|  |  |  |
| --- | --- | --- |
| **Linux System Administration** | | |
| **Test** | **Content** | **Scheduled Date** |
| **ST1** | **Introduction:** History, Linux Foundation, H/W Requirements, Linux Components, Distributions, Features, Choosing a suitable Linux distribution. **Linux Architecture:** Kernel, Architectural differences between Windows and Linux. Configuration & customizations of Linux, Linux structure, and Installation. **Installation:** Different ways to install Linux, Linux installation (CentOS7 - Recommended), CentOS vs. CentOS stream, Take a snapshot of VM. **Boot Process:** The boot process, Partitioning, dual boot, Virtual memory and swap space disk partition (df, fdisk), Adding swap space. **File System & Storage Management:** File system structure, Navigation commands (cd, ls and pwd), Absolute and relative Paths, Creating files and directories (touch, cp, mkdir), Disk partitions and file systems, Mounting and unmounting file systems (mount, umount), Managing disk space (df, du) **Working with Files & Directories:** Linux file types, find, locate, Changing Password, cp, rm, mv, mkdir, rmdir) **File Display Commands:** cat, less, more, head, tail) redirection, Files and directory permissions (chmod), File ownership commands (chown, chgrp) | 18th November 2023 |
| **ST2** | **Editors:** Linux file editor (vi), Difference between vi and vim editors, nano, pico and other linux editors,"sed" command. **Filters / Text Processing Commands:** cut, awk, grep/egrep, sort/uniq, wc, compare files (diff and cmp), Compress and uncompress (tar, gzip, gunzip). **User Account Management:** useradd, groupadd, usermod, userdel, groupdel, Switch users and sudo access (su, sudo), Monitor users (who, last, w, id). System Utility Commands: date, uptime, hostname, uname, which, cal, bc. **Process Management & System Monitoring:** ps, bg, fg, nice commands. **Troubleshooting:** ifconfig, ping, traceroute, DNS troubleshooting tools etc. Web and **Database Services:** Configuring web servers (Apache, Nginx), Setting up databases (MySQL, PostgreSQL), Managing web applications, Automation and Scripting, Introduction to shell scripting (Bash), Automating tasks with scripts, Using configuration management tools (Ansible), **Shell Scripting:** Shell scripting basics, Types of shells, starting a shell, Create your first script - Hello world, Conditions/If else statements Scripts, Case statements script, Conditions/If else statements, Scripts, Case statements script, for loop script, do-while scripts, Exit status, Script, For loop script, do-while scripts, Exit status, **Introduction to GCC compiler:** Basics of GCC, Compilation of program, Execution of program, Time stamping | 16th December 2023 |
| **ETE** | Complete Syllabus | 21st -22nd December 2023 |