



Configuring Bandwidth Management

This chapter describes bandwidth management, including bandwidth throttling and bandwidth reservation. It provides the procedure for creating, configuring, and managing access codes, which are alphanumeric strings that BBSM generates for end users to access the Internet:

- [Bandwidth Reservation Overview, page 17-1](#)
- [Configuring Bandwidth Throttling, page 17-3](#)
- [Configuring Bandwidth Reservation, page 17-3](#)
- [Creating and Configuring Access Codes, page 17-9](#)

As of BBSM 5.2, BBSM supports the new *bandwidth reservation* feature, as well as the *bandwidth throttling* feature used in previous releases. These features are explained below:

- **Bandwidth throttling**—The specified bandwidth is a maximum bandwidth. Clients receive no more than the specified bandwidth.
- **Bandwidth reservation**—Clients in the reservation pool share the specified minimum bandwidth. Instead of using Quality of Service (QoS), bandwidth is reserved by using the Cisco IOS Class-Based Shaping feature. For additional information about Class-Based Shaping, go to the following website:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121newft/121t/121t2/clsbsshp.htm>

Bandwidth Reservation Overview

This section provides an overview of bandwidth reservation. Refer also to each section for detailed information about that configuration procedure.

With bandwidth reservation, hotel customers can reserve bandwidth for meetings that require broadband access. When hotel customers reserve meeting rooms, they can specify bandwidth for their meeting. During the meeting when guests are logged in, the reserved bandwidth is available only to meeting room guests.

Being able to reserve bandwidth provides several specific advantages to the hotel:

- **An added source of revenue**—Because the hotel can provide a range of bandwidths, it can offer a tiered pricing structure to meeting room customers.
- **More efficient use of hotel Internet bandwidth**—Guests use the Internet primarily in the evening. During the day, hotel bandwidth is usually underused and can generate additional meeting room revenue.

Hotels wanting to use the bandwidth reservation feature do not need to buy any additional bandwidth. Instead, they can re-allocate their existing bandwidth. For example, if a hotel has 1000 kbps allocated for guest use, a bandwidth reservation of 200 kbps would decrease the total amount of bandwidth available for general guest use to 800 kbps. However, reservations do not actually decrement the total hotel bandwidth unless someone is logged into the reservation. As soon as the last person using the reserved bandwidth logs out, the bandwidth is available again for guest use.

It is important not to oversubscribe the network. If the full amount of bandwidth were reserved, no bandwidth would be left for hotel guests. Each hotel must determine how much bandwidth it wants to provide for its guests and weigh that against the increased revenue potential of the bandwidth reservation system.

What Bandwidth Reservation Adds to Your Router

In some cases, the external router is managed by a service provider who may be concerned about the configuration that BBSM adds to the router. If you are working with an ISP who needs more information about what the bandwidth reservation feature adds to the router, this section describes the router configuration in more detail. Note that no BBSM bandwidth reservation commands are ever entered manually on the router; BBSM adds them automatically when the bandwidth reservation feature is used.

Bandwidth reservation uses the IOS Class-Based Shaping feature to configure the router. Refer to the following website for documentation about Class-Based Shaping:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121newft/121t/121t2/clsbsshp.htm>

The configuration added to the router consists of a policy map, several class maps (one for each class of service), and one extended access list for each class map. Some parts of the configuration are static, and some are dynamic, as follows:

- Static—The policy map is the static part of the configuration.
- Dynamic—Class maps and extended access lists are created dynamically as users log in to the reservations. When the last user logs out of a reservation, the class map and extended access list for that reservation are deleted from the running configuration.

None of the configuration is stored in permanent memory (NVRAM). It is only kept in the running configuration. If you reload the running configuration, you erase the bandwidth reservation configuration.

All of the configuration settings on the router contain the string *BBSM*. If you want to test the bandwidth reservation feature, first create a reservation. (Refer to the “[Creating and Configuring Access Codes](#)” section on page 17-9.) Then log into BBSM as an end user using an access code. Now Telnet to your external router and view the running configuration. Look for the BBSM string. The policy map, class maps, and extended access lists all have names that include this string. As mentioned earlier, when you deactivate the client session, the dynamic part of the configuration is removed. You can always reload the running configuration on the router to restore the previous configuration.

Configuring Bandwidth Throttling

The bandwidth throttling feature enables end users to choose a bandwidth when they connect. Bandwidth throttling enables you to control the maximum bandwidth that you allocate to end users on a per-port basis.

If you are using the AccessCode and MeetingRoom page sets, you can control bandwidth by choosing an Access Codes Bandwidth option—bandwidth disabled, throttling, or reservation—on the WEBconfig BBSM Server Settings web page. The options for this web page are described in [Chapter 17, “Configuring Bandwidth Management.”](#)

This section repeats the procedure to configure bandwidth throttling.

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- Step 1** From the Dashboard, click **WEBconfig**. The BBSM Server Settings web page appears.
- Step 2** In the Bandwidth Management area, verify that you chose *Throttling* in the Access Codes Bandwidth field. This option enables bandwidth throttling. (If you choose None, bandwidth management is disabled.)
- Step 3** To reserve bandwidth, follow the procedure in the [“Creating and Configuring Access Codes”](#) section on [page 17-9](#).
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Configuring Bandwidth Reservation

The bandwidth reservation feature enables a property to set aside a specified bandwidth for a meeting room users. When a hotel customer reserves a meeting room, he or she has the option of specifying a bandwidth reservation for the meeting. At the time of the meeting, this bandwidth is available only to meeting room users, not for general usage. You must configure the bandwidth reservation option on the Bandwidth Reservation web pages in WEBconfig.

To configure bandwidth reservation, you must configure the following:

- The bandwidth management *Reservation* option on the BBSM Server Settings web page
- The external router
- The total property bandwidth
- The classes of service

The sections that follow describe how to configure these options.

Verifying the External Router

Follow this procedure to verify the external router for bandwidth reservation. Cisco recommends using a Cisco 2600 router. You must have Cisco IOS Release 12.1(2)T or later. Other routers may support this feature depending on the IOS version installed. Please consult the Cisco website for the full capabilities of your particular router and Cisco IOS software version.

- Step 1** From the Dashboard, click **WEBconfig**. The BBSM Server Settings web page appears.
- Step 2** In the Bandwidth Management area, verify that you chose *Reservation* in the Access Code Bandwidth field. This option enables bandwidth reservation for access codes.
- Step 3** In the NavBar, navigate to the External Router web page by choosing **Bandwidth Reservation > External Router**. The External Router web page appears. (See [Figure 17-1](#).)

Figure 17-1 Bandwidth Reservation External Router Web Page

The screenshot displays the 'Building Broadband Service Manager WEBconfig' interface. The top navigation bar includes 'Dashboard | Help | Logout'. The left sidebar contains a tree view with categories like 'BBSM Server Settings', 'IP Addresses', 'Routers', and 'Bandwidth Reservation'. Under 'Bandwidth Reservation', the 'External Router' option is selected. The main content area features the Cisco Systems logo and the title 'Bandwidth Reservation - External Router'. It contains three input fields: 'IP Address' (10.10.1.1), 'Telnet 'terminal' Password' (****), and 'IOS 'enable' Password' (****). Below these fields are buttons for 'Restore Router Configuration', 'Requery', and 'Save'. A yellow callout box on the right provides instructions for 'Router Interface' and 'Restore Router Configuration'.

Router Interface:
After you enter the correct passwords and click Save, the Router Interface field appears with the name of the BBSM router interface.

Restore Router Configuration:
Adds the BBSM bandwidth reservation configuration to the router. BBSM does not write to memory on the router, so if the router is restarted, the BBSM reservation settings will be lost.

Step 4 Enter the external router options based on the information shown in [Table 17-1](#) and click **Save**.

Table 17-1 External Router Options

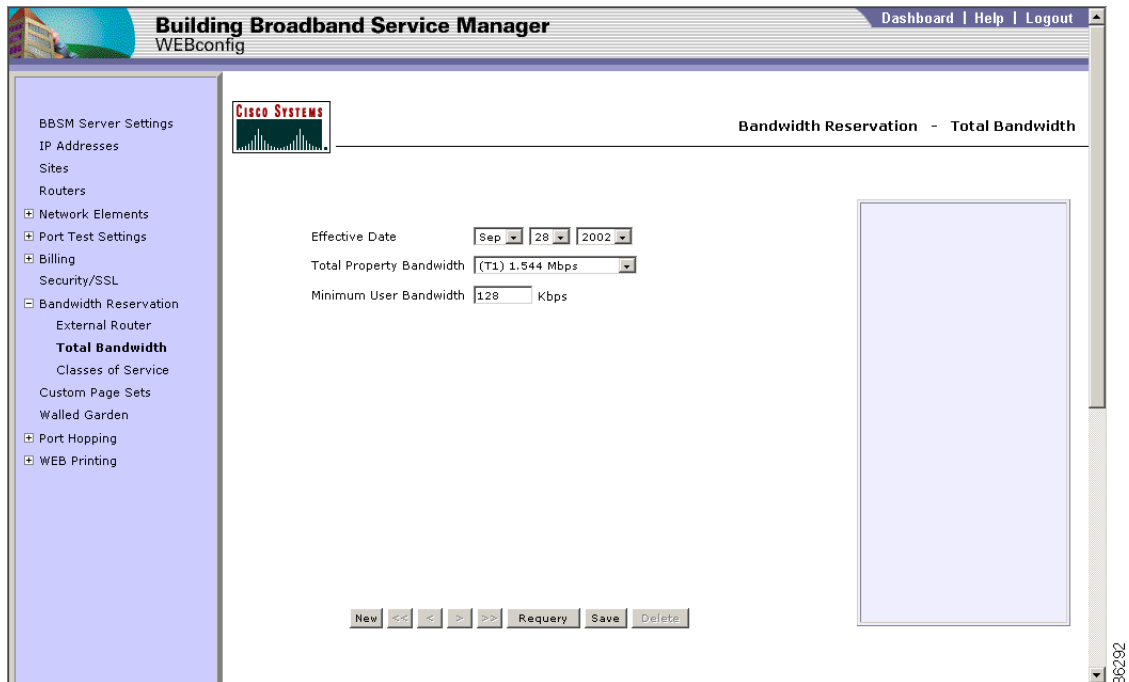
Field	Description
IP Address	Enter the IP address for the external router.
Telnet 'terminal' Password	Enter the terminal password, as configured in IOS on the router (Telnet password).
IOS 'enable' Password	Enter the enable password, as configured in Cisco IOS on the router.
BBSM Router Interface	After you enter the correct passwords and click Save, the Router Interface field appears with the name of the BBSM router interface.
Buttons	
Restore Router Configuration	Restores the BBSM bandwidth reservation policy map to the router's running configuration. Because BBSM does not write its configuration to the router's memory, if the router is reset, the BBSM reservation settings are lost. To restore these settings, click this button. The static policy map is restored. The dynamic user information is not. Users need to reauthenticate to rejoin their reservation.
Requery	Refreshes the web page (click before saving changes).
Save	Saves the changes made to the web page.

Configuring the Total Bandwidth

Follow this procedure to configure the total bandwidth.

- Step 1** From the Dashboard, click **WEBconfig**. The BBSM Server Settings web page appears.
- Step 2** In the NavBar, navigate to the Total Bandwidth web page by choosing **Bandwidth Reservation > Total Bandwidth**. The Total Bandwidth web page appears. (See [Figure 17-2](#).)

Figure 17-2 Bandwidth Reservation Total Bandwidth Web Page



Step 3 Configure the bandwidth options based on the information shown in [Table 17-2](#) and click **Save**.

Table 17-2 Total Bandwidth Options

Field	Description
Effective Date	<p>From the drop-down menus, choose the date that the total bandwidth setting takes effect at the property:</p> <ul style="list-style-type: none"> The first date that you enter is always the date when you begin using bandwidth reservation. Subsequent dates are the scheduled dates when you will begin offering bandwidth changes. <p>The bandwidth setting remains in effect until another date begins.</p> <p>Note If you choose a date to decrease bandwidth, reservations already made for dates in this time period of decrease will be deleted.</p>
Total Property Bandwidth	From the drop-down menu, choose the full bandwidth at the property, or choose Enter your bandwidth and enter a bandwidth.
Minimum Guest Bandwidth (in kbps)	Enter the minimum bandwidth for all users that are not in a reservation. This number will be subtracted from the Total Bandwidth to determine the bandwidth that is available for reservations. This must be a multiple of 8 kbps.
Buttons	
New	Creates another entry when you are installing additional bandwidth or removing bandwidth. (You can have many bandwidth entries.) A blank web page appears so the new total bandwidth entry can be configured.
Requery	Refreshes the web page (click before saving changes).
Save	Saves the changes made to the web page.
Delete	Deletes the total bandwidth entry.

Configuring Classes of Service

Classes of service are configured using the Bandwidth Reservation Classes of Service web page. This page is optional because BBSM ships with several default classes of service. Use this page to add, modify, or delete classes of service.

BBSM creates bandwidth classes of service that correspond to levels of Internet service. In a particular day, several different bandwidth reservations can exist that are composed of different classes. For example, if a hotel set aside 500 kbps for meeting room bandwidth reservations, it could define three classes of service—300 kbps, 200 kbps, and 100 kbps. Notice that the total bandwidth exceeds the maximum of 500 kbps, so BBSM does not allow all three classes of service to be reserved for 1 day to prevent the hotel from reserving unavailable bandwidth. However, the hotel could reserve five reservations at the 100 kbps class on one day and three reservations with one at the 100 kbps class and two at the 200 kbps class the next day. Although the system ensures that no more than 500 kbps can be reserved in 1 day, the classes can be combined in any way to total 500 kbps. The BBSM server uses this method of managing classes rather than QoS because it provides greater flexibility.

After a class of service has been created, you can modify the class properties until the class is used for a reservation. When a reservation has been created using the class, the class name and bandwidth cannot be modified, which ensures that the network does not become oversubscribed. A maximum of 64 classes of service can be created.

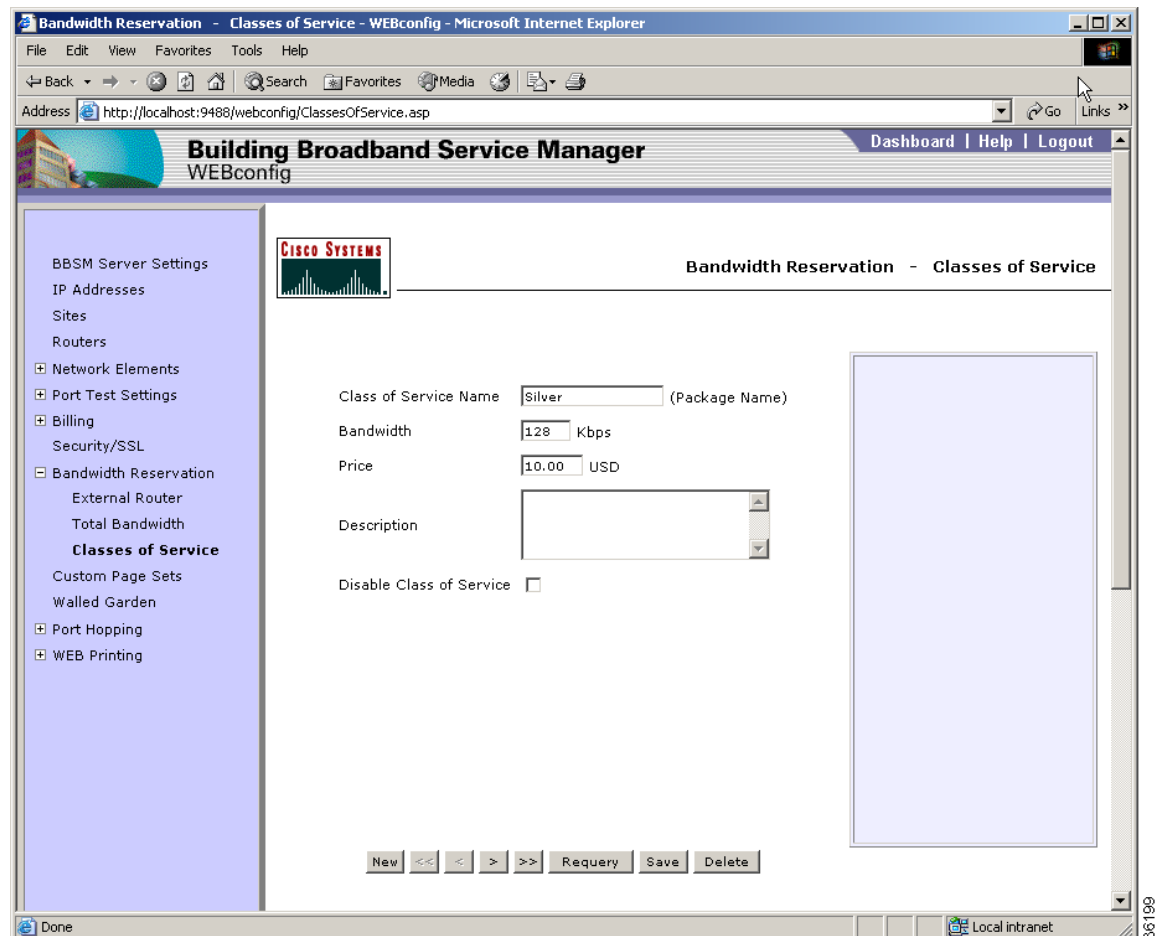
**Note**

After a class of service has been created, you can modify its properties or delete it using the Delete button until the class is used for a reservation. When past or future reservations exist at this class of service, it cannot be deleted. However, it can be disabled to prevent new reservations from being made.

Follow this procedure in this section to configure a class of service.

- Step 1** From the Dashboard, click **WEBconfig**. The BBSM Server Settings web page appears.
- Step 2** In the NavBar, navigate to the Classes of Service web page by choosing **Bandwidth Reservation > Classes of Service**. The Classes of Service web page appears. (See [Figure 17-3](#).)

Figure 17-3 Classes of Service Web Page



- Step 3** Configure the bandwidth reservation class of service options based on the information shown in [Table 17-3](#) and click **Save**.

Table 17-3 *Classes of Service Options*

Field	Description
Package name	Enter the name of the class of service. The BBSM operator will use this name when making bandwidth reservations, so descriptive names (such as Gold, Silver, and Bronze or First Class and Second Class) are recommended.
Bandwidth (in kbps)	For the specified service package (class of service), enter a bandwidth.
Price	Enter a price per access code. This is the suggested price, which can be changed at the time the reservation is made.
Description	Enter a package description. The description is displayed to the BBSM operator when making reservations, but the customer does not see the description. Use this field to write notes to the those making reservations, such as <i>Best service - for use by priority customers only</i> .
Disable class of service	Check to keep the class of service, but disable it at this time. (If a class of service is disabled, no new reservations can be made with this class.)
Buttons	
New	Enters a new class of service. A blank web page appears so the new class and options can be added.
Requery	Refreshes the web page (click before saving changes).
Save	Saves the changes made to the web page.
Delete	Deletes this class of service. Classes of service can be deleted only if they are not used for any bandwidth reservations (past or present). To phase out a class of service, disable it first. It can be deleted after 1 year, at which time the system automatically purges old reservations.

Creating and Configuring Access Codes

This section describes how to create access codes and configure them. Before creating and configuring them, you must choose a bandwidth management option on the BBSM Server Settings web page and, if you are using bandwidth reservation, configure reservation on the Bandwidth Reservation web pages. Refer to the [“Configuring Bandwidth Reservation”](#) section on page 17-3.

Internet access is purchased in these ways:

- **Specified date range (start and end date and time)**—This specified time period can be paid for when reserving the access code or at the time the access code is used. Only this option (with a specified start and end time) can be used to make reservations because the system could be oversubscribed by access codes specified by duration if too many users logged on at the same time.
- **Specified duration (in minutes, hours, days, or weeks)**—With this feature, access codes are based on duration of usage instead of a specific time period. The feature supports bandwidth throttling and not bandwidth reservation because BBSM would have no way of preventing oversubscribing. When

an end user logs onto the Internet using access codes by duration, a disconnect window displays the time remaining. The time is displayed in minutes only unless the time exceeds 1000 minutes, in which case it is displayed in hours and minutes. The end user can log out and log in as many times as he or she wishes. BBSM maintains the total internet usage time, and when the time lapses, the end user is disconnected. If end users attempt to connect with an access code that has no time left on it, they are given an error page similar to the page presented to a prepaid RADIUS user with no time remaining.

This feature applies to exclusive access codes only. If an end user attempts to connect with an access code tied to a duration and the Connect page specifies that the session should be non-exclusive (set in the post page), BBSM automatically overrides this setting and forces the session to be exclusive. If anyone else attempts to log in with that access code, he or she will receive an error page stating that the access code is already in use.

When an end user finishes using all of their allocated time, BBSM disconnects them and purges the access code from the system. This puts their access code back into the pool of available codes for future use. The benefit of this is that it increases the number of codes for use in the future. The drawback is that if the access code gets used right away, then the previous user might still remember the code and could potentially steal some internet time from the new user.

These are some other BBSM access code features:

- For auditing purposes, the access code system enables you to view past and future reservations, which includes any reserved bandwidth.
- For those access codes that have a specified date range, BBSM stores access codes for 1 year for auditing purposes. After that, they are purged from the system so you do not need to delete access codes.
- The BBSM server does not bill when users log in with access codes. In addition, access code charges cannot be sent to a PMS or local printer.

Follow this procedure to create and configure the access codes.

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- Step 1** From the Dashboard, click **WEBconfig**. The BBSM Server Settings web page appears.
- Step 2** In the Bandwidth Management area, verify that you chose *Throttling* or *Reservation* in the Access Code Bandwidth field. This option enables bandwidth throttling or reservation for access codes.
- Step 3** Click **Dashboard** in the upper right-hand corner and then click **Access Code Management**. The Codes by Date web page appears. This web page is used to create access codes based on date range. The page differs, depending on the access codes bandwidth options that you configured on BBSM Server Settings web page in WEBconfig:
- **None**—If you chose *None* from the Access Codes Bandwidth drop-down menu, the bandwidth defaults to Full Speed and that is shown in the Manage Codes web page.
 - **Throttle**—If you chose *Throttle* from the Access Codes Bandwidth drop-down menu, the Manage Codes web page appears as shown in [Figure 17-4](#) without the Bandwidth Class of Service options.
 - **Reservation**—If you chose *Reservation* from the Access Codes Bandwidth drop-down menu, the Manage Codes web page appears as shown in [Figure 17-5](#) with the Bandwidth Class of Service options.

Note the following features of bandwidth reservation:

- You can edit a bandwidth reservation at any time with the calendar user interface in WEBconfig. If you need to change the bandwidth for a reservation, you can choose a different class of service associated with the reservation before and during the event time.

- If you modify the bandwidth during a meeting and users are logged into the reservation, the new bandwidth does not apply to the existing users, but to new end users logging in. This feature enables the hotel to change the bandwidth during a meeting if the system becomes too heavily subscribed.
- To access the reserved bandwidth, end users connect to BBSM using an access code that is generated when the user reserves the bandwidth. When the end user makes the reservation, he or she specifies the number of needed access codes (the maximum number is 1000). Because all access codes for a group (reservation) share the reserved bandwidth, bandwidth is reserved per group, not per access code. Larger groups require more bandwidth.
- The bandwidth reservation does not correspond to any particular port, so users are not limited to the meeting room. If meeting attendees are also hotel guests, they can use their access codes to log in from their rooms. (This functionality depends on the page set that is available from the guest rooms because not all page sets enable users to enter an access code.) Because access codes are confined to a site (not a port), users at one hotel site cannot travel to another site and connect with the same access code.

Step 4 Create access codes by using the Codes by Date or Codes by Duration web page:

- If you want to create access codes by date, go to [Step 5](#).
- If you want to create access codes by duration, go to [Step 6](#).

Step 5 Configure the options for creating access codes by date range, based on the information shown in [Table 17-4](#) and click **Save**. You have completed the procedure to create access codes by date range.



Note If you try to modify a reservation while clients for that reservation are connected, bandwidth changes will not apply to these active clients.

Figure 17-4 Codes by Date Web Page Using the Throttle Option

The screenshot displays the 'Access Codes by Date' configuration page in the Building Broadband Service Manager. The interface includes a navigation bar with 'Codes by Date', 'Codes by Duration', 'Find Access Codes', and 'View by Year'. A Cisco Systems logo is visible in the top left. The main content area is divided into three sections:

- Calendar:** A calendar for October 2003. The 7th is highlighted in white, indicating a reservation. A legend below shows a white box for 'Reservations' and a grey box for 'No Reservations'. A 'Today' button is present.
- Customers:** A box for 'October 7, 2003' showing 'Site 1' with 'No Reservations'.
- Access Codes:** Configuration fields for a new access code:
 - Customer:** A text input field.
 - Set Start Date:** A button next to the date '10/7/2003'.
 - Time:** A time selector set to '12:00 AM'.
 - Set End Date:** A button next to the date '10/8/2003'.
 - Time:** A time selector set to '12:00 AM'.
 - Code Prefix:** A text input field.
 - Quantity:** A text input field.
 - Access Code Price:** A text input field with 'USD ea' as a unit.
 - Length of Codes:** A dropdown menu set to '5' digits.
 - Bandwidth:** A dropdown menu set to 'Full-Speed'.

At the bottom of the 'Access Codes' section are buttons for 'New', 'Requery', 'Save', and 'Delete'. A vertical ID '816224' is visible on the right edge of the screenshot.

Figure 17-5 Codes by Date Web Page Using the Reservation Option

The screenshot displays the 'Access Codes by Date' page in the Building Broadband Service Manager. It features a navigation bar with 'Codes by Date' selected. A Cisco Systems logo is present in the top left. The main content area is divided into three sections: a calendar, a list of customers, and reservation details. The calendar shows a reservation for October 22, 2003, highlighted in blue. The customer list shows 'Pacific Plaza' with a bandwidth of 1%. The reservation details form includes fields for Customer, Site, Name, Bandwidth, Start Date, End Date, Time, Code Prefix, Quantity, Access Code Price, and Length of Codes. A 'Bandwidth Options' button is also visible.

Table 17-4 Options for Creating Access Codes by Date Range

Field	Description
Calendar	
Monthly calendar	<p>The calendar section shows you the following information:</p> <ul style="list-style-type: none"> By scrolling, you can see previous and future months and make reservations by clicking the appropriate dates. From the drop-down menu on the right, you can see reservations for all customers, which is the default, or choose a specific customer's reservations. As shown in the lower left-hand corner, the calendar is color coded to highlight dates for which reservations have been made. Click Today to highlight the current day and see its reservations.
Customer	
Date	Displays the chosen calendar and reservation date.
Site	Displays the site number for the applicable reservation.
Name	Shows the site name and the percentage of bandwidth used by that reservation. Click the name to recall the reservation details. (The fields at right are populated with the details.)

Table 17-4 Options for Creating Access Codes by Date Range (continued)

Field	Description
Access Codes	
Customer	Enter a customer name.
Set Start Date Time	On the calendar at the left, click a starting date. Click Set Start Date and choose a starting time. The default is <i>12:00am</i> (midnight).
Set End Date Time	On the calendar at the left, click an ending date. Click Set End Date and choose an ending time. The default is <i>12:00am</i> (midnight).
Code Prefix	Enter an optional one- to three-letter customer code. After you save the changes, BBSM adds this prefix to the numeric portion of the access code when the access code is generated. The combination is the access code. For example, if you entered CIS and entered 5 for the length, the access codes would be in the form of CISxxxx, where <i>x</i> is the numeric portion of the code. If no prefix is entered, the access code appears as xxxxx.
Quantity	Enter the number of access codes that you need. The maximum number of access codes that can be saved is 1000. Because customer names do not have to be unique for access codes, the same customer name can be used to create 1000 codes. Nevertheless, the maximum number allowed in the Quantity field is 1000.
Access Code Price	Enter the price that you want to charge for each access code. Although the price is recorded for auditing purposes, BBSM does not perform any billing when users log in with access codes. (The currency type was chosen from the Currency Type drop-down menu on the BBSM Server Settings web page. The currency specified on that web page applies to all options.)
Length of Codes	Enter the length of the numeric portion of the access code. The minimum length of the numeric portion of the access code is 4 numbers and the maximum length is 15 numbers. The default is 5 numbers.
Bandwidth Class of Service (These fields apply only for bandwidth reservation.)	
Package	From the drop-down menu, choose a service package.
Bandwidth	Displays the bandwidth in kbps for the entire group
Description	Displays a description of the chosen bandwidth package.
Bandwidth Throttle	
Bandwidth kbps	Note This field only appears when bandwidth throttling is being used. From the drop-down menu, choose a maximum bandwidth that is applied to each user that logs in with one of the access codes.
Buttons	
View Access Codes	Shows the access codes that you configured.
New	Adds a new reservation. A web page with blank fields appears so the access codes can be configured.
Requery	Refreshes the web page (click before saving changes).
Save	Saves the changes made to the web page.
Delete	When you choose a reservation, deletes the reservation.

- Step 6** Verify that you checked *Enable Bandwidth Throttle* or chose *Throttling* in the Access Code Bandwidth field on the BBSM Server Settings web page. Choosing one of these options allows the bandwidth to be specified on the Codes by Duration web page.
- Step 7** Configure the options for creating access codes by duration and click **Save**. The View Access Codes button appears on the web page so you can view the access codes for this group. See [Figure 17-6](#) and [Table 17-5](#).

If you do not check this box, you can modify any other settings without altering the time remaining on the access codes (the Duration field is ignored).



Note The Reset Time Remaining check box appears on this page when you are editing access codes. This check box can be used to reset the time remaining on all access codes in the group. If this box is checked and you click Save, a confirmation dialog box appears, asking you to verify that you want to reset the time remaining. When you click OK, all codes in the group are updated so the time remaining is equal to the chosen duration.

- Step 8** Click the **View Access Codes** button to verify your configuration. The values that you configured appear on the page.

Figure 17-6 Codes by Duration Web Page

Building Broadband Service Manager
Access Code Management

Dashboard | Help | Logout

Codes by Date | **Codes by Duration** | Find Access Codes | View by Year

CISCO SYSTEMS

Access Codes by Duration

Creation Date: August 14, 2003

Customer:

Duration of Each Code: minutes

Quantity:

Code Prefix:

Length of Each Code: digits

Sample:

Customer:
This field can be up to 40 characters.

Code Prefix:
This field is optional and can be up to 3 letters. When editing existing codes, the prefix cannot be changed.

Length of Each Code:
The length does not include the prefix. When editing existing codes, the code length cannot be changed.

New Requery Save Delete Advanced

11:05:00

Table 17-5 Options for Creating Access Codes by Duration

Field	Description
Customer	Enter a customer name.
Duration of Each Code	Enter the numeric value for the duration that the access code can be used. From the drop-down menu on the right, choose <i>minutes</i> , <i>hours</i> , <i>days</i> , or <i>weeks</i> .
Price per Code	Enter the price that you want to charge for each access code. Although the price is recorded for auditing purposes, BBSM does not perform any billing when users log in with access codes. (The currency type was chosen from the Currency Type drop-down menu on the BBSM Server Settings web page. The currency specified on that web page applies to all options.)
Bandwidth (kbps per user)	<p>Note This option is only available when you check <i>Enable Bandwidth Throttle</i> or choose <i>Throttling</i> in the Access Code Bandwidth field on the BBSM Server Settings web page. Choosing one of these options allows the bandwidth to be specified on the Codes by Duration web page.</p> <p>From the drop-down menu, choose a maximum bandwidth that is applied to each user that logs in with one of the access codes.</p>
Quantity	Enter the number of access codes that you need. The maximum number of access codes that can be saved is 1000. Because customer names do not have to be unique for access codes, the same customer name can be used to create 1000 codes. Nevertheless, the maximum number allowed in the Quantity field is 1000.
Code Prefix	<p>Enter an optional one- to three-letter customer code. After you save the changes, BBSM adds this prefix to the numeric portion of the access code when the access code is generated. The combination is the access code. For example, if you entered CIS and entered 5 for the length, the access codes would be in the form of CISxxxxx, where <i>x</i> is the numeric portion of the code. If no prefix is entered, the access code appears as xxxxx.</p> <p>(The Code Prefix and Length of Each Code fields are disabled after the access code is created because they cannot be changed after the codes have been saved.)</p>
Length of Each Code	<p>From the drop-down menu, choose the number of digits for the numeric portion of the access code. The minimum length of the numeric portion of the access code is 4 numbers and the maximum length is 15 numbers. The default is 5 numbers.</p> <p>(This field is disabled after the access code is created because the prefix can no longer be changed.)</p>

Finding Access Codes

Follow this procedure to find reservations and access codes by the customer name or code.

- Step 1** From the Dashboard, click **Access Code Management**. The Codes by Date web page appears.
- Step 2** From the menu bar, click **Find Access Codes**. The Find Access Codes web page appears. (See [Figure 17-7](#).)

Figure 17-7 Find Access Codes Web Page

- Step 3** Find access codes in one of the following ways:
- In the Find by Customer area, choose a customer from the Customer drop-down menu.
 - In the Find by Access Code area, enter the access code in the Access Code field. (The access code entered does not have to be a complete access code. You can enter partial codes. The access code is not case sensitive—typing **s123** in the Access Code field finds any codes that contain S123 or s123.)



Note If a customer is chosen and an access code is entered, BBSM will search only for the customer name and ignore the access code field.

- Step 4** Click **Find Codes**. The View Access Codes web page appears. The access codes are displayed either by customer or access code order. The search string that was used is displayed at the top of the page. Also, the access codes that contained the search string are displayed in bold so they are easier to find on the page. (See [Figure 17-8](#).)

Figure 17-8 View Access Codes Web Page

Building Broadband Service Manager
Access Code Management

Dashboard | Help | Logout

Codes by Date | Codes by Duration | **Find Access Codes** | View by Year

CISCO SYSTEMS View Access Codes - Find Access Codes

Access Codes for customer **Cisco**. Click Edit to modify the values displayed in the table.

Customer	Price	Bandwidth	Duration	Time Remaining	Access Codes	Edit	Printable
Cisco	10.00 USD	Full-Speed	8 hours	480 minutes	23676		
				480 minutes	93661		
				480 minutes	39343		
				480 minutes	31384		
				480 minutes	69425		
				480 minutes	78484		
				480 minutes	41749		
				480 minutes	24828		
				480 minutes	45379		
480 minutes	34156						

Customer	Price	Bandwidth	Start Date	End Date	Class of Service	Access Codes	Edit	Printable
Cisco	20.00 USD	512	Nov 4 2003 12:00AM	Nov 7 2003 12:00AM	Platinum	CIS27161		
						CIS22888		
						CIS82502		
						CIS84904		
						CIS42106		
						CIS10221		
						CIS47374		
						CIS29807		
						CIS84781		
						CIS26944		
						CIS40785		
						CIS53367		
						CIS54394		
						CIS28738		
						CIS58157		

- Step 5** To edit an existing group of access codes, click one of the **Edit** buttons on the page. When you click the Edit button for a group, you are taken to the View Access Codes web page that shows the access codes for one group. Access codes can only be edited on a group basis, rather than by individual access code. Editing by group means that more time cannot be added for only one access code. It can only be added to the entire group.
- Step 6** On the View Access Codes web page, click **Printable** to print the access codes in a larger format that can be given to guests. The Printer Format Access Codes web page appears.

Finding Reservations by Date

Follow this procedure to find reservations by the date of the reservation.

- Step 1** From the Dashboard, click **Access Code Management**. The Codes by Date web page appears.
- Step 2** From the menu bar, click **View by Year**. The Find Codes by Date web page appears, showing highlighted dates for the existing reservations. (See [Figure 17-9](#).)

Figure 17-9 Find Codes by Date Web Page

The screenshot shows the 'Building Broadband Service Manager' interface. At the top, there is a navigation bar with 'Dashboard | Help | Logout' and a menu bar with 'Manage Codes | Find by Customer | Find by Date'. Below the menu bar, there is a 'Cisco Systems' logo and the text 'Site 1, Pacific Plaza Find Codes by Date'. A dropdown menu is set to 'Pacific Center'. Below the dropdown, there are two instructions: '1. Choose a customer to view only their access codes: Pacific Center' and '2. Click a highlighted date to view or edit the access codes.' A navigation bar shows '< 2002 >'. The main content area displays 12 monthly calendars from January to December. The date 3rd of October is highlighted in blue. The interface also includes a vertical scrollbar on the right side.

- Step 3** Click the date to view the details about the reservation. The Codes by Date web page appears, showing the existing reservations for the date.

Access Codes for Meeting Rooms

The administrator or operator can configure access so that either multiple users or only one person at a time can use a particular access code. This is determined by the page set that you chose in the Network Element Port Settings pop-up window for the meeting room site or ports:

- For access by only one person at a time per code, choose the MeetingRoom page set.
- For access by more than one person at a time per code, choose the AccessCode page set.

(For additional information, refer to the [“Page Set Overview”](#) section on page 18-2 and [Chapter 13, “Configuring PMS or Print Billing.”](#))

You can configure the site so it consists only of meeting rooms. In addition, you can manage your server to mix meeting rooms and guest rooms at the site. This configuration does not depend on the property’s physical layout.



Note

When using access codes, all of the BBSM sites are assumed to be located in the same time zone.

When you mapped your rooms, if you checked the “Check here if this is a meeting room” check box, the MeetingRoom page set was applied by default to these rooms. If you want to change the page set to the AccessCode page set, refer to the chapter on using the port control option in the *Cisco BBSM 5.3 Operations Guide*.

