Packet Tracer Activity – VLSM Subnetting

### Given network address – 192.78.78.0/24

1. Subnet Table

| Network name | Host requirements | Subnet Address | Subnet mask | First Usable Host Address | Last Usable Host Address | Broadcast Address |
| --- | --- | --- | --- | --- | --- | --- |
| **LAN4** | 110 | 192.78.78.0 | 255.255.255.128 | 192.78.78.1 | 192.78.78.126 | 192.78.78.127 |
| **LAN2** | 25 | 192.78.78.128 | 255.255.255.224 | 192.78.78.129 | 192.78.78.158 | 192.78.78.159 |
| **LAN1** | 11 | 192.78.78.160 | 255.255.255.240 | 192.78.78.161 | 192.78.78.174 | 192.78.78.175 |
| **LAN3** | 3 | 192.78.78.176 | 255.255.255.248 | 192.78.78.177 | 192.78.78.182 | 192.78.78.183 |
| **WAN** | 2 | 192.78.78.184 | 255.255.255.252 | 192.78.78.185 | 192.78.78.186 | 192.78.78.187 |

1. Addressing Table

| Device | Interface | IP Address | Subnet Mask | Default Gateway |
| --- | --- | --- | --- | --- |
| RT115 | G0/0 | 192.78.78.161 | 255.255.255.240 | N/A |
| G0/1 | 192.78.78.129 | 255.255.255.224 | N/A |
| S0/0/0 | 192.78.78.185 | 255.255.255.252 | N/A |
| RT116 | G0/0 | 192.78.78.177 | 255.255.255.248 | N/A |
| G0/1 | 192.78.78.1 | 255.255.255.128 | N/A |
| S0/0/0 | 192.78.78.186 | 255.255.255.252 | N/A |
| S1 | VLAN 1 | 192.78.78.162 | 255.255.255.240 | 192.78.78.161 |
| S2 | VLAN 1 | 192.78.78.130 | 255.255.255.224 | 192.78.78.129 |
| S3 | VLAN 1 | 192.78.78.178 | 255.255.255.248 | 192.78.78.177 |
| S4 | VLAN 1 | 192.78.78.2 | 255.255.255.128 | 192.78.78.1 |
| PC1 | NIC | 192.78.78.174 | 255.255.255.240 | 192.78.78.161 |
| PC2 | NIC | 192.78.78.158 | 255.255.255.224 | 192.78.78.129 |
| PC3 | NIC | 192.78.78.182 | 255.255.255.248 | 192.78.78.177 |
| PC4 | NIC | 192.78.78.126 | 255.255.255.128 | 192.78.78.1 |

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