

Assignment network design essay



**ASSIGN
BUSTER**

Read this information well since afterwards no excuses will save you.

Objectives In this project you are required to design a network for a typical educational company that requires its computers to communicate with each other and on the internet. **Company Requirements** A new education center has just opened up with the aim of offering IT related courses to its students. It aims to provide student labs, provide computers for its education and administrative staff and also set up a web server.

The company has just purchased one internet connection providing 1. Mbps for upload and download from its ISP (Mantel). In terms of PC's, the center has the following plans: C] It wants to setup 1 web server to host the center's website and also 1 file server on which its students can access course materials from home. Each of these will be allocated a different DNS name.

L] The center wants to set up two computer labs, each containing 15 PC's with each having internet connectivity. C] Additionally it wants to allocate 7 PC's, each of which will be placed in different classrooms and are to be used by the course tutor.

These PC's also require internet connectivity. 11 Also 7 PC's will be made available for administration, in one separated room, and another 3 for tutors, in another separated room. Please note that management has decided that these PC's should get internet connectivity.

C] And finally a wireless network should be made available to students which can allow students internal access to the file and web server and to the internet. Your task is to come up with a logical, efficient and scalable network design that will be suitable for this center.

The company has allowed an adage Tate budget to purchase any switches, routers, repeaters, access points, ND multifunction devices that may be required. Design Details When drawing up your network designs make sure you split the design up in a way that emphasizes the function of the components. In addition, make sure that no malicious user would be able to circumvent the system.

Additionally, make sure that all sub-networks (subnets) are split up allowing them the fastest access possible depending on their requirements. Also keep the design as simple as possible allowing efficient troubleshoots Eng.

As a hint, always split up networks in terms of function, since PC's with similar function cost probably will often communicate between them. Also do not forget about the ISP link!! Deliverables Build a drawing file (called diagram-jpg) giving all the necessary network designs (enough information should be provided that will allow any technician to build your network structure from scratch). You are requested to depict the network setup by means of diagrams showing the division of the networks and their interconnections.