



# Global Site Selector Operations and Configuration

**Length**  
3 days

**Format**  
Lecture/lab

**Track**  
Design/  
Support

**Version**  
1.0

## Course Description

The Cisco GSS Global Site Selector is a crucial component of any data center architecture that requires a secure site-to-site global load balancing. The GSS allows businesses to deploy global Internet and intranet applications with the confidence that all application users will be quickly rerouted to a standby data center during a primary data center outage or overload.

The aim of this course is to prepare systems engineers to design, configure, manage, and troubleshoot Cisco GSS installations.

## Who Should Attend

This course provides in-depth technical training for system engineers, network engineers, and field engineers who need to deploy, configure, and manage the Cisco Global Site Selector.

## Recommended Prerequisites

- Basic knowledge of routing and switching and TCP
- Working knowledge of the basic functionality of Server Load Balancers
- Working knowledge of basic DNS
- Knowledge of HTTP fundamentals

## Related Training

- Cisco Application Control Engine Operations and Configuration (ACEOC)
- Designing Data Center Application Services (DCASD)

# GSSOC

## Learning Objectives

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

- Implement basic IP activation of the Cisco GSS including interface addressing, user roles and IDs, NTP implementation, and SNMP configuration
- Implement intelligent DNS configuration with the Cisco GSS
- Implement and network multiple Cisco GSS devices in both a load-balancing and a DRP type of implementation
- Choose and implement appropriate keepalive(s) necessary to insure minimum risk of a GSS giving an answer that refers to an unreachable device
- Implement the appropriate DDoS mitigation techniques on the GSS
- Troubleshoot GSS and DNS configurations





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## Course Outline

### Module 1: Domain Name System and Global Server Load-Balancing Overview

#### Lesson 1: Reviewing Basic DNS

- DNS Resolution
- DNS Definitions
- DNS: Caching and TTL
- DNS RFCs
- Berkley Internet Naming Daemon

#### Lesson 2: Examining the Role of the Cisco GSS in the Network

- What Is GSLB?
- Key Features of the Cisco GSS
- DNS Resolution Process
- DNS Resolution Process with Cisco GSS

#### Lesson 3: Discussing Cisco GSS Fundamentals

- Cisco GSS Definitions
- DNS Rule Clauses
- How Cisco GSS Is Deployed
- Cisco GSS Component Structure
- Cisco GSS Basic Configuration Sequence
- Cisco GSS NS Forwarding
- Cisco GSS Hardware
- Cisco GSS 2.0 Descriptions
- Cisco GSS Use Cases
- Ordering Cisco GSS
- Cisco GSS Network Management
- Cisco GSS Availability

### Module 2: Cisco GSS Deployment Model Overview

#### Lesson 1: Revealing Distributed Data Centers: Benefit and Challenges

- The Need for Distributed Data Centers
- GSLB and Business Continuance Networking in a Distributed Data Center Topology

#### Lab 2: Accessing the Remote Lab

#### Lesson 2: Describing Advantages and Issues of the DNS-Based Approach

- Advantages of the Cisco GSS Approach
- Considerations of the DNS-Based Approach
- Cisco GSS Topological Placement
- Considerations
- Cisco GSS Traffic Permission

#### Lesson 3: Describing Cisco GSS Modes of Operation

- Delegated Mode
- Hierarchical Mode

### Module 3: Cisco GSS Setup

#### Lesson 1: Discussing Initial Cisco GSS Setup—Basic

- Login and CLI Overview
- Software Installation
- Cisco GSS Configuration File Basics
- Initial CLI Configuration

#### Lab 3: Initial Cisco GSS Configuration

#### Lesson 2: Describing Multiple User Roles and Views

- Roles
- Views

#### Lesson 3: Implementing TACACS+ on the Cisco GSS

- Overview of Cisco GSS Utilization of TACACS+
- Cisco GSS TACACS+ Configuration Through CLI Operation
- Cisco GSS TACACS+ Monitoring Through the CLI
- Cisco GSS TACACS+ Notes

#### Lesson 4: Troubleshooting and Monitoring

- Monitoring Cisco GSS Status Through GUI
- Monitoring Cisco GSS Status Through CLI
- Helpful Cisco GSS CLI Troubleshooting and Logging Commands
- Cisco GSS GUI Logs

#### Lesson 5: Implementing Simple Network Time Protocol with Cisco GSS

- Cisco GSS SNTP Setup
- Cisco GSS SNTP Monitoring

### Module 4: Global Server Load Balancing

#### Lesson 1: Explaining DNS Rule

- Fundamentals
- Rule Logic
- Rule Specifics



Learning Solutions



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## Course Outline

### Module 4: Global Server Load Balancing (Cont.)

#### Lab 4: Initial Cisco GSS GSLB Configuration

##### Lesson 2: Building a Rule

- The Rule Builder Window
- Owner, Region and Location, Attributes in a Rule
- Rule Elements
- Domain Lists
- Source Address Lists
- Answers and Answer Groups
- Load-Balancing Configuration
- Keepalives

### Module 5: Cisco GSS Keepalives

#### Lesson 1: Fundamentals

- Shared Keepalives
- Keepalive Types
- Keepalive Limits and Parameters

#### Lab 5: Keepalives

#### Lesson 2: Keepalive Processes

- Cisco GSS Keepalive Retry Process
- Fast Keepalive Intervals, Operations and Settings

#### Lesson 3: Describing Individual Keepalive Details and Illustrations

- TCP Keepalive Flow
- KAL-AP Keepalive by VIP
- KAL-AP Keepalive by TAG
- Scripted/SNMP Keepalives
- Monitoring SNMP Keepalives
- Multiport Keepalives

#### Lesson 4: Implementing Keepalives

- Examining Keepalives
- Keepalive Configuration
- Keepalives in Relation to the Firewall

### Module 6: Cisco GSS Load-Balancing Methods

#### Lesson 1: Describing Load-Balancing Techniques and Fundamentals

- Load Balancing Fundamentals
- Ordered List

### Lab 6: Implementing Load-Balancing Techniques

#### Lesson 2: Describing DNS Persistence

- DNS Persistence
- Sticky Behavior
- Global Mask
- Sticky Implementation

### Module 7: Cisco GSS Network Proximity

#### Lesson 1: Describing Directory Response Protocol Fundamentals

- Proximity Definitions
- Proximity Overview
- Proximity/Cisco GSS Hierarchy
- DRP Network Planning Considerations

#### Lab 7: Configuring Cisco GSS Clusters

### Module 8: Cisco GSS DDoS Protection

#### DDoS Fundamentals

- Antispoofing
- Mitigation
- Rate Limiting
- Peacetime Learning
- Lab 8: Configuring Distributed Denial of Service Commands on the Cisco GSS

### Module 9: Cisco GSS and Cisco Network Registrar Interaction

#### Lesson 1: Using Cisco Network Registrar

- Basics of Cisco GSS and Cisco Network Registrar Interaction
- Cisco GSS Response with and Without Cisco Network Registrar

#### Lesson 2: Describing Cisco Network Registrar Configuration Elements

- Cisco Network Registrar Record Balancing

#### Optional Lab: Upgrading Software on the Cisco GSS



Learning Solutions