TCP/IP and OSI Model

Overview of TCP/IP and OSI Models

The TCP/IP and OSI models describe how data is transmitted across networks, providing layered frameworks for communication.

Both models standardize protocols to ensure diverse devices can communicate effectively.

OSI Model Layers

The OSI model includes seven layers: Physical, Data Link, Network, Transport, Session, Presentation, and Application.

Each layer has responsibilities such as routing, encryption, error correction, and session management.

TCP/IP Model Layers

The TCP/IP model consists of four layers: Link, Internet, Transport, and Application.

It is the practical model used on the internet, focusing on reliable transmission and addressing.

Comparison of Models

Both models promote modular communication but differ in complexity and structure.

The OSI model is theoretical, while TCP/IP is widely implemented in real-world networking.