Konfigurasi Cisco

Note : Seluruh awalan konfigurasi menggunakan huruf kecil dan font italic

Basic configuration :

hostname (sesuai device)

ip domain-name lomba.lks

L2 configuration :

1. S1-LAN1 konfigurasi etherchannel :

enable

configure terminal

int range fa 0/23-24

channel-group 1 mode active

S2-LAN1 konfigurasi etherchannel :

enable

configure terminal

int range fa 0/23-24

channel-group 1 mode passive

2. Konfigurasi trunk pada seluruh link di antara switch termasuk Etherchannel

S1-LAN1 trunk configuration :

int port-channel 1

switchport mode trunk

int fa 0/4

switchport mode trunk

int fa 0/22

switchport mode trunk:

S2-LAN1 trunk configuration :

int port-channel 1

switchport mode trunk

int fa 0/4

switchport mode trunk

int fa 0/21

switchport mode trunk

SW 3 trunk configuration :

int range fa 0/21-22

switchport mode trunk

3. Konfigurasi domain VTPv2 untuk sinkron VLAN di antara switch

SW 3 VTP configuration :

vtp version 2

vtp mode server

vtp domain lombalks.id

vtp password skills24

S3-LAN1 membuat vlan :

vlan 10

name HQ10

vlan 20

name HQ20

int fa 0/1

switchport mode access

switchport access vlan 10

int fa 0/2

switchport mode access

switchport access vlan 20

S3-LAN1 bpdu & portfast configuration :

int fa 0/2

spanning-tree bpduguard enable

spanning-tree portfast

S1 & 2 – LAN1 vtp configuration :

vtp version 2

vtp mode client

vtp domain lombalks.id

vtp password skills24

S1-LAN1 STP configuration

spanning-tree vlan 10 root primary

spanning-tree vlan 20 root secondary

S2-LAN1 STP configuration

spanning-tree vlan 20 root primary

spanning-tree vlan 10 root secondary

L3 Configuration :

1. Berikan IPV4 dan IPV6 pada perangkat network menurut table configuration

   Pada Switch :

   int vlan 10
   ip add (ip address & subnet)
   ipv6 add (ip address & prefixnya)
   int vlan 20
   ip add (ip address & subnet)

   Pada Router R1-BR-JKT :

   int gi 0/1
   no shutdown
   int gi 0/1.10
   encapsulation dot1Q 10
   ip add 192.168.10.252 255.255.255.0
   ipv6 add (ip address & prefix)

int gi 0/1.20
encapsulation dot1Q 20
ip add 192.168.20.252 255.255.255.0
int serial 0/0/1
no shutdown
ip add 210.103.5.1 255.255.255.252

Pada Router R2-BR-JKT :
int gi 0/1
no shutdown
int gi 0/1.10
encapsulation dot1Q 10
ip add 192.168.10.253 255.255.255.0
ipv6 add (ip address & prefix)
int gi 0/1.20
encapsulation dot1Q 20
ip add 192.168.20.253 255.255.255.0
int serial 0/0/0
no shutdown
ip add 210.103.5.5 255.255.255.252

Pada Router R3 - HQ :
int gi 0/0
no shutdown
ip add 210.103.5.9 255.255.255.252
int serial 0/0/0
no shutdown
ip add 210.103.5.6 255.255.255.252
int serial 0/0/1
no shutdown
ip add 210.103.5.2 255.255.255.252

Pada Router R2 - HQ :
int gi 0/2
no shutdown
ip add 210.103.5.13 255.255.255.252
int serial 0/0/0
no shutdown
ip add 210.103.5.18 255.255.255.252
int serial 0/0/1
no shutdown
ip add 210.103.5.22 255.255.255.252

Pada Router R1-HQ:

int gi 0/0
no shutdown
ip add 210.103.5.10 255.255.255.252
int gi 0/1
no shutdown
ip add 210.103.5.26 255.255.255.252
int gi 0/2
no shutdown
ip add 210.103.5.14 255.255.255.252

Pada Router ISP-A :

int gi0/1
ip add 210.103.5.25 255.255.255.252

Pada Router R1-REMOTE:

int gi 0/1
no shutdown
ip add 172.16.10.254 255.255.255.0
int serial 0/0/1
no shutdown
ip add 210.103.5.21 255.255.255.252

Pada Router R1-BALI:

int gi 0/1
no shutdown
ip add 210.103.5.254 255.255.255.128
int serial 0/0/0
no shutdown
ip add 210.103.5.17 255.255.255.252

Pada FW1 :

int gi 1/1
nameif OUTSIDE
ip add 210.103.5.129 255.255.255.128
no shutdown
int gi 1/2
nameif INSIDE
ip add 172.16.20.254 255.255.255.0
no shutdown

masukkan juga IP address pada perangkat PC,laptop dan juga server
SERVER-APL ip address 192.168.10.1 255.255.255.0
DEV-PROV-HQ dhcp
DEV-HR ip address 172.16.20.1 255.255.255.0

2. Konfigurasi OSPF dengan prosess ID (tergantung soal)

Pada Router R1-BR-JKT:

router ospf 5

network 192.168.10.0 0.0.0.255 area 0

network 192.168.20.0 0.0.0.255 area 0

network 210.103.5.0 0.0.0.3 area 0

Pada Router R2-BR-JKT:

router ospf 5

network 192.168.10.0 0.0.0.255 area 0

network 192.168.20.0 0.0.0.255 area 0

network 210.103.5.4 0.0.0.3 area 0

Pada Router R3-HQ:

router ospf 5

router-id 3.3.3.3

network 210.103.5.0 0.0.0.3 area 0

network 210.103.5.4 0.0.0.3 area 0

network 210.103.5.8 0.0.0.3 area 0

untuk mengecek :sh run | sec ospf

Pada Router R1-HQ (tergantung soal [pake interface atau ngga]):

router ospf 5
router-id 1.1.1.1
redistribute ospf 10 subnets
redistribute ospf 15 subnets
interface gi0/0
ip ospf 5 area 0
router ospf 10
router-id 1.1.1.2
redistribute ospf 5 subnets
redistribute ospf 15 subnets
interface gi0/2
ip ospf 10 area 1
router ospf 15
router-id 1.1.1.3
interface gi0/1
ip ospf 15 area 2
redistribute ospf 5 subnets
redistribute ospf 10 subnets

Pada Router ISP-A:

router ospf 15
router-id 4.4.4.4
network 210.103.5.24 0.0.0.3 area 2

Pada Router R2-HQ:

router ospf 10

router-id 2.2.2.2

network 210.103.5.12 0.0.0.3 area 1

network 210.103.5.16 0.0.0.3 area 1

network 210.103.5.20 0.0.0.3 area 1

Pada Router R1-BALI:

router ospf 10

network 210.103.5.16 0.0.0.3 area 1

network 210.103.5.128 0.0.0.127 area 1

Pada Router R1-REMOTE:

router ospf 10

network 210.103.5.20 0.0.0.3 area 1

network 172.16.10.0 0.0.0.255 area 1

Service Configuration

1. Konfig DHCP server untuk Network VLAN 20 pada R2-BR

   Pada Router R2-BR-JKT2 :

   ip dhcp excluded-address 192.168.20.1 192.168.20.10

   ip dhcp pool VLAN20

   network 192.168.20.0 255.255.255.0

   default-router 192.168.20.253

2. Konfigurasi DHCP server pada R1-REMOTE

   Pada Router R1-REMOTE :

   ip dhcp excluded-address 172.16.10.1 172.16.10.10

   ip dhcp pool USER

   network 172.16.10.0 255.255.255.0

   default-router 172.16.10.254

3. Konfigurasi NAT pada R1,R2-BR-JKT dan FW1

   Pada Router R1-BR-JKT:

   int gi 0/1.10

   ip nat inside

   int gi 0/1.20

   ip nat inside

   int serial 0/0/1

   ip nat outside

   ip access-list standard INTERNET

   permit 192.168.10.0 0.0.0.255(ip network & wildcard)

   permit 192.168.20.0 0.0.0.255 (ip network & wildcard)

   untuk mengecek : do sh run | sec INTERNET

   ip nat inside source list INTERNET interface serial 0/0/1 overload

   Pada Router R2-BR-JKT :

   int gi 0/1.10

   ip nat inside

   int gi 0/1.20

   ip nat inside

   int serial 0/0/0

   ip nat outside

ip access-list standard INTERNET(sesuai soal)

permit 192.168.10.0 0.0.0.255(ip network & wildcard) ip inside

permit 192.168.20.0 0.0.0.255 (ip network & wildcard) ip inside

untuk mengecek : do sh run | sec INTERNET

ip nat inside source list INTERNET(sesuai soal) interface serial 0/0/0 overload (NAT)

Pada FW1 :

object network INTERNET (sesuai soal)

subnet 172.16.20.0 255.255.255.0

nat (INSIDE,OUTSIDE) dynamic interface

access-list OUTSIDE-IN(sesuai soal) extended permit icmp any any

access-group OUTSIDE-IN in interface OUTSIDE

Pada Router R1-:

ip nat inside source static udp 192.168.10.1 123 210.103.5.1 123

(untuk mengubah ip server menjadi ip R3 pada int serial 0/0/0)

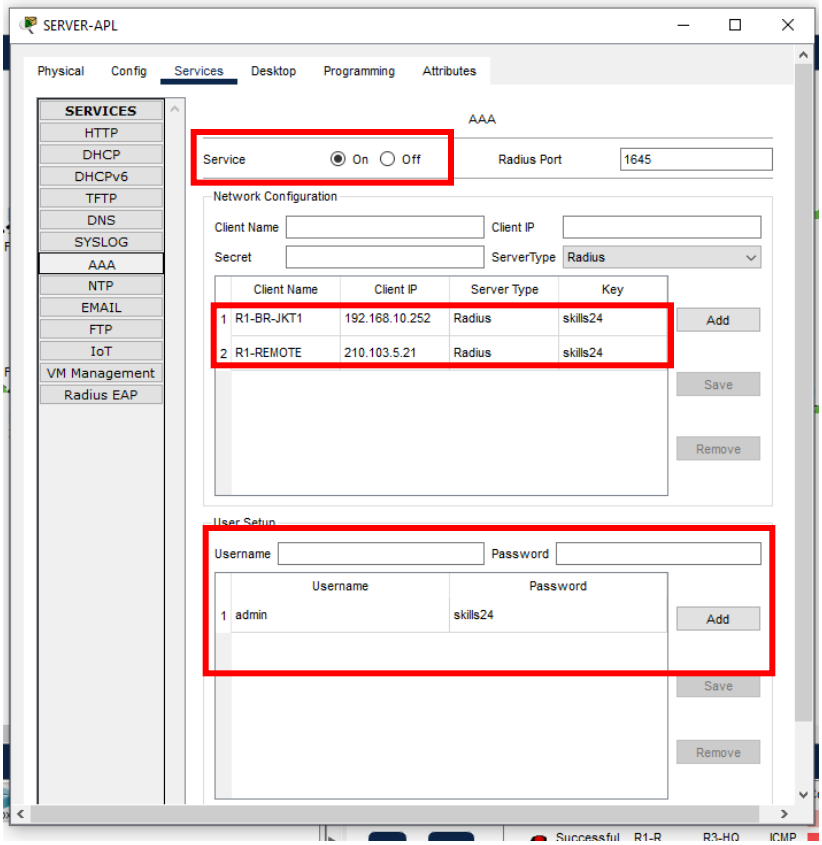
4. Router RADIUS Config

aaa new-model

radius-server host 192.168.10.1 key skills24

aaa authentication enable default group radius enable

Server Service RADIUS config



5. Configure SSH version 2 in remote device
   Pada Remote :
   masuk ke terminal pada remote
   configure terminal
   aaa authentication login default group radius local
   crypto key generate rsa(jika udah ada pilih no, jika belum yes)
   ip ssh version 2
   line vty 0 4
   transport input ssh
   exit
   lakukan pengujian dengan masuk ke cmd pada “remote” dan lakukan login ke salah satu router, misal :
   kita akan meremote router ISP, commandnya adalah :
   ssh -l admin 210.103.5.10
   masukkan password dari router ISP tersebut

Security Configuration

1. configure ASA firewall according to the following requirements
    1. set “outside” gi 1/1 with 0 security level
    2. set “inside” gi 1/2 with 100 security level

Pada FW1 :

int gi 1/1

security-level 0

int gi 1/2

security-level 100

do sh run

note : untuk menyimpan configurasi

do write atau copy run startup-config

Konfigurasi Selesai