INSTRUCTIONS:

1. CONFIGURE SSH ON EACH INTERMEDIARY DEVICE (ROUTER AND SWITCH)

EXCEPT INTERNET ROUTER

2. CONFIGURE VTP. Select among the CDO switches to be a vtp server

and vtp clients. Use domain name and password of your choice.

3. CONFIGURE VLAN, PORT ASSIGNMENT, AND TRUNKING (vlan information

is found below the topology)

4. CONFIGURE RAPID PVST. Select among the CDO switches to be the

root bridge and a secondary root bridge.Use any of the STP

configuration methods

5. CONFIGURE ETHERCHANNEL BETWEEN CDO SWITCHES. Use Pagp or LacP

6. IMPLEMENT PORT SECURITY: On F0/5 of each switch allow 2 MAC

addresses that are automatically added to the configuration file

when detected.

The port should not be disabled, but a syslog message should be

captured if a violation occurs. Disable all other unused ports.

7. CONFIGURE INTER-VLAN ROUTING IN CDO ROUTER. Statically assign

ip and default gateway address to the switch under management

vlan.

8. CONFIGURE DHCP SERVICES FOR VLAN 20 AND VLAN 40. USE VLAN-20

AND VLAN-40 AS THE CASE SENSITIVE NAMES FOR THE POOL.

EXCLUDE THE FIRST 10 ADDRESSES IN EACH NETWORK ADDRESS. ASSIGN IP

ADDRESS TO THE PC DYNAMICALLY UNDER VLAN 20 & VLAN 40.

9. ASSIGN IP ADDRESS TO THE INTERFACES OF THE CDO AND CEBU ROUTER,

CEBU SWITCH, CEBU PCs AND FILE SERVER STATICALLY.

10. IMPLEMENT ROUTING ON CDO AND CEBU ROUTER: Use EIGRP or OSPF as

dynamic routing protocol. Configure one network statement for

the entire 192.168.10.0/24 address space. Disable interfaces that

should not send EIGRP/OSPF messages.

11. IMPLEMENT NAT: Refer to your documentation and configure static

NAT for the File Server. Configure a standard, one statement ACL

number 1.

All IP addresses belonging to the 192.168.10.0/24 address space

are allowed. Configure dynamic NAT with PAT using a pool name of

your choice,

a /30 netmask, and these two public addresses: 198.133.219.128 and

198.133.219.129

12. USE ANY PUBLIC NETWORK ADDRESS BETWEEN INTERNET AND CDO ROUTER.

ASSIGN EACH SERIAL INTERFACE WITH AN IP ADDRESS COMING

FROM THE NETWORK ADDRESS USED. USE DEFAULT ROUTE BETWEEN CDO AND

INTERNET ROUTERS. ADVERTISE DEFAULT ROUTE IN CDO TO CEBU

ROUTER

13. VERIFY YOUR CONFIGURATION BY USING THE FOLLOWING COMMANDS:

SHOW RUN, SHOW IP ROUTE, SHOW ACCESS-LIST 1, SHOW IP NAT

TRANSLATIONS, AND SHOW VLAN BRIEF.

(use ssh -l (username followed by the target ip to be ssh) when

verifying ssh configuration at the pc command prompt)

--SSH configuration to all routers(except Internet router)

& all switches--

Switch(config)#line con 0

Switch(config-line)#password cisco

Switch(config-line)#login

Switch(config-line)#exit

Switch(config)#enable secret class

Switch(config)#service password-encryption

Switch(config)#hostname CHOOSE\_ANY\_NAME

CDO-SERVER-SWITCH(config)#banner motd $

Enter TEXT message. End with the character '$'.

###########################

unauthorized not allowed

###########################

$

CDO-SERVER-SWITCH(config)#ip domain-name cisco.com

CDO-SERVER-SWITCH(config)#crypto key generate rsa

The name for the keys will be: CDO-SERVER-SWITCH.cisco.com

Choose the size of the key modulus in the range of 360 to 2048 for your

General Purpose Keys. Choosing a key modulus greater than 512 may take

a few minutes.

How many bits in the modulus [512]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

CDO-SERVER-SWITCH(config)#

\*Mar 1 17:13:58.817: %SSH-5-ENABLED: SSH 1.99 has been enabled

CDO-SERVER-SWITCH(config)#username choose\_any\_name secret choose\_any\_name

CDO-SERVER-SWITCH(config)#ip ssh version 2

CDO-SERVER-SWITCH(config)#ip ssh authentication-retries 2

CDO-SERVER-SWITCH(config)#ip ssh time-out 60

CDO-SERVER-SWITCH(config)#line vty 0 4

CDO-SERVER-SWITCH(config-line)#transport input ssh

CDO-SERVER-SWITCH(config-line)#login local

CDO-CLIENT-SWITCH\_1(config)#end

%SYS-5-CONFIG\_I: Configured from console by console

<make it a habit na ipang save nimo imong mga configurations>

CDO-CLIENT-SWITCH\_1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

CDO-CLIENT-SWITCH\_1#

<note: e configure pud ni sa tanan switches ug mga router, walay labot ang Internet router>

--VTP--

CDO-SERVER-SWITCH#conf t

CDO-SERVER-SWITCH(config)#vtp mode server

CDO-SERVER-SWITCH(config)#vtp domain cisco.com

CDO-SERVER-SWITCH(config)#vtp password class

CDO-CLIENT-SWITCH\_1#conf t

CDO-CLIENT-SWITCH\_1(config)#vtp mode client

CDO-CLIENT-SWITCH\_1(config)#vtp domain cisco.com

CDO-CLIENT-SWITCH\_1(config)#vtp password class

CDO-CLIENT-SWITCH\_2#conf t

CDO-CLIENT-SWITCH\_2(config)#vtp mode client

CDO-CLIENT-SWITCH\_2(config)#vtp domain cisco.com

CDO-CLIENT-SWITCH\_2(config)#vtp password class

--VLAN--

VLAN 10-SERVERS- 192.168.10.0/27

VLAN 20-FACULTY- 192.168.10.32/27

VLAN 30-NATIVE- 192.168.10.64/27

VLAN 40-MANAGEMENT- 192.168.10.96/27

--for server switch--

CDO-SERVER-SWITCH(config)#vlan 10

CDO-SERVER-SWITCH(config-vlan)#name SERVERS

CDO-SERVER-SWITCH(config-vlan)#vlan 20

CDO-SERVER-SWITCH(config-vlan)#name FACULTY

CDO-SERVER-SWITCH(config-vlan)#vlan 30

CDO-SERVER-SWITCH(config-vlan)#name NATIVE

CDO-SERVER-SWITCH(config-vlan)#vlan 40

CDO-SERVER-SWITCH(config-vlan)#name MANAGEMENT

CDO-SERVER-SWITCH(config-vlan)#exit

CDO-SERVER-SWITCH(config)#int range g0/1,f0/1-4

CDO-SERVER-SWITCH(config-if-range)#switchport mode trunk

--for client switches--

CDO-CLIENT-SWITCH\_2(config)#int range f0/1-4

CDO-CLIENT-SWITCH\_2(config-if-range)#switchport mode trunk

--verify vlan to all cdo-switches using--

CDO-SERVER-SWITCH#show vlan brief

CDO-CLIENT-SWITCH\_1#show vlan brief

CDO-CLIENT-SWITCH\_2#show vlan brief

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active Fa0/5, Fa0/6, Fa0/7, Fa0/8

Fa0/9, Fa0/10, Fa0/11, Fa0/12

Fa0/13, Fa0/14, Fa0/15, Fa0/16

Fa0/17, Fa0/18, Fa0/19, Fa0/20

Fa0/21, Fa0/22, Fa0/23, Fa0/24

Gig0/1, Gig0/2

10 SERVERS active

20 FACULTY active

30 NATIVE active

40 MANAGEMENT active

1002 fddi-default active

1003 token-ring-default active

1004 fddinet-default active

1005 trnet-default active

--PORT ASSIGNMENT--

--for native vlan 30--

CDO-CLIENT-SWITCH\_1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

CDO-SERVER-SWITCH(config)#int g0/1

CDO-SERVER-SWITCH(config-if)#switchport mode trunk

CDO-SERVER-SWITCH(config-if)#switchport trunk native vlan 30

--for vlan 10--

CDO-CLIENT-SWITCH\_1(config)#int f0/5

CDO-CLIENT-SWITCH\_1(config-if)#switchport mode access

CDO-CLIENT-SWITCH\_1(config-if)#switchport access vlan 10

--for vlan 20--

CDO-CLIENT-SWITCH\_2(config)#int f0/5

CDO-CLIENT-SWITCH\_2(config-if)#switchport mode access

CDO-CLIENT-SWITCH\_2(config-if)#switchport access vlan 20

--for vlan 40--

CDO-SERVER-SWITCH(config)#int f0/5

CDO-SERVER-SWITCH(config-if)#switchport mode access

CDO-SERVER-SWITCH(config-if)#switchport access vlan 40

--verify port assignment to all cdo-switches using--

CDO-SERVER-SWITCH#show vlan brief

CDO-CLIENT-SWITCH\_1#show vlan brief

CDO-CLIENT-SWITCH\_2#show vlan brief

<dapat isa sa mga vlan, na assign na ang interface na f0/5>

example:

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active Fa0/6, Fa0/7, Fa0/8, Fa0/9

Fa0/10, Fa0/11, Fa0/12, Fa0/13

Fa0/14, Fa0/15, Fa0/16, Fa0/17

Fa0/18, Fa0/19, Fa0/20, Fa0/21

Fa0/22, Fa0/23, Fa0/24, Gig0/2

10 SERVERS active

20 FACULTY active

30 NATIVE active

40 MANAGEMENT active Fa0/5

1002 fddi-default active

1003 token-ring-default active

1004 fddinet-default active

1005 trnet-default active

---INTER-VLAN ROUTING---

CDO-Router>en

Password:<class>

CDO-Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

CDO-Router(config)#int g0/0.10

%LINK-5-CHANGED: Interface ....

CDO-Router(config-subif)#encapsulation dot1Q 10

CDO-Router(config-subif)#ip address 192.168.10.1 255.255.255.224

CDO-Router(config-subif)#ex

CDO-Router(config)#int g0/0.20

CDO-Router(config-subif)#encapsulation dot1Q 20

CDO-Router(config-subif)#ip address 192.168.10.33 255.255.255.224

CDO-Router(config-subif)#ex

CDO-Router(config)#int g0/0.30

CDO-Router(config-subif)#encapsulation dot1Q 30

CDO-Router(config-subif)#ip address 192.168.10.65 255.255.255.224

CDO-Router(config-subif)#ex

CDO-Router(config)#int g0/0.40

CDO-Router(config-subif)#encapsulation dot1Q 40

CDO-Router(config-subif)#ip address 192.168.10.97 255.255.255.224

--Statically assign ip and default gateway address

to the switch under management vlan--

<sa bisaya pa, butngan ug ip address ang switch na pinakataas sa cdo network ;) >

CDO-SERVER-SWITCH#conf t

CDO-SERVER-SWITCH(config)#int vlan 40

CDO-SERVER-SWITCH(config-if)#ip address 192.168.10.107 255.255.255.224

CDO-SERVER-SWITCH(config-if)#no sh

CDO-SERVER-SWITCH(config-if)#ex

CDO-SERVER-SWITCH(config)#ip default-gateway 192.168.10.97

<note: sa tanan switches sa cdo $ cebu networks, mao ra ni nga switch

ang nabutngan ug ip address - so mao ra ni nga switch imong

ma access para maka perform ug ssh>

---DHCP---

CDO-Router#conf t

CDO-Router(config)#ip dhcp pool VLAN-20

CDO-Router(dhcp-config)#network 192.168.10.32 255.255.255.224

CDO-Router(dhcp-config)#default-router 192.168.10.33

CDO-Router(dhcp-config)#exit

CDO-Router(config)#ip dhcp pool VLAN-40

CDO-Router(dhcp-config)#network 192.168.10.96 255.255.255.224

CDO-Router(dhcp-config)#default-router 192.168.10.97

CDO-Router(dhcp-config)#exit

CDO-Router(config)#ip dhcp excluded-address 192.168.10.33 192.168.10.43

CDO-Router(config)#ip dhcp excluded-address 192.168.10.97 192.168.10.107

CDO-Router(config)#end

CDO-Router#copy run start

--verify dhcp configuration--

CDO-Router#show run

<dapat mugawas ni>

!

ip dhcp excluded-address 192.168.10.33 192.168.10.43

ip dhcp excluded-address 192.168.10.97 192.168.10.107

!

ip dhcp pool VLAN-20

network 192.168.10.32 255.255.255.224

default-router 192.168.10.33

ip dhcp pool VLAN-40

network 192.168.10.96 255.255.255.224

default-router 192.168.10.97

!

<adto dayun ka sa pc sa vlan 20 ug sa lappy sa vlan 40, turn

the dot from static to dchp - muhatag na siyag ip address>

<I mean you do it now basin malimtan nimo unya ;) >

---PORT SECURITY---

CDO-SERVER-SWITCH>en

Password:<class>

CDO-SERVER-SWITCH#conf t

CDO-SERVER-SWITCH(config)#int f0/5

CDO-SERVER-SWITCH(config-if)#switchport port-security

CDO-SERVER-SWITCH(config-if)#switchport port-security maximum 2

CDO-SERVER-SWITCH(config-if)#switchport port-security mac-address sticky

CDO-SERVER-SWITCH(config-if)#switchport port-security violation restrict

<note: buhata ni sa TANAN switch sa cdo network pero ayaw sa cebu network>

--verify port security--

CDO-SERVER-SWITCH#show run

CDO-CLIENT-SWITCH\_1#show run

CDO-CLIENT-SWITCH\_2#show run

<dapat mugawas na ni sila>

!

interface FastEthernet0/5

...

...

switchport port-security

switchport port-security maximum 2

switchport port-security mac-address sticky

switchport port-security violation restrict

!

---DISABLE ALL UNUSED PORTS---

--for cdo server switch--

CDO-SERVER-SWITCH#conf t

CDO-SERVER-SWITCH(config)#int range f0/6-24,g0/2

CDO-SERVER-SWITCH(config-if-range)#SHUTDOWN

--for 2 cdo client switches--

CDO-CLIENT-SWITCH\_1 & \_2#conf t

CDO-CLIENT-SWITCH\_1 & \_2(config)#int range f0/6-24,g0/1-2

CDO-CLIENT-SWITCH\_1 & \_2(config-if-range)#SHUTDOWN

--for cebu switch--

CEBU-Switch#conf t

CEBU-Switch(config)#int range f0/1,f0/4-24,g0/2

CEBU-Switch(config-if-range)#SHUTDOWN

--verify shutdown ports--

CDO-SERVER-SWITCH#show run

CDO-SERVER-SWITCH\_1#show run

CDO-SERVER-SWITCH\_2#show run

<dapat naka shutdown na gyud>

example:

!

interface FastEthernet0/6

shutdown

!

interface FastEthernet0/7

shutdown

!

interface FastEthernet0/8

shutdown

!

interface FastEthernet0/9

shutdown

!

interface FastEthernet0/10

shutdown

!

interface FastEthernet0/11

shutdown

!

interface FastEthernet0/12

shutdown

!

interface FastEthernet0/13

shutdown

!

interface FastEthernet0/14

shutdown

!

interface FastEthernet0/15

shutdown

!

interface FastEthernet0/16

shutdown

!

interface FastEthernet0/17

shutdown

!

interface FastEthernet0/18

shutdown

!

interface FastEthernet0/19

shutdown

!

interface FastEthernet0/20

shutdown

!

interface FastEthernet0/21

shutdown

!

interface FastEthernet0/22

shutdown

!

interface FastEthernet0/23

shutdown

!

interface FastEthernet0/24

shutdown

<dapat kung unsa nga port ang na shutdown maoy mu label na shutdown >

---STP---

--To all switches in cdo network--

#conf t

CDO-SERVER-SWITCH(config)#spanning-tree mode rapid-pvst

CDO-CLIENT-SWITCH\_1(config)#spanning-tree mode rapid-pvst

CDO-CLIENT-SWITCH\_2(config)#spanning-tree mode rapid-pvst

--verify--

#show run

!

spanning-tree mode rapid-pvst

!

--root bridge election--

<note: duha ang paagi sa pagpili sa root bridge

pero mamili ra daw ta asa sa duha, priority number or root>

--root bridge election using root primary--

<pamili lang kung asa na switch ang gusto nimo himoong primary na

root brige ug ang secondary root bridge>

CDO-SERVER-SWITCH(config)#spanning-tree vlan 40 root primary

CDO-SERVER-SWITCH(config)#spanning-tree vlan 20 root primary

CDO-SERVER-SWITCH(config)#spanning-tree vlan 10 root primary

CDO-SERVER-SWITCH(config)#end

<isa ra ka switch ang himoong secondary>

CDO-CLIENT-SWITCH\_2#conf t

CDO-CLIENT-SWITCH\_2(config)#spanning-tree vlan 20 root secondary

CDO-CLIENT-SWITCH\_2(config)#spanning-tree vlan 10 root secondary

CDO-CLIENT-SWITCH\_2(config)#spanning-tree vlan 40 root secondary

CDO-CLIENT-SWITCH\_2(config)#end

--verify that your configuration works--

CDO-CLIENT-SWITCH\_1#show spanning-tree vlan 10

CDO-CLIENT-SWITCH\_2#show spanning-tree vlan 20

CDO-SERVER-SWITCH#show spanning-tree vlan 40

<dapat ang gigamitan nimog root primary mao ni ang result>

Interface Role Sts Cost Prio.Nbr Type

---------------- ---- --- --------- -------- --------------------------------

Fa0/2 Desg FWD 19 128.2 P2p

Fa0/1 Desg FWD 19 128.1 P2p

Fa0/4 Desg FWD 19 128.4 P2p

Fa0/3 Desg FWD 19 128.3 P2p

Fa0/5 Desg FWD 19 128.5 P2p

Gi0/1 Desg FWD 4 128.25 P2p

<mao ning timailhan na nahimo nang root bridge ang usa ka

switch, puros na "Desg FWD" tanan, dapat wlay syay kapareha sa

uban switch>

--apply this to all switches in cdo network after spanning tree--

(config)#int f0/5

(config-if)#spanning-tree bpduguard enable

---ETHERCHANNEL---

<about sa etherchannel, ikaw ra magbuot kung lacp or pagp ba imong

gamiton. This is a pagp configuration>

--group 1-- <still ikaw ra gyapon magbuot asa na mga switch imong grupohon>

CDO-CLIENT-SWITCH\_1(config)#int range f0/3-4

CDO-CLIENT-SWITCH\_1(config-if-range)#channel-group 1 mode desirable

CDO-CLIENT-SWITCH\_1(config-if-range)#exit

CDO-CLIENT-SWITCH\_1(config)#interface port-channel 1

CDO-CLIENT-SWITCH\_1(config-if)#switchport mode trunk

CDO-CLIENT-SWITCH\_2(config)#int range f0/3-4

CDO-CLIENT-SWITCH\_2(config-if-range)#channel-group 1 mode desirable

CDO-CLIENT-SWITCH\_2(config-if-range)#exit

CDO-CLIENT-SWITCH\_2(config)#interface port-channel 1

CDO-CLIENT-SWITCH\_2(config-if)#switchport mode trunk

--group 2--

CDO-SERVER-SWITCH(config)#int range f0/3-4

CDO-SERVER-SWITCH(config-if-range)#channel-group 2 mode desirable

CDO-SERVER-SWITCH(config-if-range)#exit

CDO-SERVER-SWITCH(config)#interface port-channel 2

CDO-SERVER-SWITCH(config-if)#switchport mode trunk

CDO-CLIENT-SWITCH\_2(config)#int range f0/1-2

CDO-CLIENT-SWITCH\_2(config-if-range)#channel-group 2 mode desirable

CDO-CLIENT-SWITCH\_2(config-if-range)#exit

CDO-CLIENT-SWITCH\_2(config)#interface port-channel 2

CDO-CLIENT-SWITCH\_2(config-if)#switchport mode trunk

--group 3--

CDO-SERVER-SWITCH(config)#int range f0/1-2

CDO-SERVER-SWITCH(config-if-range)#channel-group 3 mode desirable

CDO-SERVER-SWITCH(config-if-range)#exit

CDO-SERVER-SWITCH(config)#interface port-channel 3

CDO-SERVER-SWITCH(config-if)#switchport mode trunk

CDO-CLIENT-SWITCH\_1(config)#int range f0/1-2

CDO-CLIENT-SWITCH\_1(config-if-range)#channel-group 3 mode desirable

CDO-CLIENT-SWITCH\_1(config-if-range)#exit

CDO-CLIENT-SWITCH\_1(config)#interface port-channel 3

CDO-CLIENT-SWITCH\_1(config-if)#switchport mode trunk

--verify etherchannel using--

CDO-SERVER-SWITCH#show etherchannel summary

CDO-CLIENT-SWITCH\_1#show etherchannel summary

CDO-CLIENT-SWITCH\_2#show etherchannel summary

<every switch na gi configure nimo sa etherchannel, dapat tag DUHA

ilang grupo ky by partner man sila. Pag naay isa ka switch na isa

ra iyang channel-groups - may nakalimutan ka :D >

example:

Number of channel-groups in use: 2

Number of aggregators: 2

Group Port-channel Protocol Ports

------+-------------+-----------+----------------------------------------------

1 Po1(SU) PAgP Fa0/3(P) Fa0/4(P)

2 Po2(SU) PAgP Fa0/1(P) Fa0/2(P

---EIGRP or OSPF---

<note: ospf akong gigamit pero pwede pud ka

magamit ug eigrp kung kabalo ka. Btw, self-thought

nalng gyud kay wala ni sila na topic ni sir tungod

sa covid19..>

CDO-Router#conf t

CDO-Router(config)#router ospf 1

CDO-Router(config-router)#network 192.168.10.0 0.0.0.255 area 0

CDO-Router(config-router)#passive-interface g0/0

CDO-Router(config-router)#end

CDO-Router#copy run start

CEBU-Router#conf t

CEBU-Router(config)#router ospf 1

CEBU-Router(config-router)#network 192.168.10.0 0.0.0.255 area 0

CEBU-Router(config-router)#passive-interface g0/0

CEBU-Router(config-router)#end

CEBU-Router#copy run start

--verify configuration using--

CDO-Router#show ip route

CEBU-Router#show ip route

<kailangan nga naa ky makita na letter "O" sa routing table,

pag naa na nga letter - success ang ospf, pwede na sila mag connect -

cdo network to cebu network and vice versa>

example:

....

O 192.168.10.0/27 [110/65] via 192.168.10.162, 00:00:29, Serial0/0/0

O 192.168.10.32/27 [110/65] via 192.168.10.162, 00:00:29, Serial0/0/0

O 192.168.10.64/27 [110/65] via 192.168.10.162, 00:00:29, Serial0/0/0

O 192.168.10.96/27 [110/65] via 192.168.10.162, 00:00:29, Serial0/0/0

---NAT---

CDO-Router>en

Password: <class>

CDO-Router#conf t

CDO-Router(config)#ip nat inside source static 192.168.10.30 201.165.200.129

CDO-Router(config)#ip nat pool BISAG-UNSA-NGA-NAME 198.133.219.128 198.133.219.129 netmask 255.255.255.252

CDO-Router(config)#access-list 1 permit 192.168.10.0 0.0.0.255

CDO-Router(config)#ip nat inside source list 1 pool BISAG-UNSA-NGA-NAME overload

CDO-Router(config)#int g0/0.10

CDO-Router(config-subif)#ip nat inside

CDO\_Router(config-if)#exit

CDO-Router(config)#int g0/0.20

CDO-Router(config-subif)#ip nat inside

CDO\_Router(config-if)#exit

CDO-Router(config)#int g0/0.30

CDO-Router(config-subif)#ip nat inside

CDO\_Router(config-if)#exit

CDO-Router(config)#int g0/0.40

CDO-Router(config-subif)#ip nat inside

CDO\_Router(config-if)#exit

CDO-Router(config)#int s0/0/1

CDO-Router(config-if)#ip nat outside

CDO-Router(config-if)#END

CDO-Router#copy run start

---CDO Router to INTERNET Router (DEFAULT ROUTE)---

<para mag connect na sila CDO ug Internet routers>

CDO-Router#conf t

CDO-Router(config)#int s0/0/1

CDO-Router(config-if)#ip address 181.16.17.1 255.255.255.252

CDO-Router(config-if)#no shutdown

Router#conf t

Router(config)#hostname INTERNET-ROUTER

INTERNET-ROUTER(config)#int s0/0/0

INTERNET-ROUTER(config-if)#ip address 181.16.17.2 255.255.255.252

INTERNET-ROUTER(config-if)#no shutdown

INTERNET-ROUTER(config-if)#exit

INTERNET-ROUTER(config)#ip route 0.0.0.0 0.0.0.0 181.16.17.1

INTERNET-ROUTER(config)#end

INTERNET-ROUTER#copy run start

CDO-Router(config-if)#exit

CDO-Router(config)#ip route 0.0.0.0 0.0.0.0 181.16.17.2

CDO-Router(config)#end

CDO-Router#copy run start

<human ani pwede na maka konek ang mga devices from cdo network to

internet router, you try it. DILI pa pwede maka konek ang duha ka

switch from vlan 10 & vlan 20 kay wala silay mga ip address. Pero

pwede maka connect ang switch under vlan 40 kay nabutngan siyag

ip address as per Mr. Pachica's procedures ;) >

---CDO router telling Cebu router nga Naay Internet Router---

<ani na time, dili pa pwede maka connect si Cebu router kay Internet

router kay walay hinanawan ang Cebu router nga naa diay Internet

router - si CDO router ray nakabalo. Pero but an man kaayu ang mga

taga CDO, gisaba nila sa taga CEBU nga naa diay Internetan :D >

CDO-Router#conf t

CDO-Router(config)#router ospf 1

CDO-Router(config-router)#default-information originate

CDO-Router(config-router)#end

CDO-Router#copy run start

<remember: make it a habit na e save nimo imong mga configurations>

<so.. pwede na maka konek ang mga taga CEBU sa Internetan :D .

And they live happily ever after XD >

CDO-Router#show ip nat translations

Pro Inside global Inside local Outside local Outside global

--- 201.165.200.129 192.168.10.30 --- ---

<mao ning result sa static nat>

<para makita ang result sa dynamic nat & pat, e ping ang Internet router sa mga

devices nga naa sa CDO network like server, lappy, & pc. Human ug ping

sa Internet router - e open dayun ang CDO router>

example:

C:\>ping 181.16.17.2

Pinging 181.16.17.2 with 32 bytes of data:

Reply from 181.16.17.2: bytes=32 time=12ms TTL=254

Reply from 181.16.17.2: bytes=32 time=1ms TTL=254

Reply from 181.16.17.2: bytes=32 time=1ms TTL=254

Reply from 181.16.17.2: bytes=32 time=14ms TTL=254

CDO-Router#

CDO-Router#

CDO-Router#

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [75]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [45]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [76]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [46]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [77]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [47]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [78]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [48]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [79]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [49]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [80]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [50]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [81]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [51]

NAT: s=192.168.10.44->198.133.219.129, d=181.16.17.2 [82]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.44 [52]

NAT: s=192.168.10.108->198.133.219.129, d=181.16.17.2 [326]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.108 [53]

NAT: s=192.168.10.108->198.133.219.129, d=181.16.17.2 [327]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.108 [54]

NAT: s=192.168.10.108->198.133.219.129, d=181.16.17.2 [328]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.108 [55]

NAT: s=192.168.10.108->198.133.219.129, d=181.16.17.2 [329]

NAT\*: s=181.16.17.2, d=198.133.219.129->192.168.10.108 [56]

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 44 (44)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 45 (45)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 46 (46)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 47 (47)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 48 (48)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 49 (49)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 50 (50)

NAT: expiring 198.133.219.129 (192.168.10.44) icmp 51 (51)

NAT: expiring 198.133.219.129 (192.168.10.108) icmp 25 (25)

NAT: expiring 198.133.219.129 (192.168.10.108) icmp 26 (26)

NAT: expiring 198.133.219.129 (192.168.10.108) icmp 27 (27)

NAT: expiring 198.133.219.129 (192.168.10.108) icmp 28 (28)

<mao ning result sa dynamic nat ug pat>

<verifying standard acl, nakagamit man tag acl tungod sa dynamic nat>

CDO-Router#sh access-lists 1

Standard IP access list 1

permit 192.168.10.0 0.0.0.255 (76 match(es))

<e verify nga nag work ba ang ssh sa switch under management vlan

ug sa mga router except Internet router.

Mamili kag isa sa mga pc sa cdo or cebu. Pwede pud ang server ug lappy imong

pilion. Dayun adto ka sa "Command Prompt" sa device nga imong napilian.

Dayun mao ning buhaton para ma perform ang ssh>

C:\>ssh -l roderick 192.168.10.107

Password:<agol>

###########################

unauthorized not allowed

###########################

CDO-SERVER-SWITCH>en

Password:<class>

CDO-SERVER-SWITCH#

<ug nakasulod naka sa switch under management vlan 40>

<note: pwede pud nimo e ssh ang mga router except sa Internet router>

"It's in this moment that you knew, you succeed"