



## Cisco Certified Network Associate Routing and Switching (CCNA R&S)

Cisco Certified Network Associate (CCNA) Routing and Switching is a certification program for entry-level network engineers that helps maximize your investment in foundational networking knowledge and increase the value of your employer's network. CCNA Routing and Switching is for Network Specialists, Network Administrators, and Network Support Engineers with 1-3 years of experience. The CCNA Routing and Switching validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks.

Date	the class will start as soon as we have enough students (min. 8 students). Please <a href="#">contact us</a> for more details.
Schedule	18:00 - 21:00 (part time)
Location	#18, st. 360, Sangkat Boeung Kang Keng 3, Khan Chamkamon, Phnom Penh, Cambodia <a href="#">Map</a>
Price	350\$ (early registration till <date> 300\$)
Available seats	16
Language	Khmer

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### CCNA prerequisites

- Participant should have IT background.
- You have to bring your laptop for lab

### What is included in the price ?

- Classroom training
- Course materials
- Coffee breaks

### Course Contents

CCNA course outline

- OSI Reference Model

- OSI Layer
  - Introduction to the 7 layers
- IPv4
  - IPv4 Addressing
    - Introduction to IPv4
    - Private vs. public addresses
- Subnetting & Supernetting
  - IPv4 subnetting :: Part 1
  - IPv4 subnetting :: Part 2
  - IPv4 summarization
- Basic Router Configuration
  - Introduction to IOS
    - Accessing router via CLI
    - Basic configuration & verification
- IP Routing
  - Routing Fundamentals
  - IP routing components
- Static Routing
  - Static routing
  - Default routing
  - Floating static
- Dynamic Routing
  - Introduction to Dynamic Routing
- Understanding EIGRP
  - Introduction to EIGRP
  - Implementing EIGRP
- Open Shortest Path First (OSPF)
  - Introduction to OSPF
  - OSPF router-id & priority
  - OSPF DR & DBR election
  - Implementing OSPF :: Part 1
  - Implementing OSPF :: Part 2
  - OSPF authentication
- IP Services
  - IOS services
    - Cisco Discovery Protocol
    - DHCP
    - Remote management
    - DNS/HTTP/HTTPS
- Firewall Technologies
  - Access Control List (ACL)
    - Introduction to ACL
    - Standard ACL
    - Extended ACL
    - Named ACL
- Network Address Translation (NAT)
  - Introduction to NAT
  - Static NAT
  - Dynamic NAT
  - Port Address Translation (PAT)
- WAN Protocols
  - Point-to-Point Technologies
    - Point-to-point protocol
    - PAP authentication
    - CHAP authentication
    - HDLC

- Multipoint Technologies
  - Introduction to Frame Relay
  - Implementing Frame Relay
- IPv6
  - Addressing Structure
    - Introduction to IPv6
    - Implementing IPv6
  - IPv6 Routing
    - Implementing RIPng
    - Implementing EIGRPv6
    - Implementing OSPFv3
- Layer 2 Technologies
  - Switching
    - Basic switching
    - VLAN
    - Inter-VLAN routing
    - VTP
    - DTP
    - STP
    - RSTP
    - PVST
    - EtherChannel
  - High Availability
    - HSRP
      - Introduction to HSRP
      - Implementing HSRP
- Security
  - Layer 2 Security
    - Port Security
    - BPDU Guard/BPDU Filter
    - Root Guard/Loop Guard