

Solaris 10 System Administration - Part I

Course Overview

Length: 5 Days

Overview: Skills Gained:

- Using the Solaris Desktops
- Local System Administration with Solaris Management Console (SMC)
- Configuring the Openboot Firmware
- Managing Boot Procedures with GRUB
- Startup and Shutdown Procedures
- Managing Services with the Service Management Facility (SMF)
- Installing the Solaris Operating system
- Software Package Administration
- Maintenance Of Patches
- Disk Management and Partitioning
- File System Management
- ZFS
- File Security and ACLs
- User and Group Management
- Accessing Remote Systems
- Backup And Recovery
- Managing the Print Environment
- Managing Processes

Course Content

Day One

COURSE INTRODUCTION

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

ACCESSING THE SOLARIS OPERATING SYSTEM

- Solaris Desktops
- Solaris Desktop Administration Tools
- Main Features and Usage of SMC

BOOT PROCEDURES

- Openboot interface
- Openboot parameters
- Device names and aliases
- Openboot diagnostics
- Boot Options
- Boot Device Sequence with BIOS
- Booting with GRUB

Exercise: Setting Openboot parameters and Boot options

STARTUP AND SHUTDOWN PROCEDURES

- Boot Phases
 - init
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- System run levels
- inittab file
- Run control scripts
- Adding a run control script
- Disabling a run control script
- System shutdown
- The shutdown command
- The init command
- The halt/poweroff commands
- The reboot command
- The stop-a command
- Exercise: Creating a run control script

SERVICE MANAGEMENT FACILITY

- Basic Features
- The SMF Environment
- SMF and Booting
- SMF Environmental Structures
- Service States
- Managing Services
- Listing Services with svcs and inetadm
- Managing the State of a Service with svcadm
- Configuring a Service with svccfg
- Managing the State of inetd Network Services with inetadm

Exercise: Listing and Managing the State of Services

Day Two

INSTALLING THE SOLARIS OPERATING SYSTEM

- Installation requirements
- System configuration for servers and clients
- Partitions and multiple disks
- Software terminology
- Packages, Clusters and Groups
- Configuration cluster
- Definition of Installation methods
 - Web Start
 - Interactive
 - Jumpstart
 - Flash

- Live Upgrade
- Interactive Installation Process
- Installation from CD/DVD
- Exercise: Installing a Solaris System (possibly, optional at the end of the course)

SOFTWARE PACKAGE ADMINISTRATION

- Documentation Packages
- Configuration clusters
- Tools for managing software
- Displaying current software package information
- Checking the installation of a package
- Adding software packages using a CDROM device
- Removing software packages
- Package logfiles

Exercise: Removing, adding and listing a Package

MAINTENANCE OF PATCHES

- Maintenance of patches and patch clusters
- Verification of currently installed patches
- Installing a patch on the system
- Removing a patch from the system
- Patch logfiles
- Exercise: Installing and listing a Patch

CONNECTION SERVICES

- Sun Connection Services Overview
- The smpatch command
- The Update Manager

DISK MANAGEMENT

- Displaying disk information
 - Partitions/Slices
 - Naming conventions
 - Physical device names
 - Instance name
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- Logical device names
- Block and character devices
- Configuring new disk devices
- Partitioning the disk with the format command and Solaris
- Management Console
- Making a new partition

Exercise: Configuring and listing a disk slice

Day Three

FILE SYSTEM MANAGEMENT

- Disk based file systems
- Main root sub-directories
- Pseudo file systems
- Components of a ufs file system
- Boot block
- Superblocks
- Inodes
- Data disk blocks
- Ulimit parameter
- File types
- Symbolic and Hard links
- Creating file systems
- The newfs command
- The mount command
- The umount command
- The vfstab file
- The mnttab file
- Filesystem checking
- Determining if a file system needs checking
- Running fsck manually
- The lost+found directories
- Automounting CDs and floppies (Volume Management)
- Checking free disk space
- The df command
- The quot command
- The du command
- Freeing disk space
- Freeing up disk space with compression utilities
- Rotating files with logadm

Exercise: Managing file systems, newfs, mount etc

ZFS

- ZFS - A Basic Description
- Requirements
- Main Features
- ZFS Tools
- Managing ZFS Pools with zpool
- Pool Storage Devices
- Pool Configuration Features
- Creating and Deleting ('Destroying Pools')
- Managing File Systems with ZFS
- Creating and Destroying a File System
- Snapshots and Clones
- ZFS Properties
- Read-Only Native Properties
- Settable Native Properties
- ZFS GUI Interface

Exercise: Creating and managing a ZFS system

Day Four

FILE SECURITY AND ACLS

- ACLs (Access Control Lists)
- The setfacl command
- The getfacl command
- The ACL mask
- Exercise: Setting and Viewing ACLs

USER MANAGEMENT

- User accounts
 - Files used in creating a user - the passwd, group and shadow files
 - Adding a user
 - Changing user details
 - Deleting a user
 - User group maintenance
 - Password administration
 - Password command
 - Local Login control
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- Remote Login control
- Login logs
- User communication
- The wall command
- The message of the day
- Controlling the amount of disk space accessible to users using quotas

Exercise: Creating and listing users and groups

BACKUP AND RECOVERY

- Backup overview
- Backup policy
- Backup and restore utilities overview
- Tape device names
- The mt utility - retention, rewind, space forward or backward and status
- The ufsdump and ufsrestore utilities
- ufs snapshots

Exercise: Backing up and restoring /export/home

Day Five

MANAGING THE PRINT ENVIRONMENT

- The print service
- Print service files
- Hardware setup - ethernet, parallel & serial
- Printer configuration with Solaris Print Manager
- Printer configuration with lpadmin
- Line printer commands - lpshut, lpsched, accept, reject, enable, disable, lpmove lpusers, lpstat, lp, cancel
- Printing from copies of files
- Stopping banner output

Exercise: Configuring and managing printer queues

MANAGING PROCESSES

- Introduction to Process Management
- The ps command
- The prstat command
- The process manager application
- The kill command
- Using the cron processes
- Cron files
- Creating crontab entries
- Amending existing crontab files
- Crontab command options
- The at command
- Exercise:
 - Monitoring and managing processes

Setting up cron batch files