Cisco 6400 Service Selection Gateway

THE CISCO 6400 SERVICE SELECTION GATEWAY (SSG) IS A CISCO IOS® FEATURE MODULE THAT ENABLES SERVICE PROVIDERS TO MOVE UP THE VALUE CHAIN, GET CLOSER TO CONSUMERS, AND OFFER DIFFERENTIATED VALUE-ADDED SERVICES. AS THE GATEWAY TO NEW WORLD SERVICES, THE CISCO 6400 SSG EMPOWERS PROVIDERS TO SEIZE ADDITIONAL REVENUE-GENERATING OPPORTUNITIES VIA VALUE-ADDED USAGE-BASED SERVICES, WHICH TYPICALLY HAVE HIGHER MARGINS. SERVICES SUCH AS VIDEOCONFERENCING, STREAMING VIDEO, PERSONALIZED INTERNET, BUSINESS-GRADE INTERNET, SHOPPING, AND GAMING NOT ONLY CREATE NEW REVENUE STREAMS BUT ALSO HELP ATTRACT AND RETAIN SUBSCRIBERS. THE CISCO 6400 SSG ALLOWS SUBSCRIBERS TO DYNAMICALLY SELECT ON-DEMAND SERVICES. IT THEN SWITCHES SUBSCRIBER TRAFFIC TO THE SELECTED SERVICES, APPLYING FULL EDGE ROUTING AND QUALITY OF SERVICE (QOS) POLICIES.

Service Selection Dashboard

Together with the Cisco 6400 SSG, the Service Selection Dashboard (SSD) allows a service provider to create a captive portal (Figure 1), whereby subscribers select services using a Web browser. Captive portals give service providers the ability to advertise services, build its brand, and own the user experience. Wholesale providers can offer a service to retailers called retail portals, which are captive portals with a customized look and feel for each Internet service provider (ISP). Retail portals give each ISP the ability to own the user experience while allowing service providers to participate in the additional revenues differentiated services can provide. With the power to offer multiple services under a branded portal, service providers and ISPs can implement creative pricing strategies and truly develop sticky portals.

Figure 1 A Captive Portal with the SSD

The SSD is a Java-based application that runs on a Solaris or Windows NT workstation. The SSD presents subscribers with a menu of services, enabling them to log onto and disconnect from different services using a Web browser. This improves flexibility and convenience for subscribers (including the ability to log onto multiple services simultaneously) and enables service providers to bill subscribers based on connect time and services used, rather than charging a flat rate. For example, Internet access may be a fixed service, but additional on-demand services such as corporate telecommuting, gaming, or other extranet networks allow billing beyond a single service. Figure 2 illustrates how the Cisco 6400 SSG and SSD work in conjunction with a RADIUS-compliant authentication, authorization, and accounting (AAA) server.

The SSD provides a standard set of customizable HTML pages to meet the needs of a service provider's organization. No client software is needed. All SSD software resides on a Web server. Customers do not need to download any special software, drivers, or plugins.

Figure 2 Web Selection System Overview

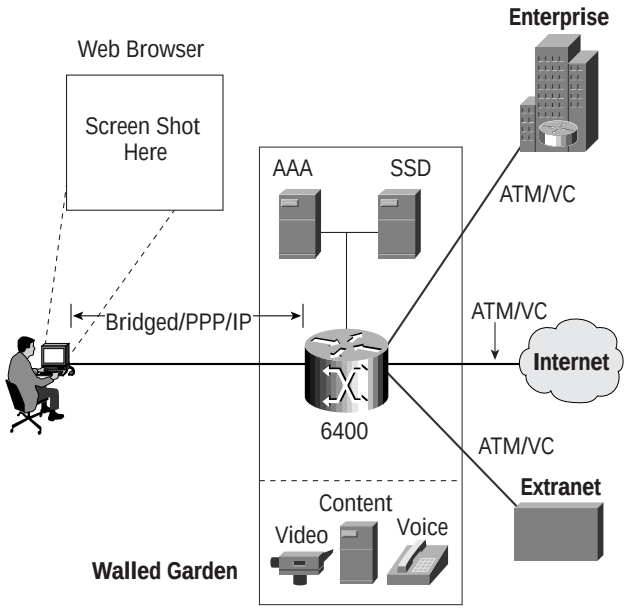

Table 1: Feature Summary

Feature	Benefit
Business Models	
Captive Portal	Captive portals enable service providers to own the user experience, develop a sticky portal, and build a brand.
Retail Portal	Retail portals allow ISPs to own the user experience and develop a sticky portal, while enabling wholesalers to participate in additional service revenues via value-added offerings.
Walled Garden	A walled garden is a portal that offers unique and value-added services to subscribers, thereby creating switching costs and helping to build customer loyalty.
Service Selection Methods	
Web Selection	A Web-based selection method enables captive and retail portals and a walled garden, whereby subscribers can concurrently access multiple on-demand services from a list of personalized services. This unique service selection method leverages the ubiquity of Web browsers, and eliminates logistics related to client software (such as license fees, distribution logistics, and an increased customer support burden).
PPP Termination Aggregation (PTA)	PTA is a PPP selection method whereby service is selected based on structured domain name (username@service.com) and supports one service at a time.
PTA Multidomain (PTA-MD)	PTA-MD is a PPP selection method that supports overlapping IP addresses and concurrent connection to more than one service.
Cisco 6400 SSG Service Types	
Pass-Through	Traffic is forwarded via normal routing or next-hop table. AAA is performed by the Cisco 6400 SSG, and Network Address Translation (NAT) is not performed. This service type is well suited to standard Internet access.
Tunnel	The Cisco 6400 SSG initiates an Layer 2 Tunneling Protocol (LT2P)tunnel to the remote LNS. NAT is performed by between subscriber IP address and LNS assigned address. This service type is ideal for services that are already equipped for LNS.
Proxy	Authentication and authorization performed by remote AAA server. This service type supports NAT when the remote server assigns an IP address. The service type is well suite when service must perform AAA.
Access Methods	
PPPoE PPPoA RFC1483 Bridged RBE	Supports multiple access methods. Multiple users at a site can connect to multiple destinations simultaneously.
AAA	
RADIUS-based user and service authentication and accounting	Supports usage based billing

SSD System Requirements

Operating System / Workstation

- Solaris 2.4 or later on a SparcStation 20 or better, with 64-MB RAM (128 MB recommended)
- Windows NT with 64-MB RAM (128 MB recommended)

Java Support

- Java Servlet Development Kit (JSDK) 2.2
- Java 1.1.7 Release 5 or later (JDK or JRE version)

Web Server

- The Jetty Web Server ships with the SSD for a turnkey solution
- The SSD is designed to work with any Web server that is JSDK2.2 compliant

Browser Support

- Subscribers must use either Netscape 4.05 or later or Microsoft Internet Explorer 4.01 or later
- Browsers must also support Java Script for service redirect upon selecting a service

AAA Server

- RADIUS-based that accepts vendor-specific attributes (Cisco Access Registrarrecommended)

Ordering and Availability

The Cisco 6400 SSG is a feature module of Cisco IOS software that runs on the Cisco 6400 Node Route Processor (NRP). The SSD may be downloaded from Cisco Connection Online (CCO).

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Cisco IOS Software Options	
S64J5-12.1.3DC	Cisco 6400 Cisco IOS software for NRP with multidomain
S64J6-12.1.3DC	Cisco 6400 Cisco IOS software for NRP with Web selection

For more information, please contact ask-6400-pm@cisco.com.

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems Europe
11, Rue Camille Desmoulins
92782 Issy Les Moulineaux
Cedex 9
France
www-europe.cisco.com
Tel: 33 1 58 04 60 00
Fax: 33 1 58 04 61 00

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems Australia, Pty., Ltd
Level 17, 99 Walker Street
North Sydney
NSW 2059 Australia
www.cisco.com
Tel: +61 2 8448 7100
Fax: +61 2 9957 4350

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