

## CERTIFICATE OF COURSE COMPLETION

### CCNA 3 SWITCHING BASICS AND INTER- MEDIATE ROUTING



Glenn Robinson

Date : April 8, 2004  
Instructor : John, Rakesh  
Location : Menlo Park  
Academy Name : Opportunities  
Industrialization  
Center West

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Instructor's Signature

**During the CCNA 3 Course administered by the undersigned instructor, the student was able to proficiently:**

- Compute and use Variable Length Subnet Masking (VLSM) techniques to design and implement effective and efficient IP addressing
- Configure and use the RIP v2 distance vector routing protocol
- Describe the concepts and techniques of link-state routing, and compare and contrast with distance vector routing
- Configure and use the Open Shortest Path First (OSPF) link-state routing protocol in a single area mode of operation
- Configure and use the Extended IGRP (EIGRP) routing protocol
- Demonstrate an ability to troubleshoot routing protocol problems, specifically using and interpreting the show and debug commands
- Describe the operation and technology of the IEEE 802.3 "Ethernet" variants
- Describe and compare the concepts and techniques used within Ethernet switched LANs
- Describe and compare the concepts and techniques used by Ethernet LAN switches
- Design a simple LAN using tiered techniques
- Describe the three tier process as used by Cisco for internetwork design purposes
- Configure and administer a Cisco Catalyst LAN switch
- Compare and contrast various forms of redundancy built into networks, and explain the associated advantages and disadvantages
- Describe the operation of the spanning tree algorithm, and describe the methods by which it is implemented and used in a switched network
- Describe and compare the concepts, advantages and disadvantages of virtual LANs
- Configure and administer inter-switch VLANs on Cisco switches
- Solve a simple VLAN problem
- Configure and administer VTP on Cisco switches
- Configure and administer routing between VLANs on Cisco switches