Sun Enterprise™ 10000 Server Administration ES-400

The *Sun Enterprise™ 10000 Server Administration* course provides students with the skills and information necessary to manage and administer the Sun Enterprise™ 10000 server hardware and software. Additionally, students can obtain skills for diagnosing and troubleshooting server hardware and software.

Who can benefit

Students who can benefit from this course are:

- Senior enterprise system administrators
- Senior service providers
- Operations managers
- Information technology planners
- Individuals responsible for supporting mainframe-style networked database servers
- Individuals responsible for configuring, upgrading, and supporting the Sun Enterprise 10000 server

Prerequisites

To succeed fully in this course, students should be able to:

- Provide administration support for version 8, 7, or 2.x of the Solaris™ Operating Environment
- Understand and apply the fundamentals of data storage administration
- Understand and apply the fundamentals of Transmission Control Protocol/Internet Protocol (TCP/IP) networking and administration

- Perform common platform tasks, such as powering system hardware on and off, managing domains, and booting the Solaris Operating Environment
- Troubleshoot server and network system software and hardware

Skills gained

Upon completion of this course, students should be able to:

- Describe the major capabilities and features of the Sun Enterprise 10000 server
- Explain Sun Enterprise 10000 server architectural concepts
- Configure the Sun Enterprise 10000 server
- Load the operating system on a domain and the System Service Processor (SSP)
- Power the system on and off
- Boot the system
- Create, delete, configure, and rename domains
- Configure and use Internet Protocol Multipathing (IPMP)
- Dynamically configure domains
- Dynamically reconfigure domain hardware
- Manage domain resources by automating the Dynamic Reconfiguration (DR) process
- Configure Inter-Domain Networks (IDNs)
- Collect system diagnostic information

50% **Lab**
Lab

Days 5
Duration

- Perform basic diagnostic and troubleshooting tasks
- Monitor and control the Sun Enterprise 10000 server

Related courses

Before:

- SA-118: *Fundamentals of the Solaris™ 8 Operating Environment for System Administrators*
- SA-238: *Solaris™ 8 Operating Environment System Administration I*
- SA-288: *Solaris™ 8 Operating Environment System Administration II*
- SA-389: *Solaris™ 8 Operating Environment Network Administratio*n

After:

- ES-210: *Storage Management with Backup*
- ES-220: *Disk Management with DiskSuite™*
- ES-255: *Sun™ Hardware RAID and T3 Storage System Administration*
- ES-310: *Volume Manager with Sun StorEdge™*
- ST-350: *Sun™ Systems Fault Analysis Workshop*
- ES-415: *Sun™ Management Center 3.0 Administration*
- ES-330: *Sun Enterprise Cluster Administration*
- ES-450: *Sun™ Cluster Advanced Administration*
- SA-400: *Enterprise System Performance Management*

Course outline

Module 1 – "Introduction to the Sun Enterprise 10000 Server"

- Describe the capabilities and features of the Sun Enterprise 10000 server
- Identify the hardware and software components of the Sun Enterprise 10000 server
- Introduce the concepts of the System Service Processor (SSP) operation

Module 2 – "Architecture Overview"

- Describe the construction of the Sun Enterprise 10000 server
- Explain the function and operation of the Sun Enterprise 10000 server components
- Describe the system board interface
- Describe the system board structure
- Describe the centerplane operation
- Describe the control board structure
- Assess the Sun Enterprise 10000 server hardware and software configuration

Module 3 – "System Service Processor Administration"

- Explain the functions of the System Service Processor (SSP)
- Describe how the SSP interacts with the Sun Enterprise 10000 server platform
- Describe security considerations relevant to the Sun Enterprise 10000 server
- Plan a network for a Sun Enterprise 10000 server and its SSP
- Install the SSP software
- Accomplish a manual failover from the main SSP to the spare SSP

- Configure automatic failover of the main SSP to the spare SSP
- Perform control board switch-over

Module 4 – "Platform Management Programs"

- Determine the Sun Enterprise 10000 server hardware configuration by using the `hostinfo` command
- Control system fan speeds with the `fan` command
- Manage the Sun Enterprise 10000 server's power by using the `power` command
- Describe the purpose of the `hostview` program
- Use the following features of `hostview`: fan control, power control, and log inspection
- Perform most of the `hostview` functions from the command line

Module 5 – "Domains"

- Describe a domain
- Identify domain configurations
- Describe the purpose of the `eeprom.image` files
- Identify the steps required for creating an `eeprom.image` file
- List the requirements for a domain
- Create, remove, and rename a domain

Module 6 – "Boot Devices"

- Explain the process for configuring domain hardware
- Decode SBus slot and processor physical locations
- Identify physical locations of disks
- Describe the use of the `netcon` and `netcontool` programs

Module 7 – "System Initialization Process"

- Analyze the domain `bringup` process
- Discuss the Sun Enterprise 10000 server power-on self-test (POST)
- Describe the open boot PROM (OBP) environment specific to the Sun Enterprise 10000 server
- Describe blacklisting and how to manage a `blacklist` file

Module 8 – "Installing the Solaris Operating Environment"

- Describe the Solaris Operating Environment as it relates to the Sun Enterprise 10000 server
- Configure the SSP as a boot and install server
- Install a Solaris Operating Environment on a Sun Enterprise 10000 domain
- Explain how to boot a Solaris Operating Environment on a domain
- Perform the default configuration for network time protocol (NTP) in a domain

Module 9 – "Multipathing"

- Describe the concepts of multipathing
- Discuss the supported device types
- Install and set up the Alternate Pathing (AP) software
- Use the AP command-line commands
- Configure alternate network paths
- Configure alternate disk array paths
- Configure alternate paths for the boot drive

Module 10 – "Dynamic Reconfiguration 2.0"

- Describe the benefits of the Dynamic Reconfiguration (DR) feature
- Discuss the restrictions and concerns that can occur with the use of DR
- Analyze domain configuration status while using DR
- Find solutions to problems that prevent DR from performing properly
- Identify the steps required for removing system boards while using DR
- Identify the steps required for installing system boards while using DR
- Move a system board between domains while using DR

Module 11 – "Internet Protocol Multipathing"

- Describe the purpose of Internet Protocol Multipathing (IPMP)
- Identify devices supported by IPMP
- Configure IPMP
- Describe the relationship between IPMP and Dynamic Reconfiguration

Module 12 – "Inter-Domain Networks"

- Determine the benefits of an Inter-Domain Network (IDN)
- Describe how IDNs work
- Determine how IDNs interact with DR and arbitration stops (arbstops)
- Identify the commands used to administrate IDNs
- Configure an IDN

Module 13 – "Diagnostic Information"

- Understand how a Sun Enterprise 10000 server fails and recovers
- Understand the role of the SSP in failure logging
- Discuss the different types of failures
- Find where failure information is recorded
- Interpret failure information
- Understand support information requirements
- Troubleshoot common Sun Enterprise 10000 server faults