

## WWW

WWW" stands for "World Wide Web." It is a system of interconnected documents and resources that are accessed via the internet using web browsers. The World Wide Web was created by Sir Tim Berners-Lee in 1989 and became publicly available in 1991. It is a way to access and share information on the internet, including text, images, videos, and other multimedia content, by using hyperlinks to navigate between web pages. The World Wide Web has revolutionized the way people access and share information, and it is a fundamental part of the modern internet.

## HTTP SMTP SNMP

HTTP, SMTP, and SNMP are three distinct protocols used in the field of computer networking and communication. Each serves a specific purpose and plays a crucial role in facilitating various aspects of data transfer and network management. Here's an introduction to each of them:

### HTTP (Hypertext Transfer Protocol):

- Purpose: HTTP is the foundation of data communication on the World Wide Web. It enables the transfer of web pages, images, videos, and other resources between web servers and web browsers or other HTTP clients.
- Functionality: HTTP operates as a request-response protocol. A client, typically a web browser, sends an HTTP request to a web server, specifying the resource it wants (e.g., a webpage), and the server responds with the requested data. It uses a set of methods (e.g., GET, POST, PUT) to interact with web resources.
- Key Characteristics: Stateless, text-based (uses headers for communication), operates over TCP/IP, and is commonly used with URLs (Uniform Resource Locators).

### SMTP (Simple Mail Transfer Protocol):

- Purpose: SMTP is the standard protocol for sending and receiving email messages over the internet. It focuses on the transmission of email from the sender's email client to the recipient's email server.
- Functionality: SMTP is responsible for routing and delivering email messages. When you send an email, your email client uses SMTP to communicate with your email server, which then forwards the message to the recipient's email server using SMTP. The recipient's email client retrieves the message from their server.

- Key Characteristics: Primarily used for sending emails, operates over TCP/IP, text-based communication, and works with both plain text and encrypted connections (SMTPS).

#### SNMP (Simple Network Management Protocol):

- Purpose: SNMP is used for managing and monitoring network-connected devices and systems, such as routers, switches, servers, and printers. It allows network administrators to collect data, configure devices, and receive alerts about network issues.
- Functionality: SNMP operates in a manager-agent architecture. Network management systems (managers) use SNMP to request and receive information from SNMP-enabled devices (agents). Managers can also send configuration changes or commands to agents.
- Key Characteristics: Designed for network management, uses a hierarchical structure of Management Information Bases (MIBs) to organize data, operates over UDP (User Datagram Protocol) and SNMPv3 provides security features such as authentication and encryption.

In summary, HTTP is essential for web browsing and accessing online resources, SMTP is used for sending and receiving email messages, and SNMP is crucial for monitoring and managing network devices and systems. Each protocol serves a specific role in the world of computer networking and communication.