



## Diploma in IP Routing

Routing is the process of moving data from one point to the other using networking software and hardware (routers and switches). – The course focuses on initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Candidates will develop skills on how to configure a router, manage Cisco IOS Software, configure routing protocol on routers, and set the access lists to control the access to routers.

*Why does the course exist* – Routers and switches are the most important networking hardware. Without routers, there would be no internet! The connection of LANs and WANs is at the core of commercial and personal businesses.

*How it fits into the larger programme* – In today's world, companies can not function without the internet. 80% of daily transactions are internet based and only 20% of information is produced internally, this makes IP Routing course a necessity and in demand.

*For whom it was designed* – This course is designed for candidates who complete the Diploma in Unix & Windows Networking or holders of equivalent qualification.

*How it will benefit candidates* – A combination of Certificate in Networking and a Diploma in IP Routing make candidates highly qualified, enhancing the chances of getting employment.

### *Subjects:*

- Technological Elements of Networks
- Internet Infrastructure
- IP Routing Technology
- Connecting Routing Devices
- Introduction to Telecommunications

[This course is about Cisco basics. However, unlike Microsoft products well known, Cisco is not common to the ordinary person. Why is this? Have you ever seen a Cisco router/switch in a high street shop? This is one reason most think Cisco course is different. All the above five subjects are meant to make you understand Cisco routers by viewing through all routing technology through different angles – from routing in Windows (platform most familiar to many – until the point you realise you are looking at the same things and it is not that .....!]

**Technological Elements of Networks** – it is impossible to visualise how one can be a Network Administrator without understanding underlying networking hardware, the technology involved, different types of networks, and what happens behind the scenes (as far as data transmission technology is concerned).

**Internet Infrastructure** – Without routers, there would be no internet [full stop/period]! The Internet is largest network in the world and nobody owns it. But if network administrators who

configure small to large independent networks [which end up forming the Internet] do not build long lasting, secure infrastructures – this largest network would be catastrophic!

**IP Routing Technology** - an umbrella term for the set of protocols that determine the path that data follows in order to travel across multiple networks from its source to its destination. Data is routed from its source to its destination through a series of routers, and across multiple networks. The IP Routing protocols enable routers to build up a forwarding table that correlates final destinations with next hop addresses.

**Connecting Routing Devices** - There are several varieties of Cisco routers. This course relevant router models are the 2500, 4000, 7000, and 7500 series. Cisco routers enable the transportation and delivery of data over the internet.

**Introduction Telecommunications** – Internet and Telecommunication works hand in hand. Most importantly, today's technology integrates voice and data into one.