

**Linux** is, in simplest terms, an operating system. It is the software on a computer that enables applications and the computer operator to access the devices on the computer to perform desired functions. The operating system (OS) relays instructions from an application to, for instance, the computer's processor. The processor performs the instructed task, then sends the results back to the application via the operating system.

#### Overview

As an open operating system, Linux is developed collaboratively, meaning no one company is solely responsible for its development or ongoing support. Companies participating in the Linux economy share research and development costs with their partners and competitors. This spreading of development burden amongst individuals and companies has resulted in a large and efficient ecosystem and unheralded software innovation. Linux is already successful on many different kinds of devices, but there are also many technological areas where Linux is moving towards, even as desktop and server development continues to grow faster than any other operating system today.

The duration of linux workshop will be two consecutive days, with eight hours session each day in a total of sixteen hours, properly divided into theory and hand on practical sessions. At the end of this workshop, a competition will be organized among the participating students where each participating student will get Certificate of Participation and the Winners will get Certificate of Merit.

### Day 1 (Session 1)

#### **Introduction to Linux**

- What is Linux?
- Linux vs Windows.
- About RED HAT.
- What is Kick Start in Linux?
- NTP
- Basic Networking
- IP addressing (Practical)

# Day 1 (Session 2)

- Software Installation and awareness about different types.
- Introduction to Basic and Advanced Commands.
- User Management
- Group Management
- Permissions

# Day 2 (Session 3)

### $(Practical\ and\ Theory)$

- File System Management.
- Ownership of files
- RAID Technology.
- Software Installation: YUM.
- Deploying Basic IP Servers: DHCP.
- SSH and deploying SSH for remote login.
- Deploying Name and Security Server: DNS.

# Day 2 (Session 4)

#### **Second Session : (Practical and Theory)**

- Deploying APACHE Web Server
- Deploying Proxy web server: SQUID.
- Understanding SEL (Security Enhanced Linux).

### **Ethical Hacking Workshop Overview / Catalogue**

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