

# Lesson 1 Linux Introduction

## 1. Linux Introduction

Before introducing Linux, we need to know what is operating system.

Computer can receive message, store data, process data and output the processing result (word, picture, audio and video) according to the requirements of users.

Hardware is described as physical components of a computer containing screen, keyboard, etc., and software can coordinate how the whole computer works. And operating system is one kind of the software, which serves as intermediary for the communication between hardware and other software.

Operating system will control other programs to run, manage system resources and provide the rudimentary computer functions.

And Linux is an operating system similar to Windows. However, different from Windows, Linux is open-source.



## 2. Linux Characteristic

In the past 20 years, Linux is applied in three major fields, including server

side, embedded development and PC desktop, and server side is the key field. For example, lots of internet enterprises adopt Linux as their program running platform of server side.

And Linux enjoys such popularity attributing to the following advantages.

- ① free and open-source
- ② fully compatible
- ③ multiple users and tasks
- ④ Enable you to develop practical and creative projects

⑤ live boot image of Linux can start a computer whose hard disk crashes, and then find out the solution. As an multi-user operating system, Linux is very private and stable, and your teammates can login the system locally or remotely at the same time.

⑥ Linux provides a sophisticated software package management system that allows you to download and maintain the applications in every online repository without worry.

### **3. Mainstream Version**

Linux has released various versions, and the common systems are listed below.

#### **1) Ubuntu**

Ubuntu is a Linux distribution based on Debian. It is competitive in the field of proprietary desktop operating system, and highly compatible with new software. With user-friendly desktop and supporting wide range of hardware, Ubuntu is the first choice for desktop system, and also applicable to server side.



# ubuntu

Ubuntu aims at providing a up-to-date and stable operating system composed of major free software for general users. Besides, Ubuntu has a powerful community where users can get help.

## 2) Debian

Released in 1993, Debian is very stable, involves more than 30,000 software packages and supports more processor architectures than other Linux distributions.



## 3) RHEL



Redhat series systems are listed below.

- ① RHEL: Redhat Enterprise Linux is also called Redhat Advance Server. Not free, but stable and applicable to server.
- ② Fedora Core: Developed from desktop version of Redhat, it is free but not stable. It is better to apply it to desktop application. )
- ③ CentOS: community clone version of RHEL. Free, stable and fit for server. )

#### 4) Fedora

Built by global community enthusiasts, Fedora is a swift and powerful operating system for daily applications. Anyone is free to use, modify and republish. It is developed by strong community whose members immerse themselves in offering and maintaining free and open-source software and open criterion.



Fedora is an operating system based on Linux and a collection of software keeping computer running. Its goal is to develop a set of innovative, multi-functional, free and open-source operating system.

#### 5) OpenSUSE

OpenSUSE is well-known German Linux system which enjoys large global popularity and high market share, and its distribution ranks first in Europe. OpenSUSE is free to use and update.

