



Fundamentals of Solaris™ 8 for System Administrators SA-118

The *Fundamentals of Solaris™ 8 for System Administrators* course teaches you how to use UNIX® operating system commands and basic Solaris™ Operating Environment commands. The class is for new users of the Solaris Operating Environment. You learn fundamental command-line features of the Solaris Operating Environment, including file system navigation, file permissions, the vi text editor, command shells, and basic network use.

Who can benefit

Students who can benefit from this course are:

- Persons new to the Solaris Operating Environment
- Persons who will be performing system administration duties and who are unfamiliar with the UNIX operating system

Prerequisites

To succeed fully in this course, students should be able to:

- Use a computer
- Input commands and control characters from a keyboard

Skills gained

Upon completion of this course, students will be able to:

- Log in and log out of Solaris and Common Desktop Environment (CDE) systems
- Compose command-line strings to perform Solaris functions
- Navigate the Solaris Operating Environment file system
- Manipulate text files
- Create files and directories

- Back up and restore user files and directories
- Change permissions of files and directories
- Use the vi text editor
- Identify and modify initialization files
- Use shell features to streamline command execution
- Use basic network commands
- Use commands to search directories and files
- List active user processes and selectively kill user processes

Related courses

After:

- SA-238: *Solaris™ 8 System Administration I*
- SL-120: *Shell Programming*
- SA-245: *Shell Programming for System Administrators*

Course outline

Module 1 – *Introducing the Solaris 8 Operating Environment*

- Identifying the main hardware components of the computer system
- Describing the Solaris Operating Environment in terms of its software components

50%
Lab

4
Days
Duration

- Listing the main purpose for the three main Solaris 8 Operating Environment user shells

Module 2 – *Accessing the System*

- Logging in and out of the system
- Working with password requirements
- Changing your password from the command line and CDE
- The `/etc/passwd` file
- Using command-line syntax
- Using online manual pages to help in constructing command lines

Module 3 – *Accessing Files and Directories*

- Working with the file system structure
- Using absolute and relative path names
- Using the `cd` command to change directories
- Using the `pwd` command to display the current directory
- Working with path name abbreviations
- Using the `~` and `-` expressions
- Using the `ls` command
- Identifying and using metacharacters

Module 4 – *Directory and File Commands*

- Handling control characters
- Determining the file type using the `file` command
- Displaying files using the `cat`, `more`, `head`, `tail`, and `strings` commands
- Using the `wc` command
- Creating files with the `touch` command
- Using the `tee` command
- Creating directories
- Removing files and directories
- Copying files and directories

- Moving and renaming files and directories
- Printing files and canceling print requests

Module 5 – *Searching for Files and Text*

- Finding files using specific criteria
- Searching for text within documents
- Sorting files alphabetically or numerically
- Performing multilevel sorting
- Comparing the contents of text files

Module 6 – *File Security*

- Determining file access
- Learning types of permissions
- Setting standard permissions on a file
- Working with permission categories
- Changing permissions with symbolic mode
- Changing permissions with absolute (octal) mode
- Determining the unmask value

Module 7 – *Visual (vi) Editor*

- Introducing `vi`
- Using various `vi` modes
- Invoking `vi`
- Employing input, positioning, and editing commands
- Using advanced editing options
- Creating and saving a file
- Completing a `vi` extended exercise

Module 8 – *Archiving User Data*

- Learning about backup and restore
- Using `tar` utility to perform file storage
- Backing up files with the `tar` and `compress` commands
- Using the `jar` command

- Using compression tools to save storage space
- Using the `cpio` command
- Manipulate the tape with `mt`

Module 9 – *Remote Connections*

- Working with the client-server environment
- Connecting remote using `telnet`
- Doing remote access using `rlogin`
- Transferring files with `ftp`

Module 10 – *System Processes*

- Displaying system processes
- Using processes and process identifiers (PIDs)
- Identifying child and parent processes
- Terminating processes using `kill`
- Using the `pgrep` and `pkill` commands

Module 11 – *The Korn Shell*

- Learning shell features
- Working with variable types
- Using shell variables
- Using user-defined shell variables
- Customizing shell variables
- Displaying shell variables
- Applying predefined environment variables
- Exporting variables
- Redirecting output using the shell

- Working with environment variables
- Configuring the shell environment

Module 12 – *Introducing sed and awk*

- Command-line editing the contents of a text file
- Sending the results of command-line editing to standard output
- Using regular expression metacharacters to delete lines, add text to lines, or change characters with `sed` commands
- Using `awk` to scan text files or standard input to display specific data, change data format, and add text to existing data

Module 13 – *Reading Shell Scripts*

- Using basic shell commands
- Defining shell variables
- Passing command-line variables to a shell script
- Deciphering basic shell scripts