**Commands for Router**

en

conf t

ip access-list extended VLAN10\_GUEST

deny ip 192.168.10.252 0.0.0.3 192.168.20.0 0.0.0.255

deny ip 192.168.10.252 0.0.0.3 192.168.30.0 0.0.0.255

deny ip 192.168.10.252 0.0.0.3 192.168.40.0 0.0.0.255

deny ip 192.168.10.252 0.0.0.3 192.168.50.0 0.0.0.255

deny ip 192.168.10.252 0.0.0.3 192.168.60.0 0.0.0.255

deny ip 192.168.10.252 0.0.0.3 192.168.70.0 0.0.0.255

permit ip 192.168.10.0 0.0.0.255 192.168.10.0 0.0.0.255

exit

int vlan 10

ip access-group VLAN10\_GUEST in

exit

ip access-list extended VLAN20\_GUEST

deny ip 192.168.20.252 0.0.0.3 192.168.10.0 0.0.0.255

deny ip 192.168.20.252 0.0.0.3 192.168.30.0 0.0.0.255

deny ip 192.168.20.252 0.0.0.3 192.168.40.0 0.0.0.255

deny ip 192.168.20.252 0.0.0.3 192.168.50.0 0.0.0.255

deny ip 192.168.20.252 0.0.0.3 192.168.60.0 0.0.0.255

deny ip 192.168.20.252 0.0.0.3 192.168.70.0 0.0.0.255

permit ip 192.168.20.0 0.0.0.255 192.168.20.0 0.0.0.255

exit

int vlan 20

ip access-group VLAN20\_GUEST in

exit

ip access-list extended VLAN30\_GUEST

deny ip 192.168.30.252 0.0.0.3 192.168.10.0 0.0.0.255

deny ip 192.168.30.252 0.0.0.3 192.168.20.0 0.0.0.255

deny ip 192.168.30.252 0.0.0.3 192.168.40.0 0.0.0.255

deny ip 192.168.30.252 0.0.0.3 192.168.50.0 0.0.0.255

deny ip 192.168.30.252 0.0.0.3 192.168.60.0 0.0.0.255

deny ip 192.168.30.252 0.0.0.3 192.168.70.0 0.0.0.255

permit ip 192.168.30.0 0.0.0.255 192.168.30.0 0.0.0.255

exit

int vlan 30

ip access-group VLAN30\_GUEST in

exit

ip access-list extended VLAN40\_ADMIN

deny ip 192.168.40.0 0.0.0.255 192.168.50.0 0.0.0.255

deny ip 192.168.40.0 0.0.0.255 192.168.10.252 0.0.0.3

deny ip 192.168.40.0 0.0.0.255 192.168.20.252 0.0.0.3

deny ip 192.168.40.0 0.0.0.255 192.168.30.252 0.0.0.3

permit ip any any

exit

int vlan 40

ip access-group VLAN40\_ADMIN in

exit

ip access-list extended VLAN50\_ADMIN

deny ip 192.168.50.0 0.0.0.255 192.168.40.0 0.0.0.255

deny ip 192.168.50.0 0.0.0.255 192.168.10.252 0.0.0.3

deny ip 192.168.50.0 0.0.0.255 192.168.20.252 0.0.0.3

deny ip 192.168.50.0 0.0.0.255 192.168.30.252 0.0.0.3

permit ip any any

exit

int vlan 50

ip access-group VLAN50\_ADMIN in

exit

ip access-list extended VLAN80\_EMERGENCY  
deny ip 192.168.10.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.20.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.30.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.40.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.50.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.60.0 0.0.0.255 192.168.80.0 0.0.0.255

deny ip 192.168.70.0 0.0.0.255 192.168.80.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.10.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.20.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.30.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.40.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.50.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.60.0 0.0.0.255

permit ip 192.168.80.0 0.0.0.255 192.168.70.0 0.0.0.255

permit ip any any

exit

interface gig0/0.80

ip access-group VLAN80\_EMERGENCY in

exit

ip access-list extended VLAN40\_TO\_VLAN50

deny ip 192.168.40.0 0.0.0.255 192.168.50.0 0.0.0.255

deny ip 192.168.50.0 0.0.0.255 192.168.40.0 0.0.0.255

permit ip any any

exit

interface gig0/0.40

ip access-group VLAN40\_TO\_VLAN50 in

exit

interface gig0/0.50

ip access-group VLAN40\_TO\_VLAN50 in

exit

do wr

**Code for internet connectivity**

#### Commands for ISP Router

#### Interface facing the internal router: 203.0.113.1

#### Interface facing the simulated Internet: 10.0.0.1

#### en

#### config t

#### interface GigabitEthernet0/0

#### ip address 203.0.113.1 255.255.255.0

#### no shutdown

#### interface GigabitEthernet0/1

#### ip address 10.0.0.1 255.255.255.0

#### no shutdown

#### Exit

#### ip route 0.0.0.0 0.0.0.0 10.0.0.2

#### access-list 100 permit ip 203.0.113.0 0.0.0.255 any

#### ip nat inside source list 100 interface GigabitEthernet0/1 overload

#### interface GigabitEthernet0/0

#### ip nat inside

#### interface GigabitEthernet0/1

#### ip nat outside

#### do wr

#### Commands for Internal Router

#### Interface connecting to the ISP router: 203.0.113.2.

#### enable

#### configure terminal

#### interface GigabitEthernet0/1

#### ip address 203.0.113.2 255.255.255.0

#### no shutdown

#### Exit

#### ip route 0.0.0.0 0.0.0.0 203.0.113.1

#### access-list 1 permit 192.168.0.0 0.0.255.255

#### ip nat inside source list 1 interface GigabitEthernet0/1 overload

#### interface GigabitEthernet0/0.10

#### ip nat inside

#### interface GigabitEthernet0/0.20

#### ip nat inside

#### interface GigabitEthernet0/0.30

#### ip nat inside

#### interface GigabitEthernet0/0.40

#### ip nat inside

#### interface GigabitEthernet0/0.50

#### ip nat inside

#### interface GigabitEthernet0/0.60

#### ip nat inside

#### interface GigabitEthernet0/0.70

#### ip nat inside

#### interface GigabitEthernet0/0.80

#### ip nat inside

#### interface GigabitEthernet0/1

#### ip nat outside

#### do wr

#### access-list 1 permit 192.168.60.0 0.0.0.255

#### access-list 1 permit 192.168.70.0 0.0.0.255

#### access-list 1 permit 192.168.80.0 0.0.0.255

#### ip nat inside source list 1 interface GigabitEthernet0/1 overload

#### Connection Verification

show ip route

ping 203.0.113.1



