

Advanced Services' Cisco Service Control Application for Broadband Training (SCA-BB) v2



This course provides knowledge and hands-on experience with Cisco® Service Control Application for Broadband (SCA-BB). Students will gain knowledge about the elements of this solution including Cisco Service Control Engine (SCE), SCA-BB Console, Cisco Subscriber Manager (SM), and Cisco Collection Manager (CM) plus the Reporter, Service Configuration Editor, and Protocol Signature Editor tools. This course provides information to run and configure a SCA-BB solution for bandwidth control using several different subscriber modes: subscriberless, anonymous subscribers, subscriber-aware in push mode, subscriber-aware in pull mode, and using a RADIUS or Dynamic Host Configuration Protocol (DHCP) authentication, authorization, and accounting (AAA) system.

Duration

Four days

Target Audience

This course is intended for people designing, deploying, or supporting SCA-BB.

Course Objectives

Upon completion of this course, you should be able to:

- Describe the uses and benefits of bandwidth control provided by SCA-BB
- Configure the solution for building an SCA-BB site containing SCE, SM, Reporter, and a database
- Implement the setting of subscriberless global bandwidth controls
- Generate detailed reports on bandwidth usage by subscribers and service usage
- Describe the extensibilities and customization available with using a database for report generation
- Configure anonymous and static users using the command-line interface on the Cisco SCE
- Configure subscribers using the Subscriber Manager application

- Implement the use of dynamic subscribers using SCA-BB integrated with an AAA system such as RADIUS or DHCP
- Implement optimized bandwidth controls for multitiered groups of subscribers
- Configure priorities for services for subscribers to optimize bandwidth usage
- Configure quota limits for subscriber usage of types of messages/services
- Create time-based bandwidth controls on subscribers
- Create greater classification enhancement and refinement through the use of zones and flavors
- Describe the key points and effects on overall system design with SCA-BB using policy servers VAS and HA considerations
- Implement combinations of bandwidth controls: quota, time-based, and tiered services to provide comprehensive subscriber bandwidth controls
- Describe security issues and the solution's use of filters, spam protection, distributed denial-of-service attack protection, worm controls, and anomaly detection
- Create a new protocol signature

Course Prerequisites

Table 1 lists the prerequisites for this course.

Table 1 Course Prerequisites

Prerequisite Knowledge	Relevant Courses
<ul style="list-style-type: none"> • Experience using Cisco IOS® Software for configuration of IP, Multiprotocol Label Switching (MPLS) VPN, Open Shortest Path First (OSPF), Border Gateway Protocol (BGP), and Intermediate System-to-Intermediate System (IS-IS) protocols 	<i>Building Core Networks with OSPF, BGP, and MPLS Boot Camp</i>
<ul style="list-style-type: none"> • Basic understanding of quality of service (QoS) operations 	<i>Implementing Cisco Quality of Service</i>

Course Outline

- Overview and Defining a Site
- Global Bandwidth Control and Filters
- Reports
- Anonymous Mode
- Subscriber-Aware Mode
- Subscriber Manager Using Push or Pull Mode
- Architecture Considerations
- Integration with RADIUS and DHCP
- Committed Information Rate (CIR) and Peak Information Rate (PIR)
- Assurance Level
- Relative Priority
- Extra Bandwidth Controllers
- Service Controls (Kbytes and Queue Settings)
- Quota (Bandwidth and Sessions)

- Time-Based Bandwidth Management
- Classification Services with Flavors and Zones
- Multiple Bandwidth Control Scenarios
- Collecting Data and Generating Reports
- Security Issues
- New Protocol Signature Creation

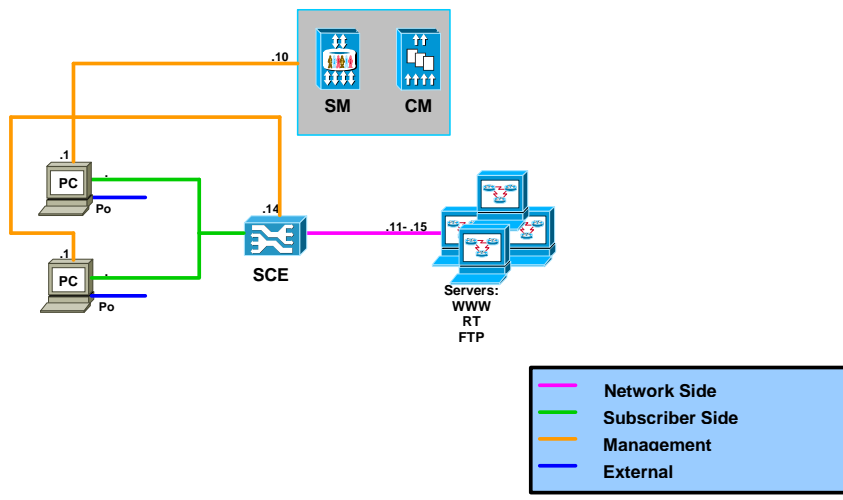
Lab Outline

- Defining a Site
- Global Bandwidth Controller
- Adjusting Filters
- Creating Anonymous Subscribers in the Cisco SCE
- Loading and Using Subscribers in the Cisco SCE
- Using Subscriber Manager in Push Mode
- Using Subscriber Manager in Pull Mode
- Integration with RADIUS System
- Using CIR and PIR
- Using Relative Priority
- Using Extra Bandwidth Controllers
- Class of Service and Protocol Controls
- Quota for Bandwidth
- Quota for Sessions
- Setting Up Zones
- Multiple Bandwidth Controls Scenario
- Generating Reports
- Creating New Protocol Signature

Lab Topology

Figure 1 shows the lab topology used in this course.

Figure 1 Lab Network Topology



Registration Information

For more information about schedules and registration for this course, please contact aeskt_registration@cisco.com.

For More Information

For more information about Advanced Services Education course offerings, including custom training options, as well as Advanced Services Curriculum Planning Services and Advanced Services Technical Knowledge Library (TKL), refer to the Advanced Services Education Website at www.cisco.com/go/ase.



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