



HP-UX System and Network Administration I (H3064S)

Duration: 5.00 Days **Course Code: 0071681**

Overview:

This hands-on course is the first of two courses that prepare system administrators to successfully configure, manage, maintain, and administer HP-UX servers in a networked environment. This course focuses on configuring disks, file systems, peripherals, and user accounts, as well as managing and configuring core OS, patches, and application software. Successful completion of HP-UX System and Network Administration I and II will help prepare students for the HP-UX CSA technical certification exam. The 5-day course is 50 percent lecture and 50 percent hands-on labs using HP servers.

Target Audience:

HP-UX 11i system administrators and others who install, configure, and maintain HP-UX servers

Objectives:

- At the conclusion of this course you should be able to:
 - Install and manage HP-UX software and patches
 - Configure and manage peripheral devices and device files
 - Configure and manage disks using HP Logical Volume Manager (LVM)
 - Configure and manage file systems using HP Journal File System (JFS)
 - Configure HP-UX kernel drivers, subsystems, and tunable parameters
 - Minimize planned and unplanned downtime with DRD
 - Shutdown, boot, reboot Integrity HP-UX servers
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Prerequisites:

- UNIX Fundamentals (51434S) or equivalent experience
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Follow-on-Courses:

HP-UX System and Network Administration II (H3065S)

Content:

Navigating the System Management Homepage (SMH)

- SAM and SMH overview
- zLaunching the SMH GUI and TUI
- Verifying SMH certificates
- Logging into the SMH
- Navigating the SMH interface
- Launching SMH tools
- Launching SMH tasks
- Viewing SMH logs
- Managing SMH access control
- Managing SMH authentication
- SMH and SIM integration concepts

Managing Users and Groups

- User and group concepts
- /etc/passwd, /etc/shadow, and /etc/group concepts
- Creating, modifying, deactivating, and removing user accounts
- Configuring password aging and password security policies
- Managing groups
- Managing /etc/skel

Navigating the HP-UX File System

- Static and dynamic files and directory concepts
- OS and application directory concepts
- Top level directory concepts and contents
- Searching for files and executables using the find, whereis, which, and file commands

Configuring Hardware

- Hardware component overview
- CPU, cell, crossbar, and Blade overview
- SBA, LBA, and I/O overview
- iLO/MP, core I/O, and interface adapter card overview
- Internal disks, tapes, and DVD overview
- Disk array, LUN, SAN, and multipathing overview
- Partitioning overview
- nPar, vPar, VM, and secure resource partition overview
- System type overview
- Entry-class rackmount server overview
- Mid-range rackmount server overview
- High-end server overview
- HPBladeSystem overview
- HP BladeSystem c-class enclosure overview
- HP Integrity blade server overview
- HP Integrity Superdome 2 overview
- Viewing system hardware configuration
- Viewing nPar, vPar, and VM hardware
- Hardware address concepts
- Legacy HBA, SCSI, and FC hardware address concepts
- Agile View HBA, SCSI, and FC hardware address concepts

Managing File Systems

- File system concepts
- File system types
- Superblock, inode, directory, block, extent, and intent log concepts
- Hard and symbolic link concepts
- HFS and VxFS comparison
- Creating file systems
- Mounting file systems
- Unmounting file systems
- Automatically mounting file systems
- Mounting CDFS file systems
- Mounting LOFS file systems
- Mounting ISO file systems
- Mounting MemFS file systems

Managing Swap Space

- HP-UX memory concepts
- HP-UX swap concepts
- HP-UX swap types
- HP-UX pseudoswap
- Enabling swap via the CLI
- Enabling swap via /etc/fstab
- Monitoring swap space
- Disabling swap
- Guidelines for configuring swap space

Maintaining Logical Volumes and File Systems

- Defragmenting file systems
- Repairing corrupted file systems
- Monitoring free space
- Reclaiming wasted file system space
- Extending, reducing, and removing volume groups
- Extending, reducing, and removing logical volumes
- Extending and reducing file systems

Preparing for Disasters

- Disaster recovery, mirroring, and DRD concepts
- Using DRD to minimize planned downtime
- Using DRD to minimize unplanned downtime
- Installing DRD
- Using the drd command
- Creating a DRD clone
- Synchronizing a DRD clone
- Verifying a DRD clone's status
- Accessing inactive images via DRD-safe commands
- Managing software via DRD-safe commands
- Managing kernel tunables via DRD-safe commands
- Accessing inactive images via other commands
- Activating and deactivating an inactive

Booting Integrity Systems

- HP-UX shutdown and reboot concepts
- Integrity boot process major players
- Integrity boot disk structures
- Integrity boot disk system, OS, and HPSP structures
- Integrity and PA-RISC boot process comparison
- UEFI/EFI addressing concepts
- Autoboot and manual boot concepts
- Booting from primary, alternate, and arbitrary boot devices
- Booting from Ignite-UX servers and recovery archives
- Managing boot menu settings
- Managing console settings
- Interacting with the UEFI/EFI shell
- Interacting with the hpux.efi OS loader

Configuring the HP-UX Kernel

- Kernel configuration concepts
- Special kernel configurations
- Kernel configuration commands
- Modifying the current kernel configuration
- Creating a named configuration
- Copying a configuration
- Loading a configuration
- Kernel module concepts, states, and state changes
- Viewing and managing module states
- Kernel tunable concepts and types
- Viewing, managing, and monitoring kernel tunables
- Viewing, managing, and monitoring kernel resource alarms
- Kernel troubleshooting
- Viewing the kernel change log
- Booting from an alternate kernel
- Booting via override parameters
- Booting to tunable maintenance mode

Managing Software with SD-UX

- SD-UX software structure concepts
- SD-UX software depot concepts
- SD-UX IPD concepts
- SD-UX daemon and agent concepts
- Listing software
- Installing and updating software
- Removing software

Managing Patches with SD-UX

- Patch concepts
- Patch naming convention concepts
- Patch supersession concepts
- Patch rating concepts
- Patch source concepts
- Patch tool concepts
- Downloading and installing patches from the HPSC
- Installing patches from DVD, tape, and

- Viewing legacy hardware addresses
- Viewing LUNs via Agile View
- Viewing a LUN's lunpaths via Agile View
- Viewing an HBA's lunpaths via Agile View
- Viewing LUN health via Agile View
- Viewing LUN attributes via Agile View
- Enabling and disabling lunpaths
- Slot address concepts
- Slot address components
- Viewing slot addresses
- Installing interface cards with and without OL*
- Installing new devices

Configuring Device Special Files

- DSF attribute concepts
- DSF directories
- Legacy DSF names
- Persistent DSF names
- LUN, disk, and DVD DSF names
- Boot disk DSFs
- Tape drive DSFs
- Tape autochanger DSFs
- Terminal, modem, and printer DSFs
- Listing legacy DSFs
- Listing persistent DSFs
- Correlating persistent and legacy DSFs
- Correlating persistent DSFs with lunpaths and WWIDs
- Decoding legacy and persistent DSF attributes
- Creating DSFs via insf, mksf, and mknod
- Removing DSFs via rmsf
- Disabling and enabling legacy mode DSFs

Managing Disk Devices

- Disk partitioning concepts
- Whole disk partitioning concepts
- LVM disk partitioning concepts
- LVM physical volume concepts
- LVM volume group concepts
- LVM logical volume concepts
- LVM extent concepts
- LVM extent size concepts
- LVM versions and limits
- LVM DSF directories
- LVMv1 device files
- LVMv2 device files
- Creating physical volumes
- Creating LVMv1 volume groups
- Creating LVMv2 volume groups
- Creating logical volumes
- Verifying the LVM configuration
- Comparing disk space management tools

image

- Customizing the make_*_recovery archive contents
- Backing up the boot disk via make_tape_recovery
- Backing up the boot disk via make_net_recovery
- Using a make_*_recovery archive
- Interacting with the recovery process

Accessing the System Console and the iLO/MP

- Management processor concepts
- Viewing MP/console ports
- Connecting MP serial and LAN ports
- Accessing the MP
- Navigating the MP menu and web interfaces
- Accessing nPar, vPar, and VM consoles
- Accessing the VFP, console log, and system event log
- Accessing the MP help menus
- Accessing the MP command menu
- Configuring the MP LAN interface
- Enabling MP remote access
- Managing MP user accounts and access levels
- Managing MP login sessions
- Rebooting via the MP

Booting PA-RISC Systems

- HP-UX shutdown and reboot concepts
- PA-RISC boot process major players
- PA-RISC boot disk structures
- PA-RISC boot process overview
- Autoboot and manual boot concepts
- Interacting with the BCH and ISL/IPL

directory depots

- Listing patches
- Removing patches

Installing the OS with Ignite-UX

- Install source concepts
- Planning an install
- Choosing an operating environment
- Choosing an install-time security bundle
- Locating the source media
- Initiating a PA-RISC install
- Initiating an Integrity install
- Navigating the Ignite-UX menus
- Verifying an installation
- Completing post-install configuration tasks

Self-Study Appendices

- Managing printers
- Connecting to a network
- Navigating the System Administration Manager (SAM)
- Configuring the HP-UX 11i v1 kernel

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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