

Course Overview

LLC107 Network Programming on Linux course takes an insight in to the Linux networking. Emphasis is given to topics such as interprocess communication, socket programming, signals and threads.

Pre-Requisites

Considerable knowledge of Networking concepts such as packet switching, circuit switching LAN/WAN/MAN. Knowledge of C/C++ programming makes the understanding more effective.

Target Audience

This program targets the programmers intending to build their career over Linux network / socket programming. The program also provides an effective migration for non-Unix professionals.

Course Outline

Networks

- Introduction
- Layering Principles
- OSI, TCP Models
- TCP, IP, UDP
- TCP (ARP, RARP, ICMP)
- IP (Classes, Datagram formats, IP routing, v4 v5 v6)
- ICMP (Error Reporting, Correction. icmp format)

Processes & Signals

- Processes & Process Environment
- System calls related to Process Management
- Daemons
- Signals

Interprocess Communication

- An overview
- Pipes
- FIFO's
- Message Queues
- Semaphores
- Shared Memory
 - Relevant examples on client-server model

Sockets

- Outline of Linux domain Sockets
- Sockaddr structure
- Elementary Socket System Calls
- Advanced Socket System Calls
- Socket Options
- TCP/UDP Client/Server examples
- Session Byte order
- IP addr conversion routines I & II
- Server Application Design
- Interactive Servers
- Concurrent Servers
- Select System Call
- Telnet, Netstat, TFTP & POP3

Broadcasting**Multicasting****Threading**

- Essentials of threads
- Basic thread functions
- Communication b/w threads
- Synchronization b/w threads
- Mutual Exclusion b/w threads
- Multithreaded concurrent Server

Course Duration: Three Days: 10 am - 5.30 pm

Course Fee Rs. 6,000/-

(Plus Service Tax as applicable)