

Electronic Mail Protocols

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Overview

E-mail protocols are communication protocols with the goal of sending and receiving Electronic Mail

SMTP

POP3

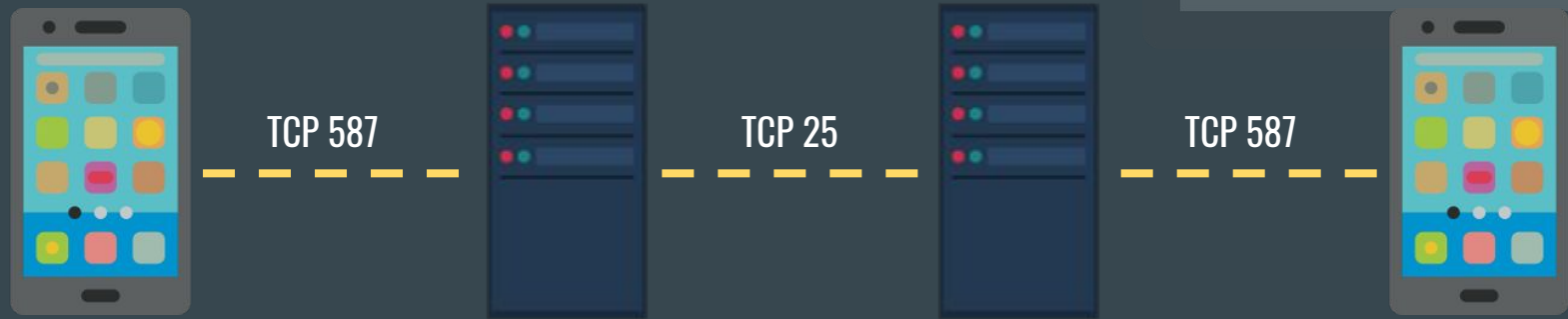
IMAP

SMTP Protocol

- Simple Mail Transfer Protocol
- **TCP/IP Delivery Protocol**
- Born in 1981, edited in 1982 and finalised in 2008
- Servers use it for communicating between each other



SMTP Protocol



SMTP Protocol

S: 220 smtp.example.com ESMTP Postfix

C: HELO relay.example.com

S: 250 smtp.example.com, nice to meet you!

C: MAIL FROM: <bob@example.com>

S: 250 OK

C: RCPT TO: <alice@example.com>

S: 250 OK

C: DATA

S: 354 End data with [CR][LF].[CR][LF]

C: From: "Bob" <bob@example.com>

To: "Alice" <alice@example.com >

Date: Tue, 15 January 2008 16:02:43

Subject: Test Message

Hi! This is a test message.

S: 250 Ok: queued as 12345

C: QUIT

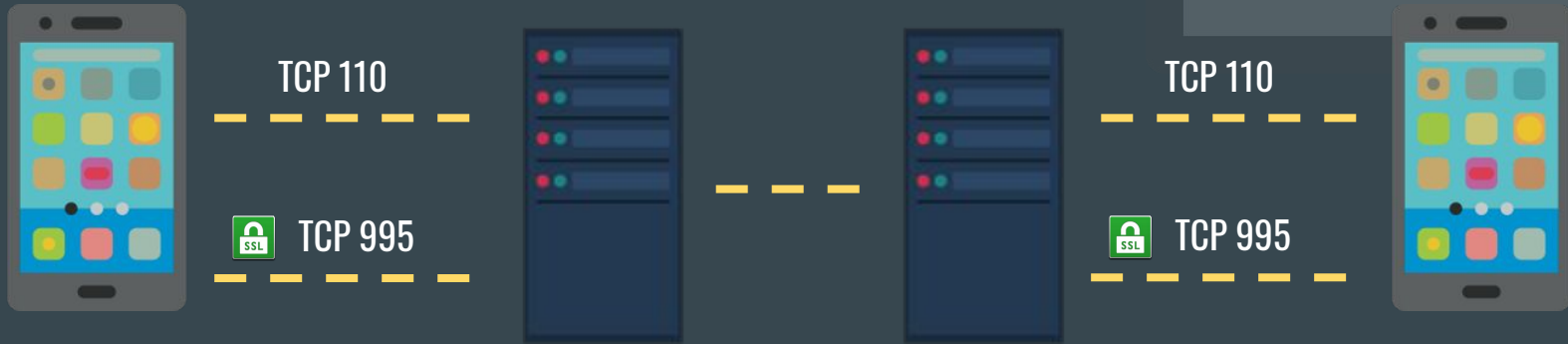
S: 221 Bye

POP3 Protocol

- Post Office Protocol, v3
- **Storage and Retrieval Protocol**
- Born in 1984, v2 in 1985 and v3 in 1988
- Used mostly by clients.



POP3 Protocol



POP3 Protocol

S: +OK <22593.1129980067@example.com>

C: USER pippo

S: +OK

C: PASS pluto

S: +OK

C: LIST

S: +OK

1 817

2 124

C: RETR 1

S: +OK

Return-Path: <pippo@example.org>

Delivered-To: pippo@example.org

Date: Sat, 22 Oct 2005 13:24:54 +0200

From: Mario Rossi <mario@rossi.org>

Subject: xxxx

Content-Type: text/plain;

charset=ISO-8859-1

Hi! This is a test message!

C: DELE 1

S: +OK

IMAP Protocol

- Internet Message Access Protocol
- **Retrieval and Management Protocol**
- Born in 1986, v2 in 1988 and 1990, v3 in 1991, v2bis in 1993
- Current version is v4
- Like POP3, used mostly by clients.
- Way more advanced than POP3

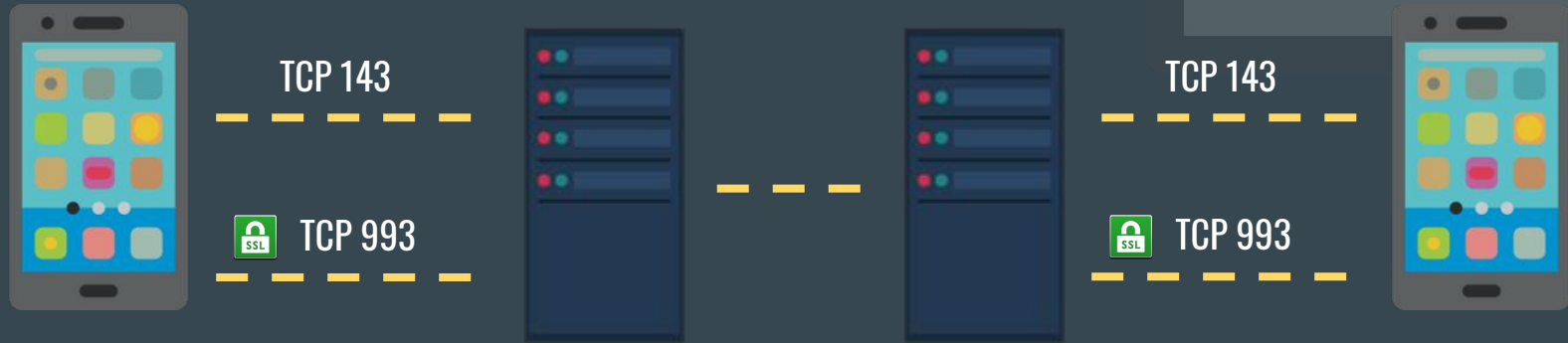


IMAP Protocol - Advantages over Pop3

- Connected and disconnected modes of operation
- Multiple clients connected simultaneously to the same mailbox
- Partial fetch
- Message state information
- Server side searches



IMAP Protocol



IMAP Protocol

C: <open connection>

S: * OK IMAP4rev1 Service Ready

C: a001 login mrc secret

S: a001 OK LOGIN completed

C: a002 select inbox

S: * 18 EXISTS

* FLAGS (\Answered \Flagged \Deleted \Seen \Draft)

* 2 RECENT

* OK [UNSEEN 17] Message 17 is the first unseen
message

a002 OK [READ-WRITE] SELECT completed

C: a003 fetch 12 body[header]

S: * 12 FETCH (BODY[HEADER] {342})

Date: Wed, 17 Jul 1996 02:23:25 -0700 (PDT)

From: Terry Gray <gray@cac.washington.edu>

Subject: IMAP4rev1 WG mtg summary and minutes
[...]

a003 OK FETCH completed

C: a004 store 12 +flags \deleted

S: * 12 FETCH (FLAGS (\Seen \Deleted))

a004 OK +FLAGS completed

C: a005 logout

S: * BYE IMAP4rev1 server terminating connection

S: a005 OK LOGOUT completed

Thanks for listening!

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