Certificate of Course Completion

CCNA 1—Networking Basics

During the Cisco® Networking Academy® CCNA 1 course administered by the undersigned instructor, the student was able to proficiently:

- Define and install the hardware and software required to be able to communicate across a network

- Demonstrate the mathematical skills required to work effortlessly with integer decimal, binary, and hexadecimal numbers and simple binary logic

- Define and describe the structure and technologies of computer networks

- Describe the meaning and application of the term "bandwidth" when used in networking

- Describe, compare, and contrast network communications using two examples of layered models

- Describe the physical, electrical, and mechanical properties and the standards associated with copper and optical media used in networks

- Describe what is required to install a simple WLAN

- Explain the issues associated with the transmission of signals on networking media

- Describe the topologies and physical issues associated with cabling common LANs

- Describe the physical issues associated with cabling networking equipment to work over a WAN link

- Explain the fundamental concepts associated with the Ethernet media access technique

- Explain how collisions are detected and the concepts associated with autonegotiation on an Ethernet system

- Define and describe the structure and technologies of computer networking systems

- Describe networking topologies and physical issues associated with cabling common LANs

- Describe the principles and practice of switching on an Ethernet network

- Describe how the protocols associated with TCP/IP allow host communication to occur

- Explain and demonstrate the mechanics associated with IP addressing

- Describe how an IP address is associated with a device interface and the association between physical and logical addressing

- Describe the principles and practice of packet switching using the Internet Protocol (IP)

- Describe the concepts associated with routing and the different methods and protocols used to achieve it

- Describe the fundamental concepts associated with transport layer protocols and compare the connection-oriented transport with the connectionless approach to transport

- List the major TCP/IP application protocols and briefly define their features and operation

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Bruno LESIEUR
Student's Name

June 21, 2007
Date

Coquin, Didier
Instructor

IUT d'Annecy -
Université de Savoie
Academy Name

Annecy-le-vieux
Location

Instructor's Signature

CISCO SYSTEMS

Certificate of Course Completion

CCNA 2—Router and Routing Basics

During the Cisco® Networking Academy® CCNA 2 course administered by the undersigned instructor, the student was able to proficiently:

- Identify the important characteristics of common WAN configurations and technologies, differentiate between these and common LAN technologies, and describe the role of a router in a WAN

- Identify the major internal and external components of a router and describe the associated functionality

- Properly connect router Fast Ethernet, Serial WAN, and console ports

- Describe the purpose and fundamental operation of the router operating system (IOS®)

- Establish communication between a terminal device and the router operating system (IOS) and use it for system analysis, configuration, and repairs

- Perform, save, and test an initial configuration on a router

- Configure additional administrative functionality on a router

- Use embedded data-link layer functionality to perform network neighbor discovery and analysis from the router console

- Use embedded Layer 3 through Layer 7 protocols to establish, test, suspend, or disconnect connectivity to remote devices from the router console

- Identify the stages of the router boot-up sequence and show how the **configuration-register** and **boot system** commands modify that sequence

- Manage system image and device configuration files

- Identify, configure, and verify the use of static and default routes

- Evaluate the characteristics of routing protocols

- Identify, analyze, and show how to rectify inherent problems associated with distance vector routing protocols

- Configure, verify, analyze, and troubleshoot simple distance vector routing protocols

- Describe the operation of ICMP and identify the reasons, types, and format of associated error and control messages

- Use embedded Layer 3 through Layer 7 protocols to establish, test, suspend, or disconnect connectivity to remote devices from the router console

- Use the commands incorporated within Cisco IOS Software to analyze and rectify network problems

- Describe the operation of the major transport layer protocols and the interaction and transportation of application layer data

- Identify the application of packet control with various access control lists

- Analyze, configure, implement, verify, and rectify access control lists within a router configuration

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Bruno LESIEUR
Student's Name

March 20, 2008
Date

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