Routing Real Life Implementation(Mikrotik)

Cloud-1

WAN
10.42.0.0

10.42.0.1

10.42.0.99

E2

DHAKA

10.10.10.2/30

E3

10.10.10.1./30 CHITTAGONG

E2

E4

E3

192.168.89.1/24

192.168.88.1/24

Ethernetswitch-1

Ethernetswitch-2

PC-4

VPCS

PC-5

SERVER-1

192.168.88.10

VPCS

SERVER-2

192.168.89.10

192.168.88.11

SERVER-3

192.168.89.11

192.168.89.12
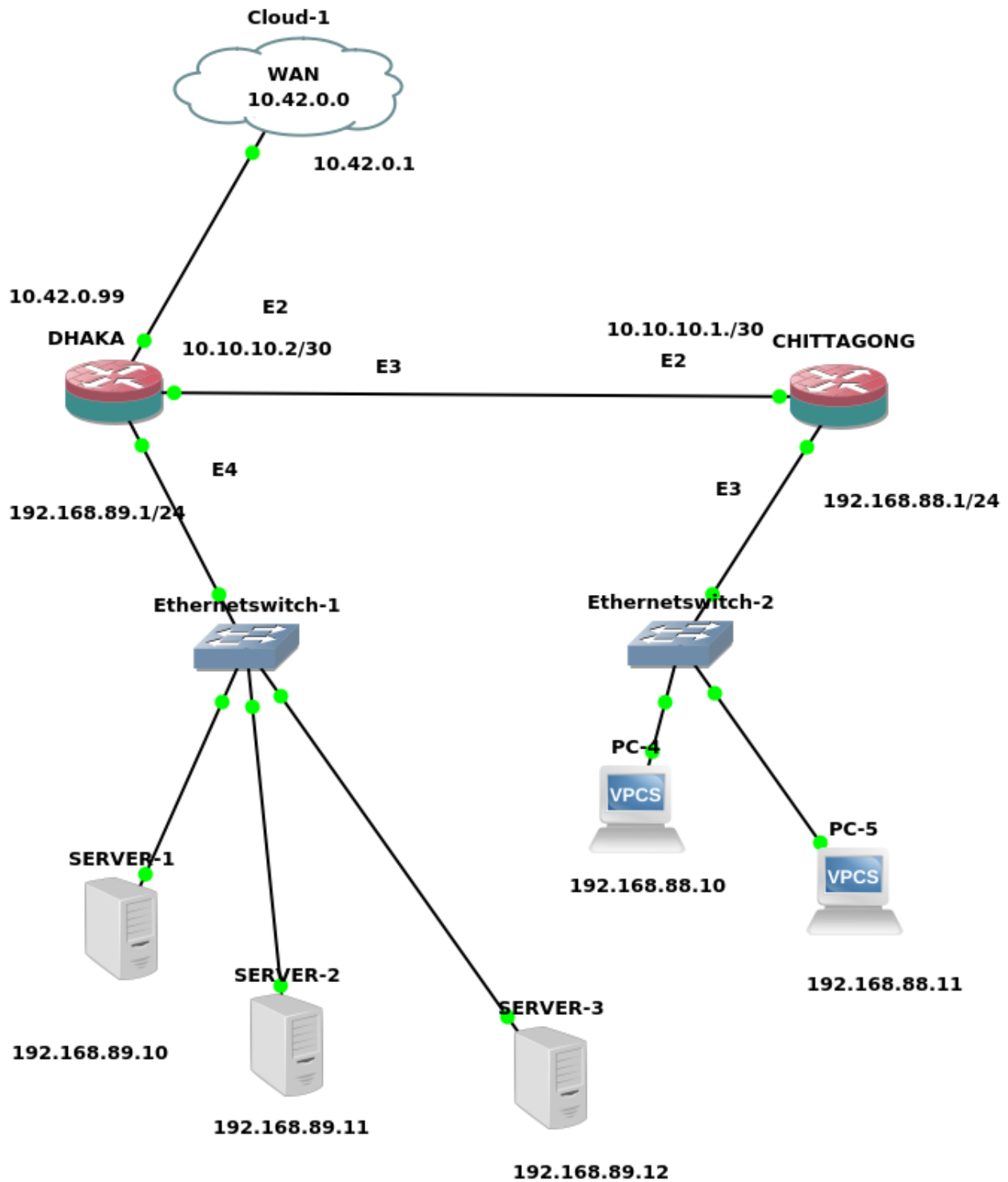
DHAKA BRANCH(HEAD)

1) First change the ip services:

[admin@MikroTik] /ip service> disable 1,2,3,5,7
[admin@MikroTik] /ip service> print

2) Change The interface Name:

[admin@MikroTik] /interface> set 1 name=DHK-WAN
[admin@MikroTik] /interface> set 2 name=DHK-TO-CTG
[admin@MikroTik] /interface> set 3 name=DHAKA-LAN

3) Change The identity:

[admin@MikroTik > system identity set name=DHK-HEAD-BRANCH

4) Add IP address to the interface:

[admin@DHK-HEAD-BRANCH] > ip address add address=10.42.0.99/24
interface=DHK-WAN
[admin@DHK-HEAD-BRANCH] > ip address add address=10.10.10.2/30
interface=DHK-TO-CTG
[admin@DHK-HEAD-BRANCH] > ip address add address=192.168.89.1/24
interface=DHAKA-LAN

5) Add gateway:

[admin@DHK-HEAD-BRANCH] > ip route add gateway=10.42.0.1

6) Add DNS:

[admin@DHK-HEAD-BRANCH] > ip dns set servers=8.8.8.8
[admin@DHK-HEAD-BRANCH] > ip dns set allow-remote-requests=yes

6) Add NAT :

[admin@DHK-HEAD-BRANCH] > ip firewall nat add chain=srcnat
action=masquerade

7) Add Routing :

[admin@DHK-HEAD-BRANCH] > ip route add dst-address=192.168.88.0/24
gateway=10.10.10.1

7) Add ip address to 3 VPCS SERVER :

VPCS1> ip 192.168.89.10/24 192.168.89.1
Checking for duplicate address...
PC1 : 192.168.89.10 255.255.255.0 gateway 192.168.89.1

VPCS2> ip 192.168.89.11/24 192.168.89.1
Checking for duplicate address...
PC1 : 192.168.89.11 255.255.255.0 gateway 192.168.89.1

VPCS> ip 192.168.89.12/24 192.168.89.1
Checking for duplicate address...
PC1 : 192.168.89.12 255.255.255.0 gateway 192.168.89.1

7) ping Test from 3 SERVER :

VPCS1> ping 8.8.8.8

84 bytes from 8.8.8.8 icmp_seq=1 ttl=116 time=59.398 ms

VPCS2> ping 8.8.8.8

84 bytes from 8.8.8.8 icmp_seq=1 ttl=116 time=58.859 ms

VPCS3> ping 8.8.8.8

84 bytes from 8.8.8.8 icmp_seq=1 ttl=116 time=66.714 ms

CHITTAGONG BRANCH(SLAVE)

1) First change the ip services:

[admin@MikroTik] /ip service> disable 1,2,3,5,7
[admin@MikroTik] /ip service> print

2) Change The interface Name:

[admin@MikroTik] /interface> set 1 name=DHK-TO-CTG
[admin@MikroTik] /interface> set 2 name=CTG-LAN

3) Giving IP address:

[admin@MikroTik] > ip address add address=10.10.10.1/30 interface=DHK-TO-CTG
[admin@MikroTik] > ip address add address=192.168.88.1/24 interface=CTG-LAN

4) Adding Gateway:

[admin@MikroTik] > ip route add gateway=10.10.10.2

5) Adding Routing:

[admin@MikroTik] > ip route add dst-address=192.168.89.0/24 gateway=10.10.10.2

6) Adding IP address to PC:

PC-4> ip 192.168.88.10/24 192.168.88.1
Checking for duplicate address...
PC1 : 192.168.88.10 255.255.255.0 gateway 192.168.88.1
PC-4> ip dns 8.8.8.8

PC-5> ip 192.168.88.11/24 192.168.88.1
Checking for duplicate address...
PC1 : 192.168.88.11 255.255.255.0 gateway 192.168.88.1

PC-5> ip dns 8.8.8.8

6) Testing With Ping from PC:

PC-5> ping yahoo.com
yahoo.com resolved to 98.137.246.8

84 bytes from 98.137.246.8 icmp_seq=1 ttl=48 time=313.686 ms

PC-4> ping yahoo.com
yahoo.com resolved to 72.30.35.10

84 bytes from 72.30.35.10 icmp_seq=1 ttl=48 time=278.168 ms
84 bytes from 72.30.35.10 icmp_seq=2 ttl=48 time=278.859 ms