

Cisco Building **Broadband** Service Manager

Version 5.2



Cisco Building Broadband Service Manager (BBSM) is an access gateway for public access networks that enables simple, plug-and-play access, end user self-provisioning of services, multiple authentication and billing options and Web-based management, reporting and configuration.

Cisco BBSM works with Cisco access-layer LAN products to provide a complete solution that enables service providers or property owners to create, market and operate broadband access services in vertical markets such as hospitality, public spaces/hotspots, and higher-education.

BBSM 5.2 will ship November 15, 2002. BBSM 5.2 will use new product numbers and new pricing different from BBSM version 5.1. The upgrade utility for existing installs will be available in early December.

Lastly, we have eliminated port-license based pricing. All bundled port licenses and the requirement to purchase additional license packs have been eliminated.

New BBSM 5.2 Features

- Support for selection between Public & Private IPs (a.k.a. MultiNet)
- Prepaid billing support for RADIUS authentication
- Bandwidth Reservation & Calendaring
- Two-Way PMS Interface API
- Improved Cable modem support
- Roaming Support
- Connect Screen Wizard
- Administrative Session Deactivation
- Support for Cisco switch clustering
- Secure Enterprise Network Layering (Visitor-based networking)



Feature, Function & Benefits

Support for client selection between Public and Private IPs (a.k.a. MultiNet)

- Eliminates the IPSec VPN issues that occur with the use of private IP addressing; Allows service provider to confidently advertise all VPN clients are supported
 - Decreases operating costs to property owner/Service provider by providing the ability to offer end-users public IP addresses necessary for VPN access. At the same time, free private IP addresses are assigned to non-VPN clients or VPN clients that support NAT, which offer full access and connectivity, without incurring unnecessary expense. Providing public IPs in support of VPN access as well as improved service quality may provide an up-sell revenue opportunity for the venue. Fully supported for DHCP-configured end user devices.

Prepaid support for full AAA RADIUS

- BBSM supports the AAA model: Authentication (who is the user), Authorization (what the user is allowed to do) and Accounting (what resources did the user utilize). AAA services provide the administrator with the tools and features necessary to successfully manage their community of end users.
- Pre-paid support allows RADIUS users to pre-pay for Internet service prior to a session.
 - Enables Service Providers and others to offer promotional coupons for limited free access to service, or as a primary subscription method. Prepayment is analogous to prepaid telephone cards, which offer a convenient and simple way to collect revenues for selling blocks of access time. Usage is deducted and tracked by a RADIUS accounting server.

Bandwidth Reservations and Calendaring

- Establishes minimum reserved bandwidth for users
 - The administrator can assure a certain amount of bandwidth will be available to users who have reserved the bandwidth. Naturally, this is highly desirable by service providers to provide incremental revenue associated with this premium service.
 - This feature is useful where a venue offers a particular level of performance to users for business or productivity reasons, such as the use of real-time applications (for example, IPTV), which require a certain minimal level of performance in order to function properly.
- Establishes classes of service (CoS) set rates for bandwidth reservations based on application, authentication or billing agreement
 - The administrator may define payment rates for varying classes of service offered to users. Administrator can make reservations, schedule and pre-assign requested bandwidth (up-sell opportunity) to accommodate the needs of specific events, network applications, types of users, and so forth.
- Bandwidth reservation feature applies to access code authentication only
- The bandwidth reservation feature provides group bandwidth management, working simultaneously with the existing bandwidth rate shaping feature designed for individual clients
 - There are two policies at work regarding managing and provisioning network bandwidth through the BBSM; on an individual basis as identified by their IP information, as well as applying bandwidth to a group reservation, such as a convention, meeting, or other scheduled particular events.



- A simplified calendaring GUI is used for scheduling and bandwidth reservation
- The BBSM calendar interface is also used for administering Meeting Room Scheduling
 - The BBSM calendar interface is an intuitive, easy-to-use graphical interface for maintaining the meeting room schedule, and may be used by either front office or venue sales staff. The GUI allows bandwidth to be reserved for upcoming events easily without technical assistance, and automatically generates the appropriate number of access codes corresponding to each reservation. Works in conjunction with the IOS
 - Provides bandwidth management capabilities at the edge of the network to ensure accuracy and most efficient use of network infrastructure, without the use or necessity of complex and unfamiliar commands

Two Way Property Management System API (Hotels, Condos, Apartments)

- The Two Way PMS can communicate with Fidelio to offer a personalized guest experience. Provides a single point of control and entry during hotel check in.
- Ships with Fidelio support. Features include:
 - Guest folio checkout
 - *Self checkout for improved guest experience*
 - End user Session Termination at checkout
 - *No lost revenue due to early check-outs*
 - End User Affiliation/Personalization capabilities
 - *Provide personalized messaging and content to targeted audience*
 - *Allows for instant recognition and customization to “honored guest” class of end users*
- Flexible configuration options
 - Supports either one-way, or two-way PMS systems
 - May be connected via either a serial or TCP/IP interface

Support for Cable Modem Private IPs, Client Public IPs

- Allows for cost-effective allocation of VPN capable public IP address to clients and private IPs to cable modems
 - Cost savings to property owner/Service provider by providing the ability to offer end-users public IP addresses necessary for VPN access. At the same time, free private IP addresses are assigned to cable modems. By placing clients on a different subnet that cable modems prevents sensitive cable modem DHCP information from being sent to a user, therefore reducing the chances of malicious attacks on the system. Allows MSOs to offer high-speed Internet access over the existing coaxial infrastructure, leveraging their existing investments.

Roaming Support

- BBSM will provide support for IPASS Smart Client and Boingo
 - Corporate travelers may now use their familiar and approved process to connect to their home/business network through a secure link—while usage billing is applied to their existing corporate IPASS or Boingo accounts.
 - Leverage existing IPASS and Boingo marketing initiatives and branding to drive users to ISP/WISP locations, which will increase usage and revenue.



Connect Screen Wizard

- Web-based wizards for creating custom connect page sets
 - The connect screen wizard quickens service deployment time by simplifying BBSM connect page design, offering quick and simple development of custom page sets. No complex or sophisticated Web programming skills are required to create, edit and deploy customized connect screens. This feature eliminates the overhead cost of hiring a third-party development house for basic Web design needs.

Administrative Session Deactivation

- An operator and/or administrator can terminate an end-user's session via a Web-based interface
 - Administrator has additional control to deactivate malicious users from either a local or a remote location. May be used to permanently or temporarily disable end user access. Identification based on end user's MAC address; positively identifies specific malicious users

Support for Cisco Switch Clustering

- Reduces the number of required IP addresses from one per switch to one per cluster (up to 16 switches)
 - Cost savings to property owner and service provider by reducing required IP addresses. One IP address simplifies management of the cluster. Administrators may use the cluster Web GUI to manage the cluster member switches, rather than Telnetting into each individually.
- BBSM can recognize the entire cluster via one manageable IP address
 - A single IP address for a switch cluster simplifies the network design, it can be either localized or a centralized management.

Secure Enterprise Network Layering (Visitor-based networking)

- Enables a secure converged network of employees and visitors on the enterprise wireless LAN in areas of a campus where vendors and partners visit. Meetings can have action items executed immediately as partners and contractors VPN back to their headquarters and interface with remote systems. BBSM can be used for Web authenticated visitor access while employees bypass BBSM using a secure protocol like LEAP.
 - Increased productivity due to visitor's ability to access their corporate network resources and collaborate with colleagues as they create and retrieve information while meeting with your staff.
 - Features full-VPN support using Cisco infrastructure components to allow for secure access as though they were directly connected to their office.
 - Provides quality of service features to ensure network resources are prioritized for your employees but excess bandwidth is provided to your visitors.
 - Optionally charge for your visitor access to subsidize your branch office network costs
 - Location based portals will welcome your visitors to various areas of your campus and display information relevant to their location or building.



Enhancements from 5.1

In addition to offering new features, which will allow us to sell effectively into new markets, Cisco has added additional improvements to the core product to increase functionality and usability:

- Better support for handheld devices (SDK)
 - Support for micro browsers to correctly display on-screen information
 - Improved support for PDAs connecting to BBSM including the Compaq iPAQ, HP Joranda, etc.
- Improved Switch Discovery Wizard functionality
 - Allows for quicker and easier network element discovery to simplify configuration and shorten deployment time
 - Shortened deployment cycles have a direct impact installation costs.

Load Balancing and Failover (Reference Design)

- The BBSM Load Balancing and Failover reference design architecture is available using Cisco Content Services Switch (CSS) and supports DHCP clients (no proxy settings).
- As additional users login, the additional traffic is spread across the available servers resources, therefore providing optimal performance balancing regardless of the stress load.
- The reference design provides a "fail-over" capability. If one server or CSS in the design goes down, the next one is available to continually provide service to the users of the network resources.
- Auto fail-over occurs with no administrator intervention necessary.

Table 1 Key Features and Benefits to Targeted Audience

	Add Revenue	Save OPEX	Security	Customer Retention	Venue
Public/Private IP	x	X		x	All
Prepaid RADIUS	X				PLAN
Bandwidth Reservation/ Calendaring	X				Education, Convention/ Conference
2-Way PMS API	?		X	X	Hospitality
Improved Cable Support					MxU
Connect Screen Wizard		X			All
Roaming Support	X				PLAN, Hospitality
Session deactivation		X	X		All
Switch Clustering		X			All

The table above helps identify the specific new features delivered in BBSM v5.2, which would be of strong interest in particular venues, as well as the value they provide to the customer. This value is defined in terms of competitive differentiation, providing additional revenue opportunity, provide savings to operating expenses, provide and facilitate increased security, and increase Customer loyalty.



BBSM Software Development Kit (SDK)

Cisco provides a software development kit for BBSM available for download on Cisco Connection Online (CCO) at: <http://www.cisco.com/warp/public/570/comlob/index.html>

The BBSM SDK for each software release is typically updated and available 45 days after the release begins shipping.

The SDK enables the following value added services:

- Customization and development services for BBSM Active Server Page Web screens, which define the access policy for the port and present the branding to the end customer.
- Installation services to configure and install BBSM software for various vertical building applications.
- Custom development of BBSM modules for billing and accounting interfaces to OSS systems.
- Custom development of BBSM modules for third party network hardware.
- Integration of BBSM billing features with external servers such as Microsoft Windows Terminal server for renting Microsoft Office applications in an application service provider environment.

Table 2 Ordering BBSM v5.2

Part Number:	Description	List Price (\$US)
BB-SM-SERVER5.2	Cisco BBSM v5.2 pre-loaded server—Cisco BBSM pre-loaded on server ready to install in property. Includes Cisco BBSM 5.2 software base kit CD, documentation, BBSD, and Microsoft software (Windows 2000 Server, ISA Server).	\$7,000
BB-SM-5.2-UPG=	Cisco BBSM v5.2 Upgrade on CD with BBSD—software only kit (does not include Windows 2000 or ISA Server).	\$2,500
BB-SM5.2-CDBUNDLE=	Cisco BBSM v5.2 Software Bundle on CD, Microsoft Windows 2000 Server, Microsoft ISA Server	\$5,000

Schedule and Availability

First Customer Orderability (FCO)

- October 18, 2002

First Customer Ship (FCS)

- November 15, 2002

For further questions, please contact:

Tim Trautman —Product Manager

Cisco Systems, Inc.

Building Broadband Solutions Unit

10935 Vista Sorrento Parkway

San Diego, CA 92130

Ph: (858) 526-1171

Fax: (858) 526-1097

Email: ttrautma@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 International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

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, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

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