VLSM DIAGRAM PRACTICE SHEET 2

The company expects the use of VLSM Design to maximize the use of IP addresses. A table is to be produced showing all possible subnets that meet the Companies requirements using a VLSM design. A table for recording the VLSM design is below. Expect 0% growth of current IP requirements when determining size of subnets.

* 700 employees
* 450 employees
* 62 employees
* 30 employees
* 12 employees
* 5 servers on separate subnet
* 2 WAN connection’s
* Use network 172.27.0.0/16 for internal addressing.

1. The company expects the use of VLSM to maximize the use of IP addresses. A table is to be produced showing all possible subnets that meet the company’s requirements using a VLSM design.

1. Use the following table for your VLSM design.
2. Add 1 to host requirement for use as the default gateway.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **# of Hosts** | **Network Address** | **1st Useable** | **Last Useable** | **Broadcast Address** | **Subnet Mask**  **/ Value** | **# of Possible Hosts** |
| 700 | 172.27.0.0 | 172.27.0.1 | 172.27.3.254 | 172.27.3.255 | 255.255.252.0 /22 | 1022 |
| 450 | 172.27.4.0 | 172.27.4.1 | 172.27.5.254 | 172.27.5.255 | 255.255.254.0 /23 | 510 |
| 62 | 172.27.6.0 | 172.27.6.1 | 172.27.6.126 | 172.27.6.127 | 255.255.255.128 /25 | 126 |
| 30 | 172.27.6.128 | 172.27.6.129 | 172.27.6.190 | 172.27.6.191 | 255.255.255.192 /26 | 62 |
| 12 | 172.27.6.192 | 172.27.6.193 | 172.27.6.206 | 172.27.6.207 | 255.255.255.240 /28 | 14 |
| 5 | 172.27.6.208 | 172.27.6.209 | 172.27.6.214 | 172.27.6.215 | 255.255.255.248 /29 | 6 |
| 2 | 172.27.6.216 | 172.27.6.217 | 172.27.6.218 | 172.27.6.219 | 255.255.255.252 /30 | 2 |
| 2 | 172.27.6.220 | 172.27.6.221 | 172.27.6.222 | 172.27.6.223 | 255.255.255.252 /30 | 2 |