

COURSE TITLE:

SO112 - Solaris 10 OE System Administration I

LENGTH:

5 Days

DESCRIPTION:

The **Solaris 10 OE System Administration I** course teaches attendees how to perform the essential system administration tasks required to effectively manage a Solaris 10 system. Topics include the duties and responsibilities of a Solaris OE system administrator, installation of the Solaris 10 Operating Environment, system startup and shutdown, managing file systems, adding/deleting users, installing and administering local and network printers, managing processes, schedule jobs, backing up and restoring system and user data, package installation, and general administrative procedures.

This course is applicable to the Solaris 10 Operating Environment.

AUDIENCE

This course is designed for new system administrators who will be performing essential system administration procedures on a Solaris 10 OE.

COURSE OBJECTIVES:

Upon completion of this course the student will be able to:

1. state the duties and responsibilities of a Solaris OE system administrator;
2. install the Solaris operating environment;
3. start up and shut down a Solaris system for different operation levels;
4. add and delete user accounts and groups;
5. add and configure local and network printers;
6. create new filesystems, check the integrity of filesystems, and repair damaged filesystems;
7. identify Solaris floppy and tape device special files;
8. perform complete and incremental filesystem backups and restores;
9. install and update software packages;
10. use the **cpio** and **tar** archive programs for data storage and retrieval,
11. set up and use the **cron** and **at** facilities.,
12. identify and correct common problems.

PREREQUISITES

1. Attendees should have completed the **SO111 - Introduction to the Solaris 10 Operating Environment** course,
or
2. have at least one year experience using a Solaris system,
and
3. know how to perform basic UNIX tasks
4. understand basic UNIX commands
5. use the **vi** text editor
6. read and interpret shell scripts;
7. user the command line; and,
8. interact with a windowing system

FOLLOW-ON TRAINING

After completing this course it is suggested that the student attend:

1. SO113 - Solaris 10 OE System Administration II
2. SO114 - Solaris 10 OE Network Administration

COURSE CONTENT

Unit 1 - System Administration Unit Overview

1. The Duties of the System Administrator
2. Choosing a System Administrator
3. The root Login
4. Setting up a System Logbook
5. System Documentation
6. Other Recommended Books
7. Site Planning
8. Filesystem and Process Management
9. Standard Unix Directory Hierarchy
10. Mountable File Systems
11. Checking Filesystem Free Disk Space
12. File and Directory Attributes
13. Processes
 - a. Checking System Status
 - b. Monitoring System Load
 - c. Managing Processes
14. The Solaris Management Console

Unit 2 - Operating System Installation

1. Solaris OE Installation Types
2. Planning the Installation
3. Solaris 10 Operating Environment Installation
4. Installing Additional Packages
5. Post-Installation Tasks

Unit 3 - System Startup and Shutdown

1. Starting Up Solaris OE - SPARC
2. Bringing Up Solaris OE - x86
3. Booting the System - SPARC
4. Booting the System - Solaris x86
5. System Shutdown
6. The **/usr/sbin/shutdown** Command
7. Alternative Shutdown Commands
8. Understanding the Boot and Startup Sequence
 - a. Run-Levels
 - b. The **/etc/init** Process
 - c. System Initialization Example
 - d. Controlling **init**
 - e. Initialization Scripts
 - f. Multi-User Initialization
9. Understanding the Shutdown Sequence

- a. The `/etc/uadmin` Command
- b. Abnormal Shutdown

Unit 4 - The Service Management Facility

1. Service Management Facility Overview
2. Compare Run Levels and SMF Milestones
3. Use SMF Commands to Manage Services

Unit 5 - Configuring and Testing Devices

1. Define the Purpose of the Power On Self Test (POST)
2. Define the Purpose of the Device Configuration Assistant (DCA)
3. Describe Device Configuration Paths
4. Identify the System's Boot Device
5. View and Change `eeeprom` Parameters from the Shell
6. Interrupt an Unresponsive System

Unit 6 - User Account Management

1. Overview of User Accounts
2. User Account Files
3. Adding A User Account
 - a. The `useradd` Command
 - b. User and System Account Files
 - c. The `/usr/bin/passwd` Command
4. Adding a Group
 - a. The `groupadd` Command
5. Locking and Unlocking User Account
6. Modifying Account Information
 - a. The `usermod` Command
7. Modifying Group Information
 - a. The `groupmod` Command
8. Deleting a User Account
 - a. The `userdel` Command
9. Deleting a Group
 - a. The `groupdel` Command
10. Alternative User Account Management Facilities

Unit 7 - Managing Printers

1. Understanding the Print Spooling Mechanism
2. Installing a Printer
 - a. Local Printer
 - b. Network Printer
3. Starting and Stopping the Print Service
4. Setting the Default Printer
5. Submitting Print Jobs
6. Managing Print Jobs

Unit 8 - Filesystem Maintenance

1. Filesystem Features
 - a. Types of Files
 - b. Types of Filesystems on Solaris
 - c. File/Directory Manipulation
2. Hard Drive Partitioning
 - a. Slice Assignments
3. Mountable Filesystems
 - a. The `/etc/vfstab` File
 - b. The **mount** Command - Listing Mounted Files
 - c. Mounting a Filesystem
 - d. Unmounting a Filesystem
4. Restricting Mount Access to Removable Devices
5. The Volume Manager
 - a. The Volume Manager and Device Files
6. The **sync** Command
7. Filesystem Permissions
8. Filesystem Maintenance
 - a. **fsck** - Filesystem Check Command
9. Creating a Filesystem
10. Filesystem Management Commands

Unit 9 - Process Management

1. View system processes
2. Terminating Processes

Unit 10 - Disk & Tape Management

1. The I/O Subsystem
 - a. Character I/O
 - b. Device Types
 - c. Identifying Devices
2. Formatting Floppy Diskettes
3. Archive Programs
4. The **cpio** Command
5. The **tar** Command
6. Notes about Archives

Unit 11 - Backup & Restore

1. Backup Strategies
2. Backup Methods
3. The **ufsdump** Command
4. Suggested Dump Schedule
5. The **ufsrestore** Command
6. Create a UFS Snapshot
7. Backup a UFS Snapshot
8. Customized Backups

Unit 12 - Job Scheduling

1. The **cron** Daemon
2. The **crontab** Command
3. Submitting Jobs With **at**
 - a. Solaris SPARC & X86 Differences

Unit 13 - System Architecture Differences

1. Differences between the x64/x86-based system architecture and the SPARC-based system architectures.
2. Installation Differences
3. Managing Local File Systems Differences
4. Package Administration Differences
5. System Boot Procedure Differences
6. User and Security Administration Differences
7. Managing Network Printer and System Processes Differences
8. System Backups and Restores Differences

Appendix A: System Logbook

SYSTEM CONFIGURATION
Software Information
File System Layout
System Procedures
System Log
Miscellaneous
System Log
Notes:

Appendix B: Answers to Review Questions

