UNIX and LINUX Systems Basics II

Course Summary

Description

This course serves to further expose students to the UNIX operating system. By providing a detailed look at additional aspects of the UNIX operating environment, it builds on the foundation of UNIX system structure and commands and is designed to further develop the student's understanding of UNIX. At the completion of this course, the student will have a proficiency in additional commands necessary to fully utilize the power of the UNIX operating system.

Objectives

At the completion of this course, the student will be able to:

- Use scheduling commands to execute other UNIX commands at a future time
- Understand the various UNIX commands that allow for session management
- Understand how UNIX provides networking services such as FTP, Telnet
- Understand how to communicate with other users
- Use printer commands

Topics

- Scheduling Commands
- Session Management
- UNIX in a Wider World - Networking
- Communicating with Other Users
- Printing

Audience

This course is designed for personnel interested in furthering their skills in the UNIX environment.

Prerequisites

The student should have completed the UNIX Systems Basics I course or possess equivalent knowledge such as an understanding of the UNIX file system, permission, basic file management command, use of the vi editor and familiarity with using a UNIX shell interactively.

Duration

Two days

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Course Outline

I. SED
- A. The Streaming Editor
- B. Simple SED commands
- C. SED scripts

II. AWK
- A. A pattern scanning language
- B. Simple AWK commands
- C. AWK scripts

III. Scheduling Commands
- A. The roles of at, batch and cron
- B. At security considerations
- C. Scheduling tasks with at
- D. Batch commands
- E. cron security considerations
- F. Scheduling tasks with cron

IV. Session Management
- A. Multi-tasking and UNIX processes
- B. Executing commands in the background
- C. Terminating processes with the kill command

V. UNIX in a Wider World - Networking
- A. UNIX and TCP/IP
- B. Using IP addresses
- C. Using telnet to log into remote systems
- D. File transfer protocol and ftp
- E. Basic commands
- F. Options
- G. Getting and putting files
- H. Transferring multiple files

VI. Communicating with Other Users
- A. The difference between electronic mail and messaging
- B. Retrieving system mail from cron and lp
- C. Using write and wall
- D. The mesg command
- E. The finger and talk commands

VII. Perl Overview
- A. When to use Perl
- B. Typical Uses
- C. Sample Scripts
- D. Perl Vs Shell Scripting

VIII. Shell Scripting Overview
- A. Comparison of Shells
- B. When to Shell Script
- C. Which Shell to use
- D. Strength and Weaknesses
- E. Example Shell Scripts

IX. Printing (OPTIONAL)
- A. General concepts of the lp “print spooler”
- B. UNIX printer names
- C. Using the lp command and its options
- D. Specifying printer destinations
- E. The print job-id
- F. Using lpstat and its options
- G. Canceling print jobs

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