

```
## R1_VLAN (SW1_3560)
```

```
...
```

```
hostname R1_VLAN
```

```
vlan 8
```

```
name VerHa
```

```
exit
```

```
vlan 16
```

```
name WLAN
```

```
exit
```

```
vlan 24
```

```
name Myy
```

```
exit
```

```
vlan 48
```

```
name Osto
```

```
exit
```

```
ip routing
```

```
interface vlan 1
```

```
ip address 172.21.1.1 255.255.255.0
```

```
no shutdown
```

```
exit
```

```
interface vlan 8
```

```
ip address 172.21.8.1 255.255.254.0
```

no shutdown

exit

interface vlan 16

ip address 172.21.16.1 255.255.252.0

no shutdown

exit

interface vlan 24

ip address 172.21.24.1 255.255.248.0

no shutdown

exit

interface vlan 48

ip address 172.21.48.1 255.255.240.0

no shutdown

exit

interface range f0/21-22

channel-group 1 mode active

exit

interface port-channel 1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport trunk allowed vlan 1,8,16,24,48

switchport trunk native vlan 8

exit

interface f0/24

no switchport

ip address 192.168.12.1 255.255.255.240

no shutdown

exit

interface f0/23

switchport mode access

switchport access vlan 1

switchport nonegotiate

exit

interface f0/1

switchport mode access

switchport access vlan 1

switchport nonegotiate

exit

interface range f0/2-3

switchport mode access

switchport access vlan 8

switchport nonegotiate

exit

interface range f0/4-8

switchport mode access

switchport access vlan 16

switchport nonegotiate

exit

interface range f0/9-14

switchport mode access

switchport access vlan 24

switchport nonegotiate

exit

interface range f0/15-20

switchport mode access

switchport access vlan 48

switchport nonegotiate

exit

interface loopback 0

ip address 10.1.1.1 255.255.255.255

exit

router ospf 5

router-id 11.1.1.1

exit

router ospf 5

interface f0/24

ip ospf 5 area 0

exit

router ospf 5

interface loopback 0

ip ospf 5 area 0

exit

router ospf 5

interface vlan 1

ip ospf 5 area 0

exit

```
router ospf 5
interface vlan 8
ip ospf 5 area 0
exit
```

```
router ospf 5
interface vlan 16
ip ospf 5 area 0
exit
```

```
router ospf 5
interface vlan 24
ip ospf 5 area 0
exit
```

```
router ospf 5
interface vlan 48
ip ospf 5 area 0
exit
```

```
router ospf 5
passive-interface default
no passive-interface f0/24
```

```
...
```

```
## R2_Reuna
```

```
...
```

```
hostname R2_Reuna
```

```
interface loopback 0
ip address 10.2.2.2 255.255.255.255
exit
```

```
interface g0/0
ip address 192.168.12.2 255.255.255.240
no shutdown
exit
```

```
interface g0/1
ip address 192.168.23.2 255.255.255.240
no shutdown
exit
```

```
interface g0/2
ip address 198.51.100.2 255.255.255.248
no shutdown
exit
```

```
ip route 0.0.0.0 0.0.0.0 198.51.100.1
```

```
router ospf 5
router-id 22.1.1.1
exit
```

```
router ospf 5
interface g0/0
ip ospf 5 area 0
exit
```

```
router ospf 5
```

```
interface g0/1
ip ospf 5 area 0
Exit
```

```
Router ospf 5
interface loopback 0
ip ospf 5 area 0
exit
```

```
router ospf 5
passive-interface default
no passive-interface g0/0
no passive-interface g0/1
```

```
Default-information originate
```

```
...
```

```
## R3_Eta
```

```
...
```

```
hostname R3_Eta
```

```
interface f0/1
ip address 192.168.23.3 255.255.255.240
no shutdown
exit
```

```
interface loopback 0
ip address 10.3.3.3 255.255.255.255
exit
```

```
interface f0/0
ip address 172.23.0.1 255.255.255.0
no shutdown
exit
```

```
router ospf 5
interface f0/1
ip ospf 5 area 0
exit
```

```
router ospf 5
interface f0/0
ip ospf 5 area 0
exit
```

```
router ospf 5
interface loopback 0
ip ospf 5 area 0
exit
```

```
router ospf 5
router-id 13.1.1.1
exit
```

```
router ospf 5
passive-interface default
no passive-interface f0/1
```

```
...
```



```
## ISP
```

```
...
```

```
hostname ISP
```

```
interface loopback 0
```

```
ip address 111.112.113.1 255.255.255.255
```

```
exit
```

```
interface f0/0
```

```
ip address 198.51.100.1 255.255.255.248
```

```
no shutdown
```

```
exit
```

```
ip route 0.0.0.0 0.0.0.0 198.51.100.2
```

```
...
```

```
## SW2_3560
```

```
...
```

```
hostname SW2_3560
```

```
vlan 8
```

```
name VerHa
```

```
exit
```

```
vlan 16
```

```
name WLAN
```

```
exit
```

vlan 24

name Myy

exit

vlan 48

name Osto

exit

interface range f0/21-22

channel-group 1 mode active

exit

interface port-channel 1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport trunk allowed vlan 1,8,16,24,48

switchport trunk native vlan 8

exit

interface range f0/23-24

switchport mode access

switchport access vlan 1

switchport nonegotiate

exit

interface f0/1

switchport mode access

switchport access vlan 1

switchport nonegotiate

exit

interface range f0/2-3

```
switchport mode access
switchport access vlan 8
switchport nonegotiate
exit
```

```
interface range f0/4-8
switchport mode access
switchport access vlan 16
switchport nonegotiate
exit
```

```
interface range f0/9-14
switchport mode access
switchport access vlan 24
switchport nonegotiate
exit
```

```
interface range f0/15-20
switchport mode access
switchport access vlan 48
switchport nonegotiate
exit
```

```
interface vlan 8
ip address 172.21.8.21 255.255.254.0
exit
```

```
ip default-gateway 172.21.8.1
```

```
...
```

```
## SW3_2960
```

```
...
```

```
hostname SW3_2960
```

```
interface f0/24
```

```
switchport mode trunk
```

```
switchport trunk allowed vlan 1,8,16,24,48
```

```
switchport trunk native vlan 1
```

```
no shutdown
```

```
exit
```

```
interface range f0/1-23
```

```
switchport mode access
```

```
switchport access vlan 1
```

```
switchport nonegotiate
```

```
exit
```

```
interface vlan 1
```

```
ip address 172.23.0.21 255.255.255.0
```

```
no shutdown
```

```
exit
```

```
ip default-gateway 172.23.0.1
```

```
...
```

```
R1
```

```
...
```

```
ip access-list extended ICMP
deny icmp any 172.21.16.0 0.0.3.255
permit ip any any
exit
```

```
interface f0/24
ip access-group ICMP in
```

```
...
```

ISP

```
...
```

```
ip http server
```

(enables server no need for more commands. This command does not work in cisco packet tracer)

(On pc)

```
telnet 111.112.113.1 80
```

```
quit
```

```
...
```

R2

```
...
```

```
access-list 10 permit 172.21.8.0 0.0.1.255
```

```
line vty 0 15
```

```
transport input ssh
```

```
login local
```

```
ip ssh ver 2
```

```
access-class 10 in
```

```
exit
```

```
ip domain-name SSH-1
```

```
crypto key generate rsa general-keys modulus 2048
```

```
username cisco secret cisco
```

```
...
```

```
R3_Eta
```

```
...
```

```
ip access-list extended Surfing
```

```
permit tcp 172.23.0.0 0.0.0.255 any eq 80
```

```
permit tcp 172.23.0.0 0.0.0.255 any eq 443
```

```
exit
```

```
ip access-list extended Browsing
```

```
permit tcp any 172.23.0.0 0.0.0.255 established
```

```
exit
```

```
interface f0/0
```

```
ip access-group Surfing in
```

```
ip access-group Browsing out
```

```
exit
```

```
...
```

```
R2 NAT
```

```
...
```

```
interface g0/0
```

```
ip nat inside
```

```
exit
```

```
interface g0/1
```

```
ip nat inside
```

```
exit
```

```
interface g0/2
```

```
ip nat outside
```

```
exit
```

```
ip nat inside source static 10.3.3.3 198.51.100.100
```

```
ip nat pool NAT_POOL 198.51.100.3 198.51.100.6 netmask 255.255.255.248
```

```
access-list 2 permit 172.21.0.0 0.0.63.255
```

```
access-list 2 permit 172.23.0.0 0.0.0.255
```

```
ip nat inside source list 2 pool NAT_POOL overload
```

```
...
```