# Hands-On PC Skills for Telecom Technicians



# **Course Description**

With the expansion of telecommunications from phone systems into DSL, Internet Access, IP Television and Triple play networks, telecom technicians need to use Laptop PCs to test and validate services. PCs are becoming more than just a way to surf the Internet and are becoming vital service testing tools. As such technicians need a solid background in using and maintaining laptop PCs. They must also be able to interface with customers who use services and validate their configuration to link to services.

This course is aimed at giving technicians a solid grounding in how Laptop and desktop PCs work with Windows. The course will explain the basic architecture of PCs, their memory, disk layout and interfaces. It will teach attendees how windows and user programs, services and features are installed and maintained, how to select drivers for new hardware such as Wireless adaptors, how to configure networking and routing and how to use and test key user services. Technicians will need to move test files and software between platforms as well as upload and download files to the Internet. These key skills will be taught and practiced.

Many customers will be unfamiliar with firewalls and anti-virus software. The course will explain the limitations of this software and how to turn on and off Windows XP security features. The concepts of system registry and system restore will also be explained.

#### **Students Will Learn**

- Describe The Architecture Of PC Platforms For Technician Testing And User Deployment
- Compare Laptop And Desktop Pcs
- Appreciate How Disks, Folders And Memory Should Be Organized
- Identify How Systems Software Services Function And Monitor What Software Is Running
- Install And Uninstall Software And Windows Components
- Configure Wired And Wireless Windows Networking
- Share Files And Services
- Upload And Download Files And Software To The Internet
- And More...

# **Target Audience**

Technicians, contractors, union craftsman, electricians, installers, engineers, and anyone involved in installing, maintaining, troubleshooting CPE (Customer Premise) telephone installs, Internet services, and any other networking services and support issues.

# **Course Outline**

#### Module I: Introduction to PC Hardware

Components of a PC

Comparing Desktop and Laptop Hardware

- Processors and Buses
- Disk Partitions and formats
- Internal and External Disks
- **USB** Interfaces
- Network Interface cards
- Graphics Cards
- Sound Interfaces

## Module II: Operating System Components

Functions of Operating Systems Windows, MAC and Linux compared Key Windows Components Organization of system processes The Desktop Quick Launch bar and task bars The system tray Configuring your desktop Ways to organize your Laptop Using Task manager to monitor processes and memory Windows Directory Windows System Directory Installing and Uninstalling Programs Users and passwords System Start-up and closedown System Registry

#### System Restore

#### Module III: Running Programs and Services

Methods of running programs Starting and stopping programs Running Programs from the Command Prompt Configuring command prompt window for troubleshooting Key windows commands Creating shortcuts to start programs Organizing shortcuts in the start-up and program list Starting and stopping services

#### Module IV: IP Networking In Windows XP

Fundamentals of IP Addresses Subnet Masks and Network Prefix Default Routers Dynamic IP addressing with DHCP Configuring static addresses Displaying IP addresses and routing tables with IPCONFIG and NETSTAT DNS Servers Testing services with PING, TRACERT and NSLOOKUP

### Module V: Installing External Hardware

External hard drives Memory Sticks and flash drives External networking Installing an external device Installing and updating Drivers

# Module VI: Microsoft Networking for File Sharing

Naming your PC

Domains and Working groups

Turning on and off file sharing

Moving files between machines

Mapping Network Drives

Windows Explorer

Web Browsers

FTP transfer

HTTP download

#### Module VII: Key Technician Laptop Tools for Troubleshooting

Organizing your Laptop as a testing tool What to include What to avoid Protocol Analyzers Throughput and Access Speed Testing FTP and TFTP servers Terminal Emulators

# **Delivery Method**

Instructor led with numerous Hands-On labs and exercises.

#### **Equipment Requirements** (This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

# **Course Length**

3 Days