

ACEAP

Course Description

In this hands-on 4-day instructor-led course of training, you will learn how to deploy and configure the Cisco Application Control Engine (ACE) Appliance.

This course covers all of the key features of the Cisco ACE appliance, including resource virtualization and management, server load balancing (Layer 2-4 and Layer 7), SSL termination and offload, security features like application-layer inspection and fixups, and application optimization capabilities.

Who Should Attend

This course is designed for systems engineers and network architects who need to design or deploy server load-balancing solutions using the Cisco ACE appliance.

Required Prerequisites

You will gain the most from this course if you have a basic understanding of the following topics:

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

What's Covered

This course includes the following topics:

- The methods used to manage the ACE appliance
- ACE features that provide IP application based security
- The capabilities and configuration of the ACE features used to provide load balancing of IP based applications
- The health monitoring capabilities of the ACE appliance
- Layer 7 processing options used to provide advanced application networking
- ACE support for SSL protocol processing
- Key application acceleration and optimization features and their benefits in the overall design
- The High Availability features of the ACE appliance which are used to provide reliable application networking services
- A methodology used to design and configure multiple ACE feature



Implementing the Cisco Application Control Engine Appliance

Course Outline

Lesson 1: Introducing ACE

- IP Protocol Stack Review
- IP Application Review
- HTTP Protocol Review
- Introducing ACE

Lesson 2: Deploying ACE

- Connecting ACE to the Network
- Network Topologies
- Virtualization Resource Management
- Authorizing Management Users
- Configuring Interfaces

Lesson 3: Managing the ACE Appliance

- Permitting Management Traffic
- SNMP Manageability
- GUI

Lesson 4: Layer 4 Load Balancing

- Load Balancing Concepts
- Load Balancing Algorithms
- Configuring Layer 4 Load Balancing

Lesson 5: Modular Policy CLI

- Class Maps
- Policy Maps
- Applying Policy Maps

Lesson 6: Health Monitoring

- Health Monitoring Overview
- Active Health Probes
- HTTP Error Code Monitoring
- Using TCL Scripting

Lesson 7: Layer 7 Protocol Processing

- HTTP Layer 7 Load Balancing
- Persistent/Pipelined HTTP Extensions
- HTTP Modifications
- Session Persistence
- HTTP Inspection
- FTP Protocol Processing
- Inspected Protocols

Lesson 8: Security Features

- IP Access Control Lists
- Object Groups
- TCP/IP Normalization
- SYN Cookies
- IP NAT and PAT

Lesson 9: Processing Secure Connections

- Digital Encryption Technologies
- SSL Service Options
- Configuring a Public-Key Infrastructure
- Configuring SSL Proxy Services

Lesson 10: Deploying Application Acceleration and Optimization

- FlashForward
- DeltaOptimization
- SmartRedirect
- FastRedirect
- FlashConnect
- J-I-T Object Acceleration
- Adaptive Dynamic Cache

Lesson 11: High Availability

- ACE Appliance Redundancy Model
- Object Tracking
- Failover Recovery Process
- State Replication
- HA Configuration
- HA Monitoring

Lesson 12: Integrating Multiple Features

- Web Application Profiles
- Identifying Features Needed
- Designing Multiple Context Implementation
- Designing Multi-feature implementation
- Configuring Multiple Integrated Features



Learning Solutions



Implementing the Cisco Application Control Engine Appliance

Course Labs

- Lab 1: Implementing Virtualization
- Lab 2: Using NAT
- Lab 3: Configuring Server Load Balancing
- Lab 4: Implementing Health Monitoring
- Lab 5: Configuring Layer 7 Load Balancing
- Lab 6: Enabling Sticky Connections
- Lab 7: Enabling Protocol Inspection
- Lab 8: Configuring SSL Termination
- Lab 9: Enabling HTTP Optimizations
- Lab 10: Integrating Multiple Features
- Lab 11: Troubleshooting Case Study 1
- Lab 12: Troubleshooting Case Study 2



Learning Solutions