Glossary

CLTS

Connectionless transport service. Data may be exchanged without a prior link between processes. Also known as a datagram protocol because the operation is like sending a letter.

client

A process that makes use of a service or services provided by other processes. A client process initiates requests for services.

concurrent server

A multithreaded server that creates a new process to handle each request, leaving the main server process to listen for more requests. With a multithreaded OS, such as Solaris, it is possible to implement concurrent servers without creating a complete process to handle requests; each request can be dealt with in a single thread.

COTS

Connection-oriented transport service. Requires a logical connection to be established between two processes before data can be exchanged. Conceptually analogous to a telephone call.

ephemeral port numbers

Short-lived port numbers. TCP or UDP can assign an unused port to a process.

ICMP

Internet Control Message Protocol. A network layer protocol dealing with routing, reliability, flow control and sequencing of data.

internetwork

The connection of different physical networks into a large, virtual network. The Internet refers to the TCP/IP-based Internet that connects many commercial sites, government agencies, and universities.

IP

Internet protocol. Core protocol of TCP/IP at the network layer. A connectionless service, it handles packet delivery for TCP, UDP, and ICMP protocols.

ISO/OSI

The International Standards Organization (ISO) model for Open Systems Interconnection (OSI) is a seven layer model for describing networked systems.

iterative server

A single-threaded server that can handle only one request at a time. Requests are received and processed within a single process. It is possible for client processes to be blocked for some time while waiting for requests to be finished.

protocol

A set of rules and conventions that describes how information is to be exchanged between two entities.

protocol stack

A set of layered protocols where each layer has a well-defined interface to the layer immediately above and immediately below.

protocol peers

A pair of protocols that reside in the same layer. They communicate with each other.

RFC

Request for Comments. Formal specifications of the Internet protocols.

server

A process that provides some facility that can be used by other processes. A server process waits for requests.

TCP

Transmission Control Protocol. Built on top of IP at the transport layer, TCP provides a reliable connection-oriented byte stream service between two hosts on an internetwork

UDP

User Datagram Protocol. Built on top of IP at the transport layer, UDP provides an unreliable datagram-based service between two hosts on an internetwork.

well-known port numbers

16-bit port numbers that identify individual processes on a host. Well-known services are provided at well-known port numbers.