# CHM-A level

**A4: Linux Administration (Duration 80 Hours)**

**Subject Prerequisites:**
This course covers, skills in systems administration on Linux, that are like Control common system hardware, Linux file system, user and group administration to a level where you can attach and configure a workstation on an existing network and also Back up file systems performance, memory, and process management

**Subject Outcome:**
- Understand the relationship between the UNIX and Linux Operating Systems
- Understand and navigate the directory structure
- Obtain information on files and directories and also use of Linux commands
- Create, delete, move and rename files and directories
- Manage file and directory access permissions and manipulate running processes
- Combine several simple commands in order to produce more powerful operations
- Compile simple programs under Linux
- View, set and change environment variables
- candidates can able to work as system administrator in respective field

| Section | Brief Contents | Duration (Hrs) |
|---|---|---|
| **1. Introduction to Linux System** | Various parts of an operating system, Important parts of the kernel Major services in a UNIX system | 5 |
| **2. Overview of the Directory Tree, Hardware Devices and Tools** | Directories, File Structure, mounting File and Directory Permissions Software RAID, LVM Configuration, CD Burners and Linux, Bootable CDROMs, Configuring PCMCIA Devices. Troubleshooting tools | 10 |
| **3. Boots And Shutdowns** | Boot loader Initialization, shutdowns and Run levels | 5 |
| **4. Logging In And Out, Managing user Accounts** | logging, Creating a user, scheduling, memory management. resource monitoring, package management. kernel management, Shell Scripting, Printing and Documentation | 10 |
| **5. Network Management** | General networking, network layers, LAN/WAN/MAN, interface configuration, unicast, multicast, broadcast, any cast, Internet, Intranet, TCP/IP configuration and Troubleshooting | 10 |
| **6. Backup Procedure** | Importance of backed up, Selecting the backup medium, backup tool, Simple backups Multilevel backups, Compressed backups | 5 |
| **List of Experiments** | 1. Various versions of Linux systems and also | 35 |

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| | distributions<br>2. Install a Linux server According to your available specifications<br>3. File management<br>4. Experiments on Text editor<br>5. Experiments on File content<br>6. File permissions and Techniques<br>7. Install mail server<br>8. Install a printer Local and Network making Print sever<br>9. Archival and compression<br>10. Experiments on creating users on server mage group accounts<br>11. kernel management at run time<br>12. Searching<br>13. experiments on using shell scripting<br>14. Basic networking Related to LAN/MAN/WAN<br>15. Backup and Recovery Data and Network | |