




DITE with Cyber security



AN ISO 9001-2015 CERTIFIED COMPANY

 +91 9809109000  support@ics-education.com  www.ics-worldwide.com

TOPICS COVERED

Computer Hardware

Networking CCNA, MCSA

Cyber Security

CCTV Installation

Security Systems

Computer Hardware

Computer

- Inside A CPU
- Motherboard
- Types of motherboard
- Form Factor
- Motherboard Manufactures

Microprocessor

- CPU Socket
- Types of Sockets and Socket Numbers
- Microprocessor (Intel and AMD)
- Types of microprocessor
- Identifying Gen and series
- Clock Speed
- Core & Thread
- Core Suffix value
- Insert Microprocessor

System Memory

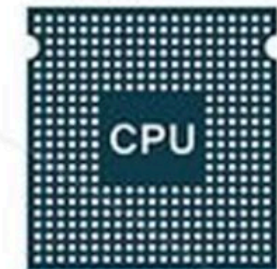
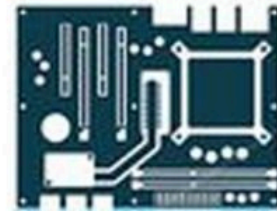
- Ram Module on motherboard
- RAM
- Types of Ram and voltage
- Type Of RAM
- Ram Size
- Ram speed
- Ram Manufactures
- Installing RAM

Storage Device

- Storage Slots On motherboard
- Storage devices (HDD, SSD, NVMe etc.)
- Storage Manufactures
- Removable Storages (pen drive,external Drives)
- Installing Storage devices

Expansion Cards & Graphics cards

- Expansion Slots on motherboard
- Expansion cards (Add on cards ,graphics cards)
- Graphics cards (NVidia ,Radeon , Intel Arc)
- Types of Graphics card
- Manufactures
- Installing graphics card & Expansion cards



Cooling and power

- CPU & sys fan connector on motherboard
- Types of cooling Fan Based
On socket (Tower,Liquid,Case)
- Thermal Paste (Paste type & liquid type)
- Manufactures
- Installing Cooling fan
- Power supply unit
- Power supply connectors on motherboard and other devices
- Input and output voltages
- Wattage Rating (Based on CPU & Graphics)
- Power supply manufactures
- Installing PSU

Cables and connectors

- Cable types
- Video cable
- USB Cables
- Storage cables
- Expansion cables

Other Components Of motherboard

- CMOS Battery slot
- CMOS Battery
- Installing CMOS Battery
- Front Panel
- Back panel
- Chipsets

Assignment

- Write a configuration of Budgeted PC and High performance PC

Computer Assembling

Laptop Hardware

- Laptop
- Disassembling a Laptop
- Replacing a Battery
- Replacing the Keyboard
- Upgrading the Memory
- Adding Expansion Cards
- Replacing the Storage
- Replacing Display



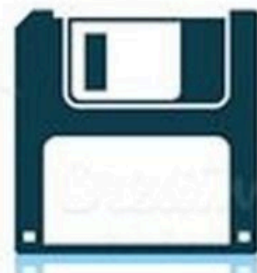
BIOS/UEFI

- BIOS/UEFI
- Boot Options
- BIOS/UEFI Security
- TPM and HSM
- BIOS/UEFI Cooling Options
- Configuring the BIOS
- Configuring the UEFI



Operating Systems

- Introduction
- About O S
- Operating Systems types
(Windows, Linux, mac OS, chrome OS, android)
- Compatibility Concerns

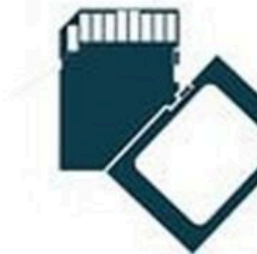


Installing Operating Systems

- Installing Windows
- Installing Linux

Installing Drivers and Software's

- Driver pack installation (Online & offline)
- Software Installation
- Uninstalling Software



Windows operating systems setting

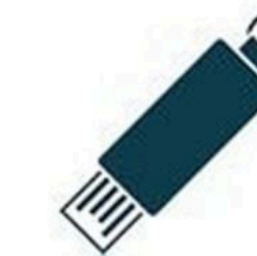
- Control panel settings
- Windows Tools (Task manager, device manager, Disk management etc.)
- Creating Partition (MBR, GPT)
- User Accounts (User creation)
- Etc.

Recovery & Dual OS

- Data Recovery
- Password recovery
- OS installation without Data Loss
- Upgrade OS
- Dual OS

Printer and connections

- Types of printers
- Connections
- Driver installation
- Sharing on network



Trouble Shooting

- Trouble shooting with Practical's

Networking

CCNA

NETWORK FUNDAMENTALS

- Devices
- Topologies
- OSI and TCP/IP Models

IP ADDRESSING AND SUBNETTING

- Binary
- IPV4 Addressing
- IPV4 Subnetting

ROUTING FUNDAMENTALS

- Router
- Routing Table
- Packet Forwarding

ADVANCED ROUTING

- Static Routing
- Dynamic Routing
- OSPF

CISCO IOS

- Managing Cisco IOS
- Installing, Updating Cisco IOS
- Backing Up and Restoring Cisco IOS

SWITCH FUNDAMENTALS

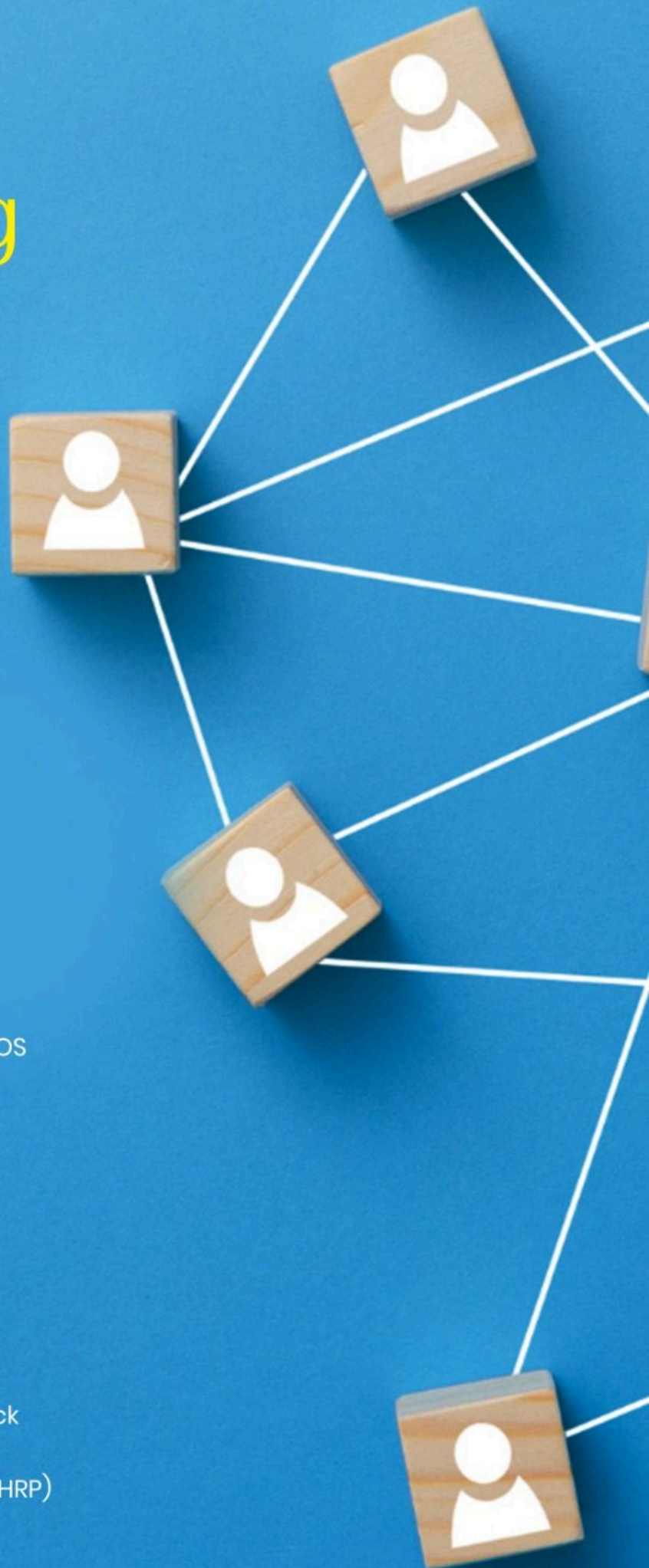
- Switches Types
- Switch Layer-2 Functions
- Mac Address Table
- Frame Forwarding

VLANS AND TRUNKS

- Configuring and Verifying VLANS
- Configuring and Verifying Trunks

INTER-VLAN ROUTING

- Normal Method, Router-On-A-Stick
- Using MLS, SVIs and Routed Ports
- First Hop Redundancy Protocol (FHRP)



SPANNING TREE PROTOCOL

- Understanding STP, PVST
- Configuring RSTP
- Manipulating the STP Topology
- PortFast and BPDU Guard

ETHER CHANNEL

- Configuring and Verifying Ether Channel Bundle
- Understanding PAGP and LACP

DHCP AND NTP

- Configure Router as a DHCP Server
- Configure Router as a DHCP Relay Agent
- Configure Router as a DHCP Client
- Configuring and Verifying NTP

CDP, LLDP, SYSLOG AND SNMP

- Overview of CDP
- Overview of LLDP
- Overview of SYSLOG
- Overview of SNMP

QOS

- Introduction to QOS

SECURITY

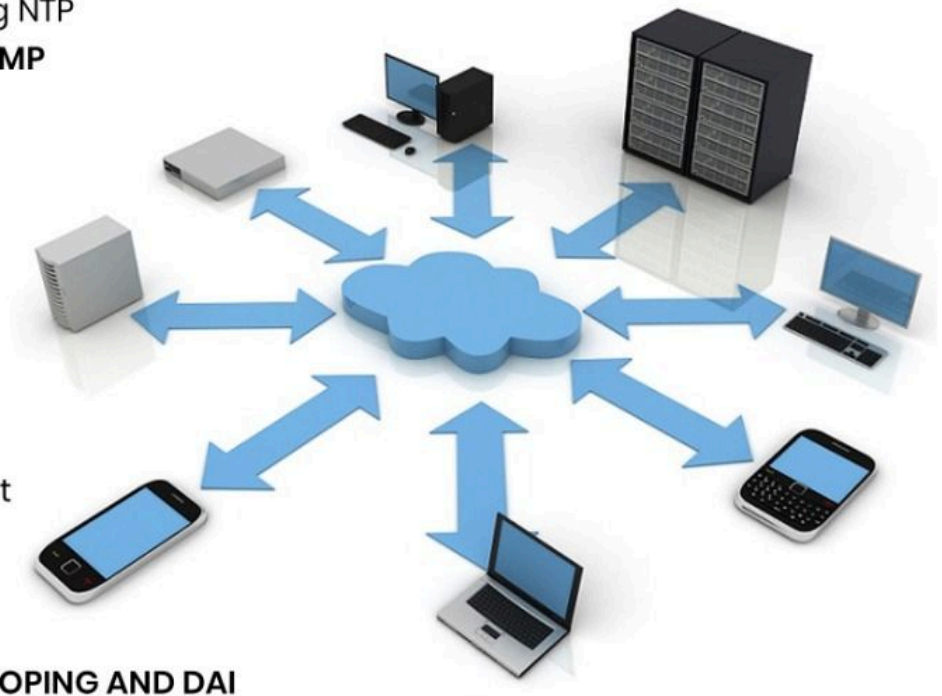
- Security Overview
- Securing the Console Port
- Securing the VTY Lines
- Configuring SSH
- VPN Overview

PORT SECURITY, DHCP SNOOPING AND DAI

- Configuring and Verifying Port Security
- Overview of DHCP Snooping
- Overview of DAI

ACLs

- Understanding Security Threats
- Understanding Hardware Firewall and IOS Firewall
- Configuring and Verifying Standard Access List
- Configuring and Verifying Extended Access List
- Configuring and Verifying Named Access List



NETWORK ADDRESS TRANSLATION (NAT)

- Understanding NAT, NAT Types
- Configuring and Verifying Static NAT
- Configuring and Verifying Dynamic NAT
- Configuring and Verifying PAT

WIRELESS

- An Introduction to Wireless
- Understanding Wireless Standards
- Understanding Cisco Unified Wireless Solution
- Configuring and Verifying Small Wireless Network (WLAN)

AUTOMATION AND PROGRAMMABILITY

- An Overview of Automation and Programmability
- Exploring Controller Based Networks
- An Introduction to DNA Center

IPV6

- Introduction to IPV6 Addressing
- Implementing and Configuring IPV6 Network
- Configuring and Verifying IPV6 Static Routing
- Configuring and Verifying IPV6 Dynamic Routing

MCSA

Introduction to Microsoft Server and Client Operating Systems

- Microsoft Server Overview
- Server Operating System Components
- User Account Types, Creating user Accounts, Changing User Account Types
- Comparing and Understanding Microsoft Server Operating Systems 2003, 2008, 2012, 2016, 2019 and 2022.
- Understanding Licensing of Server 2022 Standard Edition & Datacentre Edition
- Install, Upgrade, and Migrate Servers and workload
- Introduction to Microsoft Powershell

Implement Hyper-V

- Introduction to Virtualization
- Hypervisor, Hypervisor types, Hosted and Bare-metal hypervisors
- Install and configure Hyper-V
- Configure virtual machine (VM) settings
- Configure Hyper-V storage
- Configure Hyper-V networking

Implement Storage Solutions

- Configure Disks and Volumes
- Implement server storage
- File sharing, Folder sharing, Disk sharing
- File sharing permissions and Disk security, Disk Quota
- Accessing Shared files and Map network drive
- Basic Disk, Dynamic Disk, Primary Partition, Extended Partition, Logical Partition
- iSCSI
- Terminal Services, Remote Desktop, Remote Assistance

IP Addressing

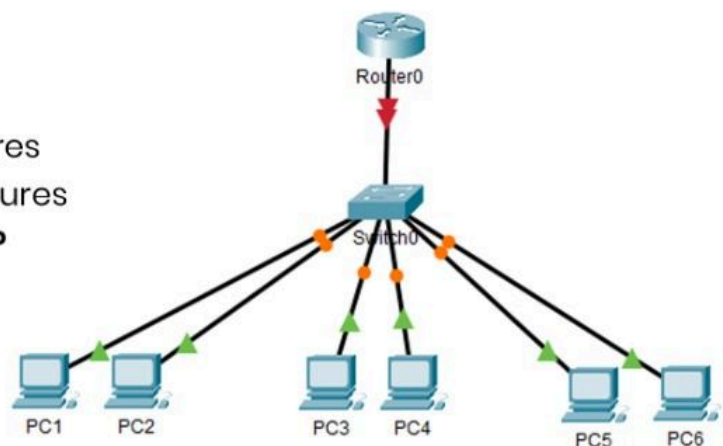
- IP format, IP Address Versions, IPV4 and IPV6
- IP Address Classification, IP Subnetting
- Private IP Address and Public IP Address
- Subnet Mask, Default Gateway, Preferred DNS
- IP Address Configuration, Communication Checking
- Ping, tracert, ipconfig, netsh cmd or powershell Commands

Maintain and Monitor Server Environments

- Maintain server installations
- Monitor server installations
- Server Manager and Dashboard
- Installing Server Roles and Features
- Monitoring Server Roles and Features

Implement Networking with DHCP

- Overview about DHCP
- Install and configure DHCP
- Manage and maintain DHCP
- IPv4 and IPv6 Scope
- Lease, Reservation and Scope options
- DHCP address filtering
- DHCP client side configuration
- DHCP client side verification and troubleshooting
- DHCP Backup and Restore



Implement Domain Name System (DNS)

- Install and configure DNS servers
- Forward Lookup Zone and Reverse Lookup Zone
- Primary, Secondary and Stub Zone
- Forwarders and Conditional Forwarders
- Zone Transfer and DNSSEC

- DNS Resource Records (RR)
- SOA, NS, A, AAAA, PTR, SRV, CNAME, and MX records
- Root Hints and Dynamic DNS
- DNS Backup and Restore

Implement Network Connectivity and Remote Access Solutions

- Implement network connectivity solutions with NAT
- Implement virtual private network (VPN) and DirectAccess solutions
- Implement Network Policy Server (NPS)

Implement IP Address Management IPAM

- Overview about IPAM
- Installing IPAM feature
- Connecting and configuring IPAM server
- Monitoring and Managing IPAM server
- Accessing and Configuring DHCP, DNS and NPS using IPAM

Implement Windows Deployment Service WDS

- Overview about WDS
- Installing WDS role
- Configuring and Maintaining WDS
- Adding Operating system images and boot images to WDS
- Monitoring & Installing Operating system for client systems using WDS server

Implement Internet Information Service (IIS)

- Overview about Microsoft IIS
- Installing Webserver (IIS) role
- Creating a test webpage
- Configuring IIS webserver
- Monitoring and troubleshooting IIS

Installing and Configuring Domain Controllers

- Introduction to Active Directory Domain Services
- Overview of Identity Management Concepts
- Active Directory Domain Services Components
- Overview of ADDS Domain Services
- Deploying Domain Controllers

Managing AD DS Objects

- Overview of Object Management
- Managing User Accounts
- Managing Groups
- Managing Computer Accounts
- Managing Organizational Units

Securing Active Directory Domain Services

- Managing Organizational Units
- Implementing Account Security Auditing AD DS
- Configuring Managed Service Accounts

Working with Complex AD Infrastructures

- Overview of Advanced AD DS Deployments
- Deploying a Distributed AD DS Environment
- Overview of AD DS Replication
- Configuring AD DS Services

Implementing Group Policy

- Overview of Group Policy Creating and Configuring GPOs
- Monitoring and Troubleshooting Group Policy
- Managing Security Options for Computers using Group Policy Managing • User Environments

Monitoring and Recovering AD DS

- Monitoring AD DS Database Management
- Backup and Recovery in AD DS



Cyber Security

- Introduction to cybersecurity
- Penetration testing standards
- Introducing kali linux
- Anonymity and privacy
- Information gathering
- Scanning and protocol enumeration
- Vulnerability assessment
- Accessing or attacking windows and linux systems
- Windows and linux privilege escalation
- Active directory penetration testing
- Pivoting and lateral movement
- Deep packet inspection and active sniffing
- Ids, ips and firewall evasions
- Denial of service and defences
- Social engineering attacks
- Web application penetration testing
- Wireless penetration testing
- Penetration testing project assessment and Communications



CCTV Installation

DVR

Camera and cable types

- CCTV Camera types and features
- CCTV cables
(Co-axial cable, network cable)
- CCTV Connectors (BNC Connectors, AHD transmitter, DC jack, RJ 45 ,RCA)
- BNC Cable connection
- CCTV Mic
- CCTV Mic connection (separate mic)

DVR and SMPS

- What is DVR
- DVR types and features
- What is SMPS
- Types of SMPS and features

Storage

- Hard disk types and cable
- Storage calculator
- Installing hard disk on a DVR

CCTV Manufacturing companies

CCTV installation

- Fix a CCTV camera on a surface (4*4 BOX)
- Wiring and connecting
- CCTV Rack and size
- Rack Fan
- Installing DVR and SMPS in RACK
- Wiring and connection
- Connect DVR in monitor
- HDMI Cable , VGA Cable, HDMI Extender, HDMI Splitter
- Connecting DVR in to internet (Crimping)

Configuring DVR

- Start-up wizard
- DVR all settings
- Mobile & PC Accessing (Using software's)
- Cloud storage



Maintain DVR & trouble shooting

- IR reflection
- Camera not working
- DVR time & date issue (CMOS)
- Password RESET

NVR

NVR and features

- What is NVR and IP camera
- IP Camera features
- NVR features
- PoE switch and features

Cable and connectors

- Network cable and types
- RJ 45
- Crimping

Basic networking & modem configuration

- Basic networking
- IP Address
- Subnet mask
- Gateway
- Modem configuration

Storage

- Hard disk types and cable
- Storage calculator
- Installing hard disk on a NVR

CCTV Manufacturing companies

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Configuring NVR

- Start-up wizard
- Adding IP Camera
- NVR all settings
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Maintain NVR and trouble shooting

- IR reflection
- IP Camera not working
- NVR time and date issue (CMOS)
- Password RESET
- IP Camera Reset

Security Systems

Introduction to security systems

- What is security System
- Types of security systems
- Sensors and detectors
- Control panel

control panel

- Intro
- Zones
- Features
- Wiring

Connection diagram

- Sensor connection
- Testing

FACP

- Intro
- Wiring
- Connection
- Testing

Biometric

- Intro
- Configuration
- Software installation
- Report Print
- All setting in software

Access control

- EM lock intro
- Working diagram
- Connection (wiring)
- Testing
- Rim Lock intro
- Working diagram
- Connection
- Testing



ADDITIONAL TRAINING

1. COMMUNICATIVE ENGLISH

2. CORPORATE TRAINING

(Organizational Behaviour, Interview Training)



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