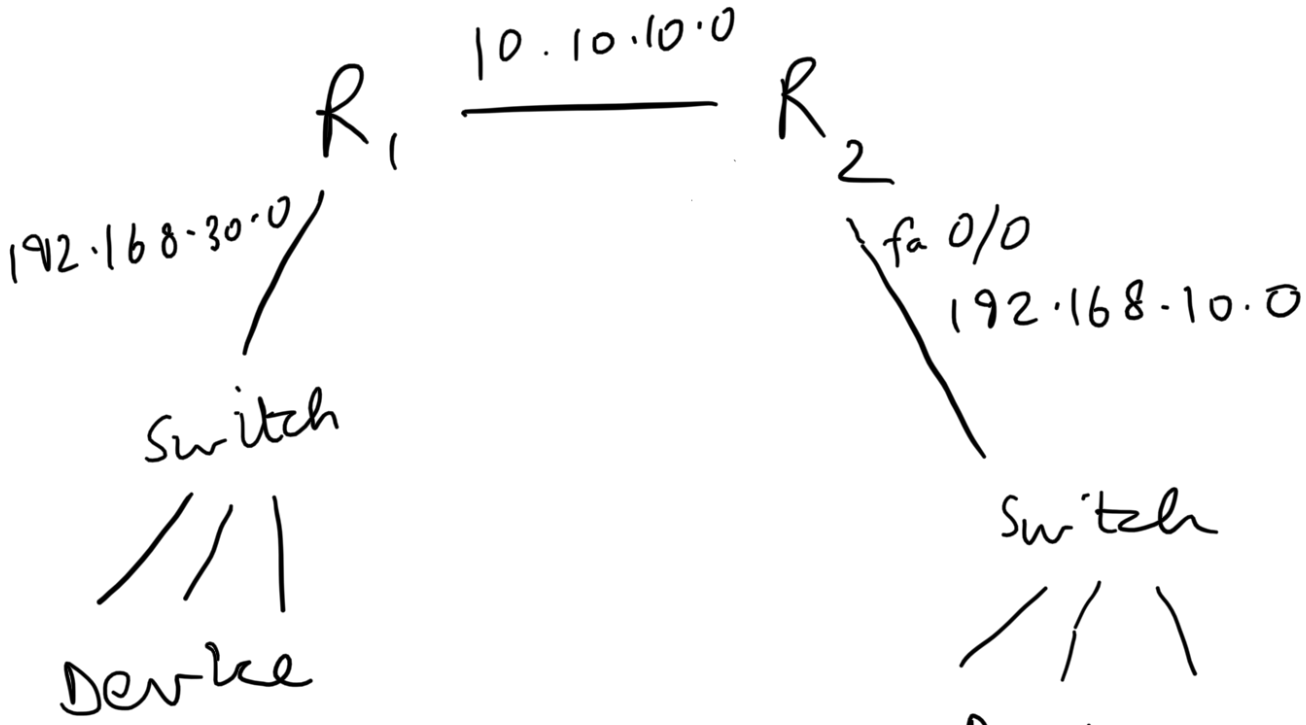
DHCP, NAT, OSPF, RIP

DHCP between routers



(Put entire topology in RIP first)

For R1,

enable

config t

ip dhcp excluded-address 192.168.30.1 192.168.30.20

ip dhcp pool chin(poolname)

network 192.168.30.0 255.255.255.0
default-router 192.168.30.1
dns-server 0.0.0.0

exit

ip dhcp pool saya (poolname)
network 192.168.10.0 255.255.255.0
default-router 192.168.10.1
dns-server 0.0.0.0

exit

For R2,

enable
config t
interface fastethernet 0/0
ip helper-address 10.10.10.1
exit

NAT

1] Static:-

Now we will write CLI for the 'common' router

> interface gigabitethernet 0/0
> ip nat inside
> exit

> interface gigabitethernet 0/1
> ip nat outside
> exit

> ip nat inside source static 192.168.10.10 (device addr)
10.0.0.1 (outside global gateway)

for one device inside

> ip nat inside source static 192.168.10.20 (device addr)
10.0.0.1

for other device inside

II) dynamic :-

Now we will write CLI for the 'common' router

> interface gigabitethernet 0/0
> ip nat inside
> exit

> interface gigabitethernet 0/1
> ip nat outside
> exit

> access-list 1 permit 192.168.10.0 0.0.0.255
(network name) (ultra of mask)

> ip nat pool chin 10.0.0.5 10.0.0.10
(poolname) (range)
netmask 255.0.0.0

> ip nat inside source list 1 pool chin

> end

Some imp commands

1) show ip nat translations
2) debug ip nat
3) no debug ip nat
4) clear ip nat translation *

OSPF

> config t
> router ospf 1
> network 10.0.0.0 (network name) 0.255.255.255 (wild card of mask) area 0
> " 20.0.0.0 " area 0
> exit
(write all the networks in ospf region)

RIP

> config t

> router zip
> network (network name) 10.0.0.0
> " 20.0.0.0
> exit
(write all the networks in zip region)

NTP ( )

first connect everything and give the server also a static ip addr and gateway addr of the connected router.

In Services of server, go to NTP and click 'enable' and click 'On'

In CLI of connected router,

> config t
> ntp server (static ip addr of server) 1.0.0.2

> exit
> show clock

To show border and boundary information :-

> show ip ospf database

(or)

> show ip ospf database

DNS, DHCP using Server, OSPF and RIP routing

Same (switch to switch) etc - - - -

diff (switch to pc, switch to router) ———

Router to pc (- - - - - - -)
