

Addressing Table

Device	Interface	IP Address Prefix	Subnet Mask	Default Gateway
Lotus	Fa0/0	192.168.16.1	255.255.255.224	N/A
	S0/0/0	192.168.14.153	255.255.255.252	N/A
	S0/1/0	192.168.14.157	255.255.255.252	N/A
	S0/1/1	192.168.14.161	255.255.255.252	N/A
Split	Fa0/0	192.168.16.33	255.255.255.224	N/A
	S0/0/0	192.168.14.154	255.255.255.252	N/A
	S0/1/0	192.168.14.158	255.255.255.252	N/A
	S0/1/1	192.168.14.162	255.255.255.252	N/A
Haven	Fa0/0	192.168.16.65	255.255.255.224	N/A
	S0/0/0	192.168.14.182	255.255.255.252	N/A
Pearl	Fa0/0	192.168.16.97	255.255.255.224	N/A
	S0/0/0	192.168.14.165	255.255.255.252	N/A
Ascent	Fa0/0	192.168.16.129	255.255.255.240	N/A
	S0/0/0	192.168.14.166	255.255.255.252	N/A
	S0/1/0	192.168.14.170	255.255.255.252	N/A
Bind	Fa0/0	192.168.16.145	255.255.255.248	N/A
	S0/0/0	192.168.14.178	255.255.255.252	N/A
	S0/1/0	192.168.14.174	255.255.255.252	N/A
Laptop 1	Fa0/7	192.168.16.3	255.255.255.224	192.168.16.1
Laptop 2	Fa0/6	192.168.16.4	255.255.255.224	192.168.16.1
Laptop 3	Fa0/5	192.168.16.5	255.255.255.224	192.168.16.1
Laptop 4	Fa0/4	192.168.16.6	255.255.255.224	192.168.16.1
Laptop 5	Fa0/3	192.168.16.7	255.255.255.224	192.168.16.1
Laptop 6	Fa0/2	192.168.16.8	255.255.255.224	192.168.16.1
DHCP 1	Fa0/5	192.168.16.98	255.255.255.224	192.168.16.97

DHCP 2	Fa0/7	192.168.16.34	255.255.255.224	192.168.16.33
DHCP 3	Fa0/6	192.168.16.66	255.255.255.224	192.168.16.65
DHCP 4	Fa0/4	192.168.16.146	255.255.255.248	192.168.16.145
DHCP 5	Fa0/3	192.168.16.130	255.255.255.240	192.168.16.129
Email	Fa0/2	192.168.16.131	255.255.255.240	192.168.16.129
DNS	Fa0/6	192.168.16.99	255.255.255.224	192.168.16.97
WEB	Fa0/7	192.168.16.100	255.255.255.224	192.168.16.97
PC 1	Fa0/2	192.168.16.101	255.255.255.224	192.168.16.97
PC 2	Fa0/3	192.168.16.102	255.255.255.224	192.168.16.97
PC 3	Fa0/4	192.168.16.103	255.255.255.224	192.168.16.97
PC 4	Fa0/2	192.168.16.35	255.255.255.224	192.168.16.33
PC 5	Fa0/3	192.168.16.38	255.255.255.224	192.168.16.33
PC 6	Fa0/4	192.168.16.36	255.255.255.224	192.168.16.33
PC 7	Fa0/5	192.168.16.39	255.255.255.224	192.168.16.33
PC 8	Fa0/6	192.168.16.37	255.255.255.224	192.168.16.33
PC 9	Fa0/2	192.168.16.70	255.255.255.224	192.168.16.65
PC 10	Fa0/3	192.168.16.71	255.255.255.224	192.168.16.65
PC 11	Fa0/4	192.168.16.69	255.255.255.224	192.168.16.65
PC 12	Fa0/5	192.168.16.68	255.255.255.224	192.168.16.65
PC 13	Fa0/2	192.168.16.149	255.255.255.248	192.168.16.145
PC 14	Fa0/4	192.168.16.132	255.255.255.240	192.168.16.129
PC 15	Fa0/5	192.168.16.133	255.255.255.240	192.168.16.129

Configuration Commands

Lotus

- enable
 - config t
 - interface FastEthernet0/0
 - ip address 192.168.16.1 255.255.255.224
 - no shutdown
 - interface Serial0/0/0
 - ip address 192.168.14.153 255.255.255.252
 - no shutdown
 - interface Serial0/1/0
 - ip address 192.168.14.157 255.255.255.252
 - no shutdown
 - interface Serial0/1/1
 - ip address 192.168.14.161 255.255.255.252
 - no shutdown
 - exit
-
- ip route 192.168.16.32 255.255.255.224 s0/0/0
 - ip route 192.168.16.64 255.255.255.224 s0/0/0
 - ip route 192.168.16.96 255.255.255.224 s0/1/0
 - ip route 192.168.16.128 255.255.255.240 s0/1/1
 - ip route 192.168.16.144 255.255.255.248 s0/1/1
 - ip route 192.168.16.144 255.255.255.248 s0/0/0

Split

- enable
- config t
- interface FastEthernet0/0
- ip address 192.168.16.33 255.255.255.224
- no shutdown
- interface Serial0/0/0
- ip address 192.168.14.154 255.255.255.252
- no shutdown
- interface Serial0/1/0
- ip address 192.168.14.158 255.255.255.252
- no shutdown
- interface Serial0/1/1
- ip address 192.168.14.162 255.255.255.252

- no shutdown
- exit

- config t
- ip dhcp pool splitA
- network 192.168.16.32 255.255.255.224
- default-router 192.168.16.33
- dns-server 192.168.16.99
- exit
- ip dhcp excluded-address 192.168.16.33
- exit

- ip route 192.168.16.0 255.255.255.224 s0/0/0
- ip route 192.168.16.64 255.255.255.224 s0/1/0
- ip route 192.168.16.96 255.255.255.224 s0/0/0
- ip route 192.168.16.128 255.255.255.240 s0/0/0
- ip route 192.168.16.128 255.255.255.240 s0/1/1
- ip route 192.168.16.144 255.255.255.248 s0/1/1

Haven

- enable
- config t
- interface FastEthernet0/0
- ip address 192.168.16.65 255.255.255.224
- no shutdown
- interface Serial0/0/0
- ip address 192.168.14.182 255.255.255.252
- no shutdown
- exit

- config t
- ip dhcp pool havenA
- network 192.168.16.64 255.255.255.224
- default-router 192.168.16.65
- dns-server 192.168.16.99
- exit
- ip dhcp excluded-address 192.168.16.65

- exit
- ip route 192.168.16.0 255.255.255.224 s0/0/0
- ip route 192.168.16.32 255.255.255.224 s0/0/0
- ip route 192.168.16.96 255.255.255.224 s0/0/0
- ip route 192.168.16.128 255.255.255.240 s0/0/0
- ip route 192.168.16.144 255.255.255.248 s0/0/0

Pearl

- enable
- config t
- interface FastEthernet0/0
- ip address 192.168.16.97 255.255.255.224
- no shutdown
- interface Serial0/0/0
- ip address 192.168.14.165 255.255.255.252
- no shutdown
- exit

- config t
- ip dhcp pool pearlA
- network 192.168.16.96 255.255.255.224
- default-router 192.168.16.97
- dns-server 192.168.16.99
- exit
- ip dhcp excluded-address 192.168.16.97
- exit

- ip route 192.168.16.0 255.255.255.224 s0/0/0
- ip route 192.168.16.32 255.255.255.224 s0/0/0
- ip route 192.168.16.64 255.255.255.224 s0/0/0
- ip route 192.168.16.128 255.255.255.240 s0/0/0
- ip route 192.168.16.144 255.255.255.248 s0/0/0

Ascent

- enable
- config t
- interface FastEthernet0/0

- ip address 192.168.16.129 255.255.255.240
- no shutdown
- interface Serial0/0/0
- ip address 192.168.14.166 255.255.255.252
- no shutdown
- interface Serial0/1/0
- ip address 192.168.14.170 255.255.255.252
- no shutdown
- exit

- config t
- ip dhcp pool ascentA
- network 192.168.16.128 255.255.255.240
- default-router 192.168.16.129
- dns-server 192.168.16.99
- exit
- ip dhcp excluded-address 192.168.16.129
- exit

- ip route 192.168.16.0 255.255.255.224 s0/0/0
- ip route 192.168.16.32 255.255.255.224 s0/0/0
- ip route 192.168.16.64 255.255.255.224 s0/0/0
- ip route 192.168.16.64 255.255.255.224 s0/1/0
- ip route 192.168.16.96 255.255.255.224 s0/0/0
- ip route 192.168.16.144 255.255.255.248 s0/1/0

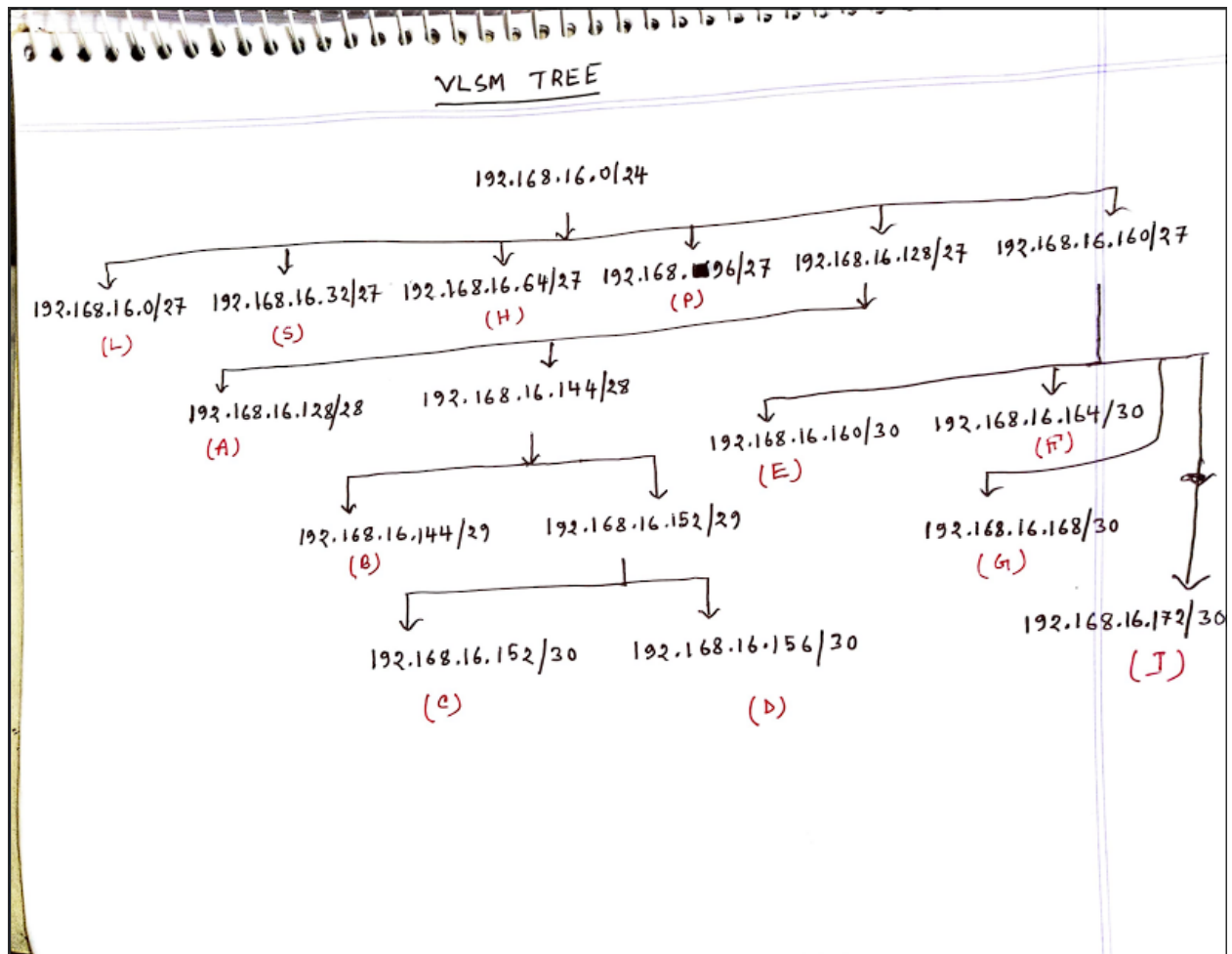
Bind

- enable
- config t
- interface FastEthernet0/0
- ip address 192.168.16.145 255.255.255.248
- no shutdown
- interface Serial0/0/0
- ip address 192.168.14.178 255.255.255.252
- no shutdown
- interface Serial0/1/0
- ip address 192.168.14.174 255.255.255.252
- no shutdown
- exit

- config t

- ip dhcp pool bindA
- network 192.168.16.144 255.255.255.248
- default-router 192.168.16.145
- dns-server 192.168.16.99
- exit
- ip dhcp excluded-address 192.168.16.145
- exit
- ip route 192.168.16.0 255.255.255.224 s0/0/0
- ip route 192.168.16.32 255.255.255.224 s0/1/0
- ip route 192.168.16.64 255.255.255.224 s0/1/0
- ip route 192.168.16.96 255.255.255.224 s0/0/0
- ip route 192.168.16.128 255.255.255.240 s0/0/0

VLSM Tree



Sub: _____

12 7
14 6
32 5
16 4
8 3
4 2

Day

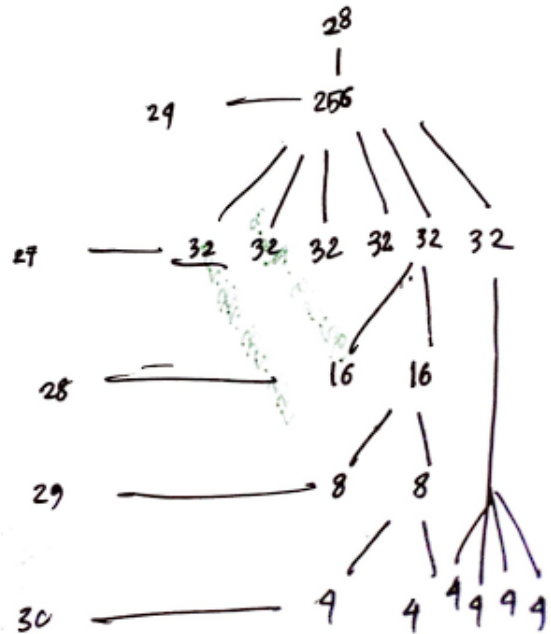
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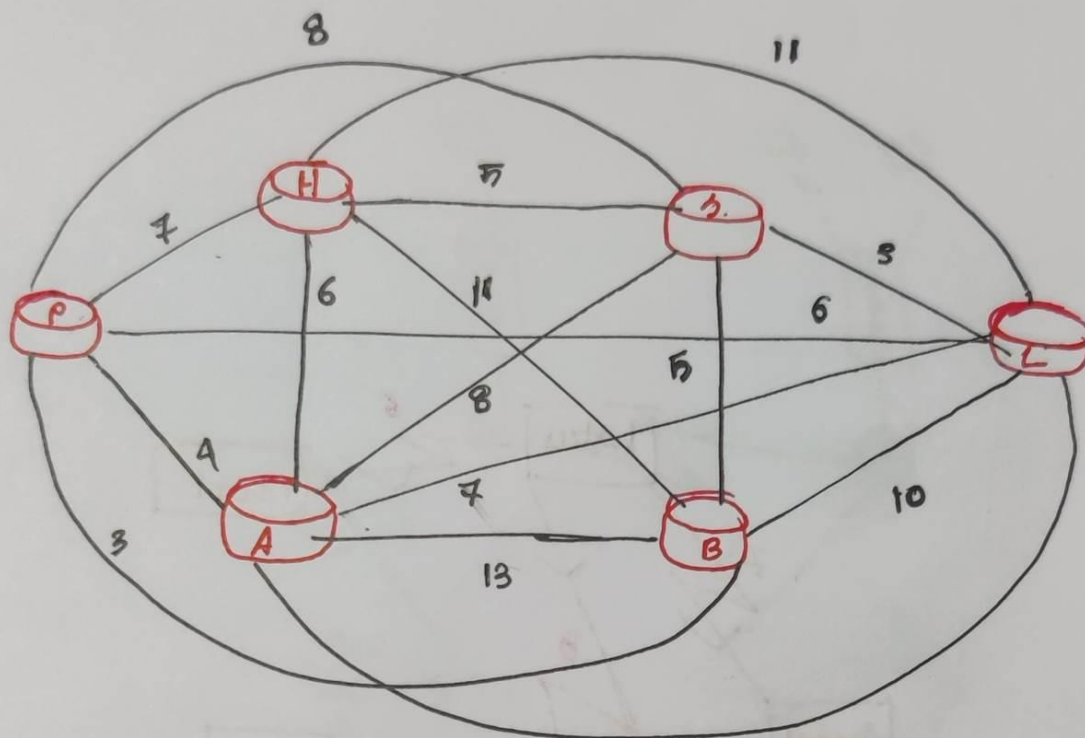
Date: / /

	+2	IP?	Host Bit	Network Bit
L 30	32	32	6	27
S 25	27	32	5	27
H 20	22	32	5	27
P 15	17	32	5	27
A 10	12	16	4	28
B 5	7	8	3	29
C 2	4	4	2	30
D 2	4	4	2	30
E 2	4	4	2	30
F 2	4	4	2	30
G 2	4	4	2	30
I 2	4	4	2	30

192.168.16.0 /24

192.168.16.0 → 128
192.168.16.0 → 128
25
128





7

	L	S	H	P	A	B
L	0_L	3 _L	11 _L	6 _L	7 _L	10 _L
S		3_L	8 _S	6 _L	7 _L	8 _S
P			8_S	6_L	7 _L	8 _S
A			8 _S		7_L	8 _S
H			8_S			8 _S
B						8_S