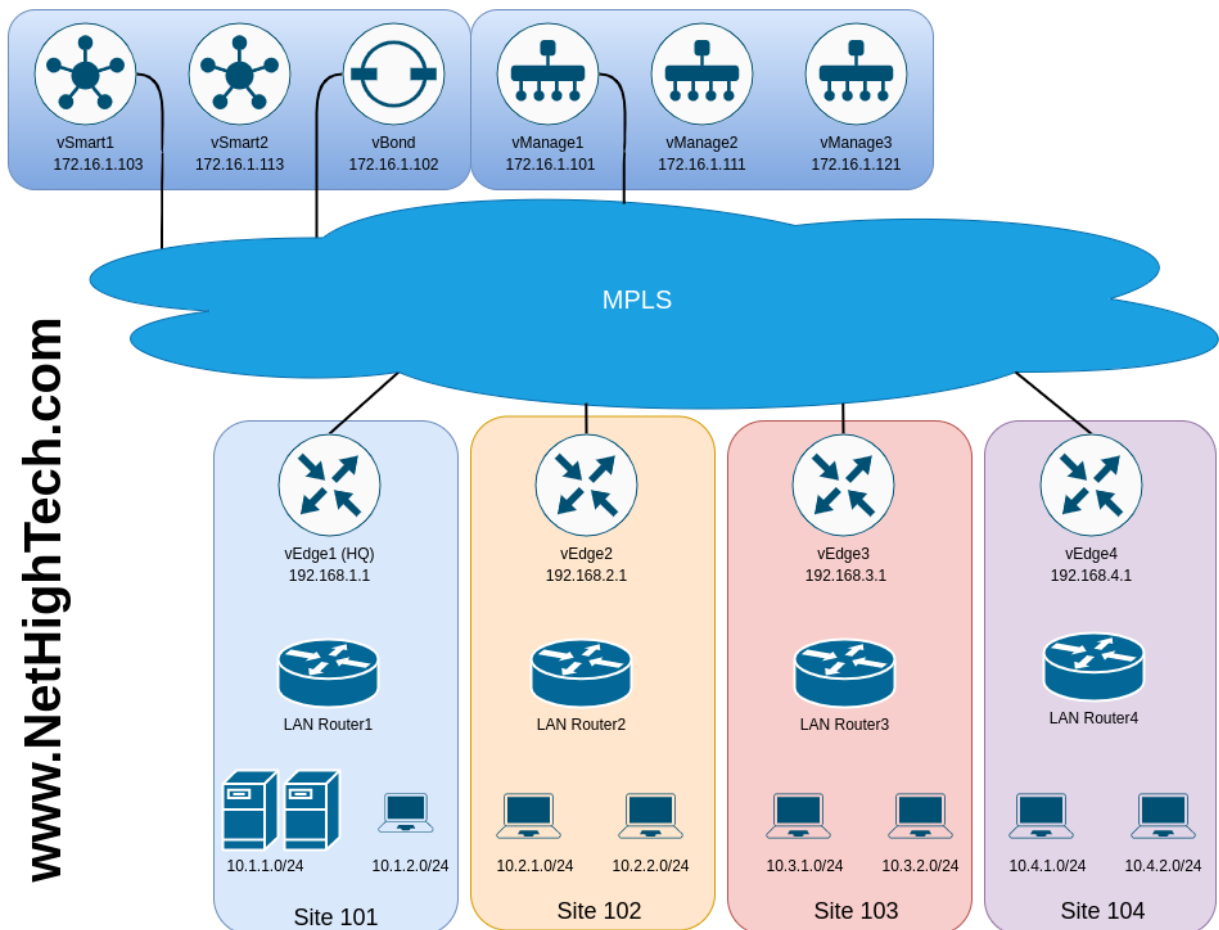


Cisco SD-WAN LAB-1

Trainer: Behrouz Soleimani



vManage Configuration:

vmanage# config terminal

```
vmanage(config)# vpn 0
vmanage(config-vpn-0)# ip route 0.0.0.0/0 172.16.1.1
vmanage(config-vpn-0)# no interface
vmanage(config-vpn-0)# interface eth1
vmanage(config-interface-eth1)# ip address 172.16.1.101/24
vmanage(config-interface-eth1)# no shutdown
vmanage(config-interface-eth1)# tunnel-interface
vmanage(config-tunnel-interface)# color mpls
vmanage(config-tunnel-interface)# allow-service all
vmanage(config-tunnel-interface)# exit
vmanage(config-interface-eth1)# exit
vmanage(config-vpn-0)# exit
```

```
vmanage(config)# vpn 512
vmanage(config-vpn-512)# no interface
vmanage(config-vpn-512)# interface eth0
vmanage(config-interface-eth0)# ip address 192.168.100.101/24
vmanage(config-interface-eth0)# no shutdown
vmanage(config-interface-eth0)# exit
vmanage(config-vpn-512)# exit
```

```
vmanage(config)# system
vmanage(config-system)# host-name vManage1
vmanage(config-system)# site-id 1
vmanage(config-system)# system-ip 1.1.1.101
vmanage(config-system)# organization-name NetHighTech
vmanage(config-system)# clock timezone Europe/Lisbon
vmanage(config-system)# vbond 172.16.1.111
```

```
vmanage(config-system)# ntp
vmanage(config-ntp)# server 192.168.100.1
vmanage(config-server-192.168.100.1)# commit and-quit
```

vManage1#

vBond1 Configuration:

vedge# config terminal

```
vedge(config)# vpn 0
vedge(config-vpn-0)# ip route 0.0.0.0/0 172.16.1.1
vedge(config-vpn-0)# interface ge0/0
vedge(config-interface-ge0/0)# ip address 172.16.1.111/24
vedge(config-interface-ge0/0)# no shutdown
vedge(config-interface-ge0/0)# no tunnel-interface
vedge(config-interface-ge0/0)# tunnel-interface
vedge(config-tunnel-interface)# color mpls
vedge(config-tunnel-interface)# encapsulation ipsec
vedge(config-tunnel-interface)# allow-service all
vedge(config-tunnel-interface)# exit
vedge(config-interface-ge0/0)# exit
vedge(config-vpn-0)# exit
```

```
vedge(config)# vpn 512
vedge(config-vpn-512)# interface eth0
vedge(config-interface-eth0)# ip address 192.168.100.111/24
vedge(config-interface-eth0)# no shutdown
vedge(config-interface-eth0)# exit
vedge(config-vpn-512)# exit
```

```
vedge(config)# system
vedge(config-system)# host-name vBond1
vedge(config-system)# site-id 1
vedge(config-system)# system-ip 1.1.1.111
vedge(config-system)# organization-name NetHighTech
vedge(config-system)# clock timezone Europe/Lisbon
vedge(config-system)# vbond 172.16.1.111 local
```

```
vedge(config-system)# ntp
vedge(config-ntp)# server 192.168.100.1
vedge(config-server-192.168.100.1)# commit and-quit
vBond1#
```

vSmart1 Configuration:

```
vsmart# config terminal
```

```
vsmart(config)# vpn 0
vsmart(config-vpn-0)# ip route 0.0.0.0/0 172.16.1.1
vsmart(config-vpn-0)# no interface
vsmart(config-vpn-0)# interface eth1
vsmart(config-interface-eth1)# ip address 172.16.1.121/24
vsmart(config-interface-eth1)# no shutdown
vsmart(config-interface-eth1)# no tunnel-interface
vsmart(config-interface-eth1)# tunnel-interface
vsmart(config-tunnel-interface)# color mpls
vsmart(config-tunnel-interface)# allow-service all
vsmart(config-tunnel-interface)# exit
vsmart(config-interface-eth1)# exit
vsmart(config-vpn-0)# exit
```

```
vsmart(config)# vpn 512
vsmart(config-vpn-512)# no interface
vsmart(config-vpn-512)# interface eth0
vsmart(config-interface-eth0)# ip address 192.168.100.121/24
vsmart(config-interface-eth0)# no shutdown
vsmart(config-interface-eth0)# exit
vsmart(config-vpn-512)# exit
```

```
vsmart(config)# system
vsmart(config-system)# host-name vSmart1
vsmart(config-system)# site-id 1
vsmart(config-system)# system-ip 1.1.1.121
vsmart(config-system)# clock timezone Europe/Lisbon
vsmart(config-system)# vbond 172.16.1.111
```

```
vsmart(config-system)# ntp
vsmart(config-ntp)# server 192.168.100.1
vsmart(config-server-192.168.100.1)# commit and-quit
vSmart1#
```

vEdge1 Configuration:

```
vedge# config terminal
```

```
vedge(config)# vpn 512
vedge(config-vpn-512)# no interface
vedge(config-vpn-512)# interface eth0
vedge(config-interface-eth0)# ip address 192.168.100.201/24
vedge(config-interface-eth0)# no shutdown
vedge(config-interface-eth0)# exit
vedge(config-vpn-512)# exit
```

```
vedge(config)# vpn 0
vedge(config-vpn-0)# ip route 0.0.0.0/0 172.16.101.1
vedge(config-vpn-0)# no interface
vedge(config-vpn-0)# interface ge0/0
vedge(config-interface-ge0/0)# ip address 172.16.101.101/24
vedge(config-interface-ge0/0)# no shutdown
vedge(config-interface-ge0/0)# no tunnel-interface
vedge(config-interface-ge0/0)# tunnel-interface
vedge(config-tunnel-interface)# color mpls
vedge(config-tunnel-interface)# encapsulation ipsec
vedge(config-tunnel-interface)# allow-service all
vedge(config-tunnel-interface)# exit
vedge(config-interface-ge0/0)# exit
vedge(config-vpn-0)# exit
```

```
vedge(config)# system
vedge(config-system)# host-name vEdge1
vedge(config-system)# site-id 101
vedge(config-system)# system-ip 1.1.1.201
vedge(config-system)# organization-name NetHighTech
vedge(config-system)# clock timezone Europe/Lisbon
vedge(config-system)# vbond 172.16.1.111
```

```
vedge(config-system)# ntp
vedge(config-ntp)# server 192.168.100.1
vedge(config-server-192.168.100.1)# commit and-quit
vEdge1#
```

```
vEdge1# vshell
vEdge1:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/Root.cer /home/admin/.
vEdge1:~$ exit
vEdge1# request root-cert-chain install /home/admin/Root.cer
vEdge1# request csr upload /home/admin/vEdge1.csr
Enter organization-unit name      : NetHighTech
Re-enter organization-unit name   : NetHighTech
vEdge1:~$ scp /home/admin/vEdge1.csr behrouz@192.168.100.247:/home/behrouz/Downloads/.
vEdge1:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/vEdge1.cer /home/admin/.
vEdge1:~$ exit
vEdge1# request certificate install /home/admin/vEdge1.cer
vEdge1# request vedge-cloud activate chassis-number ..... token .....
```

vEdge2 Configuration:

```
vedge# config terminal
```

```
vedge(config)# vpn 512
vedge(config-vpn-512)# no interface
vedge(config-vpn-512)# interface eth0
vedge(config-interface-eth0)# ip address 192.168.100.202/24
vedge(config-interface-eth0)# no shutdown
vedge(config-interface-eth0)# exit
vedge(config-vpn-512)# exit
```

```
vedge(config)# vpn 0
vedge(config-vpn-0)# ip route 0.0.0.0/0 172.16.102.1
vedge(config-vpn-0)# no interface
vedge(config-vpn-0)# interface ge0/0
vedge(config-interface-ge0/0)# ip address 172.16.102.102/24
vedge(config-interface-ge0/0)# no shutdown
vedge(config-interface-ge0/0)# no tunnel-interface
vedge(config-interface-ge0/0)# tunnel-interface
vedge(config-tunnel-interface)# color mpls
vedge(config-tunnel-interface)# encapsulation ipsec
vedge(config-tunnel-interface)# allow-service all
vedge(config-tunnel-interface)# exit
vedge(config-interface-ge0/0)# exit
vedge(config-vpn-0)# exit
```

```
vedge(config)# system
vedge(config-system)# host-name vEdge2
vedge(config-system)# site-id 102
vedge(config-system)# system-ip 1.1.1.202
vedge(config-system)# organization-name NetHighTech
vedge(config-system)# clock timezone Europe/Lisbon
vedge(config-system)# vbond 172.16.1.111
```

```
vedge(config-system)# ntp
vedge(config-ntp)# server 192.168.100.1
vedge(config-server-192.168.100.1)# commit and-quit
vEdge2#
```

```
vEdge2# vshell
vEdge2:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/Root.cer /home/admin/.
vEdge2:~$ exit
vEdge2# request root-cert-chain install /home/admin/Root.cer
vEdge2# request csr upload /home/admin/vEdge2.csr
Enter organization-unit name      : NetHighTech
Re-enter organization-unit name   : NetHighTech
vEdge2:~$ scp /home/admin/vEdge2.csr behrouz@192.168.100.247:/home/behrouz/Downloads/.
vEdge2:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/vEdge2.cer /home/admin/.
vEdge2:~$ exit
vEdge2# request certificate install /home/admin/vEdge2.cer
vEdge2# request vedge-cloud activate chassis-number ..... token .....
```

vEdge3 Configuration:

```
vedge# config terminal
```

```
vedge(config)# vpn 512
vedge(config-vpn-512)# no interface
vedge(config-vpn-512)# interface eth0
vedge(config-interface-eth0)# ip address 192.168.100.203/24
vedge(config-interface-eth0)# no shutdown
vedge(config-interface-eth0)# exit
vedge(config-vpn-512)# exit
```

```
vedge(config)# vpn 0
vedge(config-vpn-0)# ip route 0.0.0.0/0 172.16.103.1
vedge(config-vpn-0)# no interface
vedge(config-vpn-0)# interface ge0/0
vedge(config-interface-ge0/0)# ip address 172.16.103.103/24
vedge(config-interface-ge0/0)# no shutdown
vedge(config-interface-ge0/0)# no tunnel-interface
vedge(config-interface-ge0/0)# tunnel-interface
vedge(config-tunnel-interface)# color mpls
vedge(config-tunnel-interface)# encapsulation ipsec
vedge(config-tunnel-interface)# allow-service all
vedge(config-tunnel-interface)# exit
vedge(config-interface-ge0/0)# exit
vedge(config-vpn-0)# exit
```

```
vedge(config)# system
vedge(config-system)# host-name vEdge3
vedge(config-system)# site-id 103
vedge(config-system)# system-ip 1.1.1.203
vedge(config-system)# organization-name NetHighTech
vedge(config-system)# clock timezone Europe/Lisbon
vedge(config-system)# vbond 172.16.1.111
```

```
vedge(config-system)# ntp
vedge(config-ntp)# server 192.168.100.1
vedge(config-server-192.168.100.1)# commit and-quit
vEdge3#
```

```
vEdge3# vshell
vEdge3:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/Root.cer /home/admin/.
vEdge3:~$ exit
vEdge3# request root-cert-chain install /home/admin/Root.cer
vEdge3# request csr upload /home/admin/vEdge3.csr
Enter organization-unit name      : NetHighTech
Re-enter organization-unit name   : NetHighTech
vEdge3:~$ scp /home/admin/vEdge3.csr behrouz@192.168.100.247:/home/behrouz/Downloads/.
vEdge3:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/vEdge3.cer /home/admin/.
vEdge3:~$ exit
vEdge3# request certificate install /home/admin/vEdge3.cer
vEdge3# request vedge-cloud activate chassis-number ..... token .....
```

vEdge4 Configuration:

```
vedge# config terminal
```

```
vedge(config)# vpn 512
vedge(config-vpn-512)# no interface
vedge(config-vpn-512)# interface eth0
vedge(config-interface-eth0)# ip address 192.168.100.204/24
vedge(config-interface-eth0)# no shutdown
vedge(config-interface-eth0)# exit
vedge(config-vpn-512)# exit
```

```
vedge(config)# vpn 0
vedge(config-vpn-0)# ip route 0.0.0.0/0 172.16.104.1
vedge(config-vpn-0)# no interface
vedge(config-vpn-0)# interface ge0/0
vedge(config-interface-ge0/0)# ip address 172.16.104.104/24
vedge(config-interface-ge0/0)# no shutdown
vedge(config-interface-ge0/0)# no tunnel-interface
vedge(config-interface-ge0/0)# tunnel-interface
vedge(config-tunnel-interface)# color mpls
vedge(config-tunnel-interface)# encapsulation ipsec
vedge(config-tunnel-interface)# allow-service all
vedge(config-tunnel-interface)# exit
vedge(config-interface-ge0/0)# exit
vedge(config-vpn-0)# exit
```

```
vedge(config)# system
vedge(config-system)# host-name vEdge4
vedge(config-system)# site-id 104
vedge(config-system)# system-ip 1.1.1.204
vedge(config-system)# organization-name NetHighTech
vedge(config-system)# clock timezone Europe/Lisbon
vedge(config-system)# vbond 172.16.1.111
```

```
vedge(config-system)# ntp
vedge(config-ntp)# server 192.168.100.1
vedge(config-server-192.168.100.1)# commit and-quit
vEdge4#
```

```
vEdge4# vshell
vEdge4:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/Root.cer /home/admin/.
vEdge4:~$ exit
vEdge4# request root-cert-chain install /home/admin/Root.cer
vEdge4# request csr upload /home/admin/vEdge4.csr
Enter organization-unit name      : NetHighTech
Re-enter organization-unit name   : NetHighTech
vEdge4:~$ scp /home/admin/vEdge4.csr behrouz@192.168.100.247:/home/behrouz/Downloads/.
vEdge4:~$ scp behrouz@192.168.100.247:/home/behrouz/Downloads/vEdge4.cer /home/admin/.
vEdge4:~$ exit
vEdge4# request certificate install /home/admin/vEdge4.cer
vEdge4# request vedge-cloud activate chassis-number ..... token .....
```