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## **CS501 is a cSAGE Certification Preparatory Course!**

### **CS501-# Solaris OE System Administration *Certification Preparation***

- CS501-8 Solaris 8
- CS501-9 Solaris 9

**Length:** 5 Days

#### **Description**

Attendees of this course will learn how to perform initial system administration tasks required on the Solaris Operating Environment. Topics include an overview of the responsibilities of the system administration, installation of the Solaris Operating Environment, system startup and shutdown, process management, file system management, file system maintenance, job scheduling, file backup & restore, adding/deleting users, and installing and configuring printers.

This course is applicable to both Solaris 8 and Solaris 9 Operating Environments.

#### **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 system,
3. start up and shut down a Solaris system gracefully,
4. manage processes,
5. create new filesystems, check the integrity of filesystems, and repair damaged filesystems,
6. identify and use Solaris floppy and tape device special files,
7. perform complete and incremental filesystem backups and restores,
8. use the cpio and tar archive programs for data storage and retrieval,
9. use file compression programs,
10. set up and use the cron and at facilities.,
11. add and delete user accounts and groups,
12. add and configure printers.

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### Prerequisites:

Before attending this course, attendees must be able to:

1. Log on and off a Solaris System
2. Define basic Solaris terms such as operating system, kernel, shell, files, directories, devices, etc.
3. Use common Solaris commands such as ls, who, date, mail, etc.
4. Use the Solaris man pages to determine command syntax, execution, and options.
5. Use the vi text editor
6. Use basic shell features such as I/O redirection, pipes, filename expansion characters, quoting, etc.
7. Read shell, awk, and sed scripts,
8. Use the Common Desktop Environment.

### Course Content

#### Unit 1 - System Administration Unit Overview

1. Unit Overview
2. The Duties of the System Administrator
3. Choosing a System Administrator
4. Setting up a System Logbook
5. System Documentation
6. Site Planning
7. Filesystem and Process Management
8. Standard Unix Directory Hierarchy
  - A Mountable File Systems
  - B Checking Filesystem Free Disk Space
  - C Disk Usage - The du Command
  - D File and Directory Attributes
9. Processes
  - A Checking System Status
  - B Monitoring System Load
  - C Managing Processes
  - D Helpful Commands
10. admintool - Graphical User Interface Administration Tool
11. The Solaris Management Console
12. Performing System Administration Tasks
13. Unit Review

#### Unit 2 - Operating System Installation

1. Introduction
2. Solaris OE Installation Types
3. Planning the Installation
4. Solaris 8/9 Operating Environment Installation
5. Installing Additional Packages
6. Post-Installation Tasks

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### Unit 3 - System Startup and Shutdown

1. Introduction
2. Starting Up Solaris OE - SPARC
3. Bringing Up Solaris OE - x86
4. Booting the System - SPARC
5. Booting the System - Solaris x86
6. System Shutdown
7. The /usr/sbin/shutdown Command
8. Alternative Shutdown Commands
9. Events Which Occur During Startup
10. Run-Levels
11. The /etc/init Process
12. System Initialization Example
13. Controlling init
14. Initialization Scripts
15. Multi-User Initialization
16. Shutdown Revisited
17. The /etc/uadmin Command
18. Abnormal Shutdown
19. Unit Review

### Unit 4 - Process Management

1. Unit Overview
2. Processes Structure
3. Process Creation
4. Daemon Processes
5. Orphans and Zombies
6. Monitoring System Status
7. Checking System Status
8. Managing Processes
9. Process Termination
10. Unit Review

### Unit 5 - File System Management

1. Unit Overview
2. File System Features
3. Types of Files
4. Types of File Systems on Solaris
5. File/Directory Manipulation
6. Hard Drive Partitioning
7. Slice Assignments
8. Mountable File Systems
9. The /etc/vfstab File
10. The mount Command - Listing Mounted Files
11. Mounting a File System
12. Unmounting a File System
13. The Volume Manager

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14. The Volume Manager and Device Files
15. The sync Command
16. File System Permissions
17. Periodic Cleanup of File Systems
18. Creating a File System
19. File System Management Commands
20. Unit Review

### Unit 6 - File System Maintenance

1. Unit Overview
2. Filesystem Maintenance
3. fsck - Filesystem Check Command
4. Disk Quotas
5. Unit Review

### Unit 7 - Job Scheduling

1. Unit Overview
2. The cron Daemon
3. The crontab Command
4. Submitting Jobs With at
5. Unit Review

### Unit 8 - Backup & Restore

1. Unit Overview
2. I/O Subsystem
3. Character I/O
4. Device Types
5. Identifying Devices
6. Formatting Floppy Diskettes
7. Archive Programs
  - A The cpio Command
  - B The tar Command
  - C Notes about Archives
8. Backup Strategies
9. Backup Methods
10. The ufsdump Command
11. Suggested Dump Schedule
12. The ufsrestore Command
13. Customized Backups
14. The dd Command
15. The mt command
16. The fssnap Command
17. Compression Programs
18. Unit Review

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### Unit 9 - User Account Management

1. Unit Overview
2. Overview of User Accounts
3. User Account Files
4. Adding A User Account
5. AThe useradd Command
6. AThe groupadd Command
7. AUser and System Account Files
8. AThe /usr/bin/passwd Command
9. Locking and Unlocking User Account
10. Modifying Account Information
11. AThe usermod Command
12. AThe groupmod Command
13. Deleting a User Account
14. AThe userdel Command
15. AThe groupdel Command
16. Alternative User Account Management Facilities
17. Unit Review

### Unit 10 - Managing Printers

1. Unit Overview
2. Overview of the Print Spooling Mechanism
3. How The Print Spooling Mechanism
4. Printer Installation and Configuration
5. Setting Up the Print Spooler
6. Administering Printers Using the GUI Printer Administration Tools
7. Unit Review

### Appendix A: System Logbook

### Appendix B: Answers to Review Questions