



7403

5BCA-3(A) - LINUX AND SHELL PROGRAMMING

UNIT - I

Linux introduction and file system - Basic Features, Advantages, Installing requirement, Basic Architecture of Unix/Linux system, Kernel, Shell.

Linux File system-Boot block, super block, Inode table, data blocks, How Linux access files, storage files, Linux standard directories.

Commands for files and directories cd, ls, cp, md, rm, mkdir, rmdir, pwd, file, more, less, creating and viewing files using cat, file comparisons - cmp & comm, View files, disk related commands, checking disk free spaces.

Partitioning the Hard drive for Linux, Installing the Linux system, System startup and shut-down process, init and run levels.

UNIT-II

Essential linux commands Understanding shells, Processes in linux-process fundamentals, connecting processes with pipes, tee, Redirecting input

output, manual help, Background processing, managing multiple processes, changing process priority with nice, scheduling of processes at command, cron, batch commands, kill, ps, who, sleep, Printing commands, find, sort, touch, file, file related commands-ws, sat, cut, dd, etc.

Mathematical commands- bc, expr, factor, units.

Creating and editing files with vi, joe & vim editor

UNIT-III

System administration. Common administrative tasks, identifying administrative files - configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disable user's accounts, creating and mounting file system, checking and monitoring system performance file security & Permissions, becoming super user using su.

Getting system information with uname, host name, disk partitions & sizes, users, kernel.

Backup and restore files, reconfiguration hardware with kudzu, installing and removing packages with rpm command.

Configure X-windows desktop-redhat-config-Xfree86, understanding XF86config file, starting & using X desktop. KDE & Gnome graphical interfaces, changing X settings.

UNIT-IV

Shell programming- Basic of shell programming, Various types of shell available in Linux, comparisons between various shells, shell programming in bash, read command, conditional and looping statements, case statements, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automate system tasks.

UNIT-V

Simple filter commands - pr, head, tail, cut, paste, sort, uniq, tr.

Filter using regular expressions - grep, egrep, and sed.

awk programming - report printing with awk.

TEXTS & REFERENCES BOOKS :

- UNIX - Concepts & Applications (Third Ed.) - Sumitabha Das, Tata McGraw Hill Publications.
- Unix for programmers and users (Third Ed.) - Graham Glass & King Ables, Pearson Education India. (Low Prices Edition).
- Red Hat Linux'9 Bible - Cristopher Negus, IDG Books India Ltd.

