Competitor prices: CLP £1,895.00 (ex. VAT) for five days Others range £ 1900 - £ 600 Cheapest approx £ 595 (ex.vat) for 4 days



# Implementing Cisco QOS

#### **Overview**

KCC FLEX training allows the ultimate control in your training schedule. Training can be split into weekdays or weekends and time can be taken between training to suit your requirements and/or review the material. Classes are limited to a maximum of five students and students are graded into classes to ensure equal ability groups = minimum delays. Students have dedicated equipment and do not need to share PC, routers and switches. Training is conducted in modern office environments or training rooms with air conditioning and refreshments/lunches are provided.

The Instructors are of `CCIE® level' with over 10 years experience in the real world, not only to teach to achieve certification, but also to teach to improve practical and `on-the-job' abilities.

In this training you will gain an in-depth knowledge of QoS, implement QoS on routers and switches, modify scenarios, diagnose and practice configuration changes AND PASS THAT NASTY 642-642 Cisco exam.

**Pre-Requisites** - a valid CCNA® certification, good network/OSI knowledge, BGP knowledge and/or previous CCNP® FLEX training and a keen interest in Cisco networking.

**Target Audience** - System Engineers, Network Engineers, Engineers and anyone with a keen interest in Cisco networking and the desire to improve their skills or work toward the Cisco CCIP®, CCVP®, Certifications and above

# **Objectives**

- Explain the need to implement QoS and methods for implementing and managing QoS
- Identify and describe different models used for ensuring QoS in a network and IP QoS mechanisms used
- Explain the use of MQC and AutoQoS
- Classify and Mark network traffic in order to implement a defined QoS Policy
- Use Cisco queuing mechanisms to manage network congestion
- Use Cisco QoS congestion avoidance mechanisms to reduce the effects of congestion on the network
- Use Cisco QoS traffic policing and traffic shaping mechanisms to effectively limit the rate of network traffic
- PASS the 642-642 Cisco exam

# MORE DETAILED CONTENT

## Describe Network Requirements Introduction to IP QoS

Understanding the Need for QoS

Understanding QoS

Implementing QoS

## The Building Blocks of IP QoS

Identifying Models for implementing QoS

Understanding the Integrated Services Model

Understanding the Differentiated Services Model

Identifying QoS Mechanisms

Understanding QoS in the Life of a Packet.

## **Introduction to Modular QoS CLI and AutoQoS**

Introducing Modular QoS CLI

Introducing Cisco AutoQoS VoIP

Introducing Cisco AutoQoS Enterprise

#### **Classification and Marking**

Understanding Classification and Marking

Using MQC for Classification

Using MQC for Class-Based Marking

Using NBAR for Classification

Configuring QoS Pre-Classify

Configuring QoS Policy Propagation through BGP

Configuring LAN Classification and Marking

#### **Congestion Management**

Introducing Queuing

Understanding Queuing Implementations

Configuring FIFO and WFQ

Configuring CBWFQ and LLQ

Configuring LAN Congestion Management

#### **Congestion Avoidance**

Introducing Congestion Avoidance

Introducing RED

Configuring Class-Based Weighted RED

Configuring Explicit Congestion Notification

## **Traffic Policing and Shaping**

Understanding Traffic Policing and Shaping Configuring Class-Based Policing Configuring Class-Based Shaping Configuring Class-Based Shaping on Frame Relay Interfaces Frame Relay Voice – Adaptive Traffic Shaping and Fragmentation

# Link Efficiency Mechanisms

Understanding Link Efficiency Mechanisms

Configuring Class-Based Header Compression

Configuring Link Fragmentation and Interleaving

# **QoS Best Practices**

Understanding Traffic Classification Best Practices

Deploying End-to-End QoS

Providing QoS for Security

# **EXAMPLE EXAM QUESTIONS & TECHNIQUES**

PASS THAT NASTY 642-642 Cisco Exam !