建置及管理思科網路技術

代碼	CCNA
中文名稱	建置及管理思科網路技術
英文名稱	Implementing and Administrating cisco Networking Technologies
課程長度	8 天
上課時間	09:00 ~17:00
費用	66,000
教材	原廠教材
考試代碼	200-301
適合對象	This course is designed for anyone seeking CCNA certification. The course also provides foundational knowledge for all support technicians involved in the basic installation, operation, and verification of Cisco networks. The job roles best suited to the material in this course are: ● Entry-level network engineer ● Network administrator ● Network support technician ● Help desk technician
學前基礎	Before taking this course, you should have: ● Basic computer literacy ● Basic PC operating system navigation skills ● Basic Internet usage skills ● Basic IP address knowledge
課程目標	The Implementing and Administering Cisco Solutions (CCNA) v1.0 course gives you a broad range of fundamental knowledge for all IT careers. Through a combination of lecture and hands-on labs, you will learn how to install, operate, configure, and verify basic IPv4 and IPv6 networks. The course covers configuring network components such as switches, routers, and wireless LAN controllers; managing network devices; and identifying basic security threats. The course also gives you a foundation in network programmability, automation, and software-defined networking. This course helps you prepare to take the2 00-301 Cisco® Certified Network Associate (CCNA®) exam. By passing this one exam, you earn CCNA certification.

課程內容

This class includes lecture sections and some self-study sections. In Taiwan our instructor-led classes, we will deliver the whole course in lectures mode.

Section title	Learning mode
Exploring the Functions of Networking	Lecture
Introducing the Host-to-Host Communications Model	Lecture
Operating Cisco IOS Software	Lecture
Introducing LANs	Lecture
Exploring the TCP/IP Link Layer	Lecture
Starting a Switch	Lecture
Introducing the TCP/IP Internet Layer, IPv4 Addressing, and Subnets	Lecture
Explaining the TCP/IP Transport Layer and Application Layer	Lecture
Exploring the Functions of Routing	Lecture
Configuring a Cisco Router	Lecture
Exploring the Packet Delivery Process	Lecture
Troubleshooting a Simple Network	Lecture
Introducing Basic IPv6	Lecture
Configuring Static Routing	Lecture
Implementing VLANs and Trunks	Lecture

Routing Between VLANs	Lecture
Introducing OSPF	Lecture
Building Redundant Switched Topologies	Lecture
Improving Redundant Switched Topologies with EtherChannel	Lecture
Exploring Layer 3 Redundancy	Lecture
Introducing WAN Technologies	Lecture
Explaining Basics of ACL	Lecture
Enabling Internet Connectivity	Lecture
Introducing QoS	Lecture
Explaining Wireless Fundamentals	Lecture
Introducing Architectures and Virtualization	Lecture
Explaining the Evolution of Intelligent Networks	Lecture
Introducing System Monitoring	Lecture
Managing Cisco Devices	Lecture
Examining the Security Threat Landscape	Lecture
Implementing Threat Defense Technologies	Lecture
Securing Administrative Access	Lecture
Implementing Device Hardening	Lecture

Lab Outline

- Implement the Initial Switch Configuration
- Inspect TCP/IP Applications
- Configure an Interface on a Cisco Router
- Configure and Verify Layer 2 Discovery Protocols
- Implement an Initial Router Configuration
- Configure Default Gateway
- Explore Packet Forwarding
- Troubleshoot Switch Media and Port Issues
- Troubleshoot Port Duplex Issues
- Configure Basic IPv6 Connectivity
- Configure and Verify IPv4 Static Routes
- Configure IPv6 Static Routes
- Implement IPv4 Static Routing
- Implement IPv6 Static Routing
- Configure VLAN and Trunk
- Troubleshoot VLANs and Trunk
- Configure a Router on a Stick
- Implement Multiple VLANs and Basic Routing Between the VLANs
- Configure and Verify Single-Area OSPF
- Configure and Verify EtherChannel
- Improve Redundant Switched Topologies with EtherChannel
- Configure and Verify IPv4 ACLs
- Implement Numbered and Named IPv4 ACLs
- Configure a Provider-Assigned IPv4 Address
- Configure Static NAT
- Configure Dynamic NAT and Port Address Translation (PAT)
- Implement PAT
- Log into the WLC
- Monitor the WLC
- Configure a Dynamic (VLAN) Interface
- Configure a DHCP Scope
- Configure a WLAN
- Define a Remote Access Dial-In User Service (RADIUS) Server
- Explore Management Options
- Explore the Cisco DNA™ Center

	- Configure and Verify NTP - Configure System Message Logging - Create the Cisco IOS Image Backup - Upgrade Cisco IOS Image - Configure WLAN Using Wi-Fi Protected Access 2 (WPA2) Pre-shared Key (PSK) Using the GUI - Secure Console and Remote Access - Enable and Limit Remote Access Connectivity - Secure Device Administrative Access - Configure and Verify Port Security - Implement Device Hardening