
Catalyst 6500 Service Module Integration in the Data Center

Duration: 5 Days **Course Code: CAT6KSMI**

Overview:

E-commerce sites require the constant availability of web-based applications. Such sites require secure, redundant, and load-balanced access to web servers and back-end application servers. These application requirements typically involve deploying multiple network and server components that must be independently managed.

The Cisco Catalyst 6500, configured with the appropriate intelligent Layer 4-7 service modules, provides an integrated, seamless solution for e-commerce environments. In this course, you will get an introduction to the Catalyst 6500 platform and the intelligent service modules that form an e-commerce solution, and you will learn how to design and deploy a Catalyst 6500-based e-commerce network solution. The course includes training on the Cisco Application Control Engine module (ACE) and the Firewall Services Module (FWSM). If you need training on the Catalyst 6500 Content Switching Module (CSM) and/or the SSL Services Module (SSLSM), please contact us about scheduling a version of this course that covers the CSM, SSLSM, and FWSM modules.

Target Audience:

This course is designed for pre-sales engineers, system engineers, and network engineers who need to design network access for high-availability e-commerce sites.

Objectives:

■ **After you complete this course, you will be able to:**

- Components and features of the Catalyst 6500 that support secure, high-performance networking for e-commerce sites
 - Design and implement firewall services with the Catalyst 6500 FWSM
 - Optimize application performance, scalability, and security with the Catalyst 6500 ACE
 - Design and implement e-commerce options based on Cisco's EnterpriseComposite Network Model and Catalyst 6500 service modules
 - Integrate multiple service modules within a single Catalyst 6500 chassis
 - Design and implement high availability network access using multiple Catalyst 6500s
 - Design and implement an e-commerce networking solution using the Catalyst 6500
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Prerequisites:

Delegates should meet the following prerequisites:

- Experience working with IP networks and web servers is recommended.
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Content:

1. Catalyst 6500 Architectural Overview

- Configuring the Catalyst 6500 Chassis
 - Cisco Chassis Overview
 - Catalyst 6500 Backplane Architecture
 - Catalyst 6500 Line Card ArchitecturesLine Card Packet Flow
 - Deploying Line Cards in a Catalyst 6500
- Providing High Availability
 - Reliability in Cisco Catalyst 6500 Series Switches
 - Route Processor Redundancy and RPR+
 - SRM with SSO
 - NSF with SSO
 - Software modularity
 - Fault Management
- Configuring Network Redundancy
 - EtherChannel
 - Spanning Tree Overview
 - Multiple Spanning Trees
 - Layer 3 Default Gateway Redundancy

2. Deploying Firewall Services With the Catalyst 6500

- Understanding Firewall Services
 - IP Protocol Stack Review
 - IP Application Review
 - Firewall Fundamentals
 - Using NAT and PAT
 - Overview of the FWSM
- Deploying the Firewall Services Module
 - Configuring VLANs
 - Initial Configuration
 - Configuring FWSM Modes
 - Configuring Routed Mode
 - Configuring Transparent Mode
 - Identifying Traffic with Access List
- Configuring Advanced Features
 - Managing Connection Setup
 - Interfaces with the Same Security Level
 - Configuring IP Routing
 - Using Advanced NAT
 - Configuring AAA Services
 - Using Deep Packet Inspection
- Using FWSM with Multiple Contexts
 - Overview of Multiple Contexts
 - Creating Contexts
 - Resource Management
- High Availability
 - Failover Concepts
 - Failover Monitoring
 - Configuring Failover

3. Deploying Intelligent Application Services With the Catalyst 6500

- Introducing ACE
 - IP Application Review
 - Introducing ACE
- Deploying ACE
 - Connecting ACE to the Network
 - Network Topologies
 - Virtualization
 - Resource Management
 - Authorizing Management Users
 - Configuring Interfaces
- Modular Policy CLI
 - Class Maps
 - Policy Maps
 - Applying Policy Maps
 - Permitting Management Traffic\
- Layer 4/7 Load Balancing
 - IP Access Control Lists
 - Load Balancing Concepts
 - Load Balancing Algorithms
 - Configuring Layer 4 Load Balancing
 - Configuring Layer 7 Load Balancing
 - Health Monitoring Over
- Layer 7 Protocol Processing
 - Session Persistence
 - HTTP Modifications
 - Protocol Inspection
- Processing Secure Connections
 - Digital Encryption Technologies
 - SSL Service Options
 - Configuring a Public-Key Infrastructure
 - Configuring SSL Proxy Services
- Security Features
 - TCP/IP Fragmentation/Reassembly
 - TCP/IP Normalization
 - Network Address Translation
- High Availability
 - Redundancy
 - Object Tracking
 - Failover
 - State Replication
 - Displaying Fault Tolerance Information
- Integrating Multiple Features
 - Analyzing Network Requirements
 - Designing ACE Contexts
 - Designing ACE Features
 - Configuring Multiple Integrated Features

4. Designing Catalyst 6500 Solutions for the Data Center

- Design Methodologies
 - Hierarchical Design
 - Enterprise Composite Network Model
- Integrating Service Modules
 - Multiple Module Topologies
 - Module Consolidation
 - Expanding Capacity
 - Example Design
- High Availability
 - Introducing Redundancy Options
 - Intra-Chassis Redundancy

Labs

- Lab 1: Use the Cisco Power Calculator
- Lab 2: Configuring FWSM Transparent Mode
- Lab 3 Configuring FWSM Routed Mode
- Lab 4: Configuring FWSM Advanced Features
- Lab 5: Using Multiple Contexts
- Lab 6: Configuring High Availability
- Lab 7: Implementing Virtualization
- Lab 8: Configuring Server Load Balancing
- Lab 9: Implementing Health Monitoring
- Lab 10: Configuring Layer 7 Load Balancing
- Lab 11: Enabling Sticky Connections
- Lab 12: Enabling Protocol Inspection
- Lab 13: Configuring SSL Termination
- Lab 14: Using Network Address Translation
- Lab 15: Integrating Multiple Features
- Lab 16: Troubleshooting Case 1: Common SLB Configuration Errors
- Lab 17: Troubleshooting Case 2: Layer 7 SLB Configuration Errors

-Inter-Chassis Redundancy
-Ensuring High Availability

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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