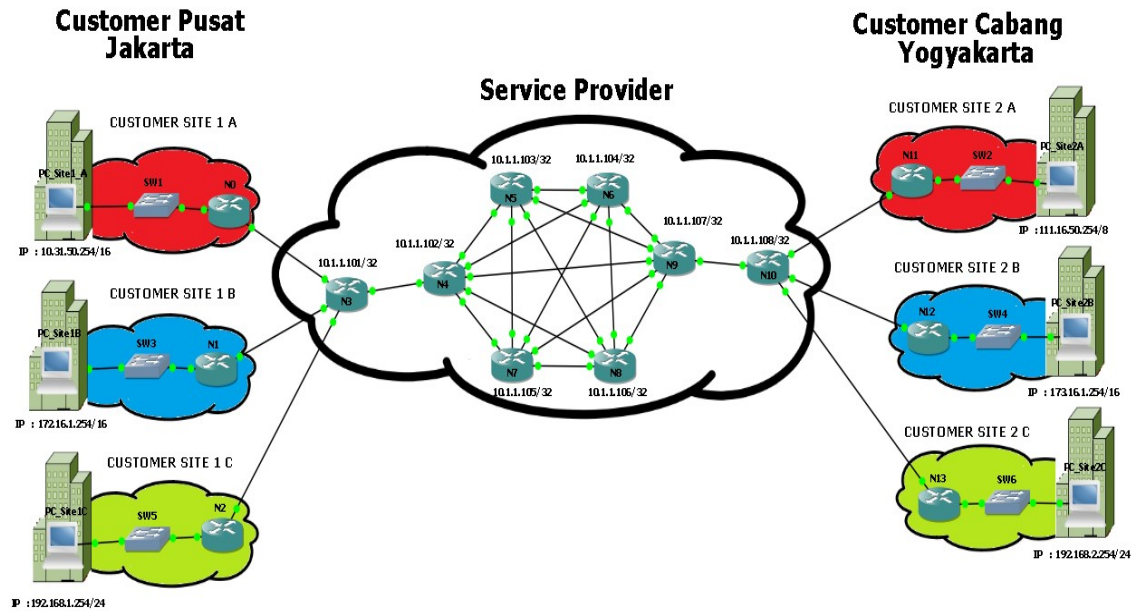


LAPORAN HASIL
EKSPERIMEN KONFIGURASI JARINGAN MPLS VPN
CISCO

MARDIANTO



Konfigurasi Router CE_VPN1A

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN1A
!
boot-start-marker
boot-end-marker
!
enable secret 5 $1$JZx9$pumOE4Mu749Adqdy.HK4R.
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
```

```

ip ftp username vpnsite1a
ip ftp password vpnsite1a
!
interface FastEthernet0/0
bandwidth 128
ip address 192.168.2.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 128
ip address 192.168.1.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.1.0
network 192.168.2.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
line vty 0 4
login local
!
End

```

Konfigurasi Router CE_VPN1B

```

version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN1B
!
boot-start-marker
boot-end-marker
!

```

```
enable secret 5 $1$5qNK$SfY3.AjcrV/dHp6ZyjdH1/
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
ip ftp username vpnsite1b
ip ftp password vpnsite1b
!
interface FastEthernet0/0
bandwidth 256
ip address 192.168.4.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 256
ip address 192.168.3.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.3.0
network 192.168.4.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
line vty 0 4
login local
!
end
```

Konfigurasi Router CE_VPN1C

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN1C
!
boot-start-marker
boot-end-marker
!
enable secret 5 $1$xM/H$j2kyCiFm7g273LvCuLRK0
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
!
interface FastEthernet0/0
bandwidth 512
ip address 192.168.6.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 512
ip address 192.168.5.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.5.0
network 192.168.6.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
line con 0
exec-timeout 0 0
privilege level 15
```

```
logging synchronous
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
line vty 0 4
login local
!
end
```

Konfigurasi Router PE1

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname PE1
!
boot-start-marker
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip vrf vpn1
rd 1:10
route-target export 1:10
route-target import 1:10
!
ip vrf vpn2
rd 2:20
route-target export 2:20
route-target import 2:20
!
ip vrf vpn3
rd 3:30
route-target export 3:30
route-target import 3:30
!
mpls label protocol ldp
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.2.2.100 255.255.255.255
!
```

```
interface FastEthernet0/0
bandwidth 128
ip vrf forwarding vpn1
ip address 192.168.2.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 256
ip vrf forwarding vpn2
ip address 192.168.4.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet1/0
bandwidth 512
ip vrf forwarding vpn3
ip address 192.168.6.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet2/0
bandwidth 10000000
ip address 172.12.174.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
router eigrp 100
network 172.2.0.0
network 192.168.2.0
network 192.168.4.0
network 192.168.6.0
auto-summary
!
address-family ipv4 vrf vpn3
redistribute bgp 100 metric 1 1 1 1 1
network 192.168.2.0
no auto-summary
autonomous-system 100
exit-address-family
!
address-family ipv4 vrf vpn2
redistribute bgp 100 metric 1 1 1 1 1
network 192.168.4.0
no auto-summary
autonomous-system 100
exit-address-family
!
address-family ipv4 vrf vpn1
```

```
redistribute bgp 100 metric 1 1 1 1 1
network 192.168.2.0
no auto-summary
autonomous-system 100
exit-address-family
!
router bgp 100
no synchronization
bgp log-neighbor-changes
neighbor 172.9.2.107 remote-as 100
neighbor 172.9.2.107 update-source Loopback0
no auto-summary
!
address-family vpnv4
neighbor 172.9.2.107 activate
neighbor 172.9.2.107 send-community both
exit-address-family
!
address-family ipv4 vrf vpn3
redistribute eigrp 100
no synchronization
exit-address-family
!
address-family ipv4 vrf vpn2
redistribute eigrp 100
no synchronization
exit-address-family
!
address-family ipv4 vrf vpn1
redistribute eigrp 100
no synchronization
exit-address-family
!
no ip http server
no ip http secure-server
!
mpls ldp router-id Loopback0 force
!
control-plane
!
gatekeeper
shutdown
!
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
```

```
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
End
```

Konfigurasi Router Core1

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Core1
!
boot-start-marker
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.3.2.101 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.12.174.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 10000000
ip address 172.14.176.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/0
bandwidth 10000000
ip address 172.13.175.1 255.255.0.0
duplex auto
```



```
speed auto
mpls ip
!
interface FastEthernet1/1
bandwidth 10000000
ip address 172.15.177.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/0
bandwidth 10000000
ip address 172.16.178.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/1
bandwidth 10000000
ip address 172.17.179.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
router eigrp 100
network 172.3.0.0
network 172.12.0.0
network 172.13.0.0
network 172.14.0.0
network 172.15.0.0
network 172.16.0.0
network 172.17.0.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
```

```
logging synchronous
stopbits 1
line vty 0 4
login
!
end
```

Konfigurasi Router Core2

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Core2
!
boot-start-marker
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.4.2.102 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.13.175.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 10000000
ip address 172.18.180.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/0
bandwidth 10000000
ip address 172.19.181.1 255.255.0.0
duplex auto
speed auto
mpls ip
```

```
!  
interface FastEthernet1/1  
bandwidth 10000000  
ip address 172.20.182.1 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet2/0  
bandwidth 10000000  
ip address 172.21.183.1 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet2/1  
no ip address  
shutdown  
duplex auto  
speed auto  
!  
router eigrp 100  
network 172.4.0.0  
network 172.13.0.0  
network 172.18.0.0  
network 172.19.0.0  
network 172.20.0.0  
network 172.21.0.0  
auto-summary  
!  
no ip http server  
no ip http secure-server  
!  
control-plane  
!  
gatekeeper  
shutdown  
!  
line con 0  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
stopbits 1  
line aux 0  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
stopbits 1  
line vty 0 4  
login
```

!
End

Konfigurasi Router Core3

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Core3
!
boot-start-marker
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.5.2.103 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.14.176.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 10000000
ip address 172.21.183.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/0
bandwidth 10000000
ip address 172.22.184.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/1
bandwidth 10000000
ip address 172.23.185.1 255.255.0.0
```

```

duplex auto
speed auto
mpls ip
!
interface FastEthernet2/0
bandwidth 10000000
ip address 172.24.186.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/1
no ip address
shutdown
duplex auto
speed auto
!
router eigrp 100
network 172.5.0.0
network 172.14.0.0
network 172.21.0.0
network 172.22.0.0
network 172.23.0.0
network 172.24.0.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
End

```

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Core4
!
boot-start-marker
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.6.2.104 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.17.179.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 10000000
ip address 172.18.180.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/0
bandwidth 10000000
ip address 172.22.184.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/1
bandwidth 10000000
ip address 172.27.189.1 255.255..0
shutdown
duplex auto
speed auto
mpls ip
!
```

```

interface FastEthernet2/0
bandwidth 10000000
ip address 172.25.187.2 255.255.255.252
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/1
no ip address
shutdown
duplex auto
speed auto
!
router eigrp 100
network 172.6.0.0
network 172.17.0.0
network 172.18.0.0
network 172.22.0.0
network 172.25.0.0
network 172.27.0.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
End

```

Konfigurasi Router Core5

```

version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption

```

```
!  
hostname Core5  
!  
boot-start-marker  
boot-end-marker  
!  
no aaa new-model  
no ip icmp rate-limit unreachable  
!  
ip cef  
no ip domain lookup  
!  
ip tcp synwait-time 5  
!  
interface Loopback0  
ip address 172.7.2.105 255.255.255.255  
!  
interface FastEthernet0/0  
bandwidth 10000000  
ip address 172.16.178.2 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet0/1  
bandwidth 10000000  
ip address 172.19.181.2 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet1/0  
bandwidth 10000000  
ip address 172.23.185.2 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet1/1  
bandwidth 10000000  
ip address 172.26.188.2 255.255.0.0  
duplex auto  
speed auto  
mpls ip  
!  
interface FastEthernet2/0  
bandwidth 10000000  
ip address 172.27.189.2 255.255.0.0  
duplex auto  
speed auto
```



```

mpls ip
!
interface FastEthernet2/1
no ip address
shutdown
duplex auto
speed auto
!
router eigrp 100
network 172.7.0.0
network 172.16.0.0
network 172.19.0.0
network 172.23.0.0
network 172.26.0.0
network 172.27.0.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
end

```

Konfigurasi Router Core6

```

version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Core6
!
boot-start-marker

```

```
boot-end-marker
!
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.8.2.106 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.15.177.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 10000000
ip address 172.20.182.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/0
bandwidth 10000000
ip address 172.24.186.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet1/1
bandwidth 10000000
ip address 172.26.188.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/0
bandwidth 10000000
ip address 172.28.190.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet2/1
bandwidth 10000000
```

```

ip address 172.25.187.1 255.255.0.0
duplex auto
speed auto
mpls ip
!
router eigrp 100
network 172.8.0.0
network 172.15.0.0
network 172.20.0.0
network 172.24.0.0
network 172.25.0.0
network 172.26.0.0
network 172.28.0.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
end

```

Konfigurasi Router PE2

```

version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname PE2
!
boot-start-marker
boot-end-marker
!

```

```
no aaa new-model
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
!
ip vrf vpn1
rd 1:10
route-target export 1:10
route-target import 1:10
!
ip vrf vpn2
rd 2:20
route-target export 2:20
route-target import 2:20
!
ip vrf vpn3
rd 3:30
route-target export 3:30
route-target import 3:30
!
mpls label protocol ldp
!
ip tcp synwait-time 5
!
interface Loopback0
ip address 172.9.2.107 255.255.255.255
!
interface FastEthernet0/0
bandwidth 10000000
ip address 172.28.190.2 255.255.0.0
duplex auto
speed auto
mpls ip
!
interface FastEthernet0/1
bandwidth 128
ip vrf forwarding vpn1
ip address 192.168.7.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet1/0
bandwidth 256
ip vrf forwarding vpn2
ip address 192.168.9.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet1/1
```

```
bandwidth 512
ip vrf forwarding vpn3
ip address 192.168.11.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 172.9.0.0
network 172.28.0.0
network 192.168.7.0
network 192.168.9.0
network 192.168.11.0
auto-summary
!
address-family ipv4 vrf vpn3
redistribute bgp 100 metric 1 1 1 1
network 192.168.11.0
no auto-summary
autonomous-system 100
exit-address-family
!
address-family ipv4 vrf vpn2
redistribute bgp 100 metric 1 1 1 1
network 192.168.9.0
no auto-summary
autonomous-system 100
exit-address-family
!
address-family ipv4 vrf vpn1
redistribute bgp 100 metric 1 1 1 1
network 192.168.7.0
no auto-summary
autonomous-system 100
exit-address-family
!
router bgp 100
no synchronization
bgp log-neighbor-changes
neighbor 172.2.2.100 remote-as 100
neighbor 172.2.2.100 update-source Loopback0
no auto-summary
!
address-family vpnv4
neighbor 172.2.2.100 activate
neighbor 172.2.2.100 send-community both
exit-address-family
!
address-family ipv4 vrf vpn3
redistribute eigrp 100
no synchronization
```

```

exit-address-family
!
address-family ipv4 vrf vpn2
redistribute eigrp 100
no synchronization
exit-address-family
!
address-family ipv4 vrf vpn1
redistribute eigrp 100
no synchronization
exit-address-family
!
no ip http server
no ip http secure-server
!
mpls ldp router-id Loopback0 force
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
stopbits 1
line vty 0 4
login
!
end

```

Konfigurasi Router CE_VPN2A

```

version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN2A
!
boot-start-marker
boot-end-marker

```

```

!
enable secret 5 $1$b1BJ$hdrM8.tQh2NNt90MjCKNF1
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
!
interface FastEthernet0/0
bandwidth 128
ip address 192.168.7.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 128
ip address 192.168.8.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.7.0
network 192.168.8.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
line vty 0 4
login local
!
end

```

Konfigurasi Router CE_VPN2B

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN2B
!
boot-start-marker
boot-end-marker
!
enable secret 5 $1$4iL$C0OA4YumynKEIjT6PsPk61
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
!
interface FastEthernet0/0
bandwidth 256
ip address 192.168.9.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 256
ip address 192.168.10.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.9.0
network 192.168.10.0
auto-summary
!
no ip http server
no ip http secure-server
!
control-plane
!
line con 0
exec-timeout 0 0
privilege level 15
logging synchronous
```



```
line aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
line vty 0 4
login local
!
End
```

Konfigurasi Router CE_VPN2C

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CE_VPN2C
!
boot-start-marker
boot-end-marker
!
enable secret 5 $1$xH3I$AErsizzdG5ble5wppV2eg0
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
no ip domain lookup
!
username mpls password 0 vrf
!
ip tcp synwait-time 5
!
interface FastEthernet0/0
bandwidth 512
ip address 192.168.11.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
bandwidth 512
ip address 192.168.12.1 255.255.255.0
duplex auto
speed auto
!
router eigrp 100
network 192.168.11.0
network 192.168.12.0
auto-summary
```

```
!  
no ip http server  
no ip http secure-server  
!  
control-plane  
!  
line con 0  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
line aux 0  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
line vty 0 4  
login local  
!  
end
```