

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

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Cisco CCNA Industrial

Networking Basics

- **Overview of Networks:** Introduction to various types of networks and their components.
- **Network Topologies:** Different network topologies and their characteristics.
- **OSI and TCP/IP Models:** Understanding the layers of the OSI and TCP/IP models.
- **IPv4 and IPv6 Addressing:** Basics of IP addressing, subnetting, and addressing schemes.

Ethernet Networking and Data Encapsulation

- **Ethernet LANs:** Introduction to Ethernet standards and protocols.
- **Ethernet Frame Structure:** Detailed analysis of Ethernet frame structure.
- **Data Encapsulation:** How data is encapsulated and decapsulated across different layers.

Switching and Wireless Technologies

- **Switching Concepts:** Understanding switch operation, VLANs, and trunking.

- **Spanning Tree Protocol (STP):** How STP ensures loop-free Layer 2 networks.
- **Wireless LANs:** Basics of wireless technologies and WLAN standards.

IP Routing Technologies

- **Routing Concepts:** Introduction to routing protocols and concepts.
- **Static and Dynamic Routing:** Configuring static and dynamic routing protocols (e.g., RIP, OSPF).
- **Routing Protocol Authentication:** Securing routing protocols using authentication.

IP Services

- **DHCP:** Configuring DHCP services and relay agents.
- **NAT and PAT:** Understanding Network Address Translation (NAT) and Port Address Translation (PAT).
- **ACLs:** Implementing Access Control Lists (ACLs) for network security.

Network Security Fundamentals

- **Network Threats:** Common network threats and vulnerabilities.
- **Security Practices:** Implementing basic security measures (e.g., device hardening, secure passwords).
- **VPN Technologies:** Introduction to Virtual Private Networks (VPNs) and IPsec.

Industrial Networking Concepts

- **Industrial Ethernet:** Overview of Ethernet technologies in industrial environments.

- **SCADA and Industrial Control Systems (ICS):** Basics of SCADA systems and ICS networks.
- **Industrial Protocols:** Understanding protocols used in industrial automation (e.g., Modbus, Profinet).

Troubleshooting and Management

- **Network Troubleshooting:** Troubleshooting methodologies and tools.
- **Network Management:** SNMP and Syslog for network monitoring and management.
- **Configuration Management:** Backing up and restoring device configurations.

Final Preparation

- **Practice Labs:** Hands-on practice with network devices and simulation tools.
- **Exam Preparation:** Tips and strategies for preparing for the CCNA Industrial certification exam.