Sun Certified System Administrator for Solaris 10 OS, Part I (CX-310-200)

The Sun Certified System Administrator for Solaris 10 OS Part I exam is for candidates with a minimum of six to twelve months experience as a system administrator. This exam presumes the test candidate has an in-depth knowledge of basic UNIX and Solaris OS commands, such as those commands covered in the SA-200-S10 and SA-201-S10 courseware and that the test candidate has system administration expertise for SPARC, x64, and x86 based systems. The examination includes multiple-choice, scenario-based questions and drag-and-drop questions and requires extensive knowledge on Solaris OS administration topics, including how to manage file systems, install software, perform system boot and shutdown procedures, perform user and security administration, manage network printers and system processes, and perform system backups and restores. The examination is a prerequisite to the Sun Certified System Administrator for Solaris10 OS, Part II exam. Test candidates must pass this exam before proceeding to the Sun Certified System Administrator for Solaris 10 OS Part II exam.

Testing Objectives:

Section 1: Install Software

- 1.1 Explain the Solaris 10 OS installation and upgrade options for CD / DVD, including how to provide Minimal Installations for SPARC, x64, and x86-based systems.
- 1.2 Perform an OS installation from CD / DVD for SPARC, x64, and x86- based systems.

Section 2: Manage File Systems

- 2.1 Explain the Solaris 10 OS directory hierarchy, including root subdirectories, file components, and file types, and create and remove hard and symbolic links.
- 2.2 Explain disk architecture including the UFS file system capabilities and naming conventions for devices for SPARC, x64, and x86-based systems.
- 2.3 Use the prtconf and format commands to list devices, explain critical issues of the /etc/path_to_inst file and reconfigure devices by performing a reconfiguration boot or using the devfsadm command for SPARC, x64, and x86-based systems.
- 2.4 Given a scenario, partition a disk correctly using the appropriate files, commands, and options, and manage disk labels using SMI and EFI labels as they relate to disk sets.
- 2.5 Explain the Solaris 10 OS file system, including disk-based, distributed, devfs, and memory file systems related to SMF, and create a new UFS file system using options for <1Tbyte and > 1Tbyte file systems.
- 2.6 Given a scenario, check and resolve Solaris 10 OS file system inconsistencies using fsck, and monitor file system usage using the command line (df, du, and quot commands).
- 2.7 Perform mounts and unmounts on a Solaris 10 OS file system, and use volume management to access mounted diskettes and CD-ROMs, restrict access, troubleshoot volume management problems, and explain access methods without volume management.
- 2.8 Perform Solaris 10 OS package administration using command-line interface commands and manage software patches for the Solaris OS, including preparing for patch administration, and installing and removing patches using the patchadd and patchrm commands.

Section 3: Perform System Boot and Shutdown Procedures for SPARC, x64, and x86-based systems.

- 3.1 Given a scenario, explain boot PROM fundamentals, including OpenBoot Architecture Standard, boot PROM, NVRAM, POST, Abort Sequence, and displaying POST to serial port for SPARC.
- 3.2 Given a scenario, explain the BIOS settings for booting, abort sequence, and displaying POST, including BIOS configuration for x64 and x86-based system.
- 3.3 Execute basic boot PROM commands for a SPARC system.
- 3.4 Use the Xorg configuration files or kdmconfig utility to configure the keyboard, display, and mouse devices for an x64 and x86 based system.
- 3.5 Perform system boot and shutdown procedures, including identifying the system's boot device, creating and removing custom device aliases, viewing and changing NVRAM parameters, and interrupting an unresponsive system.
- 3.6 Explain the Service Management Facility and the phases of the boot process.
- 3.7 Use SMF or legacy commands and scripts to control both the boot and shutdown procedures.

Section 4: Perform User and Security Administration

- 4.1 Explain and perform Solaris 10 OS user administration, and manage user accounts and initialization files.
- 4.2 Monitor system access by using appropriate commands.
- 4.3 Perform system security by switching users on a system, and by becoming root and monitoring su attempts.
- 4.4 Control system security through restricting ftp access and using /etc/hosts.equiv and $HOME/ .rhosts files, and SSH fundamentals.
- 4.5 Restrict access to data in files through the use of group membership, ownership, and special file permissions.

Section 5: Manage Network Printers and System Processes

- 5.1 Configure and administer Solaris 10 OSprint services, including client and server configuration, starting and stopping the LP print service, specifying a destination printer, and using the LP print service.
- 5.2 Control system processes by viewing the processes, clearing frozen processes, and scheduling automatic one-time and recurring execution of commands using the command line.

Section 6: Perform System Backups and Restores

- 6.1 Given a scenario, develop a strategy for scheduled backups, and backup an unmounted file system using the appropriate commands.
- 6.2 Perform Solaris 10 OS file system restores using the appropriate commands, including restoring a regular file system, the /usr file system, the /(root) file system, and performing interactive and incremental restores for SPARC, x64, and x86 based systems.
- 6.3 Backup a mounted file system by creating a UFS snapshot and performing a backup of the snapshot file.
- 6.4 Restore data from a UFS snapshot and delete the UFS snapshot.