



March 1, 2007

Dear Giovanni Amaducci

Congratulations! You have successfully completed CCNA 4 WAN Technologies of the Cisco Networking Academy Program.

During the course, you have developed a solid foundation in the basics of networking, demonstrating knowledge of important concepts and skills, including the OSI model, Ethernet networks running TCP/IP, IP addressing, and structured cabling skills.

Information technology skills are in high demand given the explosive growth of the Internet as a practical business tool. Technological literacy is more important today than ever before, and Cisco is proud to provide you with the knowledge and skills to design, build, and maintain computer networks.

Wishing you continued success!

Sincerely,

A handwritten signature in cursive script that reads "John Chambers".

John Chambers  
President and CEO  
Cisco Systems, Inc.



# CCNA 4—WAN Technologies

**During the Cisco® Networking Academy® CCNA 4 course administered by the undersigned instructor, the student was able to proficiently:**

- Describe the concepts and characteristics of Network Address Translation, and explain its configuration, use, and administration on a network
- Describe the concepts and characteristics of the Dynamic Host Configuration Protocol (DHCP), and explain its configuration, use, and administration on a network
- Describe, compare, and contrast the essential features of WAN technology
- Classify WAN link options and explain the differences between circuit-switched and packet-switched technologies
- Make recommendations about provisioning of WAN services based on the network needs of the customer
- Design a simple WAN system using a hierarchical layered approach to the design
- Describe the operation, configuration, and functionality of serial point-to-point links
- Configure and administer serial point-to-point links
- Describe the concepts, characteristics, and functionality of the Point to Point Protocol (PPP)
- Configure and administer PPP on a serial link
- Describe the concepts, characteristics, and functionality of ISDN
- Configure and administer a router ISDN interface
- Describe the concepts, characteristics, and functionality of Dial-on-Demand Routing (DDR)
- Configure and administer DDR in a network
- Describe the concepts, characteristics, and functionality of Frame Relay
- Configure and administer Frame Relay using PVCs
- Describe, compare, and contrast workstation and server operating systems and the associated hardware
- Describe the concepts of network management, and explain how network management tools are used on a modern network

**Giovanni Amaducci**

Student's Name

**March 1, 2007**

Date

**Bandinelli, David**

Instructor

**CSL TOSCANA**

Academy Name

**Firenze**

Location

Instructor's Signature