



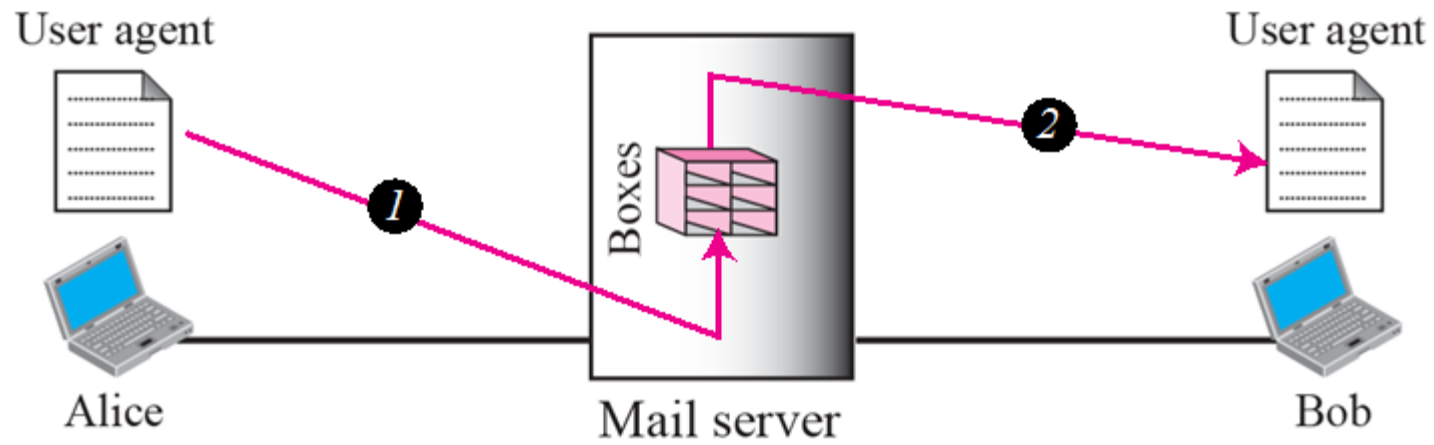
# EMAIL



E-mail is defined as the transmission of messages on the Internet. It is one of the most commonly used features over communications networks that may contain text, files, images, or other attachments.

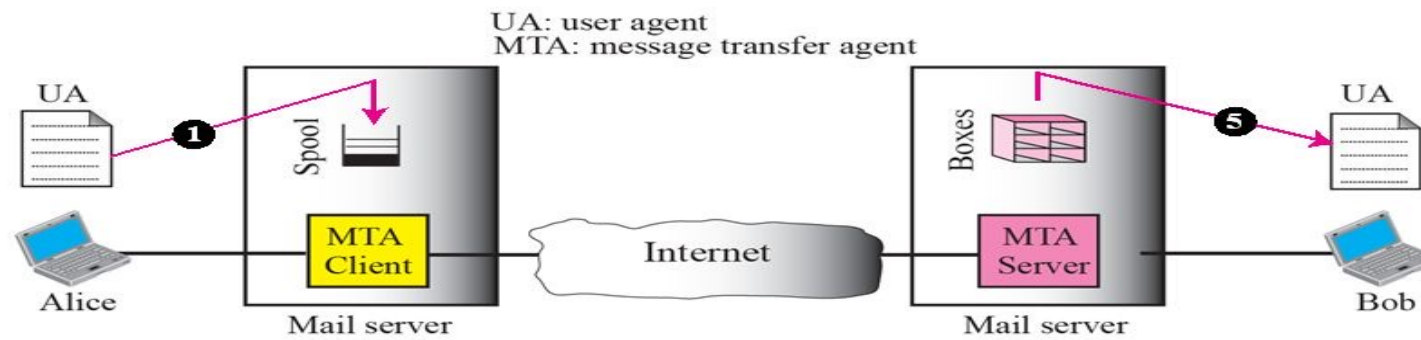
The **three main components of an Email** are

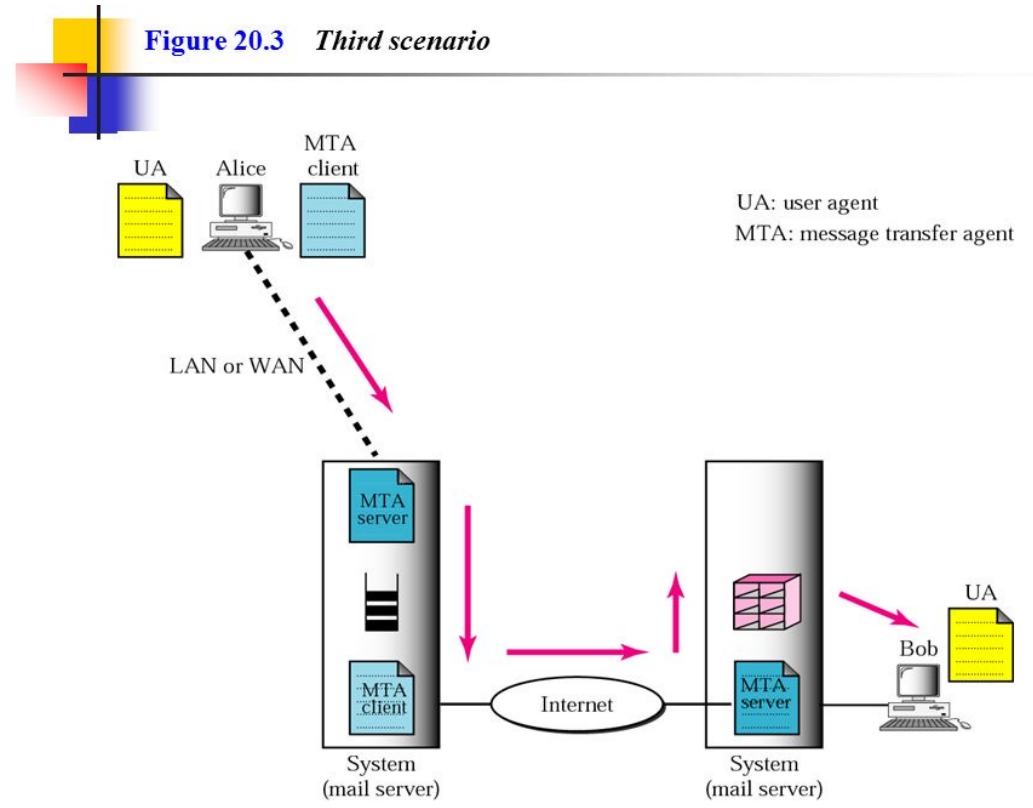
1. User Agent (UA)
2. Message Transfer Agent (MTA) – SMTP
3. Message Access Agent (MAA) - IMAP , POP





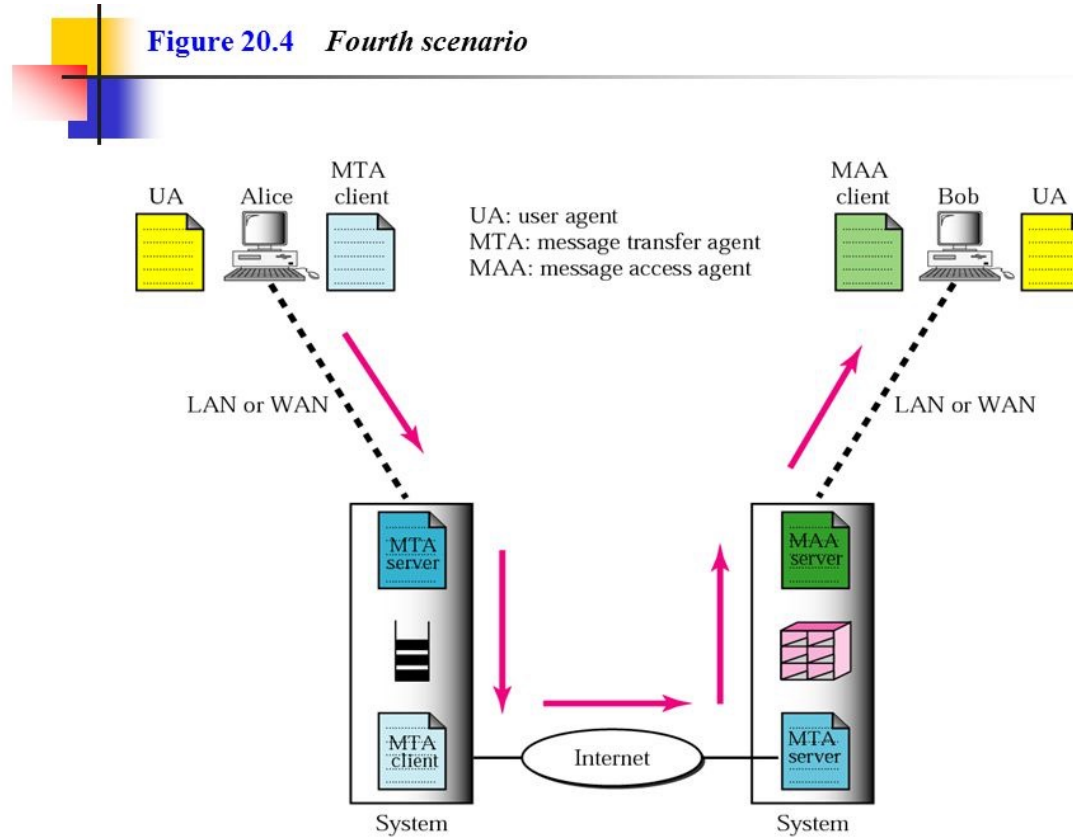
**Figure 2** *Second scenario*





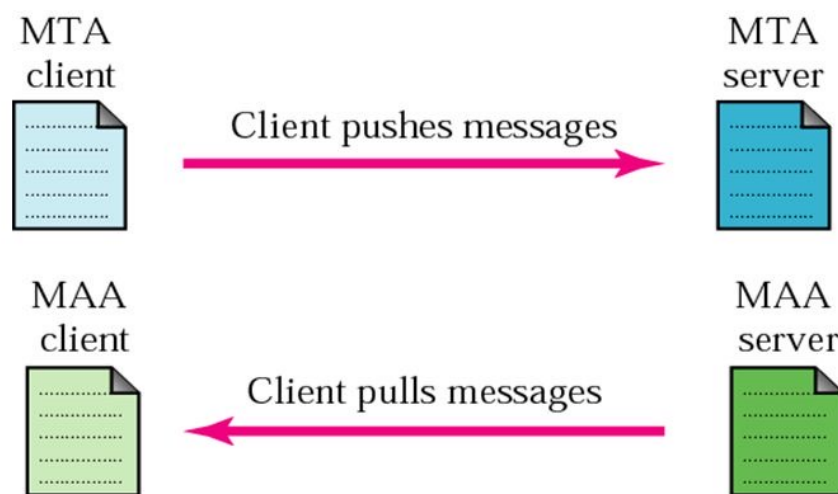
TCP/IP Protocol Suite

7



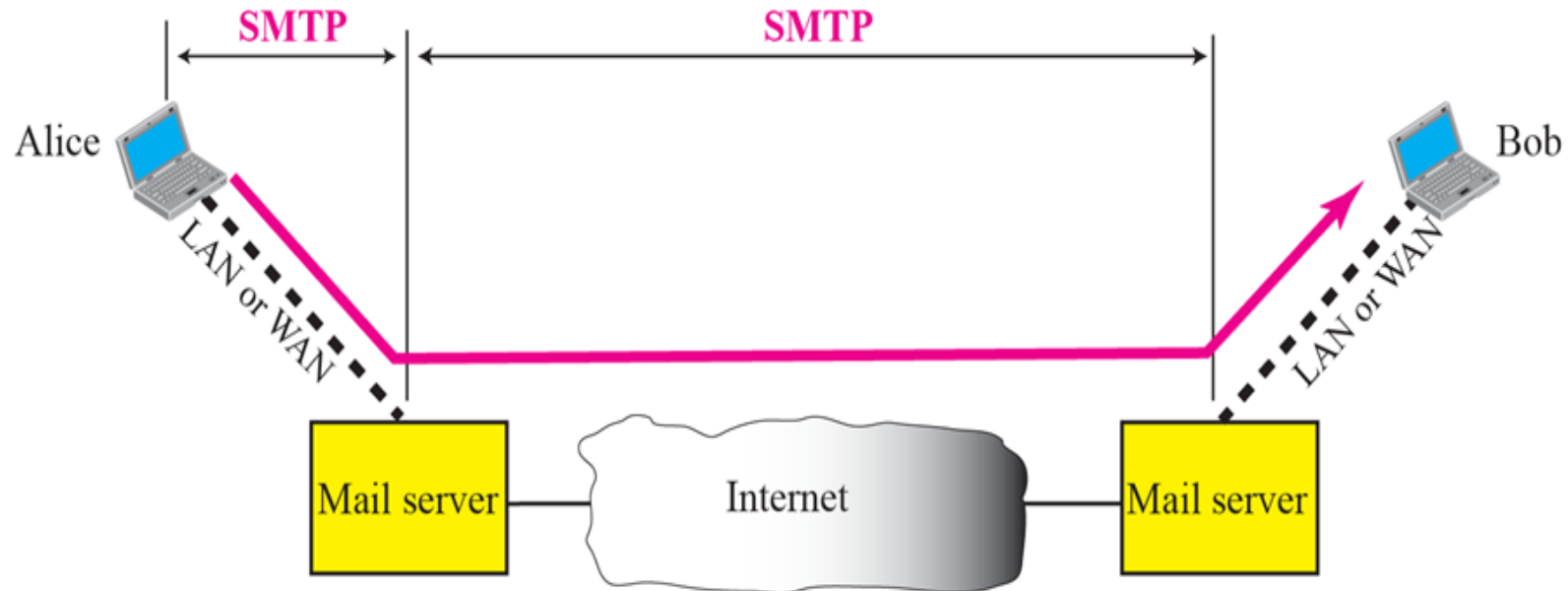


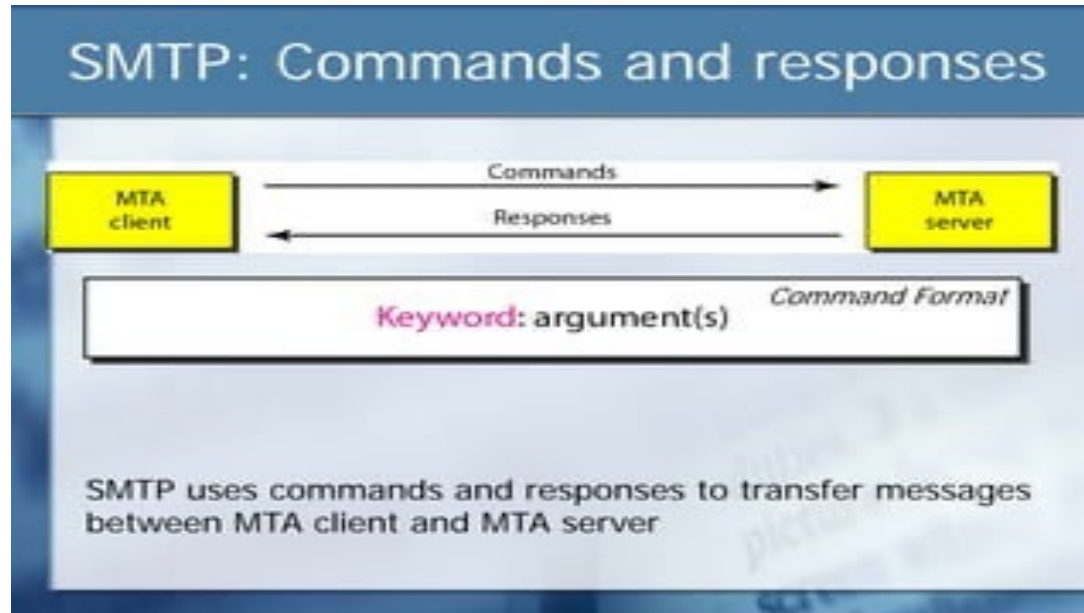
**Figure 20.5** *Push vs. pull*





# Simple Mail Transfer Protocol







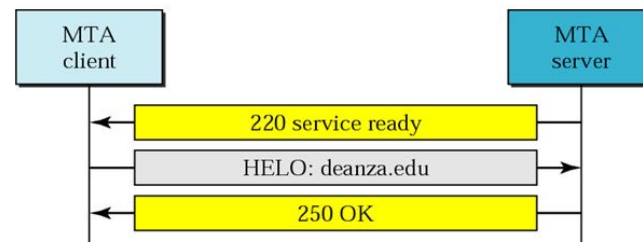


**Table 20.4 Commands**

<i>Keyword</i>	<i>Argument(s)</i>
HELO	Sender's host name
MAIL FROM	Sender of the message
RCPT TO	Intended recipient of the message
DATA	Body of the mail
QUIT	
RSET	
VERFY	Name of recipient to be verified
NOOP	
TURN	
EXPN	Mailing list to be expanded
HELP	Command name
SEND FROM	Intended recipient of the message
SMOL FROM	Intended recipient of the message
SMAL FROM	Intended recipient of the message

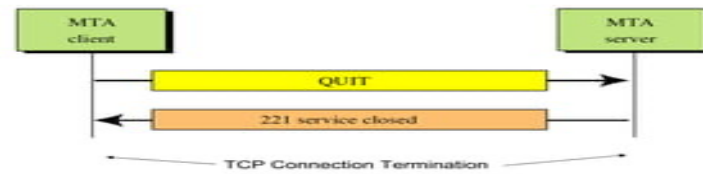


**Figure 20.16** *Connection establishment*



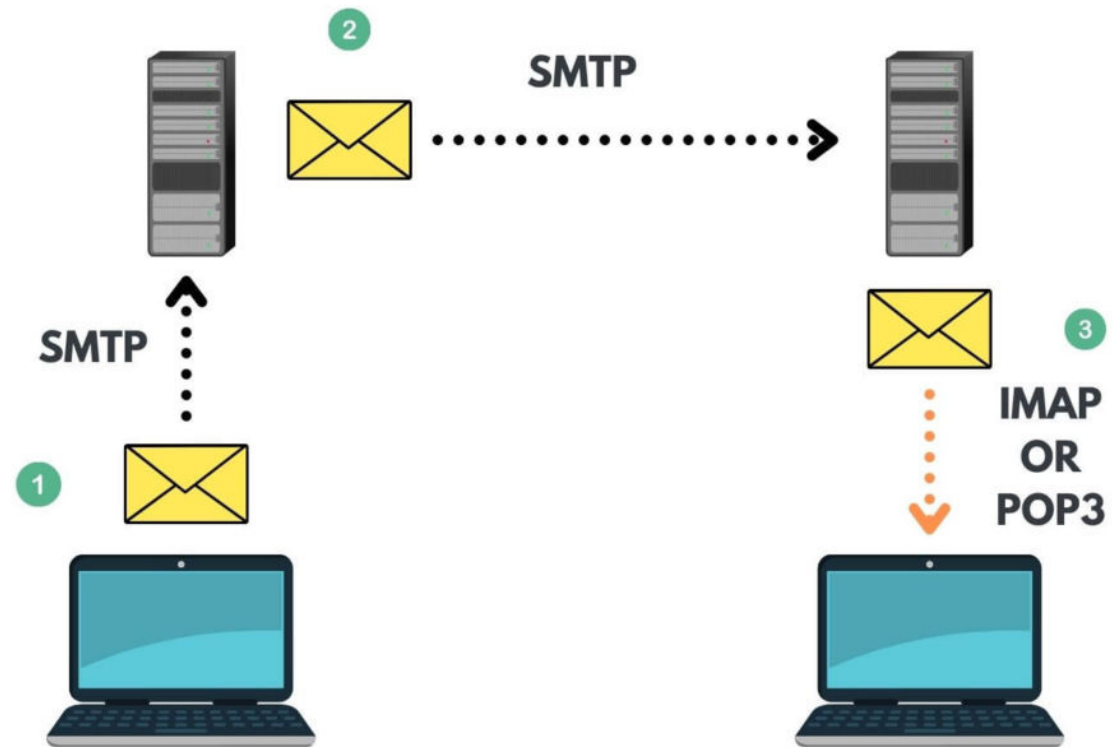


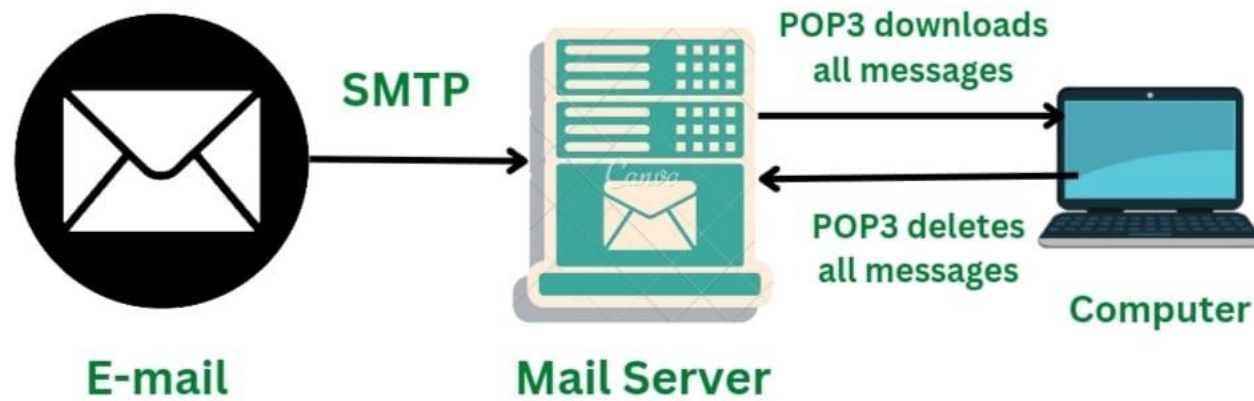
### Connection Termination





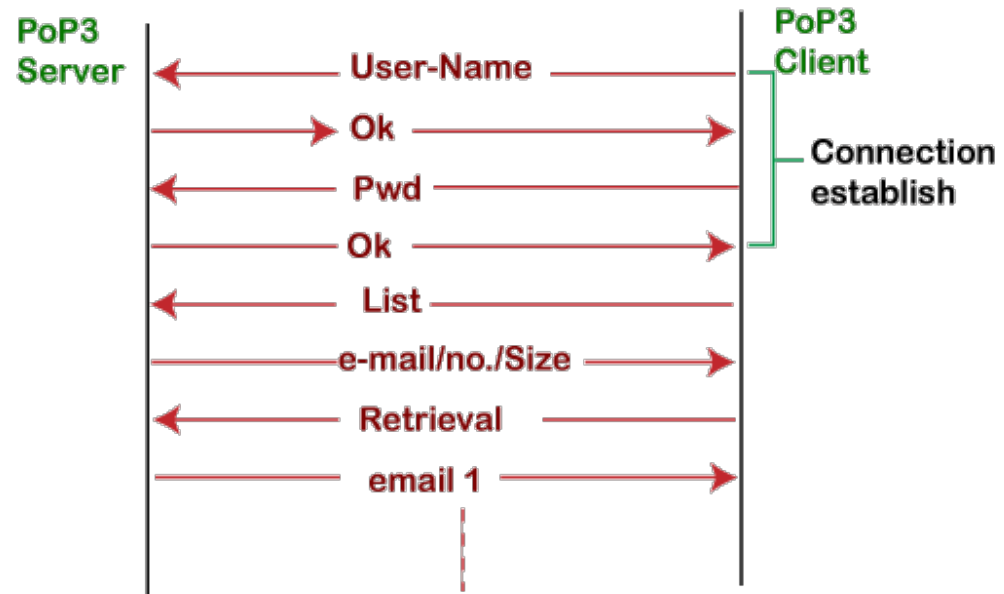
# Post Office Protocol3





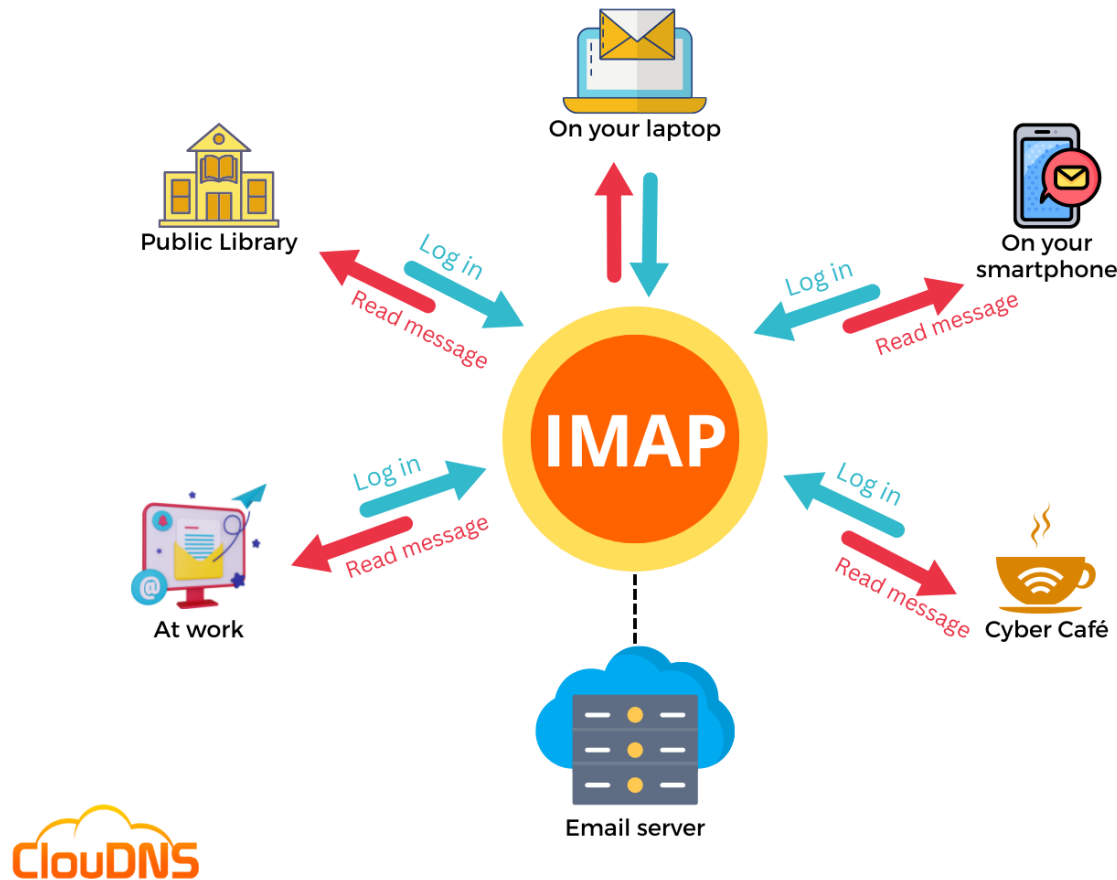


### PoP3: Post office Protocol version3





# Internet Message Access protocol





## POP3

EMAIL [All] [SEARCH]

- Inbox
- Drafts
- Sent
- Deleted
- My folders
  - Meeting
  - Letters
  - Job

<input type="checkbox"/>	• Network Solutions
<input type="checkbox"/>	• PowerCert
<input type="checkbox"/>	• Macy's Sale
<input type="checkbox"/>	• GoDaddy
<input type="checkbox"/>	• Take the Survey
<input type="checkbox"/>	• New Poll

**DOES NOT SYNC FOLDERS**

## IMAP

EMAIL [All] [SEARCH]

- Inbox
- Drafts
- Sent
- Deleted
- My folders
  - Family
  - Tasks
  - Job

<input type="checkbox"/>	• Network Solutions
<input type="checkbox"/>	• PowerCert
<input type="checkbox"/>	• Macy's Sale
<input type="checkbox"/>	• GoDaddy
<input type="checkbox"/>	• Take the Survey
<input type="checkbox"/>	• New Poll

**DOES SYNC FOLDERS**

EMAIL [All] [SEARCH]

- Inbox
- Drafts
- Sent
- Deleted
- My folders
  - Important

<input type="checkbox"/>	• Network Solutions
<input type="checkbox"/>	• PowerCert
<input type="checkbox"/>	• Macy's Sale
<input type="checkbox"/>	• GoDaddy

EMAIL [All] [SEARCH]

- Inbox
- Drafts
- Sent
- Deleted
- My folders
  - Family
  - Tasks
  - Job

<input type="checkbox"/>	• Network Solutions
<input type="checkbox"/>	• PowerCert
<input type="checkbox"/>	• Macy's Sale
<input type="checkbox"/>	• GoDaddy
<input type="checkbox"/>	• Take the Survey
<input type="checkbox"/>	• New Poll

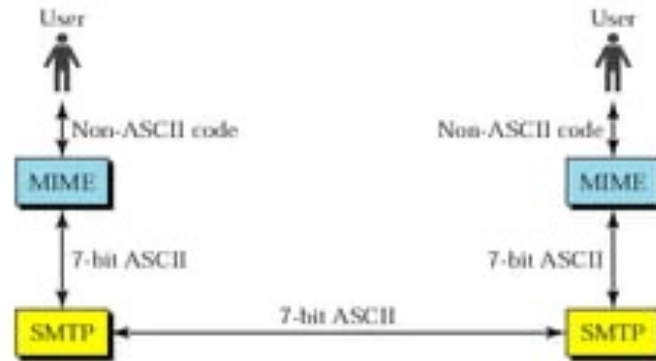




# Multipurpose Internet Mail Extension



Figure 26.4 MIME



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MIME headers

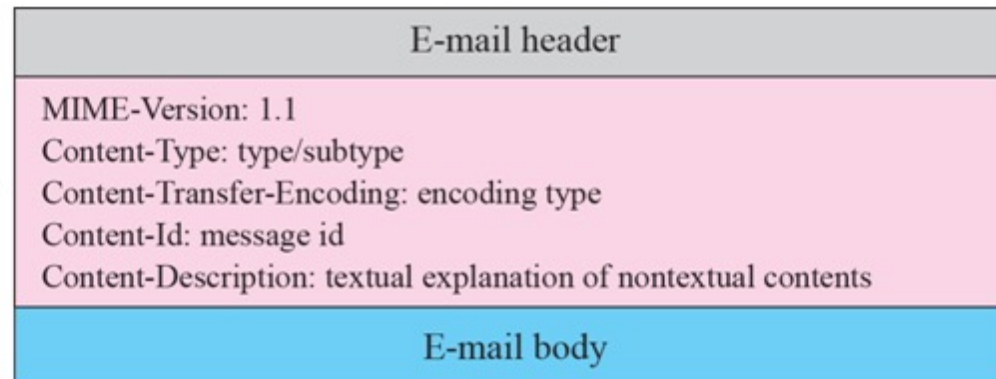




Table 18.3 MIME Content Types

Type	Subtype	Description
Text	Plain	Unformatted text; may be ASCII or ISO 8859.
	Enriched	Provides greater format flexibility.
	Mixed	The different parts are independent but are to be transmitted together. They should be presented to the receiver in the order that they appear in the mail message.
Multipart	Parallel	Differs from Mixed only in that no order is defined for delivering the parts to the receiver.
	Alternative	The different parts are alternative versions of the same information. They are ordered in increasing faithfulness to the original, and the recipient's mail system should display the "best" version to the user.
	Digest	Similar to Mixed, but the default type/subtype of each part is message/rfc822.
	Message	The body is itself an encapsulated message that conforms to RFC 822.
Message	Partial	Used to allow fragmentation of large mail items, in a way that is transparent to the recipient.
	External-body	Contains a pointer to an object that exists elsewhere.
	Image	jpeg
gif		The image is in GIF format.
Video	mpeg	MPEG format.
Audio	Basic	Single-channel 8-bit ISDN mu-law encoding at a sample rate of 8 kHz.
Application	PostScript	Adobe Postscript format.
	octet-stream	General binary data consisting of 8-bit bytes.