

Application Protocols

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Introduction

Overview of
Application
Protocols

TCP/IP is the
foundation of
Internet
communication.

Application
protocols are
specific to the
type of activity
the user is
conducting.

In this
presentation, we
will explore
protocols for
websites, emails,
and file transfers.

Protocols for Websites

HTTP and HTTPS

HTTP (Hypertext Transfer Protocol): Used to load web pages.

HTTPS (Hypertext Transfer Protocol Secure): Secure version of HTTP, encrypts data to prevent eavesdropping.

Website Content:

- Created using **HTML (Hypertext Markup Language)**.
- **CSS (Cascading Style Sheets):** Used for web design templates.

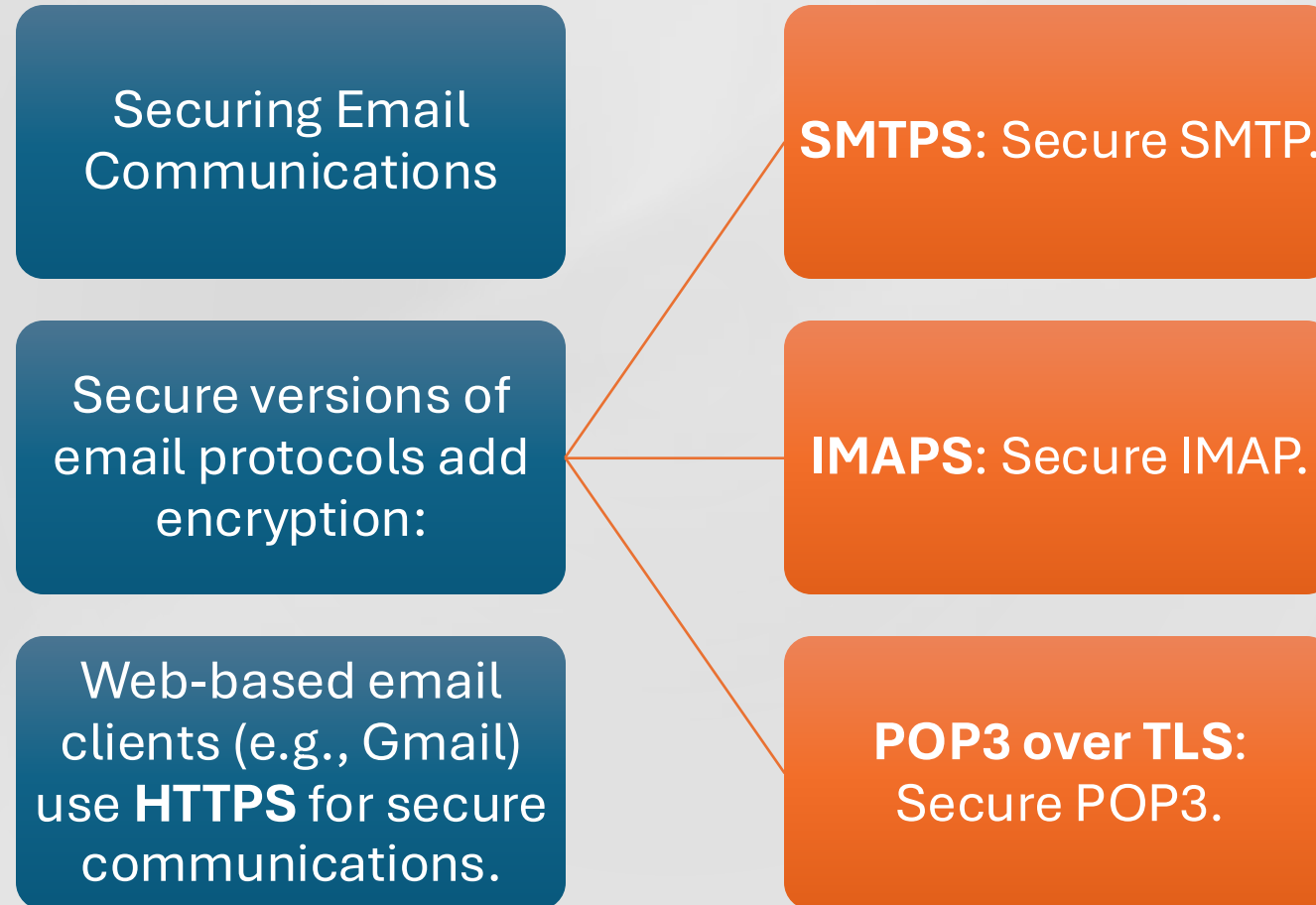
Email Protocols

How Email Works



SMTP (Simple Mail Transfer Protocol) is used to send emails between servers. **POP3 (Post Office Protocol)** Downloads messages to your computer and deletes them from the server. **IMAP (Internet Message Access Protocol)** Stores emails on the server, allowing access from multiple devices.

Secure Email Protocols



File Transfer Protocols

Transferring Files Securely

- **FTP (File Transfer Protocol):** Transfers files between clients and servers but lacks security.
- Secure alternatives:
 - **SFTP (Secure File Transfer Protocol):** Adds encryption.
 - **FTPS (File Transfer Protocol Secure):** FTP over SSL/TLS.



Key Takeaways

Essential Concepts

Websites are delivered through **HTTP** or **HTTPS**. Email is transferred using **SMTP** for sending and **IMAP** or **POP3** for receiving. For secure email, use **IMAPS**, **SMTPS**, or **POP3 over TLS**. Instead of FTP, use SFTP or FTPS for secure file transfers.

The End Application Protocols

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