

# A NETWORKING WEB QUEST

## Introduction

Welcome to the most challenging contest of your life! Your company has been assigned to enter a contest to jumpstart your IT Company as well as get it started off on the right foot. If you don't win now, it will show you how to have the upper hand on any other contest your company enters as well as have the knowledge to acquire other clients in the future. This small local pharmaceutical company is looking into upgrading its technology in order to have an innovative Local Area Network implemented into the company while also including research data as a learning tool to educate future employees to the functionality of their company's computer network. They still use an old network with a bus topology. They would like to implement a combination of a more advanced wired technology and a certain wireless technology in order to be able to connect to the Internet for future business endeavors.

The plan (Power Point) needs to include the following:

- Create a company name / logo / mission statement / slogan – 3 slides
- Give a description of all the area networks available and what they are best used for (such as WLAN, LAN, MAN, WAN, SAN, CAN, PAN, DAN) – 1 slide for two area networks 4 to 8 slides
- Write a narrative paragraph describing the objectives of the technology used to upgraded current network also give the benefits attached to using your chosen network. - 1 slide
- Details of the technology selected (i.e. topology, protocols, security, type of Internet connection) – 3 to 6 slides
- Define a detailed description (2 to 3 sentences each) to network cards, access points, hubs, switches, router – 5 slides
- A list of network parts used to incorporate into the new system such as network cards, access points, hubs, switches, router – 1 to 2 slides
- Define the Network Operating System and define the reasons for using it instead of the current company operating system
- Give drawings of the new hybrid wired – 1 to 2 slides
- Recommend a budget needed for the equipments and for the Internet connection – 1 to 2 slides
- Design the network topology – 1 to 2 slides
- Create an itemized list of materials needed for the network – 1 to 2 slides
- Research the costs – 1 to 2 slides
- Create a document detailing your design, the reasoning behind it, and the cost of implementation – 1 to 2 slides

## Process

01. Determine what equipment will be needed to successfully connect the pharmaceutical company.
02. Determine how "connectivity" will enhance productivity.
03. Determine the total cost to purchase or lease the entire system.
04. Determine concerns, fears, and responsibilities with networking the company.
05. Use Microsoft Excel and graphs to compare costs from at least three different vendors & reasons to accept specific bids.
06. Present your diagram of the mapping of the Local Area Network throughout the building using any medium that best enhances the presentation.
07. Present the responsibilities of students, administrators, parents, and the Technology Coordinator within the district along with your recommendations with a PowerPoint presentation.
08. Design the topology
09. Get the knowledge necessary to design the layout of the network, for a refresher, consult the following websites:

[How stuff works: Ethernet](#)  
[Wikipedia: Routing](#)  
[Whatis.com: network topology](#)

10. Find the cost of various items in your list of materials. Probably the best option to find good pricing on the appropriate type of equipment.
11. Finally you will have to present the plan to the jury (the class) and they will determine who is going to receive the network administrator position.

[GrayBar Electric](#)  
[Anixter](#)  
[Cisco product pricing](#)

12. Create a report - Your report should consist of the following parts:
  - A title page that includes the names of all members of your group
  - A table of contents
  - An executive summary briefly outlining the project and the benefits of your design as well as the total cost estimate
  - A detailed explanation of your network design and reasoning. Include diagrams or other figures as appropriate
  - Details on the cost of materials in a spreadsheet or accounting report format.
  - A summary of costs by category followed by the itemized costs should both be included.

## Resources

What is a network?

[The Network Book](#)

How do I get started?

[Area 1 Learning Technology Hub](#)

Servers and other network products

[Amazing Computer Trend](#)

Networking products

[C|Net.com Networking Buying Guide](#)

[C|Net.com](#)

[Windy City Networks](#)

[Networking Virtual Library](#)

Vendors

[Gateway Computers](#)

[Dell Computers](#)

[Compaq Computers](#)

Network Consultants

[Alpine Networks](#)

[Telemedia, Networks, and Systems Group](#)

## Evaluation

**The following rubric describes the criteria by which your report will be judged:**

| OVERALL GRADE            | 200 – 176 pts   | 175 – 146 pts   | 145 – 116 pts  | 115 – 0 pts  |
|--------------------------|---|---|--|--|
| <b>Report parts</b>      | All required parts of the report are included and data are properly formatted.<br>25 – 21 pts     | All parts are included, but there are minor formatting issues.<br>20 – 16 pts                           | One part is missing from the report, but it is otherwise formatted correctly.<br>15 – 11 pts | There are two or missing parts and/or serious formatting errors.<br>10 – 0 pts |
| <b>Executive summary</b> | Summary contains all necessary information, is succinct and brief.<br>35 – 31 pts                 | Summary contains all necessary information, but presents additional details or is wordy.<br>30 – 26 pts | Summary is missing some needed information.<br>25 – 21 pts                                   | Summary conveys no significant amount of information.<br>20 – 0 pts            |
| <b>Network design</b>    | Design is well thought out and well presented.<br>40 – 36 pts                                     | Design works, but is either not well planned or not well documented.<br>35 – 31 pts                     | Design will not work as presented, but only requires minor modifications.<br>30 – 26 pts     | Serious design flaws<br>25 – 0 pts   |
| <b>List of materials</b> | All major pieces and smaller components of the infrastructure design are included.<br>25 – 21 pts | List is substantially complete, with minor omissions.<br>20 – 16 pts                                    | List is missing a major item.<br>15 – 11 pts   | List is missing two or more major items.<br>10 – 0 pts                         |
| <b>Costs</b>             | All costs are documented as required.<br>25 – 21 pts  | Costs are missing for one or two small items.<br>20 – 16 pts  | Costs are missing for several small items or for one major item.<br>15 – 11 pts              | Many costs are missing.<br>10 – 0 pts  |
| <b>Mechanics</b>         | No grammar, spelling or punctuation mistakes.<br>50 – 46 pts                                      | One or two punctuation, spelling or error.<br>45 – 41 pts   | Three to five punctuation, spelling or error.<br>40 – 36 pts                                 | More than five errors.<br>35 – 0 pts   |

## Conclusion

Discuss your LAN model with the review board (the class)

After sharing LAN ideas, are there changes you would make to your LAN model?

How can it be improved?

How can you improve your client's networking be improved?

Take your basic networking skills and leverage into a practical situation

As you continue to gain knowledge & be able to do much more sophisticated network designs, build the configurations of the devices on the network, and monitor and maintain them.

## Entire Project:

**DUE: May 7<sup>th</sup> (2 –day classes) & May 8<sup>th</sup> (1-day classes)**