Network Design

**INTRODUCTION: -**

The Corporation Tech Company Currently network infrastructure includes a 1 web server, 2 application servers, 2 database servers, 2 file and print servers, and 50 workstations. We have to create a network design where it includes logical topology which separate the accounting and sales department, redundant communications (Network Design - 101 Computing, 2022).

The Network Design consist of various components such as web server, application server, database server and file server, workstation, modem, switches, routers, firewall, patch box, and printers. We use DMZ Architecture to secure the internet network from firewall from facing public networks. The internal network performs on sensitive information where DMZ perform on public host systems (Network Design - 101 Computing, 2022). The structure in Network is physical Star topology with a centralized switch is present which connects all the elements. If it comes to a logical topology, is hybrid. To secure a data in a server we use a firewall as a gateway in which it includes public web server. To ensure the confidentiality, integrity of sensitive data we use multiple layers of security like firewall.

For 24/7 Communication in network, we are using a load balancing which disputes network traffic evenly to across the multiple communication channels that no single path is overutilized (Network Design - 101 Computing, 2022). By which reliability and continuous communication even at the failure state.

Using IPV4 over IPV6 is current network only support IPV4 and upgrading to IPV6 significantly increase in hardware and software upgradation and the elements need to be reconfigured to support the ipv6 which result in downtime and failures. (Network Design - 101 Computing, 2022)

**Report Draft: -**

A Unique Network has been established based on the provided notes. The routers has been connected to switches/LAN which act as a transmitting medium. For centralized management the connection needs to be efficient which result in increase in resource sharing, security, scalability and availability. 10.10.10.10 Network sever as established for enabling availability to the printers, storage devices and application which leads to decrease in cost and improve authentication and authorization.

The Network topology separates the accounting and sales department, and each has it own hub, printer server and workstations. As per the guidelines the flow diagram for web, application and data base server has established a connection to firewall, DMZ. Load balancing has been configured under the Apache using modem. The data base server has been configured and linked enables the request flow from webserver to application server to database server. Which main aim of database is to store and retrieve customer details and providing crucial information for payment history.

# References

*Network Design - 101 Computing*. (2022, june 26). Retrieved from 101 Computing - Boost Your Programming Skills!: https://www.101computing.net/design-your-own-network/