

```
## 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
```

```
```
```