

HP-UX Network and System Administration 2

Course Summary

Length: Classroom : 4 days Virtual: 4 hrs/day - 5 days

Prerequisite: HP-UX Network and System Administration 1

Recommendation Statement:

The student should have attended the HP-UX Network and System Administration 1 course (or have equivalent experience) and have approx. 6 weeks of hands on experience in HP-UX system administration.

Course Description:

This course teaches advanced topics in HP-UX system administration. The operating system will be HP-UX 11i v3 and the course is taught on both HP 9000 and Itanium.

Topics covered include:

- LAN Concepts
- LAN Hardware Overview
- Troubleshooting Network Connectivity
- Starting Network Services
- NFS Concepts
- Configuring NFS
- Configuring AutoFS
- Configuring NIS
- Configuring DNS
- Configuring the ARPA/Berkeley Services
- Configuring NTP
- Configuring an SD-UX Server
- Configuring SSH
- Ignite-UX
- Learn key terminology and concepts related to VERITAS Volume Manager (VxVM).
- Learn how to perform common VxVM tasks, including the setup of VxVM disk groups and volumes.

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Detailed Outline

LAN Concepts

- IP network classes
- Host names
- Converting IP addresses to Medium Access Control (MAC) addresses
- Populating the Address Resolution Protocol (ARP) cache
- Managing packet flow with Transmission Control Protocol (TCP)
- Managing packet flow with User Datagram Protocol (UDP)
- Sending data to applications via ports
- Managing ports with sockets

LAN Hardware Overview

- LAN hardware components
- LAN topologies
- LAN access topologies
- Repeaters
- Hubs
- Bridges and switches
- Routers and gateways

Configuring IP Connectivity

- TCP/IP configuration overview
- Installing LAN software
- Configuring IP connectivity
- Configuring IP multiplexing
- Configuring the /etc/hosts file
- Configuring the /etc/rc.config.d/netconf file
- Configuring IP routing

Routing Concepts

- Routing tables
- Viewing routing tables
- Configuring routing tables
- Configuring the /etc/rc.config.d/netconf file

Troubleshooting Network Connectivity

- Network troubleshooting tools overview
- The lanscan, linkloop, and lanadmin commands
- Network troubleshooting tools overview
- Troubleshooting connectivity via ioscan
- Troubleshooting connectivity via lanscan
- Troubleshooting connectivity via lanadmin
- Troubleshooting connectivity via linkloop
- Troubleshooting connectivity via ping
- Troubleshooting connectivity via arp
- Troubleshooting connectivity via netstat
- Troubleshooting connectivity via nslookup

Starting Network Services

- Configuring network services via `/etc/rc.config.d/` files
- Controlling network services via `/sbin/rc*.d/` directories and scripts
- Starting and stopping network services via `/sbin/init.d/` scripts
- Creating custom startup and shutdown scripts

Configuring NFS

- What files should I share via NFS?
- Configuring NFS servers and clients
- Edit the NFS server's configuration file
- Ensure that the NFS subsystem is in the kernel
- Export and Mount NFS file systems
- Common NFS problems
- Monitoring NFS activity with `nfsstat` command

Configuring AutoFS

- AutoFS concepts and maps
- AutoFS commands and daemons
- Configuring the AutoFS master map, hosts map, direct, and indirect maps
- Mounting home directories with AutoFS

Configuring Domain Name Service (DNS)

- Configuring a DNS resolver client
- Configuring `/etc/nsswitch.conf`
- Testing name servers with `dig`
- Testing clients with `nsquery`

Configuring Network Information System (NIS)

- Why use NIS?
- NIS maps, domains, roles, startup files, and daemons
- Configuring NIS - servers and clients

Configuring the ARPA / Berkeley Services

- Internet service overview
- Internet service `inetd` daemon overview
- Configuring `/etc/rc.config.d/netdaemons`
- Configuring `/etc/inetd.conf`
- Configuring `/etc/services`
- Configuring `/var/adm/inetd.sec`
- Configuring `~/rhosts` and `/etc/hosts.equiv`

Configuring Network Time Protocol (NTP)

- Introduction to network time protocol
- NTP time sources
- NTP stratum levels
- NTP roles
- How NTP adjusts the system clock
- Configuring an NTP server and client
- Verifying NTP functionality

Configuring SSH

- Network service vulnerabilities
- SSH encryption and server authentication
- SSH client/user authentication
- Using the UNIX SSH clients
- Using PuTTY SSH clients

Configuring Software Distributor (SD-UX) Server

- Why create an SD-UX network depot?
- SD-UX concepts
- Managing depots

Ignite-UX

- Configure the Ignite-UX server with the Ignite-UX GUI
- Preparing clients for an Ignite installation.
- Booting Ignite clients
- Building a golden image
- Use Ignite to create an OS archive
- Installing the OS archive on the client

Describe Veritas Virtual Objects VM Disks, Disk Groups, Subdisks, and Plexes

Disk Devices

- Disk Device Naming in VxVM
- Configuring Disk Devices
- Discovering disks
- Placing disks under VxVM control
- Setting up VxVM root disk
- Displaying disk information

Creating and Administering Disk Groups

- Display disk group information
- Display free space in a disk group
- Create a disk group
- Adding a disk to a disk group
- Removing a disk from a disk group

Creating / Administering Subdisks

- Creating subdisks
- Display subdisk information
- Associate subdisk with Plexes

Creating/Administering Plexes

- Creating striped plex
- Display plex information