_M.Switch2(config-vlan)#vlan 30

HQ\_M.Switch2(config-vlan)#vlan 40

HQ\_M.Switch2(config-vlan)#vlan 50

HQ\_M.Switch2(config-vlan)#vlan 60

HQ\_M.Switch2(config-vlan)#int range gig1/0/2-7

HQ\_M.Switch2(config-if-range)#switchport

HQ\_M.Switch2(config-if-range)#switchport mode trunk

HQ\_M.Switch2(config)#interface GigabitEthernet1/0/1

HQ\_M.Switch2(config-if)#no switchport

HQ\_M.Switch2(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to up

HQ\_M.Switch2(config-if)#ip add 192.168.102.85 255.255.255.252

HQ\_M.Switch2(config)#ip routing

HQ\_M.Switch2(config)#router ospf 10

HQ\_M.Switch2(config-router)#network 192.168.100.0 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.100.64 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.100.128 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.100.192 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.101.0 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.101.64 0.0.0.63 area 0

HQ\_M.Switch2(config-router)#network 192.168.102.84 0.0.0.3 area 0

HQ\_M.Switch2(config-router)#ex

HQ\_M.Switch2(config)#ip route 0.0.0.0 0.0.0.0 192.168.102.86

HQ\_M.Switch2(config)#int vlan 10

HQ\_M.Switch2(config-if)#ip add 192.168.100.1 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch2(config-if)#

HQ\_M.Switch2(config-if)#int vlan 20

HQ\_M.Switch2(config-if)#ip add 192.168.100.65 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch2(config-if)#

HQ\_M.Switch2(config-if)#int vlan 30

HQ\_M.Switch2(config-if)#ip add 192.168.100.129 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch2(config-if)#

HQ\_M.Switch2(config-if)#int vlan 40

HQ\_M.Switch2(config-if)#ip add 192.168.100.193 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch2(config-if)#

HQ\_M.Switch2(config-if)#int vlan 50

HQ\_M.Switch2(config-if)#ip add 192.168.101.1 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

HQ\_M.Switch2(config-if)#

HQ\_M.Switch2(config-if)#int vlan 60

HQ\_M.Switch2(config-if)#ip add 192.168.101.65 255.255.255.192

HQ\_M.Switch2(config-if)#ip helper-address 192.168.102.67

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Branch\_M.Switch1(config)#enable password admin

Branch\_M.Switch1(config)#banner motd #Please Login#

Branch\_M.Switch1(config)#no ip domain lookup

Branch\_M.Switch1(config)#line console 0

Branch\_M.Switch1(config-line)#password admin

Branch\_M.Switch1(config-line)#login

Branch\_M.Switch1(config-line)#exit

Branch\_M.Switch1(config)#service password-encryption

Branch\_M.Switch1(config)#ip domain-name cisco.net

Branch\_M.Switch1(config)#username admin password admin

Branch\_M.Switch1(config)#crypto key generate rsa

% You already have RSA keys defined named Branch\_M.Switch1.cisco.net .

% Do you really want to replace them? [yes/no]: y

The name for the keys will be: Branch\_M.Switch1.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

Branch\_M.Switch1(config)#line vty 0 15

\*Mar 1 0:5:3.558: %SSH-5-ENABLED: SSH 1.99 has been enabled

Branch\_M.Switch1(config-line)#login local

Branch\_M.Switch1(config-line)#transport input ssh

Branch\_M.Switch1(config-line)#exit

Branch\_M.Switch1(config)#vlan 80

Branch\_M.Switch1(config-vlan)#vlan 90

Branch\_M.Switch1(config-vlan)#vlan 100

Branch\_M.Switch1(config-vlan)#vlan 110

Branch\_M.Switch1(config-vlan)#vlan 120

Branch\_M.Switch1(config-vlan)#vlan 130

Branch\_M.Switch1(config-vlan)#ex

Branch\_M.Switch1(config)#int range gig1/0/2-7

Branch\_M.Switch1(config-if-range)#switchport mode trunk .

Branch\_M.Switch1(config-if-range)#

Branch\_M.Switch1(config-if-range)#int g1/0/1

Branch\_M.Switch1(config-if)#no switchport

Branch\_M.Switch1(config-if)#ip add

%LINK-3-UPDOWN: Interface GigabitEthernet1/0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to down

%LINK-5-CHANGED: Interface GigabitEthernet1/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed stateip add

% Incomplete command.

Branch\_M.Switch1(config-if)#ip add 192.168.102.93 255.255.255.252

Branch\_M.Switch1(config-if)#ex

Branch\_M.Switch1(config)#ip routing

Branch\_M.Switch1(config)#router ospf 10

Branch\_M.Switch1(config-router)#network 192.168.102.92 0.0.0.3 area 0

Branch\_M.Switch1(config-router)#network 192.168.102.92 0.0.0. area 0

00:07:37: %OSPF-5-ADJCHG: Process 10, Nbr 195.136.17.13 on GigabitEthernet1/0/1

Branch\_M.Switch1(config-router)#network 192.168.101.128 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#network 192.168.101.160 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#network 192.168.101.192 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#network 192.168.101.224 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#network 192.168.102.0 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#network 192.168.102.32 0.0.0.31 area 0

Branch\_M.Switch1(config-router)#ip route 0.0.0.0 0.0.0.0 192.168.102.94

Branch\_M.Switch1(config)#ex

Branch\_M.Switch1#

%SYS-5-CONFIG\_I: Configured from console by console

Branch\_M.Switch1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Branch\_M.Switch1(config)#int vlan 80

Branch\_M.Switch1(config-if)#ip add 192.168.101.129 255.255.255.224

Branch\_M.Switch1(config-if)#ip hel

Branch\_M.Switch1(config-if)#ip helper-

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch1(config-if)#int vlan 90

Branch\_M.Switch1(config-if)#ip add 192.168.101.161 255.255.255.224

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch1(config-if)#int vlan 100

Branch\_M.Switch1(config-if)#ip add 192.168.101.193 255.255.255.224

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch1(config-if)#int vlan 110

Branch\_M.Switch1(config-if)#ip add 192.168.101.225 255.255.255.224

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch1(config-if)#int vlan 120

Branch\_M.Switch1(config-if)#ip add 192.168.102.1 255.255.255.224

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch1(config-if)#int vlan 130

Branch\_M.Switch1(config-if)#ip add 192.168.102.33 255.255.255.224

Branch\_M.Switch1(config-if)#ip helper-address 192.168.102.67

-------------------------------------------------------------------------------------

Branch\_M.Switch2(config)#enable password admin

Branch\_M.Switch2(config)#banner motd #Please Login#

Branch\_M.Switch2(config)#no ip domain lookup

Branch\_M.Switch2(config)#line console 0

Branch\_M.Switch2(config-line)#password admin

Branch\_M.Switch2(config-line)#login

Branch\_M.Switch2(config-line)#exit

Branch\_M.Switch2(config)#

Branch\_M.Switch2(config)#service password-encryption

Branch\_M.Switch2(config)#ip domain name cisco.net

Branch\_M.Switch2(config)#username admin password admin

Branch\_M.Switch2(config)#crypto key generate rsa

The name for the keys will be: Branch\_M.Switch2.cisco.net

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

Branch\_M.Switch2(config)#line vty 0 15

\*Mar 1 0:9:35.52: %SSH-5-ENABLED: SSH 1.99 has been enabled

Branch\_M.Switch2(config-line)#login local

Branch\_M.Switch2(config-line)#transport input ssh

Branch\_M.Switch2(config)#vlan 80

Branch\_M.Switch2(config-vlan)#vlan 90

Branch\_M.Switch2(config-vlan)#vlan 100

Branch\_M.Switch2(config-vlan)#vlan 110

Branch\_M.Switch2(config-vlan)#vlan 120

Branch\_M.Switch2(config-vlan)#vlan 130

Branch\_M.Switch2(config-vlan)#ex

Branch\_M.Switch2(config)#int range gig1/0/2-7

Branch\_M.Switch2(config-if-range)#switchport mode trunk

Branch\_M.Switch2(config)#interface GigabitEthernet1/0/1

Branch\_M.Switch2(config-if)#no switchport

Branch\_M.Switch2(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to up

Branch\_M.Switch2(config-if)#ip add 192.168.102.97 255.255.255.252

Branch\_M.Switch2(config)#ip routing

Branch\_M.Switch2(config)#router ospf 10

Branch\_M.Switch2(config-router)#network 192.168.101.128 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#network 192.168.101.160 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#network 192.168.101.192 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#network 192.168.101.224 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#network 192.168.102.0 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#network 192.168.102.32 0.0.0.31 area 0

Branch\_M.Switch2(config-router)#exit

Branch\_M.Switch2(config)#ip route 0.0.0.0 0.0.0.0 192.168.102.98

Branch\_M.Switch2(config)#int vlan 80

Branch\_M.Switch2(config-if)#ip add 192.168.101.129 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch2(config-if)#

Branch\_M.Switch2(config-if)#int vlan 90

Branch\_M.Switch2(config-if)#ip add 192.168.101.161 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch2(config-if)#

Branch\_M.Switch2(config-if)#int vlan 100

Branch\_M.Switch2(config-if)#ip add 192.168.101.193 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch2(config-if)#

Branch\_M.Switch2(config-if)#int vlan 110

Branch\_M.Switch2(config-if)#ip add 192.168.101.225 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch2(config-if)#

Branch\_M.Switch2(config-if)#int vlan 120

Branch\_M.Switch2(config-if)#ip add 192.168.102.1 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

Branch\_M.Switch2(config-if)#

Branch\_M.Switch2(config-if)#int vlan 130

Branch\_M.Switch2(config-if)#ip add 192.168.102.33 255.255.255.224

Branch\_M.Switch2(config-if)#ip helper-address 192.168.102.67

**Switches:**

MLOCS(config)#hostname MLOCS

MLOCS(config)#enable password admin

MLOCS(config)#no ip domain lookup

MLOCS(config)#banner motd #Please Login#

MLOCS(config)#line console 0

MLOCS(config-line)#pass

MLOCS(config-line)#password admin

MLOCS(config-line)#login

MLOCS(config-line)#exit

MLOCS(config)#service password-encryption

MLOCS(config)#int range fa0/1-2

MLOCS(config-if-range)#switchport mode trunk

MLOCS(config-if-range)#ex

MLOCS(config)#int range fa0/3-24

MLOCS(config-if-range)#switchport mode access

MLOCS(config-if-range)#switchport access vlan 10

% Access VLAN does not exist. Creating vlan 10

MLOCS(config-if-range)#ex

MLOCS(config)#vlan 10

MLOCS(config-vlan)#name MLOCS

-------------------------------------------------------------------------------------

MER(config)#enable password admin

MER(config)#banner motd #Please Login#

MER(config)#no ip domain lookup

MER(config)#line console 0

MER(config-line)#password admin

MER(config-line)#login

MER(config-line)#exit

MER(config)#service password-encryption

MER(config)#int range fa0/1-2

MER(config-if-range)#switchport mode trunk

MER(config-if-range)#int range fa0/3-24

MER(config-if-range)#switchport mode access

MER(config-if-range)#switchport access vlan 20

% Access VLAN does not exist. Creating vlan 20

MER(config-if-range)#ex

MER(config)#

MER(config)#vlan 20

MER(config-vlan)#name MER

-------------------------------------------------------------------------------------

MRM(config)#enable password admin

MRM(config)#banner motd #Please Login#

MRM(config)#no ip domain lookup

MRM(config)#line console 0

MRM(config-line)#password admin

MRM(config-line)#login

MRM(config-line)#exit

MRM(config)#

MRM(config)#service password-encryption

MRM(config)#int range fa0/1-2

MRM(config-if-range)#switchport mode trunk

MRM(config-if-range)#

MRM(config-if-range)#int range fa0/3-24

MRM(config-if-range)#switchport mode access

MRM(config-if-range)#switchport access vlan 30

% Access VLAN does not exist. Creating vlan 30

MRM(config-if-range)#ex

MRM(config)#

MRM(config)#vlan 30

MRM(config-vlan)#name MRM

-------------------------------------------------------------------------------------

IT(config)#enable password admin

IT(config)#banner motd #Please Login#

IT(config)#no ip domain lookup

IT(config)#line console 0

IT(config-line)#password admin

IT(config-line)#login

IT(config-line)#exit

IT(config)#

IT(config)#service password-encryption

IT(config)#int range fa0/1-2

IT(config-if-range)#switchport mode trunk

IT(config-if-range)#

IT(config-if-range)#int range fa0/3-24

IT(config-if-range)#switchport mode access

IT(config-if-range)#switchport access vlan 40

% Access VLAN does not exist. Creating vlan 40

IT(config-if-range)#ex

IT(config)#

IT(config)#vlan 40

IT(config-vlan)#name IT

-------------------------------------------------------------------------------------

CS(config)#enable password admin

CS(config)#banner motd #Please Login#

CS(config)#no ip domain lookup

CS(config)#line console 0

CS(config-line)#password admin

CS(config-line)#login

CS(config-line)#exit

CS(config)#

CS(config)#service password-encryption

CS(config)#int range fa0/1-2

CS(config-if-range)#switchport mode trunk

CS(config-if-range)#

CS(config-if-range)#int range fa0/3-24

CS(config-if-range)#switchport mode access

CS(config-if-range)#switchport access vlan 50

% Access VLAN does not exist. Creating vlan 50

CS(config-if-range)#ex

CS(config)#

CS(config)#vlan 50

CS(config-vlan)#name CS

-------------------------------------------------------------------------------------

GWA(config)#enable password admin

GWA(config)#banner motd #Please Login#

GWA(config)#no ip domain lookup

GWA(config)#line console 0

GWA(config-line)#password admin

GWA(config-line)#login

GWA(config-line)#exit

GWA(config)#

GWA(config)#service password-encryption

GWA(config)#int range fa0/1-2

GWA(config-if-range)#switchport mode trunk

GWA(config-if-range)#

GWA(config-if-range)#int range fa0/3-24

GWA(config-if-range)#switchport mode access

GWA(config-if-range)#switchport access vlan 60

% Access VLAN does not exist. Creating vlan 60

GWA(config-if-range)#ex

GWA(config)#

GWA(config)#vlan 60

GWA(config-vlan)#name GWA\_HQ

-------------------------------------------------------------------------------------

NSO(config)#enable password admin

NSO(config)#banner motd #Please Login#

NSO(config)#no ip domain lookup

NSO(config)#line console 0

NSO(config-line)#password admin

NSO(config-line)#login

NSO(config-line)#exit

NSO(config)#

NSO(config)#service password-encryption

-------------------------------------------------------------------------------------

HL(config)#enable password admin

HL(config)#banner motd #Please Login#

HL(config)#no ip domain lookup

HL(config)#line console 0

HL(config-line)#password admin

HL(config-line)#login

HL(config-line)#exit

HL(config)#

HL(config)#service password-encryption

-------------------------------------------------------------------------------------

HR(config)#enable password admin

HR(config)#banner motd #Please Login#

HR(config)#no ip domain lookup

HR(config)#line console 0

HR(config-line)#password admin

HR(config-line)#login

HR(config-line)#exit

HR(config)#

HR(config)#service password-encryption

-------------------------------------------------------------------------------------

MK(config)#enable password admin

MK(config)#banner motd #Please Login#

MK(config)#no ip domain lookup

MK(config)#line console 0

MK(config-line)#password admin

MK(config-line)#login

MK(config-line)#exit

MK(config)#

MK(config)#service password-encryption

-------------------------------------------------------------------------------------

FN(config)#enable password admin

FN(config)#banner motd #Please Login#

FN(config)#no ip domain lookup

FN(config)#line console 0

FN(config-line)#password admin

FN(config-line)#login

FN(config-line)#exit

FN(config)#

FN(config)#service password-encryption

-------------------------------------------------------------------------------------

GWArea(config)#enable password admin

GWArea(config)#banner motd #Please Login#

GWArea(config)#no ip domain lookup

GWArea(config)#line console 0

GWArea(config-line)#password admin

GWArea(config-line)#login

GWArea(config-line)#exit

GWArea(config)#

GWArea(config)#service password-encryption

-------------------------------------------------------------------------------------

SSS(config)#enable password admin

SSS(config)#banner motd #Please Login#

SSS(config)#no ip domain lookup

SSS(config)#line console 0

SSS(config-line)#password admin

SSS(config-line)#login

SSS(config-line)#exit

SSS(config)#

SSS(config)#service password-encryption

SSS(config)#ip domain-name cisco.net

SSS(config)#username admin password admin

SSS(config)#crypto key generate rsa 1024

SSS(config)#line vty 0 15

SSS(config-line)#login local

SSS(config-line)#transport input ssh

SSS(config-line)#

SSS(config-line)#int fa0/1

SSS(config-if)#switchport mode trunk

SSS(config-if)#

SSS(config-if)#int range fa0/2-24

SSS(config-if-range)#switchport mode access

SSS(config-if-range)#switchport access vlan 70

% Access VLAN does not exist. Creating vlan 70

SSS(config-if-range)#ex

SSS(config)#

SSS(config)#vlan 70

SSS(config-vlan)#name SSS

SSS(config)#int range f0/3-24

SSS(config-if-range)#switchport port-security

SSS(config-if-range)#switchport port-security maximum 1

SSS(config-if-range)#switchport port-security mac-address sticky

SSS(config-if-range)#switchport port-security violation shutdown