



Computer Networking Company in Business Area



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Abstract

Computer Networking is not something new today. Almost every company there is a Computer Network to facilitate the flow of Information within the company. Internet increasingly popular today is a giant Computer Network of Computers that are connected and can interact. This can occur because of the network technology development is very rapid. But in some ways connected to the internet can be a dangerous threat, many attacks that can occur both within and outside such as Viruses, Trojans, and Hackers. In the end, the security of computers and computer networks will play an important role in this case. A good firewall configuration and optimized to reduce these threats. Firewall configuration there are 3 types of them are screened host firewall system (Single- homed bastion), screened host firewall system (Dual-homed bastion), and screened subnet firewall. And also configure the firewall to open the ports Port right to engage connect to the Internet, because the ports to configure a firewall that can filter packets incoming data in accordance with the policy or policies. This firewall architecture that will be used to optimize a firewall on the network.

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1. Introduction

Callaway, E., Gorday, P., Hester, L., Gutierrez, J. A., Naeve, M., Heile, B., & Bahl, V. (2002), the computer network is a system of the computer that is designed to be able to share resources, communication, and can access the information. The purpose of the network is to can achieve its purpose, any part of a computer network can request and provide the service. Comer, D. E. (2018), the design is called a client-server system and is used in almost all computer network applications.

Goodman, P. S., & Darr, E. D. (1998), the development of computer network technology is growing rapidly in line with the needs of the community services that utilize computer network.

In preparing this paper, the authors formulate some problems related to:

- a) The types of network
- b) Advantages and disadvantages of network
- c) How network work

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2. Research Methods

The present study applied qualitative methods. All data is analyzed descriptively. It is used a paraphrase to explain, elaborate, and explore regarding the phenomenon belonging. The conclusion is the last remarked based on the previous discussion and result.

3. Results and Analysis

3.1 The Types of Network

a) Local Area Network (LAN)

Kalakota, R., & Whinston, A. B. (1996), LAN is a network that is limited by a relatively small area, generally bounded by the area of the environment, such as an office in a building, or each room in a school. Usually, the distance between nodes is not farther than 200m.

b) Metropolitan Area Network (MAN)

A MAN usually covers a larger area than a LAN, for example, between building in an area (area such as provinces or states). In this case, the network connecting several small tissue pieces into a larger area of the environment, as an example, namely: a network of several branches of a bank in a major city that is connected with each other.

c) Wide Area Network (WAN)

WAN is a network that normally is already using wireless media, means of satellite or fiber-optic cable because its scope is broader, not just covers one city or between cities within a region, but began to reach the area/region of the authorities of other countries.

WAN is usually more complicated and very complex when compared to LAN and MAN. Use any means to connect between the LAN and the WAN into global communication such as the internet, however between LAN, MAN, and WAN are not much different in some respects, only the scope of its area is different among others.

3.2 Advantages and Disadvantages

a) Advantages

- 1) Access speed is higher due to the provision of network facilities and management is done exclusively by a single computer that is not burdened with other tasks as a workstation.
- 2) The security system and network administration are better because there is a user who served as a network administrator, who manages administration and network security systems.
- 3) The data backup system is better because the client-server network backup is done centrally on the server, which will back up all data used in the network.

b) Disadvantages

- 1) The operational costs are relatively more expensive.
- 2) It takes a special computer enabled one more to be assigned as a server.
- 3) Continuity is very dependent on the network server. If the server is impaired then the whole network will be disrupted.

3.3 How Network Work

The working of the computer network can be seen from the types of network. Types of the network consist of a server-based network and peer to peer network.

a) Server-based network

The server-based network also called client-server consists of a server that typically use operating system windows 2000 server, and a client that uses the operating system Windows 98 SE, windows 2000 professional, Windows XP, or another non-surgical system. All workstation are connected in the network is managed by a

domain controller with domain controllers through this all workstation or user accounts collected and stored the database. Kurose, J. F. (2005), using this server-based network workstation, can be associated with other workstation if there is permission from the domain controller. It aims to maintain the security and confidentiality of the data from unauthenticated users.

b) Peer to peer

In the peer to peer network, every computer can create user accounts and shared resources or share with another computer in a network so that the server is at the same time act as a workstation. This type of network types does not differentiate between the operating system used by the server to the workstation. Generally, this type of network is organized with a workgroup, the operating system that can be used include Windows 98, Windows NT workstation, and Windows 2000 professional, the relationship between workstation no permissions so that the relative lack of data security (Stallings, 1990).

4. Conclusion

The computer network is a collection of a number of devices such as computer, hubs, switches, routers, or other network devices that are connected using communication media. Network benefits include sharing hardware, program processing.

Application of computer network currently applied almost in all places such as bank, office, universities, hospital, tourism, hotel, and even homes. All of this begins with computerization. Computerized provides convenience in the completion the need for sharing information between related parts, and the need for security and data storage. The need is then answered by the technology of computer network. Until now, computer network has become the common need of society, and therefore a basic understanding of computer network is necessary, especially for people who are involved in the world of information technology.

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Statement of authorship

The author(s) have a responsibility for the conception and design of the study. The author(s) have approved the final article.

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