

**IP ADDRESS TABLE**

Device	Interface	IP Address	Subnet Mask	Default Gateway
LOTUS	Se9/0	192.0.0.161	255.255.255.252	N/A
	Se8/0	192.0.0.169	255.255.255.252	N/A
	Se7/0	192.0.0.165	255.255.255.252	N/A
	Fa0/0	192.0.0.1	255.255.255.224	N/A
SPLIT	Se7/0	192.0.0.169	255.255.255.252	N/A
	Se8/0	192.0.0.153	255.255.255.252	N/A
	Se9/0	192.0.0.173	255.255.255.252	N/A
	Fa0/0	192.0.0.33	255.255.255.224	N/A
HAVEN	Se7/0	192.0.0.173	255.255.255.252	N/A
	Fa0/0	192.0.0.65	255.255.255.224	N/A
PEARL	Se7/0	192.0.0.165	255.255.255.252	N/A
	Fa0/0	192.0.0.97	255.255.255.224	N/A
ASCENT	Se7/0	192.0.0.161	255.255.255.252	N/A
	Se8/0	192.0.0.157	255.255.255.252	N/A
	Fa0/0	192.0.0.129	255.255.255.240	N/A
BIND	Se7/0	192.0.0.157	255.255.255.252	N/A
	Se8/0	192.0.0.153	255.255.255.252	N/A
	Fa0/0	192.0.0.145	255.255.255.248	N/A
PC0	N/A	192.0.0.99	255.255.255.224	192.0.0.97
PC1	N/A	192.0.0.100	255.255.255.224	192.0.0.97

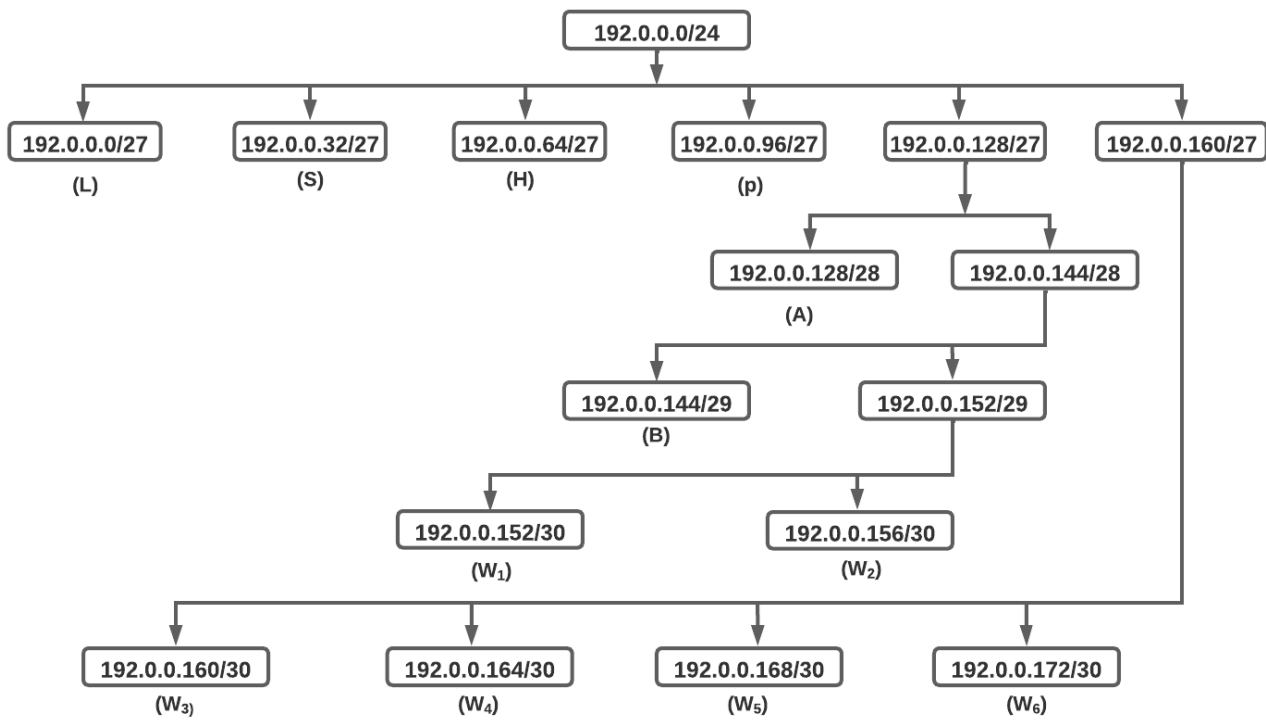
<b>PC2</b>	<b>N/A</b>	<b>192.0.0.101</b>	<b>255.255.255.224</b>	<b>192.0.0.97</b>
<b>PC3</b>	<b>N/A</b>	<b>192.0.0.35</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>PC4</b>	<b>N/A</b>	<b>192.0.0.36</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>PC5</b>	<b>N/A</b>	<b>192.0.0.37</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>PC6</b>	<b>N/A</b>	<b>192.0.0.38</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>PC7</b>	<b>N/A</b>	<b>192.0.0.39</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>PC8</b>	<b>N/A</b>	<b>192.0.0.131</b>	<b>255.255.255.240</b>	<b>192.0.0.129</b>
<b>PC9</b>	<b>N/A</b>	<b>192.0.0.132</b>	<b>255.255.255.240</b>	<b>192.0.0.129</b>
<b>PC10</b>	<b>N/A</b>	<b>192.0.0.147</b>	<b>255.255.255.248</b>	<b>192.0.0.145</b>
<b>PC11</b>	<b>N/A</b>	<b>192.0.0.67</b>	<b>255.255.255.224</b>	<b>192.0.0.65</b>
<b>PC12</b>	<b>N/A</b>	<b>192.0.0.68</b>	<b>255.255.255.224</b>	<b>192.0.0.65</b>
<b>PC13</b>	<b>N/A</b>	<b>192.0.0.69</b>	<b>255.255.255.224</b>	<b>192.0.0.65</b>
<b>PC14</b>	<b>N/A</b>	<b>192.0.0.70</b>	<b>255.255.255.224</b>	<b>192.0.0.65</b>
<b>Laptop0</b>	<b>N/A</b>	<b>192.0.0.2</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Laptop1</b>	<b>N/A</b>	<b>192.0.0.3</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Laptop2</b>	<b>N/A</b>	<b>192.0.0.4</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Laptop3</b>	<b>N/A</b>	<b>192.0.0.5</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Laptop4</b>	<b>N/A</b>	<b>192.0.0.6</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Laptop5</b>	<b>N/A</b>	<b>192.0.0.7</b>	<b>255.255.255.224</b>	<b>192.0.0.1</b>
<b>Web, DHCP &amp; DNS Server</b>	<b>N/A</b>	<b>192.0.0.98</b>	<b>255.255.255.224</b>	<b>192.0.0.97</b>
<b>DHCP S</b>	<b>N/A</b>	<b>192.0.0.34</b>	<b>255.255.255.224</b>	<b>192.0.0.33</b>
<b>DHCP H</b>	<b>N/A</b>	<b>192.0.0.66</b>	<b>255.255.255.224</b>	<b>192.0.0.65</b>
<b>DHCP &amp; Email Server (Bind)</b>	<b>N/A</b>	<b>192.0.0.146</b>	<b>255.255.255.248</b>	<b>192.0.0.145</b>

DHCP & Email Server (Ascent)	N/A	192.0.0.130	255.255.255.240	192.0.0.129
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VLSM TABLE

Host Name	Hosts Required	Need to Assign	Given IP Block Size	Host Bit	Network Bit
Lotus (L)	30	32	32	5	27
Split (S)	25	27	32	5	27
Haven (H)	20	22	32	5	27
Pearl (P)	15	17	32	5	27
Ascent (A)	10	12	16	4	28
Bind (B)	5	7	8	3	29
WAN1	2	4	4	2	30
WAN2	2	4	4	2	30
WAN3	2	4	4	2	30
WAN4	2	4	4	2	30
WAN5	2	4	4	2	30
WAN6	2	4	4	2	30

VLSM TREE



## Dijkstra Table

	Lotus (L)	Split (S)	Haven (H)	Pearl (P)	Ascent (A)	Bind (B)
Lotus (L)	<b>0</b> <sub>Lotus</sub>	<b>3</b> <sub>Lotus</sub>	<b>11</b> <sub>Lotus</sub>	<b>6</b> <sub>Lotus</sub>	<b>7</b> <sub>Lotus</sub>	<b>10</b> <sub>Lotus</sub>
Split (S)	-	<b>3</b> <sub>Lotus</sub>	<b>8</b> <sub>split</sub>	<b>6</b> <sub>Lotus</sub>	<b>7</b> <sub>Lotus</sub>	<b>8</b> <sub>split</sub>
Pearl (P)	-	-	<b>8</b> <sub>split</sub>	<b>6</b> <sub>Lotus</sub>	<b>7</b> <sub>Lotus</sub>	<b>8</b> <sub>split</sub>
Ascent (A)	-	-	<b>8</b> <sub>split</sub>	-	<b>7</b> <sub>Lotus</sub>	<b>8</b> <sub>split</sub>
Haven (H)	-	-	<b>8</b> <sub>split</sub>	-	-	<b>8</b> <sub>split</sub>
Bind (B)	-	-	-	-	-	<b>8</b> <sub>split</sub>

### Shortest Path:

**Lotus → Lotus → 0**

**Lotus → Split → 3**

**Lotus → Pearl → 6**

**Lotus → Ascent → 7**

**Lotus → Split → Haven → 8**

**Lotus → Split → Bind → 8**