



# Hardware and Networking

## **Introduction to Hardware**

- Identification, installation and troubleshooting of Processors
- Identification, installation and troubleshooting of Memory
- Identification, installation and troubleshooting of Motherboards
- Identification, installation and troubleshooting of SMPS
- Storage systems (IDE and SATA)
- Storage system – removable(CD/DVD/Blue Ray)
- Display devices and graphics card
- Peripherals and input devices (Mouse, Keyboard, Scanners, Printers) and their troubleshooting
- BIOS settings
- Laptop maintenance and their troubleshooting
- Preventive maintenance of all the components of a computer
- Gaming PCs and Server Hardware

## **Network and Servers**

- Introduction to computer networks
- Networking devices (Switches and Routers)
- LAN standards
- IP addressing
- TCP/IP protocol suite
- Structured cabling
- Installing, configuring and troubleshooting wireless networks
- Troubleshooting network problems using hardware and software tools
- Installing Microsoft Windows Server 2008
- Configuring file services
- Maintaining Windows Server 2008 file services
- Using terminal services gateway
- Configuring Routing and Remote Access and wireless networking
- Overview of active directory domain services
- Implementing active directory
- Configuring and managing the DNS Server role



- Configuring and managing the DHCP Server role
- Working with active directory sites
- Global catalog and FSMO roles
- Security Planning and Administrative Delegation
- Active Directory Administration
- Maintaining network health
- Introduction to group policy
- Configuring environment using group policy
- Performing software installation using group policy
- Active directory maintenance
- Backing up
- Active Directory troubleshooting and Disaster Recovery (DR)

## **Network Security**

- General security concepts
- Identifying potential risks
- Infrastructure and Connectivity
- Monitoring activity and intrusion detection
- Implementing and maintaining a secure network
- Securing the network environment
- Cryptography basics, methods and standards
- Security policies and procedures
- Security management

