Cisco Aantekeningen

maandag 16 januari 2023 08:55

Trunk Commands (Routers & Switches)
Meerdere poorten in 1 keer
int range gig **(int poort)** - gig **(int poort)**
no shut **(poorten opengooien)**

switchport mode trunk
switchport trunk native vlan **(nummer)**
description vlan **(nummer)**

(Voorbeeld)
```
interface GigabitEthernet1/0/1
 switchport trunk native vlan 99
 switchport mode trunk
!
interface GigabitEthernet1/0/2
 switchport trunk native vlan 99
 switchport mode trunk
!
interface GigabitEthernet1/0/3
 switchport trunk native vlan 99
 switchport mode trunk
!
interface GigabitEthernet1/0/4
 switchport trunk native vlan 99
 switchport mode trunk
!
interface GigabitEthernet1/0/5
 switchport trunk native vlan 99
 switchport mode trunk
```

(Voor eindapparaten)
switchport mode access
switchport access vlan **(nummer)**

(Voorbeeld)
```
interface FastEthernet0/1
 description vlan 10
 switchport access vlan 10
 switchport mode access
!
interface FastEthernet0/2
 description vlan 10
 switchport access vlan 10
 switchport mode access
!
interface FastEthernet0/3
 description vlan 10
 switchport access vlan 10
 switchport mode access
!
interface FastEthernet0/4
 description vlan 10
 switchport access vlan 10
 switchport mode access
!
interface FastEthernet0/5
 description vlan 10
 switchport access vlan 10
 switchport mode access
```

Trunks verwijderen
no switchport
no switchport trunk
no switchport mode trunk
no switchport trunk native vlan
no switchport mode access
no switchport access vlan

VTP inrichten (Commands)
VLANs checken = **do show vlan brief/show vlan brief**

vlan **(nummer)**
name vlan **(nummer)**

VTP version **(nummer)**
VTP domain **(naam domain)**
VTP mode **(server of client)**

Hulp commands (?)
VTP ?
VTP mode ?

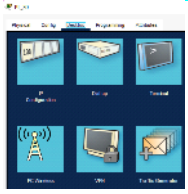
Spanning Tree op switches (Commands)
Root = **mode**
spanning-tree vlan 1-100 root primary
spanning-tree vlan 1-100 priority **(bridge priority nummer)**

Hulp commands (?)
spanning-tree ?
spanning-tree vlan ?
spanning-tree vlan 1-100 ?
spanning-tree vlan 1-100 root ?

Access Point Instellingen (draadloos)
(Op elke access point)
Poorten = aan
Bandwidth/Duplex = Auto

SSID = **(naam)**
Authentication/Beveiliging instellen
Sleutel/Password = **(wachtwoord instellen)**

(Op elke laptop)
Laptop: **netwerkkaart module** toevoegen **(module: WPC300N)**
Desktoptabblad: **Op PC Wireless verbinding maken met juiste VLAN netwerk**



Printer IP instellingen
Poorten = **aan**
Bandwidth/Duplex = **Auto**

Alle printers: IP adressen geven
IP-adres/Subnet mask/Default gateway/DNS Server IP

Router DHCP Server/Client instellen (Commands)
interface **(naam poort)**
description **(DHCP Server of Client)**
ip address DHCP
no shut

Hulp commands (?)
ip address ?

Interface IP adressen instellen (Commands)
interface **(naam poort)**
ip address **(ip adres & subnet mask)**

Interface & IP adressen instellen op Multi Layer Switch (Commands)
interface **(naam poort)**
no switchport
ip address **(ip adres & subnet mask)**

VLANs maken op Multi Layer Switch (Commands)
Alle VLANs aanmaken
interface vlan **(nummer)**
ip address **(ip adres & subnet mask)**
ip helper-address **(DNS server IP)**

(Voorbeeld)
```
interface Vlan10
 mac-address 00e0.b08e.e301
 ip address 172.16.10.1 255.255.255.0
 ip helper-address 11.11.11.14
!
interface Vlan20
 mac-address 00e0.b08e.e302
 ip address 172.16.20.1 255.255.255.0
 ip helper-address 11.11.11.14
!
interface Vlan30
 mac-address 00e0.b08e.e303
 ip address 172.16.30.1 255.255.255.0
 ip helper-address 11.11.11.14
!
interface Vlan40
 mac-address 00e0.b08e.e304
 ip address 172.16.40.1 255.255.255.0
 ip helper-address 11.11.11.14
!
interface Vlan50
 mac-address 00e0.b08e.e305
 ip address 172.16.50.1 255.255.255.0
 ip helper-address 11.11.11.14
!
interface Vlan99
 mac-address 00e0.b08e.e306
 ip address 172.16.99.1 255.255.255.0
 ip helper-address 11.11.11.14
```

DHCP server netwerk instellen op Multi Layer Switch (Commands)
IP adressen uitsluiten
ip dhcp excluded-address **(ip adres range)**

(Voorbeeld)
```
ip dhcp excluded-address 172.16.99.0 172.16.99.50
ip dhcp excluded-address 172.16.10.0 172.16.10.50
ip dhcp excluded-address 172.16.20.0 172.16.20.50
ip dhcp excluded-address 172.16.30.0 172.16.30.50
ip dhcp excluded-address 172.16.40.0 172.16.40.50
ip dhcp excluded-address 172.16.50.0 172.16.50.50
!
```

DHCP pool aanmaken (Commands)
Op alle netwerken
ip dhcp pool **(naam pool)**
default-router **(default gateway IP)**
network **(ip adres netwerk & subnet mask)**
dns-server **(DNS server IP)**

(Voorbeeld)
```
ip dhcp pool VLAN10
 network 172.16.10.0 255.255.255.0
 default-router 172.16.10.1
 dns-server 11.11.11.14
ip dhcp pool VLAN20
 network 172.16.20.0 255.255.255.0
 default-router 172.16.20.1
 dns-server 11.11.11.14
ip dhcp pool VLAN30
 network 172.16.30.0 255.255.255.0
 default-router 172.16.30.1
 dns-server 11.11.11.14
ip dhcp pool VLAN40
 network 172.16.40.0 255.255.255.0
 default-router 172.16.40.1
 dns-server 11.11.11.14
ip dhcp pool VLAN50
 network 172.16.50.0 255.255.255.0
 default-router 172.16.50.1
 dns-server 11.11.11.14
ip dhcp pool VLAN99
 network 172.16.99.0 255.255.255.0
 default-router 172.16.99.1
 dns-server 11.11.11.14
```

Hulp commands (?)
ip dhcp ?
ip dhcp pool ?

Routers vervangen
Van oude router belangrijke instellingen kopieren en plaatsen in nieuw router, oude router verwijderen
Oude kabels verwijderen, interface kabelpoorten onthouden, nieuwe router plaatsen, nieuwe kabels zetten
In nieuw router glasvezelkabel plaatsen (module: GLC-GE-100-FX/GigabitEthernet)

Webserver
Module in webserver plaatsen (module: PT-HOST-NM-1FFE/FastEthernet)

Webserver en router in juiste poort verbinden (glasvezelkabel, Copper Cross Over kabel)

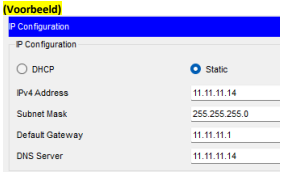
Router IP adressen of DHCP instellen (Commands)
interface **(naam poort)**
description **(naam)**
ip address dhcp

Interface IP adressen instellen (Commands)
interface **(naam poort)**
ip address **(ip adres & subnet mask)**

IP interfaces checken
show ip interface brief

Webserver IP instellingen invullen
IP adres
Subnet Mask
Default Gateway
DNS Server

(Voorbeeld)



Static Routes (Commands)
ip route **(netwerk IP/Subnet Mask/IP adres)**

(Voorbeeld)
```
ip route 172.16.10.0 255.255.255.0 10.1.1.2
ip route 172.16.20.0 255.255.255.0 10.1.1.2
ip route 172.16.30.0 255.255.255.0 10.1.1.2
ip route 172.16.40.0 255.255.255.0 10.1.1.2
ip route 172.16.50.0 255.255.255.0 10.1.1.2
ip route 172.16.99.0 255.255.255.0 10.1.1.2
```

OSPF op Router (Commands)
router ospf **(nummer)**
router-id **(nummer)**
network **(ip adres/wildcard mask/area 0)**
passive-interface **(interface)**
default-information originate

(Voorbeeld)
```
router ospf 1
 router-id 1.1.1.1
 log-adjacency-changes
 passive-interface GigabitEthernet0/0/0
 network 11.11.11.0 0.0.0.255 area 0
 network 12.12.12.0 0.0.0.255 area 0
 network 13.13.13.0 0.0.0.255 area 0
 default-information originate
```

Default routes
ip route 0.0.0.0 0.0.0.0 lo 1

Classless IP route

ip route 0.0.0.0 0.0.0.0 **(ip van netwerk)**
(Voorbeeld)

```
ip classless
ip route 0.0.0.0 0.0.0.0 10.1.1.1
```

IP routes checken: **do show ip route/c**

Access Lists (Netwerkverkeer beveiliging)
(Voorbeeld)

```
access-list 150 deny ip 172.16.50.0 0.0.0.255 172.16.10.0 0.0.0.255
access-list 150 deny ip 172.16.50.0 0.0.0.255 172.16.20.0 0.0.0.255
access-list 150 deny ip 172.16.50.0 0.0.0.255 172.16.30.0 0.0.0.255
access-list 150 deny ip 172.16.50.0 0.0.0.255 172.16.40.0 0.0.0.255
access-list 150 deny ip 172.16.50.0 0.0.0.255 172.160.0.0 0.0.0.255
```

Bekabeling in juiste poort/interface VLAN (nummer) aansluiten