Linux Server Administration

REFERENCE	CLA
INTENDED PARTICIPANTS	This course is for administrators responsible for developing and maintaining new and existing Linux systems. Participants are assumed to already have knowledge of Linux and the shell.
LEARNING OBJECTIVES	Acquire the necessary knowledge to administer a Linux server. Install and maintain reliable, functional and efficient Linux systems. Monitor and troubleshoot the boot process. Configure and manage disk space and removable storage devices. Manage users. Deploy software components from source or distribution packages. Linux system backups. Provide network services, printing.
DURATION	5 days
DELIVERY PRICE	Contact Us

COURSE CONTENT

INTRODUCTION

Presentation of Linux, how to administer the system in text mode, the administration tools, the documentation (man...) and the other sources of information (How To...)

INSTALLING LINUX

- The elements needed for installation
- The different installation methods
- Hardware platforms supported
- Partitioning solutions

SHUTDOWN AND STARTUP

- Major startup stages
- Init application, the notion of init level
- RC or startup services management
- Stopping the system with the shutdown command

BASIC SYSTEM ADMINISTRATION IN TEXT MODE

- The tree of files and file attributes
- The basic commands
- The shell
- Using the vi editor

SHELL SCRIPTS

- Running shell scripts
- Variables management
- Control statements (if, while, for, ...)
- Subroutines

USERS AND RIGHTS

- Multi-user security
- Management of user accounts and groups
- Rights management for files

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DISCS AND FILE SYSTEMS

- Managing disk space, creating a partition
- Creating and formatting file systems
- Mounting and unmounting file systems
- Logical volumes
- Logged file systems
- LVM (Logical Volume Manager)
- File system management of logged files in LV
- Links

APPLICATIONS MANAGEMENT

- The notion of process, some process management commands
- Automating treatments with crontab
- Organizing logbooks with Syslog and Syslog-ng

APPLICATIONS INSTALLATION

- Installation from source
- Red Hat Packages and Debian Packages
- Updates and dependencies (APT environment, YUM environment)

BACKUP

- Backup tools
- Backup via tar, cpio, pax and dd commands
- Compression (gzip, bzip, xz).
- Tapes

NETWORK

- Add a Linux system in an IP network
- Network services, inetd or xinetd services
- Local firewall
- Network utilities
- SSH commands: ssh, scp

PRINTING

- The architecture of Linux printing, concept of spool and class
- The CUPS system, user and administrator commands

GRAPHIC ENVIRONMENT

- X Window System
- Starting a client X session
- Introduction to KDE and Gnome

SECURITY

- Introduction to Computer Security
- Connections security

PRACTICAL WORK

Theoretical lectures alternate with immediate application through several practical sessions to provide effective instruction.
Methods and best practices to effectively administer Linux servers.
Feedback from Linux specialists.