UNIX System Administration

Duration: 5 Days   Course Code: USA   Delivery Method: Company Event

Overview:

This Unix System Administration training course is designed to give delegates practical experience in the administration of a SVR4 compatible Unix System. Practical work will concentrate on the basic SVR4 unix commands rather than vendor-specific administration menu driven or GUI tools.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

IT staff responsible for the maintenance and day-to-day running of a SVR4 compatible UNIX system. Typically,where several different versions of UNIX systems are supported and the delegate needs knowledge of administration procedures common to all that adhere to SVR4 standards. The UNIX System Administration course assumes knowledge of the Unix Operating System to the level covered in the UNIX Introduction course. Some unix shell programming experience may also prove advantageous; this can be gained on the UNIX Shell Programming course.

Objectives:

■ To provide the knowledge and skills needed to maintain
  successful day-to-day operation of a UNIX system.

Prerequisites:

This UNIX System Administration course assumes good knowledge of a Unix operating system in an Enterprise environment to the level covered in the UNIX Introduction course. Alternatively,relevant experience of UNIX or Linux servers is required,preferably within an Enterprise environment.

Knowledge of UNIX Shell Programming to the level covered on the UNIX Shell Programming course would also be beneficial.

Follow-on-Courses:
■ UNIX Advanced Shell Programming Tools (UT)
■ Oracle SQL (OSP)
■ TCP/IP Networking (TN)
■ Apache Web Server (APH)

Content:

UNIX System Administration Training Course
Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: THE ADMINISTRATOR'S ROLE

- Role of a System Administrator
- Using the root login
- Using and tracking the use of su
- The sysadm menu system

Session 2: ACCOUNT MANAGEMENT

- Users,user groups and related system files
- Adding new users and user groups (useradd,groupadd)
- Changing and deleting users and user groups (usermod,userdel,
- groupmod,groupdel)
- Password and login control (passwd)
- User communication facilites (wall,/etc/motd)
- Exercise

Session 3: LOGIN FILES

- The Bourne and Korn shell environments
- Environment variables
- The system profile /etc/profile
- The user's .profile
- The Korn shell start up file .kshrc
- Korn shell options
- Listing environment variables and aliases
- Skeleton directories
- Exercise   UNIX System Administration Training Course   Course Contents - DAY 2

Session 4: BACKGROUND JOBS

- Starting background Jobs (;)
- Using the nice command
- Using cron processes
- Creating crontab entries
- Using the crontab command
- The at command
- Exercise

Session 5: FILE SYSTEM ADMINISTRATION

- Physical disk organisation
- UNIX partition slices
- File system device names
- File system types
- File system structure
- File system creation (mkfs)
- Mounting and unmounting file systems (mount,umount)
- Checking and repairing file systems (fsck)
- Monitoring free space (df)
- Exercise

Session 6: FILE ACCESS

- File access criteria - users,groups and permissions
- Default permissions with umask
- Changing file attributes with chmod,chown and chgrp
- Testing permissions with su
- Exercise   UNIX System Administration Training Course   Course Contents - DAY 3

Session 7: BACKUP AND RESTORE FACILITIES

- Using the cpio command
- Using the tar command
- Using the dd command
- Backup and restore services
- Exercise

Session 8: MANAGING SWAP SPACE

- Listing,configuring and disabling swap space (swap)
- Exercise

Session 9: TERMINALS AND PRINTERS

- Managing terminals
- Using the stty command
- Terminal model capabilities and commands (infocmp,tput)
- The LP print service
- LP print service files
- Printer configuration (lpadmin)
- Printer maintenance - managing printer status,job queues etc.
- (lphsut,lpsched,/etc/init.d/lp,accept,reject,enable,disable,lpmove,lpusers,lpstat,cancel)
- Printing from copies of files
- Stopping banner output
- Exercise   UNIX System Administration Training Course   Course Contents - DAY 4

Session 10: SYSTEM STARTUP AND

Session 11: BASIC NETWORKING

- Basic networking overview
- Network hardware
- Network software
- Network addressing - IPv4
- Network masks and subnets
- Routing
- Network commands (hostname,ifconfig,netstat,telnet,rlogin,ssh, ftp,sftp,rcp,scp,rsh,ping)
- Client-Server environment
- Servers
- Networking services overview NIS,NIS+,DNS,LDAP NFS,DHCP
- Exercise

Session 12: PERFORMANCE MANAGEMENT

- Performance management
- System performance tools
- System activity reporting using the sar command
- General performance
- Specific areas of performance
- Excessive paging
- Disk I/O performance
- CPU performance
- Using the timex command
- Exercise   UNIX System Administration Training Course   Course Contents - DAY 5

Session 13: KERNEL CONFIGURATION

- System configuration
- Configuration guidelines
- Reducing disk I/O
- Increasing user memory
- Improving CPU performance
- Special case tuning needs
- The configuration process (/etc/conf/cf.d,idtune,idbuild)

Session 14: SOFTWARE INSTALLATION

- Operating system installation
- Other software installation (pkginfo,pkgadd,pkgrm)
- Exercise

Session 15: SYSLOG

- Syslog configuration
- The /etc/syslog.conf configuration file
- Editing the syslog.conf file
- Logging telnet,ftp and other network daemons
- Testing syslog logging (logger)
- Exercise

Session 16: GENERAL HOUSEKEEPING

SHUTDOWN:

- The /etc/init procedure
- System run states
- The /etc/inittab file
- System startup procedures and processes
- System shutdown procedures and processes (init,shutdown)
- Recovery from boot failure
- Exercise

- Managing files and directories
- Checking file space used
- Freeing up disk space
- Saving disk space
- File system organisation
- Helpful hints
- Exercise

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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