

## CERTIFICATE OF COURSE COMPLETION

### CCNA 2 ROUTERS AND ROUTING BASICS



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Date : October 1, 2004

Instructor : Kicherer, Walter

Location : Stuttgart

Academy Name : Werner Siemens  
Schule Stuttgart

**During the CCNA 2 Course administered by the undersigned instructor, the student was able to proficiently:**

- Identify the key characteristics of common wide area networking (WAN) configurations and technologies
- Compare and contrast common WAN and LAN technologies
- Describe the role of a router in a WAN
- Explain the fundamental operation of the router operating system (IOS)
- Establish communication between a terminal device and the router IOS
- Use IOS for router analysis, configuration, and repair
- Identify and describe the major internal and external components of a router
- Connect router Fast Ethernet, Serial WAN, and console ports
- 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 IOS 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 demonstrate how the configuration register and boot system commands can modify that sequence
- Manage system image and device configuration files
- Describe the operation of the Internet Control Message Protocol (ICMP) and identify the reasons, types, and format of associated error and control messages
- Identify, configure, and verify the use of static and default routes
- Evaluate the major characteristics of routing protocols
- Identify, analyze, and demonstrate how to rectify inherent problems associated with distance vector routing protocols
- Configure, verify, analyze, and troubleshoot simple distance vector routing protocols
- Use IOS commands to analyze and rectify network problems
- Describe the operation of the major transport layer protocols and the interaction and carriage of application layer data
- Identify how router packet throughput can be controlled using access control lists
- Analyze, configure, implement, verify, and rectify access control lists within a router configuration

Instructor's Signature

