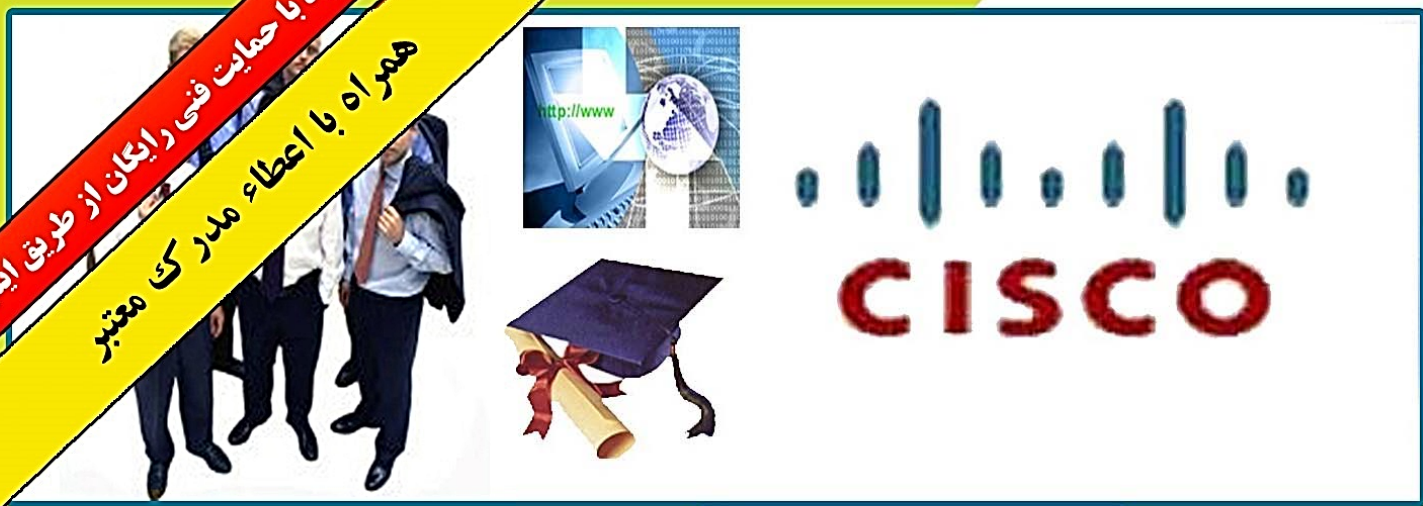


همراه با حمایت فنی رایگان از طریق ایمیل  
همراه با اعطاء مدرک معتبر



## مالتی مدیای

# Cisco VoIP & QoS

به زبان فارسی (۱ DVD – ۲۶ ساعت)

۱ DVD شامل :

۱۷ بخش آموزشی با ۷۱ درس به زبان انگلیسی و تشریح فارسی ✓

۷ Case Study مختص به VoIP و ۸ بخش سناریوهای QoS ✓

Utilities Folder شامل : ✓

اطلاعات ، مقالات و E-book های مربوط به Cisco VoIP & QoS ✓

لابراتورهای شرکت Cisco مربوط به Cisco QoS ✓

### System Requirements

- Windows XP with SP 2
- 256 MB RAM
- CD-ROM or DVD
- 1024 x 768 High Resolution Video Card & Monitor

# **Introduction to Cisco VoIP**

## **Chapter-1 Introduction to Telephony Network**

- 1.1 Telephony Network**
- 1.2 PBX vs. Key System**
- 1.3 Signaling**
- 1.4 VoIP Network Components and Advantages**

## **Chapter-2 Digitizing Voice**

- 2.1 Sampling**
- 2.2 Nyquist Theorem**
- 2.3 Waveform Compression**
- 2.4 Voice Bandwidth Calculation**

## **Chapter-3 Preparing for a VOIP Network**

- 3.1 PBX Reliability**
- 3.2 Reliability vs. Availability**
- 3.3 Replacing PBX Trunks**
- 3.4 Connecting a Router to a Phone Line**
- 3.5 Connecting a Router to a Digital Circuit**
- 3.6 VoIP in the Home**

## **Chapter-4 Cisco Call Manager**

- 4.1 Cisco Call Manager**
- 4.2 CCM Roles and Redundancy**
- 4.3 Placing Cisco CallManagers in the Network**
- 4.4 Partitions and Calling Search Spaces**
- 4.5 Replacing Old Phones with IP Phones**
- 4.6 Selecting Features for IP Phones**
- 4.7 Securing Voice**
- 4.8 Adding Video to Voice Calls**
- 4.9 Cisco Call Manager Express**

## **Chapter-5 Gateway Protocols**

- 5.1 Gateway Protocols**
- 5.2 H.323**
- 5.3 Cisco's MGCP**
- 5.4 SIP**

## **Chapter-6 Quality of Service**

- 6.1 Effective Bandwidth**
- 6.2 Configuring QoS**
- 6.3 Voice Priority**
- 6.4 Congestion Management**
- 6.5 Policing and Shaping**
- 6.6 Shaping Frame Relay Networks**
- 6.7 Using Compression**
- 6.8 Applying AutoQoS**

## **Chapter-7 Unified Messaging**

- 7.1 Unified Messaging**
- 7.2 Conference Calling**
- 7.3 Call Centers**

## **Cisco VoIP Case Studies**

- **Chapter-1 VoIP Case Study**
- **Chapter-2 VoIP Case Study**
- **Chapter-3 VoIP Case Study**
- **Chapter-4 VoIP Case Study**
- **Chapter-5 VoIP Case Study**
- **Chapter-6 VoIP Case Study**
- **Chapter-7 VoIP Case Study**

## **Voice Bandwidth Calculators**

## **Quality of Service (QoS)**

### **Chapter 1 Cisco VoIP Implementations**

- 1.1 Introduction to VoIP Networks**
- 1.2 Digitizing & Packetizing Voice**
- 1.3 Encapsulating Voice Packets**
- 1.4 Bandwidth Calculation**
- 1.5 Implementing VoIP Support in Enterprise Network**

### **Chapter 2 IP QoS**

- 2.1 Introduction to QoS**
- 2.2 Identifying and Comparing QoS Models**
- 2.3 QoS Implementation Methods**

### **Chapter 3 Classification, Marking & NBAR**

- 3.1 Classification and Marking**
- 3.2 The DiffServ, DSCP & PHBs**
- 3.3 QoS Service Class, Trust Boundaries & NBAR**
- 3.4 Configuring NBAR using IOS**

### **Chapter 4 Congestion Management and Queuing**

- 4.1 Effective Bandwidth**
- 4.2 Congestion Management and Queuing**
- 4.3 Weighted Fair Queuing**
- 4.4 Class-Based Weighted Fair Queuing**
- 4.5 Low Latency Queuing**
- 4.6 Queuing Comparison**

## **Chapter 5 Congestion Avoidance, Policing, Shaping, and Link Efficiency Mechanisms**

- 5.1 Congestion Avoidance**
- 5.2 Traffic Shaping and Policing**
- 5.3 Link Efficiency Mechanisms**

## **Chapter-6 End-to-End QoS**

- 6.1 Implementing QoS Pre-Classify**
- 6.2 Deploying End-to-End QoS**

## **Chapter 7 Implementing AutoQoS**

- 7.1 Introducing AutoQoS**
- 7.2 Implementing and Verifying AutoQoS**
- 7.3 AutoQoS Shortcoming and Remedies**

## **Chapter 8 Wireless LAN QoS, Security & Management**

- 8.1 Wireless LAN QoS**
- 8.2 Wireless LAN Security**
- 8.3 Wireless LAN Management**

## **Chapter 9 Cisco Special Topics**

- 9.1 Cisco AutoQoS**
- 9.2 Cisco IOS QoS**
- 9.3 Cisco QoS Solutions Configuration Guide**

## **Review Scenarios**

- Cisco VoIP Implementations
- IP QoS
- Classification, Marking & NBAR
- Congestion Management and Queuing
- Congestion Avoidance, Policing, Shaping, and Link
- Efficiency Mechanisms
- Implementing QoS Pre-Classify and Deploying
- End-to-End QoS
- Implementing AutoQoS
- Wireless LAN QoS, Security & Management

## **Cisco VoIP Labs**

**Lab-1 Placing and Examining VoIP Calls**

**Lab-2 Configuring CB-WFQ and LLQ Queuing Mechanisms**

**Lab-3 Configuring Class-Based Header Compression**

**Lab-4 Configuring LFI**

## **Utilities DVD**

- Articles
- Ebooks
- WAN Configuration Review
- Cisco IP Phones
- Cisco Advanced Voice Labs
- Tools
- Whitepaper
- List of Companies