

Planning IP Address Assignments

Review the [scenario and client expectations](#) about Greenfield Properties. *Make sure you also review the additional client expectations related to this Touchstone Preparation.*

Based on the information provided by the client, answer the following questions in 2-4 sentences each. Be sure to explain your answers in detail.

Although this network is rather small, subnetting it can still be beneficial. What are some reasons why? If you need some help, this [article](#) may be useful.

Dividing networks into smaller segments can help with troubleshooting, security and enhance network performance. Less network load because broadcast segments are smaller. Grouping based on department and authorization status can ease resource management.

How do you plan to segment the network? Explain your strategy, and list the subnets you would create.

I would start by grouping my resources by public or private, then by department.

Corp LAN – Executives, Office Manager, HR, Reception, IT
Marketing – Advertising, Public Relations, Social Media
Sales – Leasing Manager, Leasing Agent, Leasing Assistance
Property – Prop Owner Liaisons, Property Manager, Maintenance Manager, Maintenance Specialist
Finance – Accountant, Accounting Specialist

Private Resources – Database, File Server, Print Server, Application Server
Public Resources – Web Server

Looking at the scenario document, how many subnets do you think you will need, and how many hosts must each of them support?

8 Subnets
Corp LAN – 9 hosts
IT – 2 host
Marketing – 2 hosts
Sales – 13 hosts
Property Management – 16 hosts
Finance – 4

Public Resources – 1

Private Resources - 4

Given the needed numbers of hosts that each subnet will support, what subnet masks should be used for each of them? For each subnet, state the number of mask bits (for example, /27) and the subnet mask to use (for example, 255.255.255.224). You may find it useful to use a subnetting calculator, such as this [calculator](#). (Ref: [IP Subnetting](#))

Corp LAN – /28
IT – /30
Marketing – /30
Sales – /28
Property Management – /27
Finance – /29

Public Resources – /30
Private Resources - /29

Do you think it would be useful to implement VLANs in the proposed network? Why or why not? (Ref: [Virtual LANs](#))

Yes, VLANs offer more control and adaptability. VLANs can add more information for addressing issues and troubleshooting. VLAN is more software based routing vs the Subnet hardware based.