

Korn Shell Programming

UNIX200

This course provides an introduction to the advanced user and programming features of the Korn shell program (*ksh*) found in most versions of the UNIX operating system environment (incl. *AIX*, *SUN/Solaris*, *HP-UX*, *SCO*, and *Linux*). The ability to read and create Korn shell programs is important for application developers, UNIX system administrators, operations staff, and advanced end users who wish to automate simple-to-complex routines, customize their environments, and create powerful applications quickly.

Audience

- Applications programmers
- System administrators
- Operations staff
- Advanced end users

Prerequisites

- *Introduction to UNIX*, or equivalent, course (mandatory)
- Prior experience with some programming language

Course Length

- Five days

Learning Objectives

- Create simple-to-complex Korn shell programs to address user application and system administration needs
- Customize the user shell environment
- Learn advanced commands and features of the Korn shell

Teaching Methods

- A combination of presentation, discussion, and hands-on exercises (exercises constitute approximately 33% to 40% of class time).

Course Outline

CA2

Introduction to the Korn Shell

- *ksh* as a command interpreter
- A user environment
- A programming language

Review of Shell Features

- Input/output redirection
- Diagnostic output redirection
- Creating diagnostic output
- Command pipelines
- Shell variables
- Variable and command substitution
- Background command execution
- Quoting

Additional Shell Features

- Command grouping
- Conditional execution
- Conditional variable substitution
- Shell environment options
- Shell debugging options
- Shell built-in commands: *export*, *readonly*, *exec*, *read*, *print*, and others

Shell Programming: The *if* and *test* commands

- Conditional execution with *if*
- The *test* command for files, strings, and arithmetic

Shell Loop Constructs

- The *while* and *until* loops
- *for* loops
- The *break* and *continue* commands

The *case* Multi-Way Branching Construct and the *select* Command for Menus

Korn Shell Arrays

Writing Shell Functions

Process Control in Shell Programs

- Invoking shell programs within shell programs
- Using *exec* and the *.* command
- Shell programs and shell functions

Advanced Regular Expressions and *awk* Programs