

**SonicWALL Global Management System  
Reporting Guide**

**Standard Edition**

Version 2.9.4

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Part Number: 232-000674-01 Rev A

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## Introducing GMS Reporting

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Monitoring critical network events and activity, such as security threats, inappropriate Web use, and bandwidth levels, is an essential component of network security. GMS Reporting complements SonicWALL's Internet security offerings by providing detailed and comprehensive reports of network activity.

The GMS Reporting Module is a software application that creates dynamic, Web-based network reports. The GMS Reporting Module generates both real-time and historical reports to offer a complete view of all activity through SonicWALL Internet security appliances. With GMS Reporting, you can monitor network access, enhance security, and anticipate future bandwidth needs.

The GMS Reporting Module:

- Displays bandwidth use by IP address and service
- Identifies inappropriate Web use
- Provides detailed reports of attacks
- Collects and aggregates system and network errors
- Shows VPN events and problems
- Presents visitor traffic to your Web site
- Provides detailed daily firewall logs to analyze specific events.

*Note: The GMS Reporting Module receives its information from the stream of syslog data sent by each SonicWALL appliance and stores it in the SonicWALL GMS database or as files on the hard-disk.*

*GMS Reporting can be enabled or disabled. Once disabled, the Reports tab disappears from the SonicWALL GMS User Interface (UI) and the syslog data is no longer stored.*

# Navigating GMS Reporting

GMS Reporting is a robust and powerful tool you can use view detailed reports for individual SonicWALL appliances or groups of appliances.

This section describes each view and what to consider when making changes. Select from the following:

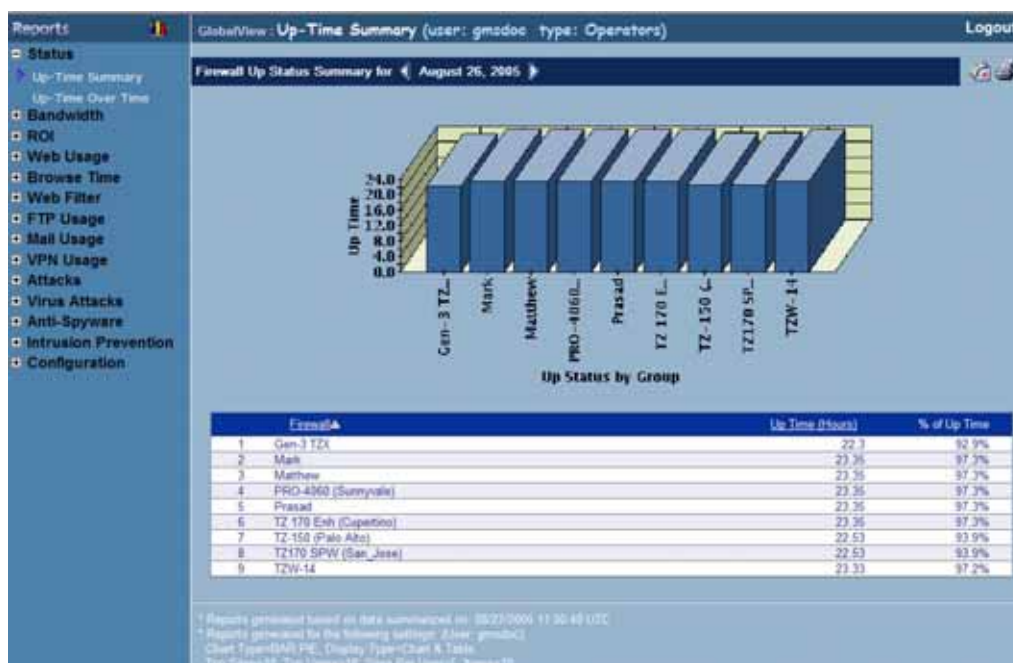
- Global and Group Views—see “Global and Group Views,” below.
- Unit View—see “Unit View” on page 4.

## Global and Group Views

From the Global and Group views of the Reports Panel, Summary and Over Time reports are available for all SonicWALL appliances within a group or all SonicWALL appliances being managed by SonicWALL GMS.

To open the Global or Group view, click the Global View icon in the upper-left hand corner of the left pane or select a Group Icon. The Global Status page appears (Figure 1).

Figure 1: Global Status Page



As you navigate the SonicWALL GMS Reports Panel screens with the Global or Group view selected and view different reports, the settings that you specify are maintained in effect throughout the session.



## Global and Group View Reports

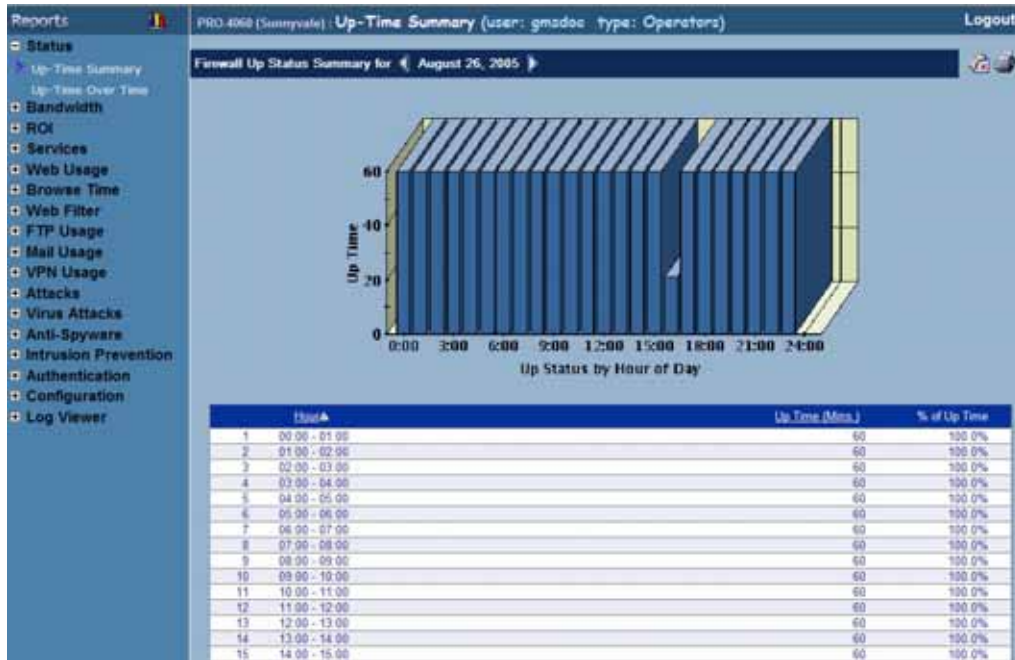
The following lists all Global and Group View Reports:

- Status
  - Up-Time Summary
  - Up-Time Over Time Summary
- Bandwidth
  - Summary
  - Over Time
- ROI
  - Summary
  - Over Time
- Web Usage
  - Summary
  - Over Time
- Browse Time
  - Summary
  - Over Time
- Web Filter
  - Summary
  - Over Time
- FTP Usage
  - Summary
  - Over Time
- Mail Usage
  - Summary
  - Over Time
- VPN Usage
  - Summary
  - Over Time
- Attacks
  - Summary
  - Errors
  - Attacks Over Time
  - Errors Over Time
- Virus Attacks
  - Summary
  - Over Time
- Anti-Spyware
  - Summary
  - Over Time
- Intrusion Prevention
  - Summary
  - Over Time
- Configuration
  - Scheduled Reports
  - Summarized Settings

## Unit View

From the Unit view of the Reports panel, reports contain detailed data for the selected SonicWALL appliance. To open the Unit view, click the **Reports** tab. Then, click a SonicWALL appliance in the left pane of the SonicWALL GMS UI. The Reports page for the SonicWALL appliance appears (Figure 2).

Figure 2: Unit Status Page



As you navigate the Reports panel with a single SonicWALL appliance selected and change settings, those settings will remain in effect throughout the session.

## Unit View Reports

The following lists all Global and Group View Reports:

- Status
  - Up-Time Summary
  - Up-Time Over Time
- Bandwidth
  - Summary
  - Monitor
  - Top Users
  - Over Time
  - Top Users Over Time
- ROI
  - Summary
  - Top Users
  - Over Time
  - Top Users Over Time
- Services
  - Summary
  - Monitor
- Web Usage
  - Summary
  - Top Sites
  - Top Users
  - By User
  - By Site
  - By Category
  - Over Time
  - Top Sites Over Time
  - Top Users Over Time
  - By Users Over Time
  - By Category Over Time
- Browse Time
  - Summary
  - Top Users
  - By User
  - Over Time
  - Top Users Over Time
  - By User Over Time
- Web Filter
  - Summary
  - Top Sites
  - Top Users
  - By User
  - By Site
  - By Category
  - Over Time
  - Top Sites Over Time
  - Top Users Over Time
  - By Users Over Time
  - By Category Over Time

- FTP Usage
  - Summary
  - Top Users
  - Over Time
  - Top Users Over Time
- Mail Usage
  - Summary
  - Top Users
  - Over Time
  - Top Users Over Time
- VPN Usage
  - Summary
  - Top Users
  - Over Time
  - Top Users Over Time
  - By Policy
  - By Policy Over Time
  - By Policy Hourly
  - By Service
- Attacks
  - Summary
  - By Category
  - Errors
  - Attacks Over Time
  - Categories Over Time
  - Errors Over Time
- Virus Attacks
  - Summary
  - Top Viruses
  - Over Time
  - Top Viruses Over Time
- Anti-Spyware
  - Summary
  - By Category
  - Over Time
  - By Category Over Time
- Intrusion Prevention
  - Summary
  - By Category
  - Over Time
  - By Category Over Time
- Authentication
  - User Login
  - Admin Login
  - Failed Login
- Configuration
  - Scheduled Reports
  - Summarized Settings
- Log/Viewer
  - Search

## Configuring GMS Reporting Settings

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This chapter describes how to enable or disable the GMS Reporting Module, configure the syslog event rate, and configure GMS Reporting settings. Select from the following:

- To enable or disable the GMS Reporting Module, see “Enabling GMS Reporting” on page 8.
- To configure the syslog event rate to accurately report all firewall information, see “Configuring the Syslog Event Rate” on page 9.
- To configure GMS Reporting settings, see “Configuring GMS Reporting Module Settings” on page 10.
- To configure which data is summarized, see “Configuring Summarized Data” on page 13.
- To configure how data is displayed, see “Configuring Presentation Options” on page 14.

## Enabling GMS Reporting

By default, GMS Reporting is enabled. To enable or disable GMS Reporting, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Console Panel** tab at the bottom of the SonicWALL GMS UI.
3. Expand the Management tree and click **GMS Settings**. The GMS Settings page appears (Figure 3).

**Figure 3: GMS Settings Page**

Console Panel | GMS Settings (user: gmsadmin type: Operator) | Logout

You do not have Update Privileges on this Screen

SMTP Server: 10.50.128.230

GMS Sender's e-Mail Address: linc@sonicwall.com  
[\[Info\]](#) To change the recipient email address, please use the Console->Management->Alert Settings Screen

Automatically save prefs file & addUnit.xml:  
(To auto save prefs files, the "Enable Prefs File Backup" must be selected on Policies/General/Settings screen. This is not required for AddUnit.xml.)

Daily every Sunday at 5:00 hours

Automatically save VPN Gateway Prefs file

Append all settings inherited from group

Append Services and Rules inherited from group (only for non-SonicOS Enhanced firmware)

Enable Reporting

Enable Auto Synchronization

Firewalls managed by this GMS do not have Internet Access

Automatically upload latest Signatures onto Firewall

4. To enable GMS Reporting, select the **Enable Reporting** check box. To disable it, deselect the **Enable Reporting** check box (default: Enabled).
5. When you are finished, click **Update**.

## Configuring the Syslog Event Rate

To configure the syslog event rate, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Policies** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Log tree and click **Log Settings**. The Log Settings page appears (Figure 4).

**Figure 4: Log Settings Page**

The screenshot shows the 'Log Settings' page for a SonicWALL appliance. The page is divided into several sections: General, Syslog Servers, Automation, and Categories. The 'General' section contains fields for Mail Server IP Address, EMail Log to, EMail Alerts to, Firewall Name (0006B1047938), Syslog Format (Default), Syslog Event Rate (60 seconds/event), and Heartbeat Rate (60 seconds/event). The 'Syslog Servers' section has a table for adding servers with columns for IP Address and Port, and an 'Add' button. The 'Automation' section includes 'Send Log' settings (When Full, every Sunday at 0 hours) and 'When Log Overflows' options (Overwrite Log selected, Shutdown SonicWALL). The 'Categories' section has two tables for selecting log types and alert/traps types, with 'Select All' buttons and checkboxes for various categories like System Maintenance, Attacks, System Errors, Dropped TCP, Dropped UDP, Dropped ICMP, Blocked Web Sites, and VPN Tunnel Status.

5. To reduce the amount of syslog data stream to your GMS network, enter **60** (default value) in the **Syslog Event Rate** field.  
For GMS network deployments using Gen-2/Distributed Summarizer Mode, enter **0** in the **Syslog Event Rate** field. The Syslog Event Rate field reduces the number of repetitive events that are logged by SonicWALL GMS. Although this prevents a log file from being full of repetitive events, setting the Syslog Event Rate field to anything other than **0** will result in inaccurate reporting.
6. To make sure that the GMS Reporting Module can display all reports, make sure that every event category in the Categories area is selected except for Network Debug.
7. When you are finished, click **Update**. The Syslog Event Rate is changed and every event category is enabled for each selected SonicWALL appliance.

## Configuring GMS Reporting Module Settings

This section describes how to configure reporting settings. These include how often the summary information is updated, the number of days that summary information is stored, and the number of days that raw data is stored.

These reports are constructed from the most current available summary data. In order to create summary data, the GMS Reporting Module must parse the raw data files.

*Note: Because reports are based on the most current summary data, the report may be old. For example, if the data was summarized four hours ago, all activity that occurred since the last summary will be missing from the report.*

When configuring GMS Reporting, you can select the amount of summary information to store. Make sure the database is large enough to accommodate the number of days that you choose.

Additionally, you can select the amount of raw data to store. The raw data is made up of information for every connection. Depending on the amount of traffic, this can quickly consume an enormous amount of space in the database. Be very careful when selecting how much raw information to store.

## Distributed Summarizer

The Distributed Summarizer provides improved performance over the old Scheduler. The following describes the processing and summarization process of the Distributed Summarizer:

- As incoming events are sent to the Agent, they are written to a file in the `<gms_directory>/logs` directory. The format of the file is:

`agentid_start-date_start-time_to_end-date_end-time.unp`

where *agentid* is the ID of the agent, *start-date* is the starting date (YYYYDD), *start-time* is the starting time (HHMMSS), *end-date* is the ending date, and *end-time* is the ending time.

- When the file contains 10,000 lines, the Distributed Summarizer closes the file and begins creating a new one.
- At the interval you specify, the Distributed Summarizer changes the extension of the file to `.prg` and begins processing the file and storing its information as summarized data. It repeats this process for every file ending with the extension `.unp`.
- After it processes a file, it changes its extension to `.PRD`.

If you choose to use the Distributed Summarizer, you will need to periodically delete files with the `.PRD` extension to prevent your disk from filling. Additionally, the Distributed Summarizer does not store raw data, so no information will appear in the log viewer.

## Configuring Data Storage Configuration Settings

To configure syslog data storage settings, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Console** tab.
3. Expand the Reports tree and click **Settings**, as illustrated in Figure 5.

**Figure 5: Reports > Settings > Data Storage Configuration Page**



4. Specify the amount of days that you would like to store your syslog data in the **Days To Store Raw Data** list box and click **Update**.



## Summarizer Settings

SonicWALL appliances send their syslog packets to SonicWALL GMS via UDP packets. At the interval you specify, the Summarizer will process those files and store the data in the summary databases.

To configure Summarizer settings, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Console** tab.
3. Expand the Reports tree and click **Summarizer**. The Summarizer page appears (Figure 6).

**Figure 6: Summarizer Page**

4. The first generation of the Summarizer writes data directly to the database and periodically parses it and stores it as summarized data. This is very resource-intensive. The Distributed Summarizer writes events directly to log files which it parses periodically and stores as summarized data. To improve performance, select the **Enable Distributed Summarizer** check box and click **Update**.
5. Specify how often the GMS Reporting Module processes and updates summary information from the **Summarize Every** list box and click **Update**.
6. To specify the next summary time, enter a date and time in the **Next Scheduled Summary Time** field and click **Update**.
7. To update the summary information now, click the **Summarize Now** button. SonicWALL GMS will automatically process the latest information and make it available for immediate viewing.  
*Note: This will not affect the normally scheduled summarization updates.*
8. Configure the following report preferences (Generation 1 Summarizer only):
  - **Number of Top Sites** - specifies the number of top sites reported in each Top Sites report.
  - **Number of Top Users** - specifies the number of top users reported in each Top Users report.
  - **Number of Top Sites Per User** - specifies the number of top sites displayed per user in each Top Sites Per User report.
  - **Enable HomePort Syslog Reporting** - Select this checkbox to enable syslog data to be sent from the SonicWALL appliance homeport.
  - **Enable Full URL Reporting** - Select this checkbox to enable report summarization to include the full URL of Website traffic.  
*Note: Enabling Full URL Reporting requires extensive resources on your SonicWALL GMS Agent CPU.*
9. In the **Reports Summarization Data for ROI Reports** section, select the currency type in the **Type of Currency** field, and specify an amount in the **Cost Per Mega Byte Bandwidth Use** field.

10. Specify how many days of summarized data the GMS Reporting Module will store in the database from the **Days To Store Summarized Data** list box (default: 15) and click **Update**. To save all information, enter **All**.  
Make sure the database is large enough to accommodate the number of days that you choose.
11. To reduce the amount of syslog data stored periodically, enter a date in the **Delete Syslog Data Daily at** field.
12. To delete summarized data, specify a date in the **Delete Summarized Data for** field and click **Update**.

## Configuring Email/Archive Settings

To configure Email/Archive and web server settings, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Console** tab.
3. Expand the Reports tree and click **Email/Archive**. The Email/Archive page appears (Figure 7).

**Figure 7: Email/Archive Page**

Console Panel | Email/Archive (user: gmsdoc type: Operators) | Logout

You do not have permissions to update this screen.

### Email/Archive Time Settings

Next Scheduled Email/Archive Time (mm/dd/yyyy hh:mm)   :

Send Weekly Reports Every

Send Monthly Reports Every  of the Month

(Note: Weekly reports are generated for Monday-Sunday of the week, and Monthly Reports are generated for the 1-30/31 of the month.)

### Email/Archive Configuration - Web Server Details

Following is the web server configuration information used by the Email/Archive component. These settings should be modified ONLY if the web server configuration has been changed.

(Note: Updates made here will NOT change the web server configuration, this information is for the Email/Archive component only).

Web Server Address:

Web Server Protocol:

Web Server Port:

4. This page shows when the next scheduled archive time will occur and when the last weekly and monthly reports were sent.
5. To set the next archive time, enter the date and time in the **Next Scheduled Email/Archive Time** fields and click **Update**.
6. To specify the day to send weekly reports, select the day from the **Send Weekly Reports Every** list box and click **Update**.
7. To specify the date to send monthly reports, select the date from the **Send Monthly Reports Every** list box and click **Update**.
8. If the web server address, port, or protocol has changed since SonicWALL GMS was installed, this will affect reporting and you should enter the new address, port, and protocol in the **Email/Archive Configuration** section.
9. When you are finished, click **Update**. The changes are saved.

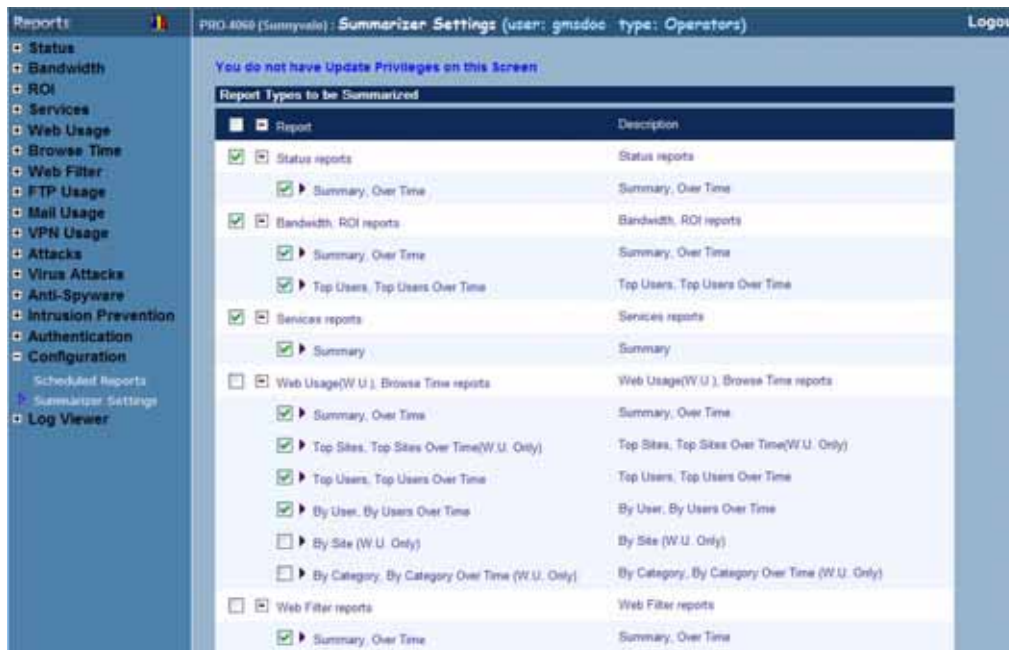
## Configuring Summarizer Settings

Periodically, the SonicWALL appliances send their syslog packets to the SonicWALL GMS Agent. At the interval you specify, the SonicWALL GMS Agent processes the syslog packets and stores the data in the file system or summary database.

This section describes how to tune the performance of the Summarizer by configuring which data will be created. To configure the Summarizer settings, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Expand the Configuration tree and click **Summarizer Settings** page, illustrated in Figure 8.  
The Summarizer Settings page provides a list of reports and a correlating description of each report. Each report contains a checkbox that you can select to generate a summarized report.

**Figure 8: Summarizer Page**



4. Select the checkbox of each report type to summarize.
5. When you are finished, click **Update**. Your configuration changes are saved automatically.

## Configuring Presentation Options

The GMS Reporting module uses a default group of settings that specify the types of charts and the amount of data that is displayed.

To change the default settings for your user ID, follow these steps:

1. Start and log into SonicWALL GMS as the user whose default settings you will modify.
2. Click the **Console** tab.
3. Expand the User Settings tree and click **Report Settings**. The Report Settings page appears (Figure 9).

**Figure 9: Report Settings Page**

The screenshot shows the 'Report Settings' page for user 'gmadoc' of type 'Operators'. The page is divided into several sections:

- Default Display Type:** Radio buttons for 'Chart and Table' (selected) and 'Table Only'.
- Default Chart Type:** Two dropdown menus: 'Summary/Over Time Charts' (set to 'BAR') and 'User Based Charts' (set to 'PIE').
- Number Of Items:** Three dropdown menus: 'Number Of Top Sites' (10), 'Number Of Top Users' (10), and 'Number Of Sites By User/Users By Site' (5).
- ( Default: For Non Sites/Users ):** Two dropdown menus: 'Number Of Items' (10) and 'Number Of Entries Per Item' (10).
- Rows Per Screen:** A dropdown menu set to 10.
- Inclusion Filter Parameters:** Text input fields for 'Site List' and 'User List', both with '(comma separated)' labels. A checkbox for 'Whole Name/IP' is present. Below these are 'Hours' dropdowns for 'Start' (00) and 'End' (23).

A note at the bottom states: '(Note: Site List and Hours settings are applicable only for the By Site and By Hour reports respectively).'

4. Select whether the reports will contain a chart and table or table only.
5. Select whether Summary and Over Time charts will be displayed as bar graphs or plots from the **Summary/Over Time Charts** list box (default: BAR).
6. Select whether User charts will be displayed as pie charts, bar graphs, area charts, or plots from the **User Based Charts** list box (default: PIE).
7. Select the number of sites to display in Top Sites reports (default: 10).
8. Select the number of users to display in Top Users reports (default: 10).
9. Select the number of sites to display in Sites by User reports (default: 5).
10. Select the number of items to display in all other reports (default: 10).
11. Select the number of entries per item to display in all other reports (default: 10).
12. To only display data for a specified group of web sites, enter the URL of each site (separated by commas) in the **Site List** field. Because this field uses pattern matching, entries such as "yahoo.com" will display data for mail.yahoo.com, shopping.yahoo.com, and so on.
13. To only display data for a specified group of users, enter the username of each user (separated by commas) in the **User List** field. Because this field uses pattern matching, entries such as "john" will display data for johnm, 123john, and so on.
14. To configure the default start and end times for hourly reports, select a start and end time from the **Start** and **End** list boxes.

15. To specify a list of web sites that will be excluded from the reports, enter a string that specifies a URL or portion of a URL to exclude from the reports. For example:

www.yahoo.com

ebay.com

netscape

...

Click **Add**. Any web site that contains a portion of the string that you specified will be excluded from the report.

Repeat this step for each web site to exclude.

---

## Managing Scheduled Reports

The Scheduled Reports page allows you to manage all the report schedules in the system from a central location. This page lists all the schedules in the system, enabling you to monitor the status of these recurring schedules and resend failed schedules, if needed. This page provides information about the last execution time of a schedule, whether it ran successfully and the error that occurred if it failed, the last run type (scheduled or one time run, along with the node, owner and other relevant information.

The Summary section provides status information on your report schedules.

The Search Criteria section provides settings for searching report schedules. Results of your searches are displayed in the Search Results section.

1. Start and log into SonicWALL GMS.
2. Click the **Console Panel** tab.
3. Expand the Reports tree and click **Scheduled Reports**. The **Scheduled Reports** page appears.
4. Define the **Search Criteria** tab.

The Search Criteria tab contains the following elements to refine your search:

- **Schedule Type** - Select from the following schedule types:
  - All Schedules
  - Daily Schedules
  - Weekly Schedules
  - Monthly Schedules
- **Status** - Select from the following status conditions:
  - All
  - Failed
  - In Progress
  - Success
  - In Queue
  - Partial Failure
- **SonicWALL Node** - Select from the following SonicWALL nodes:
  - All
  - Global View
  - Per Unit View
- **Owner** - Displays the owner (admin).
- **Name Contains** - Enter a context string to search by keywords.
- **Error Contains** - Enter a context string to search by keywords.
- **Use Condition** - Select from the following conditions:
  - And
  - Or
- **Match Case** - Select this checkbox to limit your searches to be match-case sensitive.

Figure 10: Scheduled Reports Page

**Scheduled Reports (user: gmsdoo type: Administrators) Logo**

**Ready**

**Summary**

Schedules in the system: 10  
 Next Scheduled Email/Archive Time: Sept 1, 2005 Thur [10:12 AM]  
 Weekly Schedules Last Attempted: Aug 29, 2005 Mon [10:12 AM]  
 Next Weekly Reports Time: Sept 5, 2005 Mon [10:12 AM]  
 Monthly Schedules Last Attempted: Aug 1, 2005 Mon [10:12 AM]  
 Next Monthly Reports Time: Sept 1, 2005 Thur [10:12 AM]

**Search Criteria**

Schedule Type: All Status: All  
 SonicWALL Node: All Owner: admin  
 Name contains: Error contains:  
 Use condition: AND Match case:  
 Start Search  Clear Search

**Search Results**

Show Schedules Per Screen: 10 (Range: 10-100)  Go To Schedule Number:

<Displaying 1-10 of 10>

	ID	Name	Type	Node	Last Run (Succ)	Status
<input type="checkbox"/>	221	Monthly Global Reports	Monthly	GlobalView	Jul 1, 2005 Fri [06:48 PM]	
<input type="checkbox"/>	261	Test Weekly - Steve	Weekly	TZ170 SPW (San_Jose)	Aug 29, 2005 Mon [09:51 AM]	<span style="color: green;">■</span>
<input type="checkbox"/>	262	Intra Web reports	Daily	TZ170 SPW (San_Jose)	Aug 31, 2005 Wed [09:06 AM]	<span style="color: green;">■</span>
<input type="checkbox"/>	263	Web reports	Daily	TZ170 SPW (San_Jose)	Aug 30, 2005 Tue [09:51 AM]	<span style="color: green;">■</span>
<input type="checkbox"/>	281	TZ 170 Daily Report	Daily	TZ 170 Enh (Cupertino)	Aug 30, 2005 Tue [09:51 AM]	<span style="color: green;">■</span>
<input type="checkbox"/>	282	TZ 170 Monthly Report	Monthly	TZ 170 Enh (Cupertino)	Jul 1, 2005 Fri [06:58 PM]	
<input type="checkbox"/>	304	Sample Report	Daily	TZ 170 Enh (Cupertino)	Aug 30, 2005 Tue [09:51 AM]	<span style="color: red;">■</span>
<input type="checkbox"/>	321	CharmingShoppers	Daily	Prasad	Aug 30, 2005 Tue [09:51 AM]	<span style="color: green;">■</span>
<input type="checkbox"/>	381	Test Report 1	Daily	TZ 170 Enh (Cupertino)	Aug 30, 2005 Tue [09:51 AM]	<span style="color: green;">■</span>

<Displaying 1-10 of 10>

Select Only the 10 Schedules Displayed Above:  
 Select All Schedules

E-Mail/Archive the selected schedules now  
 (Note: This is a one time event and will not affect the Scheduled E-Mail/Archive time.)

Delete the selected schedules

Re-send the selected schedules for dates (mm/dd/yyyy): Start: End:

Select the notepad icon to view the Schedule Properties page, as illustrated in Figure 11.

- **Name** - The name of the report. Click on the highlighted report name link to access the report for editing.
- **Type** - All, Daily Schedules, Weekly Schedules, and Monthly Schedules.
- **Node** - The host name of the SonicWALL appliance.
- **Last Run** - The date when the report was last generated.
- **Status** - Includes the following report status options:
  - **Red**: Failed scheduled report.
  - **Green**: Schedule processed successfully.



Figure 11: Schedule Properties Page

Schedule Properties	
Schedule ID	221
Name	Monthly Global Reports
Type	Monthly
Note	GlobalView
Description	A sample Monthly Global Schedule
Reports To Be Emailed	Yes
Destination Email Address	admin@globalmail.com
SMTP Server	10.10.128.230
Email Subject	
Email Message	
Send Reports Inline	No
Reports To Be Archived	No
Archive Folder	
Template Folder	
Include All Reports in a Single File	No
Zip Reports	No
Generate Reports in IBM Format	No
Display Type	Chart And Table
Chart Type	BAR PIV
Number Of Top Sites	10
Number Of Top Users	10
Sites By User/Users By Site	5
Number Of Items	10
Number Of Entries Per Item	10
Sites List	null
Users List	
Enable Whole Name/ID	No
Hours	00 To 23
Last Of Reports	Bandwidth Over Time

Close

## Resending Schedules

Apart from selecting multiple schedules for a one-time execution by selecting the appropriate checkboxes and clicking the “Email/Archive the Selected Schedules now,” you can re-send required schedules using the “Re-send the selected schedules for dates” option.

To resend any schedules, follow the procedures below:

1. Select the Schedule Type (Daily, Weekly, or Monthly) from the Search Criteria section and click **Start Search**. This lists all the schedules of the selected type. Select the checkboxes of the schedules you want to resend.
2. Provide a start date (and an end date if applicable). Reports are generated for the specified date/date range.
3. Click **Re-send the selected schedules for dates**. Reports are generated for the specific dates and emailed/archived as a one time option for all the schedules selected.



## Viewing Reports

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This chapter describes how to generate reports using the SonicWALL Global Management System (SonicWALL GMS) Reporting Module.

Select from the following reports:

- To view status reports, see “Viewing Status Reports” on page 19.
- To view general bandwidth usage reports, see “Viewing Bandwidth Reports” on page 22.
- To view ROI reports, see “Viewing ROI Reports” on page 29
- To view bandwidth reports, by service, see “Viewing Service Usage Reports” on page 37.
- To view web usage bandwidth reports, see “Viewing Web Usage Reports” on page 40.
- To view browse time reports, see “Viewing Browse Time Reports” on page 58
- To view reports on the number of attempts that users made to access blocked web sites, see “Viewing Web Filter Reports” on page 69.
- To view file transfer protocol (FTP) bandwidth usage reports, see “Viewing File Transfer Protocol Reports” on page 81.
- To view mail bandwidth usage reports, see “Viewing Mail Usage Reports” on page 88.
- To view virtual private networking (VPN) reports, see “Viewing VPN Usage Reports” on page 95.
- To view reports on attempted attacks, see “Viewing Attack Reports” on page 108.
- To view reports on attempted spyware attacks, see “Viewing Anti-Spyware Reports” on page 122
- To view reports on virus attacks, see “Viewing Virus Attacks Reports” on page 118.
- To view reports on intrusion prevention, see “Viewing Intrusion Prevention Reports” on page 126.
- To view detailed logging information, see “Viewing the Log” on page 135.
- To view user and administrator authentication reports, see “Viewing Authentication Reports” on page 131.

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### Viewing Status Reports

Status reports display the number of hours that one or more SonicWALL appliances were online and functional during the time period.

From this information, you can determine find trouble spots within your network. For example, this report could reveal that a SonicWALL appliance that is having network connectivity issues caused by the ISP.

*Note: All reports appear in the Firewall’s time zone.*

Select from the following:

- To view a status summary, see “Viewing the Status Up-Time Summary Report” on page 19.
- To view bandwidth usage over a period of time, see “Viewing Bandwidth Usage Over Time” on page 26.

### Viewing the Status Up-Time Summary Report

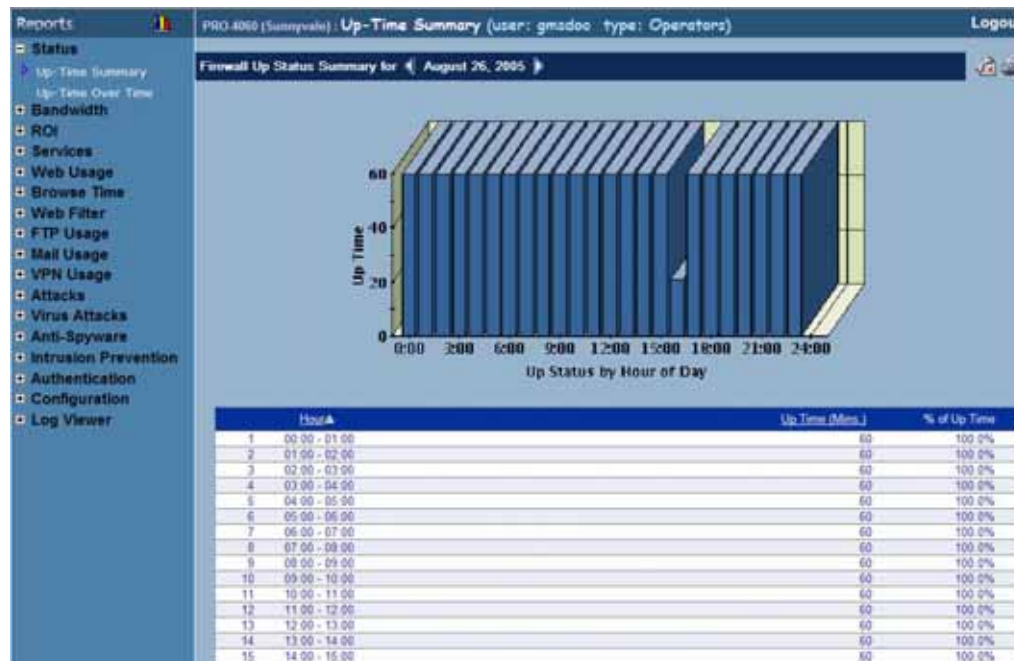
The Status Up-Time Summary report contains information on the amount of status of a SonicWALL appliance or group of Status appliances during each hour of the specified day.

To view the Status Up-Time Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.

3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Status tree and click **Summary**. The Up-Time Summary page appears (Figure 11).

**Figure 11: Up-Time Summary Page**



5. The bar graph displays the amount of time the SonicWALL appliance(s) were online and functional during each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Up Time**—number of minutes during the hour that the SonicWALL appliance was “Up.”
7. The GMS Reporting Module shows today’s report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 12).

**Figure 12: Report Settings Dialog Box**



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view from the **Select Report Date** area.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

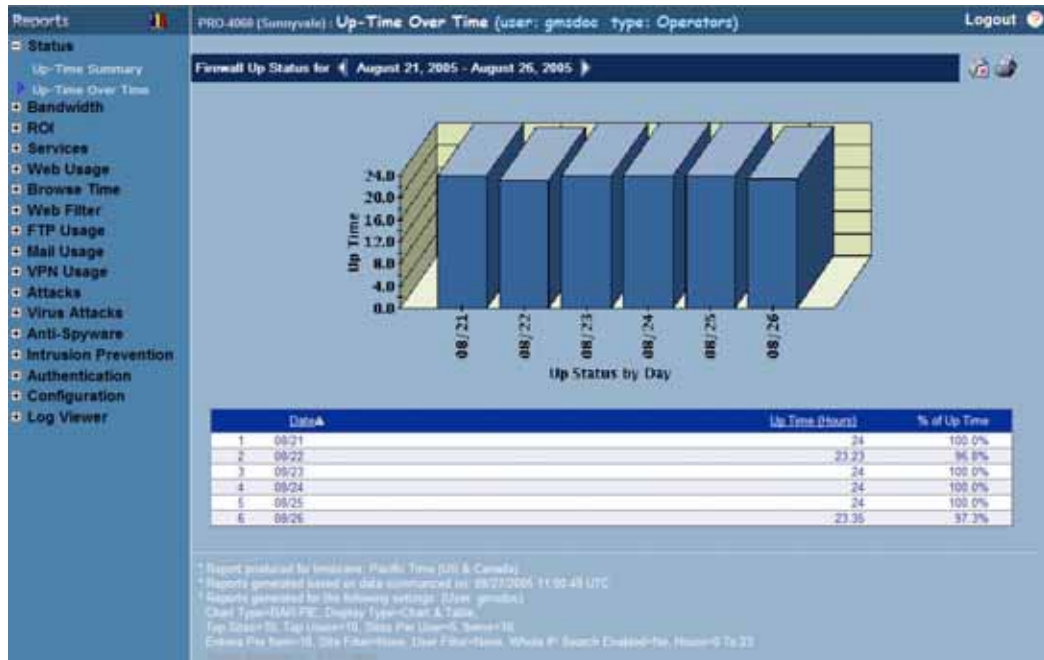
## Viewing Status Up-Time Over Time

The Status Up-Time Over Time report displays the how often the SonicWALL appliance or a group of SonicWALL appliances was available during the specified time period.

To view the Status Up-Time Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Status tree and click **Up-Time Over Time**. The Up-Time Over Time page appears (Figure 13).

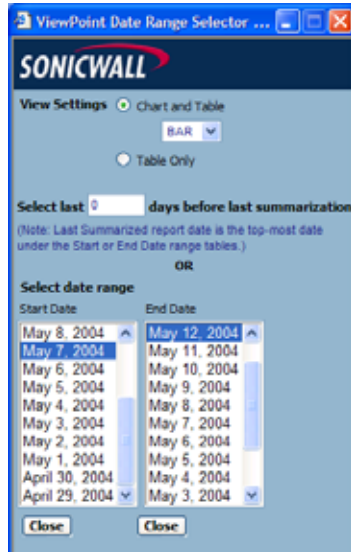
**Figure 13: Up-Time Over Time Page**



5. The bar graph displays the amount of time the SonicWALL appliance(s) were available during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Up Time**—amount of time (in hours) that the SonicWALL appliance was “Up.”

7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 14).

**Figure 14: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

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## Viewing Bandwidth Reports

Bandwidth reports display the amount of data transferred through one or more selected SonicWALL appliances.

Bandwidth reports are an ideal starting point for viewing overall bandwidth usage. You can view bandwidth usage view by the hour, day, or over a period of days. Additionally, you can view the top users of bandwidth.

From this information, you can determine network strategies. For example, if you need more bandwidth, you might need to upgrade network equipment, or you might simply need to curtail the bandwidth usage of a few employees.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily bandwidth usage, see “Viewing the Bandwidth Summary Report” on page 22.
- To view bandwidth usage in real time, see “Monitoring Bandwidth Usage in Real Time” on page 24.
- To view the users who consume the most bandwidth, see “Viewing the Top Users of Bandwidth” on page 25.
- To view bandwidth usage over a period of time, see “Viewing Bandwidth Usage Over Time” on page 26.
- To view the users who consume the most bandwidth over time, see “Viewing the Top Users of Bandwidth Over Time” on page 28.

## Viewing the Bandwidth Summary Report

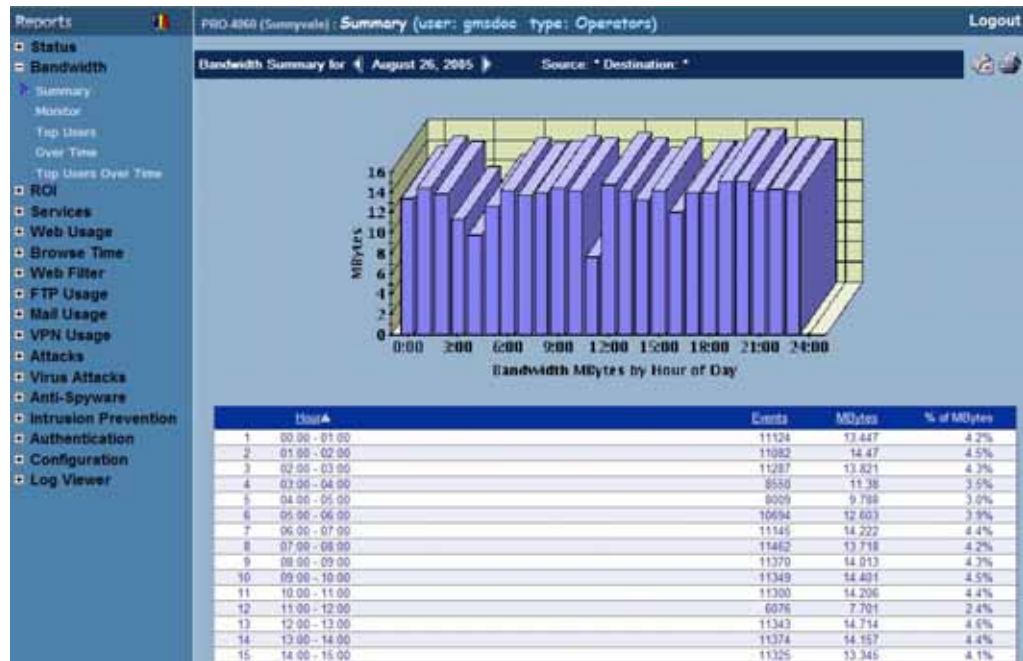
The Bandwidth Summary report contains information on the amount of traffic handled by a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

To view the Bandwidth Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.

3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Summary**. The Summary page appears (Figure 15).

**Figure 15: Summary Page**



5. The bar graph displays the amount of bandwidth transferred during each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Events**—number of events or “hits.”
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. The GMS Reporting Module shows today’s report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 16).

Figure 16: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view from the **Select Report Date** area.
10. Select the **Source** and **Destination** interfaces to view. If you want to track bandwidth usage in both directions, select the **Bi-directional** check box.
11. When you are finished, click **Generate Report**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Monitoring Bandwidth Usage in Real Time

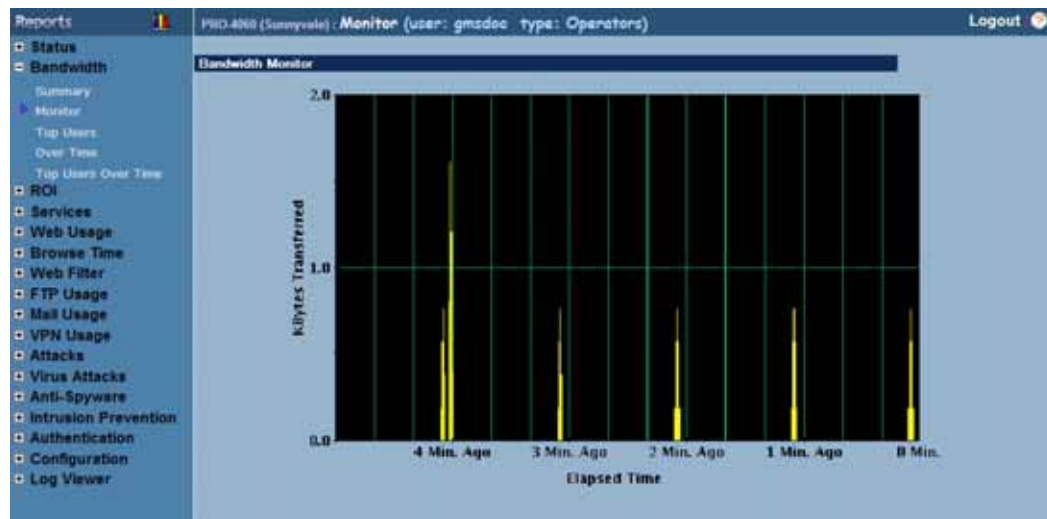
The Bandwidth Monitor displays bandwidth usage for the selected SonicWALL appliance in real time.

To view the Bandwidth Monitor, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Monitor**. The Monitor page appears (Figure 17).



**Figure 17: Monitor Page**



5. The Bandwidth Monitor shows the amount of data transferred during each sampling period for the last five minutes. The sampling period is five seconds.

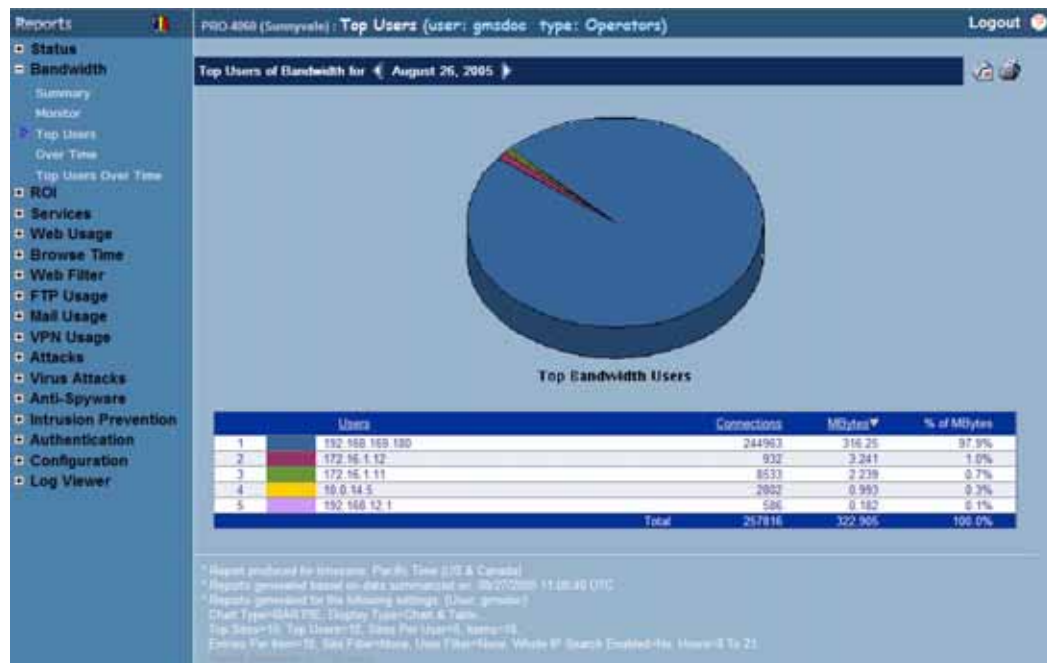
## Viewing the Top Users of Bandwidth

The Top Users report displays the users who used the most bandwidth on the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Top Users**. The Top Users page appears (Figure 18).

**Figure 18: Top Users Page**



5. The pie chart displays the percentage of bandwidth transferred by each user.

6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Connections**—number of events or “hits.”
  - **MBytes**—number of megabytes.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the day and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. By default, the GMS Reporting Module shows today’s report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 19).

**Figure 19: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, “john” will not match john\_smith, john42, or big\_john.*

12. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Bandwidth Usage Over Time

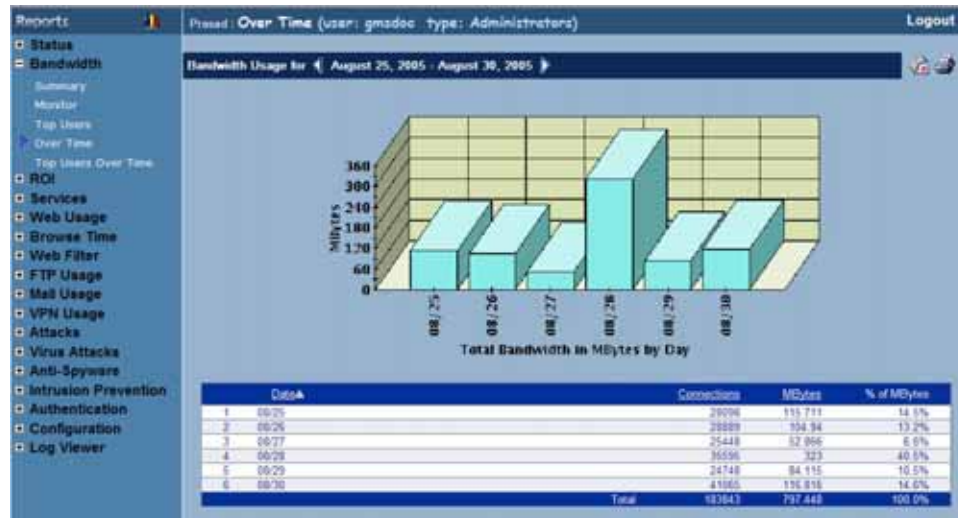
The Bandwidth Over Time report displays the daily amount of traffic handled by a SonicWALL appliance or a group of SonicWALL appliances for the specified time period.

To view the Bandwidth Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.

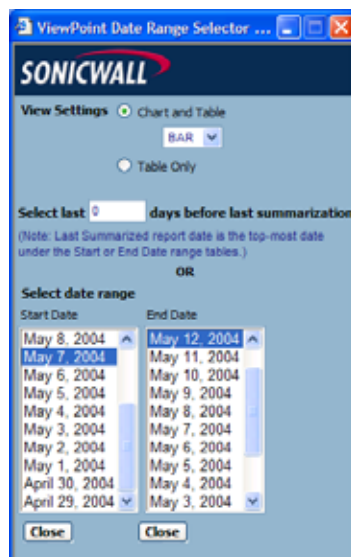
- Expand the Bandwidth tree and click **Over Time**. The Over Time page appears (Figure 20).

**Figure 20: Over Time Page**



- The bar graph displays the amount of bandwidth transferred during each day of the specified time period.
- The table contains the following information:
  - Date**—when the sample was taken.
  - Connections**—number of hits.
  - MBytes**—number of megabytes transferred.
  - % of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 100,000 megabytes of data was transferred during the time period and 25,000 megabytes was transferred on one day, the **% of Usage** field will display 25%.
- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 21).

**Figure 21: Report Settings Dialog Box**



- Select whether to display a chart and table or a table only.
- Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.

10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note:* These settings will stay in effect for all similar reports during your active login session.

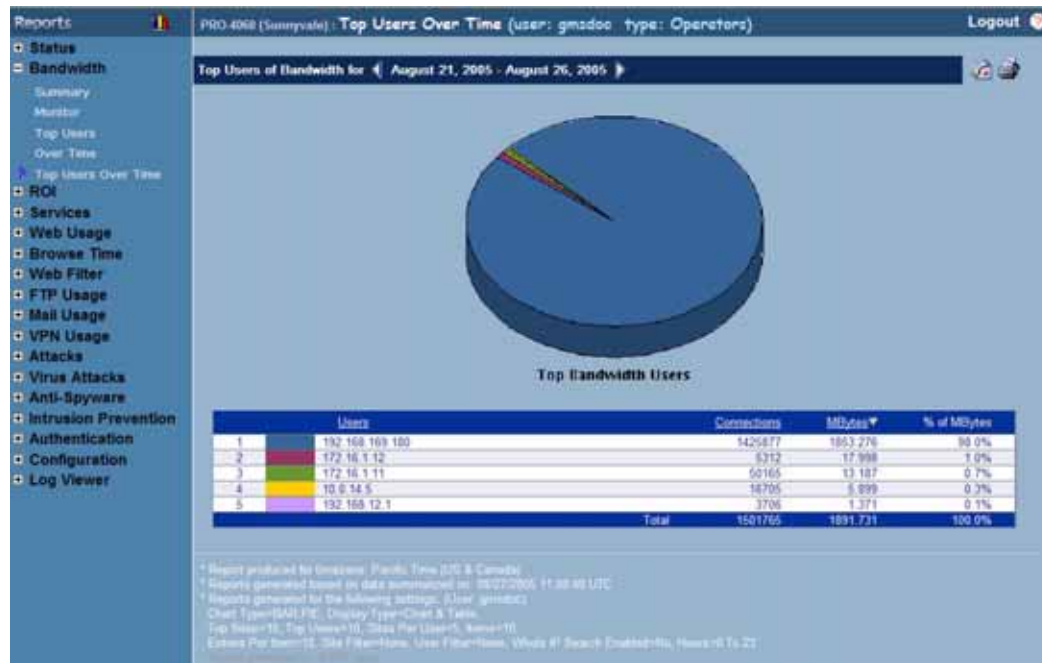
## Viewing the Top Users of Bandwidth Over Time

The Top Users report displays the users who used the most bandwidth on the specified date.

To view the Top Users Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Bandwidth tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 22).

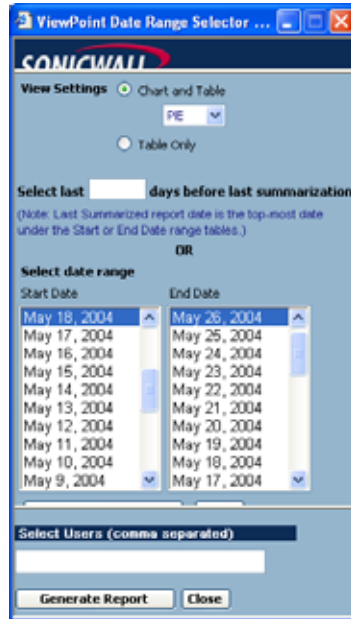
**Figure 22: Top Users Over Time Page**



5. The pie chart displays the percentage of bandwidth transferred by each user.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Connections**—number of events or “hits.”
  - **MBytes**—number of megabytes.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during this period and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.

- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 23).

**Figure 23: Report Settings Dialog Box**



- Select whether to display a chart and table or a table only.
- Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
- To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, “john” will not match john\_smith, john42, or big\_john.*
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

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## Viewing ROI Reports

Return on Investment (ROI) reports display the total cost of consumed network bandwidth transferred through one or more selected SonicWALL appliances.

ROI reports are an ideal starting point for viewing the overall cost of consumed network bandwidth usage. You can view ROI usage view by the hour, day, or over a period of days. Additionally, you can view the top users who consume the most network bandwidth and the percentage of the total cost attributed to each top user.

From this information, you can determine network strategies. For example, if you need to lower costs attributed to consumed network bandwidth, you will have the ability to generate ROI reports to identify the time where network bandwidth consumption costs.

*Note: All reports appear in the Firewall’s time zone.*

Select from the following:

- To view a summary of the total cost of consumed network bandwidth, see “Viewing the ROI Summary Report” on page 30.
- To view the users who accrued the most cost, see “Viewing the Top Users in an ROI Report” on page 31.
- To view the total cost of consumed network bandwidth over a period of time, see “Viewing ROI Usage Over Time” on page 33.
- To view the users who accrue the highest cost and consume the most network bandwidth over time, see “Viewing the Top Users of ROI Over Time” on page 35.

## Viewing the ROI Summary Report

The ROI Summary report contains information on the amount of traffic handled (measured in megabytes (MBytes)) by a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

To view the ROI Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the **ROI** tree and click **Summary**. The Summary page appears (Figure 24).

**Figure 24: Summary Page**



5. The bar graph displays the total cost for consumed network bandwidth spent each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **MBytes**—number of megabytes transferred.
  - **Cost**—total amount of the expense per 100 megabytes
  - **% of Cost**—percentage of the total amount of the expense from consumed network bandwidth during this hour, compared to the day.

7. SonicWALL GMS shows today's report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 25).

**Figure 25: Report Settings Dialog Box**



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view from the **Select Report Date** area.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Users in an ROI Report

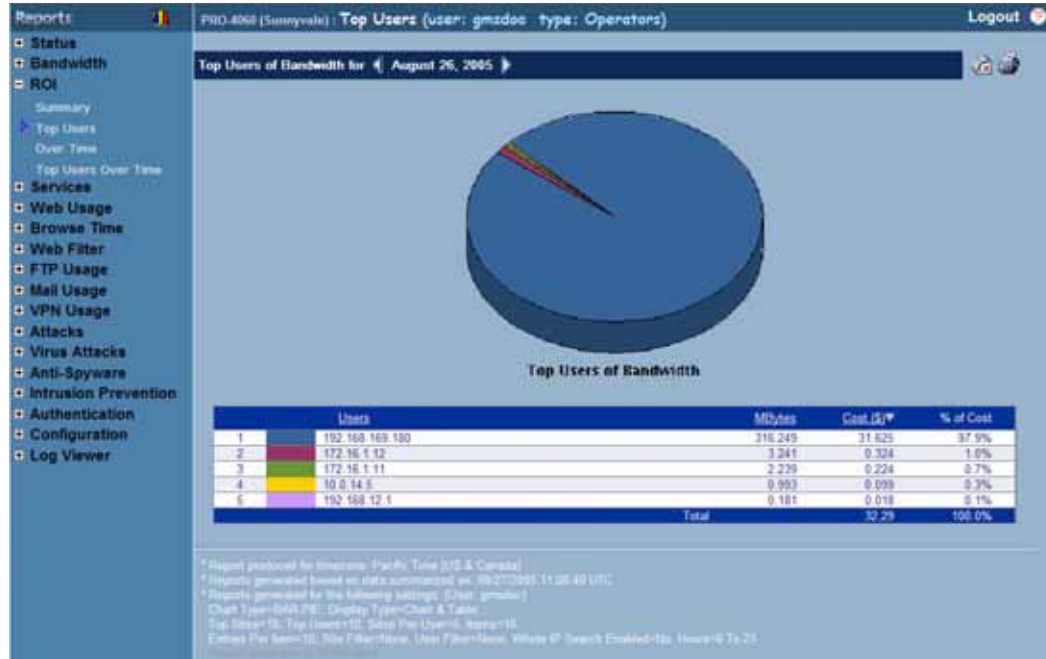
The Top Users report displays the users who used consumed the most network bandwidth and the correlating expense for the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.

- Expand the **ROI** tree and click **Top Users**. The Top Users page appears (Figure 26).

**Figure 26: Top Users Page**



- The pie chart displays an ROI report on the consumed network bandwidth costs used by each user.
- The table contains the following information:
  - Hour**—when the sample was taken.
  - MBytes**—number of megabytes transferred.
  - Cost**—total amount of the expense per 100 megabytes
  - % of Cost**—percentage of the total amount of the expense from consumed network bandwidth during this hour, compared to the day.



- By default, SonicWALL GMS shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 27).

**Figure 27: Report Settings Dialog Box**



- Select the number of users that will be displayed from the **Number of Users** list box.
- Select the type of chart from the **Chart Type** list box.
- Select the year, month, and day that you would like to view.
- To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*

- When you are finished, click **Close**. SonicWALL GMS displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing ROI Usage Over Time

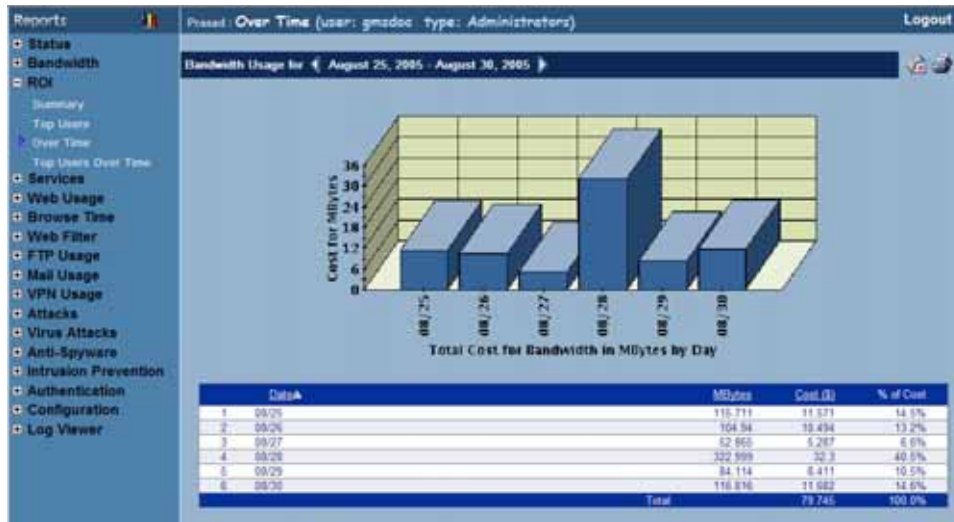
The ROI Over Time report displays the total daily expense for consumed network bandwidth handled by a SonicWALL appliance or a group of SonicWALL appliances for the specified time period.

To view the ROI Over Time report, follow these steps:

- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select the global icon, a group, or a SonicWALL appliance.

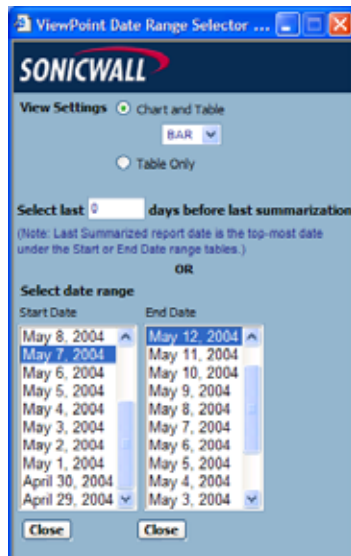
- Expand the **ROI** tree and click **Over Time**. The Over Time page appears (Figure 28).

**Figure 28: Over Time Page**



- The bar graph displays the total cost for bandwidth transferred during each day of the specified time period.
- The table contains the following information:
  - Hour**—when the sample was taken.
  - MBytes**—number of megabytes transferred.
  - Cost**—total amount of the expense per 100 megabytes
  - % of Cost**—percentage of the total amount of the expense from consumed network bandwidth during this hour, compared to the day.
- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

**Figure 29: Report Settings Dialog Box**



- Select whether to display a chart and table or a table only.
- Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
- When you are finished, click **Close**. SonicWALL GMS displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

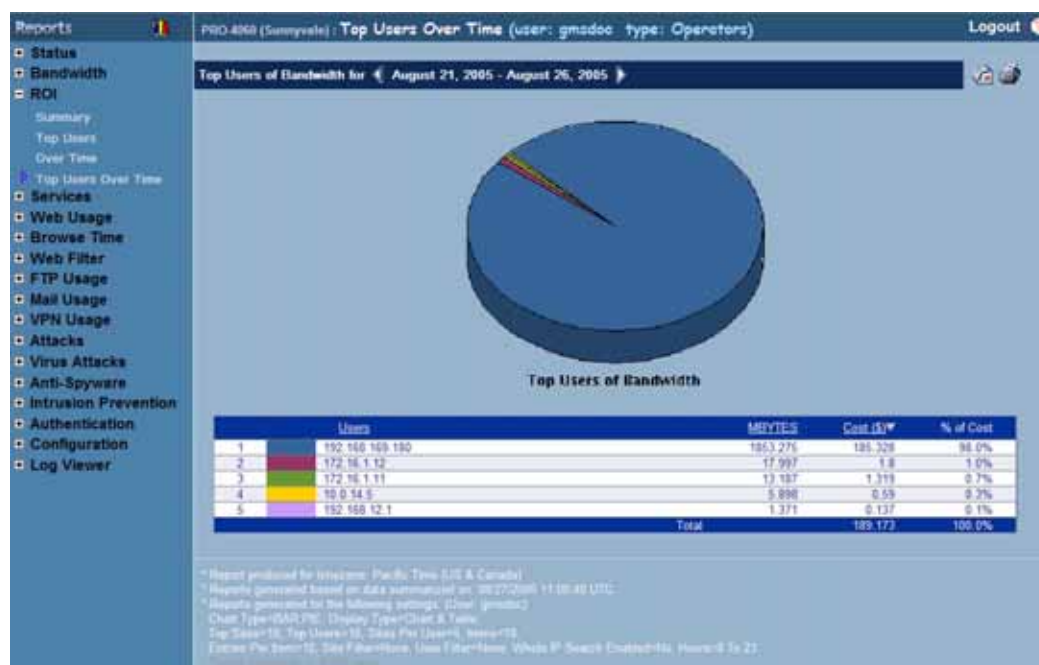
## Viewing the Top Users of ROI Over Time

The Top Users report displays the users who used the most bandwidth and accumulated the highest cost on the specified date.

To view the Top Users Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the **ROI** tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 30).

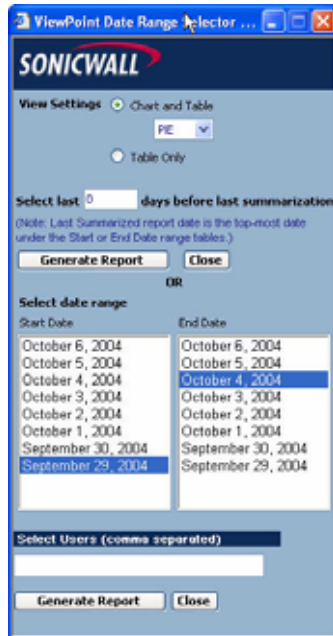
**Figure 30: Top Users Over Time Page**



5. The pie chart displays the total cost of network bandwidth consumed by each user.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **MBytes**—number of megabytes transferred.
  - **Cost**—total amount of the expense per 100 megabytes
  - **% of Cost**—percentage of the total amount of the expense from consumed network bandwidth during this hour, compared to the day.

- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 31).

**Figure 31: Report Settings Dialog Box**



- Select whether to display a chart and table or a table only.
- Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
- To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*

- When you are finished, click **Close**. SonicWALL GMS displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Service Usage Reports

Service reports provide information on the amount of data transmitted through the selected SonicWALL appliance by each service.

Service reports are useful for revealing inappropriate usage of bandwidth and can help determine network policies. For example, if there is a large spike of bandwidth usage, you can determine whether this is caused by regular web access, someone using FTP to transfer large files, an attempted Denial of Service (DoS) attack, or another service.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view service bandwidth usage in real time, see “Monitoring Service Usage in Real Time” on page 37.
- To view a summary of the daily service bandwidth usage, see “Viewing the Services Summary Report” on page 37.

*Note: You cannot view services reports from the global or group view.*

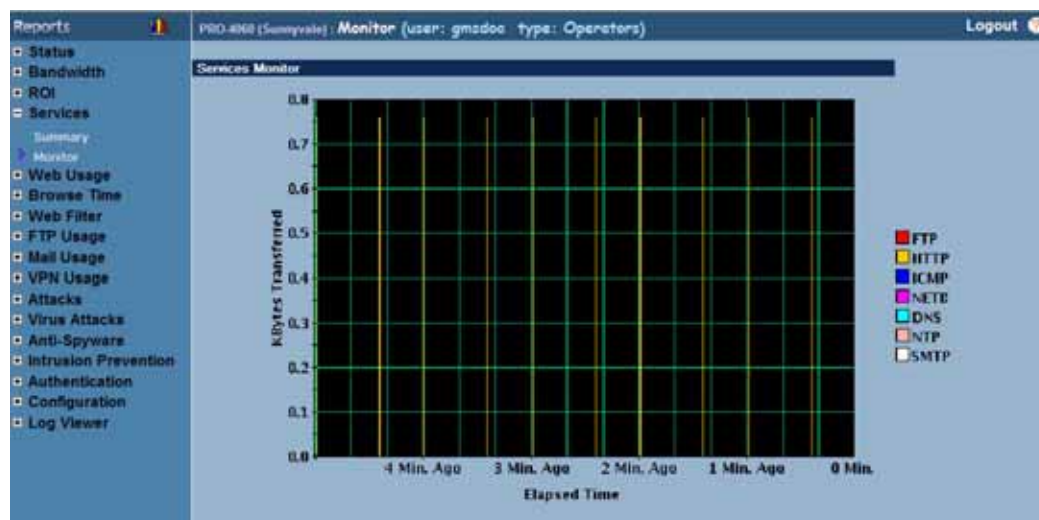
## Monitoring Service Usage in Real Time

The Services Monitor displays service usage for the selected SonicWALL appliance in real time.

To view the Service Monitor, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Services tree and click **Monitor**. The Monitor page appears (Figure 32).

**Figure 32: Monitor Page**



5. The Services Monitor shows the amount of data transferred for each service during each sampling period for the last five minutes. The sampling period is 15 seconds.

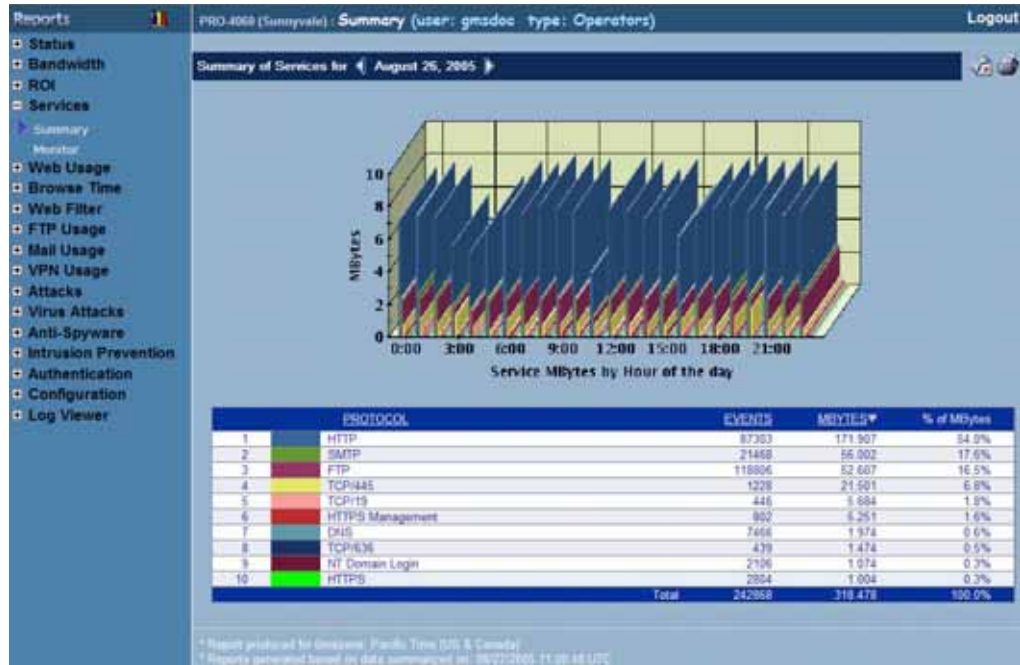
## Viewing the Services Summary Report

The Services Summary report displays the amount of traffic handled by each service during each hour of the specified day.

To view the Services Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Services tree and click **Summary**. The Summary page appears (Figure 33).

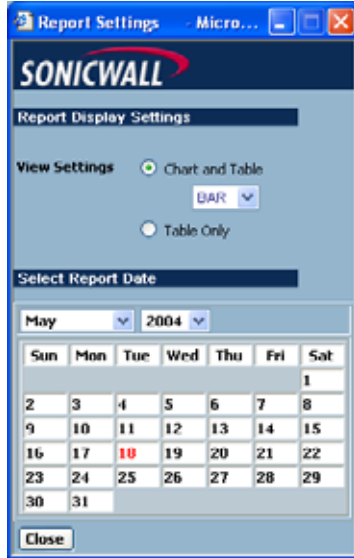
Figure 33: Summary Page



5. The bar graph displays the amount of bandwidth used by each service during each hour of the day.
6. The table contains the following information:
  - **Protocol**—the service.
  - **Events**—number of events or “hits.”
  - **MBytes**—number of kilobytes.
  - **% of MBytes**—percentage of megabytes transferred by this service on the selected day, compared to all other services. For example, if 10,000 megabytes of data was transferred during the day and 5,000 of the megabytes were transferred, the **% of MBytes** field will display 50%.

- The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 34).

**Figure 34: Report Settings Dialog Box**



- Select the type of chart to display from the **View Settings** area.
- Select the year, month, and day that you would like to view.
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

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## Viewing Web Usage Reports

Web usage reports provide information on the amount of web usage that occurs through the selected SonicWALL appliance(s).

Web usage reports can be used to view web bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of web bandwidth and view the most visited sites.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily web bandwidth usage, see “Viewing the Web Usage Summary Report” on page 40.
- To view a list of the top visited sites, see “Viewing the Top Web Sites” on page 42.
- To view the users who consume the most web bandwidth, see “Viewing the Top Users of Web Bandwidth” on page 43.
- To view the top sites visited by each user, see “Viewing Web Usage by User” on page 45.
- To view the top sites and the users who visited the sites, see “Viewing Web Usage by Site” on page 47.
- To view web bandwidth usage over a period of time, see “Viewing Web Usage Over Time” on page 50.
- To view a list of the top visited sites over time, see “Viewing Top Sites Over Time” on page 51.
- To view the users who consume the most web bandwidth over time, see “Viewing Top Users Over Time” on page 53.
- To view the sites that consume the most web bandwidth over time, see “Viewing Top Sites Over Time” on page 51.
- To view the top sites visited by each user over time, see “Viewing Bandwidth Usage By User Over Time” on page 55.

## Viewing the Web Usage Summary Report

The Web Usage Summary report contains information on the amount of HTTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

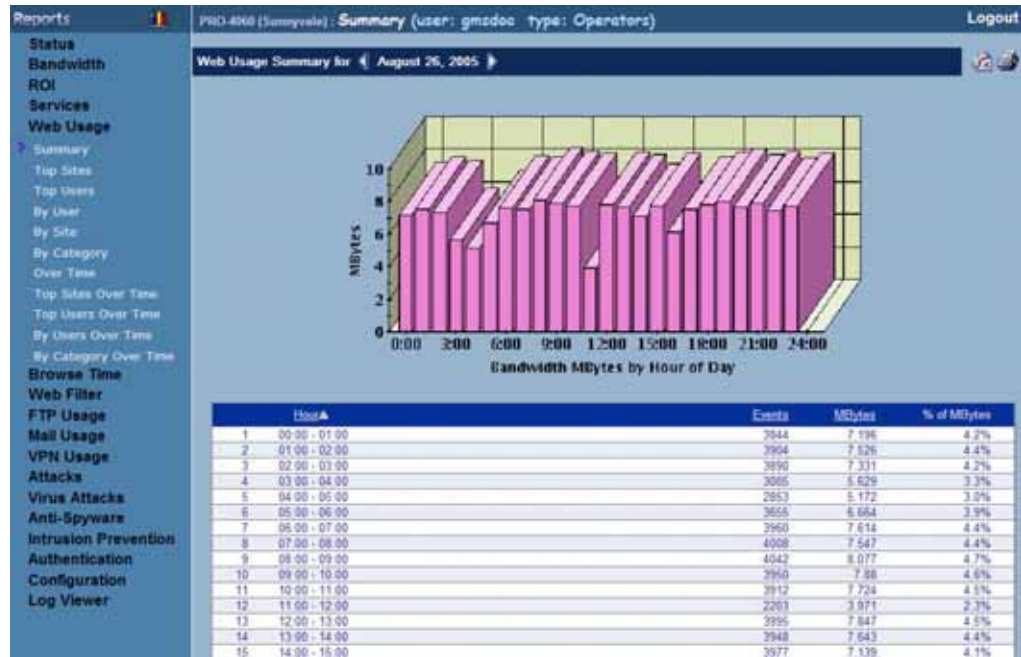
To view the Web Usage Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.



- Expand the Web Usage tree and click **Summary**. The Summary page appears (Figure 35).

**Figure 35: Summary Page**



- The bar graph displays the amount of HTTP bandwidth transferred during each hour of the day.
- The table contains the following information:
  - Hour**—when the sample was taken.
  - Events**—number of events or “hits.”
  - MBytes**—number of megabytes transferred.
  - % of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of HTTP data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
- The GMS Reporting Module shows today’s report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 36).

**Figure 36: Report Settings Dialog Box**



- Select the type of chart to display from the **View Settings** area.

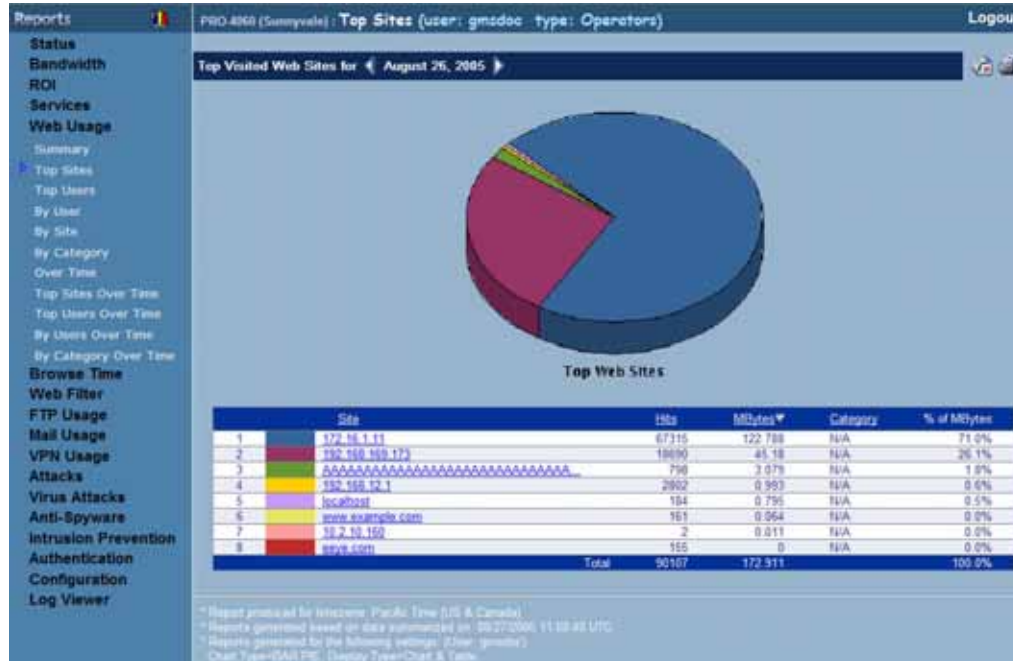
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

## Viewing the Top Web Sites

The Top Sites report displays the web sites that used the most HTTP bandwidth on the specified date. To view the Top Sites report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Sites**. The Top Sites page appears (Figure 37).

**Figure 37: Top Sites Page**



5. The pie chart displays the percentage of bandwidth used to access the top sites.
6. The table contains the following information:
  - **Site**—URL or IP address of the site.
  - **Hits**—number of hits.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred between this site, compared to all other HTTP traffic. For example, if 10,000 megabytes of data was transferred during the day and 5,000 megabytes was transferred between the appliance and Ebay, the **% of MBytes** field will display 50% and you have a problem.

7. By default, GMS Reporting shows today's report, a pie chart, and the ten top sites. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 38).

**Figure 38: Report Settings Dialog Box**



8. Select the number of sites that will be displayed from the **Number of Sites** list box.
9. Select whether to display a chart and table or a table only.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Users of Web Bandwidth

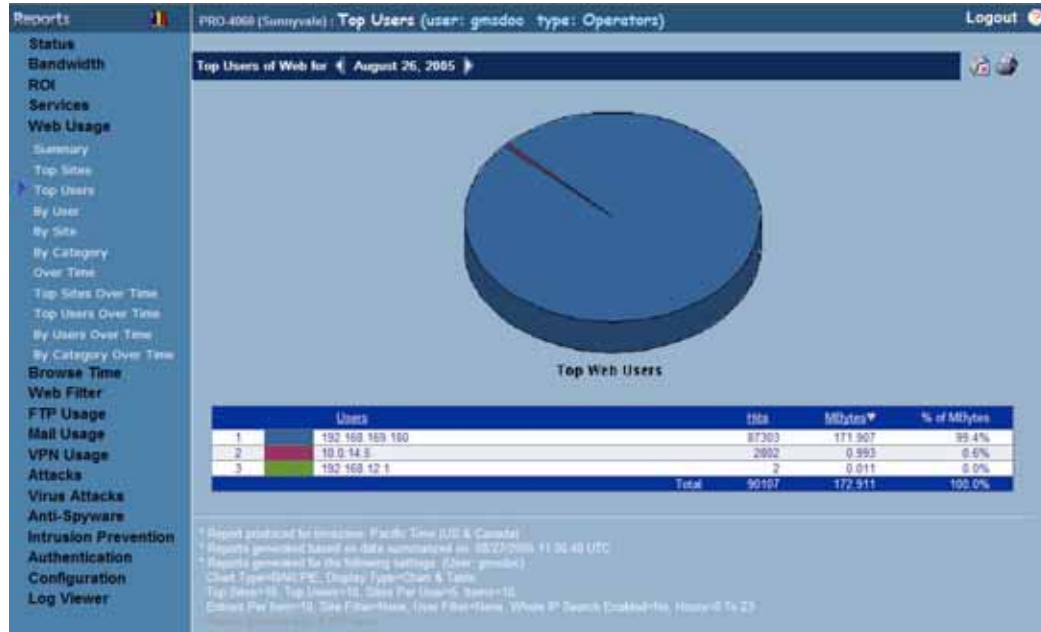
The Top Users report displays the users who used the most HTTP bandwidth on the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.

- Expand the Web Usage tree and click **Top Users**. The Top Users page appears (Figure 39).

**Figure 39: Top Users Page**



- The pie chart displays the percentage of bandwidth transferred by each of the top users.
- The table contains the following information:
  - Users**—the IP address of the user.
  - Hits**—number of hits.
  - MBytes**—number of megabytes transferred.
  - % of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the day and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.

7. By default, GMS Reporting shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 40).

**Figure 40: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.  
*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
12. When you are finished, click **Close**. The GMS Reporting Module refreshes the report based on the selected settings.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Web Usage by User

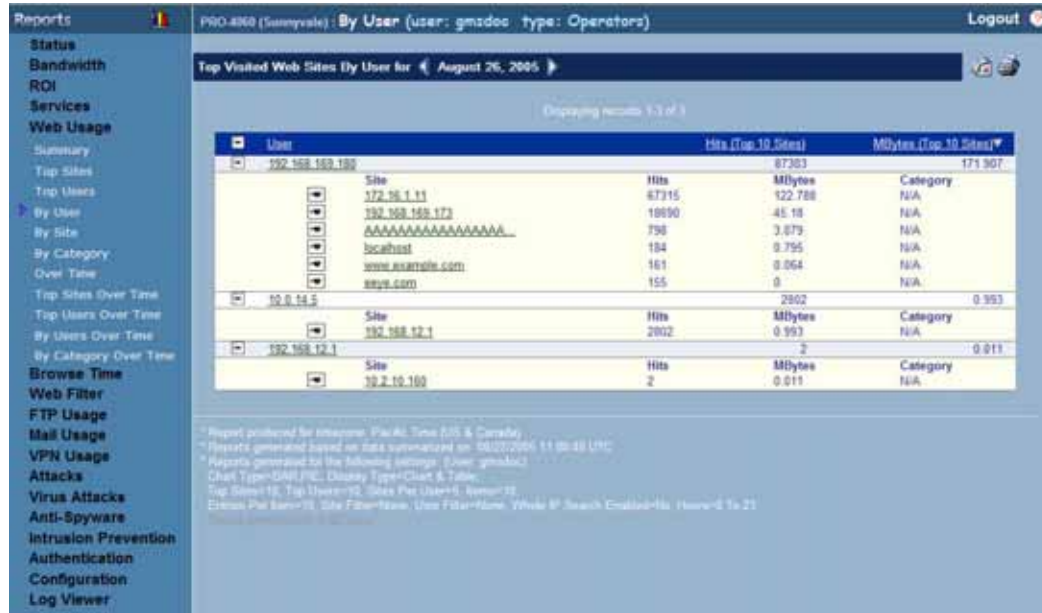
The By User report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred.

To view the By User report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.

- Expand the Web Usage tree and click **By User**. The By User page appears (Figure 41).

**Figure 41: By User Page**



- The table contains the following information:
  - User**—the IP address of the user.
  - Hits**—number of hits to each web site visited by the user.
  - MBytes**—number of megabytes transferred.
- To change the display settings, click **Settings**. The Report Settings dialog box appears (Figure 42).

**Figure 42: Report Settings Dialog Box**



- Select the number of users that will be displayed from the **Number of Users** list box.

8. Select the type of chart from the **Chart Type** list box.
9. Select the year, month, and day that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.  
*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
11. When you are finished, click **Close**. The GMS Reporting Module refreshes the report based on the selected settings.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Web Usage by Site

The By Site report displays a list of all sites, the users that accessed the sites, the number of hits to each site, and the amount of data transferred.

To view the By Site report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **By Site**. The By Site page appears (Figure 43).

**Figure 43: By Site Page**

Site	User	Hits	MBytes	Category
172.16.1.11	192.168.169.100	67315	122.788	N/A
	192.168.169.100	19690	45.18	N/A
	192.168.169.100	798	3.079	N/A
	192.168.169.100	184	0.795	N/A
	192.168.169.100	181	0.064	N/A
	192.168.169.100	155	0	N/A
192.168.169.173	192.168.169.100	18690	45.18	N/A
192.168.12.1	10.0.14.5	2802	0.993	N/A
localhost	192.168.169.100	184	0.795	N/A
www.example.com	192.168.169.100	181	0.064	N/A
192.168.12.1	192.168.12.1	2	0.011	N/A
www.com	192.168.169.100	155	0	N/A

5. The table contains the following information:
  - **Site**—the URL of the site.
  - **User**—the top users that visited the site (default: 10).
  - **Hits**—number of hits to the web site, by user.
  - **MBytes**—number of megabytes transferred, by user.

- The GMS Reporting Module shows today's report and all web sites. To change the date of the report or web sites displayed, click **Settings**. The Report Settings dialog box appears (Figure 44).

**Figure 44: Report Settings Dialog Box**



- Select the number of sites that will be displayed from the **Number of Sites** list box.
- Select the number of users that will be displayed per site from the **Number of Users per Site** list box.
- To only display a limited set of web sites, enter the URLs in the **Select Site** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, "www.yahoo.com" will not match yahoo.com, mail.yahoo.com, or shopping.yahoo.com.*

- When you are finished, click **Close**. The GMS Reporting Module adjusts the report for the selected day and settings.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Web Usage by Category

The Web Usage By Category report displays a list of the top Web site categories, the number of hits to each category, the amount of data transferred, and the percentage of data transferred.

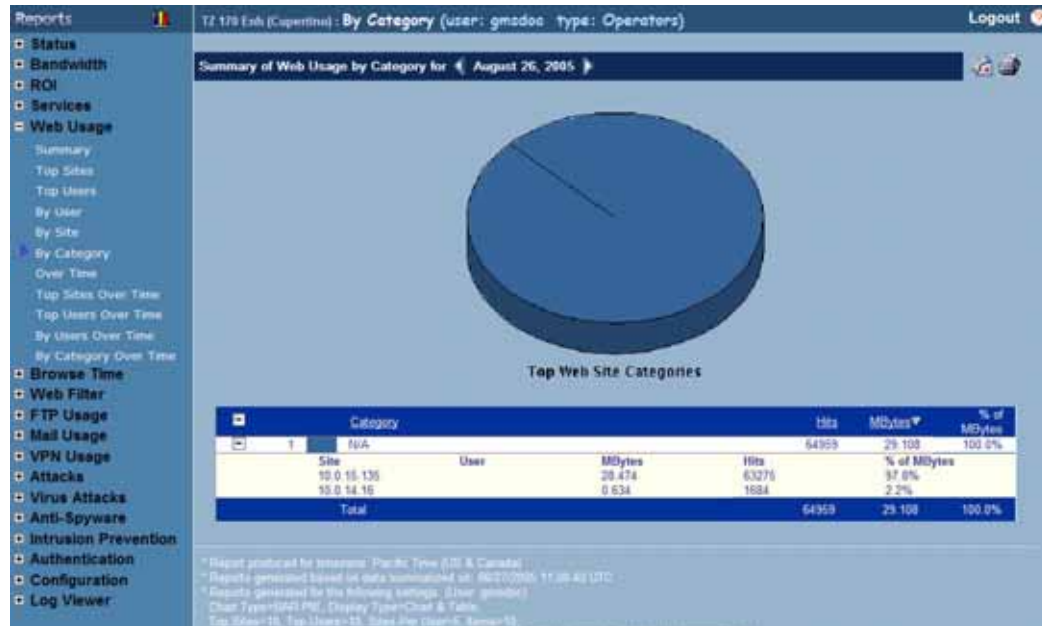
To view the By Category report, follow these steps:

- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select a SonicWALL appliance.



- Expand the Web Usage tree and click **By Category**. The By Category page appears (Figure 43).

**Figure 45: By Category Page**



- The table contains the following information:
  - Category**—the Web site category.
  - Hits**—the number of hits to the Web site category.
  - MBytes**—the number of megabytes transferred.
  - % of MBytes**—the percentage of megabytes transferred.
- The GMS Reporting Module shows today’s report and all web site categories. To change the date of the report or web site categories displayed, click **Settings**. The Report Settings dialog box appears.

**Figure 46: Report Settings Dialog Box**



- Select the number of items that will be displayed from the **Number of Items** list box.
- Select whether to display a chart and table or a table only.
- When you are finished, click **Close**. The GMS Reporting Module adjusts the report for the selected day and settings.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Web Usage Over Time

The Web Usage Over Time report displays the daily amount of HTTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the Web Usage Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Usage tree and click **Over Time**. The Over Time page appears (Figure 47).

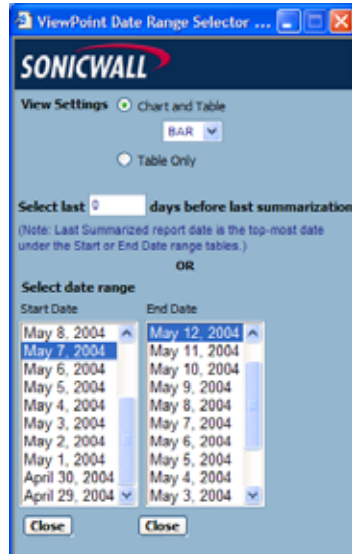
Figure 47: Over Time Page



5. The bar graph displays the amount of HTTP bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Connections**—number of connections or hits.
  - **MBytes**—number of megabytes transferred.
  - **% of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 100,000 megabytes of data was transferred during the time period and 25,000 megabytes was transferred on one day, the **% of Usage** field will display 25%.

7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 48).

**Figure 48: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Top Sites Over Time

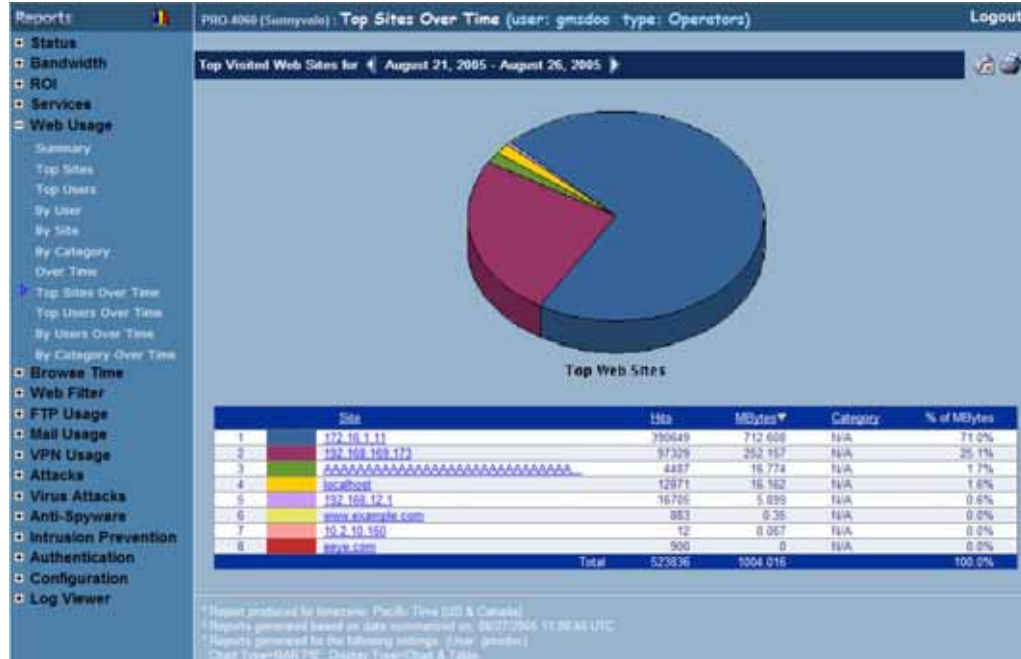
The Top Sites Over Time report displays the most visited web sites for the specified time period.

To view the Top Sites Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.

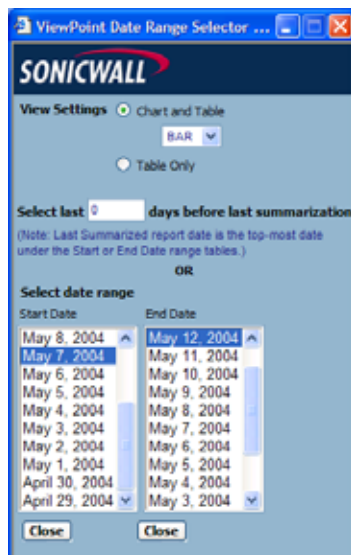
- Expand the Web Usage tree and click **Top Sites Over Time**. The Top Sites Over Time page appears (Figure 49).

**Figure 49: Top Sites Over Time Page**



- The bar graph displays the amount of HTTP bandwidth transferred during each day of the specified time period.
- The table contains the following information:
  - Site**—URL or IP address of the site.
  - Hits**—number of hits.
  - MBytes**—number of megabytes transferred.
  - % of MBytes**—percentage of megabytes transferred between this site, compared to all other HTTP traffic. For example, if 1,000,000 megabytes of data was transferred during the day and 500,000 megabytes was transferred between the appliance and Ebay, the **% of MBytes** field will display 50% and you have a problem.
- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 50).

**Figure 50: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Top Users Over Time

The Top Users Over Time report displays the top users of bandwidth for the specified time period. To view the Top Users Over Time report, follow these steps:

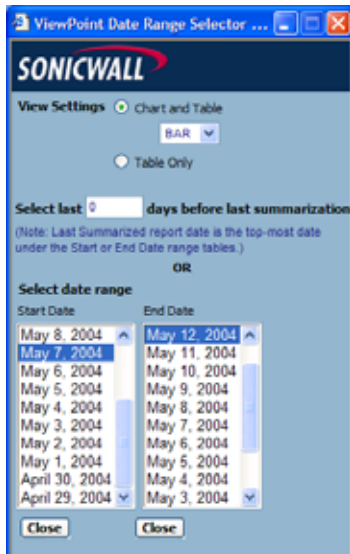
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (
 

**Figure 51: Top Users Over Time Page**



5. The graph provides a graphical display of the percentage of bandwidth transferred by each of the top users over the specified time period.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Hits**—number of hits.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 1000 megabytes of data was transferred during the period and 200 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 52).

**Figure 52: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Web Sites Accessed By Users

To view web sites access by users on a given day, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Web Usage** option.
4. Click the **By User** option. GMS displays the By User page. This page contains a list of users and the number of web site hits the user had established during a set interval.



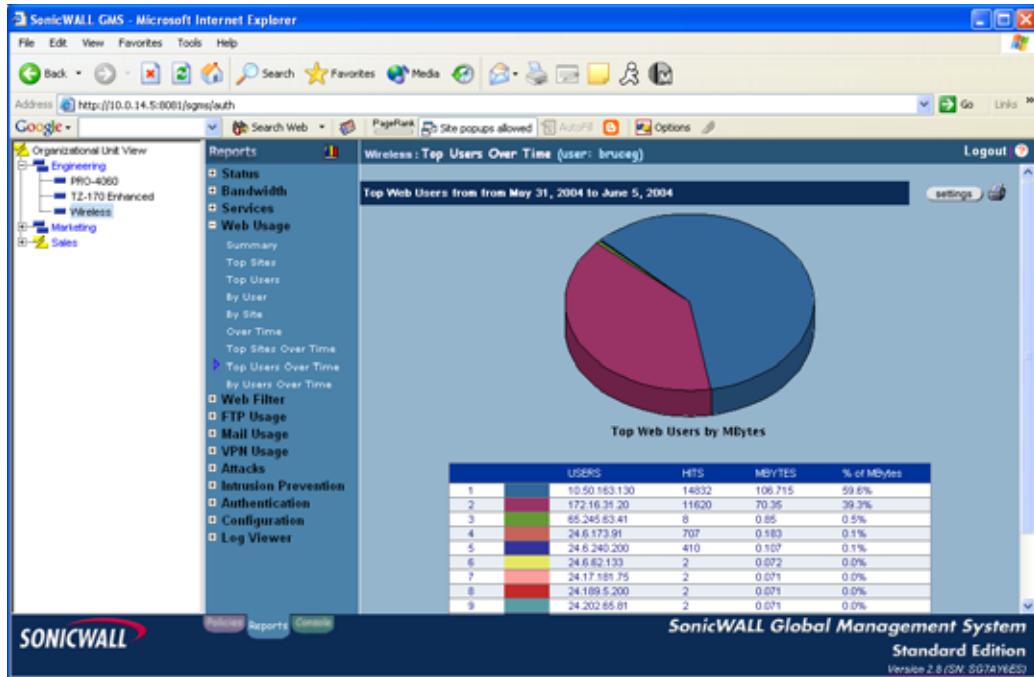
5. Click the Plus (+) symbol at the top of the user list. When the resulting dialog box displays, click an eye icon. GMS displays the Access Time Details page that displays the web sites the user accessed that day.

**Figure 53: Access Time Details Page**

Time	Full URL	Src. Interface	Dest. Interface	Tx Bytes	Rx Bytes
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	1530	47768
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	617	3395
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	617	1129
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	616	1147
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	621	1103
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	620	1164
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	620	1163
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	620	1186
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	616	1209
08:30:0005 19:18:29	http://172.16.5.1	X0	X0	621	1206
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	623	1183
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	623	1203
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	1363	28335
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	861	11029
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	620	2265
08:30:0005 19:18:27	http://172.16.5.1	X0	X0	1087	24603

6. The screen displays the following columns of information about each site hit:
  - the date and time the user reached the site.
  - the URL of the site
  - the interface used by the user (generally, a local area network on which the user's PC or workstation resides)
  - the destination interface
  - The number of bytes transmitted from the user to the destination web site.
  - The number of bytes received by the user from the destination web site.

**Figure 54: Top Users Over Time Page**



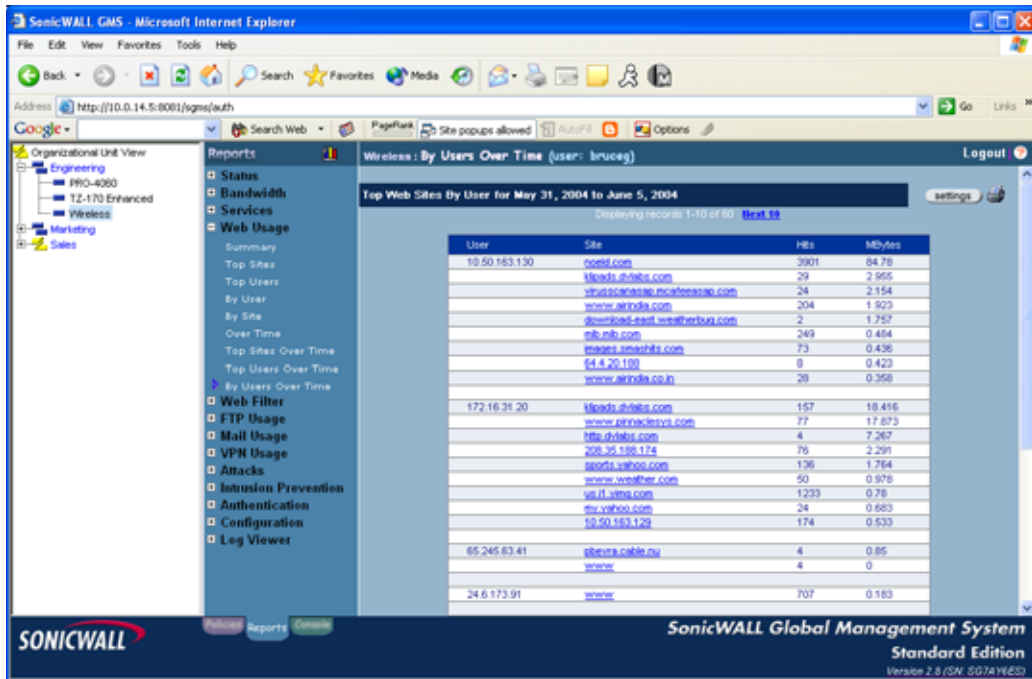
## Viewing Bandwidth Usage By User Over Time

The By User Over Time report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred for the specified time period.

To view the By User Over Time report, follow these steps:

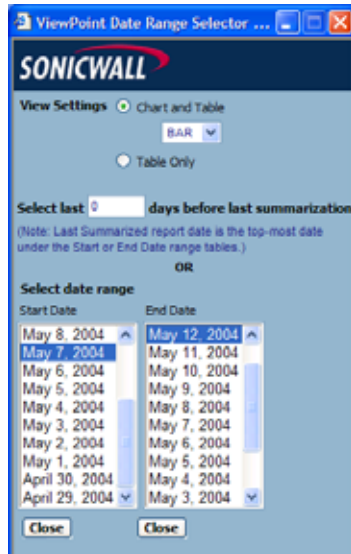
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Usage tree and click **By User Over Time**. The By User Over Time page appears (Figure 55).

Figure 55: By User Over Time Page



5. The table contains the following information:
  - User—the IP address of the user.
  - Site—the top five sites visited by the user.
  - Hits—number of hits to each web site visited by the user.
  - KBytes—number of kilobytes transferred.
6. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 56).

Figure 56: Report Settings Dialog Box



7. Select whether to display a chart and table or a table only.
8. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.



- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

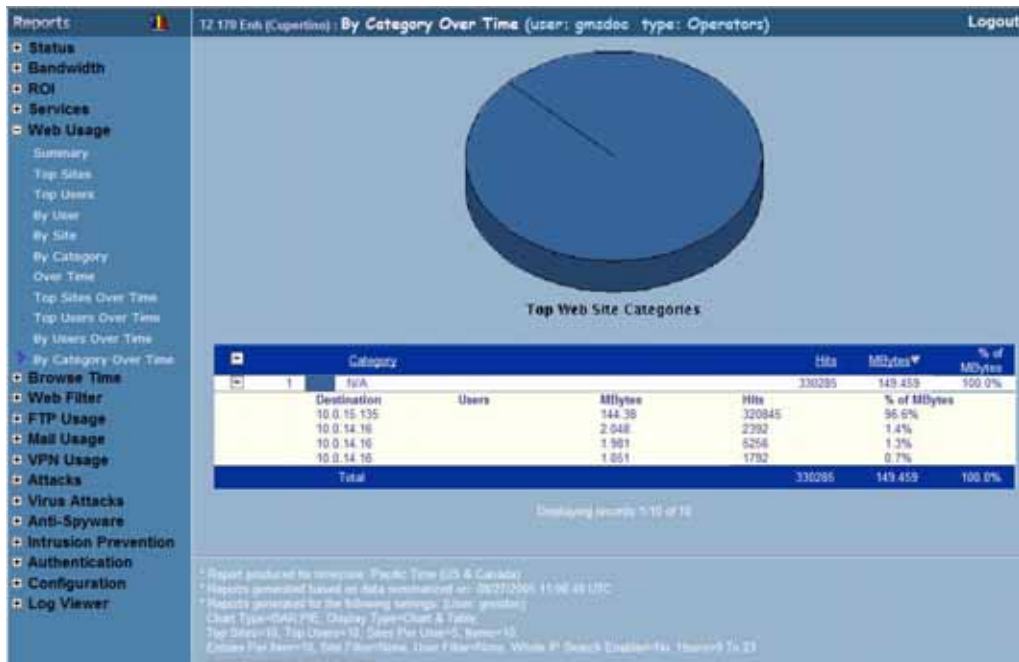
## Viewing Web Usage By Category Over Time

The By Category Over Time report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred for the specified time period.

To view the By Category Over Time report, follow these steps:

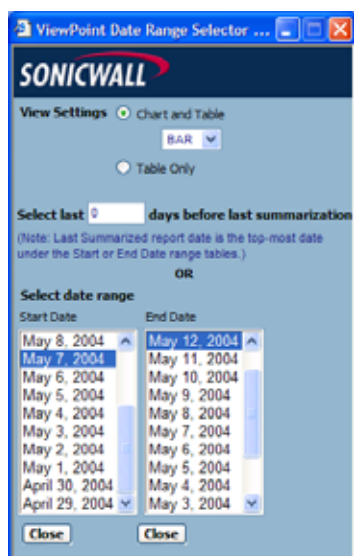
- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select a SonicWALL appliance.
- Expand the Web Usage tree and click **By Category Over Time**. The By User Over Time page appears (Figure 55).

**Figure 57: By Category Over Time Page**



- The table contains the following information:
  - Category—the Website category.
  - Hits—number of hits to each web site visited by the user.
  - KBytes—number of kilobytes transferred.
- To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

**Figure 58: Report Settings Dialog Box**



7. Select whether to display a chart and table or a table only.
8. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
9. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

---

## Viewing Browse Time Reports

Browse Time reports display the amount of time consumed browsing the Internet through one or more selected SonicWALL appliances.

Browse Time reports are an ideal starting point for viewing time spent browsing the Internet. You can view Browse Time usage view by the hour, day, or over a period of days. Additionally, you can view the top users who browse the Internet the most and the percentage of the browse time accrued by each top user.

From this information, you can determine network strategies. For example, if you need to lower costs attributed to consumed network bandwidth, you will have the ability to generate Browse Time reports to identify the total amount time used for non-job function-related Internet browsing.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the total time used browsing the Internet, see “Viewing the Browse Time Summary Report” on page 58.
- To view the users who spend the most time browsing the Internet, see “Viewing the Top Users in a Browse Time Report” on page 60.
- To view the total time spent browsing the Internet over a period of time, see “Viewing Browse Time Usage Over Time” on page 64.
- To view the users who spend the most time browsing the Internet over a period of time, see “Viewing the Top Users of Browse Time Over Time” on page 65.

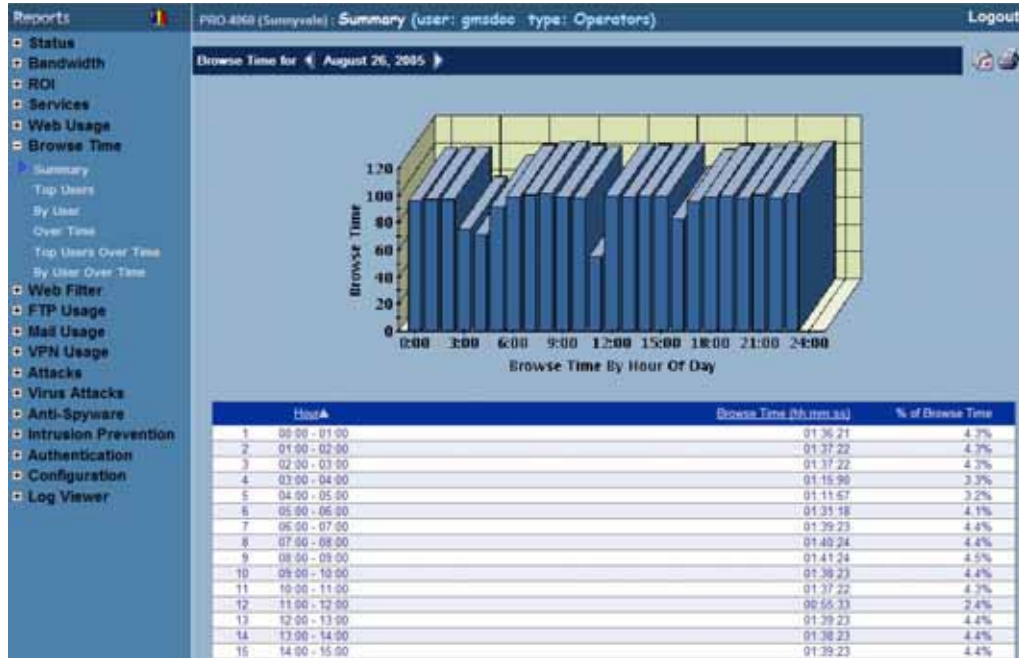
## Viewing the Browse Time Summary Report

The Browse Time Summary report contains information on the amount of time spend browsing the Internet behind a SonicWALL appliance or group of SonicWALL appliances during each hour of the specified day.

To view the Browse Time Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the **Browse Time** tree and click **Summary**. The Summary page appears (Figure 59).

**Figure 59: Summary Page**



5. The bar graph displays the total time spent browsing non-job function-related sites on the Internet each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Browse Time**—number of hours, minutes, and seconds spent browsing non-job function-related sites on the Internet.
  - **% of Browse Time**—percentage of the total amount of time browsing non-job function-related sites on the Internet during this hour, compared to the day.

7. SonicWALL GMS shows today's report. To change the date of the report and other settings, click **Settings**. The Report Settings dialog box appears (Figure 60).

**Figure 60: Report Settings Dialog Box**



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view from the **Select Report Date** area.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Users in a Browse Time Report

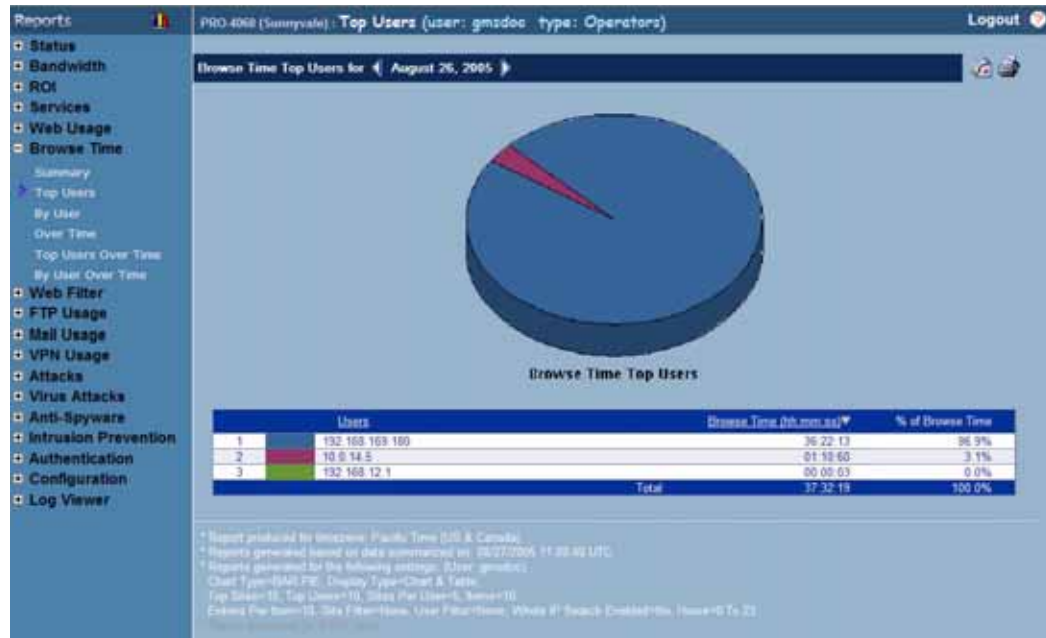
The Top Users report displays the users who spent the most time browsing non-job function-related sites on the Internet for the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.

- Expand the **Browse Time** tree and click **Top Users**. The Top Users page appears (Figure 61).

**Figure 61: Top Users Page**



- The pie chart displays a Browse Time report on the total time spent browsing non-job function-related sites on the Internet by each user.
- The table contains the following information:
  - Hour**—when the sample was taken.
  - Browse Time**—number of hours, minutes, and seconds spent browsing non-job function-related sites on the Internet.
  - % of Browse Time**—percentage of the total amount of time browsing non-job function-related sites on the Internet during this hour, compared to the day.

- By default, SonicWALL GMS shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears.

**Figure 62: Report Settings Dialog Box**



- Select the number of users that will be displayed from the **Number of Users** list box.
- Select the type of chart from the **Chart Type** list box.
- Select the year, month, and day that you would like to view.
- To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*

- When you are finished, click **Close**. SonicWALL GMS displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Browse Time Report by User

The By User report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred.

To view the By User report, follow these steps:

- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select a SonicWALL appliance.
- Expand the Browse Time tree and click **By User**. The By User page appears (Figure 41).

Figure 63: By User Page



5. The table contains the following information:
  - **User**—the IP address of the user.
  - **Hits**—number of hits to each web site visited by the user.
  - **MBytes**—number of megabytes transferred.
6. To change the display settings, click **Settings**. The Report Settings dialog box appears (Figure 42).

Figure 64: Report Settings Dialog Box



7. Select the number of users that will be displayed from the **Number of Users** list box.
8. Select the type of chart from the **Chart Type** list box.

9. Select the year, month, and day that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.  
*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
11. When you are finished, click **Close**. The GMS Reporting Module refreshes the report based on the selected settings.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Browse Time Usage Over Time

The Browse Time Over Time report displays the total daily amount of time spent browsing non-job function-related sites on the Internet behind a SonicWALL appliance or a group of SonicWALL appliances for the specified time period.

To view the Browse Time Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the **Browse Time** tree and click **Over Time**. The Over Time page appears (Figure 65).

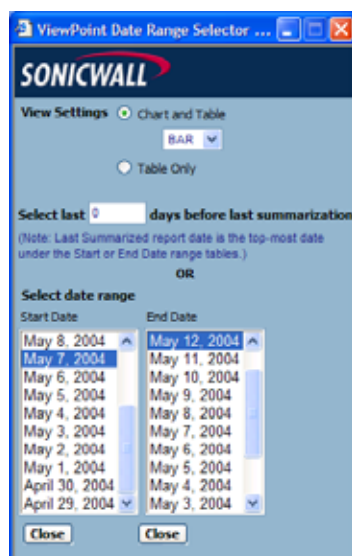
**Figure 65: Over Time Page**



5. The bar graph displays the total time spent browsing non-job function-related sites on the Internet each day of the specified time period.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Browse Time**—number of minutes spent browsing non-job function-related sites on the Internet.
  - **% of Browse Time**—percentage of the total amount of time browsing non-job function-related sites on the Internet during this hour, compared to the day.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.



**Figure 66: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. SonicWALL GMS displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Users of Browse Time Over Time

The Top Users report displays the users who spent the most time browsing non-job function-related sites on the Internet on the specified date.

To view the Top Users Over Time report, follow these steps:

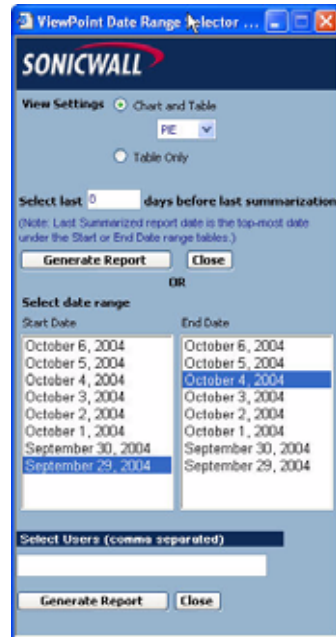
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the **Browse Time** tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 67).

Figure 67: Top Users Over Time Page



5. The pie chart displays the total time spent browsing non-job function-related sites on the Internet by each user.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Browse Time**—number of hours, minutes, and seconds spent browsing non-job function-related sites on the Internet.
  - **% of Browse Time**—percentage of the total amount of time browsing non-job function-related sites on the Internet during this hour, compared to the day.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

Figure 68: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.
 

*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
11. When you are finished, click **Close**. SonicWALL GMS displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Browse Time By User Over Time

The By User Over Time report displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred for the specified time period.

To view the By User Over Time report, follow these steps:

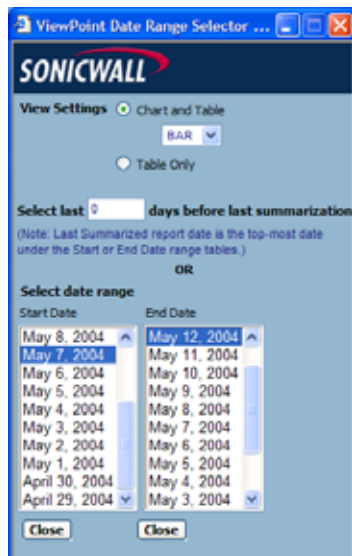
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Browse Time tree and click **By User Over Time**. The By User Over Time page appears.

**Figure 69: By User Over Time Page**

User	Site	Hits	MBytes
10.50.153.130	google.com	3901	84.75
	fileds.d-fds.com	29	2.565
	www.scnasia.com/ncat/ncat.asp	24	2.154
	www.aindia.com	204	1.923
	download-east.weatherbus.com	2	1.757
	nlb.mlb.com	249	0.484
	images.smartbits.com	73	0.436
	64.4.20.100	8	0.423
	www.aindia.co.in	28	0.358
172.16.31.20	fileds.d-fds.com	157	18.416
	www.sinnacktsyl.com	77	17.873
	http.d-fds.com	4	7.267
	208.95.188.174	76	2.291
	soods.yahoo.com	136	1.764
	www.weather.com	50	0.976
	va.it.vms.com	1233	0.78
	en.yahoo.com	24	0.683
	10.50.153.129	174	0.533
65.245.63.41	ibevra.cable.nyu	4	0.85
	www	4	0
24.6.173.91	www	707	0.183

5. The table contains the following information:
  - User—the IP address of the user.
  - Site—the top five sites visited by the user.
  - Hits—number of hits to each web site visited by the user.
  - KBytes—number of kilobytes transferred.
6. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears.

**Figure 70: Report Settings Dialog Box**



7. Select whether to display a chart and table or a table only.
8. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.

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## Viewing Web Filter Reports

Web filter reports provide information on the number of attempts that users made to access blocked web sites through the selected SonicWALL appliance(s). These reports include web sites blocked by the Content Filter List, customized keyword filtering, and domain name filtering.

Web filter reports can be used to view blocked site access attempts by the hour, day, or over a period of days. Additionally, you can view the users that most frequently attempt to access blocked sites and the most popular blocked sites.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the blocked site access attempts, see “Viewing the Web Filter Summary Report” on page 69.
- To view a list of the blocked sites that users attempted to access most often, see “Viewing the Web Filter Top Sites Report” on page 71.
- To view the users who made the most attempts to access blocked sites, see “Viewing the Top Users that Try to Access Blocked Sites” on page 72.
- To view the top blocked sites that each user attempted to access, see “Viewing the Top Blocked Sites for Each User” on page 73.
- To view blocked site access attempts over a period of time, see “Viewing Blocked Site Attempts Over Time” on page 75.
- To view a list of the blocked sites that users attempted to access most often over time, see “Viewing Blocked Site Attempts Over Time” on page 75.
- To view the users who made the most attempts to access blocked sites over time, see “Viewing the Top Blocked Site Users Over Time” on page 78.
- To view the top blocked sites that each user attempted to access over time, see “Viewing the Top Blocked Sites for Each User Over Time” on page 79.

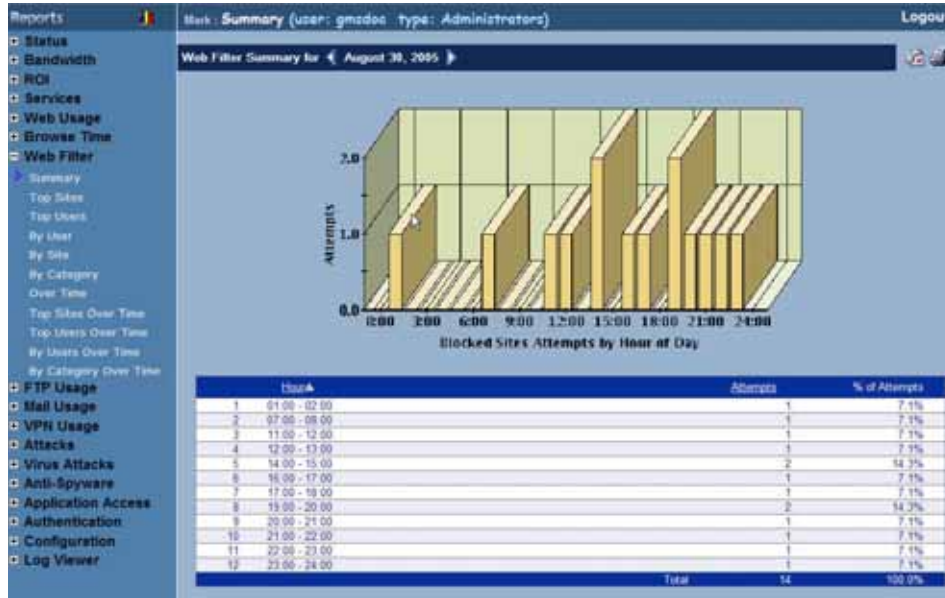
## Viewing the Web Filter Summary Report

The Web Filter Summary report contains information on the number of times users attempt to access blocked sites for the specified day.

To view the Web Filter Summary report, follow these steps:

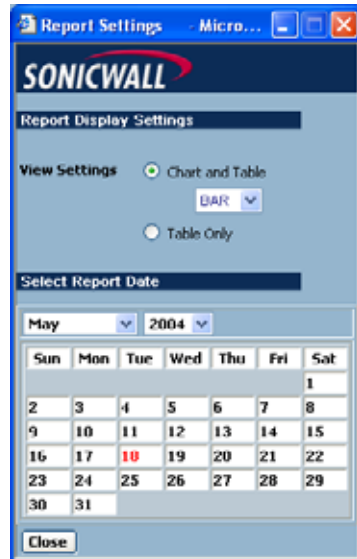
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Filter tree and click **Summary**. The Summary page appears (Figure 71).

Figure 71: Summary Page



5. The bar graph displays the number of blocked sites that users attempted to access during each hour of the day.
6. The table contains the following information:
  - **Hour**—time when the sample was taken.
  - **Attempts**—number of attempts to access blocked sites.
  - **% of Attempts**—percentage of attempts during this hour, compared to the day. For example, if 100 attempts occurred during the day and 20 attempts occurred at the 12:00 time period, the **% of Attempts** field will display 20%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 72).

Figure 72: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

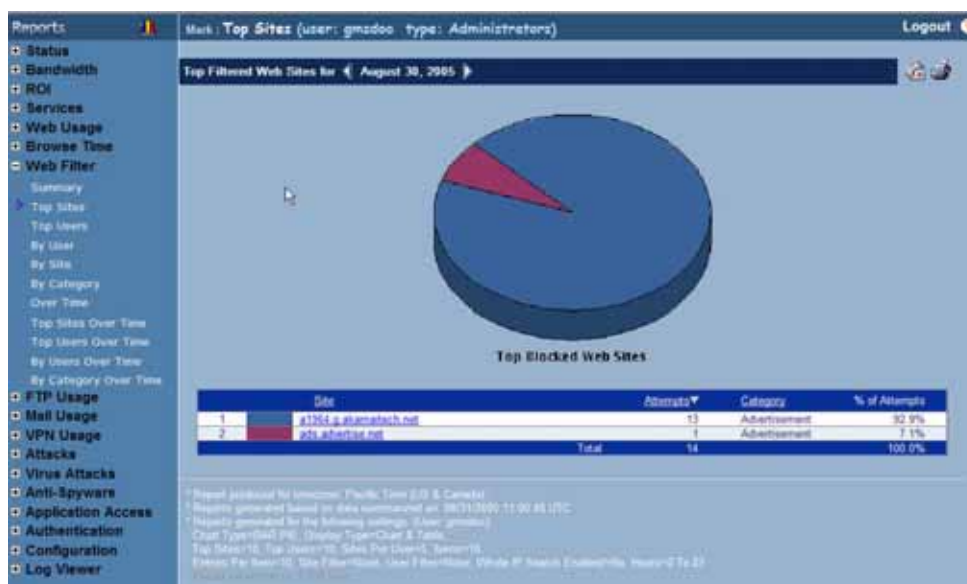
## Viewing the Web Filter Top Sites Report

The Web Filter Top Sites report displays the top blocked web sites that users attempted to access on the specified date.

To view the Top Sites report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Sites**. The Top Sites page appears (Figure 73).

**Figure 73: Top Sites Page**



5. The graph provides a display of the number of access attempts for each of the top twenty blocked web sites.
6. The table contains the following information:
  - **Site**—URL or IP address of the site.
  - **Attempts**—number of attempts.
  - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other blocked site attempts. For example, if 500 attempts were made during the day and 100 of those attempts were for www.badsite.com, its **% of Attempts** field will display 20%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 74).

Figure 74: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

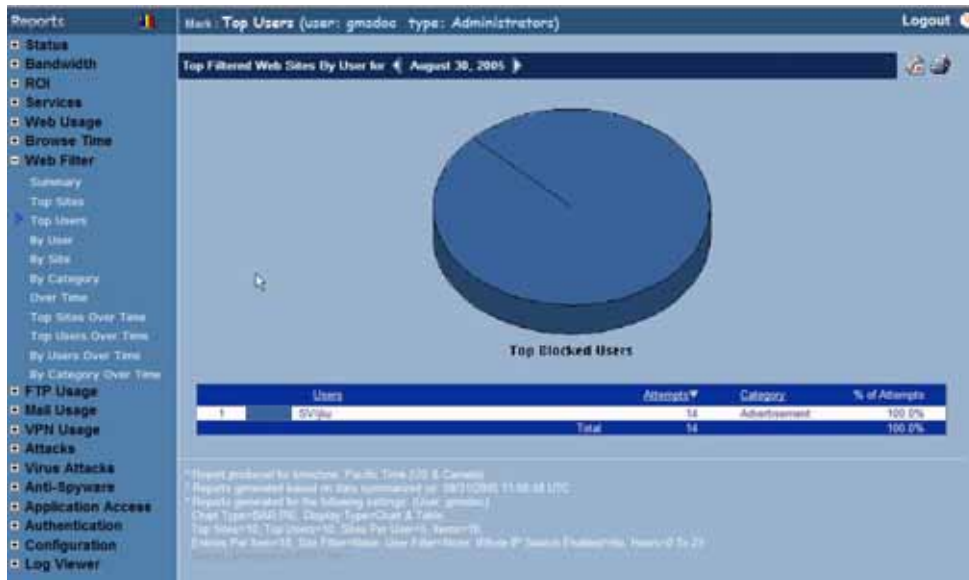
## Viewing the Top Users that Try to Access Blocked Sites

The Web Filter Top Users report displays the users who made the most attempts to access blocked sites on the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Users**. The Top Users page appears (Figure 75).

Figure 75: Top Users Page

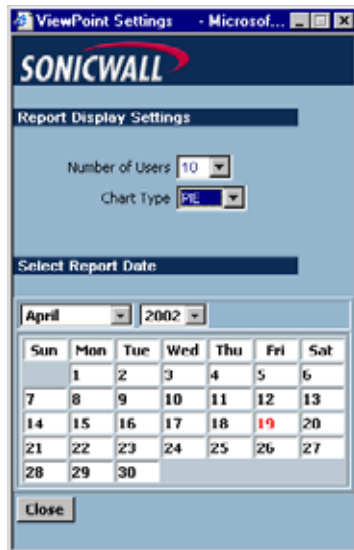


5. The pie chart displays the top users with the most blocked site attempts.



6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Attempts**—number of attempts.
  - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other user attempts. For example, if 500 attempts were made during the day and 250 of those attempts were made by a single user, his **% of Attempts** field will display 50%.
7. By default, GMS Reporting shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 76).

**Figure 76: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Blocked Sites for Each User

The Web Filter By User report displays the top blocked web sites that each user attempted to access on the specified date.

To view the Web Filter By User report, follow these steps:

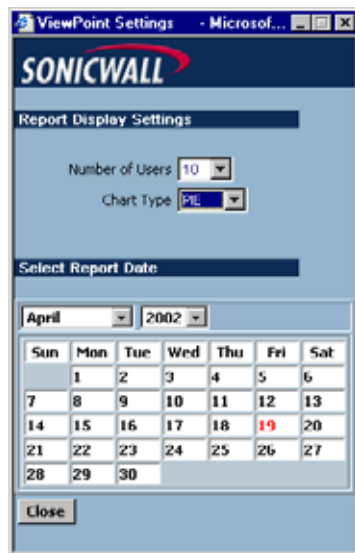
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **By User**. The By User page appears (Figure 77).

Figure 77: By User Page



5. The table contains the following information:
  - User—the IP address of the user.
  - Site—the top five sites visited by the user.
  - Attempts—number of attempts the user made to access each web site.
6. By default, the GMS Reporting Module shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 78).

Figure 78: Report Settings Dialog Box



7. Select the number of users that will be displayed from the **Number of Users** list box.
8. Select the type of chart from the **Chart Type** list box.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

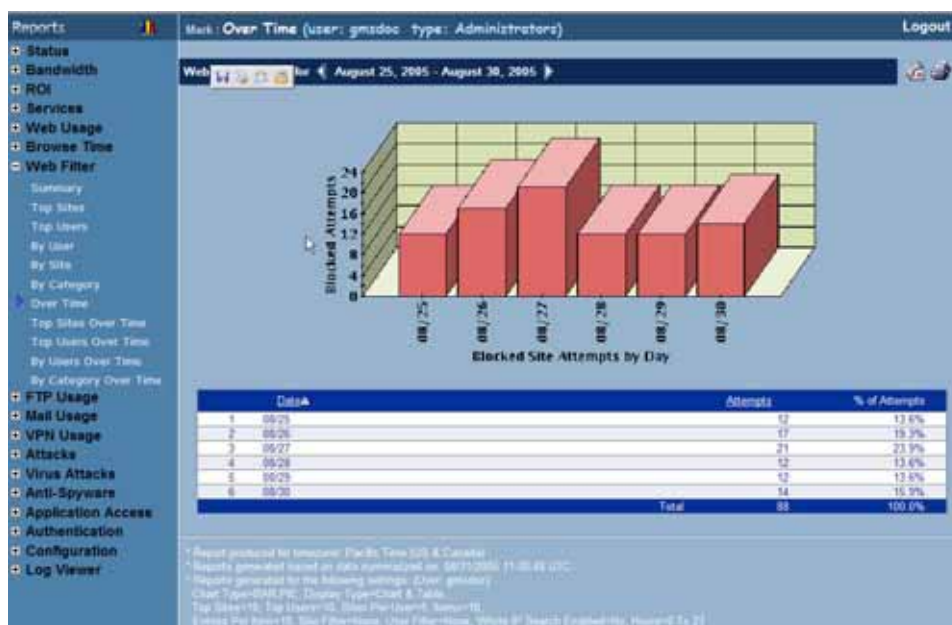
## Viewing Blocked Site Attempts Over Time

The Web Filter Over Time report displays the number of attempts that were made to access blocked web sites for the specified time period.

To view the Web Filter Over Time report, follow these steps:

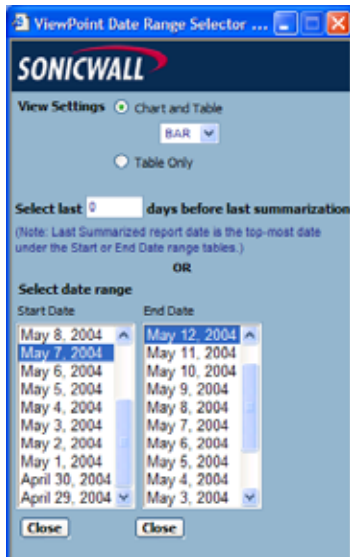
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Web Filter tree and click **Over Time**. The Over Time page appears (Figure 79).

**Figure 79: Over Time Page**



5. The bar graph displays the number of attempts that were made to access blocked web sites during each day of the specified time period.
6. The table contains the following information:
  - **Date**—day when the sample was taken.
  - **Attempts**—number of attempts to access blocked web sites.
  - **% of Attempts**—percentage of attempts to access the blocked site on the day, compared to the time period. For example, if 5,000 attempts were made during the time period and 500 were made on one day, its **% of Attempts** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 80).

**Figure 80: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

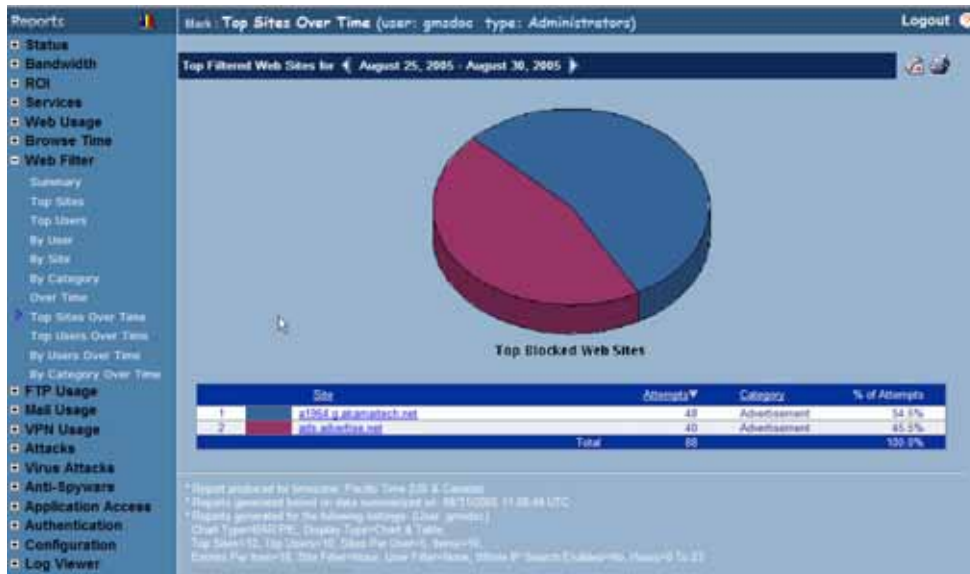
## Viewing the Top Blocked Site Attempts Over Time

The Top Sites Over Time report displays the top blocked web sites for the specified time period.

To view the Web Filter Over Time report, follow these steps:

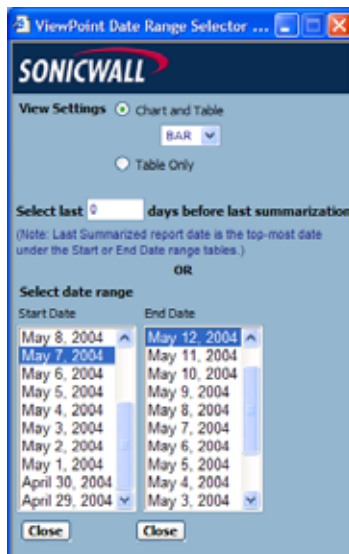
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Sites Over Time**. The Top Sites Over Time page appears (Figure 81).

**Figure 81: Top Sites Over Time Page**



5. The graph displays the number of access attempts for each of the top blocked web sites during the specified time period.
6. The table contains the following information:
  - **Site**—URL or IP address of the site.
  - **Attempts**—number of attempts.
  - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other blocked site attempts. For example, if 500 attempts were made during the period and 100 of those attempts were for www.badsite.com, its **% of Attempts** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 82).

**Figure 82: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.

10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note:* These settings will stay in effect for all similar reports during your active login session.

## Viewing the Top Blocked Site Users Over Time

The Web Filter Top Users Over Time report displays the users who made the most attempts to access blocked sites during the specified time period.

To view the Top Users Over Time report, follow these steps:

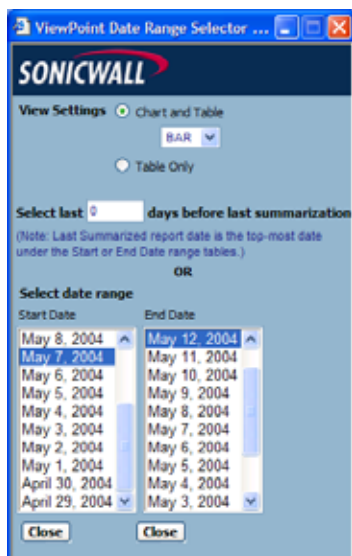
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 83).

**Figure 83: Top Users Over Time Page**



5. The pie chart displays the top users with the most blocked site attempts.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Attempts**—number of attempts.
  - **% of Attempts**—percentage of attempts to access the blocked site, compared to all other user attempts. For example, if 500 attempts were made during the period and 250 of those attempts were made by a single user, his **% of Attempts** field will display 50%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 84).

Figure 84: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Blocked Sites for Each User Over Time

The Web Filter By User report displays the top blocked web sites that each user attempted to access during the specified time period.

To view the By User Over Time report, follow these steps:

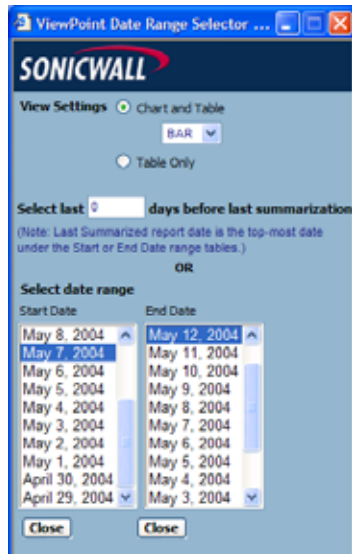
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Web Filter tree and click **By User Over Time**. The By User Over Time page appears (Figure 85).

**Figure 85: By Users Over Time Page**



5. The table contains the following information:
  - User—the IP address of the user.
  - Site—the top five sites visited by the user.
  - Attempts—number of attempts the user made to access each web site.
6. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 86).

**Figure 86: Report Settings Dialog Box**



7. Select whether to display a chart and table or a table only.
8. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
9. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*



## Viewing File Transfer Protocol Reports

FTP usage reports provide information on the amount of FTP usage that occurs through the selected SonicWALL appliance(s).

FTP usage reports can be used to view FTP bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of FTP bandwidth.

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of FTP traffic occurs during peak times, you might need more bandwidth, you might need to upgrade network equipment, or you might ask employees to use compression or transfer large files during non-peak times.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily FTP bandwidth usage, see “Viewing the FTP Summary Report” on page 81.
- To view the users who consume the most FTP bandwidth, see “Viewing the Top Users of FTP Bandwidth” on page 82.
- To view FTP bandwidth usage over a period of time, see “Viewing FTP Bandwidth Usage Over Time” on page 84.
- To view the users who consume the most FTP bandwidth over time, see “Viewing FTP Bandwidth Usage Over Time” on page 84.

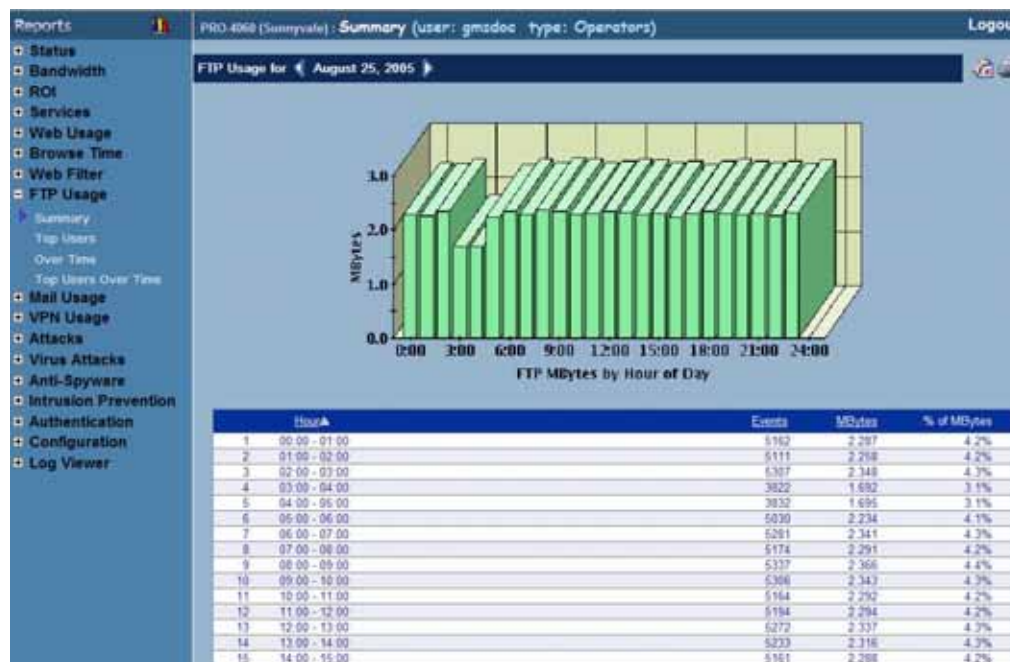
## Viewing the FTP Summary Report

The FTP Summary report contains information on the amount of FTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the FTP Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Summary**. The Summary page appears (Figure 87).

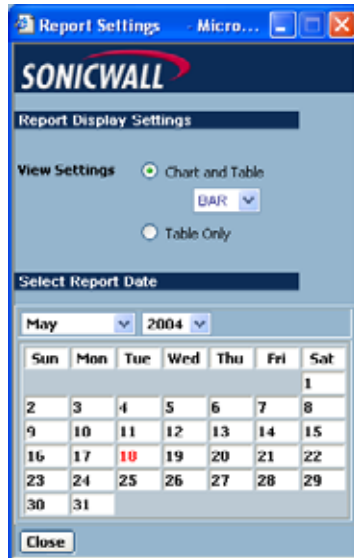
**Figure 87: Summary Page**



5. The bar graph displays the amount of FTP bandwidth transferred during each hour of the day.

6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Events**—number of FTP events.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 1000 megabytes of FTP data was transferred during the day and 100 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 88).

**Figure 88: Report Settings Dialog Box**



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

## Viewing the Top Users of FTP Bandwidth

The Top Users report displays the users who used the most FTP bandwidth on the specified date.

To view the Top Users report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Top Users**. The Top Users page appears (Figure 89).

Figure 89: Top Users Page



5. The pie chart displays the percentage of bandwidth used by each user. To view the sites visited by each user, expand the user's site tree (indicated by a '+' sign).
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Events**—number of FTP Events.
  - **KBytes**—number of kilobytes transferred.
  - **% of KBytes**—percentage of kilobytes transferred by this user, compared to all users. For example, if 10000 kilobytes of data was transferred during the day and 2000 kilobytes was transferred by the top user, the **% of KBytes** field will display 20%.
7. By default, the GMS Reporting Module shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 90).

**Figure 90: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.  
*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
12. When you are finished, click **Close**. The GMS Reporting Module refreshes the report based on the selected settings.  
*Note: These settings will stay in effect for all similar reports during your active login session.*

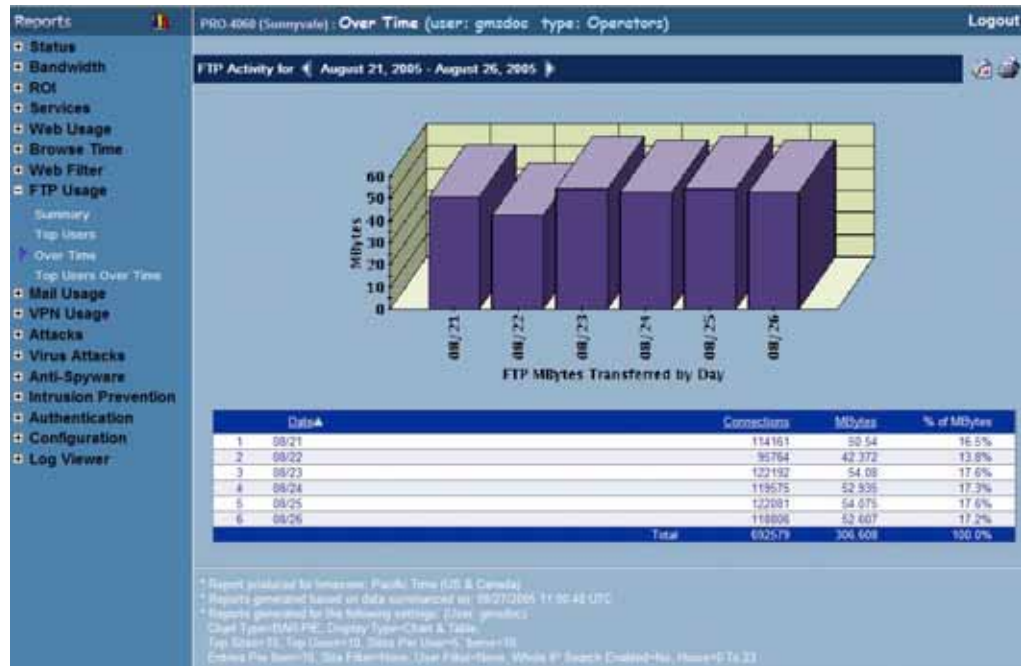
## Viewing FTP Bandwidth Usage Over Time

The FTP Usage Over Time report displays the daily amount of FTP bandwidth handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the FTP Usage Over Time report, follow these steps:

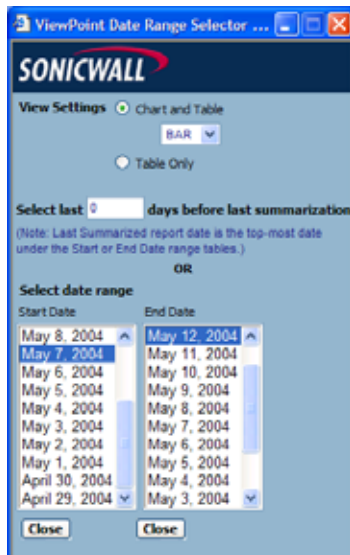
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Over Time**. The Over Time page appears (Figure 91).

Figure 91: Over Time Page



5. The bar graph displays the amount of FTP bandwidth transferred during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Connections**—number of FTP connections.
  - **MBytes**—number of megabytes transferred.
  - **% of Usage**—percentage of megabytes transferred during this day, compared to the time period. For example, if 10,000 megabytes of FTP data was transferred during the time period and 2,500 megabytes of FTP data was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 92).

Figure 92: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

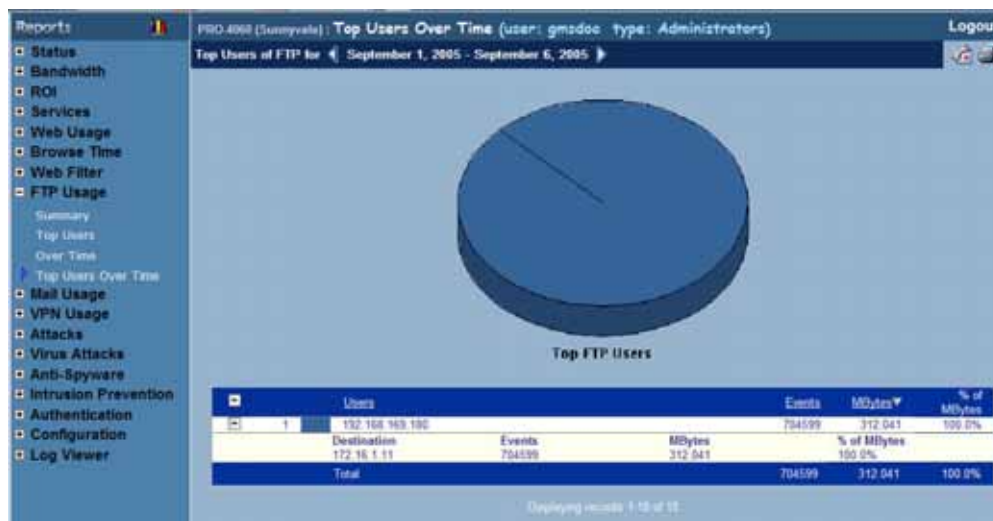
## Viewing the Top Users of FTP Bandwidth Over Time

The Top Users Over Time report displays the users who used the most FTP bandwidth for the specified time period.

To view the Top Users Over Time report, follow these steps:

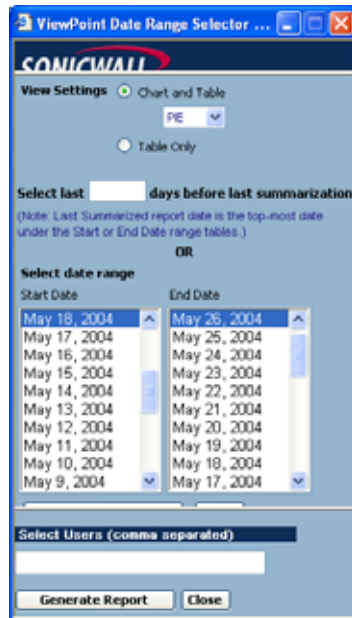
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the FTP Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 93).

**Figure 93: Top Users Over Time Page**



5. The pie chart displays the top users of FTP bandwidth. To view the FTP sites visited by each user, expand the user's site tree (indicated by a '+' sign).
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Events**—number of FTP Events.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 10000 megabytes of data was transferred during the period and 2000 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the report settings, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 94).

Figure 94: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. To display a limited group of users, enter the user IDs in the **Select Users** field and separate each entry with a comma.

*Note: This field does not use pattern matching. For example, "john" will not match john\_smith, john42, or big\_john.*
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

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## Viewing Mail Usage Reports

Mail usage reports provide information on the amount of mail usage that occurs through the selected SonicWALL appliance(s).

Mail usage reports can be used to view mail bandwidth usage by the hour, day, or over a period of days. Additionally, you can view the top users of mail bandwidth.

*Note: Mail usage reports include SMTP, POP3, and IMAP traffic.*

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of mail traffic occurs during peak times, you might want to take some of the following actions:

- Add bandwidth
- Upgrade network equipment
- Ask employees to use compression or transfer large files during non-peak times
- Ask employees to place large files on an FTP site rather than sending them as mail attachments.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily mail usage, see “Viewing the Mail Usage Summary Report” on page 88.
- To view the users who consume the most mail bandwidth, see “Viewing the Top Users of Mail Bandwidth” on page 90.
- To view mail usage over a period of time, see “Viewing Mail Usage Over Time” on page 91.
- To view the users who consume the most mail bandwidth over time, see “Viewing the Top Users of Mail Bandwidth Over Time” on page 93.

## Viewing the Mail Usage Summary Report

The Mail Usage Summary report contains information on the amount of mail handled by a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Mail Usage Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Summary**. The Summary page appears (Figure 95).



Figure 95: Summary Page



5. The bar graph displays the amount of mail sent and received during each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Events**—number of mail events.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred during this hour, compared to the day. For example, if 10,000 megabytes of mail was transferred during the day and 1,000 megabytes was transferred at the 12:00 time period, the **% of MBytes** field will display 10%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 96).

Figure 96: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.

10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

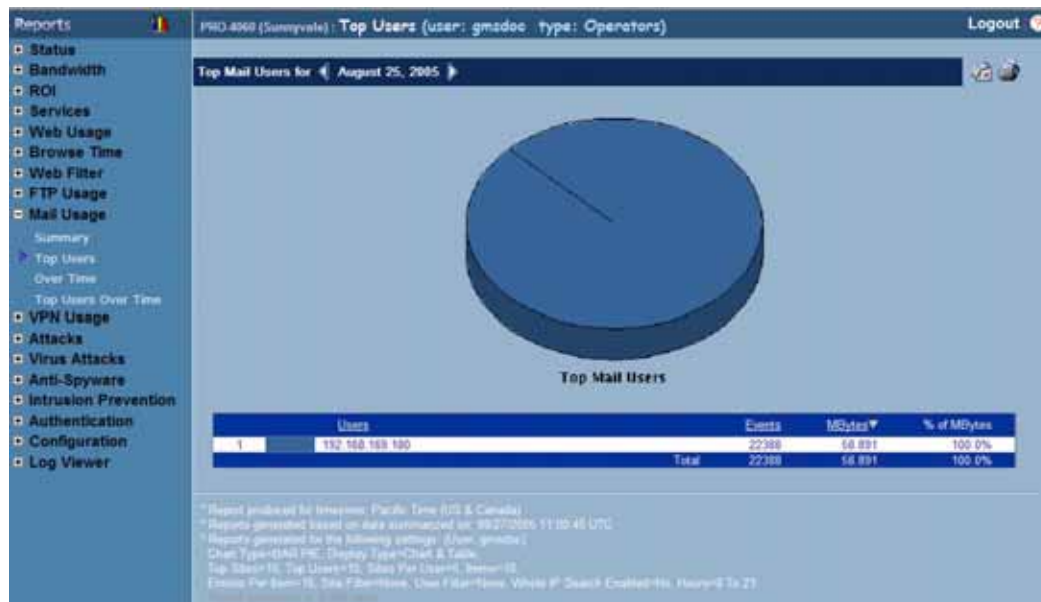
## Viewing the Top Users of Mail Bandwidth

The Top Users report displays the users who sent and received the most mail on the specified date.

To view the Top Users report, follow these steps:

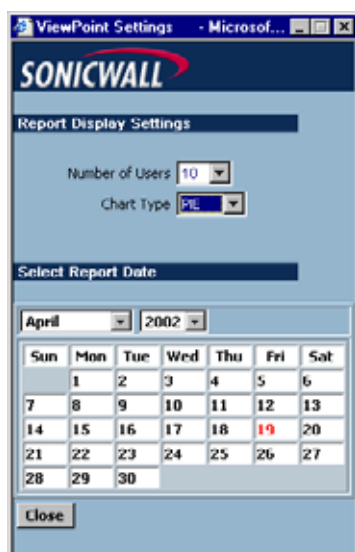
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Top Users**. The Top Users page appears (Figure 97).

**Figure 97: Top Users Page**



5. The pie chart displays the percentage of mail sent and received by the top mail users.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Events**—number of mail messages sent and received.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 10000 megabytes of data was transferred during the day and 2000 megabytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. By default, the GMS Reporting Module shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 98).

**Figure 98: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

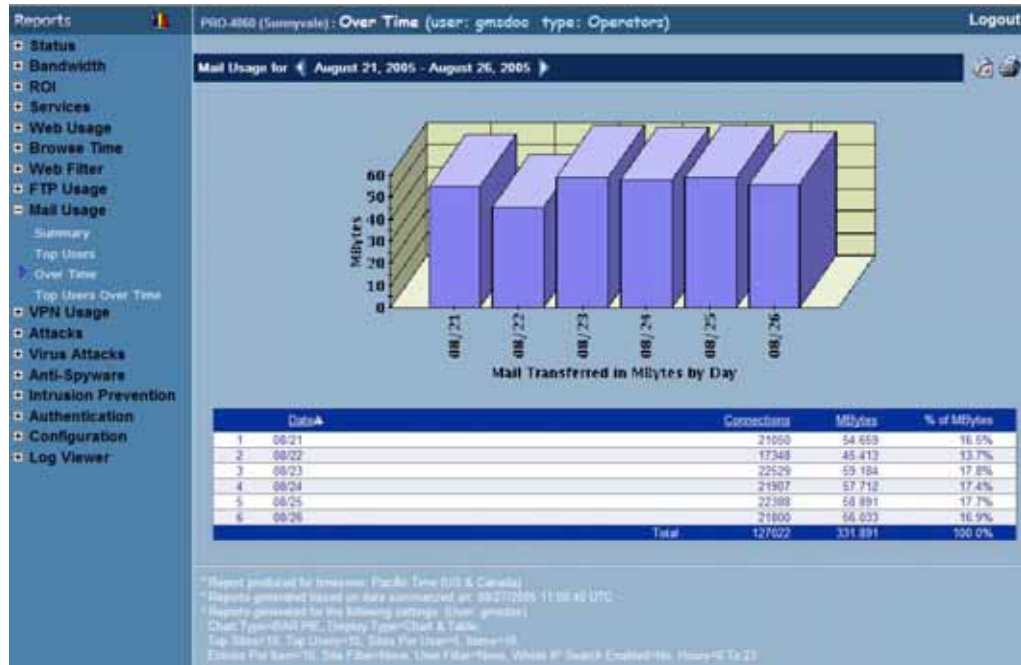
## Viewing Mail Usage Over Time

The Mail Usage Over Time report displays the daily amount of mail handled by a SonicWALL appliance or group of SonicWALL appliances for the specified time period.

To view the Mail Usage Over Time report, follow these steps:

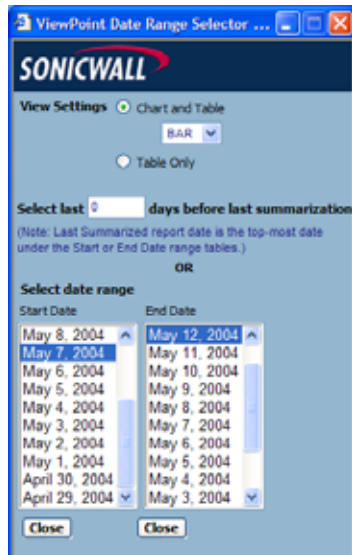
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Over Time**. The Over Time page appears (Figure 99).

Figure 99: Over Time Page



5. The bar graph displays the amount of mail sent and received during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Connections**—number of mail messages.
  - **KBytes**—number of kilobytes transferred.
  - **% of Usage**—percentage of kilobytes transferred during this day, compared to the time period. For example, if 10,000 kilobytes of mail was transferred during the time period and 2,500 kilobytes of mail was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 100).

Figure 100: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing the Top Users of Mail Bandwidth Over Time

The Top Users Over Time report displays the users who sent and received the most mail during the specified time period.

To view the Top Users Over Time report, follow these steps:

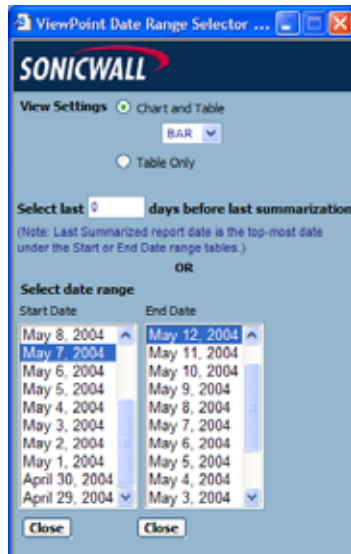
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Mail Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 101).

**Figure 101: Top Users Over Time Page**



5. The pie chart displays the percentage of mail sent and received by the top mail users.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Events**—number of mail messages sent and received.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred by this user, compared to all users. For example, if 10,000 megabytes of data was transferred during the period and 2000 kilobytes was transferred by the top user, the **% of MBytes** field will display 20%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 102).

**Figure 102: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**.GMS Reporting displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

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## Viewing VPN Usage Reports

VPN Usage reports provide information on the amount of VPN usage that occurs through the selected SonicWALL appliance(s).

VPN Usage reports can be used to view VPN usage by the hour, day, or over a period of days. Additionally, you can view the top users of VPN.

General bandwidth reports do not always provide a complete picture of network bandwidth usage. If a large amount of VPN traffic occurs, you might need to add bandwidth, upgrade network equipment, or reconfigure the VPN network.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the daily VPN bandwidth usage, see “Viewing the VPN Usage Summary Report” on page 95.
- To view the users who consume the most VPN bandwidth, see “Viewing the Top VPN Users” on page 97.
- To view VPN bandwidth usage over a period of time, see “Viewing VPN Usage Over Time” on page 98.
- To view the users who consume the most VPN bandwidth over time, see “Viewing VPN Usage Over Time” on page 98.
- To view the users who consume the most VPN bandwidth over time, see “Viewing the Top VPN Users Over Time” on page 100.
- To view VPN usage by policy, see “Viewing VPN Usage by Policy” on page 101.
- To view VPN usage by policy over time, see “Viewing the Top VPN Policies Over Time” on page 103.
- To view hourly VPN usage by policy, see “Viewing Hourly VPN Usage by Policy” on page 104.
- To view VPN services usage, see “Viewing the VPN Services Summary Report” on page 106.

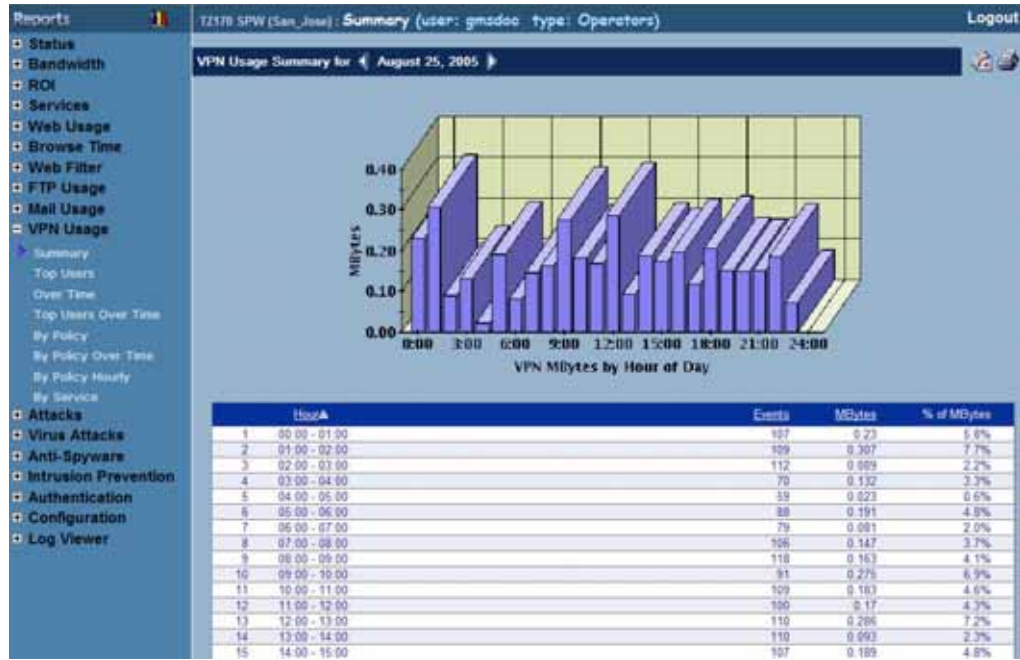
## Viewing the VPN Usage Summary Report

The VPN Usage Summary report contains information on the number of VPN connections made through a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the VPN Usage Summary report, follow these steps:

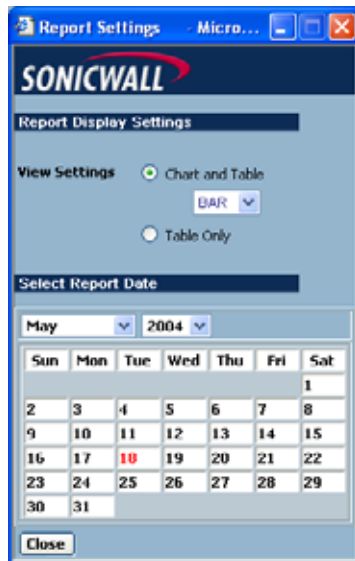
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Summary**. The Summary page appears (Figure 103).

Figure 103: Summary Page



5. The bar graph displays the number of VPN connections made during each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Connections**—number of VPN connections.
  - **% of Connections**—percentage of VPN connections during this hour, compared to the day. For example, if 10,000 connections occurred during the day and 1,000 connections occurred during the 2:00 time period, the **% of Connections** field will display 10%.
7. The GMS Reporting Module shows today’s report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 104).

Figure 104: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.



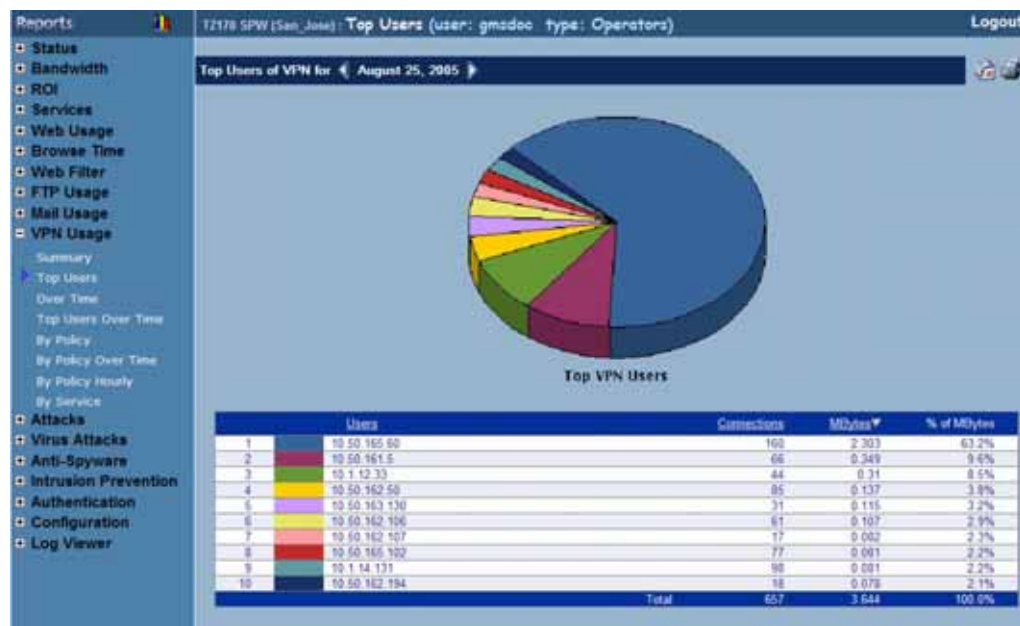
## Viewing the Top VPN Users

The Top Users report displays the users who made the most VPN connections on the specified date.

To view the Top Users report, follow these steps:

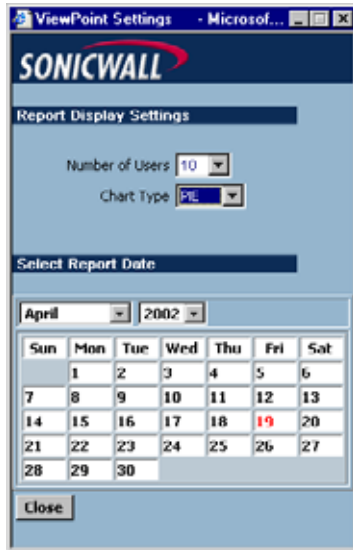
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Top Users**. The Top Users page appears (Figure 105).

**Figure 105: Top Users Page**



5. The pie chart displays the VPN connections for the top VPN users.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Connections**—number of VPN connections.
  - **% of Connections**—percentage of VPN connections made by this user, compared to all other users. For example, if 10,000 connections occurred during the day and 1,000 connections were made by one user, the **% of Connections** field will display 10%.
7. By default, the GMS Reporting Module shows today's report, a pie chart, and the ten top users. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 106).

**Figure 106: Report Settings Dialog Box**



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

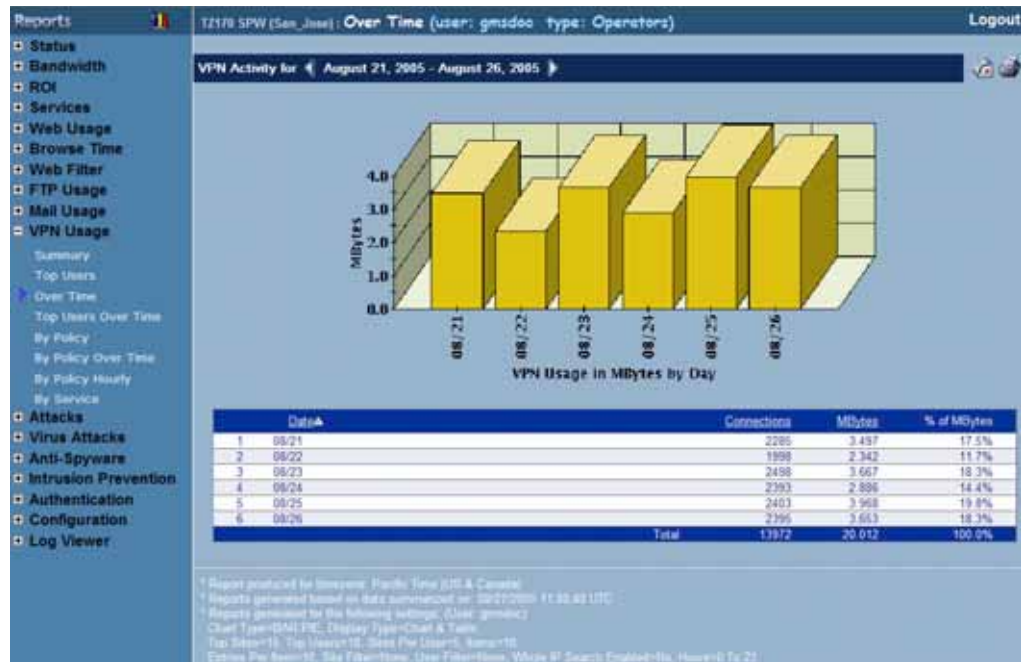
## Viewing VPN Usage Over Time

The VPN Usage Over Time report displays the daily number of VPN connections made through a SonicWALL appliance or group of SonicWALL appliances during the specified time period.

To view the VPN Usage Over Time report, follow these steps:

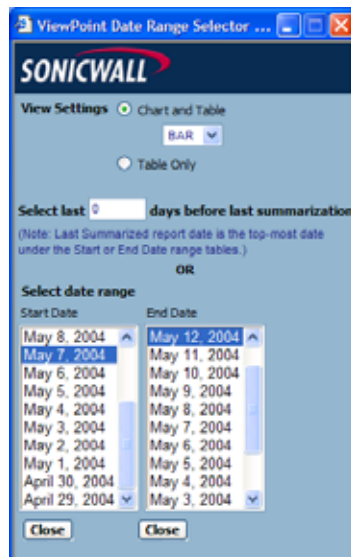
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Over Time**. The Over Time page appears (Figure 107).

Figure 107: Over Time Page



5. The bar graph displays the number of VPN connections made during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Connections**—number of connections.
  - **KBytes**—number of kilobytes transferred.
  - **% of Usage**—percentage of kilobytes transferred during this day, compared to the time period. For example, if 10,000 kilobytes of mail was transferred during the time period and 2,500 kilobytes of mail was transferred on one day, the **% of Usage** field will display 25%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 108).

Figure 108: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.

9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

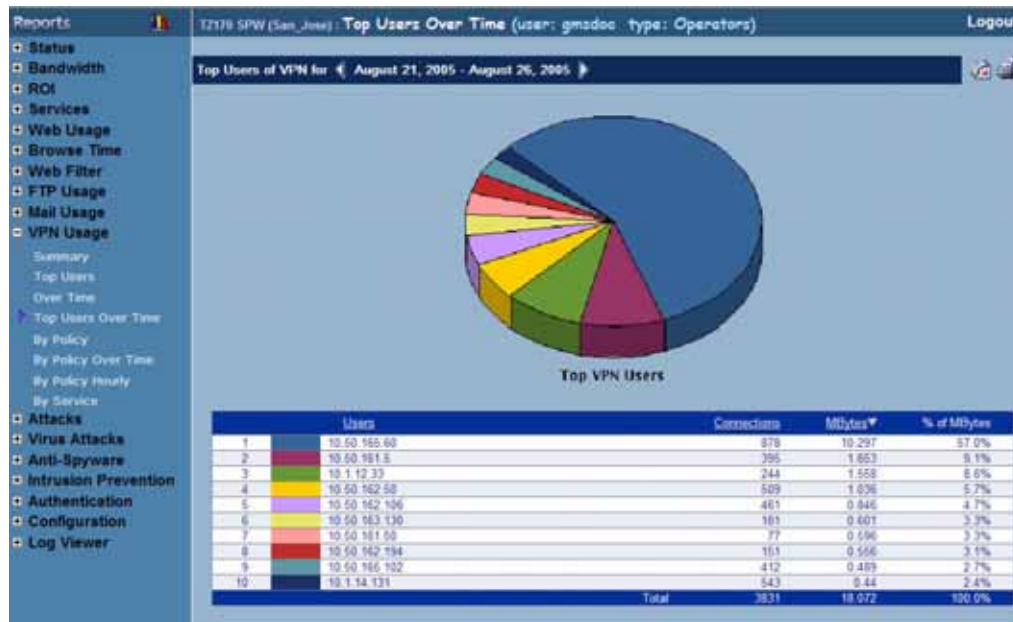
## Viewing the Top VPN Users Over Time

The Top Users report displays the users who made the most VPN connections for the specified time period.

To view the Top Users report, follow these steps:

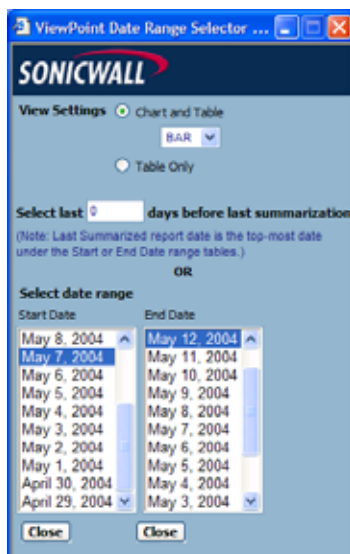
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **Top Users Over Time**. The Top Users Over Time page appears (Figure 109).

**Figure 109: Top Users Over Time Page**



5. The pie chart displays the VPN connections for the top VPN users.
6. The table contains the following information:
  - **Users**—the IP address of the user.
  - **Connections**—number of VPN connections.
  - **% of Connections**—percentage of VPN connections made by this user, compared to all other users. For example, if 10,000 connections occurred during the period and 1,000 connections were made by one user, the **% of Connections** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 110).

**Figure 110: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

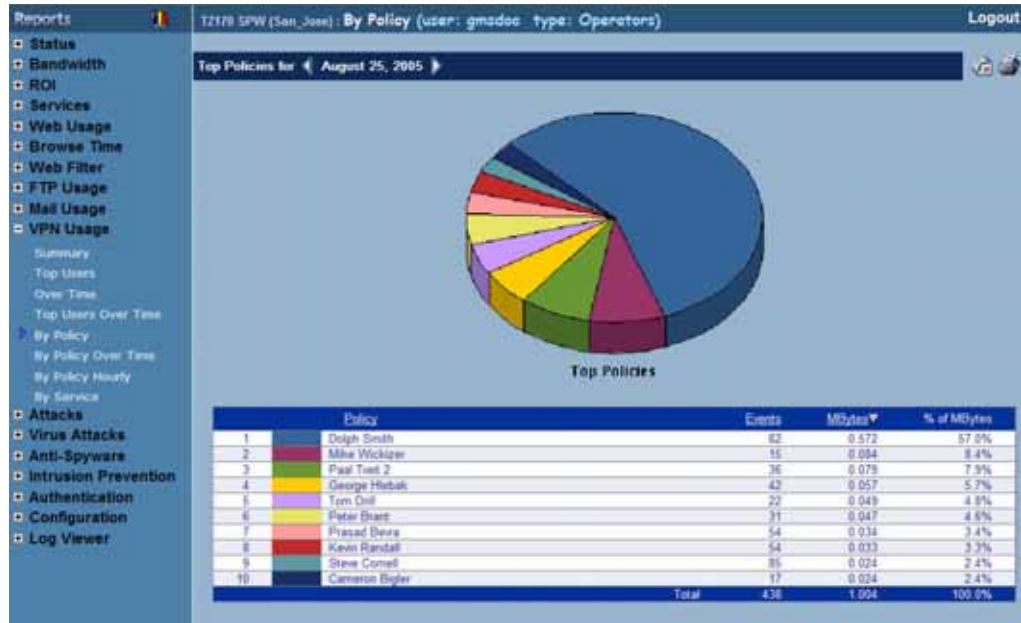
## Viewing VPN Usage by Policy

The VPN Usage by Policy report contains information on VPN usage for a SonicWALL appliance, organized by policy.

To view the VPN Usage by Policy report, follow these steps:

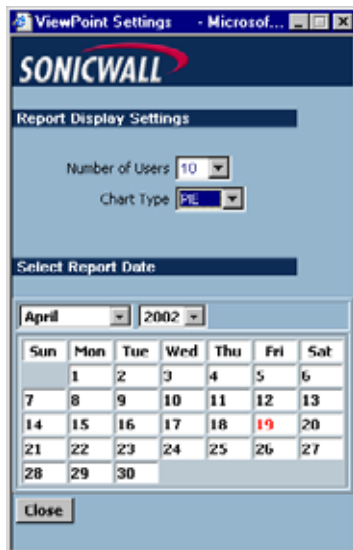
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy**. The By Policy page appears (Figure 111).

Figure 111: By Policy Page



5. The pie chart displays the amount of data transferred for each policy.
6. The table contains the following information:
  - **Policy**—name of the policy.
  - **Events**—number of VPN events.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred for this policy, compared to all other policies. For example, if a total of 10,000 megabytes was transferred and 2,500 megabytes was transferred for one policy, the **% of Usage** field will display 25%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 104).

Figure 112: Report Settings Dialog Box



8. Select the number of users that will be displayed from the **Number of Users** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

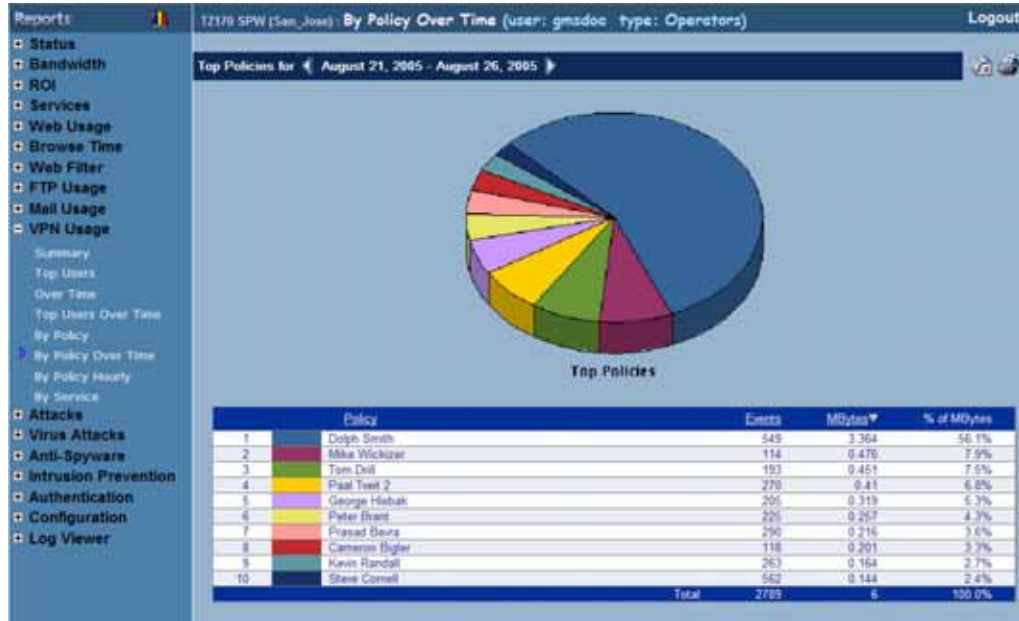
## Viewing the Top VPN Policies Over Time

The By Policy Over Time report displays the top VPN Policies for the specified time period.

To view the By Policy Over Time report, follow these steps:

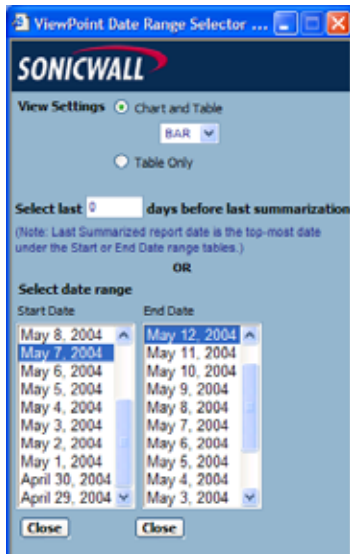
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy Over Time**. The By Policy Over Time page appears (Figure 113).

**Figure 113: By Policy Over Time Page**



5. The pie chart displays the VPN connections for the top policies.
6. The table contains the following information:
  - **Policy**—name of the policy.
  - **Events**—number of VPN events.
  - **MBytes**—number of megabytes transferred.
  - **% of MBytes**—percentage of megabytes transferred for this policy, compared to all other policies for the period. For example, if a total of 100,000 megabytes was transferred and 3,000 megabytes was transferred for one policy, the **% of Usage** field will display 3%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 114).

**Figure 114: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Hourly VPN Usage by Policy

The VPN Usage by Policy Hourly report contains information on hourly VPN usage for a SonicWALL appliance, organized by policy.

To view the VPN Usage by Policy Hourly report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Policy Hourly**. The By Policy Hourly page appears (Figure 115).

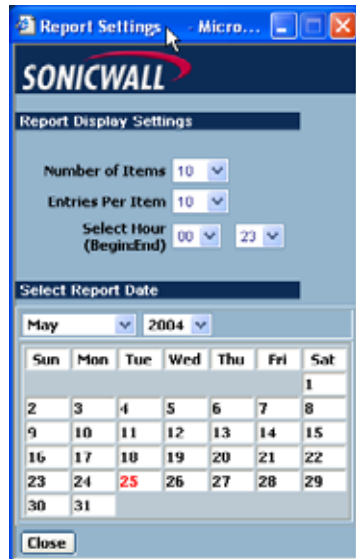


Figure 115: By Policy Hourly Page

Hour	Policy	Events	MBytes
0:00 - 1:00	Dolph Smith	15	0.138
	Mike Wickizer	5	0.053
	Cameron Bigler	5	0.031
	Peter Brant	8	0.01
	Steve Cornell	18	0.006
	Tom Dvill	1	0.008
	Prasad Beera	9	0.005
	Mike ODay	14	0.003
	Edward Gradick	3	0.001
	Abd Dhabiana	6	0.001
1:00 - 2:00	Dolph Smith	11	0.205
	Paul Tveit 2	6	0.038
	Mike Wickizer	3	0.024
	Tom Dvill	6	0.02
	Steve Cornell	23	0.007
	Nevin Randall	4	0.003
	Prasad Beera	8	0.003
	George Hehak	6	0.002
	Mike ODay	3	0.001
	Jeff Jazioriski (Home)	8	0
2:00 - 3:00	Paul Tveit 2	6	0.019
	Mike Wickizer	3	0.019
	Dolph Smith	21	0.017
	Tom Dvill	2	0.006
	Peter Brant	6	0.007
	Steve Cornell	19	0.004
	Nevin Randall	5	0.003
	George Hehak	4	0.003
	Prasad Beera	8	0.003
	Mike ODay	9	0.002
3:00 - 4:00	Dolph Smith	9	0.101

- The table contains the following information:
  - Hour**—period of time.
  - Policy**—name of the policy.
  - Events**—number of VPN events.
  - MBytes**—number of megabytes transferred.
- The GMS Reporting Module shows today’s report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 116).

Figure 116: Report Settings Dialog Box



- Select the number of items that will be displayed from the **Number of Items** list box.
- Select the number of entries per item from the **Entries per Item** list box.
- Select the beginning and ending hour that will be displayed in the report.
- Select the year, month, and day that you would like to view.
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

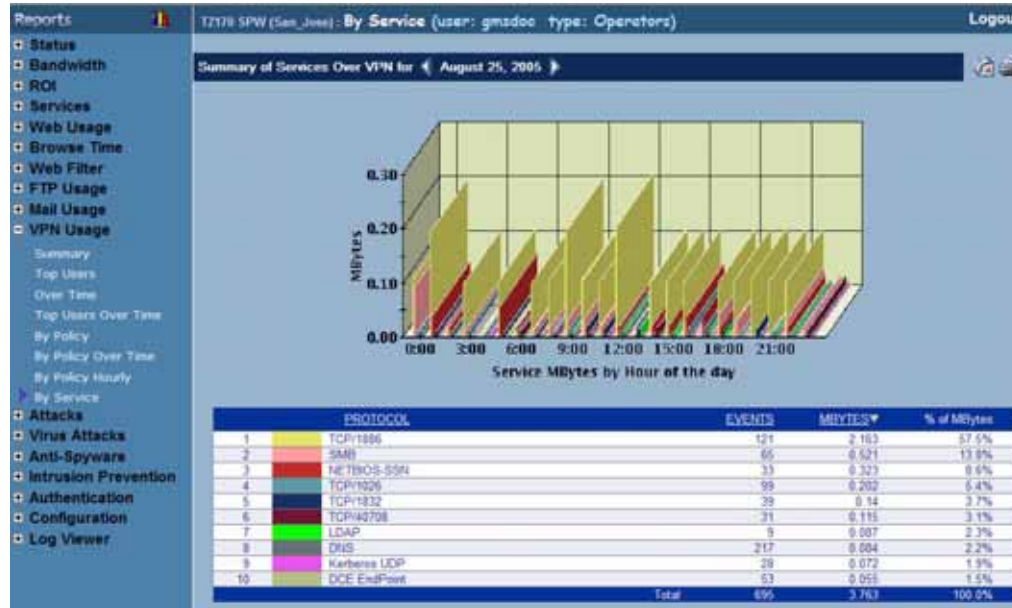
## Viewing the VPN Services Summary Report

The Services Summary report displays the amount of traffic handled by each service during each hour of the specified day.

To view the Services Summary report, follow these steps:

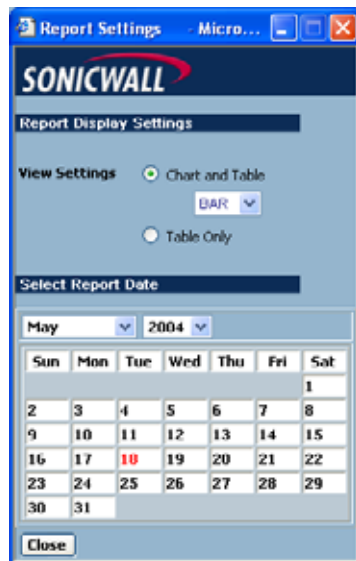
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the VPN Usage tree and click **By Service**. The By Service page appears (Figure 117).

**Figure 117: By Service Page**



5. The bar graph displays the amount of bandwidth used by each service during each hour of the day.
6. The table contains the following information:
  - **Protocol**—the service.
  - **Events**—number of events or “hits.”
  - **MBytes**—number of megabytes.
  - **% of MBytes**—percentage of megabytes transferred by this service on the selected day, compared to all other services. For example, if 1,000 megabytes were transferred and 900 megabytes were handled by the HTTP service, the **% of MBytes** field will display 90%.
7. The GMS Reporting Module shows today’s report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 118).

Figure 118: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Attack Reports

Attack reports show the number of attacks that were directed at or through the selected SonicWALL appliance(s). These include denial of service attacks, intrusions, probes, and all other malicious activity directed at the SonicWALL appliance or computers on the LAN or DMZ.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the attacks, see “Viewing the Attack Summary Report” on page 108.
- To view the attacks by attack category, see “Viewing the Attacks by Category” on page 109.
- To view the attacks by source IP address, see “Viewing the Errors Report” on page 111.
- To view a summary of the errors and exceptions, see “Viewing the Errors Report” on page 111.
- To view attacks over a period of time, see “Viewing Attack Reports Over Time” on page 113.
- To view errors and exceptions over a period of time, see “Viewing Errors Over Time” on page 116.

## Viewing the Attack Summary Report

The Attack Summary report contains information on the number of attacks attempted on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Attack Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Summary**. The Summary page appears (Figure 119).

**Figure 119: Summary Page**



5. The bar graph displays the number of attacks attempted during each hour of the day. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Attacks**—number of attack attempts.
  - **% of Attacks**—percentage of attacks during this hour, compared to the day. For example, if 1,000 attacks occurred during the day and 100 attacks occurred during the 2:00 time period, the **% of Attacks** field will display 10%.

- The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 120).

**Figure 120: Report Settings Dialog Box**



- Select the type of chart to display from the **View Settings** area.
- Select the year, month, and day that you would like to view.
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

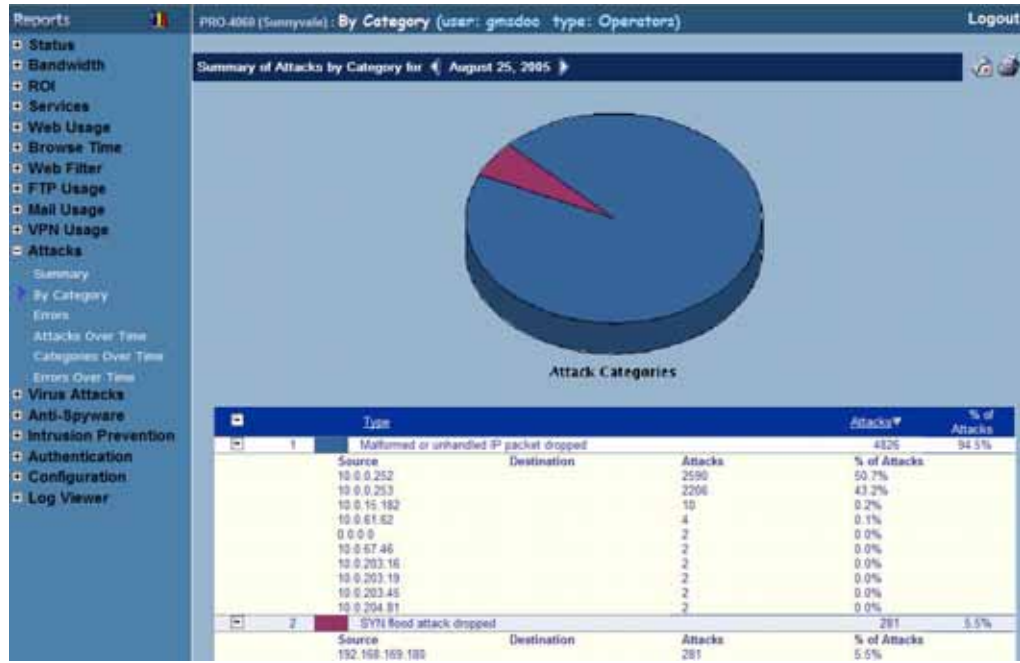
## Viewing the Attacks by Category

The Attacks by Category report displays the attacks that occurred on the specified date, sorted by category.

To view the Attacks by Category report, follow these steps:

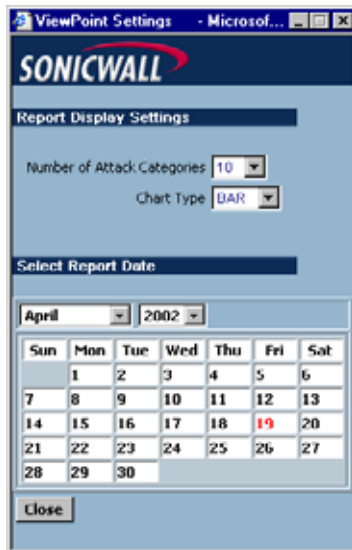
- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select a SonicWALL appliance.
- Expand the Attacks tree and click **By Category**. The By Category page appears (Figure 121).

Figure 121: By Category Page



- The pie chart displays the percentage of each type of attack. To view source and destination information on the individual attacks, expand the category tree (indicated by a '+' sign).
- The table contains the following information:
  - Type**—the type of attack
    - Source**—the IP address of the source
    - Destination**—the IP address to the destination  
Click the highlighted source or destination IP address to access the Whois Source Website.
  - Attacks**—number of attacks
  - % of Attacks**—percentage of this type of attack, compared to all other attack types. For example, if 5,000 attacks occurred during the day and the IP Spoof makes up 500 of the attacks, its **% of Attacks** field will display 10%.
- By default, the GMS Reporting Module shows today's report, a pie chart, and the ten top categories. To change these settings, click **Settings**. The Report Settings dialog box appears (Figure 122).

Figure 122: Report Settings Dialog Box



8. Select the number of categories that will be displayed from the **Number of Categories** list box.
9. Select the type of chart from the **Chart Type** list box.
10. Select the year, month, and day that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

*Note: These settings will stay in effect for all similar reports during your active login session.*

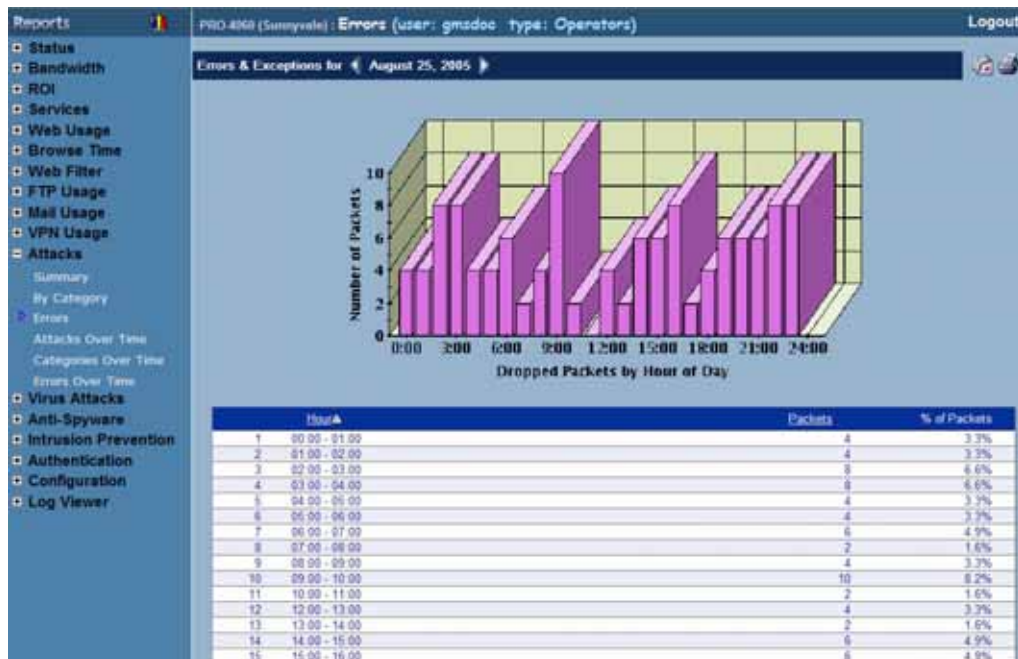
## Viewing the Errors Report

The Errors Summary report contains information on the number of dropped packets on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the Errors report, follow these steps:

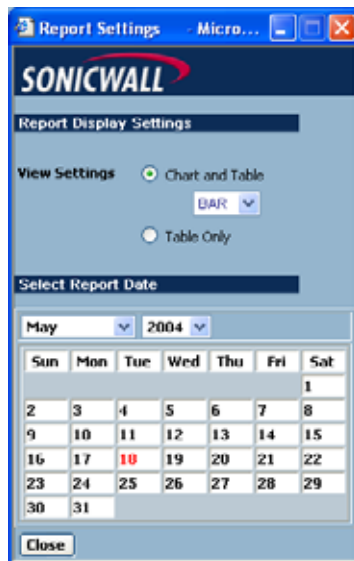
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Errors**. The Errors page appears (Figure 123).

**Figure 123: Errors Page**



5. The bar graph displays the packets that were dropped during each hour of the day.
6. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Packets**—number of dropped packets.
  - **% of Packets**—percentage of packets dropped during this hour, compared to the day. For example, if 1,000 packets were dropped during the day and 100 packets were dropped during the 1:00 time period, the **% of Packets** field will display 10%.
7. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 124).

Figure 124: Report Settings Dialog Box



8. Select the type of chart to display from the **View Settings** area.
9. Select the year, month, and day that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.



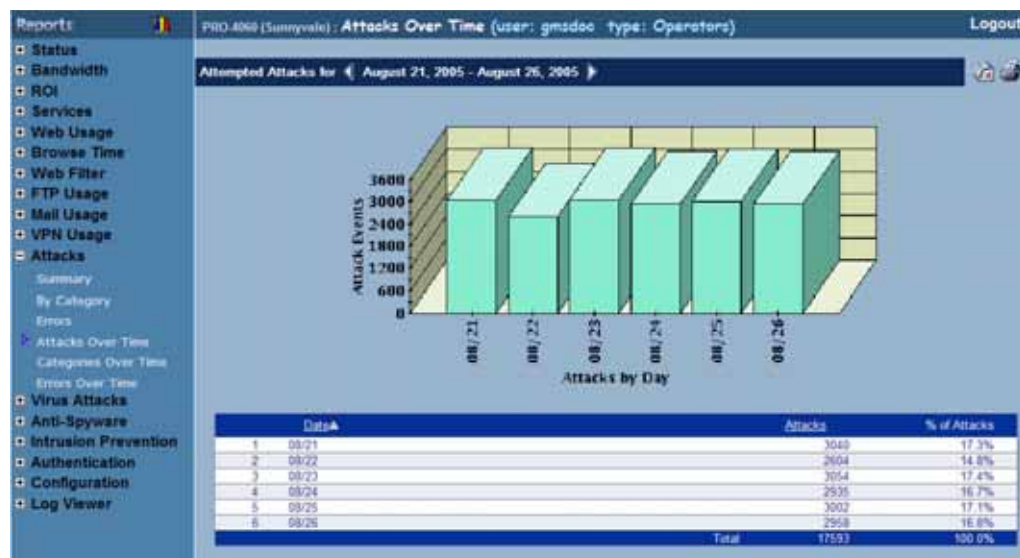
## Viewing Attack Reports Over Time

The Attacks Over Time report displays the daily number of attempted attacks during the specified time period.

To view the Attacks Over Time report, follow these steps:

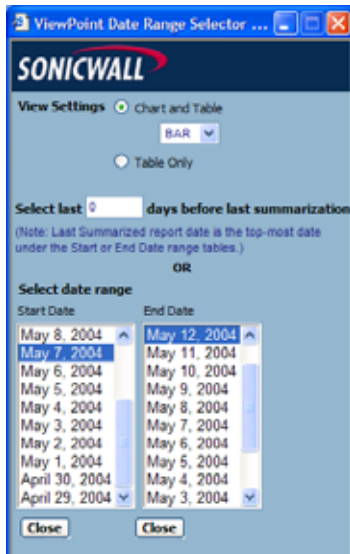
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Attacks Over Time**. The Attacks Over Time page appears (Figure 125).

**Figure 125: Attacks Over Time Page**



5. The bar graph displays the number of attacks attempted each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Attacks**—number of attacks.
  - **% of Attacks**—percentage of attacks on this day, compared to the time period. For example, if 10,000 attacks occurred during the time period and 1,000 attacks occurred on Thursday, its **% of Attacks** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 126).

**Figure 126: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

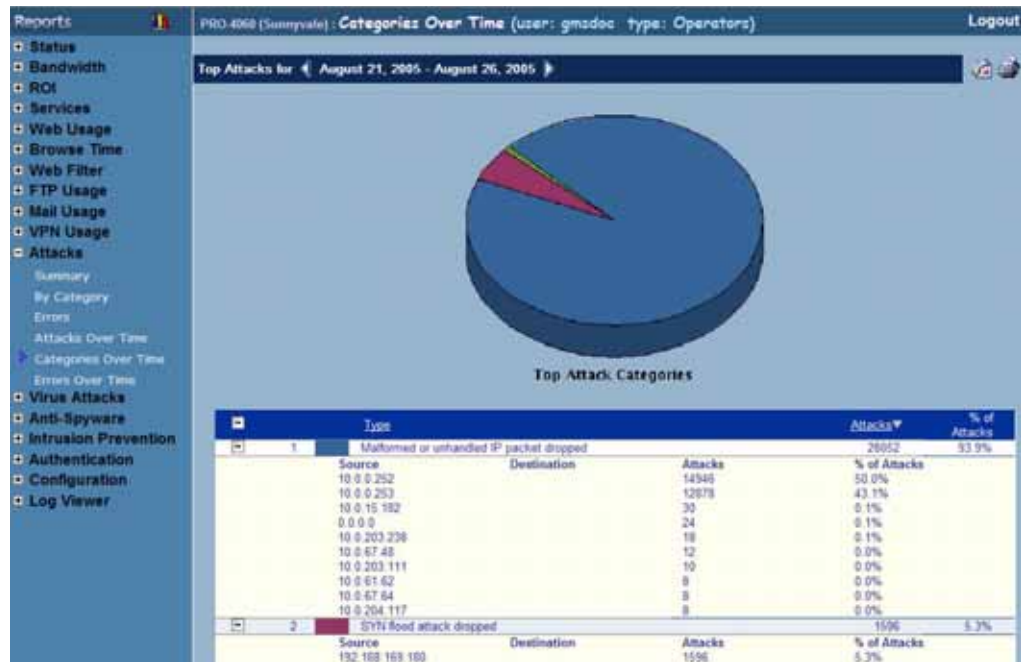
## Viewing the Attacks by Category Over Time

The Categories Over Time report displays the number of attacks in each attack category during the specified time period.

To view the Categories Over Time report, follow these steps:

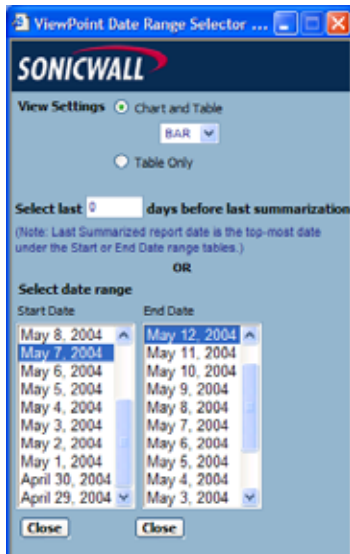
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Categories Over Time**. The Categories Over Time page appears (Figure 127).

Figure 127: Categories Over Time Page



5. The bar graph displays the number of attacks attempted each day of the specified time period. To view source and destination information on the individual attacks, expand the category tree (indicated by a '+' sign).
6. The table contains the following information:
7. The table contains the following information:
  - **Type**—the type of attack
    - **Source**—the IP address of the source
    - **Destination**—the IP address to the destination  
Click the highlighted source or destination IP address to access the Whois Source Website.
  - **Attacks**—number of attacks
  - **% of Attacks**—percentage of this type of attack, compared to all other attack types. For example, if 5,000 attacks occurred during the day and the IP Spoof makes up 500 of the attacks, its **% of Attacks** field will display 10%.
8. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 128).

**Figure 128: Report Settings Dialog Box**



9. Select whether to display a chart and table or a table only.
10. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
11. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.

*Note: These settings will stay in effect for all similar reports during your active login session.*

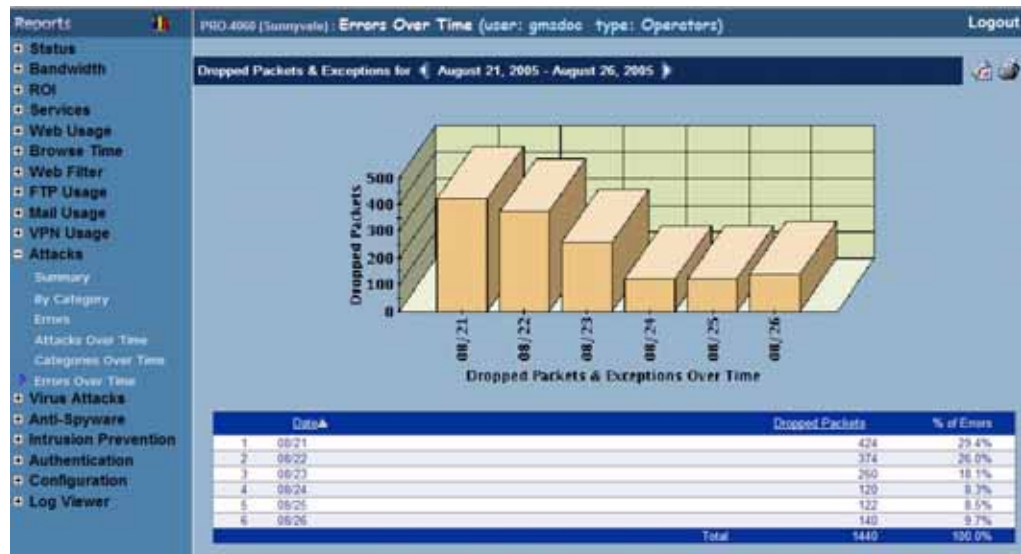
## Viewing Errors Over Time

The Errors Over Time report displays the number of errors during the specified time period.

To view the Errors Over Time report, follow these steps:

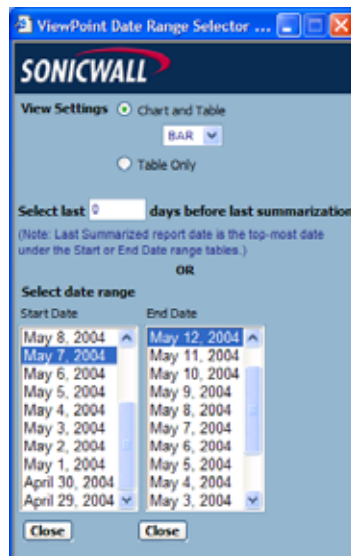
1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Attacks tree and click **Errors Over Time**. The Errors Over Time page appears (Figure 129).

Figure 129: Errors Over Time Page



5. The bar graph displays the number of packets that were dropped during each day of the specified time period.
6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Dropped Packets**—number of dropped packets.
  - **% of Errors**—percentage of dropped packets on this day, compared to the time period. For example, if 10,000 packets were dropped during the time period and 1,000 packets were dropped on Wednesday, its **% of Attacks** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 130).

Figure 130: Report Settings Dialog Box



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Virus Attacks Reports

Virus Attacks reports show the number of virus attacks that were directed at or through the selected SonicWALL appliance(s).

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the virus attacks, see “Viewing the Summary Report” on page 118.
- To view the top virus, see “Viewing the Top Viruses Report” on page 119.
- To view the virus attacks by top destinations, see “Viewing the Over Time Report” on page 120.
- To view virus attacks over time, see “Viewing the Over Time Report” on page 120.
- To view virus attacks over a period of time, see “Viewing the Top Viruses Over Time Report” on page 121.
- To view virus attacks by top destinations over time, see “Viewing Anti-Spyware Reports” on page 122.

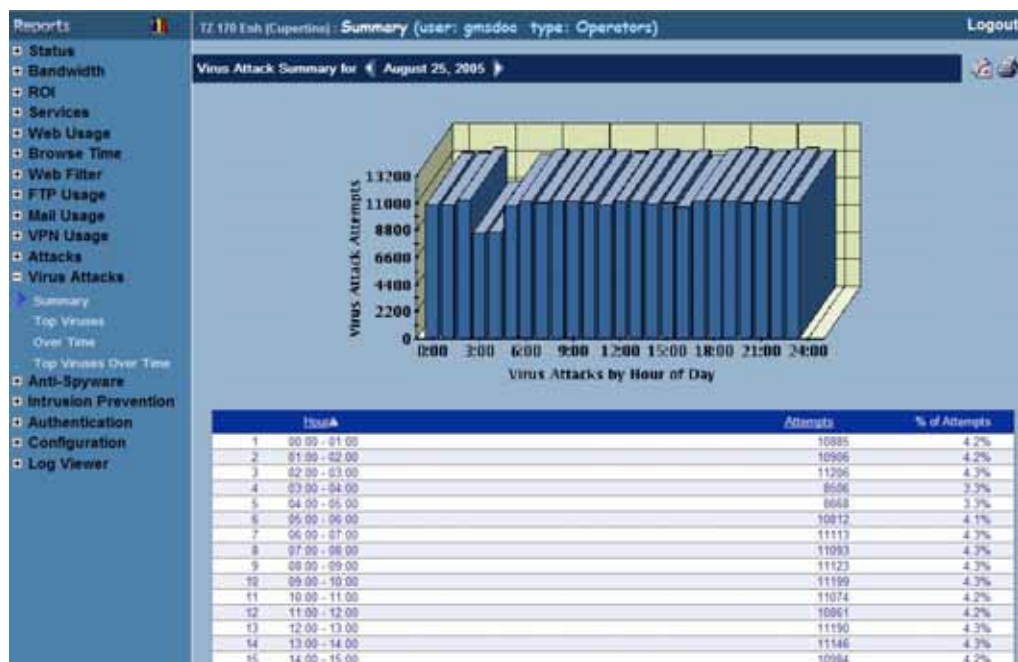
## Viewing the Summary Report

The Virus Attacks Summary report contains information on the number of virus attack attempts for the specified day.

To view the Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Virus Attacks tree and click **Summary**. The Summary page appears

**Figure 131: Summary Page**



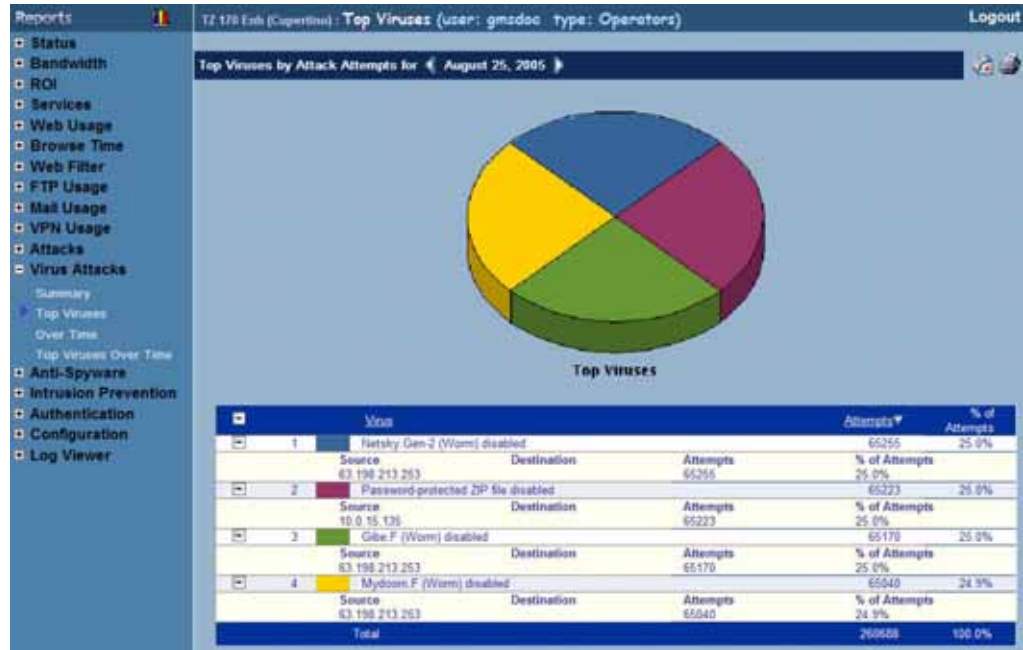
## Viewing the Top Viruses Report

The Virus Attacks Top Viruses report displays the top viruses for the specified date.

To view the Top Viruses, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Virus Attacks tree and click **Top Viruses**. The Top Viruses page appears.

**Figure 132: Top Viruses Page**



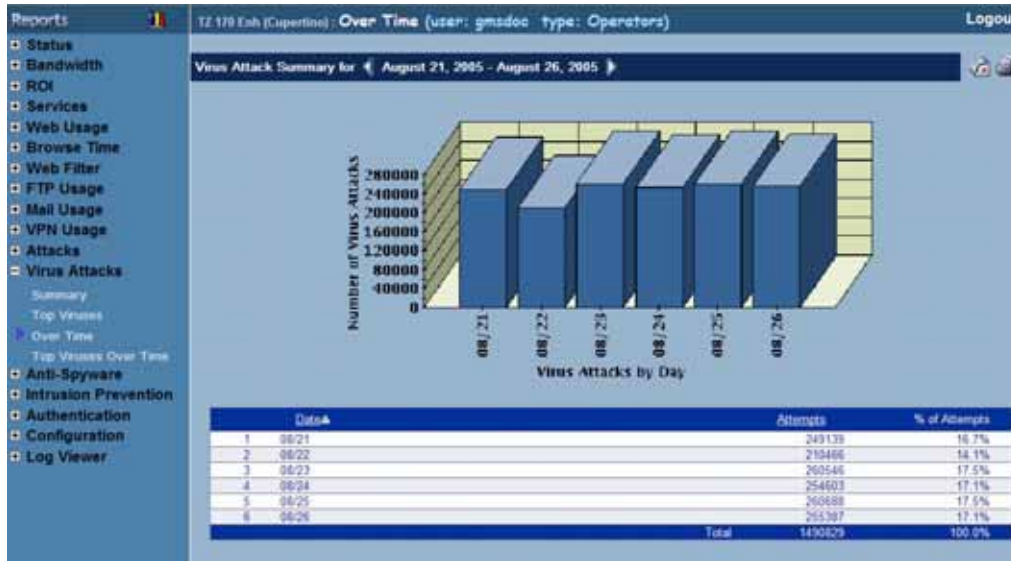
# Viewing the Over Time Report

The Virus Attacks Over Time report displays the number of virus attempts over specified time range.

To view the Over Time, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Virus Attacks tree and click **Over Time**. The Over Time page appears.

**Figure 133: Over Time Page**





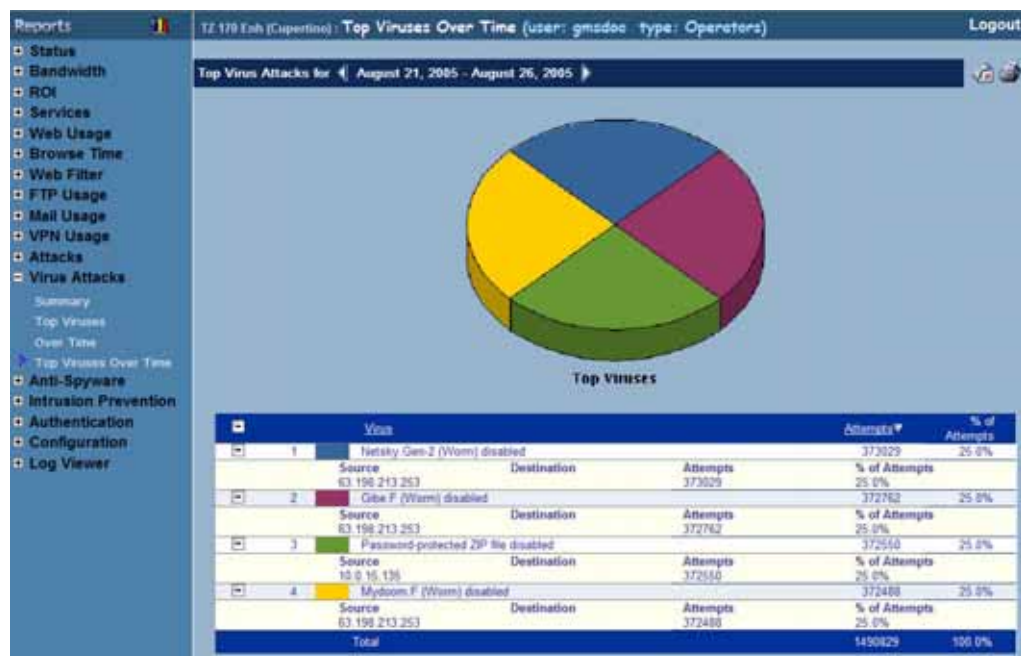
## Viewing the Top Viruses Over Time Report

The Virus Attacks Top Viruses Over Time report displays the number of top virus attempts over specified time range.

To view the Top Viruses Over Time, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Virus Attacks tree and click **Top Viruses Over Time**. The Top Viruses Over Time page appears.

Figure 134: Top Viruses Over Time Page



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## Viewing Anti-Spyware Reports

SonicWALL Anti-Spyware is included within the SonicWALL Gateway Anti-Virus (GAV), Anti-Spyware and Intrusion Prevention Service (IPS) unified threat management solution. SonicWALL GAV, Anti-Spyware and IPS delivers a comprehensive, real-time gateway security solution for your entire network. You can generate the following Anti-Spyware reports:

- To enable Anti-Spyware logging in GMS, go to the section “Viewing a Spyware Summary” on page 122.
- To view Anti-Spyware summary information, go the section “Viewing a Spyware Summary” on page 122.
- To view Anti-Spyware logging in GMS by category, go to the section “Viewing Spyware Attempts by Category” on page 123.
- To view Anti-Spyware logging in GMS over pre-set time-intervals, go to the section “Viewing Spyware Attempts Over Set Time Intervals” on page 124.
- By Category Over Time
- By Source Over Time

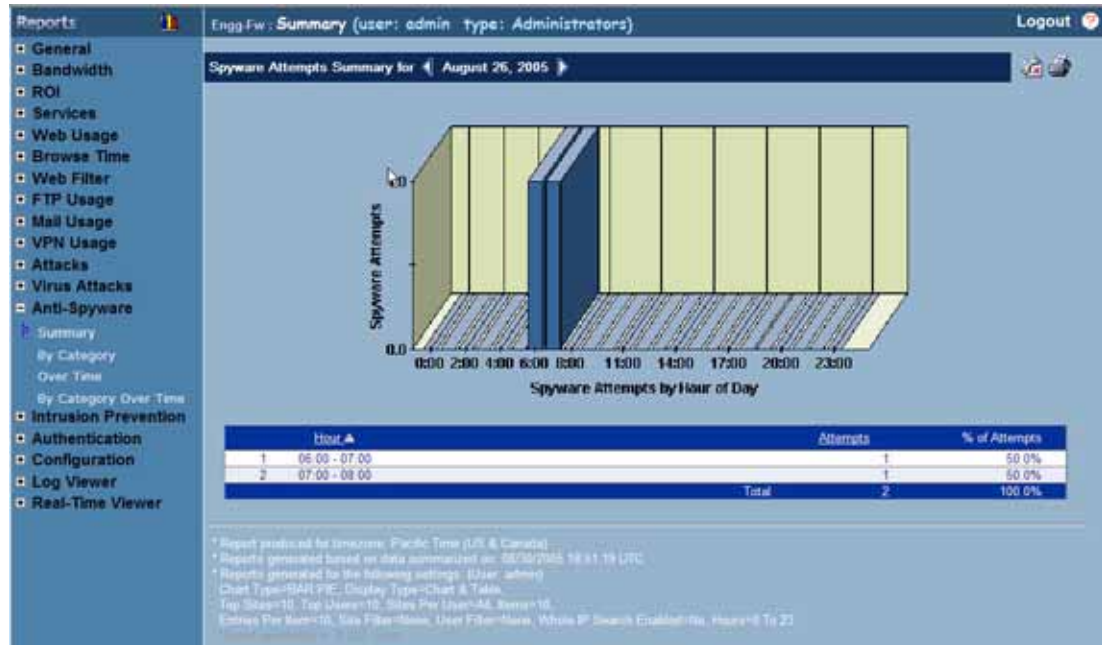
Unlike other threat management solutions, SonicWALL Gateway Anti-Virus, Anti-Spyware and Intrusion Prevention Service has the capacity to analyze files of any size in real-time without the need to add expensive hardware drive or extra memory. SonicWALL Gateway Anti-Virus, Anti-Spyware and Intrusion Prevention Service includes a pro-active alerting mechanism that notifies network administrators when a new threat is discovered. Granular policy tools and an intuitive user interface enable administrators to configure a custom set of detection or prevention policies tailored to their specific network environment. Network administrators can create global policies between security zones and group attacks by priority, simplifying deployment and management across a distributed network.

### Viewing a Spyware Summary

To view a spyware Summary, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Anti-Spyware** option. GMS displays a list of Anti-Spyware options.
4. Click the **Summary** option. GMS displays the Anti-Spyware Summary page. The page contains columns of information for the following:
  - **Hour** — The hour of the day for which the summary is provided.
  - **Attempts** — The number of times the spyware attempted to infect the device during a pre-set time interval (the hour of the day is the default).
  - **% of Attempts** — The percent of attempts the current spyware entry comprises as a portion of the aggregate number of spyware attempts on the device during a pre-set time interval (the hour of the day is the default).

Figure 135: Spyware Summary Page



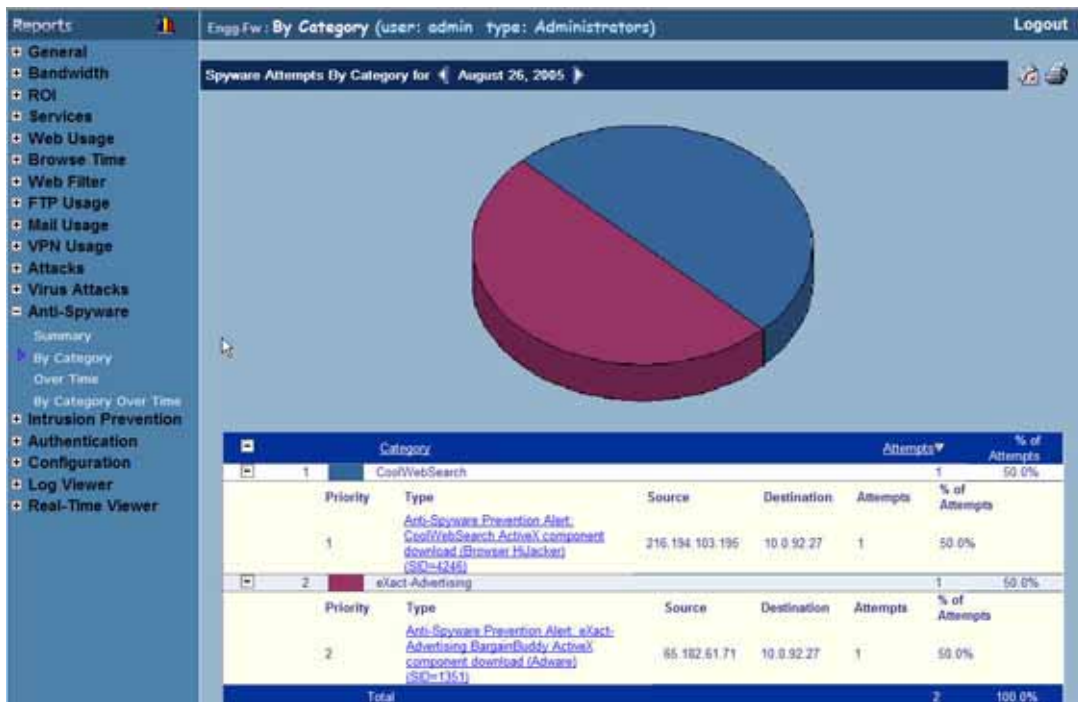
- Note this page displays the number of spyware attempts that occurred during two-hour intervals during the past day.

## Viewing Spyware Attempts by Category

These reports display the spyware activity by category including the actual category or classification of the spyware, the priority, and the event/attacks type. By using the category as criteria, you can display details about the type/message text and number of events. To view spyware attempts by category, perform the following steps:

- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Click the **Anti-Spyware** option. GMS displays a list of Anti-Spyware options.
- Click the **By Category** option. GMS displays the By Category page which displays a list of Anti-Spyware attempts by category. The page contains columns of information for the following:
  - Priority** — Indicates a severity level of the spyware attempt. The values are 1 through 3 with 1 being high-danger and 3 being low-danger attempts. You can configure this value.
  - Type** — Indicates the name of the attempting spyware program. The list of spyware programs is dynamic and continues to expand all the time.  
Click on the highlighted intrusion type link to access the SonicAlert Website for more information on the intrusion attempt.
  - Source** — The IP address or DNS name of the device that is generating the spyware attempt.
  - Destination** — The IP address of the device receiving the spyware attempt.
  - Attempts** — The number of times the spyware attempted to infect the device using the category as a criteria.
  - % of Attempts** — The percent of attempts the current spyware entry comprises as a portion of the aggregate number of spyware attempts using the category as a criteria.

Figure 136: Spyware By Category Page

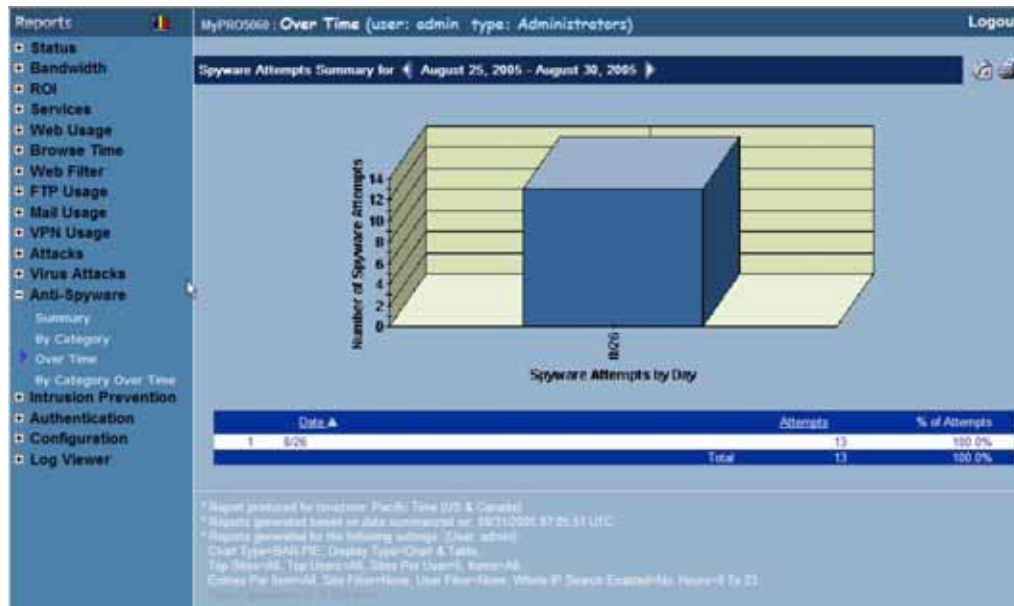


## Viewing Spyware Attempts Over Set Time Intervals

You can display spyware attempts over a set time interval. These reports are available at the unit and group levels similar to the other summary reports. To view spyware attempts using pre-set time intervals as the viewing criteria, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Anti-Spyware** option. GMS displays a list of Anti-Spyware options. The page contains columns of information for the following:
  - **Date** — The date for which the summary is provided.
  - **Attempts** — The number of times the spyware attempted to infect the device during a pre-set time interval (the hour of the day is the default).
  - **% of Attempts** — The percent of attempts the current spyware entry comprises as a portion of the aggregate number of spyware attempts on the device during a pre-set time interval (the hour of the day is the default).
4. Click the **Over Time** option. GMS displays the Over Time page which provides a snapshot of Anti-Spyware attempts over pre-set time periods. The default interval is by day. The page contains columns of information for the following:
  - **Date** — The date for which the summary is provided.
  - **Attempts** — The number of times the spyware attempted to infect the device during a pre-set time interval (the hour of the day is the default).
  - **% of Attempts** — The percent of attempts the current spyware entry comprises as a portion of the aggregate number of spyware attempts on the device during a pre-set time interval (the hour of the day is the default).

Figure 137: Spyware Over Time Page

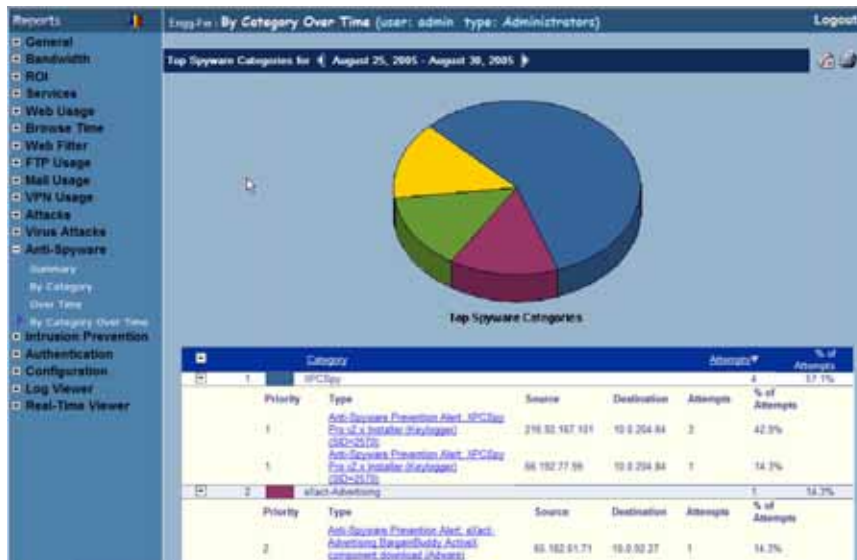


## Viewing Spyware Attempts By Category Over Time

You can generate reports that display the spyware activity by category, such as the category, priority, and events/attacks over time. Using the category over time statistic as criteria for report generation provides details about the type/message text and number of events. To view Anti-Spyware attempts using categories over time intervals as the viewing criteria, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Anti-Spyware** option. GMS displays a list of Anti-Spyware options.
4. Click on the **By Category Over Time** option. GMS displays the Category Over Time page. The page contains columns of information for the following:
  - **Priority** — Indicates a severity level of the spyware attempt. The values are 1 through 3 with 1 being high-danger and 3 being low-danger attempts. You can configure this value.
  - **Type** — Indicates the name of the attempting spyware program. The list of spyware programs is dynamic and continues to expand all the time.  
Click on the highlighted spyware type link to access the SonicAlert Website for more information on the spyware attempt.
  - **Source** — The IP address or DNS name of the device that is generating the spyware attempt.
  - **Destination** — The IP address of the device receiving the spyware attempt.
  - **Attempts** — The number of times the spyware attempted to infect the device during a pre-set time interval.
  - **% of Attempts** — The percent of attempts the current spyware entry comprises as a portion of the aggregate number of spyware attempts on the device during a pre-set time interval.

Figure 138: Spyware By Category Over Time Page



## Viewing Intrusion Prevention Reports

The Intrusion Prevention Service (IPS) reports show the number of attempted intrusions that occurred during the specified time period.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view a summary of the attacks, see “Viewing the Intrusion Prevention Summary Report” on page 126.
- To view the attacks by source IP address, see “Viewing the Errors Report” on page 111.
- To view a summary of the errors and exceptions, see “Viewing the Errors Report” on page 111.
- To view attacks over a period of time, see “Viewing Attack Reports Over Time” on page 113.
- To view errors and exceptions over a period of time, see “Viewing Errors Over Time” on page 116.

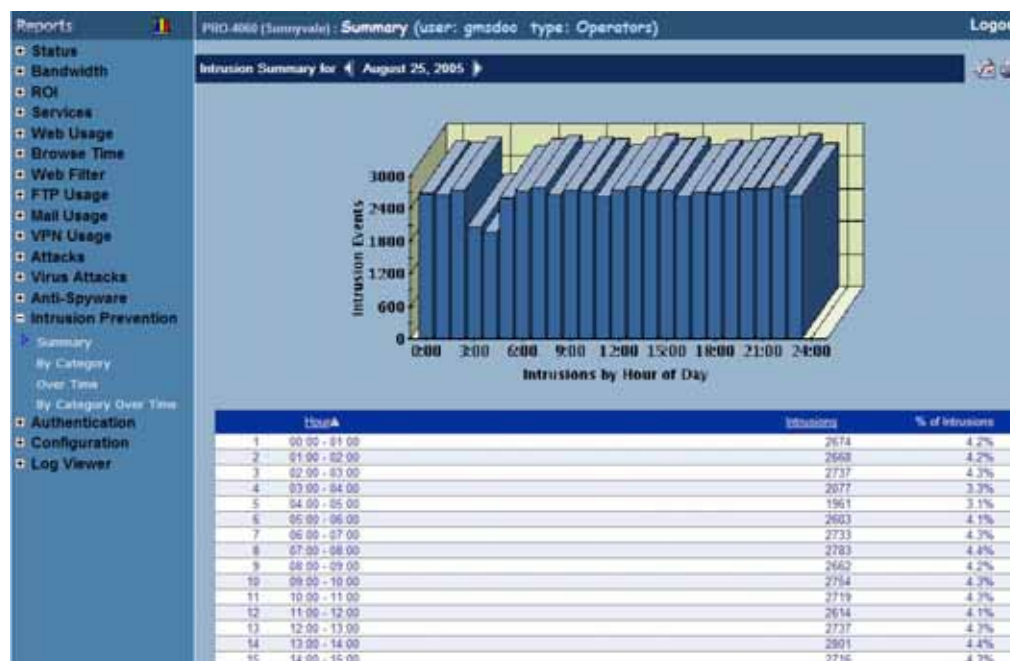
## Viewing the Intrusion Prevention Summary Report

The Attack Summary report contains information on the number of attempted intrusions on a SonicWALL appliance or group of SonicWALL appliances during the specified day.

To view the IPS Summary report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Summary**. The Summary page appears (Figure 139).

**Figure 139: Summary Page**



5. The bar graph displays the number of intrusions attempted during each hour of the day. The table contains the following information:
  - **Hour**—when the sample was taken.
  - **Attacks**—number of intrusion attempts.
  - **% of Attacks**—percentage of intrusions during this hour, compared to the day. For example, if 1,000 intrusions occurred during the day and 100 intrusions occurred during the 2:00 time period, the **% of Intrusions** field will display 10%.
6. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 140).

**Figure 140: Report Settings Dialog Box**



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

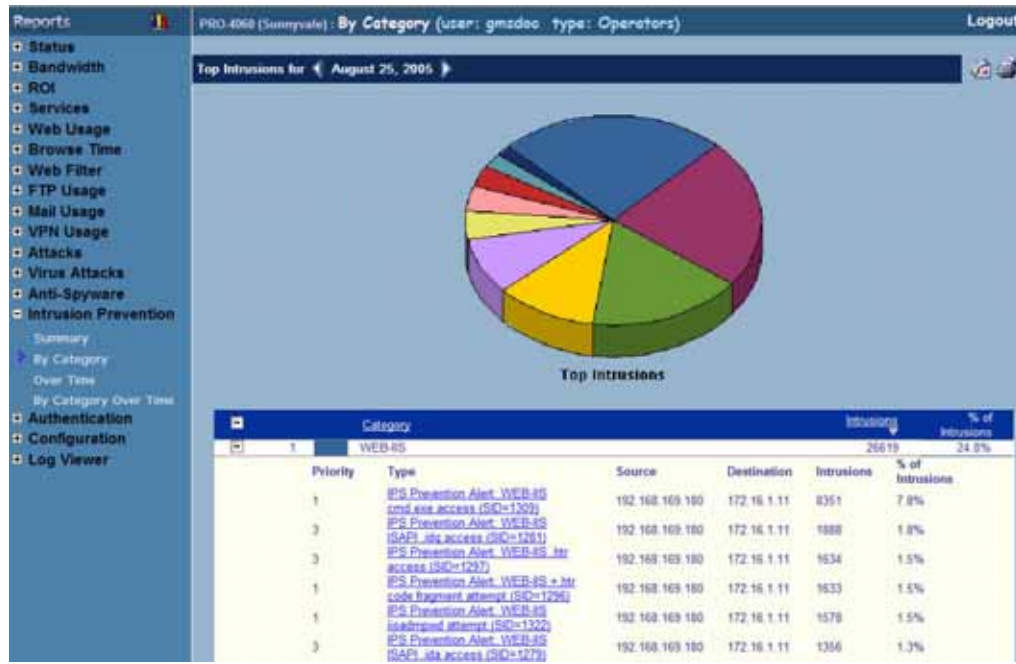
## Viewing Intrusion Attempts by Category

These reports display the intrusion activity by category including the actual category or classification of the intrusion, the priority, and the event/attacks type. By using the category as criteria, you can display details about the type/message text and number of events. To view intrusion attempts by category, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Intrusion** option. GMS displays a list of Intrusion options.
4. Click the **By Category** option. GMS displays the By Category page which displays a list of intrusion attempts by category. The page contains columns of information for the following:
  - **Priority** — Indicates a severity level of the intrusion attempt. The values are 1 through 3 with 1 being high-danger and 3 being low-danger attempts. You can configure this value.
  - **Type** — Indicates the name of the attempting intrusion program with a link to provide more information about the intrusion attempt. The list of intrusion programs is dynamic and continues to expand all the time. Click on the highlighted intrusion type link to access the SonicAlert Website for more information on the intrusion attempt.
  - **Source** — The IP address or DNS name of the device that is generating the intrusion attempt.
  - **Destination** — The IP address of the device receiving the intrusion attempt.
  - **Attempts** — The number of times the intrusion attempted to infect the device using the category as a criteria.
  - **% of Attempts** — The percent of attempts the current intrusion entry comprises as a portion of the aggregate number of intrusion attempts using the category as a criteria.



Figure 141: Intrusion By Category Page



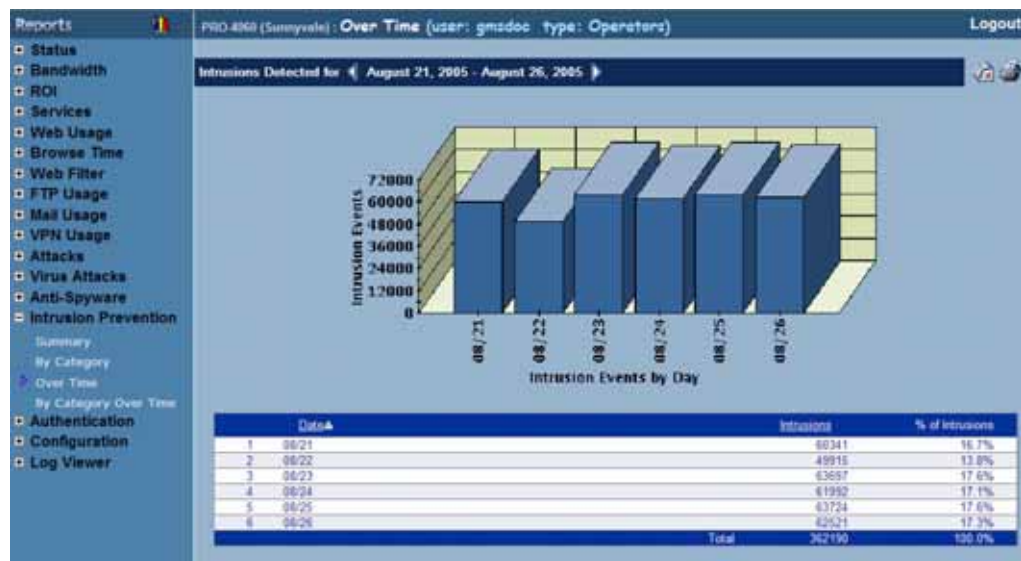
## Viewing Intrusions Over Time

The Over Time report displays the daily number of intrusion attempts during the specified time period.

To view the Intrusions Over Time report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select the global icon, a group, or a SonicWALL appliance.
4. Expand the Intrusion Prevention tree and click **Intrusions Over Time**. The Intrusions Over Time page appears (Figure 142).

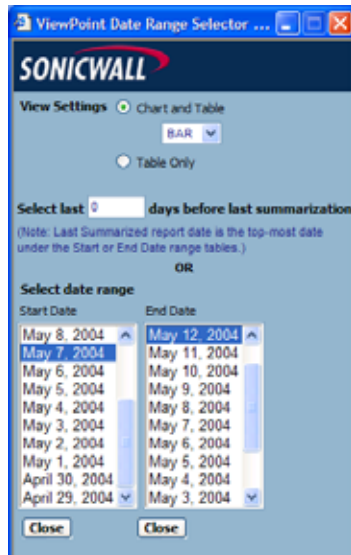
Figure 142: Intrusions Over Time Page



5. The bar graph displays the number of intrusions attempted each day of the specified time period.

6. The table contains the following information:
  - **Date**—when the sample was taken.
  - **Intrusions**—number of intrusion attempts.
  - **% of Intrusions**—percentage of intrusion attempts on this day, compared to the time period. For example, if 10,000 intrusion attempts occurred during the time period and 1,000 intrusion attempts occurred on Thursday, its **% of Intrusions** field will display 10%.
7. To change the date range of the report, click **Settings**. The Reporting Date Range Selector dialog box appears (Figure 143).

**Figure 143: Report Settings Dialog Box**



8. Select whether to display a chart and table or a table only.
9. Select from the following:
  - To select a period of time before the last summarization, enter the number of days to view before the last summarization.
  - To view a specific date range, select the starting and ending dates that you would like to view.
10. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected date range.
 

*Note: These settings will stay in effect for all similar reports during your active login session.*

## Viewing Intrusion Reports By Category Over Time

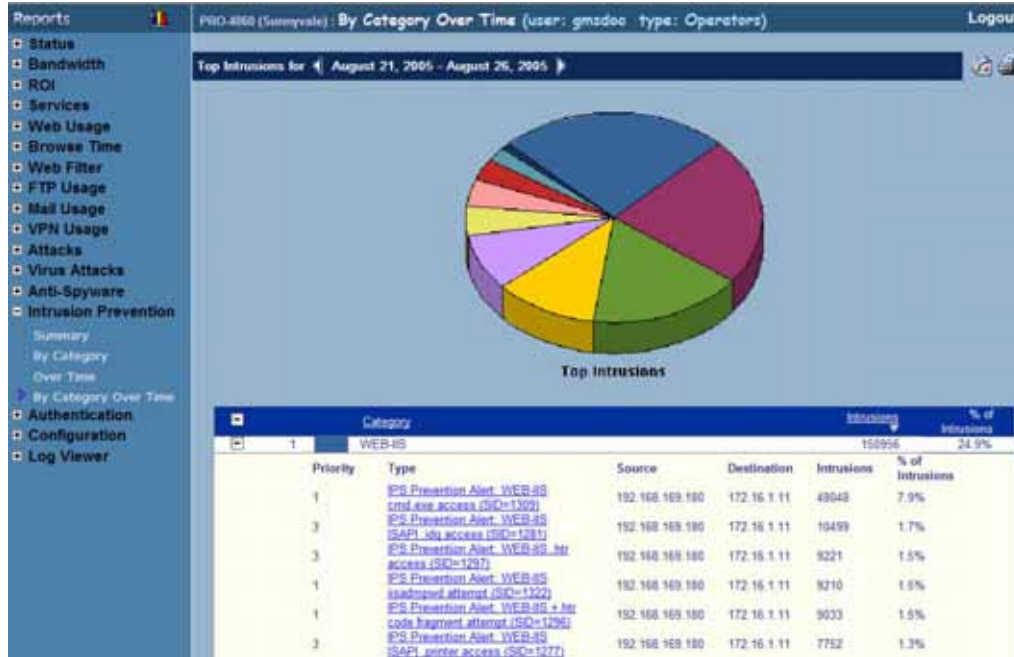
You can generate reports that display the intrusion activity by category, such as the category, priority, and events/attacks over time. Using the category over time statistic as criteria for report generation provides details about the type/message text and number of events. To view intrusion attempts using categories over time intervals as the viewing criteria, perform the following steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Click the **Intrusion Prevention** option. GMS displays a list of Intrusion Prevention options.
4. Click on the **By Category Over Time** option. GMS displays the Category Over Time page. The page contains columns of information for the following:
  - **Priority** — Indicates a severity level of the intrusion attempt. The values are 1 through 3 with 1 being high-danger and 3 being low-danger attempts. You can configure this value.
  - **Type** — Indicates the name of the attempting intrusion program. The list of intrusion programs is dynamic and continues to expand all the time.

Click on the highlighted intrusion type link to access the SonicAlert Website for more information on the intrusion attempt.

- **Source** — The IP address or DNS name of the device that is generating the intrusion attempt.
- **Destination** — The IP address of the device receiving the intrusion attempt.
- **Intrusions** — The number of attempted intrusions during a pre-set time interval.
- **% of Attempts** — The percent of attempts the current intrusion entry comprises as a portion of the aggregate number of intrusion attempts on the device during a pre-set time interval.

Figure 144: Intrusions By Category Over Time Page



## Viewing Authentication Reports

The login reports show user logins, administrator logins, and failed login attempts for users and administrators.

*Note: All reports appear in the Firewall's time zone.*

Select from the following:

- To view user logins, see “Viewing the User Login Report” on page 131.
- To view administrator logins, see “Viewing the Administrator Login Report” on page 132.
- To view failed login attempts, see “Viewing the Failed Login Report” on page 133.

## Viewing the User Login Report

The user login report shows users that logged on to the SonicWALL appliance during the specified day to bypass content filtering or to remotely access local network resources.

To view the User Login report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Authentication tree and click **User Login**. The User Login page appears (Figure 145).

**Figure 145: User Login Page**

Time	Source
01:37:02	96.123.161.148
06:08:39	67.115.110.66
09:27:42	172.18.2.148
09:28:50	172.18.2.119
09:32:01	172.18.2.148
09:36:34	172.18.2.76
09:38:43	172.18.2.203
09:38:45	172.18.2.203
10:06:42	MHWANG-9026
10:07:13	MHWANG-9026

5. The table contains the following information:
  - **User**—the user name.
  - **Time**—time the user logged in.
6. The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 146).

Figure 146: Report Settings Dialog Box



7. Select the type of chart to display from the **View Settings** area.
8. Select the year, month, and day that you would like to view.
9. When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

## Viewing the Administrator Login Report

The administrator login report shows successful administrator logins during the specified day. This report is useful for identifying misuse and unauthorized management of a SonicWALL appliance.

To view the Admin Login report, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Authentication tree and click **Admin Login**. The Admin Login page appears (Figure 147).

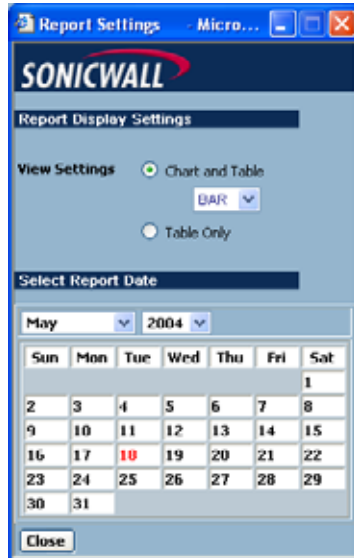
Figure 147: Admin Login Page



5. The table contains the following information:
  - **User**—the user name.
  - **Time**—time the user logged in.

- The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 148).

**Figure 148: Report Settings Dialog Box**



- Select the type of chart to display from the **View Settings** area.
- Select the year, month, and day that you would like to view.
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

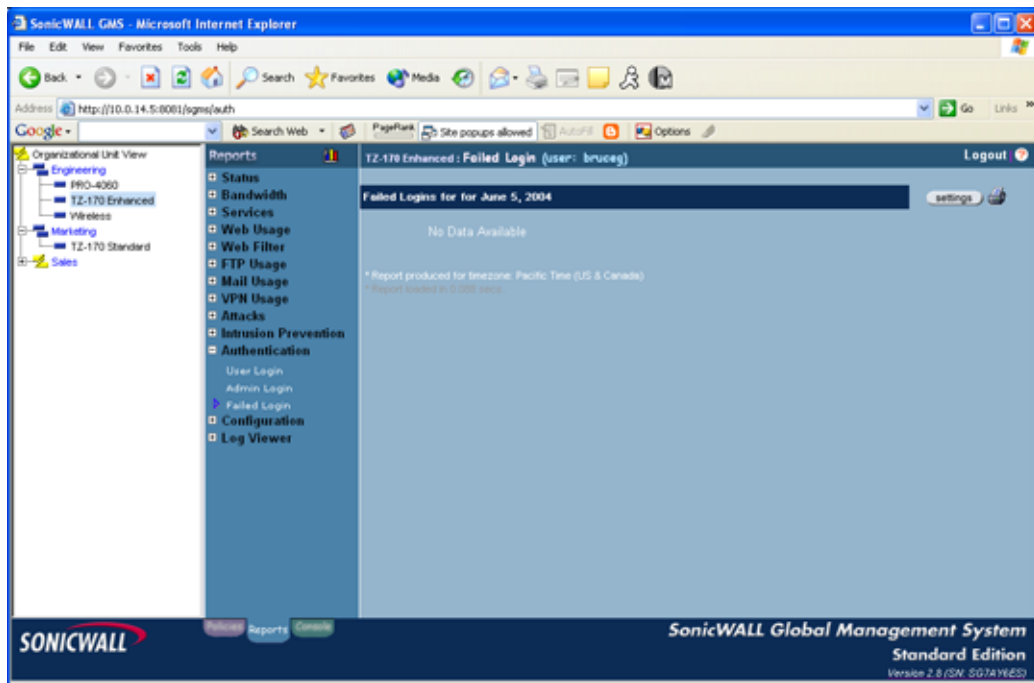
## Viewing the Failed Login Report

The failed login reports shows failed login attempts for users and administrators that attempted to log on to the SonicWALL appliance during the specified day. This report is useful for identifying unauthorized access attempts and potentially malicious activity.

To view the Failed Login report, follow these steps:

- Start and log into SonicWALL GMS.
- Click the **Reports** tab.
- Select a SonicWALL appliance.
- Expand the Authentication tree and click **Failed Login**. The Failed Login page appears (Figure 149).

Figure 149: Failed Login Page



- The table contains the following information:
  - User**—the user name.
  - Time**—time the user logged in.
  - IP Address**—IP address of the user.
- The GMS Reporting Module shows today's report. To change report settings, click **Settings**. The Report Settings dialog box appears (Figure 150).

Figure 150: Report Settings Dialog Box



- Select the type of chart to display from the **View Settings** area.
- Select the year, month, and day that you would like to view.
- When you are finished, click **Close**. The GMS Reporting Module displays the report for the selected day.

## Viewing the Log

The Log Viewer contains detailed information on each transaction that occurred on the SonicWALL appliance. This information is stored for the time that you specified in the configuration settings.

*Note: The Log Viewer displays raw log information for every connection. Depending on the amount of traffic, this can quickly consume a large amount of space in the database. It is highly recommended to be careful when choosing the number of days of information that will be stored. For more information, see “Configuring GMS Reporting Module Settings” on page 10.*

## Viewing the Log for a SonicWALL Appliance

To view the Log, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Log Viewer tree and click **Search**. The Search page appears (Figure 151).

**Figure 151: Search Page**

5. Select the date to view from the **Date** list box.
6. Enter the starting time of events to view in the **Start Time** field.
7. Enter the ending time of events to view in the **End Time** field.
8. Select the type of events to view from the **Message Category** list box.
9. Enter the source IP address to view in the **Source IP Address** field. To view all IP addresses, enter All.
10. Enter the destination IP address to view in the **Destination IP Address** field. To view all IP addresses, enter All.
11. Select the number of entries to display per page from the **Results Per Page** field.
12. Click **Generate Report**. The Log Viewer Results page appears (Figure 152).



Figure 152: Log Viewer Results Page

PRO-888 (Sunnyvale) Search (user: gmsdec type: Operators) Logout

Log Search Results for August 27, 2005 00:00:00 to August 27, 2005 23:59:59 Message Category: Connections

Displaying records 1-200 of 100000 Next:500 (1 2 3 4 5 6 7 8 9 10)

TIME	Source/User	DESTINATION	PROTOCOL	Src.Port	Dst.Port	Src Interface
08/27/2005 10:17:20	10.0.14.5	192.168.12.1	Tcp/https	56597	443	WAN
08/27/2005 10:17:20	10.0.14.5	192.168.12.1	Tcp/https	56597	443	WAN
08/27/2005 10:16:26	10.0.14.5	192.168.12.1	Tcp/https	56585	443	WAN
08/27/2005 10:16:26	10.0.14.5	192.168.12.1	Tcp/https	56585	443	WAN
08/27/2005 10:15:26	10.0.14.5	192.168.12.1	Tcp/https	56536	443	WAN
08/27/2005 10:15:26	10.0.14.5	192.168.12.1	Tcp/https	56536	443	WAN
08/27/2005 10:14:26	10.0.14.5	192.168.12.1	Tcp/https	56507	443	WAN
08/27/2005 10:14:26	10.0.14.5	192.168.12.1	Tcp/https	56507	443	WAN
08/27/2005 10:13:26	10.0.14.5	192.168.12.1	Tcp/https	56465	443	WAN
08/27/2005 10:13:26	10.0.14.5	192.168.12.1	Tcp/https	56465	443	WAN
08/27/2005 10:12:26	10.0.14.5	192.168.12.1	Tcp/https	56436	443	WAN
08/27/2005 10:12:26	10.0.14.5	192.168.12.1	Tcp/https	56436	443	WAN
08/27/2005 10:11:26	10.0.14.5	192.168.12.1	Tcp/https	56407	443	WAN
08/27/2005 10:11:26	10.0.14.5	192.168.12.1	Tcp/https	56407	443	WAN
08/27/2005 10:10:26	10.0.14.5	192.168.12.1	Tcp/https	56378	443	WAN
08/27/2005 10:10:26	10.0.14.5	192.168.12.1	Tcp/https	56378	443	WAN
08/27/2005 10:09:26	10.0.14.5	192.168.12.1	Tcp/https	56348	443	WAN
08/27/2005 10:09:26	10.0.14.5	192.168.12.1	Tcp/https	56348	443	WAN
08/27/2005 10:08:26	10.0.14.5	192.168.12.1	Tcp/https	56318	443	WAN
08/27/2005 10:08:26	10.0.14.5	192.168.12.1	Tcp/https	56318	443	WAN
08/27/2005 10:07:26	10.0.14.5	192.168.12.1	Tcp/https	56289	443	WAN
08/27/2005 10:07:26	10.0.14.5	192.168.12.1	Tcp/https	56289	443	WAN
08/27/2005 10:06:58	192.168.12.1	10.0.14.5	udp/3162	161	3162	LAN
08/27/2005 10:06:58	192.168.12.1	192.168.168.10	udp/162	161	162	LAN
08/27/2005 10:06:58	192.168.12.1	10.0.14.5	udp/3162	161	3162	LAN
08/27/2005 10:06:58	192.168.12.1	10.0.14.4	udp/162	161	162	LAN
08/27/2005 10:06:58	192.168.12.1	10.0.14.4	udp/162	161	162	LAN
08/27/2005 10:06:58	192.168.12.1	192.168.168.10	udp/162	161	162	LAN
08/27/2005 10:06:26	10.0.14.5	192.168.12.1	Tcp/https	56260	443	WAN
08/27/2005 10:06:26	10.0.14.5	192.168.12.1	Tcp/https	56260	443	WAN
08/27/2005 10:05:26	10.0.14.5	192.168.12.1	Tcp/https	56231	443	WAN
08/27/2005 10:05:26	10.0.14.5	192.168.12.1	Tcp/https	56231	443	WAN
08/27/2005 10:04:26	10.0.14.5	192.168.12.1	Tcp/https	56202	443	WAN
08/27/2005 10:04:26	10.0.14.5	192.168.12.1	Tcp/https	56202	443	WAN

13. Search through the entries to find the information for which you are searching. To view the next page of entries, click **Next**.

14. To generate another report, click **Search** again in the Log Viewer Tree.



## Scheduling GMS Reporting

SonicWALL Global Management System (SonicWALL GMS) Reporting can automatically send reports to any e-mail addresses that you specify.

*Note: These reports are affected by the presentation options that you configured for your user ID. For more information, see “Configuring Presentation Options” on page 14.*

To view currently scheduled reports or configure new reports, follow these steps:

1. Start and log into SonicWALL GMS.
2. Click the **Reports** tab.
3. Select a SonicWALL appliance.
4. Expand the Configuration tree and click **Scheduled Reports**. The Scheduled Reports page appears (Figure 153).

**Figure 153: Scheduled Reports Page**



5. The Scheduled Reports page contains a list of currently scheduled reports. To edit a report, select its radio button and click **Edit**. To delete a report, select its radio button and click **Delete**.

Select from the following:

- To create a new daily report, see “Scheduling a Daily Report” on page 137.
- To create a new weekly or monthly report, see “Scheduling a Weekly or Monthly Report” on page 141.

### Scheduling a Daily Report

By default, daily reports are sent out once a day at 03:00 GMT and contain information for the previous day. To change when they are sent, see “Configuring Email/Archive Settings” on page 12. To configure a new daily report, follow these steps:

1. From the Scheduled Reports page, click the **Add Daily Report** button. The Daily Reports page appears (Figure 154).

Figure 154: Daily Reports Page

Prasad : Scheduled Reports (user: gmsdec type: Administrators) Logout

**Single Day EMail Report Configuration**

Name:  Description:

---

**Email**

SMTP Server:  Email Subject:

Destination Email Addresses (semicolon separated):  Email Body:

Source Email Address:

**Send Reports Inline**  
(By default, reports are sent as attachments. Only single reports can be sent inline.)

---

**Archive**

Save Directory:

(If path is invalid, default path is [sgms\_directory]/Viewpoint/reports.)

---

**Generate Reports in XML format**

**Include all data in a single report**

**Zip Reports into a single file**

**Password Protect the Zip file**

Password:

Template Folder Name:   
(Only for custom reports)

(Requires only the folder name and not the complete path.)

---

**Configure Filters/Options**  
(Note: You can set filters and display options to be applied for reports in this schedule here.)

---

**Report List**

<input type="checkbox"/> Report	Description
<input type="checkbox"/> Login Reports	Login Reports
<input type="checkbox"/> Status Reports	Status Reports
<input type="checkbox"/> Bandwidth Reports	Bandwidth Reports
<input type="checkbox"/> ROI Reports	ROI reports
<input type="checkbox"/> Service Reports	Service Reports
<input type="checkbox"/> VPN Reports	VPN Reports
<input type="checkbox"/> WebUsage Reports	WebUsage reports
<input type="checkbox"/> Browse Time Reports	Browse Time reports
<input type="checkbox"/> WebFilter Reports	WebFilter reports
<input type="checkbox"/> FTP Reports	FTP Reports
<input type="checkbox"/> Mail Reports	Mail Reports
<input type="checkbox"/> Attacks Reports	Attacks Reports
<input type="checkbox"/> Virus Attacks Reports	Virus Attacks reports
<input type="checkbox"/> Spyware Reports	Spyware reports
<input type="checkbox"/> Intrusions Reports	Intrusions Reports

2. Enter a name for the report in the **Scheduled Report Name** field.
3. To send the report, select the **Email** check box.
4. By default, the GMS Reporting Module will use the Simple Mail Transfer Protocol (SMTP) server that was specified during SonicWALL GMS installation. To change it, enter the IP address or hostname of the SMTP server in the **SMTP Server Address** field.
5. Enter the Destination e-mail addresses in the **Destination Email Addresses** field. Make sure each e-mail address is separated by a semicolon (;).
6. By default, the GMS Reporting Module will use the e-mail address of the user logged into SonicWALL GMS as the Sender e-mail address. To change it, enter a new Sender e-mail address in the **Source Email Address** field.

7. Enter the Subject Line that will appear in reports sent from the GMS Reporting Module in the **Email Subject** field.
8. Enter text that will appear in the message body in the **Email Body** field.
9. To copy the contents of the report into the body of the email message, select the **Send Reports Inline** check box. To send the file as an email attachment, make sure this check box is deselected.  
*Note: Reports can only be sent inline when all data is sent in a single report.*
10. To archive the file on the server's hard disk, select the **Archive** check box and enter a path in the **Save Directory** field.  
Specify the directory where the file will be archive in the **Save Directory** field.
11. **Optional.** To specify a specific date, enter the date in the **Report Date** field.
12. If you are using custom reports, specify the folder location of the template files in the **Template Folder Name** field. For more information, see Chapter 5, "Scheduling GMS Reporting."
13. To compress the reports into a single file, select the **Zip Reports into a single file** check box.
14. To include all of the data in a single report, select the **Include all data in a single report** check box.
15. To password-protect the Zip file, select the **Password Protect the Zip File** check box and enter the password in the **Password** field.
16. Click the Configure Filters/Options button. The Configure Filters/Options page appears (Figure 155).

**Figure 155: Configure Filters/Options Page**

17. Select whether the reports will contain a chart and table or table only.
18. Select whether Summary and Over Time charts will be displayed as bar graphs or plots from the **Summary/Over Time Charts** list box (default: BAR).
19. Select whether User charts will be displayed as pie charts, bar graphs, area charts, or plots from the **User Based Charts** list box (default: PIE).
20. Select the number of sites to display in Top Sites reports (default: 10).

21. Select the number of users to display in Top Users reports (default: 10).
22. Select the number of sites to display in Sites by User reports (default: 5).
23. Select the number of items to display in all other reports (default: 10).
24. Select the number of entries per item to display in all other reports (default: 10).
25. To only display data for a specified group of web sites, enter the URL of each site (separated by commas) in the **Site List** field. Because this field uses pattern matching, entries such as “yahoo.com” will display data for mail.yahoo.com, shopping.yahoo.com, and so on.
26. To only display data for a specified group of users, enter the username of each user (separated by commas) in the **User List** field. Because this field uses pattern matching, entries such as “john” will display data for johnm, 123john, and so on.
27. To configure the default start and end times for hourly reports, select a start and end time from the **Start** and **End** list boxes.
28. Click the **Update** button to apply changes.
29. In the **Daily Reports** page, select the daily reports that will be included in the e-mail message:
  - **User Login**—shows users that logged on to the SonicWALL appliance to bypass content filtering or to remotely access local network resources.
  - **Admin Login**—shows successful administrator logins for the SonicWALL appliance.
  - **Failed Login**—shows failed login attempts for users and administrators that attempted to log on through the SonicWALL appliance.
  - **Status Summary**—status of the SonicWALL appliance during each hour.
  - **Bandwidth Summary**—amount of traffic handled by the SonicWALL appliance during each hour.
  - **Bandwidth Top Users**—displays the users who used the most bandwidth.
  - **Service Summary**—amount of traffic handled by each service during each hour.
  - **VPN Summary**—amount of VPN traffic handled by the SonicWALL appliance during each hour.
  - **VPN Top Users**—displays the users who used the most VPN bandwidth.
  - **VPN By Policy**—displays VPN usage by policy.
  - **VPN By Policy hourly**—displays hourly VPN usage by policy.
  - **VPN By Service**—displays VPN usage by service.
  - **Web Usage Summary**—amount of HTTP bandwidth handled by the SonicWALL appliance during each hour of the day.
  - **Web Usage Top Sites**—displays the web sites that used the most HTTP bandwidth.
  - **Web Usage Top Users**—displays the users who used the most HTTP bandwidth.
  - **Web Usage Sites By User, By Site**—displays a list of all users, their top sites, the number of hits to each site, and the amount of data transferred.
  - **Web Filter Summary**—displays the number of times users attempt to access blocked sites during each hour.
  - **Web Filter Top Sites**—displays the top blocked web sites that users attempted to access.
  - **Web Filter Top Users**—displays the users who made the most attempts to access blocked sites.
  - **Web Filter Sites By User, By Site**—displays a list of all users, their top sites, and the number of attempts that were made to access each site.
  - **FTP Usage Summary**—amount of FTP bandwidth handled by the SonicWALL appliance.
  - **FTP Usage Top Users**—displays the users who used the most FTP bandwidth.
  - **Mail Usage Summary**—amount of mail handled by the SonicWALL appliance.
  - **Mail Usage Top Users**—displays the users who sent and received the most mail.
  - **Attacks Summary**—number of attack attempted on the SonicWALL appliance.
  - **Attacks By Category**—displays the attacks that occurred, sorted by category.
  - **Attacks By Source**—displays the top sources of attacks.
  - **Attacks Errors and Exceptions**—number of errors and exceptions on the SonicWALL appliance.
  - **Intrusion Summary**—number of intrusions attempted on the SonicWALL appliance.
  - **Intrusions By Category**—displays the intrusion attempts that occurred, sorted by category.
  - **Intrusions By Source**—displays the top source that generated intrusion attempts.
  - **Intrusions By Destination**—displays the top destinations that generated intrusion attempts.
30. When you are finished, click **Add**. The new report will appear in the list on the Scheduled Reports page.

*Note: The report will run based on the settings that you specified and will use the default display settings. To change the display settings, see “Configuring Presentation Options” on page 14.*

## Scheduling a Weekly or Monthly Report

By default, weekly reports are sent out every Monday at 03:00 GMT and contain information for the previous week. Monthly reports are sent out on the second day of every month at 03:00 GMT and contain information for the previous month. To change when they are sent, see “Configuring Email/Archive Settings” on page 12. To configure a new weekly or monthly report, follow these steps:

1. From the Scheduled Reports page, click the **Add Multi-Day Report** button. The Multi-Day Reports page appears (Figure 156).

**Figure 156: Multi-Day Reports Page**

Prasad : Scheduled Reports (user: gmsdoc type: Administrators) Logout

### Multiple Day EMail Report Configuration

Name:  Description:

Email

SMTP Server: 10.50.128.230 Email Subject:

Destination Email Addresses (semicolon separated):  Email Body:

Source Email Address: snus5@sonicwall.com

Send Reports Inline  
(By default, reports are sent as attachments. Only single reports can be sent inline.)

Archive

Save Directory:   
(If path is invalid, default path is [%gsas\_directory]/Viewpoint/reports.)

Weekly  Monthly

Generate Reports in XML Format

Include all data in a single report

Zip Reports into a single file

Password Protect the Zip File

Password:

Template Folder Name:   
(Only for custom reports)

(Requires only the folder name and not the complete path.)

Configure Filters/Options  
(Note: You can set filters and display options to be applied for reports in this schedule here.)

### Report List

Report	Description
<input type="checkbox"/> Status Reports	Status Reports
<input type="checkbox"/> Bandwidth Reports	Bandwidth Reports
<input type="checkbox"/> ROI Reports	ROI reports
<input type="checkbox"/> WebUsage Reports	WebUsage reports
<input type="checkbox"/> Browse Time Reports	Browse Time reports
<input type="checkbox"/> WebFilter Reports	WebFilter reports
<input type="checkbox"/> Mail Reports	Mail Reports
<input type="checkbox"/> Attacks Reports	Attacks Reports
<input type="checkbox"/> Virus Attacks Reports	Virus Attacks reports
<input type="checkbox"/> Spyware Reports	Spyware reports
<input type="checkbox"/> VPN Reports	VPN Reports
<input type="checkbox"/> Intrusions Reports	Intrusions Reports

add cancel

2. Enter a name for the report in the **Scheduled Report Name** field.
3. Enter a description for the report in the **Description** field.

4. To send the report, select the **Email** check box.
5. By default, the GMS Reporting Module will use the Simple Mail Transfer Protocol (SMTP) server that was specified during SonicWALL GMS installation. To change it, enter the IP address or hostname of the SMTP server in the **SMTP Server Address** field.
6. Enter the Destination e-mail addresses in the **Destination Email Addresses** field. Make sure each e-mail address is separated by a semicolon (;).
7. By default, the GMS Reporting Module will use the e-mail address of the user logged into SonicWALL GMS as the Sender e-mail address. To change it, enter a new Sender e-mail address in the **Source Email Address** field.
8. Enter the Subject Line that will appear in reports sent from the GMS Reporting Module in the **Email Subject** field.
9. Enter text that will appear in the message body in the **Email Body** field.
10. To copy the contents of the report into the body of the email message, select the **Send Reports Inline** check box. To send the file as an email attachment, make sure this check box is deselected.  
*Note: Reports can only be sent inline when all data is sent in a single report.*
11. To archive the file on the server's hard disk, select the **Archive** check box and enter a path in the **Save Directory** field.  
Specify the directory where the file will be archive in the **Save Directory** field.
12. Select whether the report will be sent **Weekly** or **Monthly**.
13. If you are using custom reports, specify the folder location of the template files in the **Template Folder Name** field. For more information, see Chapter 5, "Scheduling GMS Reporting."
14. To compress the reports into a single file, select the **Zip Reports into a single file** check box.
15. To include all of the data in a single report, select the **Include all data in a single report** check box.
16. To password-protect the Zip file, select the **Password Protect the Zip File** check box and enter the password in the **Password** field.
17. Click the Configure Filters/Options button. The Configure Filters/Options page appears (Figure 155).



Figure 157: Configure Filters/Options Page

**Default Display Type**

Chart and Table  
 Table Only

**Default Chart Type**

Summary/Over Time Charts: BAR  
User Based Charts: PIE

**Number Of Items**

Number Of Top Sites: 10  
Number Of Top Users: 10  
Number Of Sites By User/Users By Site: 5  
( Default: For Non Sites/Users)  
Number Of Items: 10  
Number Of Entries Per Item: 10

**Inclusion Filter Parameters**

Site List: (comma separated)  
User List: (comma separated)  Whole Name/IP  
Hours: Start: 00 End: 23

(Note: Site List and Hours settings are applicable only for the By Site and By Hour reports respectively).

update reset

18. Select whether the reports will contain a chart and table or table only.
19. Select whether Summary and Over Time charts will be displayed as bar graphs or plots from the **Summary/Over Time Charts** list box (default: BAR).
20. Select whether User charts will be displayed as pie charts, bar graphs, area charts, or plots from the **User Based Charts** list box (default: PIE).
21. Select the number of sites to display in Top Sites reports (default: 10).
22. Select the number of users to display in Top Users reports (default: 10).
23. Select the number of sites to display in Sites by User reports (default: 5).
24. Select the number of items to display in all other reports (default: 10).
25. Select the number of entries per item to display in all other reports (default: 10).
26. To only display data for a specified group of web sites, enter the URL of each site (separated by commas) in the **Site List** field. Because this field uses pattern matching, entries such as “yahoo.com” will display data for mail.yahoo.com, shopping.yahoo.com, and so on.
27. To only display data for a specified group of users, enter the username of each user (separated by commas) in the **User List** field. Because this field uses pattern matching, entries such as “john” will display data for johnm, 123john, and so on.
28. To configure the default start and end times for hourly reports, select a start and end time from the **Start** and **End** list boxes.
29. Click the **Update** button to apply changes.

30. Select the reports that will be included in the e-mail message:

- **Status Over Time**—displays the status of the SonicWALL appliance for the week or month.
- **Bandwidth Over Time**—displays the daily amount of traffic handled by the SonicWALL appliance for the week or month.
- **Bandwidth Top Users Over Time**—displays the top users of bandwidth handled by the SonicWALL appliance for the week or month.
- **Web Usage Over Time**—displays the daily amount of HTTP bandwidth handled by the SonicWALL appliance for the week or month.
- **Web Usage Top Sites Over Time**—displays the top sites for the week or month.
- **Web Usage Top Users Over Time**—displays the top users for the week or month.
- **Web Usage By Users Over Time**—displays the web usage by users for the week or month.
- **Web Filter Over Time**—displays the number of attempts that were made to access blocked web sites for the week or month.
- **Web Filter Top Sites Over Time**—displays the top filtered sites for the week or month.
- **Web Filter Top Users Over Time**—displays the top users trying to access filtered sites for the week or month.
- **Web Filter By Users Over Time**—displays web filtering by user for the week or month.
- **FTP Usage Over Time**—displays the daily amount of FTP bandwidth handled by the SonicWALL appliance for the week or month.
- **FTP Usage Top Users Over Time**—displays the top FTP users for the week or month.
- **Mail Usage Over Time**—displays the daily amount of mail handled by the SonicWALL appliance for the week or month.
- **Mail Usage Top Users Over Time**—displays the top Mail users for the week or month.
- **Attacks Over Time**—displays the daily number of attacks attempted during the week or month.
- **Attacks Categories Over Time**—displays the attacks that occurred during the week or month, sorted by category.
- **Attacks Sources Over Time**—displays the top sources of attacks during the week or month.
- **Attacks Errors and Exceptions Over Time**—number of errors and exceptions on the SonicWALL appliance during the week or month.
- **VPN Usage Over Time**—displays daily number of VPN connections during the week or month.
- **VPN Usage Top Users Over Time**—displays the users who used the most VPN bandwidth during the week or month.
- **Drop Packets Over Time**—displays the number of packet errors during the week or month.
- **VPN By Policy Over Time**—displays VPN usage by policy during the week or month.
- **Intrusions Over Time**—number of intrusions attempted on the SonicWALL appliance during the week or month.
- **Intrusions By Categories Over Time**—displays the intrusion attempts that occurred during the week or month, sorted by category.
- **Intrusions By Sources Over Time**—displays the top source that generated intrusion attempts during the week or month.
- **Intrusions By Destination Over Time**—displays the top destinations that generated intrusion attempts during the week or month.

31. When you are finished, click **Add**. The new report will appear in the list on the Scheduled Reports page.

## Customizing Report Elements

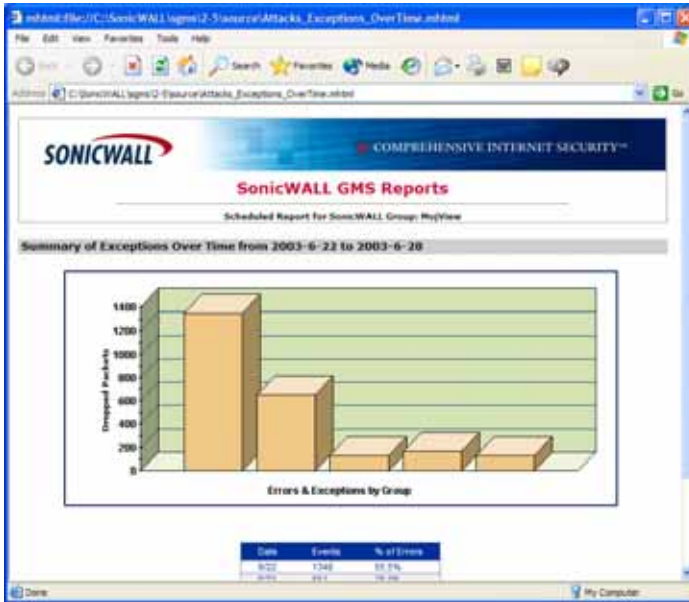
The GMS Reporting Module contains many elements that can be customized to meet the look and feel of your organization's corporate image. The elements that can be customized include:

**Table 1: Custom Elements**

Element	Default	Description
[PAGE_BG_COLOR]	#FFFFFF	Page background color
[HEADING]	<font color=red size=4>SonicWALL GMS Reports</font>	Heading Color and Title
[LOGO]	images/mainLogo2.gif	Main logo at top of page.
[LOGO_DESCRIPTION]	SonicWALL GMS Reports	Logo description.
[LOGO_HREF]	http://www.sonicwall.com	The location to which the user is taken when he or she clicks the logo.
[LOGO_TABLE_BG_COLOR]	#FFFFFF	Background color of the table in which the logo resides.
[TITLE_BAR_BG_COLOR]	#CCCCCC	Color of the title bar.
[TITLE_BAR_FONT_COLOR]	#000000	Color of the font in the title bar.
[TITLE_BAR_FONT_SIZE]	2	Size of the Font in the title bar.
[CHART_BG_COLOR]	#FFFFFF	Background color of the chart.
[CHART_PLOT_COLOR]	#D7E1B2	Color of the bar in the bar graphs.
[PIE_PLOT_COLOR]	#FFFFFF	Color of the pie in pie graphs.
[TABLE_HEADING_COLOR]	#003399	Color of the table heading.
[TABLE_EVEN_ROW_COLOR]	#FFFFFF	Color of the even-numbered rows.
[TABLE_ODD_ROW_COLOR]	#E8EEF4	Color of the odd-numbered rows.
[TABLE_TOTAL_ROW_COLOR]	#003399	Color of the "total" row.
[FOOTER_FONT_COLOR]	#000000	Color of the footer font.
[FOOTER_FONT_SIZE]	1	Size of the footer font.

The following figure shows the report elements as they are displayed.

Figure 158: Report Elements



---

## Using the Reporting Customization Tool

This section describes how to use the Reporting Customization Tool. You can use the tool to create multiple templates. After creating a template, you can apply it to one, some, or all reports.

To use the Reporting Customization Tool, follow these steps:

1. Create a folder to store custom report templates. The folder name cannot contain spaces and must be located in the appropriate directory. For example, to use the folder name `MyCustomReports`, you must create the folder with the following directory structure:

```
<gms_directory>\Tomcat\webapps\sgms\reports\scheduledreports\MyCustomReports
```

2. Create a text file that contains all the attributes and values that can be customized. For more information, see the `params.txt` file that accompanied the Reporting Customization Tool.

3. Enter the following command:

```
ReportTool.bat input_file target_folder
```

where *input\_file* is the name of the text file that you customized and *target\_folder* is the name of the target folder.

*Note:* Do not specify the complete path to the folder.

4. The default logo used in the reports is the SonicWALL logo. If you wish to use a different logo and other graphics, copy them into the following directory: `\sgms\images\`.
5. Restart the GMS Web server service.
6. Set the template folder name in the report schedule created to this folder name. This must be set for all the report schedules that use the customized templates.

---

## Scheduling a Report

For information on scheduling a custom report, see Chapter 4, "Scheduling GMS Reporting."

## Technical Tips

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### Forwarding Syslog Data to Another Syslog Server

To forward SonicWALL GMS syslog data to another syslog server, follow these steps:

1. Open the sgmsConfig.xml file with a text editor.
2. Locate the following line:  

```
Parameter name ="syslog.forwardToHost" value=""
```
3. Add the IP address or hostname of the destination syslog server to the value attribute.
4. Save the sgmsConfig.xml file and exit.
5. Ensure that at least firmware 6.3.1.0 is running on the managed SonicWALL appliances.

**Note:** To configure SonicWALL GMS to not store the syslog data after it has been forwarded, you must disable the GMS Reporting Module. To do this, open the **GMS Settings** page in the Console Panel, deselect the **Enable Reporting** check box, and click **Update**.

### Forwarding the Syslog Data to a WebTrends Server

From SonicWALL GMS, you can forward the syslog data to a WebTrends server. To accomplish this, do the following:

1. Open the sgmsConfig.xml file with a text editor.
2. Locate the following line:  

```
Parameter name ="syslog.forwardToHost" value=""
```
3. Add the IP address or hostname of the WebTrends syslog to the value attribute.
4. Save the sgmsConfig.xml file and exit.
5. Ensure that at least firmware 6.3.1.0 is running on the managed SonicWALL appliances.
6. Change the syslog format in each managed SonicWALL appliance from the default format to the WebTrends format on the Log Settings page.

WebTrends cannot read the SonicWALL syslog in its default format. The default syslog format's source (src) and destination (dst) fields contain port numbers and link information (i.e., WAN, LAN, and DMZ). These prevent WebTrends from resolving the IP to DNS entries and from performing HTML title lookups within the reports.

**Note:** The GMS Reporting Module also has problems with the WebTrends syslog format. To disable GMS Reporting, open the **GMS Settings** page in the Console Panel, deselect the **Enable Reporting** check box, and click **Update**.

### Posting GMS Reporting to Another Web Server for End-User Access

To allow end user access to another web server for end-user access, install the SonicWALL GMS Console in redundant mode.

You can then allow end user access to the redundant Console for viewing GMS Reporting real-time and historical reports. End user access will be isolated from the main Console that is used for managing and configuring SonicWALL appliances.



openObjectId intro.fm:2 469743 iii  
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openObjectId intro.fm:2 484968 iii  
openObjectId intro.fm:2 485081 iii  
openObjectId configure.fm:2 479213 iii  
openObjectId configure.fm:2 479516 iii  
openObjectId configure.fm:2 479512 iii  
openObjectId configure.fm:2 479740 iii  
openObjectId configure.fm:2 480700 iii  
openObjectId configure.fm:2 480411 iii  
openObjectId configure.fm:2 481090 iii  
openObjectId configure.fm:2 480986 iii  
openObjectId configure.fm:2 481137 iii  
openObjectId configure.fm:2 481410 iii  
openObjectId configure.fm:2 482544 iii  
openObjectId configure.fm:2 482444 iii  
openObjectId report.fm:2 497652 iii  
openObjectId report.fm:2 489669 iii  
openObjectId report.fm:2 489932 iii  
openObjectId report.fm:2 489970 iii  
openObjectId report.fm:2 481756 iii  
openObjectId report.fm:2 476832 iii  
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openObjectId report.fm:2 492119 iii  
openObjectId report.fm:2 478031 iii  
openObjectId report.fm:2 478073 iii  
openObjectId report.fm:2 484315 iii  
openObjectId report.fm:2 478157 iv  
openObjectId report.fm:2 478196 iv  
openObjectId report.fm:2 484367 iv  
openObjectId report.fm:2 484461 iv  
openObjectId report.fm:2 484532 iv  
openObjectId report.fm:2 478479 iv  
openObjectId report.fm:2 478480 iv  
openObjectId report.fm:2 478564 iv  
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openObjectId report.fm:2 484800 iv  
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openObjectId report.fm:2 479436 iv  
openObjectId report.fm:2 479437 iv  
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openObjectId report.fm:2 480329 iv  
openObjectId report.fm:2 480186 iv  
openObjectId report.fm:2 487179 iv  
openObjectId report.fm:2 490224 iv  
openObjectId report.fm:2 492131 iv  
openObjectId report.fm:2 492126 iv  
openObjectId report.fm:2 492148 iv  
openObjectId report.fm:2 492158 iv  
openObjectId report.fm:2 492411 iv  
openObjectId report.fm:2 493942 iv  
openObjectId report.fm:2 494012 iv  
openObjectId report.fm:2 494061 iv  
openObjectId report.fm:2 494129 iv  
openObjectId report.fm:2 494264 iv  
openObjectId report.fm:2 493938 iv  
openObjectId report.fm:2 490565 iv



openObjectId report.fm:2 497175 iv  
openObjectId report.fm:2 497165 iv  
openObjectId report.fm:2 496437 iv  
openObjectId report.fm:2 481444 iv  
openObjectId report.fm:2 481471 iv  
openObjectId report.fm:2 481565 iv  
openObjectId report.fm:2 481611 iv  
openObjectId report.fm:2 487535 iv  
openObjectId report.fm:2 487374 iv  
openObjectId schedule.fm:2 479213 iv  
openObjectId schedule.fm:2 479503 iv  
openObjectId schedule.fm:2 479733 iv  
openObjectId rep-elems.fm:2 480611 iv  
openObjectId rep-elems.fm:2 482027 iv  
openObjectId rep-elems.fm:2 480826 iv  
Console\_Reports\_Summarizer\_Snwls 10  
Console\_Reports\_LogViewerSettings\_Snwls 10  
Console\_Reports\_EmailArchiveSettings\_Snwls 12  
Console\_UserSettings\_Reports\_Snwls 14  
Reports\_General\_Status\_Snwls 19  
Reports\_Status\_OverTime\_Snwls 21  
Reports\_Bandwidth\_Summary\_Snwls 22  
Reports\_Bandwidth\_Monitor\_Snwls 24  
Reports\_Bandwidth\_TopUsers\_Snwls 25  
Reports\_Bandwidth\_OverTime\_Snwls 26  
Reports\_Bandwidth\_TopUsersOverTime\_Snwls 28  
Reports\_Bandwidth\_Summary\_Snwls 30  
Reports\_Bandwidth\_TopUsers\_Snwls 31  
Reports\_Bandwidth\_OverTime\_Snwls 33  
Reports\_Bandwidth\_TopUsersOverTime\_Snwls 35  
Reports\_Services\_Monitor\_Snwls 37  
Reports\_Services\_Summary\_Snwls 37  
Reports\_WebUsage\_Summary\_Snwls 40  
Reports\_WebUsage\_TopSites\_Snwls 42  
Reports\_WebUsage\_TopUsers\_Snwls 43  
Reports\_WebUsage\_ByUser\_Snwls 45  
Reports\_WebUsage\_BySite\_Snwls 47  
Reports\_WebUsage\_BySite\_Snwls 48  
Reports\_WebUsage\_OverTime\_Snwls 50  
Reports\_WebUsage\_TopSitesOverTime\_Snwls 51  
Reports\_WebUsage\_TopUsersOverTime\_Snwls 53  
Reports\_WebUsage\_ByUsersOverTime\_Snwls 55  
Reports\_Bandwidth\_Summary\_Snwls 58  
Reports\_Bandwidth\_TopUsers\_Snwls 60  
Reports\_WebUsage\_ByUser\_Snwls 62  
Reports\_Bandwidth\_OverTime\_Snwls 64  
Reports\_Bandwidth\_TopUsersOverTime\_Snwls 65  
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Reports\_WebFilter\_TopUsers\_Snwls 72  
Reports\_WebFilter\_ByUser\_Snwls 73  
Reports\_WebFilter\_OverTime\_Snwls 75  
Reports\_WebFilter\_TopSitesOverTime\_Snwls 76  
Reports\_WebFilter\_TopUsersOverTime\_Snwls 78  
Reports\_WebFilter\_ByUsersOverTime\_Snwls 79  
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