NIELIT

Accredited Under National Institute of Electronics & Information Technology (NIELIT)
Formally DOEACC
Ministry of Electronics & Information Technology Government of India
&
Accr ICMS Established Under Section 25, Act of 1956,
Central Govt of India

.

Best Training Institute / Company

CCNA 200-301
Duration: (45 Days to 90 Days)

Hawal Srinagar-190011, J&K.
www.fastrackinstitute.in / www.icmsskill.in , Email ID : icmswebcenter@gmail.com
P: 0194-3566583, +91-7006570529.

About CCNA

CCNA stands for Cisco Certified Network Associate. It is a certification program from Cisco Systems that certifies the knowledge and skills of network professionals in the installation, configuration, and troubleshooting of Cisco routers and switches. Obtaining a CCNA certification demonstrates a level of competence in Cisco networking and can help individuals/freshers advance their careers in the field.

Joining ICMS CCNA training, you will get

➢ A deeper understanding of Cisco networking technologies and best practices
➢ Your skills and knowledge in areas such as routing, switching, and network security will be improved under the guidance of experienced instructors
➢ Hands-on experience with Cisco equipment and software through labs and simulations
➢ We provide PDF and study materials throughout the training

Detailed Syllabus

Unit 1: Network Fundamentals:

- Introduction to the OSI Model , Introduction to IPv4 (Internet Protocol) , IPv4 Packet Header, Address Resolution Protocol (ARP), Introduction to TCP and UDP, Introduction to ICMP, Introduction to DNS, Introduction to Cisco Command Line Interface (CLI), User mode and Privileged mode.

Unit 2: Network Access :

- **VLANs and Trunks-**Introduction to VLANs, How to configure VLANs, VLAN Trunking Protocol (VTP), Introduction to 802.1Q, How to configure a Trunk, Dynamic Trunking Protocol (DTP), 802.1Q Native VLAN, Introduction to Voice VLAN, Etherchannels, L3 Ether channel.
- **Spanning-Tree :** Introduction to Spanning-Tree, Per VLAN Spanning-Tree, Spanning-Tree Port States, Spanning-Tree Cost Calculation, Spanning-Tree Port fast, Rapid PVST, Rapid PVST Configuration
- **Wireless :** Introduction to Wireless Networks, Introduction to Wireless LANs, Wireless LAN 802.11 Service Sets, Introduction to Wireless Security, Wireless Authentication Methods, Wireless Encryption and Integrity, Wi-Fi Protected Access (WPA)

Unit 3: IP Connectivity

- **Introduction**: Introduction to Routers and Routing, Cisco IOS Router Basic Configuration, Introduction to Wide Area Networks (WAN).
- **IPv4 Subnetting**: Introduction to Subnetting, Basics of Binary Numbers, Subnetting in Binary, Subnetting in Decimal (Fast Method), Classless Inter-Domain Routing (CIDR), Variable Length Subnet Mask (VLSM), Route Summarization, Hexadecimal to Binary and Decimal Conversion, Create a Subnetting Cheat Sheet.
- **IPv6 :** Introduction to IPv6, Shortening IPv6 Addresses, How to find IPv6 Prefix, IPv6 Address Types, IPv6 Address Assignment Example, IPv6 EUI-64, IPv6 Summarization, IPv6 Neighbor Discovery Protocol (NDP), IPv6 Stateless Auto Configuration.
- **Routing:** Default Gateway, Static Routing, IPv6 Static Route, IP Routing Explained, Router on a Stick, Inter VLAN Routing, Administrative Distance, Floating Static Route, Introduction to Route Summarization.
-
- **RIP and EIGRP**
- **OSPF (OPEN SHORTEST PATH FIRST:** Introduction to OSPF, OSPF Configuration, OSPF Packets and Neighbor Discovery, OSPF Reference Bandwidth, OSPF Router ID, OSPF DR/BDR Election, OSPF Passive Interface, OSPF Hello and Dead Interval

- **Gateway Redundancy:** Introduction to Gateway Redundancy

Unit 4: IP Services
- **DHCP (Dynamic Host Configuration Protocol):** Introduction to DHCP, DHCP Server Configuration, DHCP Relay Agent DHCP Client, DHCP Server IPv6 Configuration.
- **SNMP (Simple Network Management Protocol) :** Introduction to SNMP, SNMPv2, SNMPv
- **NAT (Network Address Translation) :** Introduction to NAT and PAT, NAT Static , NAT Dynamic , Port Address Translation (PAT)

Unit 5: Security Fundamentals
- **Access-List:** Introduction to Access-Lists, Wildcard Bits, Standard Access-List, Extended Access-List, Time-based Access-List.
- **Misc:** Port-Security, AAA and 802.1X, AAA User Authentication, AAA Admin Authentication, DHCP Snooping, Introduction to Firewalls, Introduction to VPNs.

Unit 6: Network Management:
- Introduction to CDP, Telnet Server and Client, SSH Server and Client. Introduction to NTP ,
- Introduction to Syslog, Configuration Register. Password Recovery on Cisco IOS, Cisco IOS File System, Upgrade Cisco IOS Image.

Unit 7: Concept of Programmability and Cloud Computing
- Device Programmability, REST API, Data Models and Structures, Configuration Management Tools and Version Control Systems Introduction to Software Defined Networking (SDN), Spine and Leaf Architecture
- **Cloud Computing:** Virtual Machines and Containers, Introduction to Cloud Computing, Cloud Connectivity.

Benefits of Getting a CCNA Certification

- ✓ Technical Support Engineer:
- ✓ Entry-Level Network Engineer:
- ✓ Network Administrator:
- ✓ Desktop Support Engineer:

Study Material Center Incharge

Contact us

First Floor Razvi Building Mirza Kamil Chowk Hawal Srinagar-190011.
+91-9018840815

ICMS Units Fastrack

1. ICMS – Fastrack ITSE :   Mirza Kamil Kamil Chowk Hawal Srinagar-190011.

Helpline :,+91-7006570529.

2. ICMS – Pvt ITI : Asian Software Pvt ITI [A Unit of ICMS] Gousia Complex Duderhama , Ganderbal – 191201 College Helpline : 0194-2954667   **Ph**: +91-7006570529, +91-7006434685 **Email:** asianiticollege@gmail.com.

3. **ICMS- Development Center :** 2nd Floor Gousia Complex ,   Near Firdouse Cenima Hawal – 190011 . +91-7006570529,