



Customizing Your BBSM System

Once your BBSM server has been set up and configured, you may want to configure additional parameters or customize your system. This chapter guides you to this information.

Customizing Page Sets

For complete information and instructions on customizing or creating page sets, refer to the *Cisco BBSM SDK Developer Guide*. In the Preface to this document, see the [Obtaining Documentation](#) section.

Using Walled Gardens

BBSM allows service operators to define various free access links to specific web sites. This functionality is known as Walled Gardens.

A Walled Garden offers the end-user valuable services and also generates incremental revenue or reduces costs for the operator. As an added dimension, the Walled Garden can be targeted using BBSM's location-based policies to present different links to users in different physical locations, such as the club floor of a hotel. The following are typical Walled Garden links:

- Local weather and attractions
- Online concierge services
- Online room service
- Hotel chain corporate or loyalty program portal

To add walled garden links to your start page, contact your web developer.

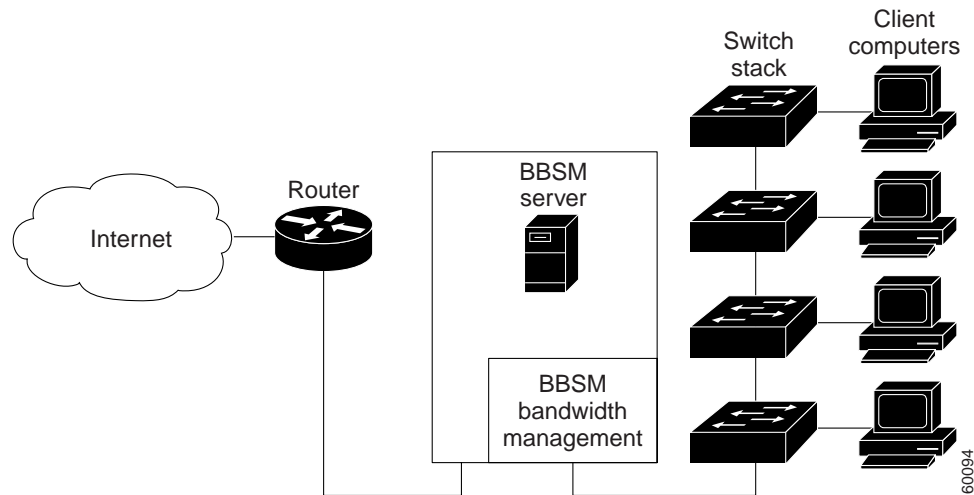
Managing Bandwidth

BBSM Bandwidth Management allows the administrator of the BBSM server to control the bandwidth allocated to end users.

Configuring the BBSM Server

This section explains how to configure and use the BBSM Bandwidth Management feature. [Figure 8-1](#) shows BBSM Bandwidth Management on the BBSM server.

Figure 8-1 BBSM Bandwidth Management Installed on the BBSM Server



BBSM bandwidth management is located on the internal interface of the BBSM server. Because all packets pass through the internal interface, the BBSM Bandwidth Management feature can be used with any network topology.

Follow these steps to activate the Bandwidth Manager feature.

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- Step 1 From the BBSM Dashboard, select **WEBconfig**. The Port IP Addresses web page appears.
 - Step 2 Click the **Server** button.
 - Step 3 Check **Bandwidth Manager**.
 - Step 4 Click **Update**.
 - Step 5 Closes WEBconfig.
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Tuning Bandwidth Manager through Optional Advanced Settings

If you are accepting the default settings for the parameters listed in the following table, you do not need to do anything more. However, if necessary, you can fine-tune BBSM Bandwidth Manager by changing parameter settings in the Windows 2000 registry on BBSM.

The parameters listed below can be adjusted. These parameters should be sized based on the peak number of users expected on the BBSM server. If this maximum is occasionally exceeded, performance is impacted but BBSM continues to operate correctly.

Table 8-1 BBSM Bandwidth Management Configurable Parameters

Parameter	Description
BWTQueueSize	<p>Amount of data per link to queue before discarding.</p> <p>The default should be adequate for TCP clients. For UDP clients (streaming audio or video), the client must select a transmission rate below the bandwidth limit to avoid losing packets due to queue overflow.</p> <p>Default: 151,400 bytes</p>
PacketPoolSize	<p>Number of packet descriptors. See LookaheadPoolSize.</p> <p>Default: 50 descriptors</p>
LookaheadPoolSize	<p>Number of look-ahead buffer descriptors (indicated by the packet descriptor). Set PacketPoolSize and LookaheadPoolSize greater than the anticipated maximum number of packets queued for bandwidth management.</p> <ul style="list-style-type: none"> For TCP clients, this number is the TCP window divided by the packet size. For UDP clients, this number is the BWTQueueSize divided by the packet size. <p>Calculate both and select the larger of the two values.</p> <p>TCP Example:</p> <p>An Ethernet interface has a maximum packet size of 1514 bytes and a typical Windows TCP client uses a window of 8192 bytes. Divide the window size (8192 bytes) by the packet size (1514 bytes) to allocate 6 packets per TCP client.</p> <p>UDP Example:</p> <p>Assume BWTQueueSize is 15140kb. Since the Ethernet packet size is 1514 bytes, divide the BWTQueueSize (15140) by 1514 bytes to establish 10 packets per client.</p> <p>Since 10 is greater than 6, 10 packets per client would be used.</p> <p>Default: 50 descriptors</p>

Editing Parameters in the Windows 2000 Registry

To change a parameter value, you must edit the AtNat parameters in the Windows 2000 registry. If you are accepting the default values, you do not need to edit the registry. Note that you can only make these changes locally, not from a remote server.



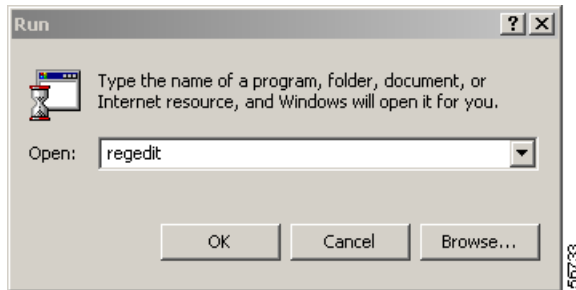
Caution

Incorrect registry settings can render your BBSM server unusable. Alter only the parameters listed in [Table 8-1 on page 8-3](#). Always backup the registry before making any changes.

The following procedure gives an example of how to change the registry to optimize Bandwidth Manager.

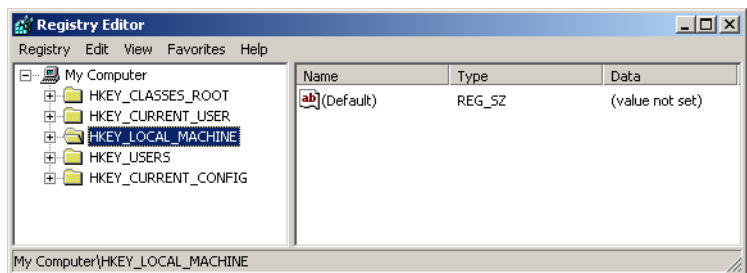
- Step 1** Choose **Start > Run**. The Run window appears. (See [Figure 8-2](#).)

Figure 8-2 Run Window



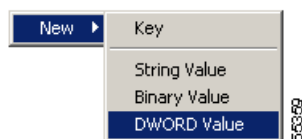
- Step 2** Enter **regedit**.
- Step 3** Click **OK**. The Registry Editor window appears. (See [Figure 8-3](#).)

Figure 8-3 Registry Editor Window



- Step 4** To back up the file before making any changes, choose **Registry > Export Registry File**.
- Step 5** Double-click **HKEY_LOCAL_MACHINE**.
- Step 6** Navigate to **System > CurrentControlSet > Services > ATNAT > Parameters**.
- Step 7** Right-click anywhere in the right pane of the Registry Editor window.
- Step 8** From the **New >** drop-down menu, select **DWORD Value**. (See [Figure 8-4](#).)

Figure 8-4 Registry Editor New Drop-Down Menu



- Step 9** Rename the entry to the parameter name you want to change. For applicable parameter names, see [Table 8-1 on page 8-3](#).
- Step 10** Double-click the new parameter name. (See [Figure 8-5](#). Note that BTWQueueSize is shown here only as an example.)

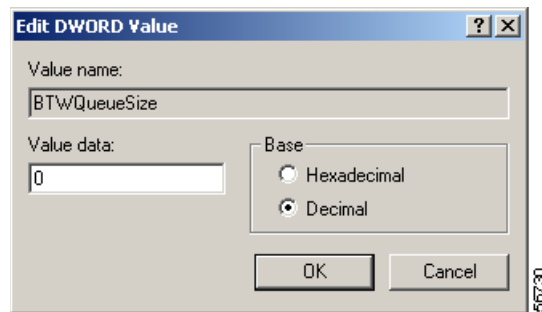
Figure 8-5 New Parameter Name

Name	Type	Data
(Default)	REG_SZ	(value not set)
ClientPage	REG_SZ	/ekgnkm/
ComputerName	REG_SZ	10.10.2.1
ConnectPage	REG_SZ	/ekgnkm/preconnect.asp
DebugLevel	REG_DWORD	0x00000000 (0)
DebugMask	REG_DWORD	0x00000000 (0)
DNSProxy	REG_DWORD	0x0a0a0201 (168428033)
EnableTransparentProxy	REG_DWORD	0x00000000 (0)
LocalMappedAddressEnd	REG_DWORD	0x0a0a02fe (168428286)
LocalMappedAddressStart	REG_DWORD	0x0a0a02ab (168428203)
PipServer	REG_DWORD	0x0a0a0102 (168427778)
SMTPServer	REG_DWORD	0x00000000 (0)
WebServer	REG_DWORD	0x0a0a0201 (168428033)
WebServerPort	REG_DWORD	0x00000050 (80)
BTWQueueSize	REG_DWORD	0x00000000 (0)

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The **Edit DWORD Value** dialog box appears. (See [Figure 8-6](#).)

Figure 8-6 Edit DWORD Value Dialog Box



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- Step 11** Click **Decimal**.
- Step 12** In the Value data field, enter the new value in the appropriate units for that parameter name. See [Table 8-1 on page 8-3](#) for a list of parameters.
- Step 13** Click **OK**.
- Step 14** To make other changes or additions, do one of the following.
- If you want to add another parameter, repeat Steps 7 through 13 for each new parameter.
 - If you want to change other parameters, repeat Steps 10 through 13 for each parameter.
- Step 15** When done, close the Registry Editor window.
- Step 16** Select **Start > Shut Down > Restart**.

