

Linux and SQL Administration for Service Environments

Overview

This hands-on practical course provides participants with a practical introduction to the core components for building a service management environment. This includes UNIX/Linux command line & administrative functions, using scripts, process control, working with databases and using SQL queries. Additionally, a practical introduction to TCP/IP is provided as well as an overview of the network architecture & service platforms of a mobile network. The learning is facilitated with many practical exercises and activities.

You will be able to

- Understand the architecture of a UNIX/Linux file system
- Use the command line to manage and monitor services
- Combine command line tools into simple scripts
- Work with graphical windows environments
- Understand the basics of networking with TCP/IP
- Work with databases
- Use SQL commands to query a database
- Explain the architecture of a mobile network

Who can benefit

Network administrators, software developers and other technical users that need to be familiar with the environment for deploying services

Pre requisite knowledge

Basic technical knowledge of computer systems

Outline

Introduction to Linux/Unix Service Environments

- Installing Linux services
- Starting services automatically
- Updating services
- User access rights to services

Linux command line

- Review of Linux Command Line
- I/O, Redirection, and Pipes
- Command Line Editing
- Command shell – Bash
- Configuring & managing shell variables
- Choosing the Right Path

Filesystem Essentials

- Review of the Linux Filesystem & file attributes
- File descriptors
- Managing devices
- Text Editing Tools
- Editing with VI & nano

Service Process Control

- Review of process control
- Checking running services
- Managing Process Priorities
- Cron Processes
- Monitoring the system, CPU, Memory & Disk-SAR

Shell Scripting

- Review of shell scripting
- Script Automation
- Using scripts for remote access

Using X-Windows

- Configuring X-windows environment
- Window Managers
- Controlling resource usage

TCP/IP Networking in Linux

- Linux networking commands
- Basic IP configuration
- Wireshark and tcpdump
- Using netstat to check port information
- Latency and jitter
- Remote X-Windows, VNC
- SSH tunneling and port forwarding
- Key Linux network applications: ftp, ssh, web

Databases and Connectivity

- Overview of available Linux database systems
- Installing & configuring a database environment
- Connecting to a Database Server
- Selecting a Database
- Users and authentication
- Database remote access
- Database web integration

SQL – The Structured Query Language

- An overview: Databases, Tables, and Fields
- SELECT Statement
- INSERT, UPDATE, and DELETE Statement
- CREATing databases
- Manipulating database content
- Performance, query cost

DURATION	5 days
MAXIMUM CLASS SIZE	12