

Introduction to UNIX

UNIX100

This course provides an introduction to all versions of the UNIX operating system environment (including *AIX*, *SUN/Solaris*, *HP-UX*, *SCO*, and *Linux*) for programmers, system administrators, and users who are familiar with computer use but new to a UNIX environment.

Audience

- Applications programmers
- System administrators
- Operations staff
- End users

Prerequisites

- General knowledge of data processing and computer use

Course Length

- Four days

Learning Objectives

- Access a UNIX system and execute basic commands
- Utilize the features of the UNIX shell to maximize command efficiency and user productivity
- Achieve familiarity with UNIX utilities for file/directory, data, and text manipulation

Teaching Methods

- A combination of presentation, discussion, and hands-on exercises (exercises constitute approximately 33% of class time).
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Course Outline

CA2

The UNIX Environment

- UNIX environment, features, tools
- The shell
- UNIX system versions

Logging-In and Executing Commands

- Logging-in
- Basic commands (*cat*, *more*, *pg*, and more)
- The online *User's Manual*
- Changing your password & logging-off

The UNIX File System

- Files, directories, and special files
- Pathnames
- File system organization
- File and directory commands: *cd*, *pwd*, *ls*, *mkdir*, *rmdir*, *cp*, *mv*, *ln*, *rm*

The vi Screen Editor

Command Line History and Editing

- The *history* and *r* commands
- Command line recall and editing using *vi*

Shell Features

- Input/output redirection
- Diagnostic output and command pipelines
- Shell variables
- Background command execution
- Variable and command substitution
- Creating simple shell programs

Managing UNIX Processes

- Monitoring processes with *ps*
- Controlling processes with *kill* and Job Control

File Access Permissions

- Setting and changing permissions with *chmod*

Customizing your Shell Environment

- Customizing special shell variables
- Customizing the *.profile* and ENV files

Commands for Text and Data Manipulation

- *grep*, *sed*, *awk*, *cut*, *sort*, *find*