1. You are given the address block of 150.43.10.0/24 for you to use for your network. Your network requires:
   1. 2 routers (1 backbone link - WAN)
   2. 1 LAN off Router 1 (R1) for R&D with 28 user PCs
   3. 1 LAN off Router 1 for the FINANCE department with 12 total hosts
   4. 1 LAN off Router 2 (R2) for the SALES department with 94 PCs
   5. 1 LAN off Router 2 for your SERVER FARM supporting 16 Servers

Calculate the requirements for each Subnetwork.

**NOTE:**

(Remember that when you’re given total number of PCs [versus the total number of hosts], you must add 2 for the total number of hosts [to accommodate the router and switch IP addresses], and the analogy of feeding the big guy first. Largest to Smallest)

Addresses required:

* 1. Backbone network
  2. R1L1
  3. R1L2
  4. R2L1
  5. R2L2

1. You can decide which LAN gets assigned to which department on the router it’s associated with (I.e. R1L1 is R&D, or R1L1 is Finance. Your choice.)

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| Network  Name | Network ID | Subnet Mask | Usable Host Range | Broadcast IP |
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1. You are given the address block of 18.60.16.0/20 for you to use for your network. Your network requires:
   1. 3 routers (2 backbone link - WANs)
   2. 1 LAN off Router 1 (R1) for OPS with 62 hosts
   3. 1 LAN off Router 1 for the IT department with 29 hosts
   4. 1 LAN off Router 2 (R2) for the Maintenance department with 10 PCs
   5. 1 LAN off Router 2 for your S6 shop supporting 100 users.
   6. 1 LAN off Router 3 (R3) for DevOps with 500 hosts
   7. 1 Lan off Router 3 for M.I. Bn (Intel) supporting 1010 hosts.

Calculate the requirements for each Subnetwork.

Addresses required:

* 1. Backbone network
  2. R1L1
  3. R1L2
  4. R2L1
  5. R2L2
  6. R3L1
  7. R3L2

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| --- | --- | --- | --- | --- |
| Network  Name | Network ID | Subnet Mask | Usable Host Range | Broadcast IP |
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