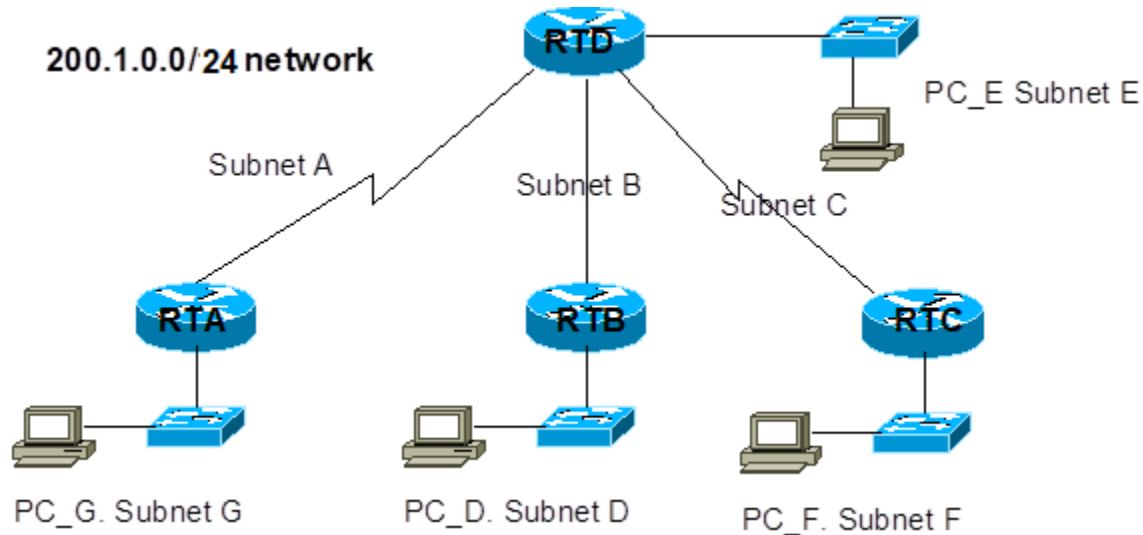


TSN2201 COMPUTER NETWORK

Lab 10 (Tri 1, 2021/2022)

Understanding Dynamic Routing Protocol OSPF using Packet Tracer

1. Use Packet Tracer to draw the following network.



2. The addressing of the networks has the following requirements. The 200.1.0.0/24 network must be subnetted using VLSM for all other addresses in the network.

- Each Subnet A, B, or C will require 2 host IP addresses.
- The Subnet D will require 50 host IP addresses.
- The Subnet E will require 30 host IP addresses.
- The Subnet F will require 12 host IP addresses.
- The Subnet G will require 10 host IP addresses.

No	Subnet	Subnet Address	Subnet Mask	IP addresses Range
1	A	200.1.0.128	255.255.255.252	200.1.0.128 – 200.1.0.131
2	B	200.1.0.132	255.255.255.252	200.1.0.132 – 200.1.0.135
3	C	200.1.0.136	255.255.255.252	200.1.0.136 – 200.1.0.139
4	D	200.1.0.0	255.255.255.192	200.1.0.0 – 200.1.0.63
5	E	200.1.0.64	255.255.255.224	200.1.0.64 – 200.1.0.95
6	F	200.1.0.96	255.255.255.240	200.1.0.96 – 200.1.0.111
7	G	200.1.0.112	255.255.255.240	200.1.0.112 – 200.1.0.127

3. Fill in the blank and give the IP addressing for the above network.

No	Description	IP Address	Default Gateway
1	PC_G		
2	PC_D		
3	PC_E		
4	PC_F		
5	RTA Fa0/0		N/A
6	RTA Fa0/1		N/A
7	RTB Fa0/0		N/A
8	RTB Fa0/1		N/A
9	RTC Fa0/0		N/A
10	RTC Fa0/1		N/A
11	RTD Fa0/0		N/A
12	RTD Fa0/1		N/A
13	RTD Fa0/2		N/A
14	RTD Fa0/3		N/A
15	RTD Fa0/4		N/A

4. Configure the dynamic routing protocol OSPF for the network. Use the following commands to configure OSPF for the router RTA. Repeat the step for other routers as well.

```
RTA#configure terminal
```

```
RTA(config)#router ospf process-id
```

```
RTA(config-router)#network subnetA_address wildcard-mask area area-id
```

```
RTA(config-router)#network subnetG_address wildcard-mask area area-id
```

```
RTA(config-router)#end
```

5. Check the routing table of each router by typing the command show ip route. Does every router have the routing information for all subnets?

6. Make sure all PCs and routers can ping each other. If every host can ping each other, then your network configuration is correct.