Report of Day-14 (Configuration of all the Protocols)
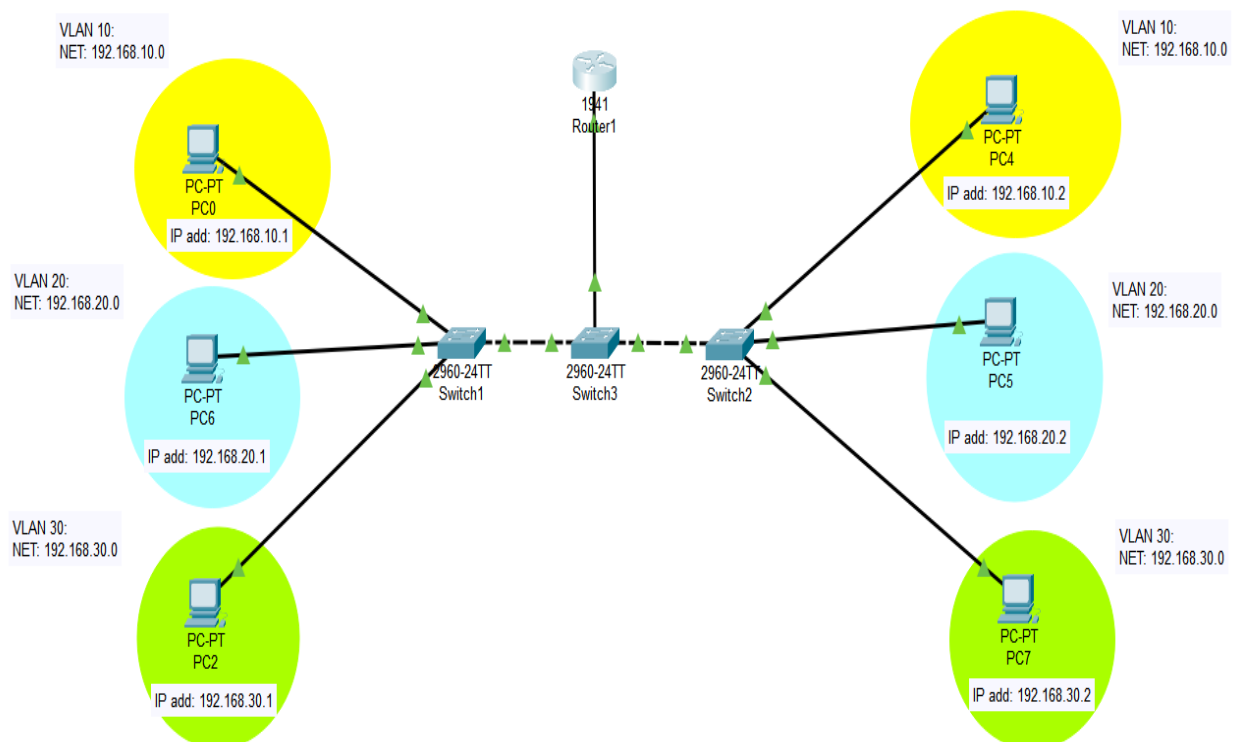
Task to do:

1) 3 vlan configuration
2) Inter-vlan Routing
3) DHCP protocol
4) Routing (Static + Dynamic)
5) Security (Acl, Password)

#1) 3vlan Routing:

Vlan configuration on Switch1:

```
Switch1#sh vlan

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   HR                               active    Fa0/3
20   IT                               active    Fa0/2
30   Technical                        active    Fa0/1
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Transl Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
20   enet  100020     1500  -      -      -        -    -        0      0
 --More--
```

Vlan configuration on Switch2:

```
Switch2>
Switch2>en
Switch2#sh vlan

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   HR                               active    Fa0/3
20   IT                               active    Fa0/2
30   Technical                        active    Fa0/1
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Transl Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
20   enet  100020     1500  -      -      -        -    -        0      0
```

Vlan port trunking on Switch3:

```
Switch3#
Switch3#sh interface trunk
Port        Mode            Encapsulation  Status      Native vlan
Fa0/1       on              802.1q         trunking    1
Fa0/2       on              802.1q         trunking    1
Fa0/3       on              802.1q         trunking    1

Port        Vlans allowed on trunk
Fa0/1       1-1005
Fa0/2       1-1005
Fa0/3       1-1005

Port        Vlans allowed and active in management domain
Fa0/1       1,10,20,30
Fa0/2       1,10,20,30
Fa0/3       1,10,20,30

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10,20,30
Fa0/2       1,10,20,30
Fa0/3       1,10,20,30
```

PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC6	PC5	ICMP	■	0.000	N	0	(edit)	(delete)
●	Successful	PC0	PC4	ICMP	■	0.000	N	1	(edit)	(delete)

Inter-vlan configuration:

```
Router1#sh ip interface brief
Interface              IP-Address      OK? Method Status                 Protocol
GigabitEthernet0/0     unassigned      YES unset  up                     up
GigabitEthernet0/0.10  192.168.10.3    YES manual up                     up
GigabitEthernet0/0.20  192.168.20.3    YES manual up                     up
GigabitEthernet0/0.30  192.168.30.3    YES manual up                     up
GigabitEthernet0/1     unassigned      YES unset  administratively down  down
Vlan1                  unassigned      YES unset  administratively down  down
```

PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC2	PC4	ICMP	■	0.000	N	0	(edit)	(delete)
●	Successful	PC0	PC7	ICMP	■	0.000	N	1	(edit)	(delete)

DHCP Configuration:

```
Router1>en
Router1#sh ip dhcp
% Incomplete command.
Router1#sh ip dhcp pool

Pool IT-pool :
 Utilization mark (high/low)    : 100 / 0
 Subnet size (first/next)       : 0 / 0
 Total addresses                : 254
 Leased addresses               : 0
 Excluded addresses             : 3
 Pending event                  : none

 1 subnet is currently in the pool
 Current index          IP address range                      Leased/Excluded/Total
 192.168.10.1           192.168.10.1    - 192.168.10.254    0    / 3    / 254

Pool HR-pool :
 Utilization mark (high/low)    : 100 / 0
 Subnet size (first/next)       : 0 / 0
 Total addresses                : 254
 Leased addresses               : 2
 Excluded addresses             : 3
 Pending event                  : none

 1 subnet is currently in the pool
 Current index          IP address range                      Leased/Excluded/Total
 192.168.20.1           192.168.20.1    - 192.168.20.254    2    / 3    / 254

Pool Tech-pool :
 Utilization mark (high/low)    : 100 / 0
 Subnet size (first/next)       : 0 / 0
 Total addresses                : 254
 Leased addresses               : 2
 Excluded addresses             : 3
 Pending event                  : none

 1 subnet is currently in the pool
 Current index          IP address range                      Leased/Excluded/Total
 192.168.30.1           192.168.30.1    - 192.168.30.254    2    / 3    / 254
```
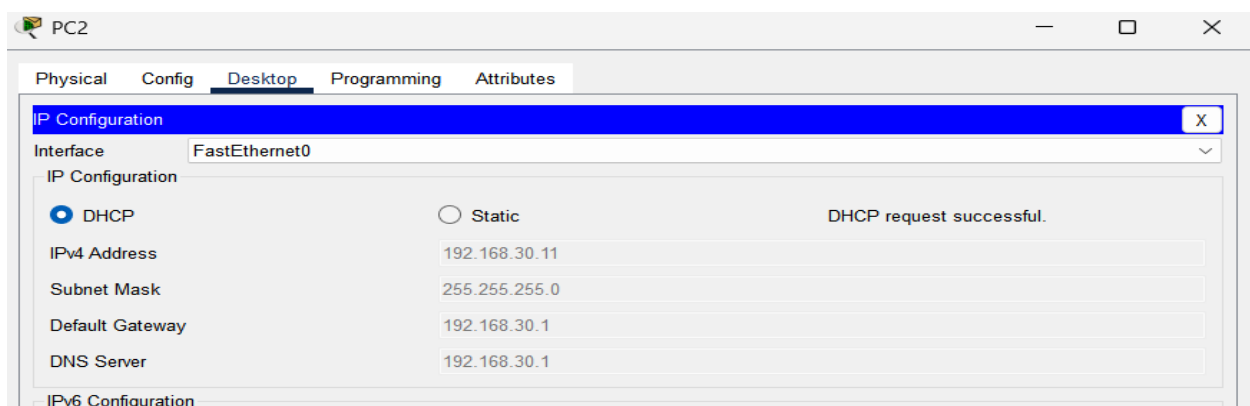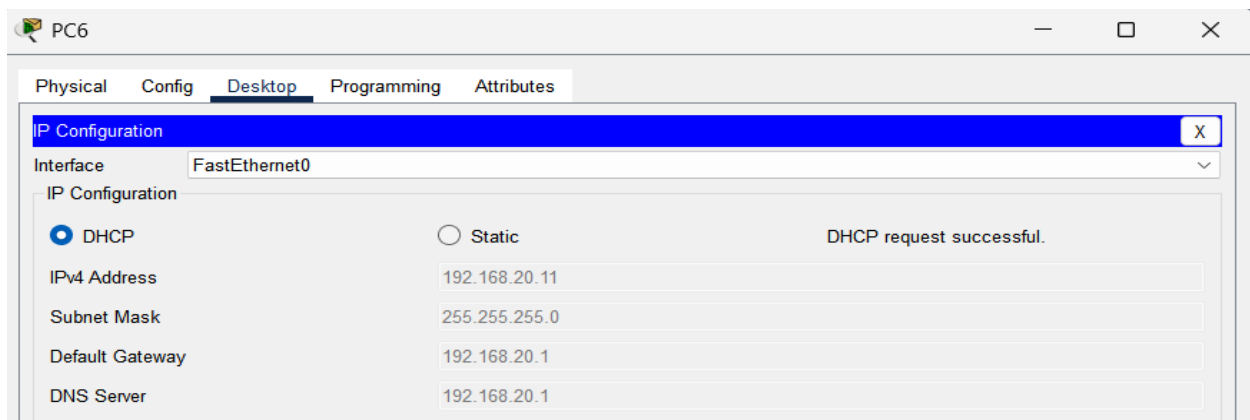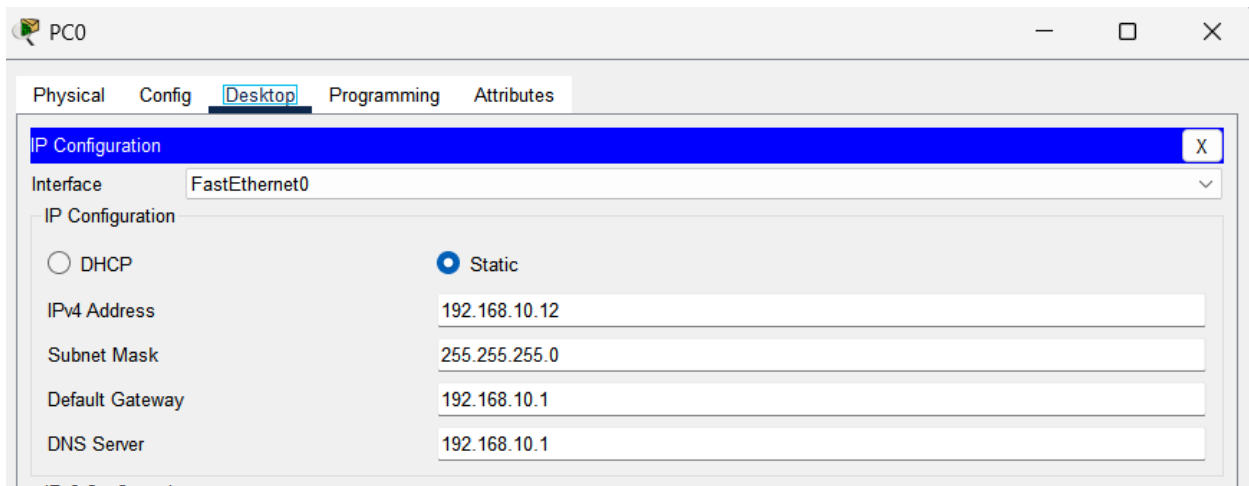
PC6 — □ ✕

Physical   Config   **Desktop**   Programming   Attributes

IP Configuration   X

Interface   FastEthernet0   ⌄

IP Configuration

● DHCP   ○ Static   DHCP request successful.

IPv4 Address   192.168.20.11

Subnet Mask   255.255.255.0

Default Gateway   192.168.20.1

DNS Server   192.168.20.1

PC2 — □ ✕

Physical   Config   **Desktop**   Programming   Attributes

IP Configuration   X

Interface   FastEthernet0   ⌄

IP Configuration

● DHCP   ○ Static   DHCP request successful.

IPv4 Address   192.168.30.11

Subnet Mask   255.255.255.0

Default Gateway   192.168.30.1

DNS Server   192.168.30.1
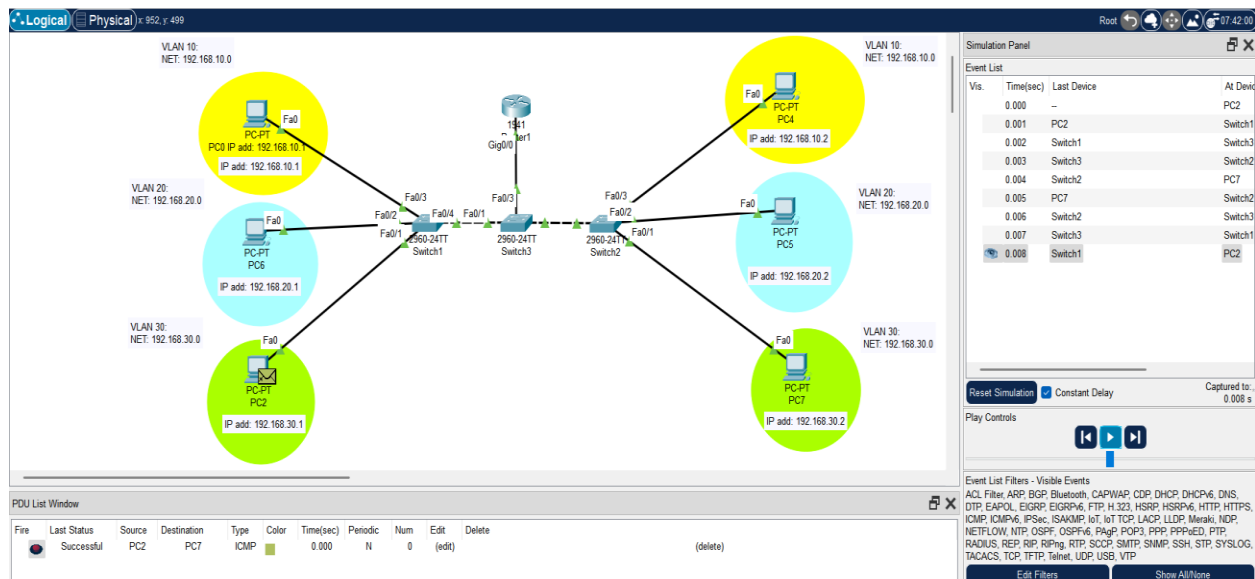
IPv6 Configuration

Static Routing:

Dynamic Routing:

```
Router1>
Router1>en
Router1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router1(config)#router rip
Router1(config-router)#network 192.168.10.0
Router1(config-router)#network 192.168.20.0
Router1(config-router)#network 192.168.30.0
Router1(config-router)#end
Router1#
%SYS-5-CONFIG_I: Configured from console by console
```


Security (Console Password and Enable Password):

```
User Access Verification

Password:

Router1>en
Password:
Router1#




Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname Router1
Router1(config)#line console 0
Router1(config-line)#password notebook
Router1(config-line)#login
Router1(config-line)#exit
Router1(config)#enable password ground
Router1(config)#exit
Router1#
```

Configuration of ACL on Router:

```
Router1>
Router1>en
Router1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router1(config)#access-list 10 permit host 192.168.20.11
Router1(config)#access-list 10 permit host 192.168.30.11
Router1(config)#
Router1(config)#
Router1(config)#access-list 10 deny any
Router1(config)#int gig 0/0
Router1(config-if)#
Router1(config-if)#ip access-group 10 in
Router1(config-if)#
Router1(config-if)#exit
Router1(config)#
Router1(config)#do wt
Translating "wt"...domain server (255.255.255.255)
Router1(config)#
Router1(config)#interface GigabitEthernet0/0
Router1(config-if)#exit
Router1(config)#do wr
Building configuration...
[OK]
Router1(config)#end
Router1#
%SYS-5-CONFIG_I: Configured from console by console

Router1#sh access-lists
Standard IP access list 10
    10 permit host 192.168.20.11
    20 permit host 192.168.30.11
    30 deny any (1 match(es))

Router1#
```