SUSE Linux System Administration

Duration: 5 Days Course Code: SLSA Delivery Method: Virtual Learning

Overview:

This instructor led SUSE Linux System Administration training course is designed to teach the key administration,security,networking and performance tasks required on a SUSE Linux Enterprise Server (SLES).
Similarly,the course is targeted to closely follow the official Linux Professional Institute (LPI) and CompTIA Linux+ certification curriculums.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

The SUSE Linux System Administration training course is suitable for novice Linux System Administrators,Programmers and other technical IT staff who need to acquire administration knowledge of the key administrative,networking,performance and security tasks required on a SUSE Linux operating system within the Enterprise.
Delegates who wish to work towards achieving the Linux Administrator LPIC-1 or CompTIA Linux+ certifications will find this course a good basis for LPIC-1: 101-500 and 102-500 exams or CompTIA Linux+: LX0-103,LX0-104 and XKO-004 exams.
The appendixes also include other related topics that would be useful reading for delegates preparing for certification.

Objectives:

- On completion of this course the delegate will have the required technical knowledge to administer a SUSE Linux server within the Enterprise. They will have gained practical experience of configuring administrative,networking,performance and security aspects of a SUSE Linux Enterprise system (SLES).
- The delegate will possess the essential knowledge required to study towards the Linux Administrator LPIC-1 and CompTIA Linux+ certifications.

Prerequisites:

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

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

Follow-on-Courses:

- SUSE Linux Advanced System Administration (SLASA)
- Linux Automation with Ansible (LANS)
- Linux Advanced Shell Programming Tools (LASP)
- Linux System Security (LSS)
- Apache Web Server (APH)
- Perl Programming (PERL)
- Oracle SQL (OSP)

Content:

SUSE Linux System Administration Training Course Course Contents - DAY 1

Course Introduction

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

Session 1: FILE SYSTEM CONFIGURATION

- File system types
- Partitioning a disk
- Creating filesystems
- Displaying disk usage
- Mounting and unmounting file systems
- Configuring labels and UUIDs
- Locating files in use
- Exercise

Session 2: ADVANCED FILE SYSTEM OPERATIONS

- Logical Volume Management
- Checking and repairing the file system
- Growing file systems
- Disk quotas
- Listing swap areas
- Creating and removing swap areas
- Exercise SUSE Linux System Administration Training Course Course Contents - DAY 2

Session 3: USER ACCOUNT MANAGEMENT

- User Private Group scheme
- Files used in creating a user
- Adding users via the command line and YaST
- Groups
- Password administration
- Bash Shell environment
- The Z-Shell
- Configuring user limits
- Extended permissions
- sudo command
- User monitoring and communication
- Exercise

Session 4: PACKAGE MANAGEMENT

- The Red Hat Package Manager(rpm)
- Verifying Software
- Querying installed packages
- Installing and removing packages
- The upgrade mechanism
- Converting rpm packages to cpio format
- Extended package management
- Exercise

Session 5: SYSTEM STARTUP AND SHUTDOWN

Session 8: SYSTEM SECURITY AND ENCRYPTION

- Secure shell OpenSSH
- Public/private key authentication
- X11 forwarding
- Encryption with GNU Privacy Guard GPG
- Managing firewalld
- Exercise

Session 9: CONNECTING LINUX TO THE NETWORK

- Basic network configuration
- IPv4 addressing
- IPv6 addressing
- Network protocols
- Network services and port numbers
- Managing network devices
- Hostnames and DNS
- Searching domains
- Routing under Linux
- Exercise SUSE Linux System Administration Training Course Course Contents - DAY 4

Session 10: INTERNET SERVICES

- Network services
- Managing services with systemd sockets
- Checking network service ports
- Analysing network packets
- Configuring network time
- Interacting with the hardware clock
- Remote administration
- Exercise

Session 11: BACKUP AND RESTORE

- Archiving with tar
- Archiving with cpio
- Using the dd command
- Archiving and compression
- Archiving RAR files
- unar and other backup tools
- Exercise

Session 12: LOCALISATION

- Localisation overview
- Locale variables
- Converting character sets and encoding
- Setting the locale
- Time zone
- Exercise

Session 13: VIRTUALISATION,CLOUD SERVICES AND CONTAINERS

- Configuring KVM virtualisation
- Understanding Linux Containers
- Configuring Docker
- Application Containers

Addendum: Reference Materials (provided within the course handbook for additional reading)

APPENDIX A - INSTALLING LINUX

- Installing Linux

APPENDIX B - ELECTRONIC MAIL

- Configuring Postfix and Sendmail
- Mail commands

APPENDIX C - X WINDOWS AND ACCESSIBILITY

- Configuring the X Windows GUI interface and desktops
- Installing alternative desktops
- Configuring the desktop for disabled users

APPENDIX D - PACKAGE MANAGEMENT

- Additional software package management tools

APPENDIX E - DEPRECATED SERVICES

- The xinetd Daemon
- TCP Wrappers

APPENDIX F - ADDITIONAL COMMANDS

- Miscellaneous Shell commands

- System startup process
- Startup script framework
- Managing services using YaST
- Starting and stopping services dynamically
- Creating Systemd services,timers and mounts
- suseconfig and /etc/sysconfig
- shutdown and rc
- Exercise

Session 6: CONFIGURING PRINTERS

- The Common Unix Printing Service CUPS
- Printer devices and configuration
- Installing printers
- Configuring the CUPS server
- Printer options
- Print commands
- Managing print queues
- Exercise SUSE Linux System Administration Training Course Course Contents - DAY 3

Session 7: PROCESS MONITORING AND SCHEDULING

- Monitoring processes
- Utilising terminal multiplexers
- Monitoring with watch
- Shared libraries
- Scheduling processes with at
- Scheduling processes with cron
- crontab command options
- Managing anacron
- Exercise

- Iaas cloud
- Exercise SUSE Linux System Administration Training Course Course Contents - DAY 5

Session 14: DEVICES UNDER LINUX

- Device services
- Device file naming conventions
- /sys directory
- Examining hardware
- Hardware and software configuration messages
- ACPI service and Desktop Bus
- Managing disk parameters
- Detecting new hardware
- System overview: siga
- Exercise

Session 15: SYSTEM LOGGING

- rsyslog configuration
- Configuring remote logging
- Testing using logger
- Managing logs with logrotate
- systemd journal: journalctl
- Exercise

Session 16: TROUBLESHOOTING

- Troubleshooting process
- Booting into maintenance mode
- Booting the rescue system
- 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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