SOLARIS SYSTEM ADMINISTRATION - PART II

COURSE SPECIFICATION

Introduction

This course will provide delegates with practical experience of configuring various aspects of a system that is using Solaris up to version 10. This course extends the skills a delegate will have gained from attending the Solaris System Administration - Part 1 course. Delegates will cover more specialised tasks such as managing the system log and configuring remote file sharing with NFS.

The delegates will practise:-

- Configuring Toolboxes in the Solaris Management Console (SMC)
- Configuring and Managing the NIS Network Naming Service
- Control of remote File Systems with NFS and Auto mount
- Managing Disk Space in the Solaris Volume Management environment using the Solaris Management Console and standard commands
- Managing swap space
- Setting up the JumpStart facility to automate installation
- Managing the System and Program Dump file environment
- Managing system event logging with syslog
- Controlling access to files and directories using ACLs
- Allocating system tasks to users using Role Based Access Control (RBAC)
- Configuring and accessing Zones

Who is the course for?

This course is aimed at IT staff responsible for administering a networked server in a local area network, running the Solaris operating environment. It will extend their skills beyond basic administration tasks.

The delegate should have attended the Solaris System Administration - Part 1 course or have equivalent skills.

Course Objectives

Administering Solaris systems involves many specialised tasks including; monitoring system events with syslog, performing network installations, dealing with various aspects of the network environment and assigning system roles to users. Delegates taking this class will gain the necessary knowledge and skills to perform these tasks.

COURSE CONTENTS

DAY 1

Introduction Administration and course materials
Course structure and agenda
Delegate and trainer introductions

Session 1 Configuring the Solaris management console (SMC)
SMC Toolboxes
Managing Toolboxes
Creating a Toolbox
Creating a Folder
Assigning Tools to a Folder
Accessing a new Toolbox
Exercise: Creating a toolbox with folders and tools

Session 2 Networking Basics
Network Addressing (IPv4)
Address Classes
Network Masks
Subnets
Routing
Network Files
Listing and configuring network devices with ifconfig
Monitoring network device activity with netstat
Testing a network device with ping
Solaris Client – Server Environment
Servers
Overview of NFS (Network File System)
Overview of Naming Services Available Under Solaris
Clients
Exercise: Displaying network configuration information

DAY 1 (Continued)

Session 3 Naming services

DNS Overview
DNS Client Setup
NIS
NIS Servers and Clients
Setting up NIS Servers and Clients
NIS+ Overview
LDAP Overview and Setting up an LDAP Client
The Name Service Switch Configuration Files
Template nsswitch Files
Displaying Information From the Name Server
Name Service Cache Daemon
Reference for Naming Services
Exercise: Setting up an NIS server and client

DAY 2

Session 4 NFS/CACHE FS

Network File System (NFS)
NFS Terminology
NFS Server
NFS Client
NFS Server Configuration
/etc/dfs/dfstab File
NFS Server Configuration – SMC
Other NFS Commands
NFS Client Configuration
The mount Command
Mounting a Local Resource
Mounting a Remote Resource
Responding to server failure – mount options
Multiple Hosts
Unmounting a Resource
NFS Client Configuration – SMC
Troubleshooting NFS
Cache File System (Cachefs)
Cachefs Terminology
Creating a Cache File System
Cachefs Statistics and Consistency
Cachefs Logging
Removing Cache File System
Exercise: Setting up an NFS server and client

DAY 2 (Continued)

SESSION 5 Automount

Automount
Automount Utility
Automount Maps
Registering Changes for Automount
automount –v
Exercise: Setting up an automount client

SESSION 6 Solaris Volume Manager (SMV)

Disk Management and File System Review
RAID Technology and Volumes
RAID Modes
SVM Tools
Volume Management Operations
State Database Replicas
Creating State Database Replicas
Creating a Disk Concatenation
SVM Commands and Files
Creating State Database Replicas – the metadb command
metadevices
metstat command
Creating a Concatenation of two disk slices
Creating and Managing Mirrors
Creating File Systems on Volumes
Deleting a Metadevice
Dynamically Growing Existing File Systems
Exercise: Creating a database and concatenation volume
Growing a file system

DAY 3

Session 7 Managing Swap Space

Swap Space
Configuring Swap Space
Adding a Swap File on an Existing File System
Deleting Swap Space
Exercise: Setting up an extra swap area

DAY 3 (Continued)

Session 8 Jumpstart

Interactive Installation Review
Automatic Installation
Principles of JumpStart
Server Setup for JumpStart
Configuring NIS to Support JumpStart
Locale
Ethernet Address
IP Address and Hostname
TimeZone
Netmasks
Bootparams
Timehost Alias
Configuring Non NIS Server for JumpStart
Configuration Directory
Rules File
Class File
Check Utility
Install/Boot Server Installation
setup_install_server Utility
add_install_client Utility
To Install New Client
Exercise: Setting up a jumpstart server and client

DAY 4

Session 9 Managing Flash Archives

Flash Archive Definition
Creating a Flash Archive
Restoring a Flash Archive
Specifying the Location of the Flash Archive to be Restored
Jumpstart Installation Considerations
Displaying Flash Archive Information

Session 10 Dump File Configuration

Dump File Definition
System Crash Dumps
Displaying the System Crash Dump Configuration
Modifying the System Crash Dump Configuration
Core Dumps
Displaying the Core Dump Configuration
Modifying the Core Dump Configuration
Exercise: Displaying the system crash dump configuration
Displaying and setting the core dump configuration

DAY 4 (Continued)

Session 11 Syslog

syslog Configuration
The /etc/syslog.conf Configuration File
Facility
Security Level
Action
The M4 Utility
Editing the syslog.conf File
Logging Telnet, FTP and other Networking Daemon
The SMC Log Viewer
Testing syslogd Logging
Exercise: Adding and testing an entry to syslog.conf

Session 12 File Security With Access Control Lists (ACLs)

Setting up Access Control Lists (ACLS)
Setting ACL File Permissions
The setfacl Command
Listing ACLS
The getfacl Command
Exercise: Setting and listing ACLs

DAY 5

Session 13 Role-Based Access Control (RBAC)

Traditional Unix Security vs RBAC
The RBAC Security Model
Main Attributes and Associated Files
Linking Attributes and their Files together
Attribute File Formats
Configuring RBAC Examples
Using SMC in the RBAC Environment
Exercise: Defining and testing a file systems management role

Session 14 Zones

Basic Description
Main Features and Benefits
Zone Configuration Settings and Characteristics
Creating Zones
User Access to Zones
Managing the Zone State
Zone System Processes

Conclusion Course summary
Course assessment