

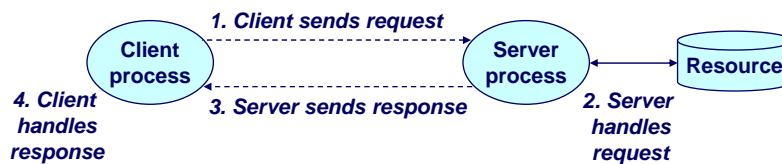
SMTP

Simple Mail Transfer Protocol

A Client-Server Transaction

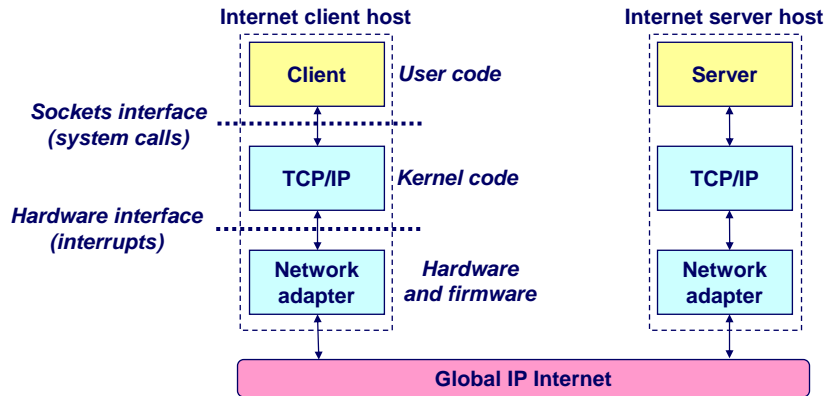
Every network application uses the client-server model:

- A **server** process and one or more **client** processes
- Server manages some **resource**.
- Server provides **service** by manipulating resource for clients.



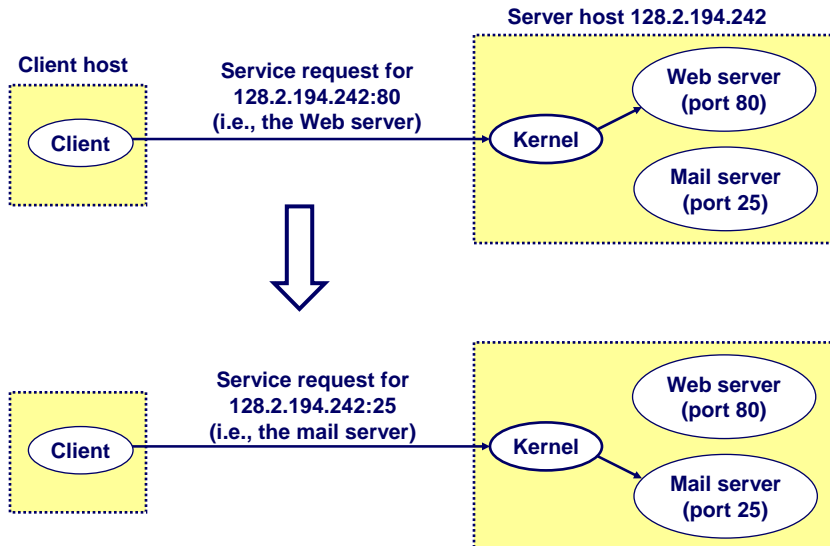
Note: clients and servers are processes running on hosts (can be the same or different hosts).

Hardware and Software Org of an Internet Application



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Using Ports to Identify Services



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Testing Servers Using telnet

The `telnet` program is invaluable for testing servers that transmit ASCII strings over Internet connections

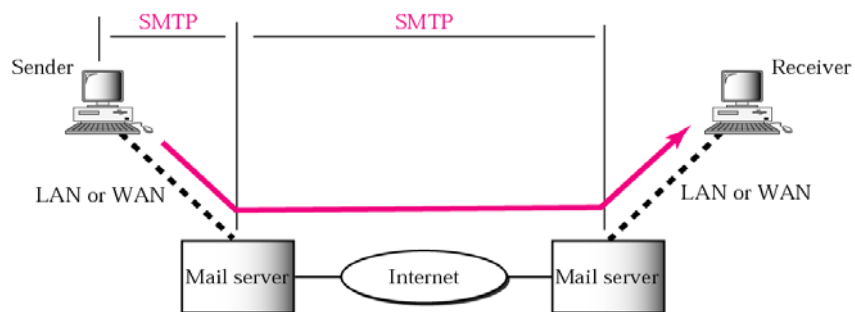
- Echo server
- Web servers
- Mail servers

Usage:

- `unix> telnet <host> <portnumber>`
- Creates a connection with a server running on `<host>` and listening on port `<portnumber>`.

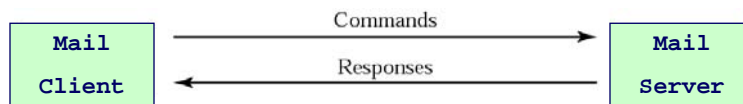
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SMTP – Simple Mail Transfer Protocol



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Commands and Responses



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SMTP 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 |

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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 |

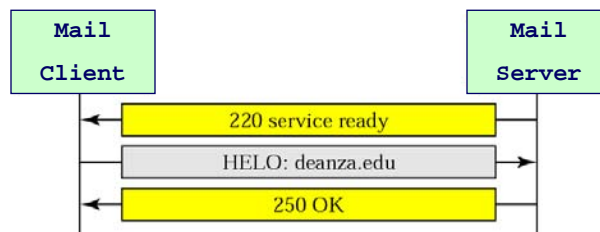
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Responses (Continued)

| | |
|--|--|
| 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 |

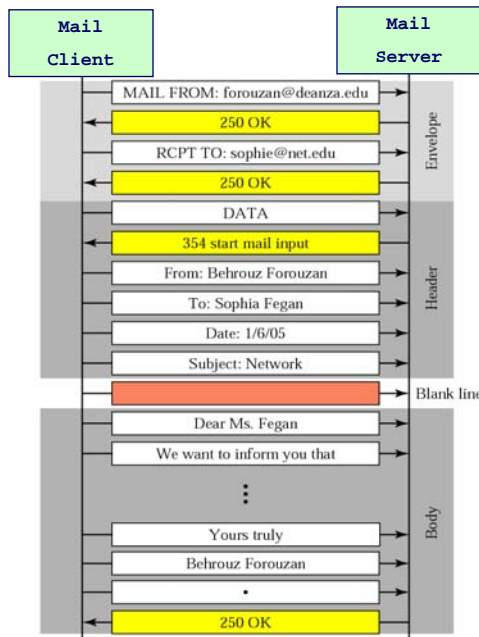
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Connection Establishment



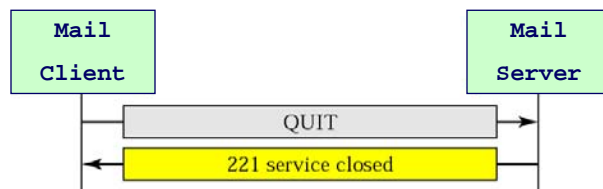
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Message Transfer



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Connection Termination



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SMTP Authentication

Forward reference to

http://computerperformance.co.uk/exchange2003/exchange2003_SMTP_Auth_Login.htm

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