Bead bar network paper

Technology, Computer

Bead bar specializes in making beads jewellery for the customers. They have three divisions' namely studios, franchises and bead bar on board that requires to be connected for synchronization of activities. It is required to create a network design and the appropriate topology which would be of good to the company for communicating the requirements and sharing information to keep in synchronization with the current state of the business.

The network topology would be discussed which would make thecommunicationfeasible and possible with regard to all the physical and network barriers.

The network design is the architecture which would give a clear picture of the interconnection of devices and the departments to facilitate the sharing of business information. The final section discusses the pros and cons of the proposed topology in question. Background information of Bead Bar: Bead Bar as an organization is departmentalized into three divisions namely studios, franchises and bead bar on board. The present situation does not create a network among the divisions and thus creates inconsistencies in information sharing and knowledge about the company as a whole, at any given point of time.

A computer network would facilitate the process of getting the entire job done for every customer at a lesser time than usual. It would make sure that information regarding ones choice and preferences would be catered and stored for future benefits. The network would enrich the communication among the divisions which in turn would facilitate greater workability and functionality in operation. Recommendation overview: The network recommendation for the Bead Bar could be capitulated into LAN and WAN.

The internal network within the divisions would have a LAN network; however the inter-department communication would be made possible using WAN. Creating a LAN would create an internal network which can be made possible for connecting the personnel in the very department itself. For the LAN network, switches and hubs are used for connecting the sole division itself and for WAN routers are used for interconnecting each other. Explanation of the Network Design: All the three divisions of the company are interconnected using the network cable in a wired network using both LAN and WAN.

Using LAN the computers are interconnected within the office or building premises so that all the employees are able to get information on demand. The head office has a central server where all the information us stored in the database. The other offices are also networked using the LAN technologies. The switch is two layered and used to take care of the storing and forwarding mechanism as stated in Tanenbaum (2003). Using WAN the network connections are using the public data services and get connect to internet and using VPNtechnology, using login credentials.

Network Topology: The LAN technology follows a star topology with hubs. The interconnecting devices used facilitate the use and share of information. The hubs are used to store and forward the information. Star topology is used which would facilitate the efficient use of network resources (Star Topology). Advantages of the architecture: • Having a star topology would make it less expensive in relation to mesh topology. • In a star, each device needs only one link and one I/O port to connect it to any number of other devices (Forouzan, 2003).

• It makes the star topology easy to install and reconfigure with time and need. • Star topology requires far less cabling and any additions, deletions and moves involve only one connection between that device and hub. • It is quite robust in nature; if one link fails the others do not cease to operate. This factor also enhances the fault identification and fault isolation. • As long as the hub is in working condition, it is quite easy to monitor link problems and bypass defective links. • A WAN is used for connecting to the internet so as to get connected with the other departments across geographic locations.

• VPN technology is used to validate the user of the network so that the connection established is secure in nature. It would use the login name and password facilities to enable a secure way of handling data. • A database server is used so that all the information is stored centrally and all the users access the information using their credentials. • The VPN also makes sure that not all users would be able to access all for ms of data an data security and integrity is restricted using the login credentials. Drawbacks of the architecture:

• The VPN technology would be quite expensive to implement (VPN). • The cost of switches and hubs would be costly. • The use of websites where all the computers are used for accessing directly the internet would have made the architecture more accessible but security would have been less. Even the cost of web server would be incurred quite high. Conclusion The primary objective to connect has been taken into account and the network topology has been discussed to give shape to the entire network for interconnecting with the various divisions in the company.

The network architecture and the drawbacks associated with it are thoroughly examined for its feasibility and communication. The network topology would have an upper hand on the drawbacks and is quite sufficient to inter-connect the enterprise to capitalize on its resources. References/ Bibliography Forouzan A. Behrouz (2003). TCP/IP Protocol Suite, second edition. Tata McGraw Hill. Physinfo (2006). Network Topologies. Retrieved October 26, 2007 from http://physinfo. ulb. ac. be/cit_courseware/networks/pt2_1. htm