
CTS005 : Cisco Certified Network Associate Routing & Switching (CCNA)**หลักการและเหตุผล :**

Certified Network Associate (Cisco CCNA) certification demonstrates your knowledge to deploy, maintain, secure and operate a medium-sized network using Cisco technologies. Cisco CCNA certified professionals can install, configure, and operate LAN, WAN, and dial access services for small networks (100 nodes or fewer), including but not limited to use of these protocols: IP, IGRP, Serial, Frame Relay, IP RIP, VLANs, RIP, Ethernet, Access Lists.

วัตถุประสงค์ :

- Describe how a network works
- Understand and describe the role of protocol layers in data networks
- Understand and describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments
- Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 networks
- Configure, verify and troubleshooting a switch with VLANs and interswitch communications
- Configure, verify, and troubleshoot basic router operation and routing on Cisco device
- Understand and describe dynamic routing protocols, distance vector routing protocols, and link-state routing protocols
- Configure and troubleshoot static routing and default routing (RIP and RIPng)
- Configure and troubleshoot an Open Shortest Path First (OSPF) network
- Configure and troubleshoot an Enhanced Interior Gateway Routing Protocol (EIGRP) network
- Describe the function of Wide Area Networks (WANs), the major devices of WANs, and configure PPP encapsulation, static and dynamic routing, PAT and RIP routing
- Identify and implement the appropriate WAN technology based on network requirements
- Implement, verify, and troubleshoot DHCP
- Implement, verify, and troubleshoot NAT and ACLs
- Understanding and describe Syslog for logging network device
- Understanding and describe SNMP for monitoring network device

หลักสูตรนี้เหมาะสำหรับ :

The primary audience for this course is individuals who have computer networking experience and wish to prepare for skills in the installation, configuration and administration of Cisco routers, switches and network connectivity

ความรู้พื้นฐาน :

- Basic computer literacy
- Windows navigation skills
- Basic Internet usage skills
- Fundamental understanding of data networking and IP addressing
- Familiarity with the Cisco IOS command-line interface

เนื้อหาหลักสูตร :**Building a Simple Network**

- Exploring the Functions of Networking
- Securing the Network
- Understanding the Host-to-Host Communication Model
- Understanding TCP/IP
- Exploring the Packet Delivery Process
- Understanding Ethernet
- Connecting to an Ethernet LAN

Connecting to an Ethernet LAN with Switch Network Construction

- Understanding the Challenges of Shared LANs
- Solving Network Challenges with Switched LAN
- Exploring the Packet Delivery Process
- Operating Cisco IOS Software
- Starting a Switch
- Implementing VLANs and Trunks
- Improving Performance with Spanning Tree
- Routing Between VLANs

Exploring the Functions of Routing with Routed Network Construction

- Exploring the Functions of Routing
- Starting a Router
- Managing Router Startup and Configuration
- Configuring a Router
- Exploring the Packet Delivery Process
- Reviewing Routing Operations
- Discovering Neighbors on the Network
- Static Routing Implementation
- RIP Implementation
- Single Area OSPF Implementation
- EIGRP Implementation

Wide Area Network and LAN Extension into a WAN

- Understanding WAN Technologies
- Enabling the Internet Connection
- Configuring Serial Encapsulation
- Introducing VPN Solutions
- Establishing a Point-to-Point WAN Connection with PPP
- Establishing a WAN Connection with Frame Relay
- Troubleshooting Frame Relay WANs

Access Control Lists, Address Space Management, and Monitor Network Device

- Introducing ACL Operation
- Configuring and Troubleshooting ACLs
- Implementing DHCP (IOS Router)
- Scaling the Network with NAT and PAT
- Configuring and verifying Syslog
- Configuring and verifying SNMP

วิทยากร :

อาจารย์สุรัตน์ เกษมบุญศิริ (surath@born2learn.net)

- NCS L.3, CompTIA Security+, ITIL Foundation v.3, CCNA
- MCT, MCITP Enterprise, MCSE +Security +Messaging

จำนวนชั่วโมงในการฝึกอบรม: 5 วัน (30 ชั่วโมง)

ช่วงเวลาฝึกอบรม: 9.00 - 16.00 น.

สถานที่ฝึกอบรม :

สถาบันวิทยากร สวทช.

เลขที่ 73/1 อาคารสำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ (สวทช.)

ถนนพระรามที่ 6 แขวงทุ่งพญาไท เขตราชเทวี กรุงเทพฯ 10400

วิธีการสำรองที่นั่ง :

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