
Designing Cisco Data Center Application Services

Dauer: 5 Tage Kursnummer: DCASD

Überblick:

This is an instructor-led, lecture/lab course. You will learn how to deploy and configure intelligent network services using the Cisco ACE products, Catalyst 6500 Application Control Edging (ACE) 4710. This course covers all of the key features of the ACE products, including resources virtualization and management, server load balancing (Layer 2-4 and Layer 7), SSL termination and offload, and security features like application-layer inspection and fixups. The focus is on enabling the student to properly position the ACE products in the network for optimizing data center components and network resources.

Wer soll teilnehmen?:

This course is intended for System Engineers, Channel Partners and Customers who need to design a SANS incorporating the MDS 9000 family of products.

Kursziel:

- After completing the course delegates will be able to:
 - Describe IP application delivery with the ACE module
 - Describe the configuration tasks necessary to successfully deploy an ACE module
 - Describe the structure and function of the Modular Policy CLI statements used to configure ACE features
 - Describe the capabilities and configuration of the ACE features used to provide load balancing of IP-based applications
 - Identify the Layer 7 processing options used to provide advanced application networking
 - Describe ACE support for SSL protocol processing
 - Describe the ACE features that provide IP application-based security
 - Describe the high-availability features of the ACE module which are used to provide reliable application networking services.
 - Describe a methodology used to design and configure multiple ACE features
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Voraussetzungen:

Before attending this course delegates are required to have a solid working knowledge of the following area's;

- The TCP/IP protocol
 - The HTTP and SSL protocols
 - N-tier application architecture
 - Server load-balancing
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Detallierte Kursbeschreibung:

Module 1: Data Center Application Services Overview

Lesson 1: IP-Based Data Center Applications

- IP Application Review
- Web Technology Overview
- GSLB Overview
- Describe Wide Area Application Acceleration

Lesson 2: Data Center Application Architecture

- Multi-Tier Applications
- Intra-Datacenter Redundancy
- Multi-Datacenter Redundancy
- Application Delivery Products

Lesson 3: Deploying the ACE Appliance and Service Module

- Connecting ACE to the Network
- Network Topologies
- ACE 4710 Installation Procedure
- ACE Appliance GUI
- Virtualization
- Resource Management
- Authorizing Management Users
- Configuring Interfaces
- What You Need
- Virtualization and Resource Management Design

Module 2: Designing Server Load Balancing Solutions

Lesson 1: Modular Policy CLI

- Class Maps
- Policy Maps
- Applying Policy Maps

Lesson 2: Managing the ACE Appliance and Service Module

- Permitting Management Traffic
- SNMP Manageability
- Application Networking Manager

Lesson 3: Security Features

- IP Access Control Lists
- ACL Object Groups
- TCP/IP Fragmentation/Reassembly
- TCP/IP Normalization
- SYN Cookies
- Network Address Translation

Lesson 4: Layer 4 Load Balancing

- Load-Balancing Concepts
- Load-Balancing Algorithms
- Configuring Layer 4 Load Balancing
- Traffic Rate Limiting
- Load-Balancing Concepts
- What You Need
- Server Load-Balancing Design Considerations

Lesson 5: Health Monitoring

- Health Monitoring Overview
- Active Health Probes
- HTTP Error Code Monitoring
- Using TCL Scripting
- Route Health Injection
- Backup Servers/Server Farms
- What You Need
- Health Monitoring Design Considerations

Lesson 6: Layer 7 Protocol Processing

- Configuring HTTP Layer 7 Load Balancing
- Persistent and Pipelined HTTP Extensions
- Server Reuse
- HTTP Modifications
- Session Persistence
- Protocol Inspection
- HTTP Inspection
- FTP Protocol Processing
- RDP Protocol Processing
- Radius Protocol Processing
- RTSP Protocol Processing
- SIP Protocol Processing
- Generic Protocol Parsing
- Other Inspected Protocols
- What You Need
- Layer 7 Design Considerations

Lesson 7: Processing Secure Connections

- Digital Encryption Technologies
- SSL Service Options
- Configuring a Public Key Infrastructure
- Configuring SSL Proxy Services
- SSL Session Reuse Functional Overview
- SSL Queue Delay Functional Overview
- SSL Client Authentication Functional Overview
- What You Need
- SSL Design Considerations

Lesson 8: Migrating From CSS and CSM

- Overview of CSS and CSM
- Migrating CSS Configurations
- Migrating CSM Configurations

Module 3: Designing Web Application Acceleration Solutions

Module 4: Designing Site-to-Site Load Balancing Solutions

Lesson 1: Deploying the GSS

- Introducing GSS
- Purpose of GSLB
- ACE GSS Installation Procedure
- Connect the GSS to the network

Lesson 2: Managing the GSS

- Default Management Roles
- Configuring Management Roles
- GSS Network Management

Lesson 3: Designing Global Server Load Balancing

- GSLB Methods
- GSS Load and Keep Alive Tracking
- KAL-AP Integration
- Using Network Proximity
- GSS Zones and Locations
- Proximity Subsystem and Database
- Proximity Network Design Guidelines
- Configuring Network Proximity
- Using DNS Sticky
- DNS Sticky Configuration and Monitoring
- What You Need

Module 5: Optimizing the DCAS Solution

Lesson 1: High Availability

- Redundancy
- Object Tracking
- Failover
- State Replication
- Fault-Tolerance Configuration
- GSS Redundancy

Lesson 2: WAN Optimization

- Introduction to Cisco WAAS
- Cisco WAAS Products
- WAN Application Performance Factors
- WAN Optimization Overview
- Application Acceleration Overview
- Load-Balancing WAEs
- Firewall Design and WAAS

Lesson 3: Designing Application Services

- Analyzing Network Requirements
- Sizing Guidelines
- Designing Virtualization
- Designing Server Load Balancing Services
- Designing Application Security Services
- Designing Web Acceleration Services

- Designing Site-to-Site Load Balancing
- Building an Application Services Demo

Lesson 1: Web Application Acceleration Overview

- Web Performance Factors
- Web Acceleration Architecture

Lesson 2: Deploying Application Acceleration and Optimization

- FlashForward
- Delta Optimization
- Smart Redirect
- Fast Redirect
- FlashConnect
- Just-in-Time Object Acceleration
- Adaptive Dynamic Cache
- Compression Overview
- Configuring Compression
- What You Need
- Web Acceleration Design Considerations

Weitere Informationen:

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