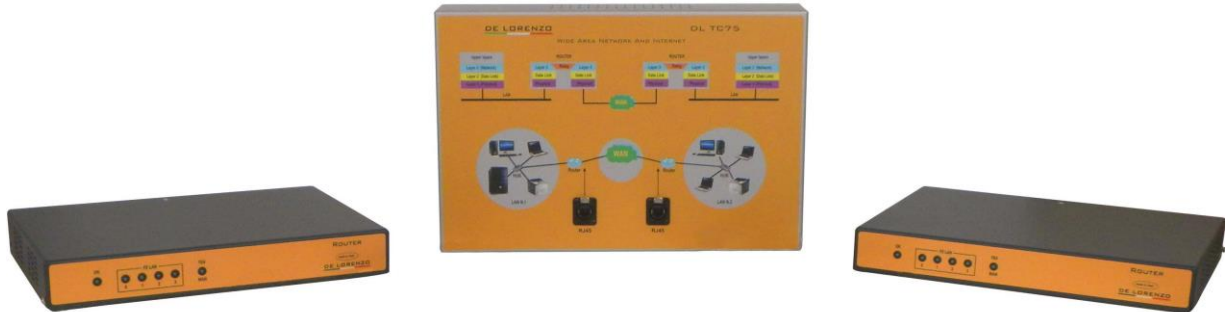




Wide Area Network (WAN) and Internet DL TC75



Objectives:

Training of an engineer for the installation and maintenance of WAN Networks and Internet, capable of:

- knowing the principles, the standards and the devices that are normally used in WANs
- installing private WANs and systems for accessing Internet
- programming and configuring the devices for accessing the WANs (routers)
- performing maintenance, troubleshooting and tests on WANs

Educational Path:

The Educational Path of the Training Package covers the following subjects:

Introduction to Internetworking

Computer networks and Internetworking, The OSI reference model, Hierarchical structure of the networks, The protocols of the Internetworking, Addressing in data networks.

- Technologies and devices of the WANs

Types of WANs and transmission protocols, Point-to-point connections, Circuit switching networks: PSTN and ISDN, Package switching networks: Frame Relay, ATM, X.25, WAN devices.

- WAN protocols: Netware protocols

Netware protocols and OSI Model, IPX protocol, IPX addressing, IPX routing, SPX protocol.

- WAN protocols: Internet protocols

Internet protocols and OSI Model, IP protocol, IP addressing, IP routing, Addressing protocols: ARP and RARP, Protocols ICMP, TCP and UDP, Higher protocols: FTP, DNS, HTTP, Telnet, etc.

- Intranet/Internet and diagnostics on the networks

What is an Intranet and its services, Terminal emulation: Telnet, Files transfer, Electronic mail, World Wide Web, Domain Name System, TCP/IP tools and diagnostics tests, Address assignment to computers.

- Routing and routing algorithms

Routing, Routing tables, Static routing, Dynamic routing, Routing algorithms: Distance vector, Routing algorithms: Link State.

- The router: its structure and configuration

The router, Structure of the hardware, Structure of the software, User interface, The help system, The password, The management of the configuration, The saving of the IOS.



- **Static IP routing: configuration and test**
Programming of the interfaces, LAN interfaces, WAN interfaces, Configuration of the IP routing, Static IP routing.
- **Dynamic IP routing: configuration and test**
Dynamic routing, Configuration RIP, Configuration EIGRP, Consulting the configuration, Test and troubleshooting.

Composed of:

TC75-MS: Structure of a WAN

The module includes:

The block diagram of the structure of a WAN.

The diagrams of the levels of the OSI model used in internetworking.

The connectors for the connection of the routers to the WAN.

TC75-DR: Router (Quantity two)

Serial type WAN interface V24/RS232.

10BaseT LAN interface.

RJ-45 or RS-232 port.

Internetworking Operating System.