Solaris 10 Systems Administration Part 2 - Networking Administration Essentials

Course Summary

Description

This course is designed to cover the essential network administration tasks confronting today's Sun network systems administrators, and is an extension to the Solaris 10 System Administration (Part 1) course, which covers all the non-network issues. This course covers networking from initial connection through basic commands, security, monitoring and up to Network File System (NFS) and the Network Information Service (NIS), with full hands-on experience at all stages. The use of the Solaris Management Console tool is included. This course, combined with the Solaris 10 Advanced System Administration course, is comparable with the Sun SA-202-S10 course and leads to the Solaris Certified Administrator (Part 2) exam.

Topics

- Introduction to Ethernet and Networking
- The IP Network
- Network Configuration
- Network File Systems (NFS) and AutoFS
- SAMBA Server Overview
- Overview of Solaris Name Services
- Network Information Service (NIS)
- DNS and LDAP Clients
- Introduction to the Apache Web Server
- Setting up Electronic Mail

Audience

This course is designed for Sun network systems administrators.

Prerequisites

Knowledge of Solaris up to a level taught in our Introduction to Solaris and Solaris 10 System Administration (Part 1) courses is important.

Duration

Two days

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Course Outline

I. Introduction to Ethernet and Networking
- A. Overview
- B. Simplest Ethernet
- C. Ethernet options
- D. The ISO/OSI 7 layer model

II. The IP network
- A. IP addresses, sockets and ports, multicast addresses
- B. Hardware requirements/options
- C. Twisted pair & fibre optic
- D. Facts and Figures
- E. Troubleshooting

III. Network Configuration
- A. Client/server concepts, processes and control
- B. Configuring a machines IPv4 interfaces manually for network connection
- C. Understanding Internet Address classes and CIDR, and formulating Internet addresses
- D. Configuring logical interfaces
- E. Multipathing configuration and operation (Failover and load spreading)
- F. Configuring an Internetwork Router
- G. Examples of route commands for manual routing. in.routed for dynamic routing
- H. Subnets and netmasks
- I. Network basic commands and the associated security files
- J. Running GUI programs using X-Windows facilities
- K. Network daemons. Inetd.
- L. The /etc/inetd.conf file
- M. Network Monitoring utilities (snoop, netstat, traceroute, etc)

IV. Network File System (NFS) and AutoFS
- A. Overview
- B. Benefits and uses of NFS
- C. NFS Installation
- D. NFS Administration
- E. Sharing file systems
- F. The mount command
- G. NFS security
- H. NFS logging
- I. NFS strategies
- J. Introduction and basic use of the automounter (AutoFS)
- K. Using SMC with NFS

V. SAMBA Server Overview
- A. A brief overview of this powerful and impressive free open-source server now included with Solaris 10, which effectively turns a Solaris machine (or other UNIX/Linux machine) into a Windows NT server
- B. A working SAMBA installation will be created, with graphical configuration using swat via a web browser

VI. Overview of Solaris name services
- A. NIS. NIS+, LDAP and DNS - how they work, advantages and disadvantages of each
- B. The Name Service Switch and /etc/nsswitch.conf
- C. The Name Service Cache Daemon (nscd)
- D. Network Information Service (NIS)
- E. Introduction
- F. Creating a fully-functioning NIS service
- G. Using the ypinit command to create Master and Slave servers
- H. Updating the NIS information from the command line
- I. Using SMC with NIS to manage users, groups and hosts
- J. Adding NIS clients
- K. NIS file policies
- L. Creating and using netgroups with /etc/netgroup
- M. Adding your own data to NIS
- N. Modifying the NIS Makefile
- O. Disabling NIS

VII. DNS and LDAP clients
- A. Configuring clients to use DNS and LDAP name services

VIII. Introduction to the Apache web server
- A. Major Components
- B. Browser invocation and configuration
- C. Apache Web Server installation and activation
- D. Installing a custom web site
- E. Enabling the Jakarta Tomcat java facility
- F. Examples of common Apache configuration directives

IX. Setting up Electronic Mail
- A. Overview
- B. How to use mail
- C. Mail routing
- D. Files and programs involved
- E. Setting up mail - local network
- F. Name Service considerations
- G. Using NFS to mount mail boxes
- H. Testing mail delivery
- I. Mail aliases
- J. External links and connecting to the Internet

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