ALBUS SECURITY

Improvement Of Networking

Networking has experienced such fast and strong progress in recent times. People have developed networking over time, working on new protocols, networking devices, and other projects to build the world of networking.

Back in the 1960s, computers were starting to become more powerful, but they couldn't easily communicate with each other. Researchers and scientists realized the importance of connecting computers to share information and resources. **That's when ARPANET came into the picture**.

ARPANET (Advanced Research Projects Agency Network) was created in the late 1960s by the U.S. Department of Defense's **Advanced Research Projects Agency (ARPA)**. It was the first widearea network and laid the foundation for the Internet we know today.

ARPANET connected different research institutions and universities, allowing them to exchange data and collaborate. It used a technology called packet switching, where data is divided into small packets and sent across the network. This approach ensured efficient and reliable transmission of information.

As time went on, **ARPANET** grew, and more computers were connected. However, there was a need for a standardized protocol to enable seamless communication across different types of computers and networks. That's where **TCP/IP** comes in.

TCP/IP (Transmission Control Protocol/Internet Protocol) was developed in the 1970s to provide a common language for computers to communicate over the network. It consists of two main protocols: TCP, responsible for breaking

data into packets, ensuring their reliable delivery, and reassembling them at the destination, and IP, handling the addressing and routing of packets across the network.

TCP/IP became the foundation of the Internet. It allowed computers and networks to interconnect globally, leading to the birth of the modern Internet. Now, people from different parts of the world could easily share information, send emails, browse websites, and engage in online activities.

In the following years, the Internet continued to evolve and grow rapidly. More protocols, applications, and services were developed, making it a fundamental part of our lives today. The World Wide Web (WWW) emerged in the 1990s, bringing user-friendly interfaces, websites, and hyperlinks, making the Internet accessible to everyone.

With the widespread adoption of TCP/IP and the Internet, new technologies and innovations flourished. Today, we have social media, online shopping, video streaming, and countless other digital services that have transformed how we connect, communicate, and access information.