Linux Basics and Shell Scripting Outline

Presentation from Uplatz

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1. Introduction to Unix/Linux

➢ Unix and its history

➢ Introduction to Linux

➢ Login session

➢ Working with the Unix filesystem (Linux Directories)

➢ Linux Basic Commands (ls, pwd, cd, touch, mkdir, rmdir, cp, mv, cat, rm)

➢ Handling files and directories (with meta characters or wildcards)

➢ Working with vi (visual editor along with 3 modes)

➢ Linux documentation (along with manual sections including path)

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2. File Utilities

➢ Standard I/O, redirection and pipes

➢ File descriptors and its usage of meta characters (>, >>, <, <<)

➢ Changing file access rights (users and permissions including both Symbolic and Absolute modes) (chmod)

➢ Soft links and hard links

➢ Checking file integrity (md5sum)

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3. Linux Utilities

➢ Disk utilities (du, df)

➢ Process utilities (ps and all options)

➢ Text processing utilities (head, tail, wc, find, grep etc)

➢ Miscellaneous commands

➢ Compressing and archiving (backup and restore) utilities

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4. System Administrative Basics

➢ Networking (ftp, tftp, scp, telnet, ssh)

➢ File systems and devices

➢ Accessing administrator (root) privileges

➢ Package management

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5. Shells and Shell Programming (BASH)

➢ Command line interpreters and SSH

➢ Variables in shell (Local and Global (export))

➢ Environment variables

➢ How to write the script?

➢ Quotes (Single and Double along with variables)

➢ Test commands or [expr]

➢ Conditional statements (if ... fi, if ... else ... fi, if ... elif ... else ... fi, case statement)

➢ Repetitive statements (for and while loops)

➢ Conditional execution (&& and ||)

➢ Functions

➢ Signal Handling (Default action, Handling Signals and Ignoring Signals)

➢ Commands such as kill, trap, shift

➢ Command line processing and command line arguments

➢ Processing command line options (getopts)

➢ Utilities: cut, join, tr, sed, uniq, awk

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