

MESSAGE TRANSFER AGENT:SMTP

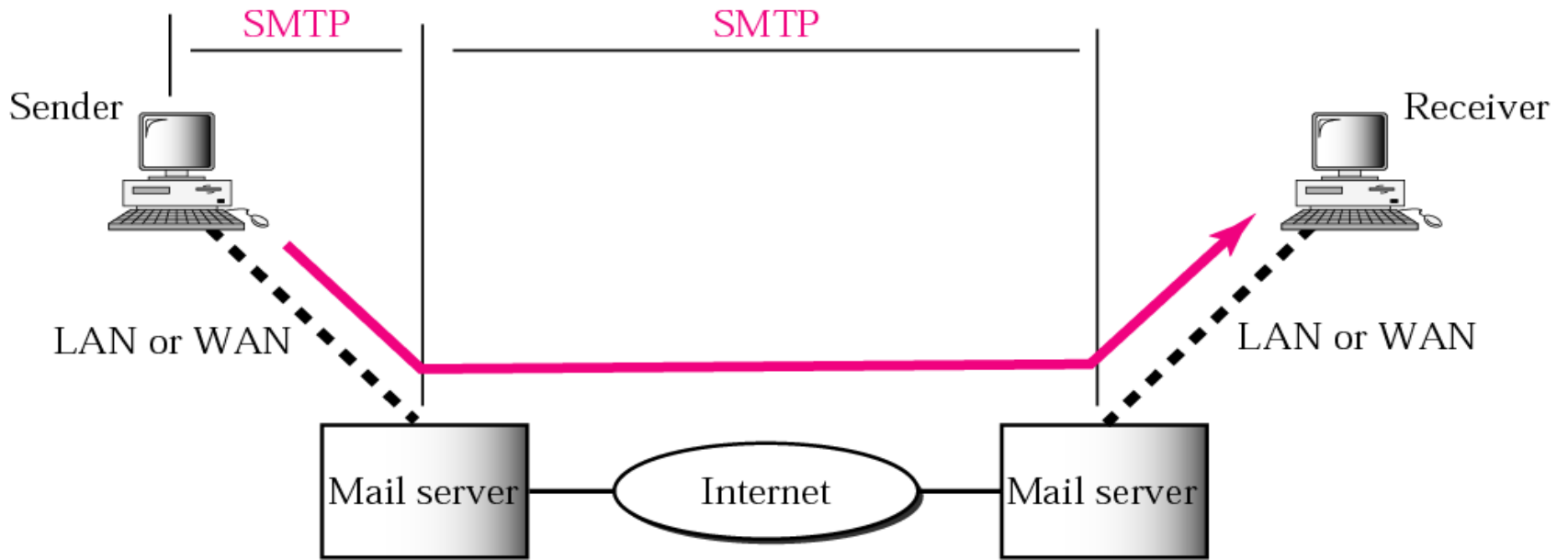
The actual mail transfer requires message transfer agents (MTAs). The protocol that defines the MTA client and server in the Internet is called Simple Mail Transfer Protocol (SMTP).

The topics discussed in this section include:

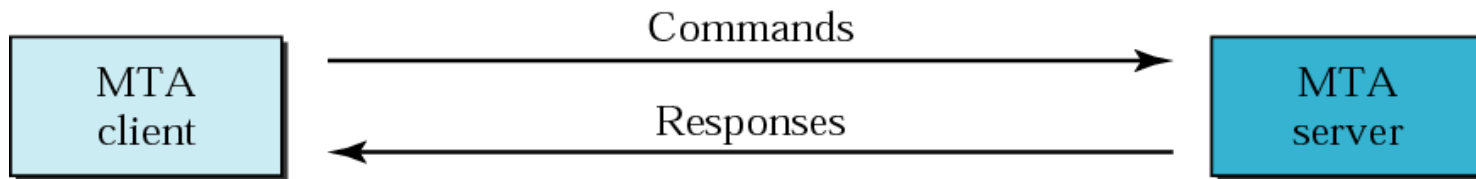
Commands and Responses

Mail Transfer Phases

SMTP range



Commands and responses



Keyword: argument(s)

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

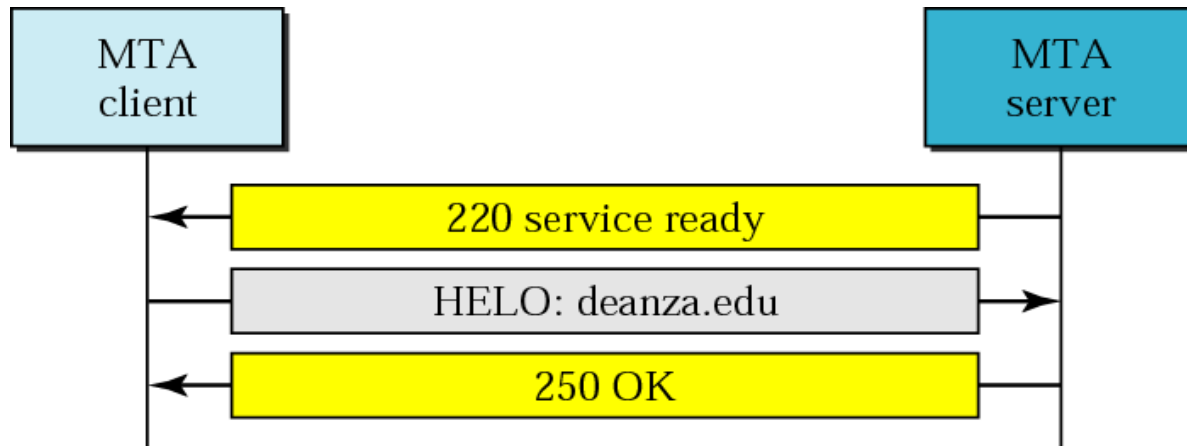
Responses

<i>Code</i>	<i>Description</i>
Positive Completion Reply	
211	System status or help reply
214	Help message
220	Service ready
221	Service closing transmission channel
250	Request command completed
251	User not local; the message will be forwarded
Positive Intermediate Reply	
354	Start mail input
Transient Negative Completion Reply	
421	Service not available
450	Mailbox not available
451	Command aborted: local error
452	Command aborted; insufficient storage

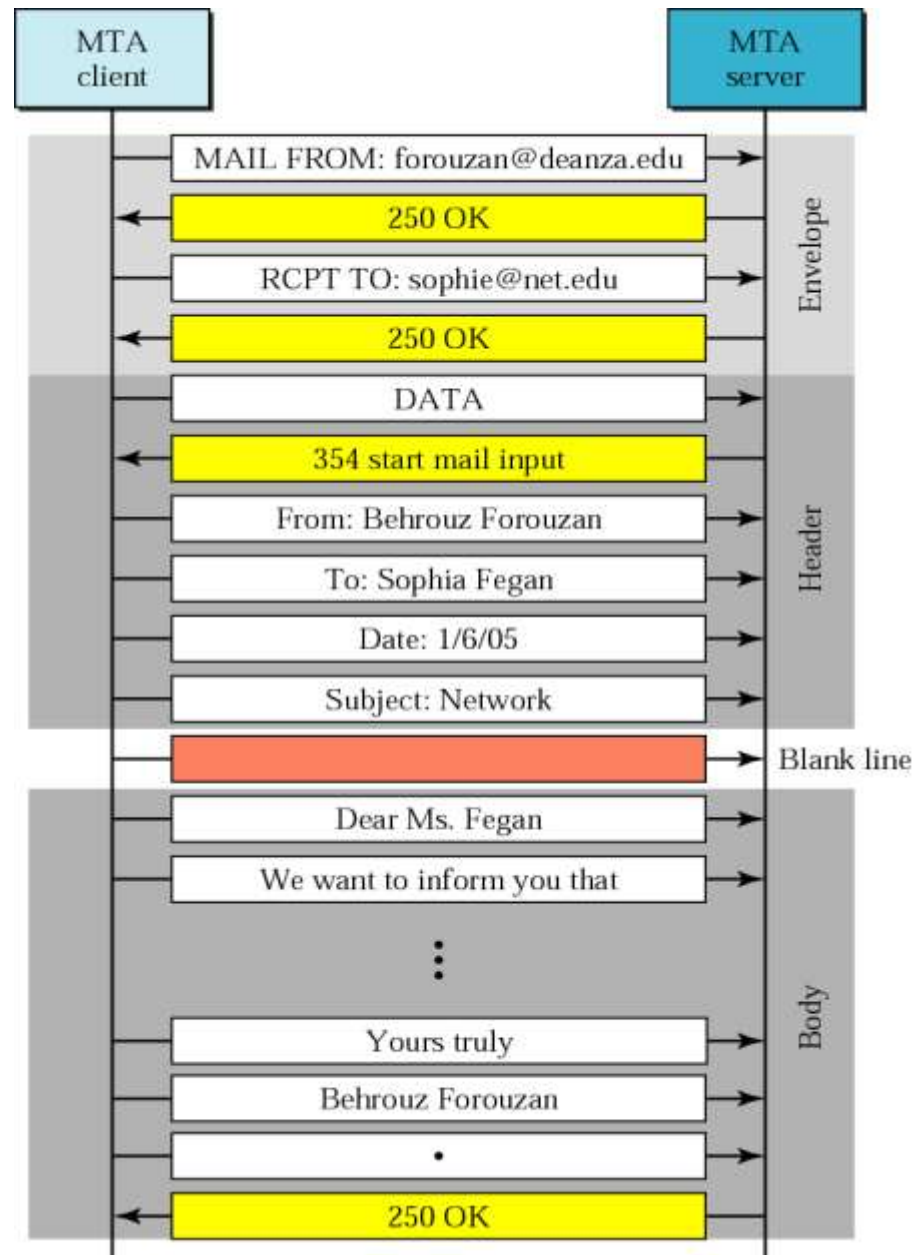
Responses (Continued)

Permanent Negative Completion Reply	
500	Syntax error; unrecognized command
501	Syntax error in parameters or arguments
502	Command not implemented
503	Bad sequence of commands
504	Command temporarily not implemented
550	Command is not executed; mailbox unavailable
551	User not local
552	Requested action aborted; exceeded storage location
553	Requested action not taken; mailbox name not allowed
554	Transaction failed

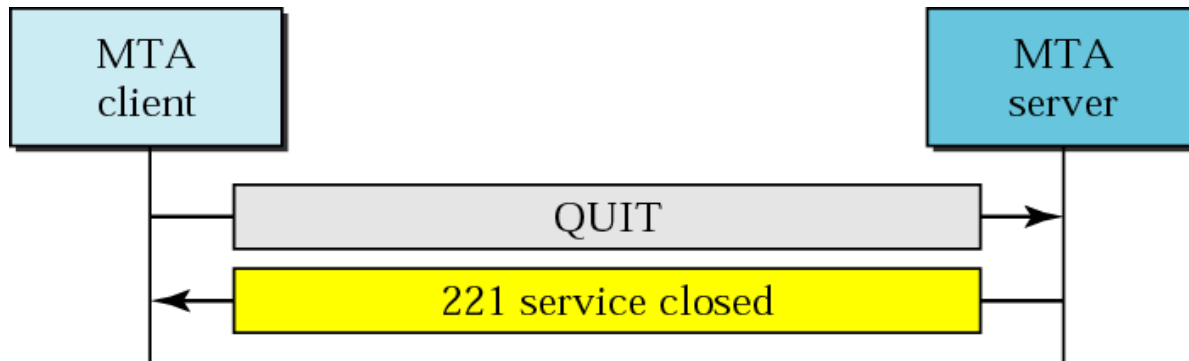
Connection establishment



Message transfer



Connection termination





EXAMPLE 1

Let us see how we can directly use SMTP to send an email and simulate the commands and responses we described in this section. We use TELNET to log into port 25 (the well-known port for SMTP). We then use the commands directly to send an email. In this example, forouzanb@adelphia.net is sending an email to himself. The first few lines show TELNET trying to connect to the adelphia mail server.

```
$ telnet mail.adelphia.net 25
```

```
Trying 68.168.78.100...
```

```
Connected to mail.adelphia.net (68.168.78.100).
```

After connection, we can type the SMTP commands and then receive the responses as shown below. We have shown the commands in black and the responses in color. Note that we have added for clarification some comment lines, designated by the “=” sign. These lines are not part of the email procedure.



EXAMPLE 1 (CONTINUED)

===== **Connection Establishment**=====

220 mta13.adelphia.net SMTP server ready Fri, 6 Aug 2004 . . .

HELO mail.adelphia.net

250 mta13.adelphia.net

===== **Envelope**=====

MAIL FROM: forouzanb@adelphia.net

250 Sender <forouzanb@adelphia.net> Ok

RCPT TO: forouzanb@adelphia.net

250 Recipient <forouzanb@adelphia.net> Ok

===== **Header and Body**=====

DATA

354 Ok Send data ending with <CRLF>.<CRLF>

From: Forouzan

TO: Forouzan

*This is a test message
to show SMTP in action.*

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EXAMPLE 1 (CONTINUED)

===== Connection Termination =====

250 Message received: adelphia.net@mail.adelphia.net

QUIT

221 mta13.adelphia.net SMTP server closing connection

Connection closed by foreign host.