

# Blue Coat® Systems Reporter™

*Configuration and Management Guide*

*version 8.3.1*



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# *Chapter 1: Introduction*

This chapter introduces you to the Blue Coat® Reporter and provides the document description and conventions.

## Welcome To Blue Coat Reporter

Blue Coat Reporter analyzes Blue Coat SG access log files and presents data using over 150 pre-defined reports.

Reporter generates dynamic reports on demand, and it supports features such as zooming (or drill-down viewing) and filtering. You can also create and apply expression and log filters. For example, you can create filters to zoom in on the events for a particular address on a particular day, or to see requests to a specific content filtering category. Reporter allows you to navigate naturally and quickly through hierarchies.

Reporter runs as its own Web server, serving its HTML pages to any Web browser through HTTP. Reporter is accessed through a Web browser.

## About the Document Organization

This document is divided into the following sections and chapters:

Chapter Title	Description
Chapter 1: "Introduction"	This chapter.
Chapter 2: "Installation"	Provides system requirements and instructions for installing and launching Reporter using either Windows or Linux.
Chapter 3: "Blue Coat Reporter Overview and Licensing"	Describes the initial Reporter screen and describes how to enter an Enterprise License.
Chapter 4: "Managing Profiles and User Accounts"	Describes how to create Reporter profiles and user accounts, and how to assign reports to profiles.
Chapter 5: "Generating and Managing Reports"	Describes how to create a profile and a user account, use the Scheduler, set profile preferences, and generate a report.
Chapter 6: "Configuring Profiles"	Describes how to modify existing profiles and report appearances; describes how to tune databases.
Appendix A: "Report Concepts and Reference"	Provides more details about the contents of an HTML report page; describes concepts relating to Reporter processes; provides log field and report field references and matrices.
Appendix B: "v7 Profile Reference"	Explains how to create configuration files and apply advanced log filters to selectively eliminate portions of your log data from the statistics.
Appendix C: "Configuration File Reference"	Lists the Profile and Preference options.

Chapter Title	Description
Appendix D: "Using Reporter from the Command Line Interface"	Explains how to use the Reporter command-line to manage databases, create reports, and view profile information. Also covers a number of run time options.
Appendix E: "Upgrading From Reporter 7.1.x to 8.2.x"	Describes how to perform initial tasks required before upgrading.
Appendix F: "Copyrights"	Lists the third party vendors licensed by Blue Coat.

## Related Blue Coat Documentation

- Blue Coat ProxySG Configuration and Management Suite*
- Blue Coat ProxySG Content Policy Language Guide*

## Document Conventions

This document uses the following typeface and screenshot conventions.

### *Typographical Conventions*

The following section lists the typographical and Command Line Interface (CLI) syntax conventions used in this manual.

Table 1-1.

Conventions	Definition
<i>Italics</i>	The first use of a new or Blue Coat-proprietary term.
Courier font	Command line text that appears on your administrator workstation.
<i>Courier Italics</i>	A command line variable that is to be substituted with a literal name or value pertaining to the appropriate facet of your network system.

### *Procedure Conventions*

This document employs the use of screenshots (Online Help excluded) to illustrate procedures and convey example information.

- Procedure screenshots—Identified by borders and callouts, these *precede* numbered steps or a set of steps. The numbered callouts point to Reporter fields and options relevant to the given procedure, and correlate with the numbered steps below, which provide detailed explanations of the options.
- Figures—Identified by incremental numbering below them (no borders), figures provide conceptual information or completed examples of preceding procedures.

## *Chapter 2: Installation*

This chapter describes how to install and access Blue Coat Reporter on a Windows or Linux platform.

---

**Important:** Before you install and run Reporter 8.3.x, be aware of the associated upgrade issues, such as report compatibility. If you are upgrading to Reporter 8.3.x from Reporter 7.1.x, (Windows only), you must perform an upgrade preparation procedure, which involves running a script. For upgrade information, see [Appendix D:“About Upgrading” on page 231](#) or the *Blue Coat Reporter 8.3.x Release Notes*.

---

### **System Requirements**

Blue Coat Reporter is a resource-intensive application. Having more disk, CPU, and memory than the minimum requirements improves the performance.

#### ***Hardware Requirements***

Refer to the Specifications document located at:  
<http://www.bluecoat.com/products/reporter>.

#### ***Software Requirements***

- Microsoft Windows
- Red Hat Linux.

Refer to the *Blue Coat Reporter Release Notes* for the most current list of supported software and versions.

Reporter uses its own Web server—an existing Web server is not required on the computer where it is running.

#### ***Browser Support***

- Mozilla Firefox (the recommended browser)
- Internet Explorer® or 6.x or 7.x (IE 7.x recommended)

While other browsers, such as Netscape®, might function properly, they are not supported by Blue Coat.

#### ***Interaction With Anti-Virus Services***

Blue Coat Reporter and Anti-virus (AV) scanners running on the same servers causes problems with folder processing. Blue Coat recommends locating log scanning and AV scanning services on different servers.

If this is not possible, you can have them co-exist on the same server, but you must configure the AV scanner to ignore specific Reporter folders. Reporter constantly opens hundreds of files for exclusive access in its folders and will fail if it cannot obtain an exclusive lock on a file. Configure the AV scanners to ignore the following folders:

- LogAnalysisInfo\Datasets** (or wherever the database folder resides)

- LogAnalysisInfo\IPC**
- LogAnalysisInfo\Locks**
- LogAnalysisInfo\log\_formats**
- LogAnalysisInfo\Output**
- LogAnalysisInfo\profiles**
- LogAnalysisInfo\ReportCache**
- LogAnalysisInfo\SessionChanges**
- LogAnalysisInfo\templates**
- LogAnalysisInfo\TempLogs**
- LogAnalysisInfo\TemporaryFiles**
- LogAnalysisInfo\WebServerRoot**
- LogAnalysisInfo\** (not all subdirectories, rather the root, which would ignore the files in this directory)

## Installation

How you install Reporter depends on the platform: Window or Linux.

### *Windows Installation*

Reporter is a standard Windows installer.

#### To install Reporter using Windows:

1. Double-click the Windows installer program to start the installer, and follow the installation Wizard tasks.
2. The installation wizard prompts you to respond to a few standard installation questions, such as acceptance of product terms and installation location. Then the following dialog displays:

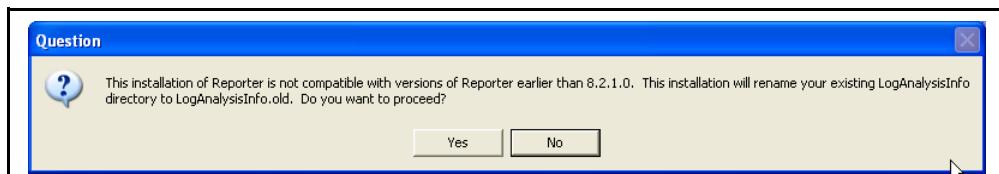


Figure 2-1. Installation question dialog.

Because of substantial design enhances, profiles created before updating to Reporter 8.2.1.0 are not compatible with this version. However, if you have created custom profiles, this dialog allows you to preserve those configurations to make it easier to customize 8.3.x profiles.

- Click **Yes** to rename the **LogAnalysisInfo** folder (appends the current folder with **.old**), thus preserving your obsolete profile configuration files. If you click **Yes**, a verification dialog appears. Click **Yes** again.
- Click **No** to instruct Reporter to overwrite the existing **LogAnalysisInfo** folder with the new 8.3.x version folder and not retain a copy of the previous folder.

After Reporter is installed, automatically launches a Web browser and connects to Reporter.



3. The first time you launch Reporter, you are prompted to enter (thus creating) an administrator username and password. (see "["Troubleshooting" on page 14](#) if you have created them before and forgotten them).
4. Click **Login**.

**Note:** For Windows users: Reporter runs as the **SYSTEM** user by default, which could restrict access to network shares or mapped drives. If you cannot access mapped network drives with Reporter, see "["Troubleshooting the Windows Service" on page 14](#) for instructions about running Reporter as a different user.

If you encounter other problems, see "["Troubleshooting" on page 14](#).

## Linux Installation

Reporter is downloaded as a gzipped `tar` archive file.

### To install Reporter using Linux:

1. Transfer the gzipped `tar` archived file to the Linux machine that is to run Reporter.
2. Open a shell prompt from the Linux command line.
3. To invoke the `gunzip` utility and untar the file, enter the following command:  
`gunzip -c (bcreport.tgz) | tar xf -`

---

**Note:** Change `(bcreport.tgz)` to match the name of the file you downloaded.

---

4. When the archive is uncompressed and extracted, run Reporter by changing to the installation directory and typing the name of the executable file from the command line:  
`cd (installation-directory)`

---

**Note:** You might need to change the filename to match the actual version you downloaded.

---

Reporter launches, starting its own Web server on the Linux machine (using port 8987). See "["Accessing Blue Coat Reporter Locally or Remotely"](#) below for more information about running Reporter.

---

**Note:** To run Reporter in the background, add a single ampersand (&) to the end of the command line that starts Reporter. This allows you to close the terminal window without killing Reporter. On some systems, you might also need to add `nohup` to the beginning of the command line for this to work properly.

---

If you experience any installation problems, see "["Troubleshooting" on page 14](#).

## Accessing Blue Coat Reporter Locally or Remotely

Now that Reporter is installed, you can access it from the Windows Start menu or by entering the IP address or DNS name.

### To access Reporter through or Linux:

1. Access Reporter locally by browsing to the local host IP address, which is:  
`http://127.0.0.1:8987/`
2. (Optional) To access Reporter remotely, browse to the server IP address:  
`http://server_ip_or_hostname:8987/`  
where `server_ip_or_hostname` is the IP address or DNS name of the computer on which you installed Reporter.
3. Enter your administrator username and password. (see "["Troubleshooting" on page 14](#) if you have created them before and forgotten them).

## Troubleshooting

If Reporter does not start up (for example, if you receive a page back when you enter the URL or if you receive an error page), attempt the following:

- Verify you installed the version of Reporter that matches the computer on which you are running Reporter (for instance, you cannot run the Linux version of Reporter on Windows).
- Verify you downloaded Reporter in BINARY mode.
- In Linux, verify the Reporter program is executable.

If you forget your username or password, you can change them:

- Go to the **LogAnalysisInfo** folder and open the `users.cfg` file; change the username and/or password and close the file.
- You can also delete the `users.cfg` file, which deletes all usernames and passwords from Reporter. When you launch Reporter, you are prompted to create a new username and password.

## Troubleshooting the Windows Service

By default Reporter is installed as a service on Windows. It runs as the local system account. This account does not have access to network shares. To use network shares, you must change the service user to one who has permission to access the desired resources.

On some Windows versions, Reporter cannot browse mapped network drive letters. In this case, directories *must* be specified using UNC paths. For example:

`\servername\sharename\`.

When run directly from the command line, Reporter displays mapped network drive letters.

**To update the system username/password:**

1. On the PC:
  - a. Select **Start > Settings > Control Panel**.
  - b. Double-click **Administrative Tools**.
  - c. Double-click **Services or Services and Applications** (depending on the OS).
2. Locate the Reporter service:
  - a. Right-click the service and select **Stop**.
  - b. Right-click the service and select **Properties**.
  - c. Select **Log On**.
  - d. Select **This Account**.
  - e. Enter the new username/password for the network. (You can also browse for the user.)
  - f. Click **OK**.
3. Right-click the Reporter service and select **Restart**.

The next time you launch Reporter, you can access network shares when specifying the directory using UNC path names.



## Chapter 3: Blue Coat Reporter Overview and Licensing

This chapter describes the main Blue Coat Reporter user interface components.

### The Data Profiles/Settings Menu

The Administrative menu appears at the left of the main administrative page.

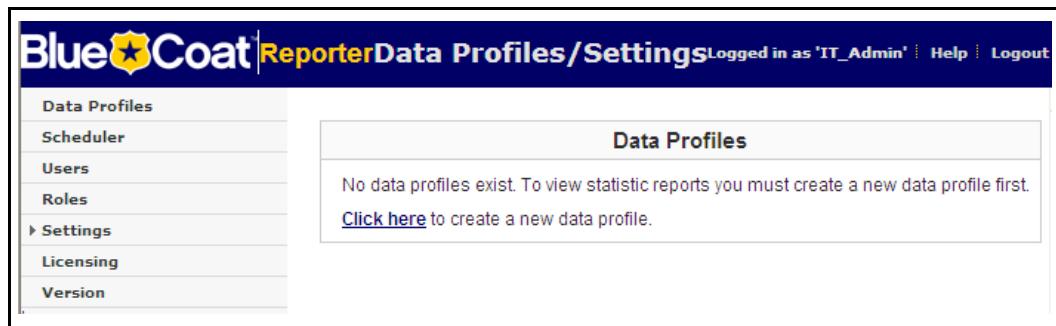


Figure 3-1. The Data Profiles/Settings menu.

The upper right corner of the header pane displays the logged-in username. As you navigate other Reporter pages, clicking the **Data profiles/settings** link next to the username returns you to this page.

The Administrative menu provides basic administrative functions, as follows.

- **Data Profiles**—From this page, you can create new profiles, delete existing ones, edit profile configuration information, or view reports for a profile (the Show Reports link). See "[Section A: About Data Profiles and Database Types](#)" on page 22.
- **Scheduler**—From this page, you can create, delete, and edit scheduled tasks. For example, you can create a task to update all of your databases every night or to send a report of the previous month by e-mail on the 1st of each month. See "[Section F: Configuring the Reporter Scheduler](#)" on page 97 for more information.
- **Users**—From this page, you can add or remove users and change the options for each user. For example, you can determine which users have administrative access and which profiles non-admin users are permitted to view. See "[Section E: Creating User Accounts](#)" on page 50
- **Roles**—From this page, you can create user roles. For example, create a role that only contains reports that Human Resource personnel are concerned with, then assign HR users to that role.
- **Settings**—Access to the General, Server, E-mail, and Log Settings pages. From these pages, configure system wide settings such as language, DNS translation, HTTPS, SMTP, and memory usage.. See "[Section F: Configuring Reporter Preferences](#)" on page 52
- **Licensing**—From this page, you can add a license or change licensing from Standard to Enterprise (if you are using a Trial license). See "[Adding an Enterprise License](#)" on page 18.
- **Version**—Displays the current Blue Coat Reporter version and build information.

## Licensing

This section describes the differences between a licensed and unlicensed Reporter version, and how to enter a license.

### Standard vs Enterprise

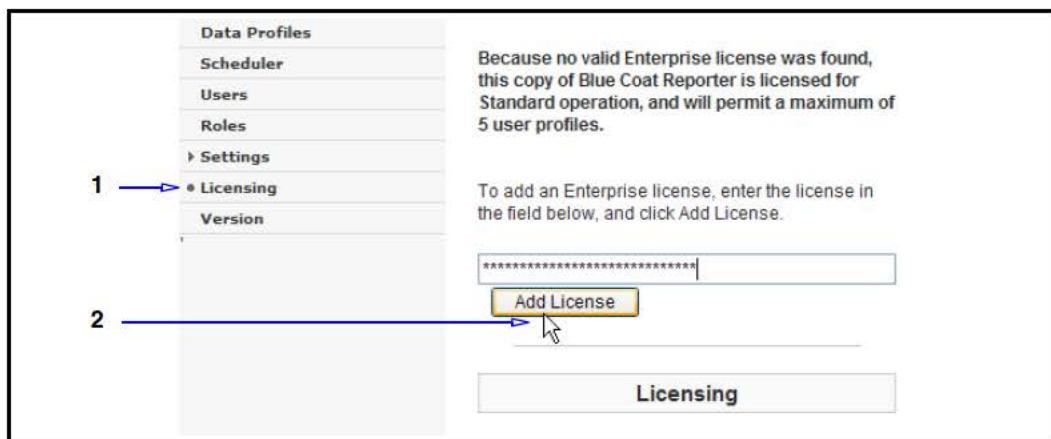
Blue Coat Reporter has two operation modes: Standard and Enterprise. The following list describes the differences between the two modes:

- Profiles: The Enterprise version of Reporter supports an unlimited number of profiles; the Standard version is limited to five profiles.
- Formats: The Enterprise version allows you to use custom formats; the Standard version supports only the default SG appliance formats.
- Multiple Processors: The Enterprise version allows you to use all available processors; the Standard version supports only one processor.
- Report/Report Menu Editor: The Enterprise version allows you to edit the report elements and the report menu; the Standard version does not.

### Adding an Enterprise License

After installed and launched, Reporter operates in Standard mode by default. If you requested a trial period or purchased an Enterprise license, you received a license key from Blue Coat. Enter this key to activate the Enterprise mode.

#### To enter a license key for the Enterprise version:



1. From the Administrative menu, click **Licensing**.
2. Enter your purchased or trial Enterprise license key and click **Add License**. The Licensing page updates to show Reporter is now licensed for Enterprise operations. The page displays the license parameters.

Licensing						
License	Valid	Type	Users	Profiles	Expiration	
enterprise-unlimited-exp04222007-xxxx-xxxx	valid	enterprise	unlimited	unlimited	21/Apr/2007	
This installation is licensed for unlimited profiles						

Figure 3-2. License parameters.

## About Reports and Log Filters

Reporter supports most Blue Coat access log formats, including custom log formats.

- For v7 profiles, Reporter also supports sophisticated log filters, which allow you to selectively eliminate portions of your log data from statistics, or convert values in log fields.
- For v8 profiles, during processing Reporter filters log lines with the following values:
  - If sc-status equals 407.
  - If sc-status is from 300 to 400.
  - If s-action is TCP\_AUTH\_REDIRECT.

Additionally, Reporter does not include byte counts (sc-byte or cs-byte) if the filter result is denied.

---

**Important:** Do not confuse log filters with filters that appear in reports. Log filters affect how the log data is processed; report filters affect the display of the database data. The default Reporter log filters automatically perform the most common filter operations (such as stripping query parameters). You can add or remove filters as you fine tune your reports.

---

Access to Reporter is authenticated. Also, non-admin users can be limited to specific profiles and not allowed to change Reporter configurations (such as filters). Reports can also be distributed by creating static HTML files or through e-mail.

Reporter displays numerical information for each entry in the report. Depending on the log type, this information varies; for example: page views, requests or hits, bytes uploaded or downloaded, or P2P protocol information.

For more information on Blue Coat access logging, refer to *Volume 9: Access Logging* in the *Blue Coat SG Appliance Configuration and Management* documentation suite.

Before reports can be viewed, you must create a profile and establish access rights. Proceed to [Chapter 4: "Managing Profiles and User Accounts" on page 21](#).



## *Chapter 4: Managing Profiles and User Accounts*

This chapter describes how to create and manage Reporter administrative and user profiles and user accounts, configure security settings, and schedule times for report generation.

This chapter contains the following sections:

- "Section A: About Data Profiles and Database Types" on page 22
- "Section B: Creating a v8 Data Profile" on page 26
- "Section C: Creating a v7 Database Profile" on page 38
- "Section D: Creating Roles (v8)" on page 47
- "Section F: Configuring Reporter Preferences" on page 52

## Section A: About Data Profiles and Database Types

---

This section provides concept information.

### What is a Data Profile?

A *data profile* is comprised of a set of reports that are generated by processing a specified log file or set of log files. You can create an unlimited number of data profiles (with an Enterprise license). Given that each data profile can be unique—from the number of reports that it has to the number and type of log files that it analyzes—you can evaluate the entire scope of your enterprise Web access information.

---

**Note:** Although the number of data profiles is unlimited, use caution when creating multiple profiles if your log data set is extremely large (dozens of gigabytes). Processing large logs for multiple profiles or a profile spanning a year can cause system memory allocation problems. For estimated optimal system guidelines, refer to the *Reporter Sizing Guide*, which is available from the Blue Coat Web site.

---

Only Reporter administrators have the ability to create and edit data profiles and reports. Administrators have access to all data profiles and log reports. You can also create non-admin user accounts and associate them with specific *roles*. For example, you can create an administrator account for the Human Resources Manager. With admin status, that person has full access to Reporter to create user accounts for the HR staff. Each HR staff member is given a non-administrator user account with a role—access only to specific data profiles—assigned to the account. As non-admins, each HR staff member is able to view, analyze, and send their assigned reports to other people through e-mail.

After data profiles are created, the Scheduler feature allows you to determine when reports are generated.

### The Default Profile

Reporter is installed with a default profile file called **default\_profile.cfg**. This file is located in the **LogAnalysisInfo** folder under the profiles subfolder. You can edit this file to establish default settings for all future profiles. For example, if you have options that you want to apply to every profile (such as a custom header or footer or default e-mail settings), you can include them in all future profiles by editing this file. Blue Coat recommends editing the default profile only after you understand how profiles function. See "[Creating and Editing Profile Files](#)" on page 201.

### About the v8 Data Profiles

The v8 database is designed to work with the SG appliance main log files, including large dataset logs. It runs faster, uses less disk space and memory, and offers a wider array of reports; however, it does *not* allow the use of custom-written filters for processing log files. A v8 database can also operate in real time by specifying a link to the SG appliance to receive streaming log updates. In addition to the selectable reports, this type of profile employs the use of a customizable *Dashboard* to display various metrics.

The v8 data profiles also allow all objects requested by one Web page to be combined to represent one page view. To learn more about the Page View Combiner (PVC), see "[About the Page View Combiner \(v8\)](#)" on page 158.

Section A: About Data Profiles and Database Types

---

## Optimal Blue Coat SG Appliance Log Formats

Reporter v8 data profiles are compatible with the SG appliance **main** log format; however, to optimize performance and maximize report content, Blue Coat recommends that the SG appliance use the default Reporter log formats: **bcreportermain\_v1**, **bcreporterssl\_v1**, and **bcreportercifs\_v1**.

For older versions, you can create custom Reporter formats using the following fields:

- For HTTP, FTP, TCP tunnel, and telnet data, use the following fields (the bold field denote required for PVC):

```
date time time-taken c-ip cs-username cs-auth-group x-exception-id sc-filter-result cs-categories cs (Referer) sc-status s-action cs-method rs (Content-Type) cs-uri-scheme cs-host cs-uri-port cs-uri-path cs-uri-query cs-uri-extension cs(User-Agent) s-ip sc-bytes cs-bytes x-virus-id
```

- For HTTPS forward proxy data, use the following fields:

```
date time time-taken c-ip cs-username cs-auth-group x-exception-id sc-filter-result cs-categories sc-status s-action cs-method rs(Content-Type) cs-uri-scheme cs-host cs-uri-port cs-uri-extension cs(User-Agent) s-ip sc-bytes cs-bytes x-virus-id x-rs-certificate-observed-errors x-rs-connection-negotiated-cipher-strength x-rs-certificate-hostname x-rs-certificate-hostname-category
```

- For CIFS data, use the following fields:

```
date time c-ip c-port r-ip r-port x-cifs-uid x-cifs-tid x-cifs-fid x-cifs-method x-cifs-server x-cifs-share x-cifs-path x-cifs-orig-path x-cifs-client-bytes-read x-cifs-server-bytes-read x-cifs-bytes-written x-client-connection-bytes x-server-connection-bytes x-server-adn-connection-bytes x-cifs-client-read-operations x-cifs-client-write-operations x-cifs-client-other-operations x-cifs-server-operations s-action x-cifs-error-code cs-username cs-auth-group s-ip
```

---

**Note:** If you copy and paste these fields, ensure there are no unnatural spaces between the fields; otherwise, compile errors occur. Copy and paste into Notepad first, then copy and paste from Notepad into the log format field.

---

## Section A: About Data Profiles and Database Types

---

### To create logs that contain the optimal formats:

In the SG appliance Management Console:

1. Select **Configuration > Access Logging > Formats**.
2. Click **New**.
3. Create a new main log format for Reporter:
  - a. Copy and paste the HTTP, FTP, TCP tunnel, and telnet fields from the first bullet to create a new log format called **bcreportermain**.
  - b. Change the default format for HTTP, FTP, TCP tunnel, and telnet log formats to **bcreportermain**.
  - c. Create a new log called **bcreportermain** that uses the **bcreportermain** format.
4. (Optional) For SSL Proxy deployments, create a new log format for Reporter:
  - a. Copy and paste the HTTPS forward proxy fields from the second bullet to create a new log format called **bcreporterssl**.
  - b. Change the default format for HTTPS forward proxy to **bcreporterssl**.
  - c. Create a new log called **bcreporterssl** using the **bcreporterssl** format.
5. Configure the upload client and schedule for each log, as required.

---

**Note:** Both formats can be used in the same v8 profile.

---

*Volume 9: Access Logging of the Blue Coat SG appliance Configuration and Management Suite* provides more detailed information and procedures to configure Access Logging options.

## Content Filtering Reporting

Blue Coat Reporter makes use of the `x-exception-id` in log formats. This allows you when analyzing reports to distinguish between policy denied verdicts based on content filtering settings versus denies because of other policy settings. How you employ `x-exception-id` depends on your SGOS operating system:

### *SGOS 4.2.2 and later:*

1. Add the `x-exception-id` log field to the log format.
2. Create a content filtering policy.
3. Do not set the **Action** to **Deny**; instead, set it to **Content\_filtered\_denied**.

### *SGOS versions 4.1.1.x and previous:*

1. Add the `x-exception-id` log field to the log format.
2. Create a content filtering policy.
3. For the **Action**, create a **content\_filtered\_denied** Return Exception (VPM: **New > Return Exception > Built-in exception > content\_filtered\_denied**). This inserts the `content_filtered_denied` string into the `x-exception-id` field when content denials occur.

Section A: About Data Profiles and Database Types

---

## About the v7 Profile

For smaller datasets; peer-to-peer (P2P), instant messaging (IM), and streaming media logs; or Squid or other non-ELFF formats. Allows the use of many custom filtering options.

## Best Practice: Log Forwarding Frequency

While Reporter can process logs of varying sizes that are uploaded at any time, Blue Coat recommends configuring the SG appliance to send log files to the location Reporter obtains them from once every hour. Consider disk space, bandwidth, and other factors when determining log size and upload frequency.

## Next Step

Once you determine the database type, you are ready to create a profile. Perform the steps in one of the following sections:

- "Section B: Creating a v8 Data Profile" on page 26.
- "Section C: Creating a v7 Database Profile" on page 38.

Section B: Creating a v8 Data Profile

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## Section B: Creating a v8 Data Profile

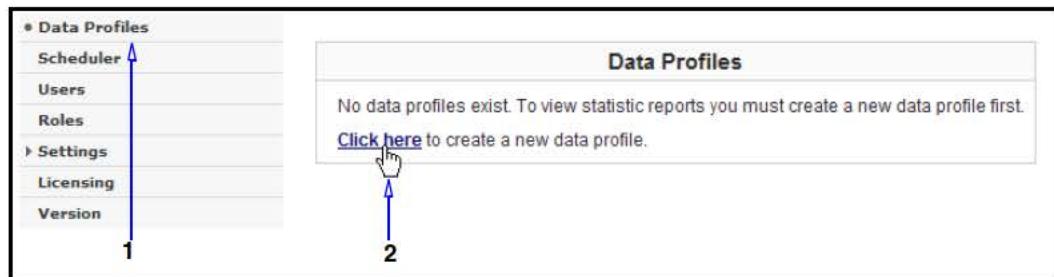
This section describes how to create a data profile that uses the Reporter v8 database to process and present log data through an extended set of reports.

**Note:** This procedure assumes you are an administrator creating profiles for yourself or non-admin users. The next section, "Creating Roles (v8)" on page 47, describes how to create user roles; "Section E: Creating User Accounts" on page 50 describes how to create new admin and non-admin user accounts.

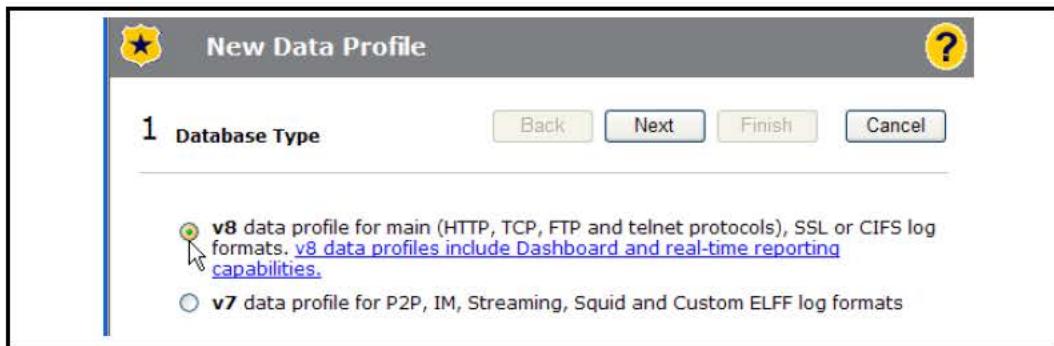
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### Creating the Data Profile

To create a data profile:



1. From the Administrative menu, select **Data Profiles**.
2. Click **Click here**.

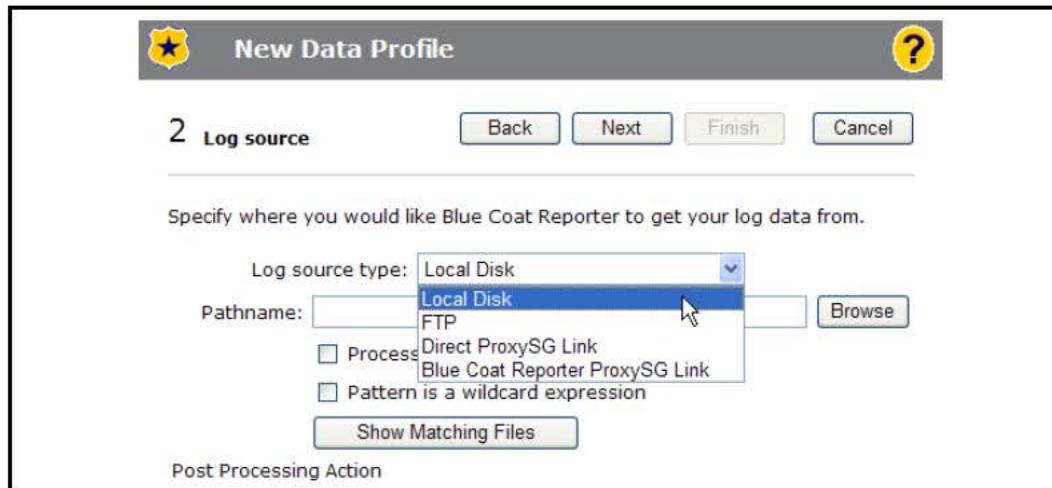


3. The first screen of the profile wizard specifies the database type used to process report data. Select **v8 profile...** and click **Next**.

**Note:** See "Optimal Blue Coat SG Appliance Log Formats" on page 23 for information about the v8 log formats.

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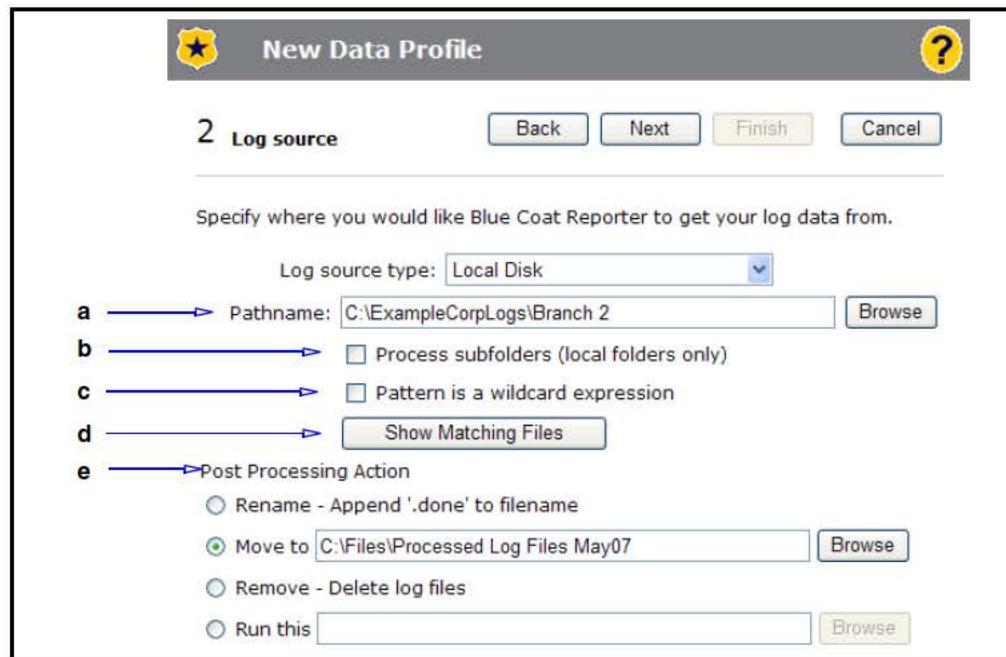
## Section B: Creating a v8 Data Profile



4. The New Profile—Log Source dialog determines the location of the log file directory or individual log file to be associated with this profile. This is a dynamic dialog.

**Important:** For Linux systems, Reporter does not support log files—text files or compressed—over 2 GB. This also applies if the compressed file expands to be over 2 GB when uncompressed.

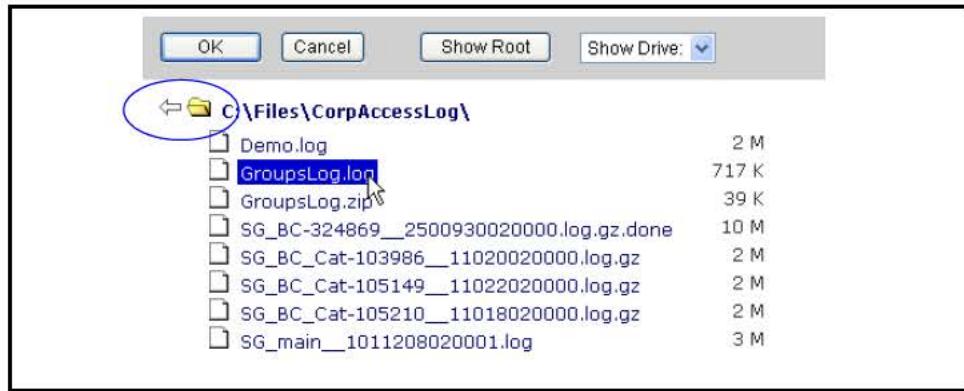
When you select a source from the **Log source type** drop-down list, you can select from various options: a local disk, an FTP location, a direct connection to an SG appliance, or a Blue Coat Reporter custom client link:



## Section B: Creating a v8 Data Profile

**Local disk:** Manually select a log file or directory that contains multiple log files:

- a. In the **Pathname** field, enter the path to the log file or directory to be associated with this profile. You can also click **Browse** to navigate to the location of your logs and select a *folder* or *file* for this profile, as illustrated in the following screenshot:

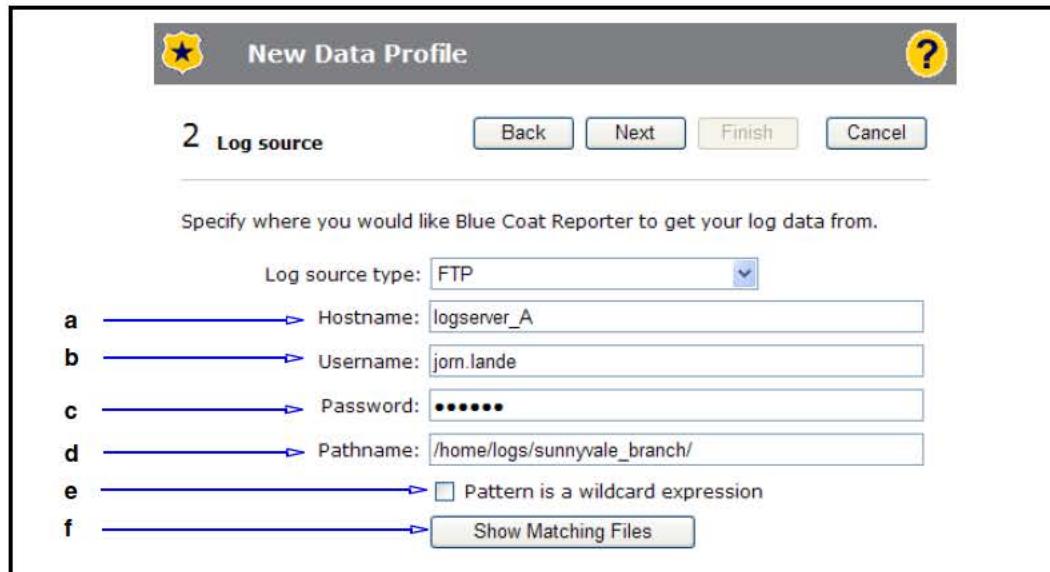


- b. (Optional) **Process subfolders**—By default, Reporter does not process subfolders of the folder you select. This option box instructs Reporter to examine subfolders for additional logs to process. For example, you are storing logs from multiple SG appliances in separate subfolders under a parent folder.
- c. (Optional) **Pattern is a Wildcard Expression**—Matches a subset of available files. The pattern can be as simple as `.gz` (to match compressed files) to a complex expression.
- d. (Optional) **Show Matching Files**—Allows Reporter to verify it recognizes the log files for the given source. Avoid using this option for whole drives; for example: `C:\`.
- e. Post Processing Action—Select an option to specify what Reporter does with the log file after it is processed:
  - **Rename**—Renames to `log_name.done`. This prevents Reporter from reprocessing this file.
  - **Move to**—Moves the log file to another directory. For example, an archive directory for this month's reporting.
  - **Remove**—Deletes the log file.
  - **Run this**—Instructs Reporter to run a custom script located at the specified location. For example, you can create a script to move three different log files from different SG appliances to three separate folders.

**Note:** If this script does not move, rename to `.done`, or delete the log file, Reporter continues to process that file and store duplicate data.

- f. After selecting a log source and post-processing action, click **Next** and proceed to Step 6.

## Section B: Creating a v8 Data Profile

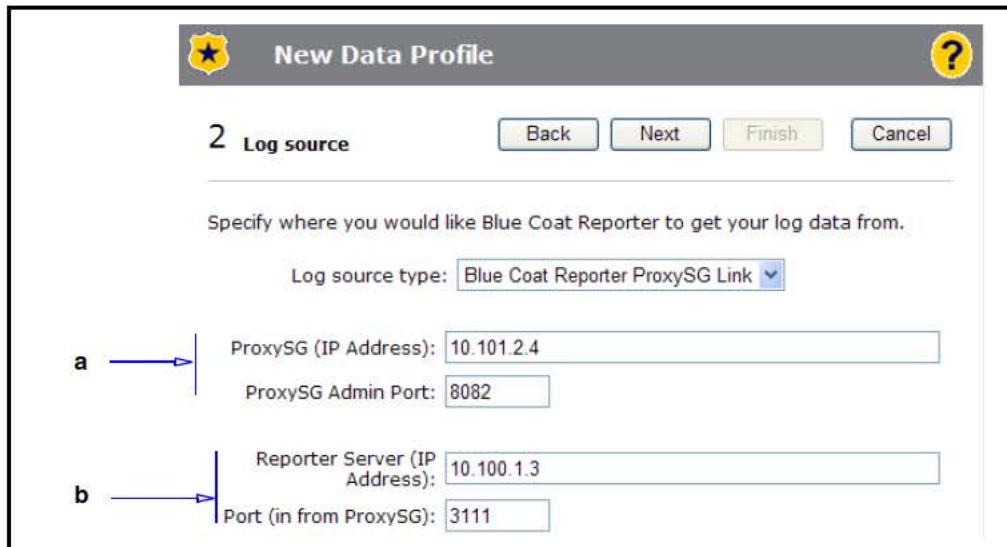


**FTP:** Allows you to specify an FTP server as the location of the logs to process.

- a. **Hostname:** The FTP server.
- b. **Username:** The username on the server(s).
- c. **Password:** The password associated with the username.
- d. **Pathname:** The path to the log file or directory of log files to be processed.
- e. **(Optional) Pattern is a Wildcard Expression**—Matches a subset of available files. The pattern can be as simple as **.gz** (to match compressed files) to a complex expression.
- f. **Use passive mode for transfers**—For this release, v8 always uses passive mode, regardless of whether the option is selected or not. This is used where an FTP server is unable to make a connection to an FTP client because the client is located behind a firewall or other similar device where outbound connections from the client are allowed, but inbound connections to the client are blocked.
- g. After selecting a log source, click **Next** and proceed to Step 5.

**Note:** If clicking **Next** does not take you to the Authenticated Users dialog, but to a blank log format selection dialog, the log file you selected to be associated with this profile is not valid for v8 profile. Navigate back to the profile selection dialog and select to create a v7 profile.

## Section B: Creating a v8 Data Profile



**Blue Coat Reporter ProxySG Link:** Allows you to specify the Reporter server that is to receive access logs pushed from an SG appliance. Depending on your SG appliance Access Logging configuration (**Configuration > Access Logging > Logs > Upload Client**), select the appropriate option:

- If you are using the Blue Coat Reporter Client (available in SGOS 5.1.4 and later), select **Blue Coat Reporter ProxySG Link**. This is the Blue Coat-recommended method, as it features gzip support and an updated protocol to better handle dropped connections.
- If you are using a custom upload client, select **Direct ProxySG Link**.

With this established link, Reporter continuously updates reports in *real-time*. Enter the required information:

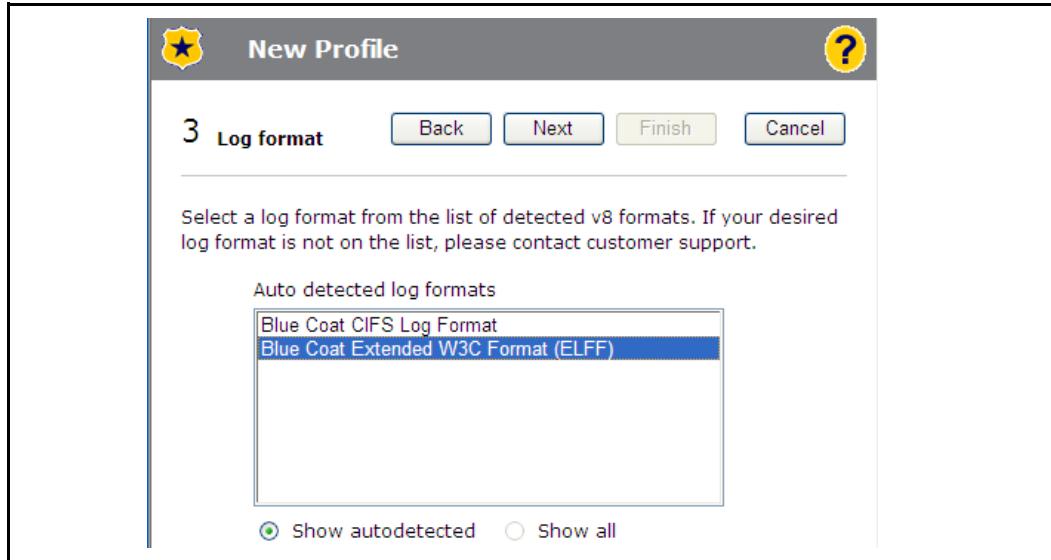
- a. (Optional) **ProxySG (IP Address)** and **ProxySG Admin Port**—This is optional for this procedure. Reporter ignores the values during this profile creation wizard because the SG appliance is configured to send logs to a Reporter server; however, if you enter values, Reporter retains them for your information and they appear if you configure additional log sources for this profile.
- b. **Reporter server (IP Address)** and **Port**—The hostname of the Reporter server (*not* the SG appliance IP address) and the port number for the connection. This *must* be an available port. After the profile is created, Reporter begins to listen on this port for SG appliance data.

---

**Note:** The linking process requires additional SG appliance configurations. See "[Linking an SG Appliance for Real-Time Reporting](#)" on page 33. Also, you can add an SG appliance as a second source after the profile is created. This procedure is described in "[Configuring the Log Sources](#)" on page 109 (v8 Formats).

- c. After selecting a log source, click **Next** and proceed to Step 5.

## Section B: Creating a v8 Data Profile



5. On the Log Format dialog, Reporter automatically detects and displays available log formats. Reporter v8 profiles current support the following fomats:

- **Blue Coat Original W3C Log Format (ELFF)**—For main or SSL data logs.
- **Blue Coat CIFS Log Format**—For CIFS data logs.

If Reporter detects the type of log file in the path specified in Step 4, this Log Format wizard step is skipped. Proceed to Step 6 now for main log data profiles or Step 7 for CIFS log data profiles.

Reporter cannot detect the log file type if:

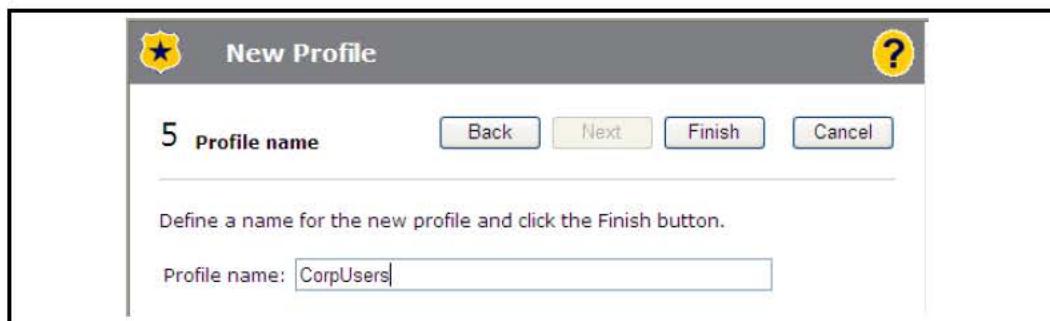
- There are currently no log files in the local directory;
- If you selected a direct SG appliance link; -or-
- The FTP server connection is not current possible.

Select a format and click **Next**. If you selected the CIFS format, proceed to Step 7.

Section B: Creating a v8 Data Profile



6. As you review the generated reports, identifying the source of the Web activity is critical to the analysis. This dialog determines whether Reporter displays client IP addresses or authenticated user names in the reports.
  - a. **My logs only have Client IP Addresses**—The default. Reports that contain user activity display the IP address of the client machine.
  - b. **My logs contain authenticated user names**—Displays the names of the users logged into client machines. To use this option, your log files *must* have the `cs_username` field. If your logs do not contain this field, generated reports display with no data found. If you are unsure as to the status of your log files, select **My logs only have Client IP Addresses**.
- c. Click **Next**.



7. In the **Profile Name** field, enter a name for the profile. This example uses the name **CorpUsers**.
8. Click **Finish**. Reporter creates the data profile and returns to the Administrative menu. The new data profile appears in the list.

The screenshot shows the 'Data Profiles' administrative page. On the left is a sidebar with links: 'Data Profiles', 'Scheduler', 'Users', 'Roles', 'Settings', 'Licensing', and 'Version'. The main area has a table with a single row:

Data Profiles		<a href="#">Create New Data Profile</a>
CorpUsers (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>

At the bottom right of the main area are 'Delete' and 'Create New Data Profile' buttons.

Figure 4-1. The new data profile appears on the Administrative page.

**Section B: Creating a v8 Data Profile*****Next Step***

The next section describes how to link an SG appliance for real-time reporting. If you do not require this step (you did not select one of the Direct ProxySG link options in the wizard):

- By default, all data profiles are accessible. If you are the sole administrator and user, proceed to:
- "[Section D: Creating Roles \(v8\)](#)" on page 47—Describes how to create data profile roles followed by designating users for each role.  
-or-
- [Chapter 5: "Generating and Managing Reports" on page 59](#)—Describes how to view reports and configure schedules.
- To create additional administrator accounts or non-admin user accounts that are associated with the data profile, continue to "[Section E: Creating User Accounts](#)" on page 50.

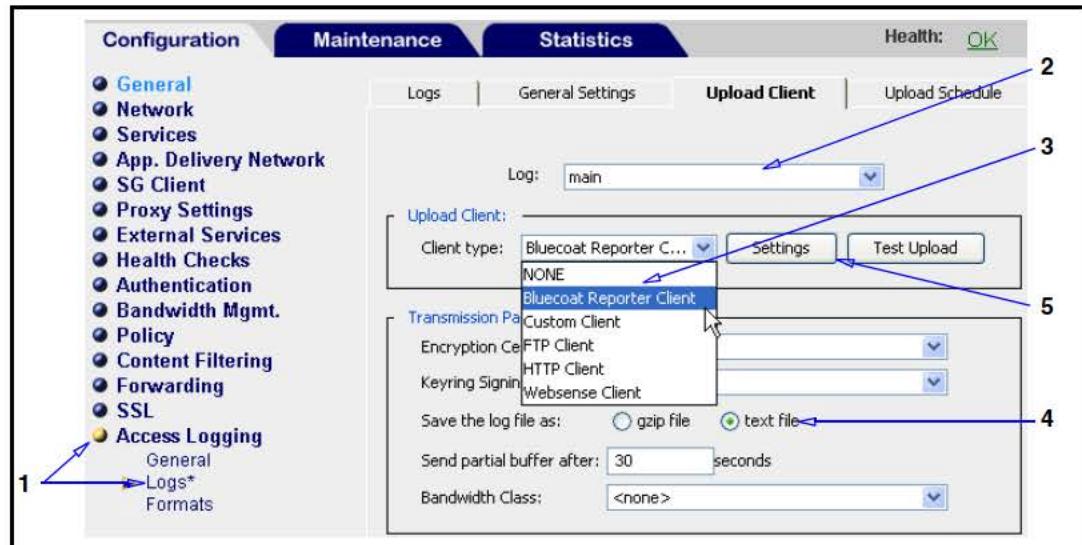
**Linking an SG Appliance for Real-Time Reporting**

This section describes how to configure an SG appliance to send log data to the Reporter server. This allows the Reporter v8 data profiles to display real-time access log data through the **Stream Reader Activity** report (described in Chapter 5, "[Section B: Blue Coat v8 Data Profile Reports—Dashboards](#)" on page 61).

Blue Coat strongly recommends only employing this type of log source if the SG appliance has a direct link to the Reporter server. Do not attempt to route the link across one or more routers. If your deployment cannot accommodate a direct link, use the local file or FTP log source method.

**Note:** This section is a companion procedure to the Log Source dialog of the Profile Wizard. See "[Creating the Data Profile](#)" on page 26.

**To configure the SG appliance for log-pushing (SGOS 5.1.4 screen shown):**



## Section B: Creating a v8 Data Profile

1. From the SG appliance Management Console, select **Configuration > Access Logging > Logs > Upload Client** tab.
2. From the **Log** drop-down list, select **main**. This is the only type of access log format allowed for real-time reporting.
3. In the **Upload Client** field, select **Bluecoat Reporter Client** from the **Client Type** drop-down list.

**Note:** Reporter retains previous version compatibility and supports the use of the **Custom Client**. However, Blue Coat recommends using the **Blue Coat Reporter Client**, as it is specifically designed for Reporter and handles dropped connections much more efficiently than the **Custom Client**.

4. For the **Save the log file as** option, select:
  - The Blue Coat Reporter Client supports **gzip file** and **text file**.
  - The Custom Client only supports **text file**; compressed files cannot be streamed.

If you select gzip, Reporter does not display any warning. Reporter aborts the improper data stream when the SG Custom Client connects and attempts to send compressed data. Furthermore, Reporter logs a parsing error to **LogAnalysisInfo/Databases/[profilenam]/profile\_messages.txt** and the log reader exits (reported as stopped on the **Log Reader** page). The reader remains stopped until Reporter is restarted or that Log Reader's start button is clicked. Any restart repeats the above behavior.

5. Click **Settings**.

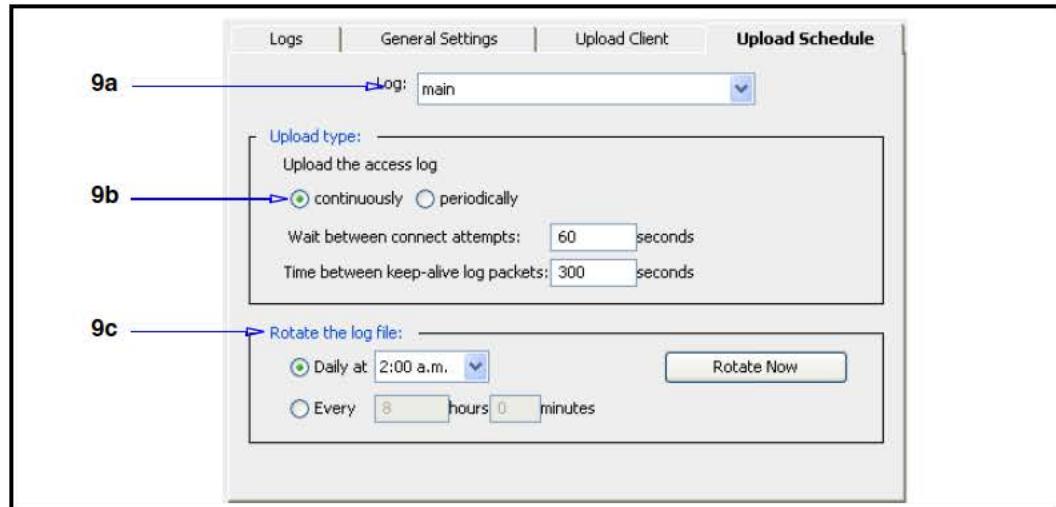


6. Configure the custom client settings:
  - a. Accept the default **Settings for** option: **Primary Blue Coat Reporter Server**.
  - b. In the **Host** field, enter the IP address of the Reporter server (must be the same IP address entered in the Profile Wizard ProxySG link configuration step).
  - c. In the **Port** field, enter the port number of the Reporter server (must be the same port entered in the Profile Wizard ProxySG link configuration step, and the port must be otherwise unused).

## Section B: Creating a v8 Data Profile

**Important:** Do not select the **Use secure connections (SSL)** option. Secure SG Link connections are not supported in this Reporter version.

- d. Click **OK**.
7. Click **Apply**.
8. On the Management Console, click the **Upload Schedule** tab.



9. Configure the upload schedule:
  - a. From the **Log** drop-down list, select **main**.
  - b. In the **Upload Type** field, select **continuously**. This provides a data stream to the Reporter server.
  - c. Blue Coat recommends accepting the default **Rotate the log file** values.

Stream reader statistics are recorded each time the log file is rotated. To achieve a daily record, rotate the log file on a daily interval. Shorter intervals are permissible. View the statistics by clicking the **History** link in the Dashboard **Log Reader** status view.
10. Click **Apply**.

### Configuring Multiple SG Appliances to Send Logs to One Reporter Server

You can configure multiple SG appliances to send their main access logs to a single Reporter server, which creates aggregate report data.

- ❑ Repeat the previous procedure to configure the SG appliance to send its **main** access log to the Reporter client.
- ❑ Assign a *unique* Reporter server port number to the custom client. For example, SG number 1 is sent to the default 3111 port, and SG appliance number two is sent to port 3112.
- ❑ Add a new log source to the data profile that links to this port number. This is described in "[Adding a Log Source](#)" on page 110.

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Section B: Creating a v8 Data Profile

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### Interactivity Notes

Although the SG appliance and Reporter server are linked, you might experience a delay before the Reporter browser begins to display updated data.

- The SG appliance buffers some amount of log data before sending it to Reporter. Because GZipped buffers can pack more data, they are sent to Reporter less frequently than text buffers (for the same amount of SG appliance activity). If the zipped data is 50% smaller than the original text, the SG appliance waits twice as long between buffer sends (the SG appliance also provides a configuration called **Send partial buffer after XXX seconds**).
- Reporter attempts to balance the smaller cost of processing received data in memory very quickly with the relatively large cost of holding up new data processing (across all of the Data Profile's log readers) because of flushing already processed data to disk. Those interval settings, along with other internal triggers, determine how often the processed data becomes available for dashboard and other reports. See “[Configuring Log Settings \(v8\)](#)” on page 56.

## Unloading/Reloading a Database (v8)

The unload database option allows you to manage resources by preventing log reading upon Reporter startup and removing the data profile from memory. For example, you have several data profiles, but one or more are accessed infrequently. However, you do not want to completely delete these profiles. When you are required to access these data profiles again, you can reload them into memory.

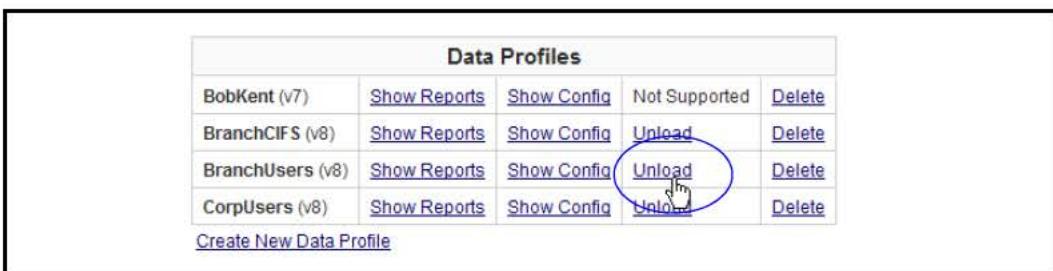
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**Note:** This feature is only available for v8 data profiles; you cannot unload or reload a v7 database from memory.

---

### To unload a database:

1. From the Administrative menu, select **Data Profiles**.



Data Profiles					
	Show Reports	Show Config	Not Supported	Delete	
BobKent (v7)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	Not Supported	<a href="#">Delete</a>	
BranchCIFS (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	<a href="#">Unload</a>	<a href="#">Delete</a>	
BranchUsers (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	<a href="#">Unload</a>	<a href="#">Delete</a>	
CorpUsers (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	<a href="#">Unload</a>	<a href="#">Delete</a>	

[Create New Data Profile](#)

2. Click **Unload** for the data profile to remove from memory. Reporter unloads the database and halts any current log reading activity.

Section B: Creating a v8 Data Profile

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Data Profiles					
BobKent (v7)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	Not Supported	<a href="#">Delete</a>	
BranchCIFS (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	<a href="#">Unload</a>	<a href="#">Delete</a>	
BranchUsers (v8)	(Not Loaded)	(Not Loaded)	<a href="#">Load</a>	<a href="#">Delete</a>	
CorpUsers (v8)	<a href="#">Show Reports</a>	<a href="#">Show Config</a>	<a href="#">Unload</a>	<a href="#">Delete</a>	

[Create New Data Profile](#)

3. Click **Load** to reload the database into memory.

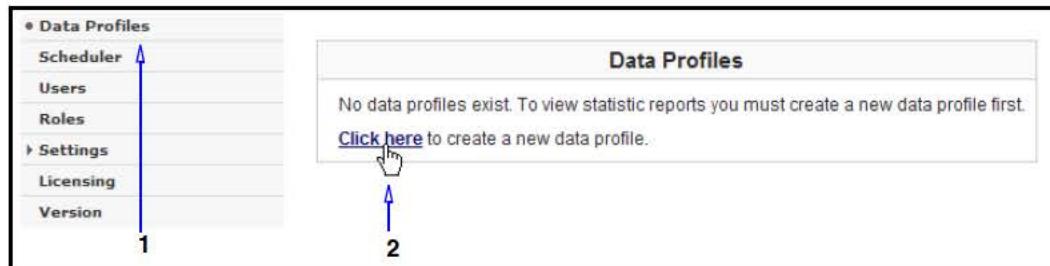
## Section C: Creating a v7 Database Profile

### Section C: Creating a v7 Database Profile

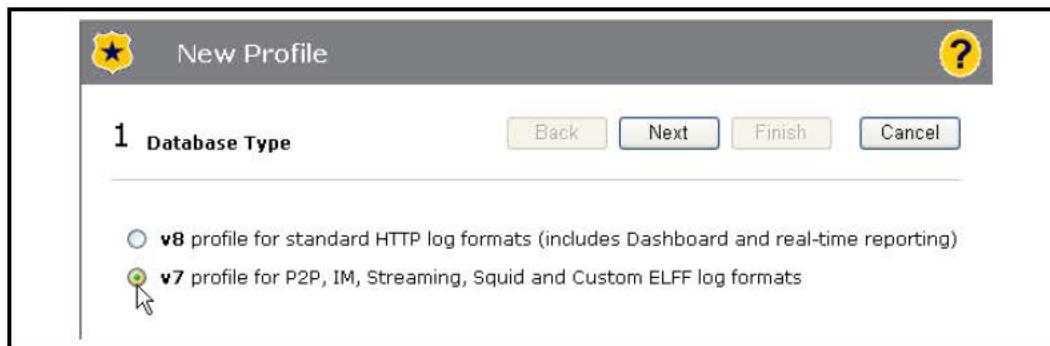
This chapter describes how to create a profile that uses the Reporter v7 database to process and present log data through the Blue Coat legacy (v7.1.x) set of reports.

**Note:** This procedure assumes you are an administrator creating profiles for yourself or non-admin users to perform log analysis. "Section D: Creating Roles (v8)" on page 47 describes how to create both non-admin users and additional admin users.

#### To create a profile:

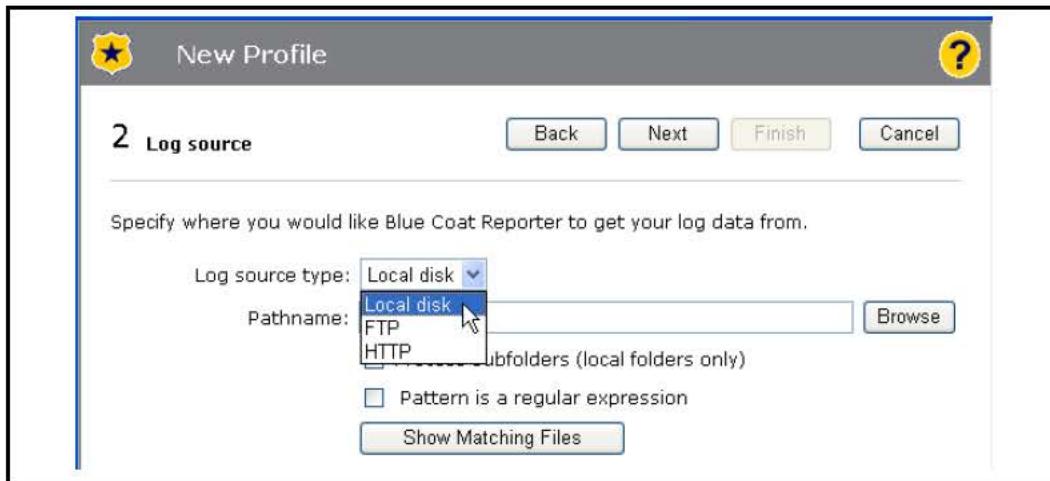


1. From the Administrative page, select **Data Profiles**.
2. Click **Click here**.



3. The first screen of the profile wizard specifies which database type is used to process report data. Select **v7 profile...** and click **Next**.

## Section C: Creating a v7 Database Profile



4. The New Profile—Log Source dialog determines the location of the log file directory or individual log file to be associated with this profile.

**Important:** For Linux systems, Reporter does not support log files—text files or compressed—over 2 GB. This also applies if the compressed file expands to be over 2 GB upon decompression.

When you select a source from the **Log source type** drop-down list, you can select from three source options: a local disk, an HTTP location, or an FTP location:



**Local disk:** Manually select a log file or directory that contains multiple log files:

- a. In the **Pathname** field, enter the path to the log file or directory to be associated with this profile. You can also click **Browse** to navigate to the location of your logs and select a folder or file for this profile.

## Section C: Creating a v7 Database Profile



Figure 4-2. Browsing a log directory.

- b. **(Optional) Process subfolders**—By default, Reporter does not process subfolders of the folder you select. This option box instructs Reporter to examine subfolders for additional logs to process. For example, you are storing logs from multiple Blue Coat SG appliances in separate subfolders under a parent folder.
- c. **(Optional) Pattern is a Regular Expression**—Matches a subset of available files. The pattern can be as simple as .gz (to match compressed files) to a complex expression.
- d. **(Optional) Show Matching Files**—Allows Reporter to verify it recognizes the log files for the given source.
- e. After configuring these options, click **OK** to close this dialog; click **Next**, and proceed to Step 5.

Specify where you would like Blue Coat Reporter to get your log data from.

Log source type:	FTP	
a	Hostname:	logserver_A
b	Username:	jorn.lande
c	Password:	[REDACTED]
d	Pathname:	/home/logs/sunnyvale_branch/
e	Pattern is a wildcard expression	<input checked="" type="checkbox"/>
f	Show Matching Files	<input type="button" value="Show Matching Files"/>

**Section C: Creating a v7 Database Profile**

**FTP:** Allows you to specify an FTP server as the location of the logs to process.

- a. Hostname: The FTP server.
- b. Username: The user name of the file(s).
- c. Password: The password associated with the username.
- d. Pathname: The path to the log file or directory of log files to be processed.
- e. (Optional) **Pattern is a Wildcard Expression**—Matches a subset of available files. The pattern can be as simple as **.gz** (to match compressed files) to a complex expression.
- f. (Optional) Use passive mode for transfers—Useful in situations where an FTP server is unable to make a connection to an FTP client because the client is located behind a firewall or other similar device where outbound connections from the client are allowed, but inbound connections to the client are blocked.

**Note:** Larger files sent over FTP might cause Reporter to hang. Refresh the browser

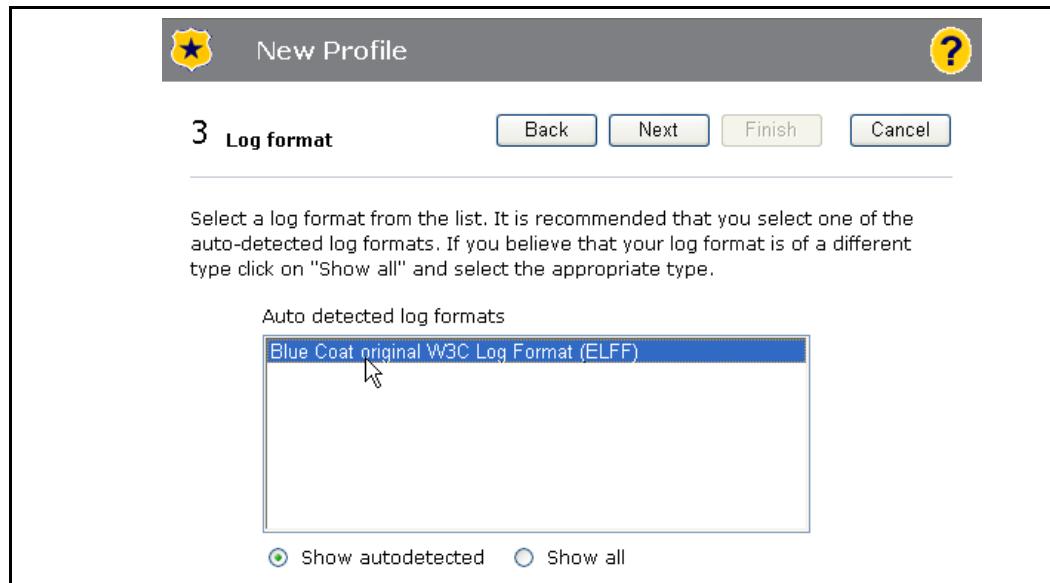
- g. After configuring these options, click **Next**, and proceed to Step 5.

The screenshot shows the 'New Profile' wizard, Step 2: Log source. The title bar says 'New Profile'. The step number '2 Log source' is displayed. There are four buttons: Back, Next, Finish, and Cancel. The main area asks 'Specify where you would like Blue Coat Reporter to get your log data from.' A dropdown menu 'Log source type:' is set to 'HTTP'. Below it, there are two input fields: 'Hostname:' containing 'http://10.1.1.1:80' and 'Pathname:' containing '/home/logs/Sunnyvale/user.log'. Arrows labeled 'a' and 'b' point from the text labels to the corresponding input fields.

**HTTP:** Allows Reporter to download a single file through HTTP:

- a. **Hostname**—Enter the hostname or IP address; the port number is required if it is anything other than 80. Other acceptable formats:
  - `http://@:hostname:port/directory/log_filename.log`—Must use the same path in **Pathname**.
  - `https://username:password@hostname:port/directory/log_filename.log`—Must use the same path in **Pathname**.
- b. **Pathname**—The location of the log file. The path *must* include the forward slash at the beginning. For example: `/directory/log_filename.log`.
- c. Specify a log source and Click **Next**.

## Section C: Creating a v7 Database Profile



5. On the Log Format dialog, Reporter automatically detects and displays available log formats. By default, **Show autodetected** is selected. Only detectable default log formats are displayed, which always includes the **Blue Coat Original W3C Log Format (ELFF)**.

**Note:** Only automatically detected log formats are supported. If you want to use a custom format, but auto-detection fails, select the **Blue Coat Custom Log Format** (visible by selecting **Show All**). If auto-detection fails when using another log format, this usually indicates a corrupted log file.

Select a format and click **Next**.

**Note:** If you are using a Blue Coat custom log format, after you click **Next** the third page of the New Profile dialog (Log Format String) displays. Enter the same string on this screen that you entered when you created the custom format in the SG appliance Management Console pane, located at **Access Logging > Formats > Create Format**. For information about creating a custom log format, refer to the Access Logging chapter in the Blue Coat SG Configuration and Management Suite: *Volume 9: Access Logging*. The remaining numbered pages described below increase by one number when you select this option.

## Section C: Creating a v7 Database Profile



6. The **Log format options—numeric fields** dialog. These options allow you to display data totals in reports. Each field you select increases the database for this profile (which slightly decreases performance) and slightly increases the width of the reports:
  - **Bytes downloaded** or **Bytes uploaded**—Displays byte totals.
  - For Web logs (Web server and HTTP proxy), Reporter distinguishes between *hits* and *page views* for most types of logs.
    - **Hits**—A hit is one access to the Web server; that is, one request for a page. The total number of hits represents the total number of requests for each object on each page.
    - **Page views**—The total number of accesses to a page (rather than an image or a support file, such as a style sheet).

Both of these values are calculated using log filters. You can modify what gets calculated as a hit or a page view by editing these filters. See "["Log Filters" on page 133](#)" for information.

- **Visitors**—Derived from unique values of the Client IP (c-ip) field. This is useful if you are tracking logs from a Web server or in a reverse-proxy environment.
- **Processing time**—The number of milliseconds it took the remote server to provide each requested file. Useful for interest in low-level network performance issues.

**Note:** Enabling unique host (visitor) tracking results in the tracking of visitor ID information for all database items, which significantly slows log processing and increases database size. While visitor tracking is required for visitor information, Web and Web proxy logs do not have this limitation. You can greatly increase processing speed by selecting only **page views** (and not **bytes uploaded/downloaded** or **track hits**)

Other options relate to specific features. Reporter detects and displays the relevant log formats for selection. For example, the Blue Coat P2P Log Format features options specific to P2P.

## Section C: Creating a v7 Database Profile

**Note:** Each tracked numeric field increases database size, potentially impacting performance during log processing and report generation. Blue Coat recommends that you track only the fields in which you are interested.

Select or deselect options as required and click **Next**.



7. The Log Format Options—Generic dialog. Allow you to track by time or total numbers:
  - a. **Track by time**—Cross-references the date/time field to all other fields. This improves performance when the Calendar or Date Range controls are used. Day-by-day information is still be available in the database if this option is not selected, but full table scans are required to query it, which could make the queries much slower.
  - b. **Track by total numbers**—Results in a smaller database, which reduces processing time. The cost is less report granularity.
- c. Select tracking options and click **Next**.

## Section C: Creating a v7 Database Profile



8. As you review the generated reports, indentifying the source of the Web activity is critical to the analysis. This dialog determines whether Reporter displays client IP addresses or authenticated user names in the reports.
  - a. **My logs only have Client IP Addresses**—The default. Reports that have the relevant field display the IP address of the client machine.
  - b. **My logs contain authenticated user names**—Displays the names of the users logged into client machines. To use this option, your log files *must* have the cs\_username field. If your logs do not contain this field, generated reports will display with no data found. If you are unsure as to the status of your log files, select **My logs only have Client IP Addresses**.
- c. Select an option and click **Next**.



9. In the **Profile Name** field, enter a name for the profile. The name of the profile is also used as the name of the database and in other places throughout Reporter. Consider planning a system of profile names. For example, based on departments or months. Create names that easily identify the profile data. This example uses the name **CorpUsers**.
10. Click **Finish**. Reporter saves the profile and returns to the Administrative menu. The new profile appears in the list.

## Section C: Creating a v7 Database Profile

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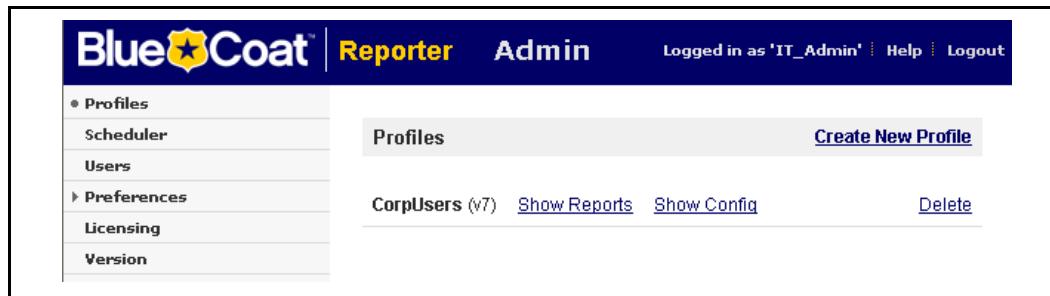


Figure 4-3. The new profile appears on the Administrative page.

### Next Step:

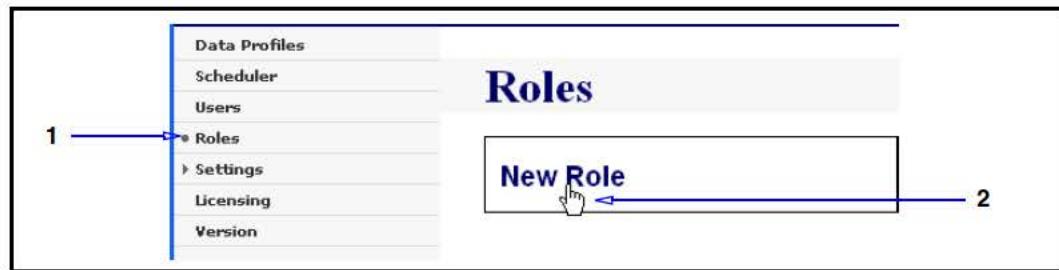
- By default, all profiles are accessible. If you are the sole administrator and user of Reporter, proceed to:
  - ["Section F: Configuring Reporter Preferences" on page 52](#)—Describes how to configure profile preferences, including security preferences. -or-
  - [Chapter 5: “Generating and Managing Reports” on page 59](#)—Describes how to view reports and configure schedules.
- To create additional administrator accounts or non-admin user accounts that are associated with the profile, continue to ["Section E: Creating User Accounts" on page 50](#).

Section D: Creating Roles (v8)

## Section D: Creating Roles (v8)

After creating profiles, you can assign specific Reporter *roles* to users. This allows you to target report reviewing based on the information specific to different employees in your enterprise. For example, Human Resource employees need to review usage reports, while IT personnel only care about performance reports, such as CIFS (file sharing). By default, the Reporter admin has access to all roles. After you create roles, as described in this section, you can create users and assign them to roles (as described in the next section).

To create a role:

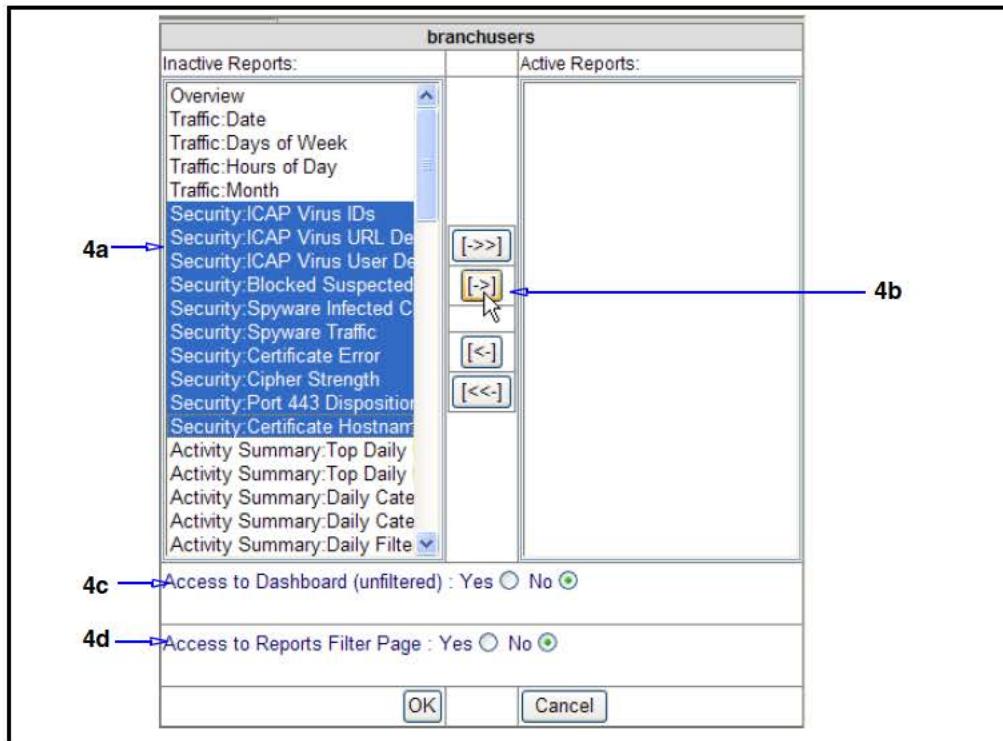


1. From the Administrative menu, click **Roles**.
2. Click **New Role** (if this is the first role you are creating, this step is not required).



3. Name the role. This example creates a role for IT employees responsible for maintaining the network security.
4. The **Data Profiles** field displays all of the (v8) profiles created on this Reporter appliance. Click a profile; an available report overlay appears.

## Section D: Creating Roles (v8)



- a. Select one or more reports (hold the Ctrl key to select multiple reports or the Shift key to select a range of reports). This example selects all of the reports in the **Security** report menu.
- b. Click the *move right* button to move the reports to the **Active Reports** field.
- c. **Access to Dashboard:**
  - **No**—Users in this role cannot see Dashboard reports.
  - **Yes**—Users in this role are allowed to view and add all Dashboard reports. You cannot filter out reports on the Dashboard.
- d. **Access to Reports Filter Page:**
  - **No**—Users in this role cannot create custom filters for their assigned reports. They receive all report data.
  - **Yes**—Users in this role are able to create custom filters; for example, to limit the range of days or target a specific user.
- e. Click **OK**.

(Optional) Repeat to include reports from other profiles. Otherwise, continue to configure the remaining role options.

Section D: Creating Roles (v8)

The screenshot shows a configuration interface for restricting report data. A dropdown menu is set to 'Group' and 'Is Not'. Below it is a text input field containing 'E-staff'. At the bottom is a 'Save Changes' button.

5. (Optional) **Restrict Report Data To**—This is a simple filter mechanism that allows you to, for this role, limit report data based on **Client IP**, **Group**, or **User** names. For example, different Human Resource employees represent different groups in the enterprise; you can create a role specific to each group. Or you want exclude executive staff users from the report. This option is not or does not affect the **Access to Filter Page** option.
6. Click **Save Changes**.

Create multiple roles to cater your enterprise reporting requirements. Then create Reporter users and assign them to roles, as described in [Section E: "Creating User Accounts"](#).

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Section E: Creating User Accounts

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## Section E: Creating User Accounts

Reporter allows you to create multiple user accounts and assign them roles, or access only to specific reports that pertain to their responsibility within the enterprise. If you have not created roles, see [Section D: "Creating Roles \(v8\)" on page 47](#).

This section also describes how to create another user with administrative access. See ["Creating New Administrative Users" on page 51](#).

### Creating a Non-Admin User Account

Non-admin users have access to the profiles and associated roles assigned to them by an administrator. Non-administrator users can neither create or edit profiles nor create or edit reports.

#### To create a user account:



1. From the Administrative menu, click **Users**. By default the Admin (the person who initially installed and configured Reporter) has access to all *roles* and *profiles*.
2. Click **New User**.

The dialog box has 'Save and Close' and 'Cancel' buttons at the top. It contains fields for 'Username' (HR\_Maya) and 'Password' (\*\*\*\*\*). Below that is a 'Access rights:' section with a radio button for 'Non-administrative' (selected) and one for 'Administrative'. At the bottom is an 'Access to roles:' section with checkboxes for 'HR' (checked) and 'IT\_Security'.

3. Enter new user information:
  - a. By default, this dialog displays the options to create a non-admin user account. Assign the account a username and password.
  - b. Select the role or roles that this user account can access.
  - c. Click **Save and Close**. The Reporter displays the new users. If required repeat the procedure to create more user accounts.

---

**Note:** To edit an existing user, click the user name link in the table.

---

## Section E: Creating User Accounts

### Creating New Administrative Users

To create a new Admin User, perform the procedure in the previous section, but select **Administrative** access rights. The available roles disappear, as administrators have access to *all* profiles.

The following screen is an example of two additional users created:

- **HR\_VP\_Jocelyn:** Administrative.
- **IT\_Carl:** Non-admin, assigned to role **IT\_Security**.

Users			
Username	Administrative rights	Roles	
<a href="#">HR_Maya</a>	No	HR	<a href="#">Delete</a>
<a href="#">HR_VP_Jocelyn</a>	Yes	All Roles	<a href="#">Delete</a>
<a href="#">IT_Admin</a>	Yes	All Roles	<a href="#">Delete</a>
<a href="#">IT_Carl</a>	No	IT_Security	<a href="#">Delete</a>

[New User](#)

Figure 4-4. Example: Created users and the profiles they have access to.

### Tips for Creating User Accounts

- For maximum security, limit the number of user accounts with administrative access rights. It is possible for a user with admin access to delete the original admin account. Also, unbridled access to the Reporter server is a security risk.
- For management purposes, create as few user accounts as possible.

Section F: Configuring Reporter Preferences

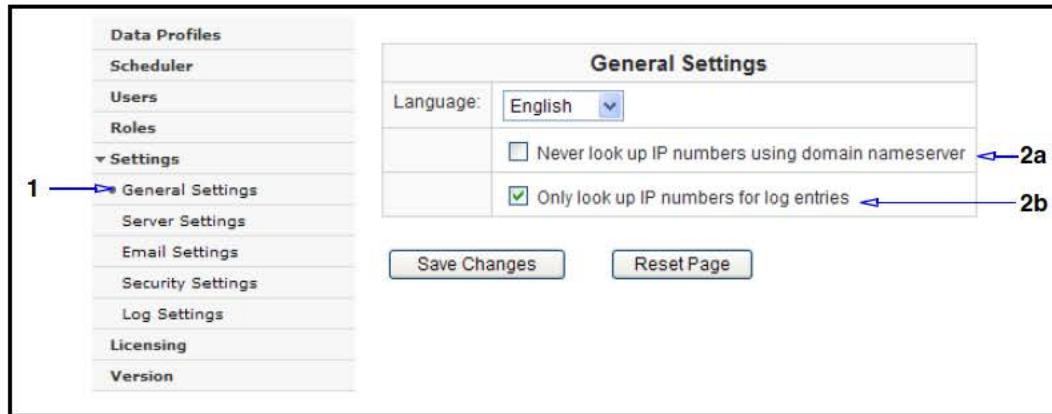
## Section F: Configuring Reporter Preferences

The **Settings** menu allows you to customize general, server, e-mail, security, and log processing settings.

### Configuring General Settings

The General Settings page allows you determine the life span of temporary files or how DNS is used.

#### To configure general profile preferences:



1. From the Administrative menu, select **Settings > General Settings**.

2. Configure domain nameserver (DNS) options:

a. **Never look up IP numbers using domain nameserver**

If this option is selected, Reporter never attempts to look up hostnames from IP numbers; it uses IP numbers for everything. If this option is not selected:

- Reporter attempts to look up the local hostname when it starts a Web server;
- Reporter attempts to look up the hostname of any host which accesses it by HTTP; and
- Reporter looks up the hostname of any host it encounters in the logs.

This option is useful if there is no local domain nameserver (for example, if the computer is not connected to a network and is not itself running DNS).

b. **Only look up IP numbers for log entries**

- If this option is selected, Reporter looks up the hostnames of IP numbers using DNS only when they appear in a log file.
- If this option is not selected, Reporter still looks up numbers in log files, but also looks up the hostname of the computer on which Reporter is running, and the hostnames of computers using Reporter through Web browsers. This option is useful because Reporter will never perform any network access, so it can be run on a computer with a dial-up connection without having to be dialed in.

**Section F: Configuring Reporter Preferences**

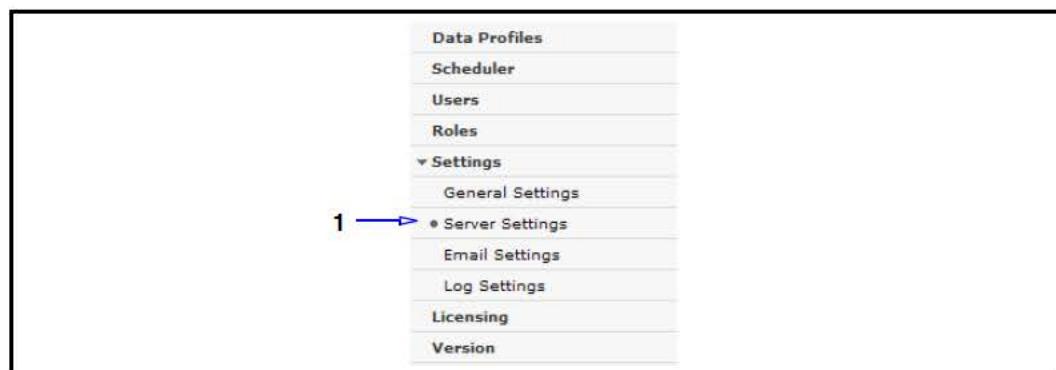
- If this option is not selected, Reporter performs a DNS lookup when it first starts and when other computers access it, so it must be permanently connected to the Internet (or using a DNS server on your local network).

3. Click **Save Changes**. The changes appear on the General Preferences page.

**Configuring Server Settings**

From the Server Settings page, you can:

- Specify a specific Web server port or IP address to which Reporter listens.
- Enable an HTTPS connection for Reporter connections.

**To configure server settings:**

1. From the Administrative menu, select **Settings > Server Settings**.

Reporter Server Web Interface Settings	
2a	IP Address: 128.0.1.1
2b	Ports: Port 1: 8987 Port 2: 8082
2c	Protocol: <input checked="" type="radio"/> HTTP <input type="radio"/> HTTPS (secure)

HTTPS (secure) Settings	
3a	Certificate: <input checked="" type="radio"/> Default Certificate <input type="radio"/> Enter Certificate
3b	Server Certificate: <input type="file"/> Browse
3b	Private Key: <input type="file"/> Browse

**Save Changes**    **Reset Page**

2. Configure server preferences, as required:

- a. Enter a specific IP address. If you enter a **Web server IP address**, Reporter listens only on that IP address. If this field is blank, Reporter listens on all IP addresses.
- b. Port 1 is the primary Reporter port and the default is 8987. Port 2 is the Dashboard port and the default is 8082. You can change either of the ports, but Reporter will not allow you to configure them as the same port.

**Important:** Do not run other applications using the ports configured here on the same computer Reporter is running on. Furthermore, if accessing Reporter through a firewall, open both those ports.

---

- c. (Optional) By default, Reporter connections are sent over HTTP. To implement secure HTTPS connections, select HTTPS. The **HTTPS (secure) Settings** field just below become active.

**Note:** For Linux only: Reporter uses the OpenSSL package installed on the host. If a compatible version of OpenSSL is not installed, the HTTPS option is not available.

---

Continue to the next step.

3. If you selected HTTPS in Step 2, the HTTPS certificate fields become active:
  - a. Select the certificate option:
    - **Default Certificate:** Select this option have **Reporter** generate a self-signed test certificate (this is not as secure as the option in the next bullet). Proceed to Step 4.
    - **Enter Certificate:** Select this option to import a proper certificate that has been signed by a recognized Certificate Authority. Complete Step 3b.
  - b. If you selected Enter Certificate in Step 3a, the **Server Certificate** and **Private Key** fields become active. Enter or paste the values, or click **Browse** and navigate to their respective files, and add them to the fields.
4. Click **Save Changes**. All Admin-authenticated Reporter sessions (including browsers on other workstations) receive the same dynamic message (after they refresh or change pages): "**Reporter configuration has changed. A restart is required in order for changes to take effect.**"



5. For these configuration changes to occur, the Reporter server must be restarted (not the Reporter browser). Any admin can browse to the **Settings > Server Settings** page and click Restart Reporter, which becomes visible after **Save Changes** is clicked in Step 5. Any Admin-authenticated browser can then restart the server. *Before* clicking this button, verify Reporter is not processing any logs or reports.



6. After a few seconds, a link appears: **Browse to Reporter with new settings**. However, this link does not indicate that the restart is complete. If any logs or reports are active, or if the database is large, the restart might require several minutes. You can check the `/LogAnalysisInfo/TaskLog` file to determine the server restart status. Upon verification, it is safe to click the link. The Reporter browser refreshes with the newly activated configuration.

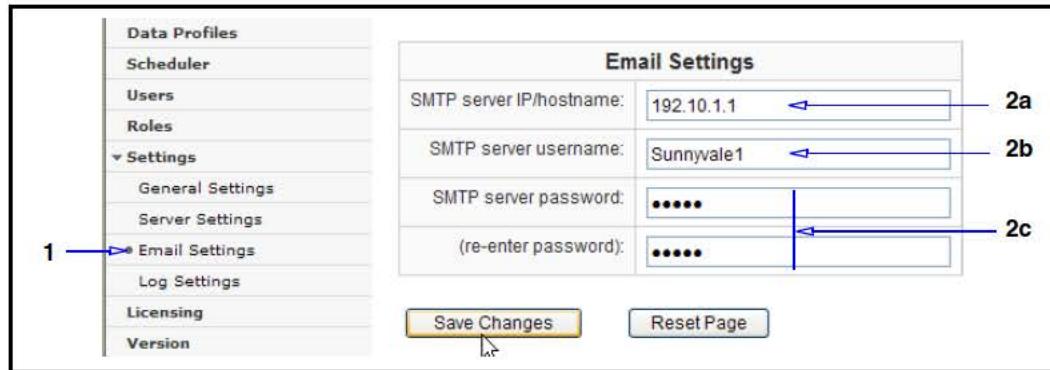
#### *Interactivity Notes*

- ❑ If the browser link is not able to connect to Reporter, check the **TaskLog** file. The most common reason is that Reporter is still performing the restart. If HTTPS was just configured, in rare instances Reporter might not have been able to generate a default certificate, or use the provided certificate. In this case, Reporter still restarts, but HTTPS is disabled and Reporter only accepts HTTP requests. If Reporter is not able to restart with all of the configuration parameters, all Admin-authenticated sessions display a red warning banner noting the startup failure. Review the **TaskLog** file for more detail about the startup failure.
- ❑ The Default certificate is generated with the IP address of the host running Reporter. The certificate will no longer be valid if the IP address of the host is changed. For this reason, the Default certificate and key are deleted when HTTPS is deselected and Reporter is restarted. A new certificate and key is generated the next time HTTPS is configured.
- ❑ When Reporter is configured to use HTTPS, IE 6 produces a recurring security alert pop-up. The alert is misleading because all data to and from Reporter is encrypted when Reporter is configured to use HTTPS. IE 6 reports this alert immediately after Login, and when browsing to various Web pages from the **Data Profiles/Settings** page, or when browsing back to the **Data Profiles/Settings** page. The affected pages are using data from both Web server ports. Regardless if **Yes** or **No** is selected in the pop-up, all data in the page is displayed. There are no known IE 6 configuration settings which will disable this pop-up.

## Configuring E-mail Server Settings

The E-mail Settings page allows you to configure SMTP server information, if you want Reporter-sourced e-mails to be routed through your SMTP deployment.

#### **To configure security preferences:**



1. From the Administrative menu, select **Settings > Email Settings**.
2. Specify e-mail settings:
  - a. Enter the IP address or hostname of your SMTP server.
  - b. Enter the username.
  - c. Enter the server password; re-enter to verify.
3. Click **Save Changes**.

## Configuring Log Settings (v8)

From the Log Settings page, you can specify memory, buffer, and intervals related to log processing resources (this applies to v8 profiles only). In addition to the your understanding of your systems and the system guidelines in the *Blue Coat Reporter Sizing Guide* (available from the Blue Coat Web site), understanding the following conditions that both aid and hinder Reporter log processing functionality can help you modify profile configuration options to optimize efficiency

To configure log processing preferences:

Log Processing	
Max log hour memory usage:	<input type="text" value="90"/> %
String bag buffer size:	<input type="text" value="32"/> k
Received buffer size:	<input type="text" value="10"/> k
Hold buffer size:	<input type="text" value="10"/> k

Dataset flush interval	
Log reader FTP/File Interval:	<input type="text" value="30"/> minutes
Log reader stream threshold:	<input type="text" value="3"/> million log lines
Log reader stream interval:	<input type="text" value="30"/> minutes

- From the Administrative menu, select **Settings > Log Settings**.
- Specify the log processing preferences:
  - Customize the **Log Processing** options to accommodate your system resources:
    - Max log hour memory usage:** This value limits the total amount of memory the LogTables can consume. It is checked before a new hour-table is added. If the value is exceeded, the oldest hour-tables are flushed to disk until the memory percentage is no longer exceeded.
    - String bag buffer size:** Log files with large URL strings fill the string bag buffer faster than ones with small strings. When the buffer is full, it must be *flushed*, or written from memory to disk, which requires time. A smaller buffer forces more frequent dataset flushes. It might also cause additional parts of the database to be flushed before it is necessary.
    - Received buffer size:** The Blue Coat Reporter Client stream and FTP log readers use the Receive Buffer to process compressed log data. Compressed data is first read into the Receive Buffer, and then decompressed into the Hold Buffer.
      - A larger size allows the OS to fill the buffer in larger chunks, which might be more efficient for some large log files.
      - As each log reader has its own Receive Buffer, if your configuration uses many log readers, they might add up to a large amount of (mostly inactive) memory. You can reduce this overall buffer size to allow more memory for other Reporter functions.

- **Hold buffer size:** Reporter cannot process files on a disk or on the network until they are read into the local memory. As log files come in many sizes, sometimes it is able to read an entire log file into memory, but other times it cannot. The Hold Buffer size allocates local memory for processing log files and simplifies the complexity of processing variable sized log files. The same **Received Buffer** benefits apply here.
- b. Customize the **Dataset flush interval** options. This feature allows you to view initial LogProcessor results well before a lengthy log file is processed. This is especially important for Stream LogReaders because there is no end-of-file aspect. A maximum dataset size threshold and time interval is provided, from which a number of smaller check points are computed. While the dataset is below the threshold size, the LogProcessor flushes the incomplete dataset using the graduated frequency. After the threshold is exceeded, only the flush interval determines how often the dataset is flushed. Large datasets require significantly more time to flush than small datasets. Log processing is suspended while the dataset is flushed.

---

**Note:** Currently, FTP/File LogProcessors do not use the interval.

---

- **Log reader FTP/File interval:** Not available for this feature.
- **Log reader stream threshold:** The maximum interval allowed before the current dataset is flushed and made available to reports. Additional graduated intervals are used while the dataset is less than the threshold.
- **Log reader stream interval:** This value helps to determine the graduated check points on streaming files. After the threshold is exceeded, only the flush interval is used. If the value is small, it will quickly be exceeded and ignored. This may be desirable if your system's disk operation is slow. If the value is large, it causes the graduated flush frequency to stay in effect longer, at the expense of increasing flush times as the dataset continues to grow.

3. Click **Save Changes**.

*Related Information*

See "[About Optimizing Log Processing Configurations \(v8\)](#)" on page 161 for conceptual information and "[Altering Log Processing Options](#)" on page 112 for similar configuration options.

## *Chapter 5: Generating and Managing Reports*

This chapter describes how to generate v7 and v8 profile reports, including how to alter the scope of the report using date and expression filters, and how to schedule a report generation time.

This chapter contains the following sections:

- "Section A: Generating a Data Report Database" on page 60.
- "Section B: Blue Coat v8 Data Profile Reports—Dashboards" on page 61.
- "Section C: Blue Coat v8 Data Profile Reports" on page 73
- "Section D: Blue Coat v7 Profile Reports" on page 83.
- "Section E: Saving and Exporting Individual Reports" on page 93.
- "Section F: Configuring the Reporter Scheduler" on page 97.

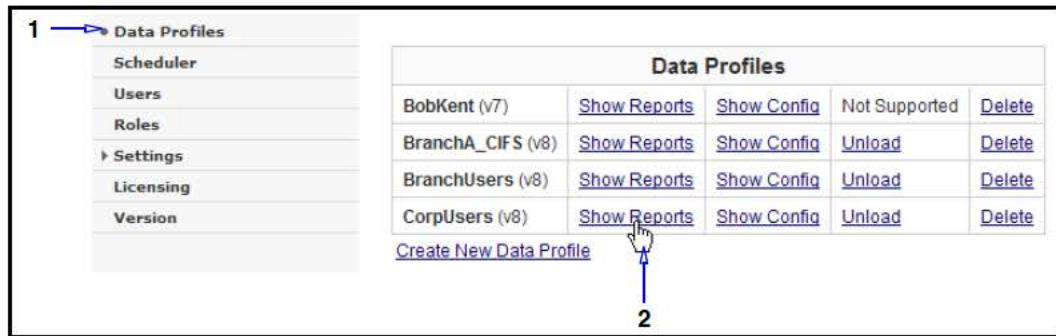
Section A: Generating a Data Report Database

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## Section A: Generating a Data Report Database

After the data profile is generated using the appropriate log format (v7 or v8), the data profile is ready to read the data from the log database and display the data in the form of an HTML page, or a report.

**View the Report menu:**



1. From the Administrative menu, select **Data Profiles**.
2. Click **Show Reports** of the data profile to view.
  - v7: If this is the first time you have clicked **Show Reports** for this data profile, Reporter begins to read and process the log data.
  - v8: Reporter began processing log data when the data profile was created.
3. What page is displayed next is based on whether this is a v8 data profile (generated using Blue Coat Extended Log Format) or a v7 data profile (generated using any other log format).
  - For v8 data profiles using the Blue Coat Extended Log Format, go to "[Section B: Blue Coat v8 Data Profile Reports—Dashboards](#)" on page 61.
  - For v7 data profiles using any other format, go to "[Section D: Blue Coat v7 Profile Reports](#)" on page 83.

Section B: Blue Coat v8 Data Profile Reports—Dashboards

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

This section describes the menu and report structure for Reporter v8 data profiles.

### About the Main Log Dashboard

When you click a **Show Reports** link from the **Data Profiles** page, Reporter displays the *Dashboard*, which displays an initial set of individual, interactive panes of categorized data.

**Note:** The example in this section demonstrates main log files. The Dashboard for CIFS log data profiles displays different reports that specifically represent file sharing and server connection data.

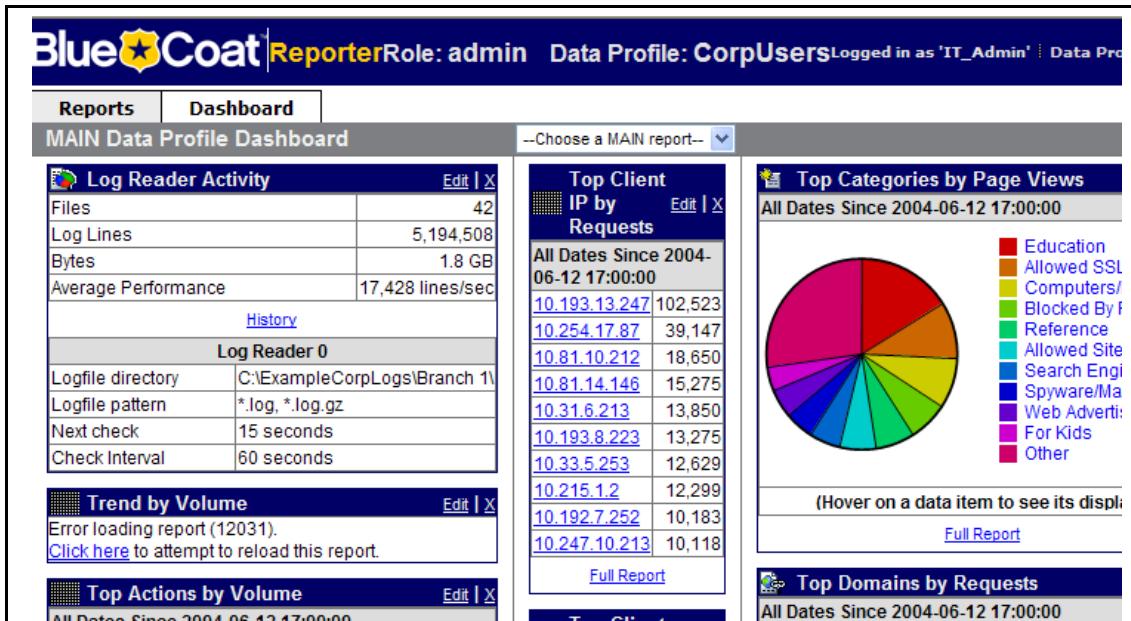


Figure 5-1. Upon first access, the Dashboard displays several usage and metric reports.

**Note:** If the **master.myprofiles\_template** file was removed from the **Blue Coat Reporter/LogAnalysisInfo/wd** folder, you receive the following text display:

This dashboard contains no reports. They can be added by using the dropdown box above. After added, reports can be customized and dragged to different locations within the dashboard.

To switch to another data profile (if one is available), select one from the **Data Profile** drop-down list in the header bar.

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

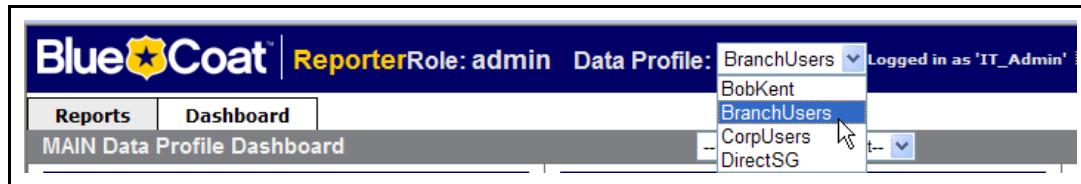


Figure 5-2. Change Dashboard view to another profile.

## About the Log Reader Activity Report

The Log Reader Activity report is a dynamic report that displays log process information.

Log Reader Activity	
Files	14
Log Lines	1,757,739
Bytes	635.3 MB
Average Performance	12,224 lines/sec
<a href="#">History</a>	
<b>Log Reader 0</b>	
3 files in queue (154.0 MB)	
Processing	...ogs\Branch 1BC2_2007-01-09_140036.log
102.6 MB out of 111.7 MB done (91%)	
288,432 lines processed in 0:39 (7326 lines/sec)	

Figure 5-3. The Log Reader Activity report, with access log reading in process.

As Reporter processes a log file or directory, you can track the status with the progress bar displayed in the Log Reader section (if you have multiple readers, they are segmented) and the bytes processed metrics. Also displayed is the number of files in the queue to be processed.

The processed log data fields display metrics for log files that Reporter has completed scanning. If the profile contains a directory with multiple log files, these fields update each time an individual log file is processed.

During active log processing, the header pane remains red. After the logs are processed, the pane turns blue.

Log Reader Activity	
Files	18
Log Lines	2,494,678
Bytes	901.0 MB
Average Performance	11,290 lines/sec
<a href="#">History</a>	
<b>Log Reader 0</b>	
LogFile directory	C:\ExampleCorpLogs\Branch 1\
LogFile pattern	*.log, *.log.gz
Next check	29 seconds
Check Interval	60 seconds

Figure 5-4. The Log Reader Activity Reports, all files in queue processed.

This pane provides the access log following processing information:

**Section B: Blue Coat v8 Data Profile Reports—Dashboards***Processed Data:*

- Files**—The total number of log files processed at the last interval.
- Log Lines**—The total number of log file lines processed at the last interval.
- Bytes**—The total number of bytes processed at the last interval.
- Average performance**—The average number of lines processed per second.

*Reader Data (might have multiple readers):*

- LogFile directory**—The path to the log file for this profile (as specified in the Profile Wizard).
- LogFile pattern**—The suffix of the log file. The default is `.log` for text files and `.log.gz` for compressed files.
- Next check**—How many more seconds before Reporter checks the source directory to determine if new logs have been deposited or current logs have been updated or removed. If new or updated logs are detected, Reporter automatically compiles these and updates the dashboard with the new data.
- Check interval**—The configured interval between checks for log file updates. The default is one minute.

---

**Note:** If you view the directory that contains the log file(s) for this profile after Reporter compiles the database, the suffix **.done** is added to the file name if you selected that option during the profile wizard procedure. For example:  
**corpusers.log.done**.

---

This history link displays all of the logs processed for this profile.

Reports	Dashboard	Source	First Entry	Last Entry	Size	Lines	Start Time	End Time
		BC2_2007-01-09_064036.log	01/09/07 03:20:36	01/09/07 03:40:36	8.5 MB	25,497	03/09/07 08:38:11	03/09/07 08:38
		BC2_2007-01-10_072036.log	01/10/07 04:00:36	01/10/07 04:20:36	46.5 MB	127,252	03/09/07 08:38:12	03/09/07 08:38
		BC2_2007-01-12_074036.log	01/12/07 04:20:36	01/12/07 04:40:36	57.7 MB	170,915	03/09/07 08:38:17	03/09/07 08:38
		BC2_2007-01-12_082036.log	01/12/07 05:00:36	01/12/07 05:20:36	105.9 MB	294,334	03/09/07 08:38:25	03/09/07 08:38
		BC2_2007-01-06_082036.log	01/06/07 05:00:36	01/06/07 05:20:34	1.7 MB	5,422	03/09/07 08:38:37	03/09/07 08:38
		BC2_2007-01-08_084036.log	01/08/07 05:20:36	01/08/07 05:40:36	27.2 MB	81,520	03/09/07 08:38:37	03/09/07 08:38
		BC2_2007-01-11_090036.log	01/11/07 05:40:36	01/11/07 06:00:36	80.1 MB	220,021	03/09/07 08:38:41	03/09/07 08:38
		BC2_2007-01-10_090036.log	01/10/07 05:40:36	01/10/07 06:00:36	104.2 MB	290,106	03/09/07 08:38:53	03/09/07 08:39
		BC2_2007-01-01_090247.log	01/01/07 05:42:47	01/01/07 06:02:46	1.5 MB	5,171	03/09/07 08:39:09	03/09/07 08:39
		RC2_2007-01-03_094247.log	01/03/07 06:22:47	01/03/07 06:42:47	14.6 MB	41,169	03/09/07 08:39:09	03/09/07 08:39

Figure 5-5. History of process log files.

---

**Note:** If there is a problem in reading a file, the **Reason** and **Status** fields display any digit other than zero, indicating the unsuccessful processing status.

---

## Viewing the Speedometers

You can edit the Log Reader Activity report to view one or two graphical *speedometers* that represent log reader performance, either for a specific log reader or an average of all log readers.

Section B: Blue Coat v8 Data Profile Reports—Dashboards

To view log reader speedometers:

Log Reader Activity	
Files	18
Log Lines	2,790,052
Bytes	1011.1 MB
Average Performance	1,975 lines/sec

1. Click Edit.

Log Reader Activity	
Display 0	speedometer(s)
Save 0	gs
1	
2	
Files	20
Log Lines	3,563,017
Bytes	1.3 GB
Average Performance	2,388 lines/sec

2. Select how many speedometers to display.

Log Reader Activity	
Display 2	speedometer(s)
The main speedometer is monitoring	Average Performance
The second speedometer is monitoring	Average Performance
Log Reader 0	Log Reader 0
Save Settings	Log Reader 1
Files	21
Log Lines	3,948,398
Bytes	1.4 GB
Average Performance	2,574 lines/sec

3. Specify the type of speedometer:

- a. By default, the main speedometers displays the average line processing speed of all log readers. You can select to display a specific log reader instead.
- b. (Optional) If you selected to view more than one speedometer, you can specify its type as in Step a.
- c. Click Save Settings. The report displays the specified speedometers.

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

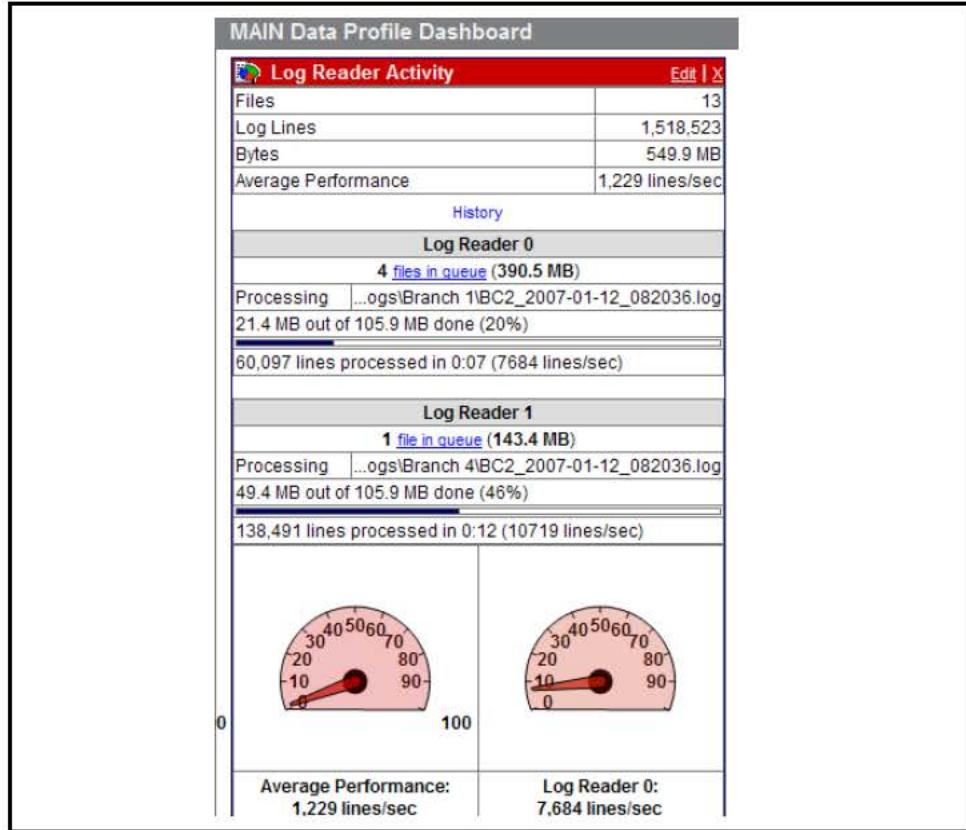


Figure 5-6. Log Reader Activity report with speedometers displayed.

*About the Trend by Volume Report*

The Reports page contains several trend reports (for example, by protocol or risk group). The Dashboard **Trend by Volume Report** displays an aggregate total of all volume in the past 90 days (by default) for the days included in the access log data in this profile. To see specific data values, roll your mouse over the apex of each day.

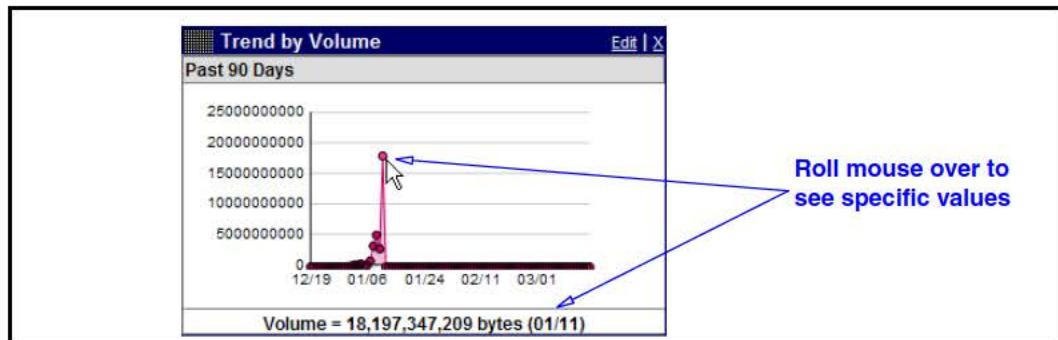


Figure 5-7. Rolling the mouse over to see values.

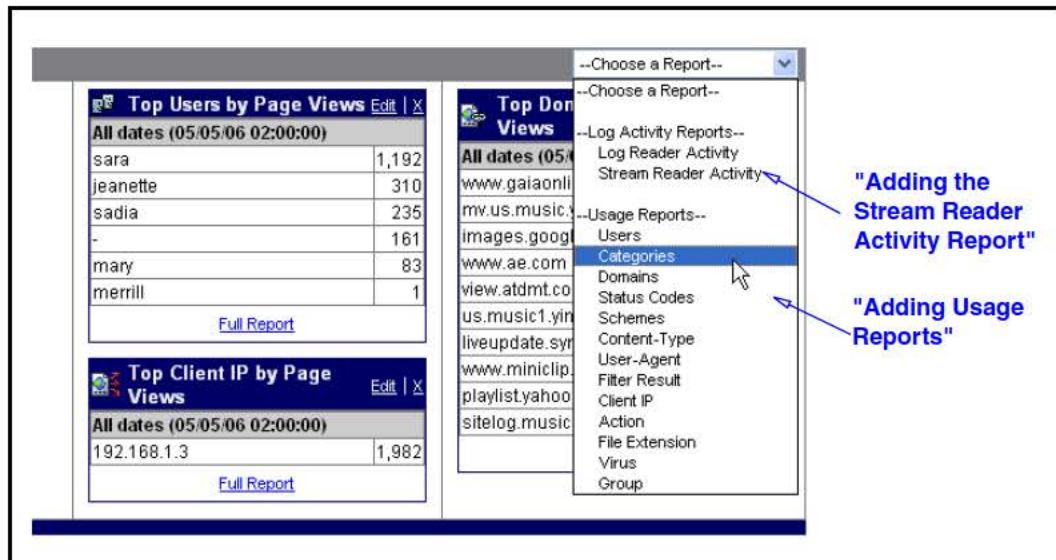
## Section B: Blue Coat v8 Data Profile Reports—Dashboards

### Adding Reports to the Dashboard

Upon first access, the Dashboard displays a few to several initial reports. You can add or delete Dashboard reports at any time. Report contents are updated as the log database changes. If you exit the Dashboard, the same reports display the next time you return to the Dashboard (for the same profile).

This section describes how to add more reports to the Dashboard.

#### To add a Dashboard report:



On the **Profile Dashboard** header, select a report from the **Choose Report** drop-down list:

- Log Activity Reports:**
  - "Adding the Stream Reader Activity Report" on page 66.
- Usage Reports**—"Adding Usage Reports" on page 67.

### *Adding the Stream Reader Activity Report*

The Stream Reader Activity report displays *real-time* statistics if you have linked one or more SG appliances to a Reporter server and are pushing access logs (see "Linking an SG Appliance for Real-Time Reporting" on page 33).

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

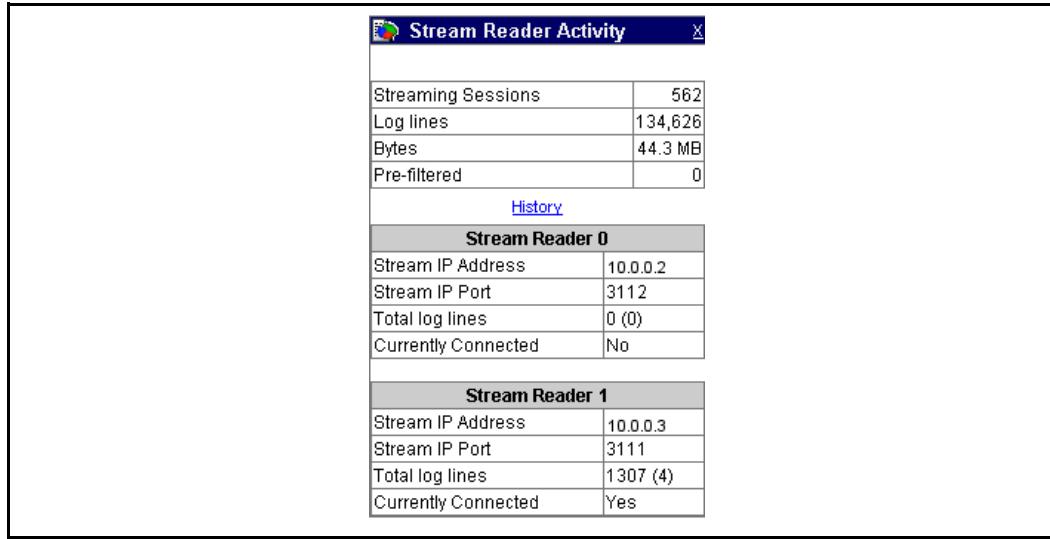


Figure 5-8. The Stream Reader Activity report.

This pane provides the access log following processing information:

*Profile Data:*

- Streaming Sessions**—The total number of access log stream sessions received by Reporter.
- Log Lines**—The total number of log file lines during this session.
- Bytes**—The total number of bytes processed during this session.
- Pre-filtered**—Combined lines using PVC. (See "[About the Page View Combiner \(v8\)](#)" on page 158).

*Reader Data (might have multiple readers):*

- Stream IP Address**—The SG appliance IP address sending the stream for this reader.
- Stream IP Port**—The unique port number used for this stream reader connection.
- Total Log Lines**—How many access log lines have been read.
- Currently Connected**—The current connection status (**Yes/No**) of this reader.

## Adding Usage Reports

The Dashboard features several pre-set reports that you can add. These reports display categorized data if the log files associated with this profile contain the relevant log fields. If the log fields are not present, the report is blank. For a reference of log fields required for each report, see "[CIFS Logs](#)" on page 166 in Appendix A.

## More Conceptual Information

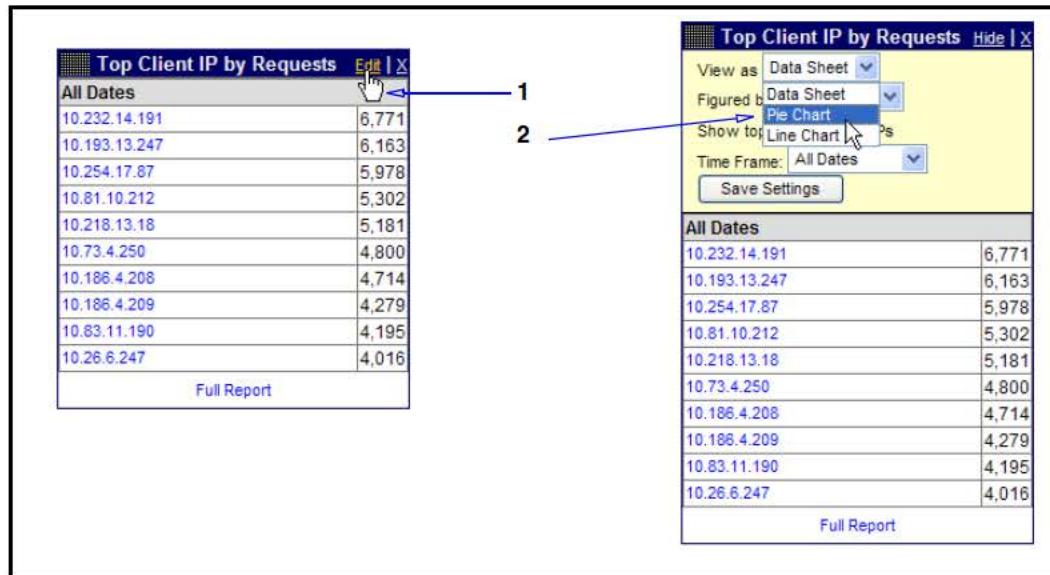
To learn more about PVC, see "[About the Page View Combiner \(v8\)](#)" on page 158 in Appendix A.

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

## Editing Dashboard Reports

By default, some reports display as data sheets (tables) and others display as graphs or pie charts. You can edit the display attribute of any report.

## To edit dashboard report display attributes:



1. Click **Edit** in the upper-right corner of a report. The field expands to display editable attributes.
2. Edit one or more of the following attributes:
  - **View as:**
    - **Data sheet**—The default. Displays numerical values.
    - **Pie chart**—Displays the data as a pie chart. The pie chart features roll-over capability, displaying metrics as you move the mouse over each piece of the pie.
    - **Line chart**—Displays the data as a line chart. The line chart features roll-over capability, displaying metrics as you move the mouse over data points in the chart.

**Note:** The line chart option is not available for all reports.

- **Figured by:**
  - **Page views**—The number of Web pages viewed.
  - **Volume**—The number of bytes processed.
  - **Requests**—The number of Web content requests.
  - **Time Taken**—Show activity for the specified time frame: years, months, weeks, days; since a selected date; or the past specified hours or days.
  - **Bytes in**—The number of bytes received.

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

- **Bytes out**—The number of bytes sent out.
  - **Show top # data**—How many listings to show in the report. For example, **Show top 10 user-agents**. The default is 10.
  - **Time frame**—You can narrow the scope of the report to the current **Year**, **Month**, **Week**, or **Day**. You can also customize to display from a specific calendar day (**Since**) or in the last so many hours or days (**Past**). These two options display a calendar or drop-downs, respectively, if selected.
3. Click **Save Settings**. The report updates according to the new attributes. For example, the following two screenshots illustrate a change from a data sheet to a pie chart of the last week.

**Note:** If you do not perform any action within a few seconds, the **Edit** field closes, returning to the normal report view.

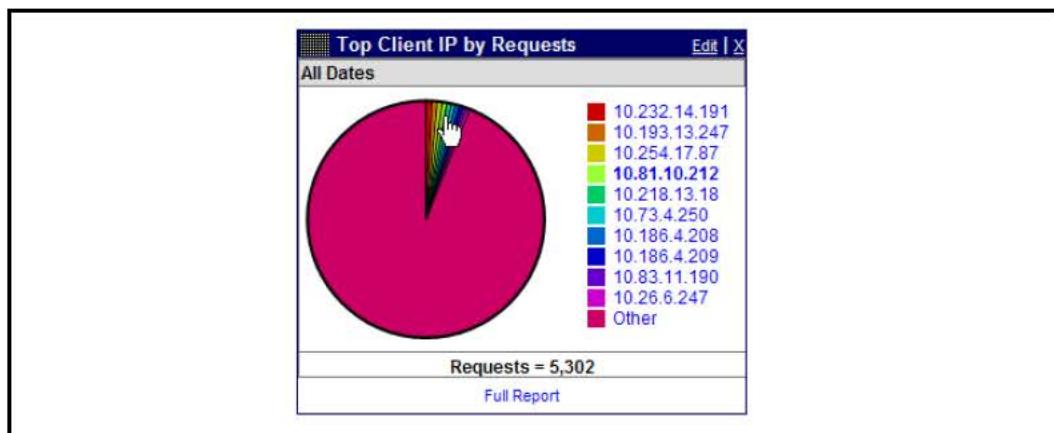


Figure 5-9. View data as pie chart instead of numbers.

## Viewing Full Dashboard Reports

To isolate and view a single report in full format, click **View Report**.

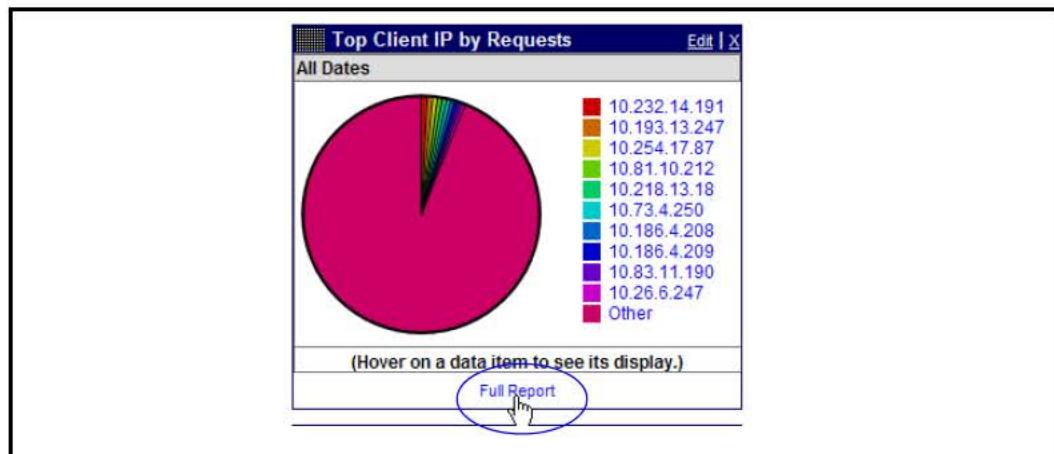
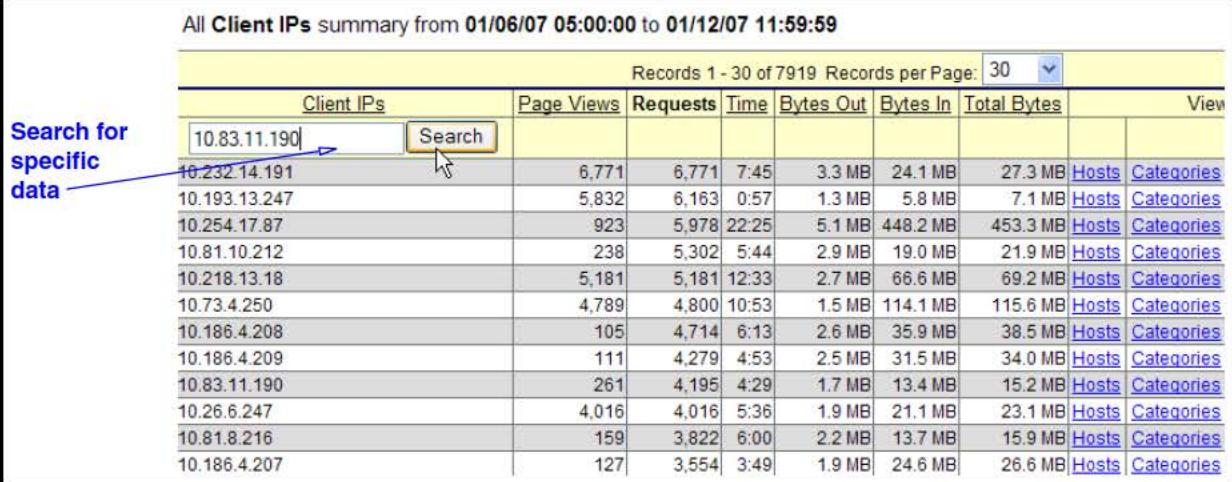


Figure 5-10. Select View Report.

**Section B: Blue Coat v8 Data Profile Reports—Dashboards**

The report is displayed, and relevant data hot-linked. You can drill-down further by clicking these links.

**Note:** Any links that are *not* active are not HTTP objects (such as HTTPS, FTP, and so on).



All Client IPs summary from 01/06/07 05:00:00 to 01/12/07 11:59:59								
Records 1 - 30 of 7919 Records per Page: 30								
Client IPs	Page Views	Requests	Time	Bytes Out	Bytes In	Total Bytes	View	
10.83.11.190								
10.232.14.191	6,771	6,771	7:45	3.3 MB	24.1 MB	27.3 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.193.13.247	5,832	6,163	0:57	1.3 MB	5.8 MB	7.1 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.254.17.87	923	5,978	22:25	5.1 MB	448.2 MB	453.3 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.81.10.212	238	5,302	5:44	2.9 MB	19.0 MB	21.9 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.218.13.18	5,181	5,181	12:33	2.7 MB	66.6 MB	69.2 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.73.4.250	4,789	4,800	10:53	1.5 MB	114.1 MB	115.6 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.186.4.208	105	4,714	6:13	2.6 MB	35.9 MB	38.5 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.186.4.209	111	4,279	4:53	2.5 MB	31.5 MB	34.0 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.83.11.190	261	4,195	4:29	1.7 MB	13.4 MB	15.2 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.26.6.247	4,016	4,016	5:36	1.9 MB	21.1 MB	23.1 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.81.8.216	159	3,822	6:00	2.2 MB	13.7 MB	15.9 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>
10.186.4.207	127	3,554	3:49	1.9 MB	24.6 MB	26.6 MB	<a href="#">Hosts</a>	<a href="#">Categories</a>

Figure 5-11. Example—A full report.

You can perform a manual search for a specific set; for example, a user or IP address. The search criteria depends on the type of report.

To return, click **Back to Dashboard** (bottom of page).

**Moving Dashboard Reports**

Dashboard reports are modular. You can drag and drop them to different location on the Dashboard. Move the mouse over a report title bar. The standard mouse pointer changes to a four-arrow pointer. Click a report, drag to a new location on the Dashboard, and release.

## Section B: Blue Coat v8 Data Profile Reports—Dashboards

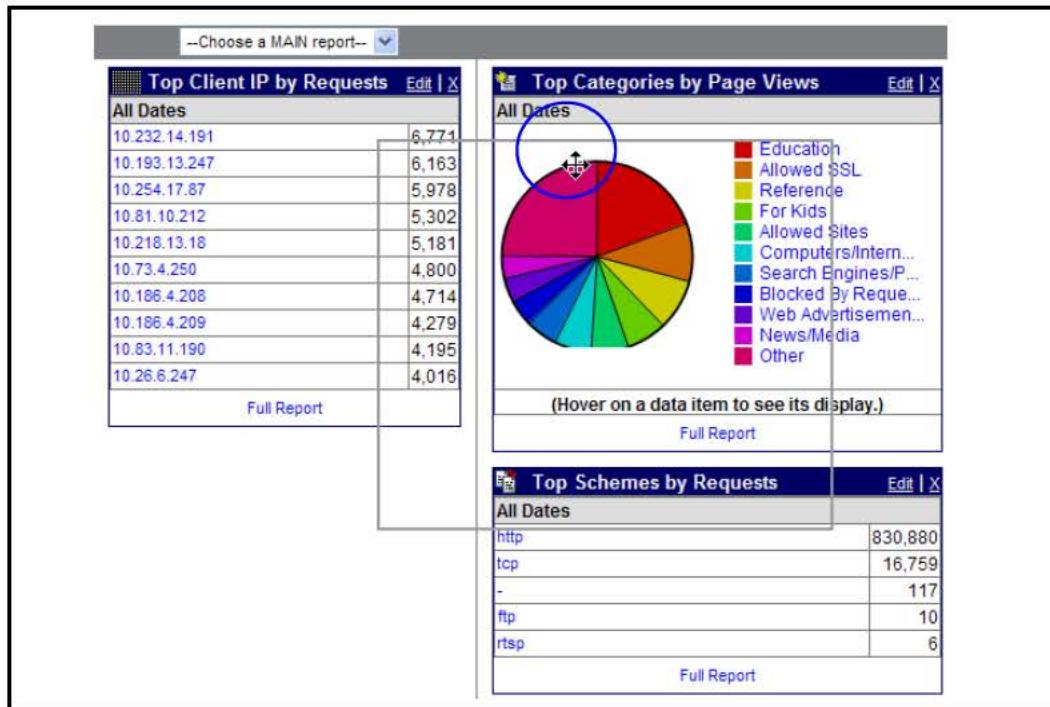


Figure 5-12. Dragging and dropping a report to a new location.

## Adding Additional Log Files

The Reporter Dashboard allows you to view real-time changes to the log database when it is updated. As described in ["About the Main Log Dashboard" on page 61](#), the Log Reader Activity report features a time interval. At the end of the countdown, Reporter checks the target directory for updates.

**Note:** If the `.done` option was selected during the profile wizard procedure, all log files that have been already processed by Reporter are annotated with `.done`. If Reporter detects a new log file (or the `.done` was manually removed), the database update begins and the Log Reader Activity report changes to show the progress bar. All associated statistics in the Dashboard reports are updated.

## About the CIFS Log Dashboard and Reports

If a v8 profile is configured to read CIFS (file sharing) logs and you click **Show Reports** from the **Data Profiles** page, the CIFS Data Profile Dashboard displays.

### *About the CIFS Dashboard*

Functionally, the CIFS Log Dashboard operates the same as the Main Log Dashboard (see ["About the Main Log Dashboard" on page 61](#)). You can edit report attributes and move them around within the Dashboard screen. The difference is this Dashboard displays reports that provide file, folder, and server connection data that pertain to CIFS (the Microsoft applications file sharing protocol).

Section B: Blue Coat v8 Data Profile Reports—Dashboards

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### *About the CIFS Reduction Report*

The Dashboard for CIFS log file profiles displays a large speedometer that reflects the overall latency reduction, by percentage, obtained by employing the CIFS over the Application Delivery Network (ADN) on the SG appliance.

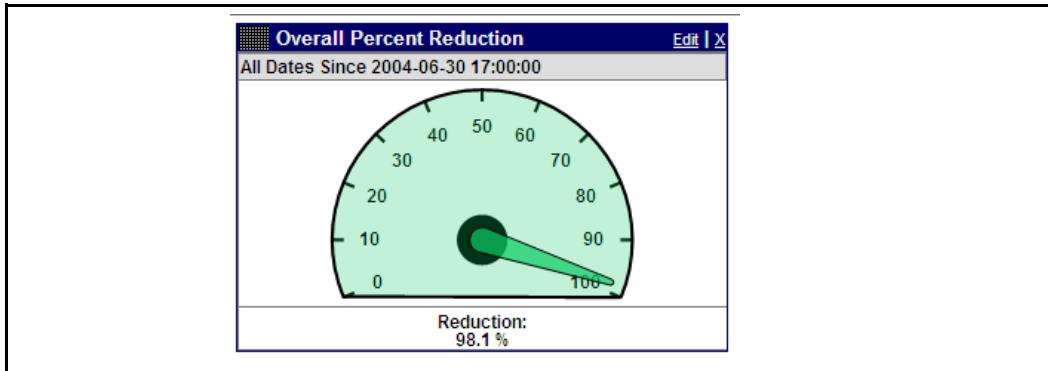


Figure 5-13. The CIFS reduction report.

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Section C: Blue Coat v8 Data Profile Reports

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## Section C: Blue Coat v8 Data Profile Reports

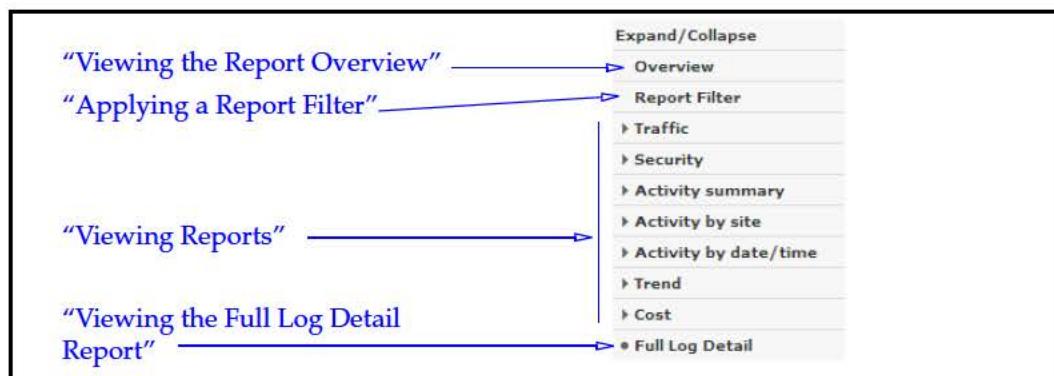
This section describes how to view the reports generated from a v8 data profile.

### About the Reports Page

The Reports page allows you to apply a data filter, view high-level log details, and select a specific data report to examine the results of the processed log files. From these pages, additional options are available to e-mail reports, determine a schedule, print, and regenerate the report.

To view the Reports page, click the **Reports** tab at the top-left of the page.

The reports page contains the following components:



### Applying a Report Filter

Report Filter is the default page upon entering the main Reports page. Applying a filter, which can contain multiple filtering components, before selecting one of the reports allows the reports to generate faster; furthermore, you receive only the particular data set you require.

---

**Note:** Any filter set and activated on this page applies to any report selected on the Reports page.

---

#### Notes

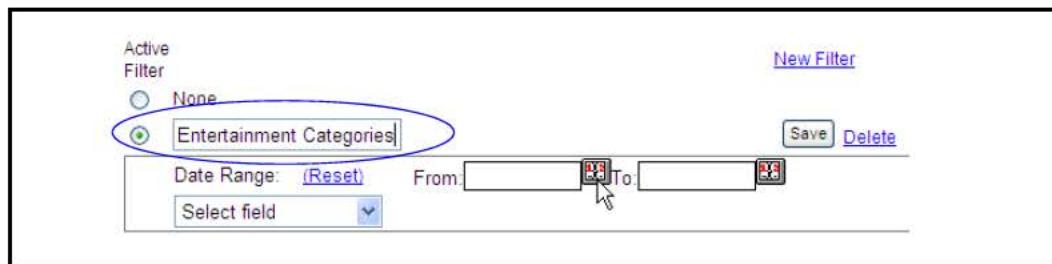
- Blue Coat strongly recommends applying filters to narrow the scope of reported data, especially if the log data set is extremely large (for example, over 20 GB). Not applying a filter increases the chance of a Reporter process failure.
- After a filter is created, it remains active until you delete it.

## Section C: Blue Coat v8 Data Profile Reports

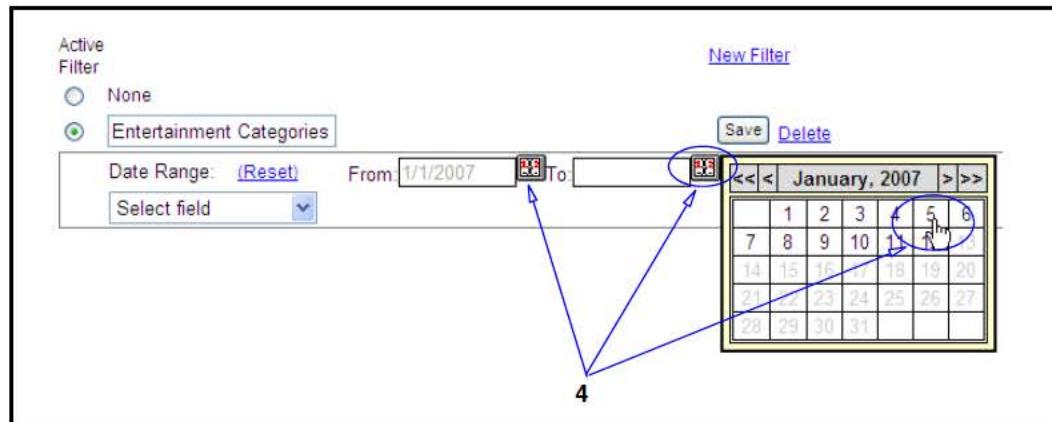
### To apply a report filter



1. From the Management Console, select **Reports > Reports Filter**.
2. Click **New Filter**.

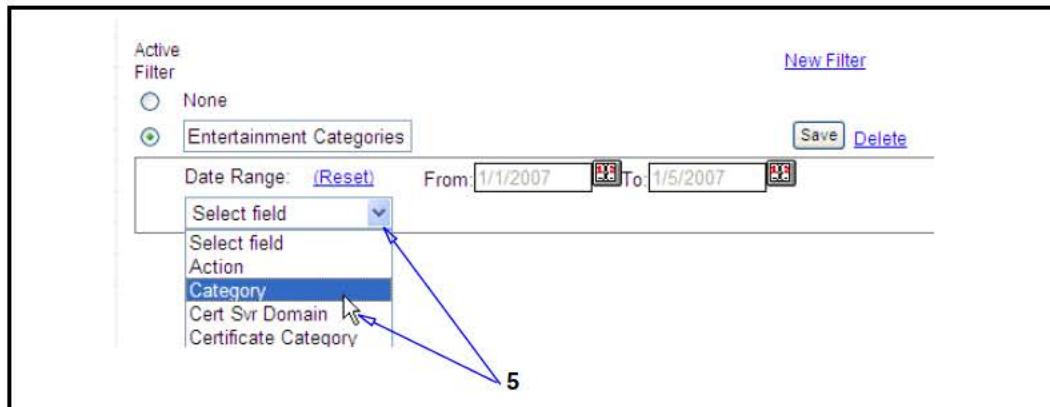


3. Enter a name for the filter. This example sets a name for a filter that limits log data to the entertainment content category.



4. Select a date range. Click the **From** calendar icon, which displays a calendar. All selectable dates (based on the dates contained in the log files) are bold. Click the arrow buttons to change months (<) and years (<<). Repeat for the **To** date field. This example selects as a range the first 15 days in the month of May. If you do not select a date range, all valid ranges contained in the log files are reported.

## Section C: Blue Coat v8 Data Profile Reports



5. From the drop-down list, select a filter component; click **Add**. This example selects **Category** as the filter.



6. Specify the filter:

- After you click **Add**, the field expands, allowing you to enter text. The intelligent filter feature displays available choices as you type. In the above example, entering the letter **E** yields the choices **Education** and **E-mail**. But entering **Ar** yields **Arts/Entertainment**, which is the desired category for this filter example. Press Enter to accept the category.
- Select one or both of the following options:
  - Is/Is Not** drop-down list: By selecting **Is**, you want the report to generate data that only includes the specified filter. If you select **Is Not**, all report data excluding this filter is displayed.
  - Match Case**: This option is useful if you know your log data has case-sensitive names. For example, you have users **bob** and **Bob**, and only want to filter on **Bob**.

**Note:** When logs are processed, the `username` and `domain` fields are *normalized*, or made all lowercase; therefore, by default, all filters are case-insensitive. To configure a profile to not normalize these fields (must occur before any logs are processed), see "About Field Value Normalization" on page 159.

To add multiple categories, click **Add value**.

Section C: Blue Coat v8 Data Profile Reports

The screenshot shows the 'Active Filter' configuration page. The 'Entertainment Categories' filter is selected. A date range from 1/1/2007 to 1/5/2007 is set. Two filter conditions are present: 'Category is Arts/Entertainment' and 'User is Bob Kent'. A blue arrow labeled '7a' points to the 'Add field ...' button at the bottom left. A blue arrow labeled '7b' points to the 'Bob Kent' entry in the User dropdown.

7. The above example adds a specific user to filter:
  - a. Click **Add Field**.
  - b. Add a user name; this example uses **Bob Kent**. To add multiple values, click **Add value**.

The screenshot shows the same filter configuration as before, but the 'Save' button in the top right corner is circled in blue. The filter conditions remain the same: 'Category is Arts/Entertainment' and 'User is Bob Kent'.

8. Click **Save**.
9. Select a report and examine the filtered log data. See the next section, "Viewing Reports" on page 78, for more information about report displays.

### Multiple Filters

You can return to the filter page at any time and create new or edit existing filters. For example, you want to isolate one particular user, **Jorn Lande**, who is visiting a large number of entertainment category Web sites.

Section C: Blue Coat v8 Data Profile Reports

**Report Filters**

Active Filter

None

Entertainment Categories

[New Filter](#) [Edit](#) [Delete](#) [Copy](#)

1. On the Report Filters page, click **Edit**.

**Report Filters**

Active Filter

None

Entertainment Categories

[New Filter](#) [Save](#) [Cancel](#) [Delete](#)

Date Range: [\(Reset\)](#) From:  To:

~~x~~ Category is  [Add value ...](#)

~~x~~ User is  [Add value ...](#)

[Add field ...](#)

2. In the User portion of the page, click **Add Value**.

None

Entertainment Categories

[Save](#) [Cancel](#) [Delete](#)

Date Range: [\(Reset\)](#) From:  To:

~~x~~ Category is  [Add value ...](#)

~~x~~ User is  [Add value ...](#)

~~x~~ User is  [Add value ...](#)

[Add field ...](#)

3. Add the new user name.
4. Click **Save**.

### Managing Filters

- To delete filter value, select the red X next to component.
- To view reports without filtering, select **None**.

## Section C: Blue Coat v8 Data Profile Reports

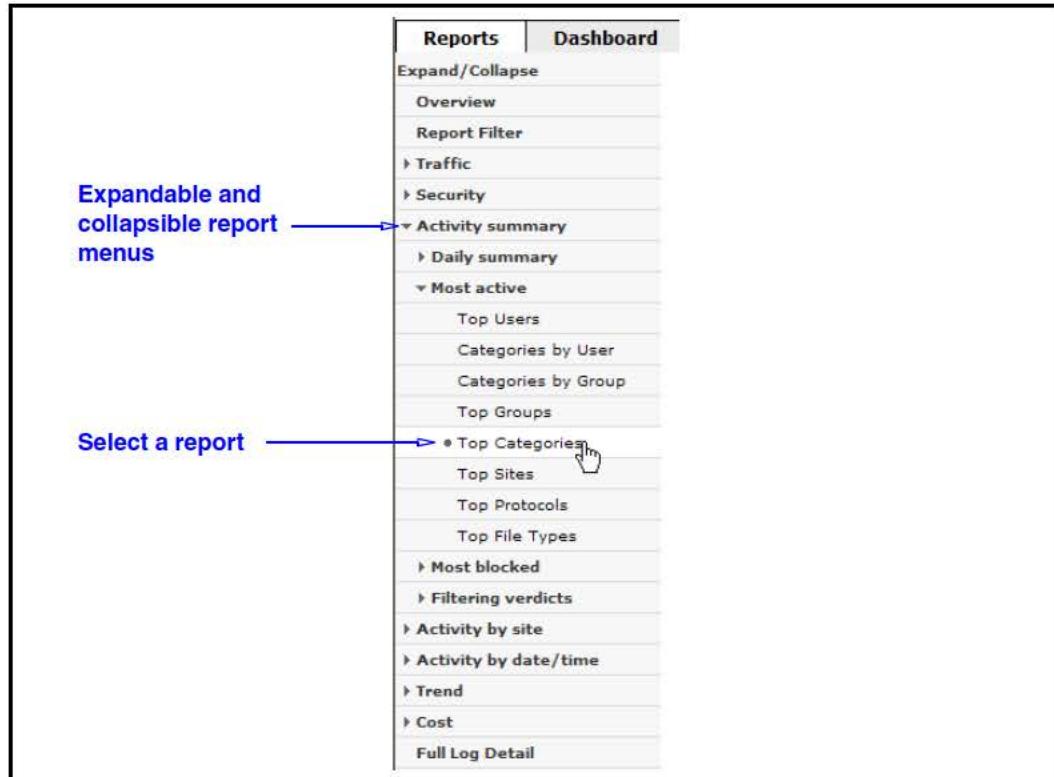
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- To remove a filter, click **Delete**.

### Viewing Reports

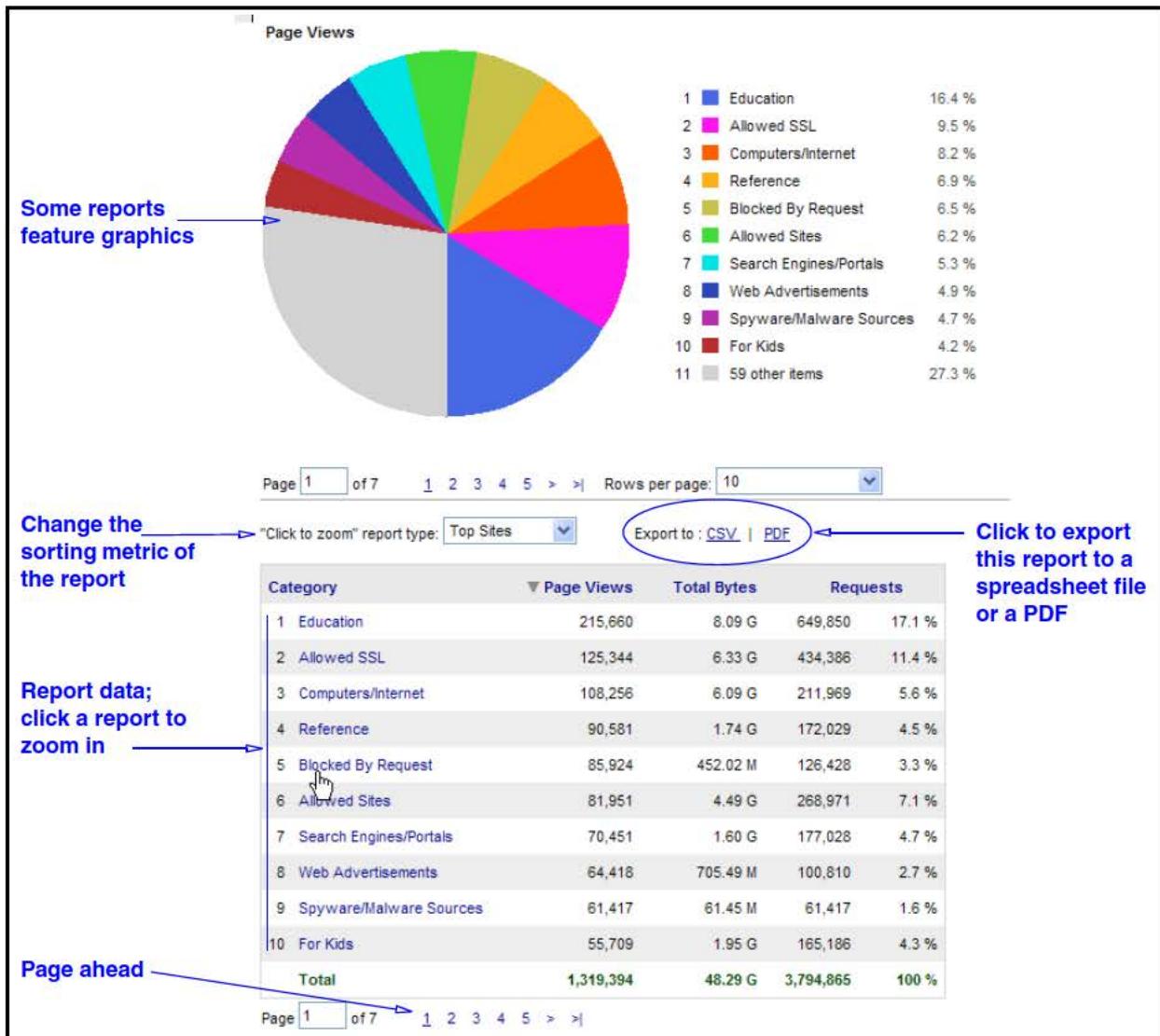
This section describes the construct of a v8 profile report.

#### To view a v8 profile report:



1. Select a report from the expandable/collapsible report menu. This example selects a report that shows the categories browsed, ranked highest to lowest by page views.

## Section C: Blue Coat v8 Data Profile Reports



In this example, the report displays data beginning with the first day of recorded data in the processed log file(s). The specific log data is presented based on the log fields for this report.

**Note:** Some reports display graphs or charts above the text data. These graphs are not customizable.

2. (Optional) The links in the table header allow you to alter the order of the presented data. For example, sort by total **Requests**, from highest to lowest (within the context of the report).

After you review the report, you can select an option within the report page:

- Choose Active Filter**—Displays the Expression Filter options in a new dialog. Allows you to apply a filter expression to change what data is displayed. For example, remove data for a certain IP address. See "Applying an Expression Filter" on page 88.

## Section C: Blue Coat v8 Data Profile Reports

- Save**—If a report attribute is changed on this page, the **Save** link becomes active. You can save this customized report. ["Using Easy Save" on page 93.](#)
- Email**—Allows you to e-mail this report to any user (only available to admin users). ["Using Easy E-mail \(Admin Only\)" on page 106.](#)
- Schedule**—Allows you to schedule this report to be generated or e-mailed (in PDF or HTML format) at a specific time or periodic interval (only available to admin users). See ["Using Easy Schedule \(Admin only\)" on page 105.](#)
- Print**—Allows you to send this report to a printer.
- Regenerate**—Regenerates the currently displayed report (not from the cache); use this if you are caching reports and you know the database recently was updated.
- Export**—Allows you to export the report to a CSV file, which is readable by Microsoft Excel, or a PDF file. See [Section E: "Saving and Exporting Individual Reports" on page 94.](#)
- Rows per page**—Allows you to configure how many rows display on this report.
- Table Viewing Options**—Changes which columns are visible, the sort order, and other aspects of the report. These changes are for this *session* only. If you log out of and back into Reporter, the changes do not remain. To make permanent changes to report displays, see ["Managing Reports" on page 115.](#)

### Zooming a Report

The Report page allows you to *zoom*, or drill-down, a report to view more targeted data. Depending on the report, you can continue to zoom down multiple levels. For example, you are viewing the **Top Categories** report, as demonstrated previously in this section. You notice a high amount of data for **Blocked by Request** and click that link.

4 Reference	90,581	1.74 G	172,029	4.5 %
5 Blocked By Request	85,924	452.02 M	126,428	3.3 %
6 Allowed Sites	81,951	4.49 G	268,971	7.1 %

Reporter reformats the report and displays a list of URLs that were blocked, again sorted highest to lowest by page views.

Responses				
13 n479ad.doubleclick.net	Blocked By Request	494	2.13 M	886
14 www.nickarcade.com	Blocked By Request	484	460.39 k	484
15 www.cinemawow.com	Blocked By Request	465	423.50 k	465

Each of these URL links is active, which breaks the data into individual days for that Web site.

Report zooming functions the same for all reports, but the levels of zoom and data types vary by report.

---

## Section C: Blue Coat v8 Data Profile Reports

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### Viewing the Report Overview

The report Overview is the high-level, unfiltered, and non-segmented data of the report. Data is presented for the aggregate totals and average per day (if the log file data spans more than one day).



Figure 5-14. The Overview Report, showing data for a log that spans seven days.

---

**Note:** The **Choose Active Filter** link allows you to apply an Expression Filter. See [Section C: "Blue Coat v8 Data Profile Reports" on page 73](#).

---

### Viewing the Full Log Detail Report

The Full Log Detail report displays unfiltered, non-segmented data of the report in a large table format.

## Section C: Blue Coat v8 Data Profile Reports

The screenshot shows a web-based reporting interface titled "Full Log Detail Report". At the top, it displays "Statistics for 01/Jan/2007 - 12/Jan/2007, 12 days" and a "Choose Active Filter" link. Below the title are navigation links: Save, Email, Schedule, Print, and Regenerate. A search bar is present above the main content area.

The main content area features a table with the following columns: Url, Day of Week, Total Bytes, Requests, and Processing Time. The table contains three rows of data:

Url	Day of Week	Total Bytes	Requests	Processing Time
1 →  http://www.nba.com/scores/simpleScore...	Monday	2.15 k	1	00:00:00.001
2 →  http://update.real.com/Update/7.0.0.1...	Monday	2.58 k	1	00:00:00.337
3 →  http://www.google.com/tools/swg2/upda...	Monday	650 b	1	00:00:00.054

A callout box points to the first row with the text: "Click the + icon to display the full URL." Below the table, there are links to "Table Viewing Options", "Export all data" (with CSV and PDF options), and page navigation (1-5, >, >>).

Figure 5-15. The Log Detail report, with one URL expanded (does not show entire table)  
Scroll horizontally to view all of the table columns.

**Note:** The **Choose Active Filter** link allows you to apply an Expression Filter. See [Section C: "Blue Coat v8 Data Profile Reports" on page 73](#).

## Differences From v7 Log Detail

Page views and hits are conceptually different in v8 versus v7.

In the v7 Log Detail report, access to any other page or link on the same domain is counted as one page view. For example, if a user visits `www.yahoo.com` and from there clicks news, stocks, and e-mail links, these are reported as four accesses to different pages, thus making page view count as 4. Reporter v7 creates a separate log entry for each image or other automatically loaded object on each page; therefore, in that version, the number of log entries corresponds one to one to number of hits.

In the v8 Log Detail report, however, a page view approximates user clicks by creating a log entry for page views only and all the automatically loaded components (hits) are counted for under that page view.

Reporter 8.1.x introduced an engine for page view combining (PVC). PVC combines all automatically loaded objects (for example, an image or a flash movie) into a single page view. This more closely approximates the user behavior; one page view equals one request. A request in a browser environment is either a new URL typed to the address bar or a link to a new page having been clicked. Page view combining requires certain log fields to be present. Refer to "["CIFS Logs" on page 166](#)".

For more conceptual information about PVC, refer to "["About the Page View Combiner \(v8\)" on page 158](#)" in Appendix A.

## Section D: Blue Coat v7 Profile Reports

### Section D: Blue Coat v7 Profile Reports

This section describes the report structure for profiles that feature the Blue Coat log formats for peer-to-peer (P2P), streaming, instant messaging (IM), SQUID formats, and other custom Extended Log File Formats (ELFF).

#### About the Overview Page

When you click **Show Reports** from the Data Profiles page, Reporter builds the database (depending upon the log file size, this can take a large duration of time). After the database compiles, Reporter displays statistical information on the Overview page.

The report Overview is the high-level, unfiltered, and non-segmented data of the report. Data is presented for the aggregate totals and average per day (if the log file data spans more than one day).



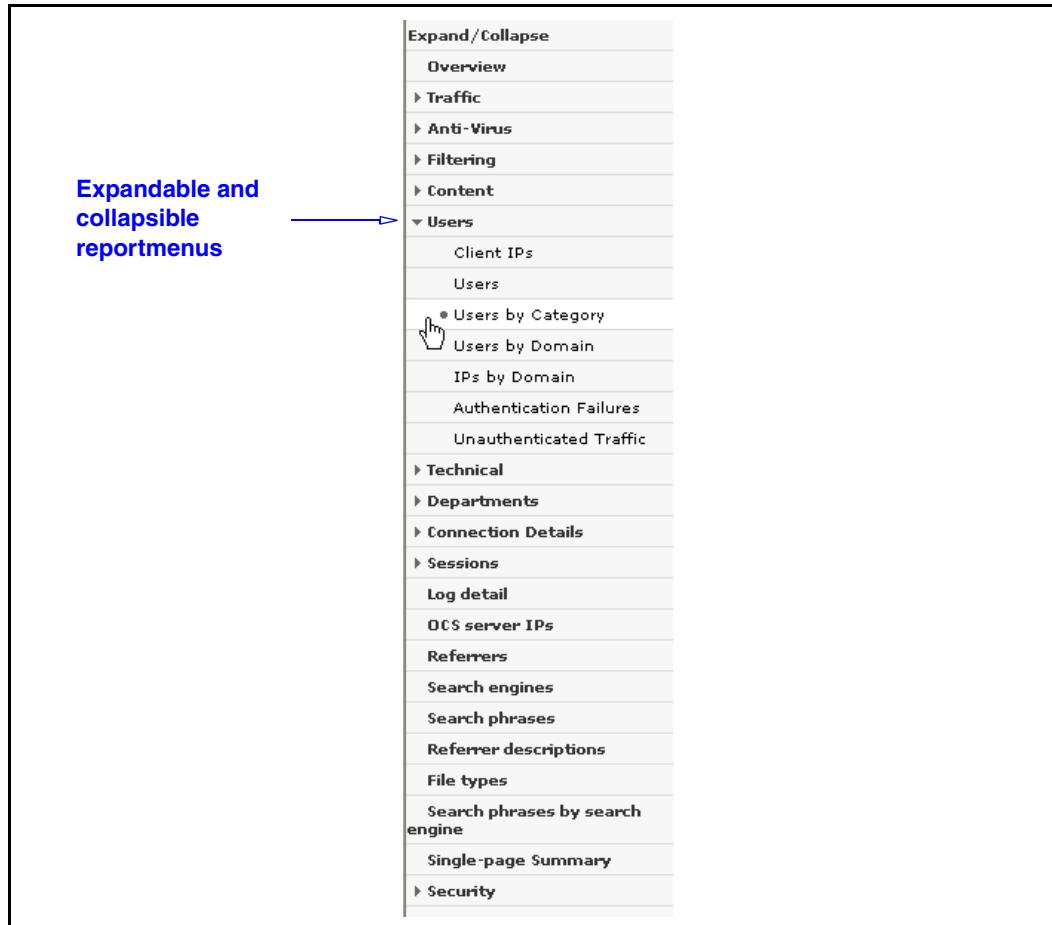
Figure 5-16. The Overview Report, showing data for a log that spans seven days.

#### Viewing Reports

This section describes the construct of a v7 profile report.

## Section D: Blue Coat v7 Profile Reports

To view a v7 profile report:



1. Select a report from the expandable/collapsible report menu. This example selects a report that shows category data based on users by Web browsing category.

## Section D: Blue Coat v7 Profile Reports

**Users by Category Report**

Statistics for 08/May/2006, 1 day      Date Filter    Filter    Save    Email    Schedule    Print    Regenerate

Users by Category      Row Numbers    Zoom Options    Export (this page) | Table Viewing Options

Page 1 of 13    1 2 3 4 5 > >|      Start row: 1      Rows per page: 10

**Table header**      Categories / User      Bytes downloaded      0 - 100 %      Bytes uploaded      Hits      Page views      Visitors      Duration

Category	User	Bytes downloaded	Bytes uploaded	Hits	Page views	Visitors	Duration
1 none	1 Sadia	9.51 M 17.1 %	569.78 k	1,061	30	1	00:00:00.313
	2 Mary	269.91 k 0.5 %	22.19 k	58	1	1	00:00:00.239
	Subtotal	9.77 M 17.6 %	591.96 k	1,119	31	-	00:00:00.309
2 Business/Economy	1 Sadia	6.58 M 11.9 %	409.45 k	805	92	1	00:00:00.234
	2 Mary	2.28 M 4.1 %	459.94 k	467	69	1	00:00:01.484
	Subtotal	8.86 M 16.0 %	869.39 k	1,272	161	-	00:00:00.693
3 Shopping	1 Sadia	12.59 M 13.7 %	972.66 k	1,798	84	1	00:00:00.139

In this example, the report displays data broken down by category, then by user.

**Note:** Some reports display graphs or charts above the text data. These graphs are not customizable.

2. (Optional) The links in the table header allow you to alter the order of the presented data. For example, sort by total Requests, from highest to lowest (within the context of the report).

After you review the report, you can select an option within the report page:

- Filter**—Displays the Expression Filter options in a new dialog. Allows you to apply a filter expression to change what data is displayed. For example, remove data for a certain IP address. See "Applying an Expression Filter" on page 88.
- Save**—If a report attribute is changed on this page, the **Save** link becomes active. You can save this customized report. "Using Easy Save" on page 93.
- Email**—Allows you to e-mail this report to any user (only available to admin users). "Using Easy E-mail (Admin Only)" on page 106.
- Schedule**—Allows you to schedule this report to be generated or e-mailed at a specific time or periodic interval (only available to admin users). See "Using Easy Schedule (Admin only)" on page 105.
- Print**—Allows you to send this report to a printer.
- Regenerate**—Regenerates the currently displayed report (not from the cache); use this if you are caching reports and you know the database recently was updated.

## Section D: Blue Coat v7 Profile Reports

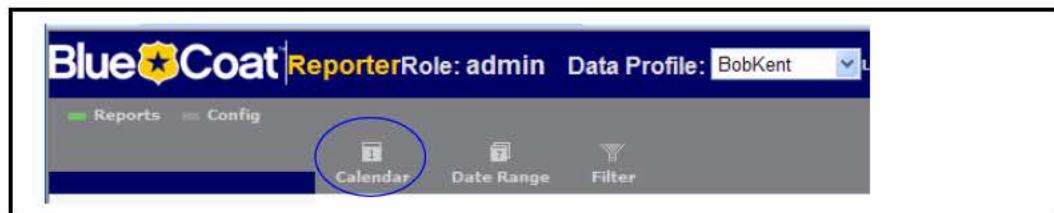
---

- Export**—Allows you to save the report data in a .crv file, which is readable by Microsoft Excel. See "Exporting a Report" on page 94.
- Display options:**
  - **Row Numbers** tab—Allows you to skip to a row further along than the first row (enter a row number in the **Start row** field). You can also configure how many rows display on this report (select a value from the **Rows per page** drop-down list). If rows are missing from your page view, the bottom of the report provides an average for the remaining items and links to remaining page views.
  - **Zoom Options** tab—Allows you to select a report from the drop-down list to view drill-down reports on selected criteria. If a Zoom filter is employed, displays what you are zoomed in on, if you are using Zoom filters. Select an item from the drop-down list to change the view. You cannot access the **Zoom Options** tab if zooming is not available for the report menu item you are viewing.
- The **Table Viewing Options** link—Changes which columns are visible, the sort order, and other aspects of the report. These changes are for this *session* only. If you log out of and back into Reporter, the changes do not remain. To make permanent changes to report displays, see "Managing Reports" on page 115.

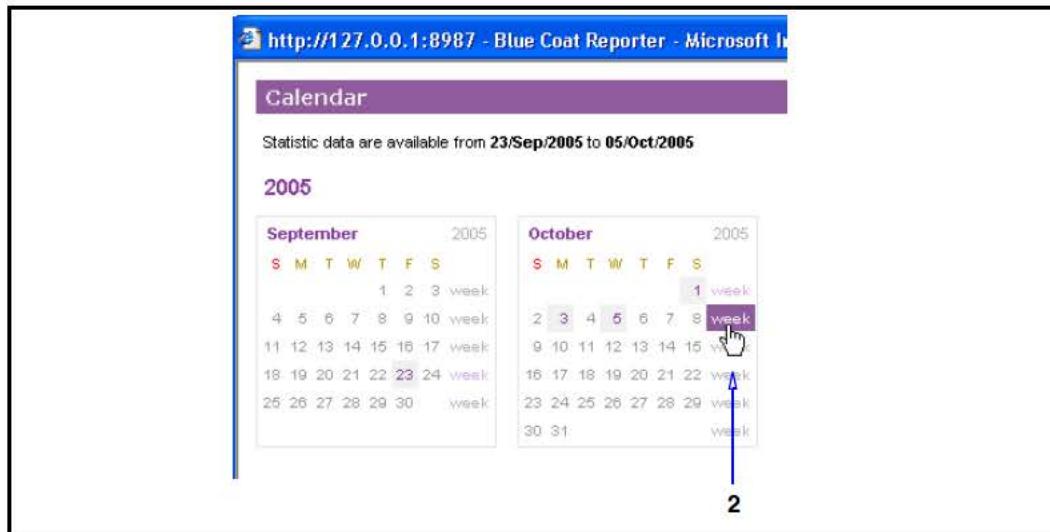
## Selecting a Single Calendar Element

The Calendar feature allows you to select a single day, week, month, or year filter to apply to the current log or set of logs.

To apply a Calendar range:



1. Click the **Calendar** icon, located just above the display header bar.

Section D: Blue Coat v7 Profile Reports

2. The calendar dialog appears, displaying all the months relevant to the data contained in the log file(s). Days that contain log data are identifiable by a shaded box around the date. Click a day, week, or month in the Calendar to have all reports show only information for that time period. The above graphic demonstrates selecting a specific week. The dialog closes and Reporter updates to show the requested filtered data.

**Removing the Calender Range**

The range remains until it is manually removed. On the Report page, deselect **Date Filter** on the report page.

**Applying a Date Range**

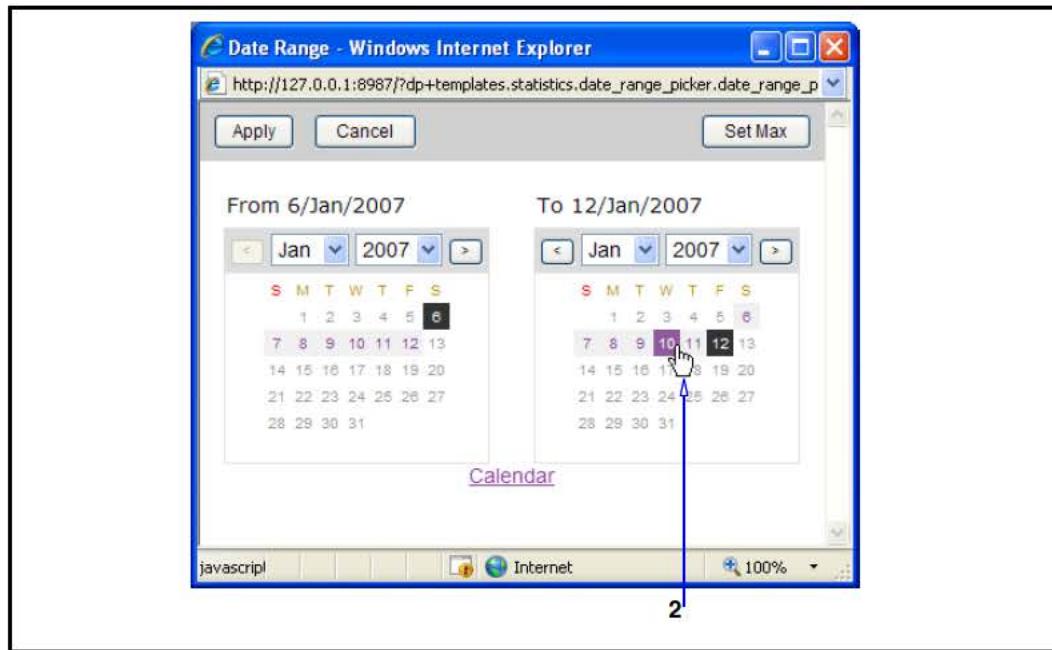
The Date Range feature is similar to the Time feature in the Dashboard (v8 Profiles) and Calendar feature in the Overview (v7 Profiles), but allows you to select a range of valid dates to isolate specific periods of log file data.

**To apply the Date Range filter:**

1. Click the **Date Filter** link or **Date Range** icon.



## Section D: Blue Coat v7 Profile Reports



2. Two calendars represent the start date (left) and the end date (right). Black boxes identify the current start and end dates.  
Click boxes in the **From** and **To** calendars. Shaded dates specify the date valid for the log(s) in the profile. If the access log spans multiple months or years, you can scroll to or select from drop-down lists different months and years.
3. Click **Apply**. All reports for this profile now show only information from that time period.

### Removing the Date Range Filter

The filter remains until it is manually removed. Click the **Date Range** icon again and click **Set Max** to revert to the full date range for this profile. Click **Apply**.

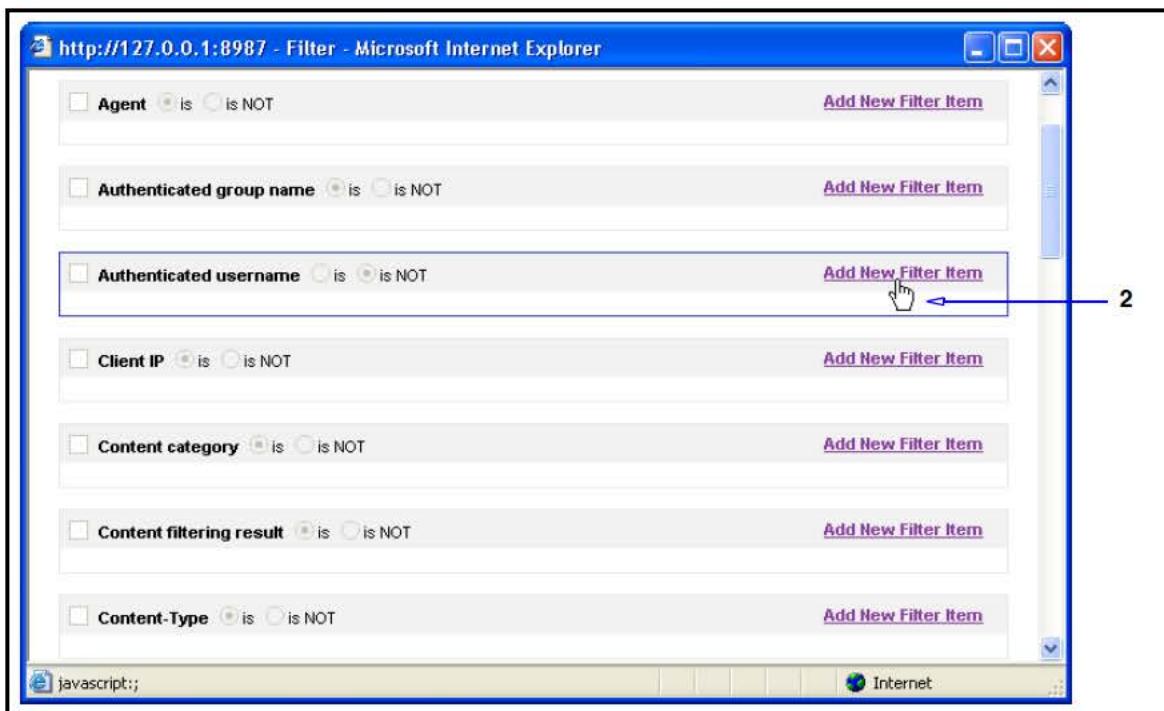
### Applying an Expression Filter

You can apply different expression filters that apply to *all* reports for this profile. The following procedure demonstrates removing data for authenticated user **homer** from the **Page views per user Report**.

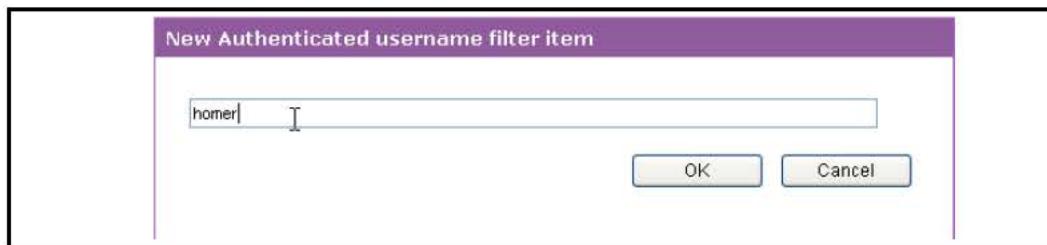
#### To apply a filter to all reports:

1. Click the **Filter** link or **Filters** icon.

Section D: Blue Coat v7 Profile Reports



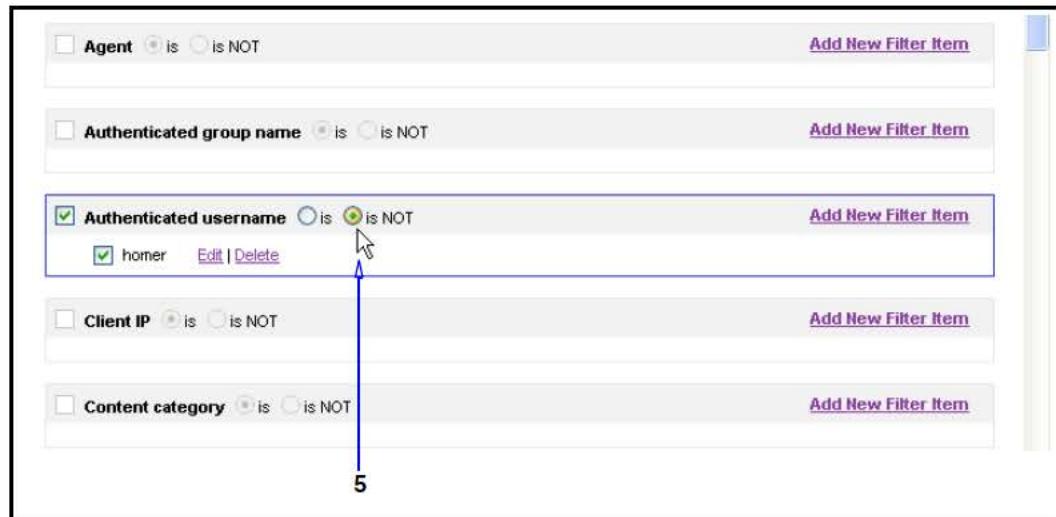
2. Click **Add New Filter Item**.



3. Enter a filter value in the field and click **OK**.

4. Click **OK**. The filter item displays in the Filter window.

## Section D: Blue Coat v7 Profile Reports



5. Select how the filter is applied:
  - **is:** The report is filtered to display only data for this value.
  - **is not:** The report is filtered to display all data except for this value.
6. Click **Save and Close**.

## Section D: Blue Coat v7 Profile Reports

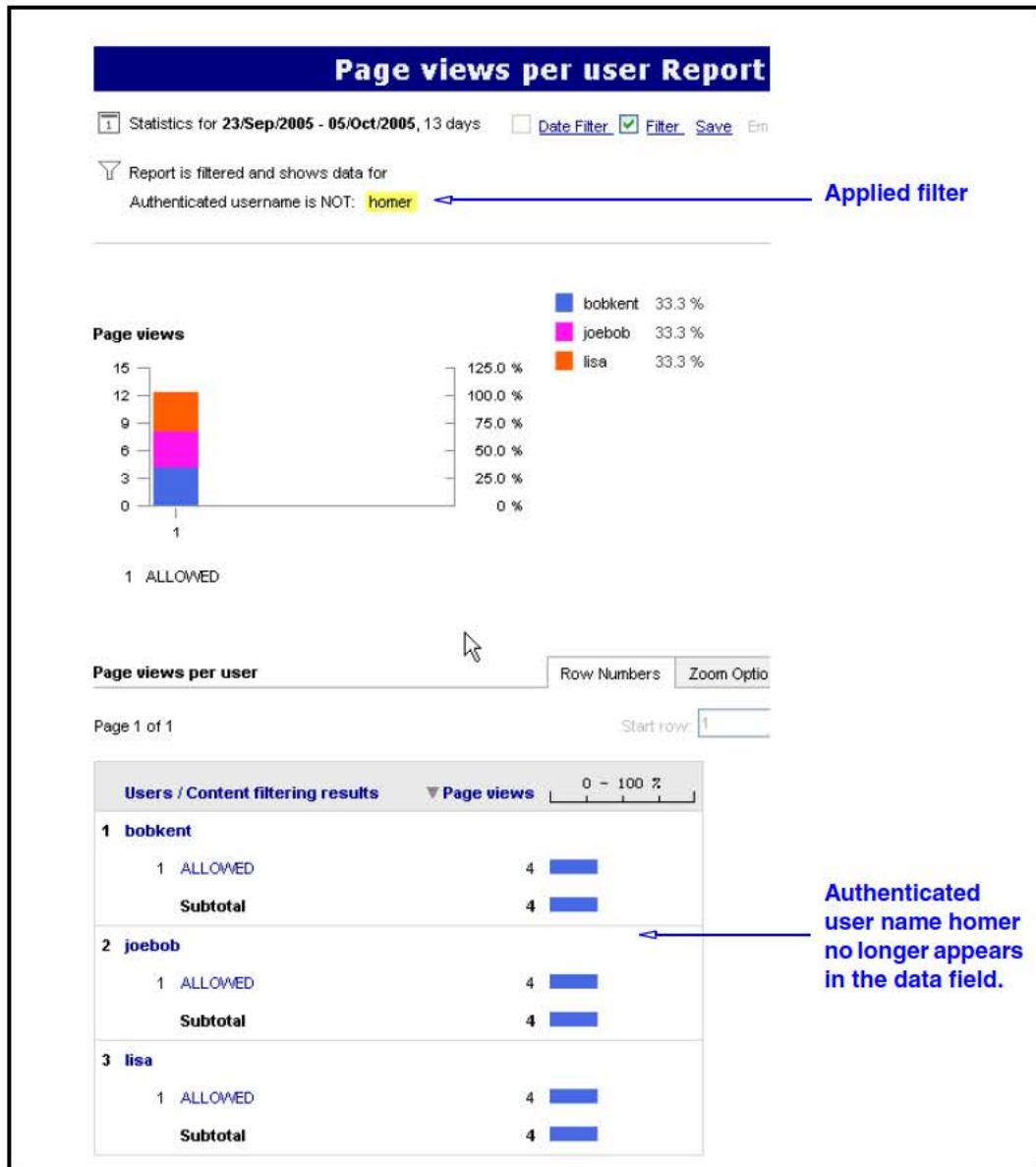


Figure 5-17. A report with an applied authenticated username filter.

The Reports menu displays the applied filter, highlighted in yellow. In this example, the data for authenticated user **homer** no longer appears in the report.

**Note:** You might have to click the **Regenerate** link to see the corrected data display.

Filters remain in place as you move from report to report until they are deselected. If the filter is deselected, it remains in the filter menu to be selected again. Furthermore, Reporter allows you to save the altered report as a new report. See the next section, "Using Easy Save" on page 93.

**Section D: Blue Coat v7 Profile Reports**

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**Editing Filters**

Access the **Filter** menu again. Deselect the filter, or edit or remove the filter by clicking the links. Click **Save and Close**.

Section E: Saving and Exporting Individual Reports

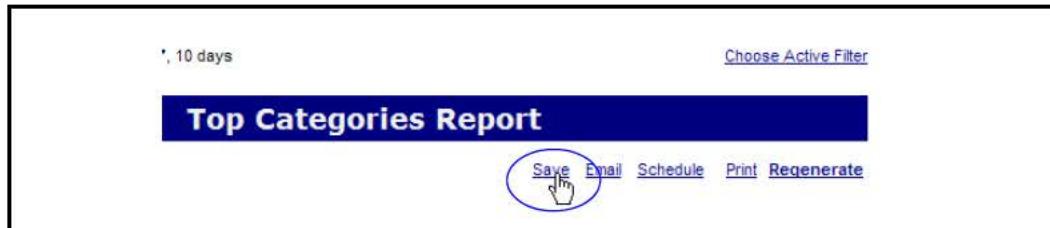
## Section E: Saving and Exporting Individual Reports

This section describes how to use the Easy Save and Export features (applies to both v8 and v7 profiles).

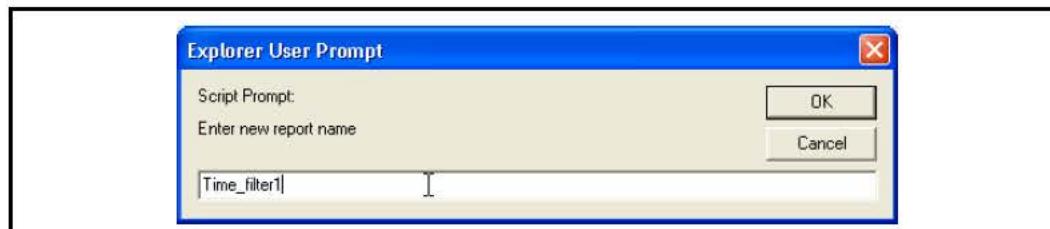
### Using Easy Save

If you apply a filter or as you *drill down* on specific report elements, you can save the filtered or more granular information screen as its own report.

**To save a custom report:**



1. On this type of screen, the **Save** link becomes active. Clicking this link displays a dialog.



2. Enter a name for the new, modified report. Click **OK**.



The report appears and is available from the **Favorite** menu item.

Section E: Saving and Exporting Individual Reports

## Exporting a Report

Reporter allows you to export an individual report in two formats:

- A PDF file.
- A CSV file, which converts the report from an HTTP page to a .csv file, which is compatible with Microsoft Excel. This allows you to customize the report. For example, you can remove columns that an HR manager is not interested in seeing and add comments to call attention to a specific set of data.

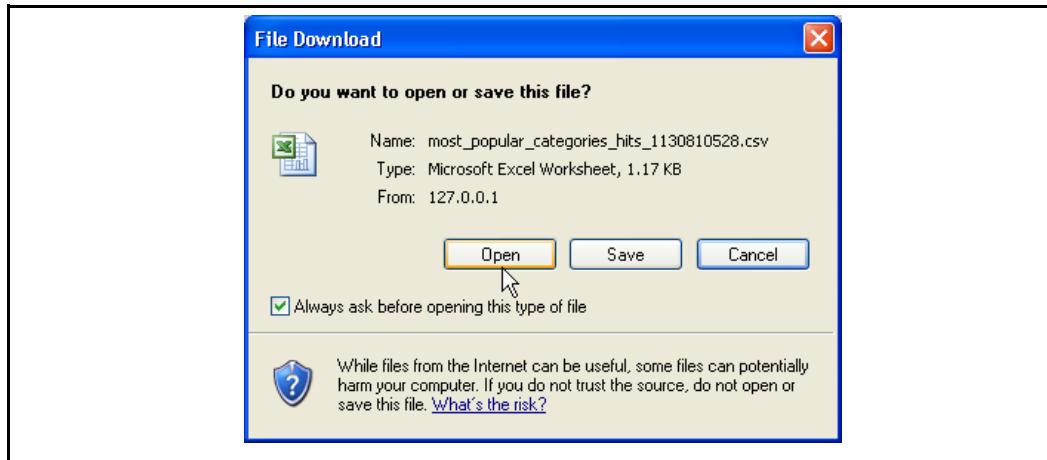
**To export and save a report:**

The screenshot shows a report titled "Daily Categories by User Report" for the period from 01/Jan/2007 to 10/Jan/2007. The report displays data in a table format. At the top right, there is an "Export" dropdown menu with two options: "all data" and "this page". The "all data" option is highlighted with a blue arrow labeled "1". Below the export menu, there is a link "to : CSV | PDF" with another blue arrow labeled "2" pointing to it. The table has columns: Date / User / Category, Total Bytes, Requests, and Page Views. The data rows are: 01/Jan/2007, 89.76 M, 10,648, 3,506; Allowed SSL, 39.62 M, 3,964, 1,044; and Allowed Sites, 135.16 k, 117, 117.

1. On any report page, from the Export drop-down list, select to export one page or all of data if the report is a detailed report, not a summary report (detailed reports are typically larger reports).
2. Select a format:
  - a. Click **PDF**. Reporter constructs the report and displays an export completed message. Click the link to generate and view the PDF file.
  - b. Click **CSV**.

The screenshot shows a modal dialog box with a "Close" button at the top. The main content area contains the text: "The file has been exported. Please click the download link to save the file." Below this text is a blue link "Download CSV file" with a cursor icon pointing to it.

3. Click **Download CSV file**. The file download dialog appears.

Section E: Saving and Exporting Individual Reports

## 4. Select an option:

- **Save**—Saves the file to a location you specify (standard Windows browse).
- **Open**—Opens Microsoft Excel with the report in a spreadsheet format. The spreadsheet can be saved.

This example demonstrates the **Open** feature on the **Most popular categories—Hits** report, with added comments.

	A	B	C	D	E	F	G	H	I	J	K
1	Content category	Hits	Page views								
2	News/Media	180293	26007								
3	Computers/Internet	114215	42270								
4	Reference	79844	70069								
5	Business/Economy	60471	14479								
6	Web Advertisements	38095	27585								
7	Shopping	35280	5888	This trend is up. We might need to update our policy.							
8	Search Engines/Portals	34276	12544								
9	Arts/Entertainment	23598	2597								
10	Email	18209	3175								
11	Web Communications	16857	4599								
12	none	15651	5243								
13	Brokerage/Trading	15201	1293	Many more hits to this category, but the trading window opened this month.							
14	Education	11690	2653								
15	Sports/Recreation/Hobbies	11660	2678								
16	Travel	7074	1164								
17	Games	6460	998	Noticing more game activity than last week.							
18	Government/Legal	5746	1066								
19	Software Downloads	5655	1788								
20	Health	4112	469								
21	Streaming Media/MP3s	3975	824								
22	Adult/Mature Content	3930	547								
23	Financial Services	3233	1824								
24	Vehicles	2657	932								
25	Religion	2266	259								

Figure 5-18. Customizing an exported report.

## Section E: Saving and Exporting Individual Reports

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Each exported report is given a name by default, based on the report name plus a **Report process number**. You can save the report with any name. For a reference of default export report names, see "[Section C: v8 Profile Default Export File Names](#)" on page 176 in Appendix A.

Section F: Configuring the Reporter Scheduler

## Section F: Configuring the Reporter Scheduler

This section describes the Blue Coat Reporter Scheduler feature.

### About the Scheduler

The Scheduler allows you to schedule specific Reporter processes to occur at a specific time or on a periodic basis. For example, generate a report and e-mail it to different people.

**Note:** Scheduled items can only be run when Reporter is running (the application/server itself, not the Reporter browser).

The extra options, if specified, are added to the end of the command line. This allows for complex scheduled actions by overriding the default options on the command line.

Reporter creates a file called **TaskLog**, in the **LogAnalysisInfo** directory, which contains a log of all scheduled tasks that have run, along with logs of all other actions Reporter has taken. This log is helpful in debugging situations.

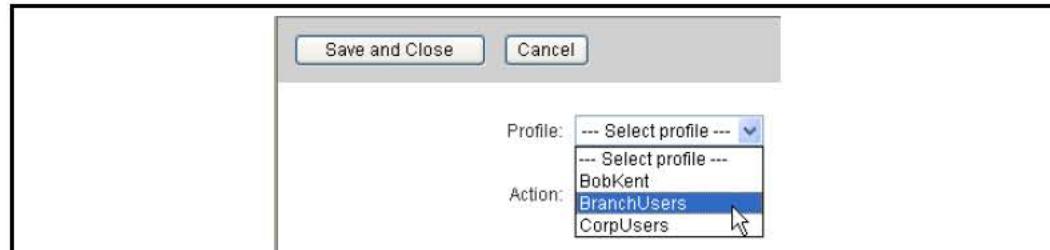
### Scheduling Reports

This section describes how to use the Schedule feature to determine when new reports are generated and how they are delivered.

#### To schedule a task:



1. From the Administrative menu, click **Scheduler**.
2. Click **New Action**.



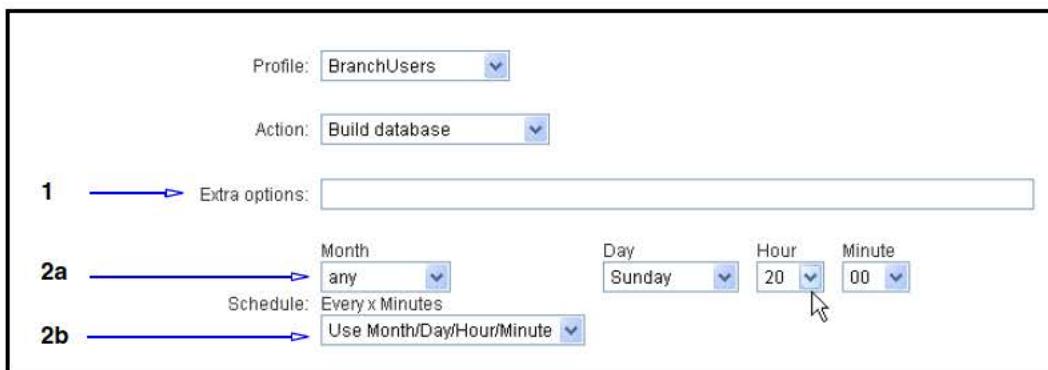
3. From the **Profile** drop-down list, select a profile.

**Section F: Configuring the Reporter Scheduler**

4. From the **Action** drop-down list, select an action. Each action is dynamic; selecting one causes different fields to appear in the dialog (actions can differ between Reporter v7 and v8 profiles).
  - Build database (v7)—"[Scheduler Action: Build Database \(v7\)](#)" on page 98.
  - Generate report files (v7 and v8)—"[Scheduler Action: Generate Report Files \(v7 and v8\)](#)" on page 99.
  - Remove database data (v7)—"[Scheduler Action: Remove Database Data \(v7\)](#)" on page 101
  - Expire database data (v8)—"[Scheduler Action: Expire Database Data](#)" on page 101
  - Send report by e-mail (v7 and v8)—"[Scheduler Action: Send Report By E-mail \(v7 and v8\)](#)" on page 102
  - Update database (v7)—"[Scheduler Action: Update Database \(v7\)](#)" on page 104.

***Scheduler Action: Build Database (v7)***

Rebuilds the log database. The related dynamic fields are:



1. (Optional) Specify extra options. Extra options are added to the end of the command line (the underlying action called by this action). This allows for complex scheduled actions by overriding the default options. For example:

```
-p profile_name -a md -mdd database_merge_directory
```

**Section F: Configuring the Reporter Scheduler**

This merges the contents of the database into the current database. For a list of available commands, see [Appendix D: "Using Reporter from the Command Line Interface" on page 219](#).

2. Specify the schedule:
  - a. Select a month, day, hour, and minutes to specify when the rebuild occurs. This example specifies every Sunday (any month) at 8:00 pm.  
-or-
  - b. From the **Every x Minutes** drop-down list, select to rebuild every 10, 20, or 30 minutes. To use the time specified in Step a, keep this option as the default: **Use Month/Day/Hour/Minute**. If you select a minute interval from this drop-down list, this setting takes precedence.
3. Click **Save and Close**. The scheduled task appears on the Scheduler page.

**Scheduler Action: Generate Report Files (v7 and v8)**

Specifies which report is generated. The related dynamic fields are:

The screenshot shows a configuration dialog for generating report files. The profile is set to "West\_Coast\_Branches". The action is "Generate report files". The report type is "Top daily users". The report date is set to "Show entire available date range". The report files folder is "C:\GeneratedReports\CorpUsers\BobKent". Extra options include the query "-f'(cs\_username within 'BobKent')". The schedule is set to "Every 20 Minutes". The frequency is defined by dropdowns for Month, Day, Hour, and Minute, all set to "any".

1	Report:	Top daily users
2a	Report date:	Show entire available date range
2b	Report date:	Show last <input type="text"/> day(s) including day of scheduler execution date
3	Report files folder:	C:\GeneratedReports\CorpUsers\BobKent <input type="button" value="Browse"/>
4	Generate PDF files	<input checked="" type="radio"/> Generate PDF files <input type="radio"/> Generate HTML files
5	Extra options:	-f'(cs_username within 'BobKent')
6a	Now:	<input type="checkbox"/>
Schedule: Every 20 Minutes		
6b	Frequency:	Every 20 Minutes
6c	Frequency:	any Month    any Day    any Hour    any Minute

1. From the **Report** drop-down list, select a report type to generate (the available reports are based on the profile version, v7 or v8).

## Section F: Configuring the Reporter Scheduler

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**Note:** Blue Coat does not recommend selecting **All Reports**, as processing all reports would likely take a extended amount of time. The alternative is to define a filter in the **Extra options** field (described below).

---

2. **Report date** fields:
  - a. To generate a report inclusive of all days included in the log file, select **Show entire available date range**.
  - b. To narrow the scope to a specific day, month or year, select **Show last**, enter a value, and select the time parameter.
3. **Reports file folder**—Specifies the folder in which to dispense the generated report.

**Note:** If you enter a path (for example, **C:\report**, the report is generated and placed in the **C:\report** folder on the Reporter server, *not* on the client workstation.

---

4. Select one of the following report format options:
  - **Generate PDF files**—The report is generated as a Adobe® Acrobat® PDF file and deposited in the designated **Reports file folder**. By default, the row limit per file is ten thousand (10,000). You can change this value. See "["General Display/Output" on page 115](#)".
  - **Generate HTML files**—The report is generated as an HTML file and deposited in the designated **Reports file folder**. By default, the page limit per file is ten (10). You can change this value. See "["General Display/Output" on page 115](#)".
5. Specify extra options. Extra options are added to the end of the command line (the underlying action called by this action). This allows for complex scheduled actions by overriding the default options. For example:

-f "(cs\_username within 'BobKent')"

The report sent is limited to activity by the user **BobKent**. For a list of available commands, see [Appendix D: "Using Reporter from the Command Line Interface" on page 219](#).

6. Specify the schedule:
  - a. Select **Now** to generate the report (After **Save and Close** is clicked).  
-or-
  - b. From the **Use Month/Day/Hour/Minute** drop-down list, select to rebuild every 10, 20, or 30 minutes. This example specifies to generate the report every 20 minutes.  
-or-
  - c. Select a month, day, hour, and minutes to specify when the rebuild occurs. If you select a minute interval from the **Use Month/Day/Hour/Minute** drop-down list, that setting takes precedence.

As you customize the time options, the selections appear in the **Schedule** field.

7. Click **Save and Close**. The scheduled task appears on the Scheduler page.

## Scheduler Action: Remove Database Data (v7)

Performs database maintenance. The related dynamic fields are:

The screenshot shows the configuration dialog for the 'Remove database data' action. It includes the following fields:

- Profile:** CorpUsersv7
- Action:** Remove database data
- 1a:** Remove database data older than 30 days (radio button selected)
- 1b:** Remove database data by custom filter expression (radio button selected):
 

```
if ((date_time < '01/Jan/2005 00:00:00') or (date_time >= '01/Jan/2006 00:00:00')) then "r"
```
- 2:** Extra options: Now (checkbox checked)
- 3:** Schedule: Now
- Frequency:** Use Month/Day/Hour/Minute
 

Month	Day	Hour	Minute
any	any	any	any

1. Select one of the following:
  - a. **Remove database data older than *value* days:** Any log data older than the specified number of days is deleted from the database. Specify the number of days. ~or~
  - b. **Remove database data by custom filter expression**—If custom filters are applied to any reports, the feature can remove data that are marked by these filters. For a list of available options, see [Section A:“About Configuration Files” on page 200](#) in Appendix A.
2. (Optional) Extra options are added to the end of the command line (the underlying action called by this action). This allows for complex scheduled actions by overriding the default options. See [Appendix D:“Using Reporter from the Command Line Interface” on page 219](#).
3. Specify the scheduled generation time (see previous examples).
4. Click **Save and Close**.

## Scheduler Action: Expire Database Data

Purges the database of data that is older than the specified time.

The screenshot shows the 'Scheduler' configuration page for a 'CorpUsers' profile. The 'Action' is set to 'Expire database data'. Step 1, 'Remove database data older than 30 days', is highlighted with a blue arrow pointing to the '30' input field. Step 2, 'Schedule: Any month Monday 06:30', is highlighted with a blue arrow pointing to the 'Frequency' dropdown and the schedule fields. The frequency is set to 'any' with 'Monday' selected for the day, '06' for the hour, and '30' for the minute.

1. Remove database data older than  $x$  days field—Specify the data freshness threshold.  
All data older than this in the database is purged at the specified time.
2. Specify the scheduled generation time (see previous examples).
3. Click **Save and Close**. The scheduled task appears on the Scheduler page.

### Scheduler Action: Send Report By E-mail (v7 and v8)

The same operation as Generate report files, but Reporter sends that report to a specified e-mail location. The related dynamic fields are:

Profile: West\_Coast\_Branches

Action: Send report by email

1 Report: Top daily users

2a Report date:  Show entire available date range

2b  Show last 7 day(s) including day of scheduler execution date

3 Generate PDF files  Generate HTML files

Recipient email address: HR\_CarlJ@example.com

Return email address: IT\_Manager@example.com

4 Carbon Copy: WestCoastMgr@example.com

Blind Carbon Copy: CEO@example.com

Email subject: Access log report for the west coast branch offices users.

SMTP server hostname: stamp

5 SMTP server username: corp\_mail1

SMTP server password: \*\*\*\*\*

6 Extra options: -f(cs\_username within 'BobKent')

Now:

7 Schedule: Any month Sunday 21.any minute

Use Month/Day/Hour/Minute

Frequency:

any	Sunday	21	any
Month	Day	Hour	Minute

1. **Report**—Select a report type.
2. **Report date** fields:
  - a. To generate a report inclusive of all days included in the log file, select **Show entire available date range**.
  - b. To narrow the scope to a specific day, month or year, select **Show last**, enter a value, and select the time parameter.
3. Select one of the following report format options:
  - **Generate PDF files**—The report is generated as a Adobe® Acrobat® PDF file and deposited in the designated **Reports file folder**. By default, the row limit per file is ten thousand (10,000). You can change this value. See "["General Display/Output" on page 115](#).

- **Generate HTML files**—The report is generated as an HTML file and deposited in the designated **Reports file folder**. By default, the page limit per file is ten (10). You can change this value. See "[General Display/Output](#)" on page 115.
4. Enter e-mail contact information:
    - a. **Recipient e-mail address**—Specifies the primary e-mail address(es) to which the report is sent. Separate different addresses with a comma.
    - b. **Return e-mail address**—Specifies the return e-mail address that is displayed to the recipient(s). For example, `IT_manager@company.com`. Separate different addresses with a comma.
    - c. **Carbon copy**—Specifies additional e-mail address(es) other than primary recipients.
    - d. **Blind carbon copy**—Specifies additional e-mail address(es), which are not visible to other recipients.
    - e. **E-mail subject**—Specifies what is displayed in the subject line of the e-mail.
  5. Enter **SMTP server and access** information.
  6. (Optional) Specify extra options. For a list of available commands, see [Appendix D: "Using Reporter from the Command Line Interface" on page 219](#).
  7. Specify the scheduled generation time (see previous examples).
  8. Click **Save and Close**. The scheduled task appears on the Scheduler page.

**Note:** Reports vary in size, which directly impacts the size of the e-mail attachment. Consider the e-mail server attachment limits. By default Reporter allows for a maximum of 10 pages per report.

### Scheduler Action: Update Database (v7)

Updates the database (when new or updated access logs are present) at the specified time.

The screenshot shows the configuration interface for a 'Update Database' scheduler action. The 'Profile' dropdown is set to 'CorpUsersv7'. The 'Action' dropdown is set to 'Update database'. The 'Extra options' field is empty. The 'Now' checkbox is unchecked. The 'Schedule' dropdown is set to 'Every 30 Minutes'. The 'Frequency' dropdown is also set to 'Every 30 Minutes'. Below the frequency dropdown, there are four dropdown menus for 'Month', 'Day', 'Hour', and 'Minute', each with the option 'any' selected.

1. (Optional) **Extra options** field. For a list of available commands, see [Appendix C: "Configuration File Reference" on page 199](#).
2. Specify the scheduled generation time (see previous examples).
3. Click **Save and Close**. The scheduled task appears on the Scheduler page.

## Editing or Deleting a Task

Once an action is scheduled, you can edit it or remove it from the scheduler by clicking the **Edit** or **Delete** links from the **Admin > Scheduler** page.

The screenshot shows the 'Scheduler' page with two scheduled tasks listed:

- BranchUsers**: Schedule: Any month, any day, 00:00 Set to run every 30 minutes. Actions: [Edit](#) | [Delete](#)
- CorpUsers**: Report: Category by User, Recipient: HR\_Emp\_Carl@corp.com, Schedule: Any month, Monday, 07:30. Actions: [Edit](#) | [Delete](#) (with a cursor icon pointing to it)

Figure 5-19. Selecting to edit a Schedule Task.

## Using Easy Schedule (Admin only)

This feature is available only to Reporter admin users.

Each individual report page contains a link named **Schedule**. This feature is designed to provide a basic template to generate a report from the Report page without having to navigate to the **Admin > Scheduler** page and create a new schedule.

The following example demonstrates using a **Top Categories by Hits Report** page. Upon analyzing the information, you decide to create a new Scheduler task for this report.

The screenshot shows the 'Sites by Category Report' page with the following interface elements:

- Header: Statistics for 01/Jan/2007 - 10/Jan/2007, 10 days, Choose Active Filter
- Toolbar: Save, Email, **Schedule** (highlighted with a cursor icon), Print, Regenerate
- Pagination: Page 1 of 7, Rows per page: 10, Table Viewing Options
- Report Type: "Click to zoom" report type: Activity Detail by Category, Export to: CSV, PDF
- Data Table:
 

Category / Host	Page Views	Total Bytes	Requests
<b>1 Adult/Mature Content</b>			
1 banner.kiev.ua	1	1.21 k	0.0 %
2 comment.myspace.com	2	133.32 k	0.0 %
3 deebs.myspace.com	1	11.54 k	0.0 %
			3 0.0 %

Figure 5-20. The Schedule link.

Clicking the link calls the Scheduler dialog. A few of the fields are populated with default configurations:

- Profile**—The name of the Profile.
- Report**—The name of the Report.
- Report Date**—The default selection is **Show entire available date range**.

Select an action and fill in the other required fields. Click **Save and Close**. The Schedule is configured and viewable from the **Admin > Scheduler** page.

## Using Easy E-mail (Admin Only)

This feature is available only to Reporter admin users.

The report page contains a link named **E-mail**.



The screenshot shows a web-based reporting interface titled "Sites by Category Report". At the top, there's a header bar with a "Choose Active Filter" link. Below the header, there are several buttons: "Save", "Email" (which is circled in blue), "Schedule", "Print", and "Regenerate". There are also links for "Table Viewing Options", "CSV", and "PDF". The main content area displays a table with four columns: "Category / Host", "Page Views", "Total Bytes", and "Requests". The table has a single section header "1 Adult/Mature Content" and three data rows. The data is as follows:

Category / Host	Page Views	Total Bytes	Requests
1 banner.kiev.ua	1	1.21 k	0.0 %
2 comment.myspace.com	2	133.32 k	0.0 %
3 deeb.myspace.com	1	11.54 k	0.0 %

Figure 5-21. The report E-mail link.

This feature is designed to schedule an e-mail report from the Report page without having to navigate to the **Admin > Scheduler** page. For example, you want to share a data trend with another person in the organization.

Clicking this link calls the Scheduler dialog (see "[Scheduler Action: Send Report By E-mail \(v7 and v8\)](#)" on page 102). Some of the fields are populated with default configurations:

- Action**—The default selection is **Send report by e-mail**.
- Profile**—The name of the report.
- Report**—The default selection is **Overview**.
- Report Date**—The default selection is **Show entire available date range**.

These configurations are only the default values. You can change any option. Fill in the fields required to send e-mail reports. Click **Save and Close**. The Schedule is configured and viewable from the **Admin > Scheduler** page.

## *Chapter 6: Configuring Data Profiles*

From the Configuration menu, you can edit or add new log sources, edit or add log filters, select database options, edit database tuning, and edit DNS lookup. The profile configuration features vary dependent upon the type of profile: Blue Coat Extended Log Format (v8) or Blue Coat Original or Custom Log Format (v7).

This chapter contains the following topics:

- "Section A: Blue Coat v8 Data Profile Configuration" on page 108.
- "Section B: Blue Coat v7 Profile Configuration" on page 129.

Section A: Blue Coat v8 Data Profile Configuration

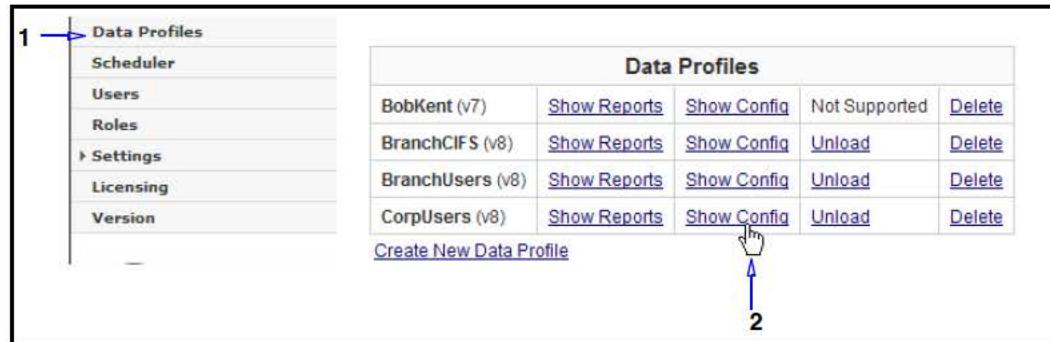
## Section A: Blue Coat v8 Data Profile Configuration

This section describes how to configure data profiles for the Blue Coat W3C ELFF Main Log Format.

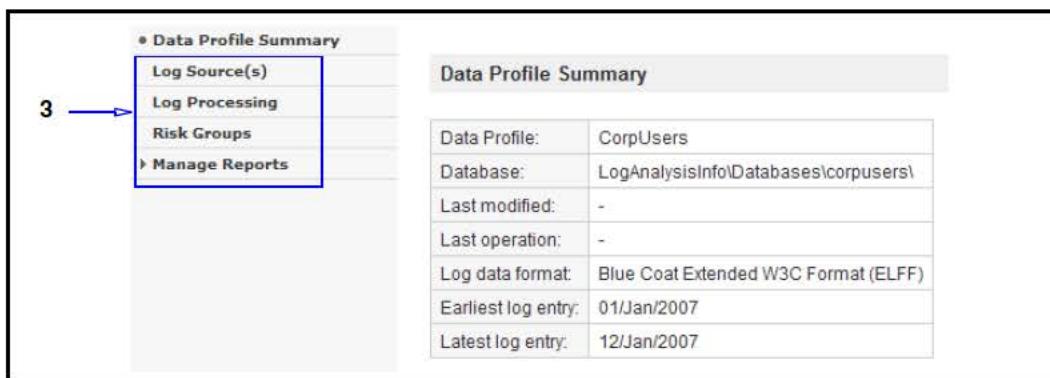
### About the Profile Editor

When you add a data profile, it appears on the Administrative menu with a link to the Configuration menu, which provides an interface for editing most aspects of data profiles, including the log source, database fields, and other options.

#### To use the Profile Editor:



1. From the Administrative menu, select **Data Profiles**.
2. For a profile that uses the Blue Coat v8 Format, click **Show Config**.



3. To navigate through the Configuration menu, click the options on the left—an arrow indicates the menu has suboptions. The following sections describe each menu option:
  - "Configuring the Log Sources" on page 109.
  - "Altering Log Processing Options" on page 112
  - "Risk Groups" on page 115.
  - "Managing Reports" on page 115.

**Section A: Blue Coat v8 Data Profile Configuration****Configuring the Log Sources**

This page allows you to edit a current log source or add another log source to the data profile. It also allows you to control the log readers.

***Viewing and Controlling Log Readers***

Reporter allows you to view the status of individual log readers and, if required, halt log processing on a specific reader without corrupting, losing, or dropping log data.

The following situations might require you to temporarily stop the log reading process:

- You want to allocate more CPU resources to other applications. At a later time when fewer CPU resources are required, you can restart the log readers, which continue from the point in the log files where the stop feature was invoked.
- Your system is experiencing slowness, and you want to run a system diagnostic task (for example: a disk defragmentation or other system scan).
- You want to modify the log file queue.

**Note:** You must be logged in with administrator privileges to invoke a log reader control action.

**Change the state of a log reader:**

The screenshot shows the Blue Coat Reporter interface for the 'West\_Coast\_Branches' profile. The left sidebar has a 'Log Source(s)' tab selected, indicated by a blue arrow labeled '1'. The main area displays two log sources: 'Local Disk 1' and 'Local Disk 2'. Each log source has fields for 'Source Logs', 'Post Action', and 'Reader Status'. The 'Reader Status' field for Local Disk 1 is circled in red and shows 'Waiting on Empty Queue'. Below each log source are three circular icons representing different actions: a blue circle, a yellow circle with a question mark, and a blue circle. A blue arrow labeled '2' points to the yellow question-mark icon under 'Local Disk 2'. At the bottom center is a button labeled 'Stop Log Reader Between Files'.

Log Source(s)	
<b>Local Disk 1</b>	
Source Logs:	C:\Files\Branch 1\*.log (process "*.gz" files)
Post Action:	Rename with ".done" extension
Reader Status:	Waiting on Empty Queue
<input type="button" value="Edit"/> <input type="button" value="Delete"/>	
<b>Local Disk 2</b>	
Source Logs:	C:\Files\Branch 2\*.log (Remaining: 8 files; 1908111 bytes) (process "*.gz" files)
Post Action:	Rename with ".done" extension
Reader Status:	Reading from: C:\Files\Branch 2\G_demo_main_060611020000.log.gz [100% done]
<input type="button" value="Edit"/> <input type="button" value="Delete"/>	

1. From the Configuration menu, select **Log Source(s)**. The **Reader Status** field, highlighted above, field displays the current state of the log reader for each log source. The possible states are:
  - **Reading:** This log reader is currently processing log files for this profile. The **Source Logs** field provides metrics pertaining to how many files and bytes remain before the process is complete (unless the source is a direct SG appliance connection).
  - **Stopped:** Log reading has been suspended.

## Section A: Blue Coat v8 Data Profile Configuration

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- **Waiting on Empty Queue:** Similar to a *sleep mode*. Occasional inquiries to the directory for new logs occur.
- **Non-existent:** This data profile does not currently have a log source assigned to it. Refer to “[Adding a Log Source](#)”.

2. There are three control options:



- If a log reader is currently processing logs, clicking **Stop** halts the readers when the current log file finishes processing. When the log reader is restarted, processing resumes, beginning with the next unprocessed log file in its queue.



- To resume reading and processing logs, click **Restart**.



- By default, the log reader status refreshes every ten seconds. Click **Refresh** updates the current log reader status on-demand.

---

**Note:** If you stop a log reader, close Reporter, re-open Reporter, and restart a log reader, the behavior is the same. The reader resumes with the next available log file.

---

## [Adding a Log Source](#)

You can add a new log source to an existing data profile. This is useful if you have multiple SG appliances sending logs to different network locations or file directories. Reporter searches for matching log files for each log source and integrates them into the database

### To add a new log source:

A screenshot of the Blue Coat Reporter Log Source page. On the left, there is a sidebar with the following menu items: Profile Summary, Log Source(s) (which is selected and highlighted with a blue border), Log Processing, Database Fields, Risk Groups, and Manage Reports. In the main area, there is a table with one row labeled "Local Disk 1". The table has three columns: "Source Logs", "Post Action", and "Reader Status". The "Source Logs" column contains the value "C:\Files\Branch 1\\*.log (process \*.gz files)". The "Post Action" column contains the value "Rename with ".done" extension". The "Reader Status" column contains the value "Waiting on Empty Queue". At the bottom of the table are three small icons: a blue square with a white circle, a yellow square with a white circle, and a green square with a white circle. In the top right corner of the main area, there is a button labeled "New Log Source" with a blue oval highlighting it. To the right of the "New Log Source" button are two more buttons: "Edit | Delete".

1. From the Log Source page, click **New Log Source**.

Section A: Blue Coat v8 Data Profile Configuration

The screenshot shows a configuration dialog box with two main sections:

**2a: Local disk**

- Log source type: Local disk (selected)
- Pathname: C:\Files\Branch 3
- Post Processing Action:
  - Rename: Append '.done' to filename
  - Move to: [Browse]
  - Remove: Delete log files
  - Run this: [Browse]

**2b: Another SG appliance as a source**

- Log source type: Direct ProxySG Link (selected)
- ProxySG (IP Address): 10.101.2.4
- ProxySG Admin Port: 8082
- Reporter Server (IP Address): 10.100.1.3
- Port: 3111

2. Select a log source type from the drop-down list. This dialog is dynamic; the fields change depending upon the selection:
  - a. **Local disk**—Add another source from a disk on your system. For detailed field descriptions.
  - b. **SG Link**—Add an SG appliance as the new source.
  - c. **FTP**—Add an FTP server as the location of the logs to process.
3. Click **Save and Close**. The new log source displays on the Log Source(s) page.
4. Click **Restart** to activate the changes to the log source.

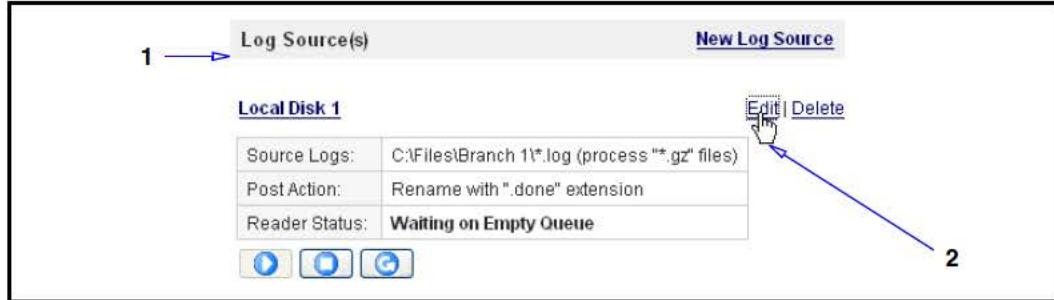
For detailed information about the log source fields, see "[Creating the Data Profile](#)" on page 26.

### *[Editing a Log Source](#)*

This section describes how to edit an existing log source for this data profile.

## Section A: Blue Coat v8 Data Profile Configuration

### To edit a data profile log source:



1. From the Configuration menu, select **Log Source(s)**.
2. To edit the log source:
  - a. Click **Edit**; the Edit Source Log dialog appears.
  - b. Edit the log source.
  - c. Select a post-processing option.
  - d. Click **Save and Close**.
3. If any log readers are currently processing, click **Stop**; then click **Refresh** to activate the changes to the log source.

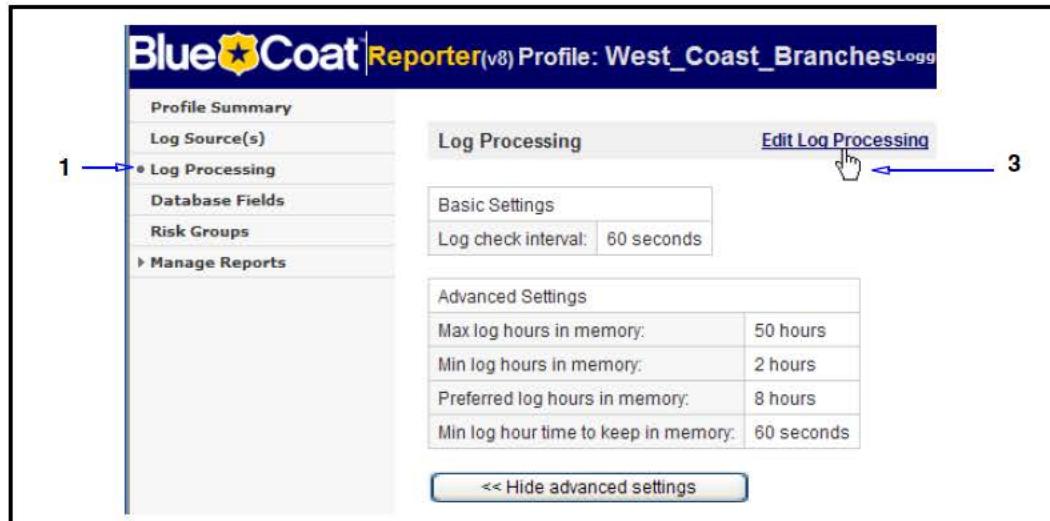
## Altering Log Processing Options

Reporter attempts to optimize v8 log processing based on the current system resources. These options allow you to adjust various options that relate to how long logs remain in memory.

Blue Coat strongly recommends you understand your own system resources and how various conditions affect log processing efficiency. For conceptual information, see "[About Optimizing Log Processing Configurations \(v8\)](#)" on page 161.

## Section A: Blue Coat v8 Data Profile Configuration

To configure log processing options:



1. From the Configuration menu, select **Log Processing**.
2. Click **Show advanced settings** to display all of the available configurable options.
3. Click **Edit Log Processing**.
4. Proceed to one of the following sections:
  - “[Basic Options](#)”
  - “[Advanced Options](#)” on page 114

### *Basic Options*

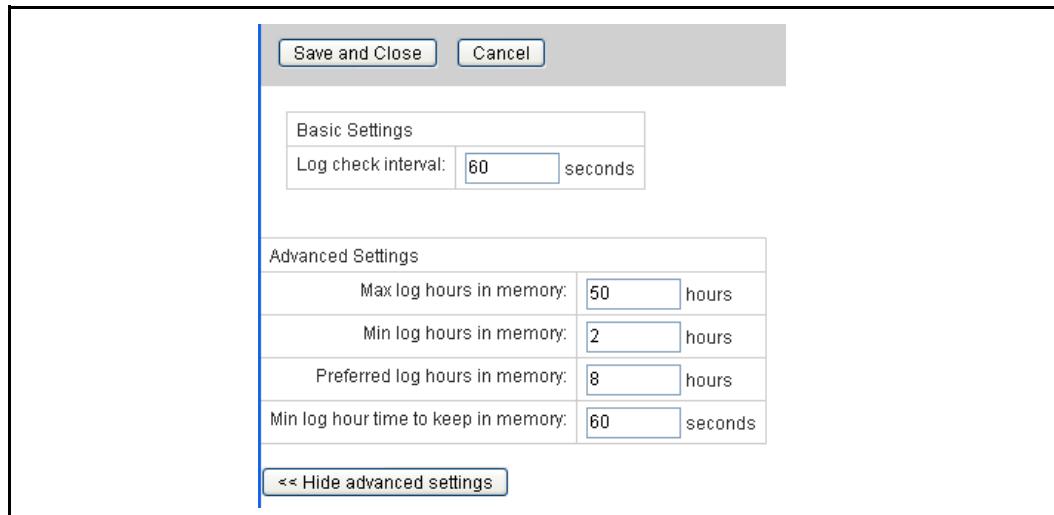
Currently, there is only one basic option.

Table 6-1. Basic log processing options

Option	Applies To	Description/Values
Log check interval	Log reader	Determines how long Reporter waits before the log reader checks the directory for new log data. The valid range is 10 to 86399 (in seconds; 10 seconds to 23:59 hours). For example, you want Reporter to wait 12 hours in between checks to conserve resources; enter <b>43200</b> .

Section A: Blue Coat v8 Data Profile Configuration**Advanced Options**

Altering memory allocation affects the efficiency of log processing, but can also alter the performance of your PC if other applications do not have sufficient memory to perform tasks.



By default, Windows 32-bit operating systems limit process memory to 2 GB, while others are typically limited to 3 or 4 GB. Reporter hosts may have even less physical memory. Log processors parse log file data into individual tables representing the hours recorded in the log files. Log files with highly variant hour data cause the log processor to create multiple tables in memory. As these tables comprise a large portion of Reporter memory, memory starvation might occur under the limitations imposed by the operating system.

The log processing options allow you to balance the interactions between the available system and process memory, the number of hours as well as the amount of data recorded in the log files, and the cost of writing and reloading hour tables to and from disk.

---

**Note:** Before changing configuration, see "[About Optimizing Log Processing Configurations \(v8\)](#)" on page 161 for conceptual information.

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Table 6-2. Advanced log processing options

Option	Applies To	Description/Values
Max log hours in memory	Log processing	This value limits the maximum number of hour-tables in each LogTable. If abundant memory is available, increasing this value reduces unnecessary disk operations when LogProcessors encounter unordered (see above) log files containing multiple hours between them. After this value is reached, the LogProcessor flushes the oldest hour to disk before adding a new one.

Section A: Blue Coat v8 Data Profile Configuration

Table 6-2. Advanced log processing options

Option	Applies To	Description/Values
Min log hours in memory	Log processing	This value limits the minimum number of hour-tables each LogTable can concurrently hold in memory. When physical memory is inadequate, decreasing this value might allow successful processing of larger log files at the expense of increased disk operations. Conversely, raising the limit might allow faster log processing. The range is <b>2</b> to <b>100</b> (hours). Two hours is the minimum because Reporter must be allowed to hold both hour-tables involved at a log hour boundary.
Preferred log hours in memory	Log processing	Although the LogTable might grow to the maximum log hour limit when necessary, it typically only needs to hold a small number of active hour-tables. This value helps keep the LogTable at its most efficient memory size. Range: this value cannot be lower than the <b>Min log hours in memory</b> setting, nor greater than the <b>Max log hours in memory</b> setting. Experiment with values to achieve optimal system performance.
Min log hour time to keep in memory	Log processing	As LogProcessors encounter sequential log hour data, the past hours eventually become inactive and unnecessary to keep in memory. This value determines when past hours are flushed from memory to help keep the LogTable at its most efficient size. The range is 10 to 300 (seconds). The higher the range, the more memory is required.

## Risk Groups

The **Risk Groups/Category** page is a reference for the category field values that Reporter tracks in its database. These categories are customizable. You can add categories to or remove categories from risk groups.

For a category/report reference, see Appendix A, "[Section B: v8 Profile and Report Log Field Reference](#)" on page 165.

## Managing Reports

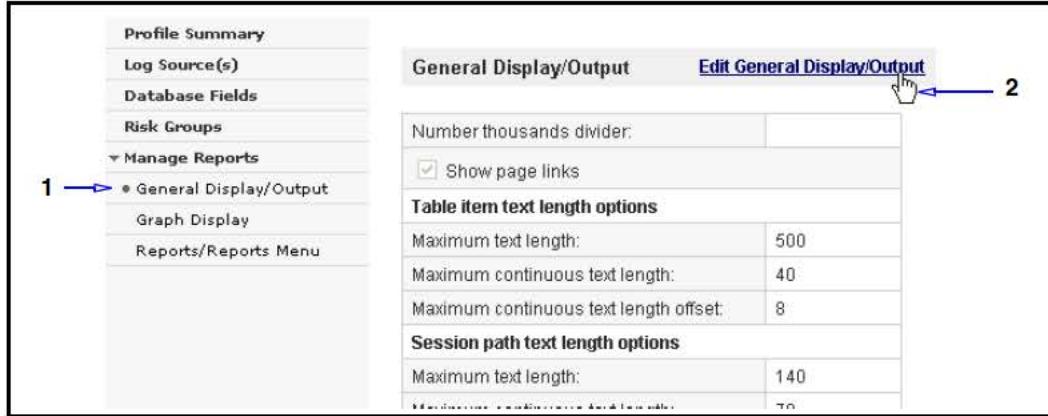
This section describes the **General Display/Output**, **Graph Display**, and **Reports** pages.

### General Display/Output

This page allows you to configure report display and output options, such as whether page links display, table item or session path text lengths, and a user agent for e-mail or report files.

Section A: Blue Coat v8 Data Profile Configuration

To configure the reports display and/or output:



1. From the Configuration menu, select **Manage Reports > General Display/Output**.
2. Click **Edit General Display/Output**.

## Section A: Blue Coat v8 Data Profile Configuration

The dialog box contains the following configuration options:

- 3a** Number thousands divider: ,
- 3b** Show page links
- 3c Table item text length options**
  - Maximum text length:
  - Maximum continuous text length:
  - Maximum continuous text length offset:
- 3d Session path text length options**
  - Maximum text length:
  - Maximum continuous text length:
  - Maximum continuous text length offset:
- 3e Cost Options**
  - Employee Time Cost (dollars per hour):
  - Bandwidth Byte Cost (cents per Megabyte):
- 3f Table Options**
  - Table Rows:
  - Subtable Rows:
  - Third-level Rows:

Buttons at the top right: Save and Close, Cancel.

## 3. Configure the options, as required:

- a. **Number thousands divider**—Specifies the divider to use between three-digit groups in large integers (for example, a comma). If this field is left blank, no dividers display.
- b. **Show page links**—If this option is enabled, all table items that begin with `http://` are shown as a link and open the page as specified by the table item URL.
- c. **Table item text length options**—Specifies the maximum number of characters per table item. Characters exceeding the maximum text length are truncated.
- d. **Session path text length options**—Specifies the maximum number of characters of page names in the session path and path through a page report. Characters exceeding the maximum session path text length are truncated.
- e. **Cost options**—Reports involving bandwidth use (bytes transferred or time spent) can display values that represent cost (in dollars) to the company. Enter the cost multipliers. The default is **20** for each field.
- f. **Table options**—Specifies how many table rows appear in data tables and tables in drill-down reports.

Dialog continued in next step.

## Section A: Blue Coat v8 Data Profile Configuration

Report Caching

**4a** Cache reports:

**4b** Page headers and page footers

Header file:

Footer file:

Header text:

Footer text:

**4c** Email Options

Recipient email address:

Return email address:

User agent for email:

User agent for report files:

Maximum email pages:

**4d** Generated Report Options

Maximum file pages:

Maximum pdf rows:

Maximum pdf rows for email:

## 4. Continued options:

- a. **Report caching**—Determines whether generated reports are stored locally in the browser cache (for faster viewing) or never cached.
- b. **Page headers and page footers**—The first two options allow you to select files to be used as the source for report header and footer text. The only valid file types are text and HTML files. To use a custom graphic, create an HTML file with just the reference to file. For example:

```
CompanyLogo.html
<img src= "C:\Documents and Settings\Username\My Documents\My Pictures\ExampleEmblem.jpg" width = 100%>
```

The second two options allow you to compose header and footer text for this profile.

- c. **Email Options**—The first two fields allow you to specify default e-mail addresses for the profile (to and from addresses).

The second two drop-down lists allow you to specify the target user agent (Web browser) when sending e-mails or when generating report files. Specifying the user agent allows Reporter to optimally handle line breaking for the target Web browser. Select a user agent from the drop-down list; you can select **Microsoft Internet Explorer**, **Safari**, **Netscape/Mozilla**, or **Unknown**. Selecting **Unknown** breaks lines by spaces and by inserting a `<br/>` tag; setting it to a known user agent breaks lines by spaces, characters and tags as supported in the specified Web browser.

## Section A: Blue Coat v8 Data Profile Configuration

The **Maximum email pages** field specifies how many pages are allowed to be sent in a single e-mail message. The maximum is 10.

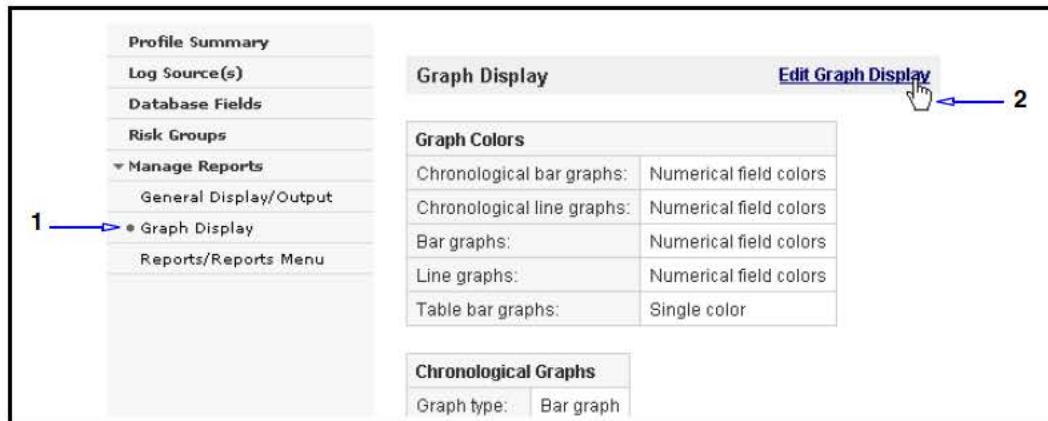
- d. **Generated report options**—These options determine how large reports generated in PDF or HTML formats can be. If the generated report exceeds to maximum or specified value, the remaining pages are not generated.

5. Click **Save and Close**. The new settings appear on the **General Display/Output** page.

### Graph Display

This page allows you to configure the visual style of report graphs.

#### To configure report graph styles:



1. From the Configuration menu, select **Manage Reports > Graph Display**.
2. Click **Edit Graph Display**.

## Section A: Blue Coat v8 Data Profile Configuration

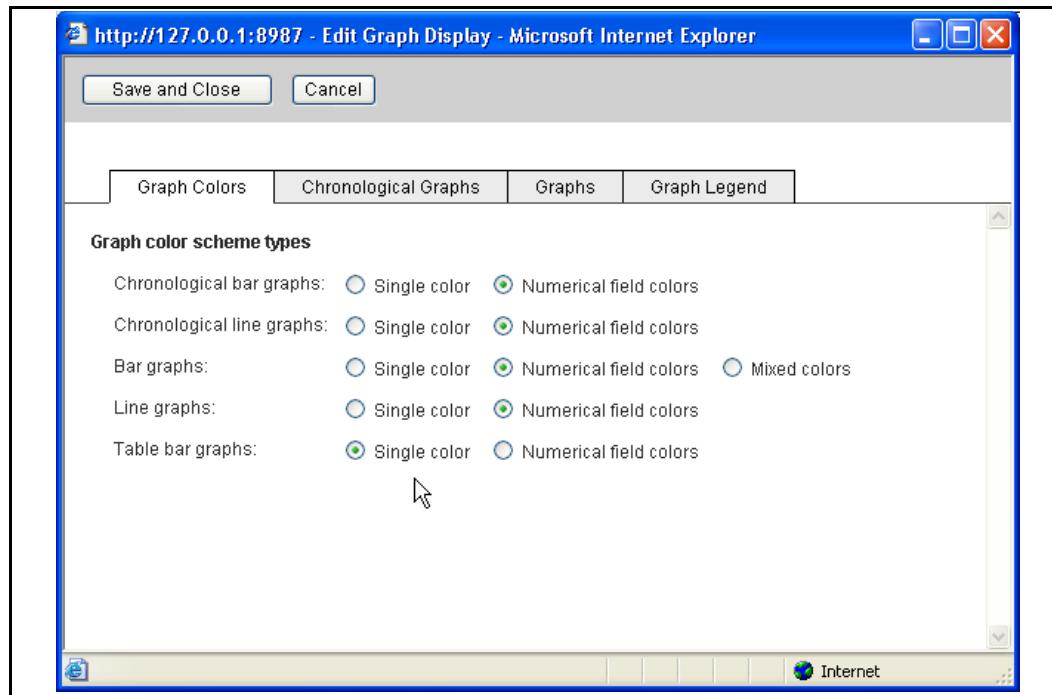


Figure 6-1. The Edit Graph Display dialog.

3. The four tabs allow you to edit various graph display options for the different types of graphs. Edit options as required.
  - **Graph Colors**—Select color schemes for each graph type.
  - **Chronological Graphs**—Configure chronological graph and chart component sizes.
  - **Graphs**—Configure graph and chart component sizes.
  - **Graph Legend**—Configure legend text parameters.
4. Click **Save and Close**. The new settings appear on the Graph Display page.

## Reports/Reports Menu

This section describes how to create a custom report and enter new a report menu name.

**Note:** The Reports/Reports Menu options are visible if an Enterprise License has been entered. See "[Adding an Enterprise License](#)" on page 18.

The Reports/Reports Menu page allows you to:

- Create a new report.
- Edit an existing report.
- Edit the Reports menu.

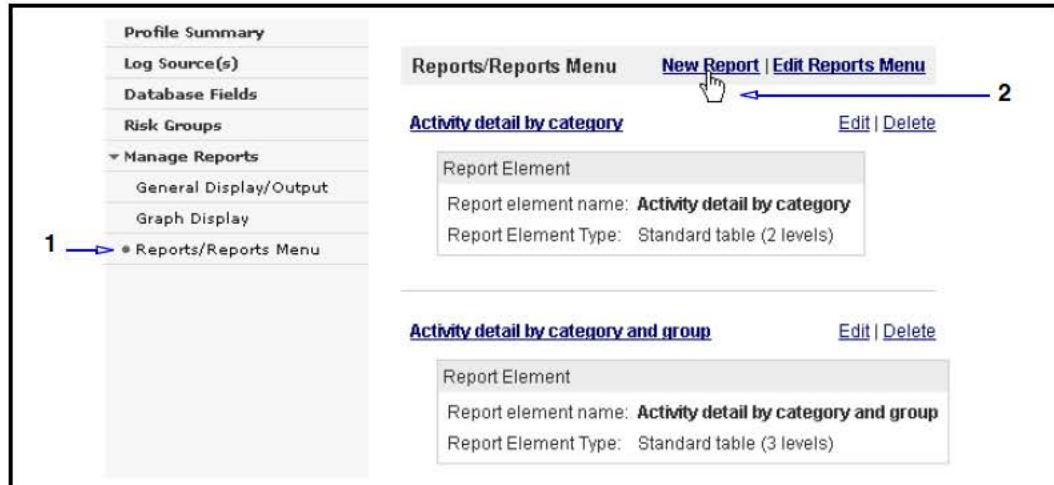
### Creating a New Report

This section describes how to create a new report and configure its menu attributes.

## Section A: Blue Coat v8 Data Profile Configuration

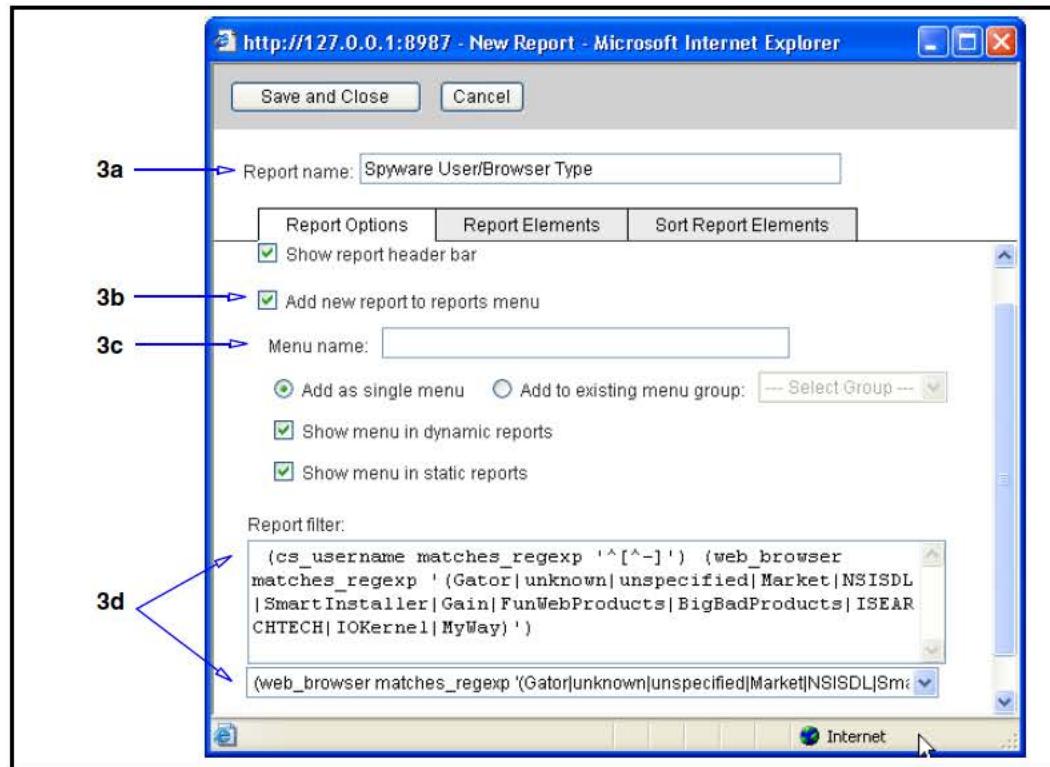
- After you have created a new report, you can edit the Reports menu to name a menu item and link the report to that item. You can also group menu items to be a list of suboptions under the main menu group that you create. You can further customize the Reports menu by editing, deleting, or rearranging default menu items and the reports to which they are linked.

### To create a new report:



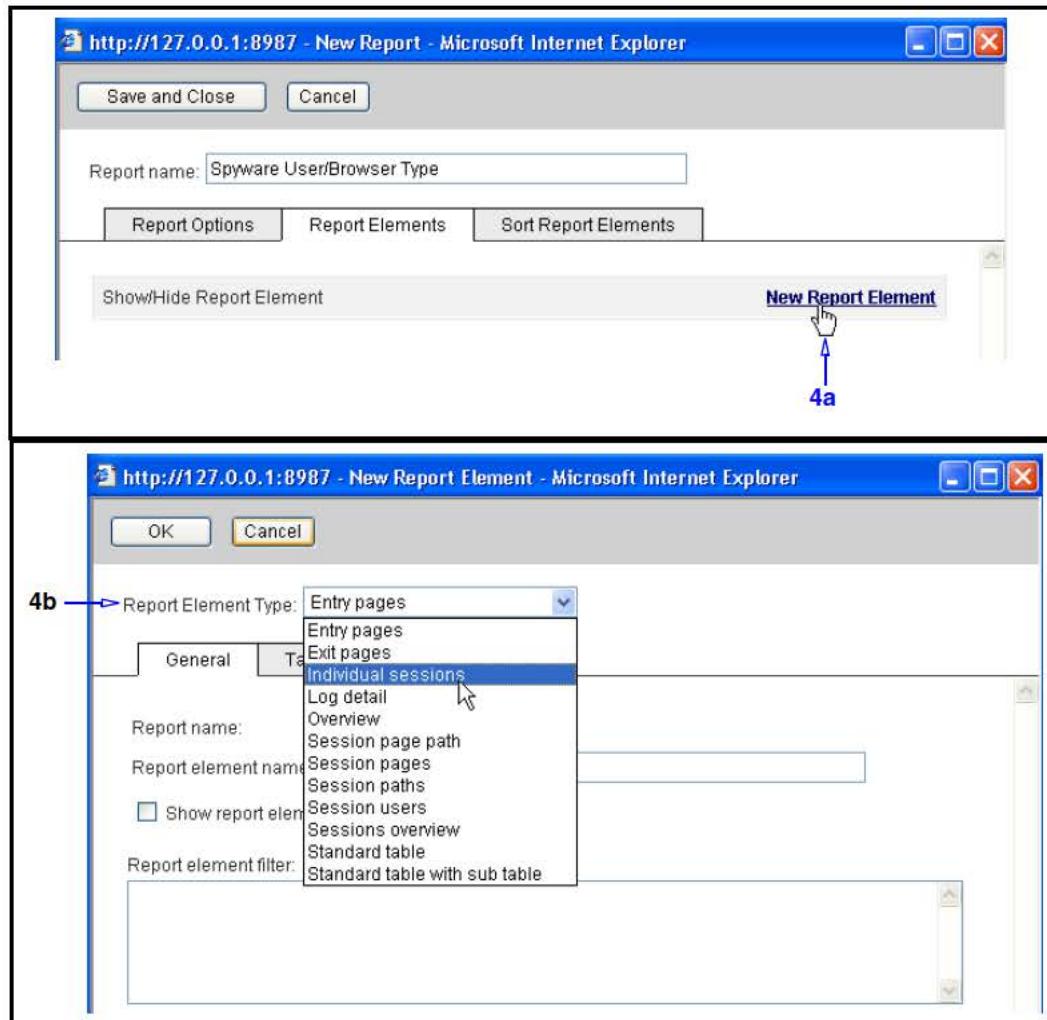
1. From the Configuration menu, select **Manage Reports > Reports/Reports Menu**.
2. Click **New Report**. Three tabs are available in the New Reports dialog: **Report Options**, **Report Elements**, and **Sort Report Elements**.

## Section A: Blue Coat v8 Data Profile Configuration



3. The **Report Options** tab allows you to configure options, such as the report header and menu parameters.
  - a. **Report name**—What name the report appears as in the **Report/Reports Menu** (this field is available on all three tabs).
  - b. **Show report header bar**—If this is disabled, the report does not include a header bar.
  - c. **Add new report to reports menu**—The new report is visible from the menu. If you select this option, the sub-fields become active. If this option is not selected, the report does not appear in the menu.
    - **Menu name**—What name the report appears as in the Reports page.
    - **Single/Existing menu**—You have the option to add the report as a stand alone report title or add the report to an existing menu group (selectable from the drop-down list).
    - **Show menu in dynamic reports**—Reports generated and viewed in the Management Console.
    - **Show menu in static reports**—Exported reports or reports sent through e-mail.
  - d. **Report filter**—Use the drop-down list to add one or more filters, or manually enter a filter string. For filter operators, including how to reference lists, see "About Filters" on page 190.

## Section A: Blue Coat v8 Data Profile Configuration



4. The **Report Elements** tab allows you to add one or more elements. These elements specify the contents and presentation of the report.
  - a. Click **New Report Element**.
  - b. In the New Report Element dialog, select an element from the **Report Element Type** drop-down list. This dialog is dynamic. As you select different elements, different option fields appear.

**Note:** Given the flexibility of this feature, element configuration might require familiarity and trial and error to achieve the look you want for each report.

- c. Click **OK**. The new element appears on the **Report Elements** tab.
- d. (Optional) Repeat Steps 4a through 4c to add more elements to the report.

## Section A: Blue Coat v8 Data Profile Configuration

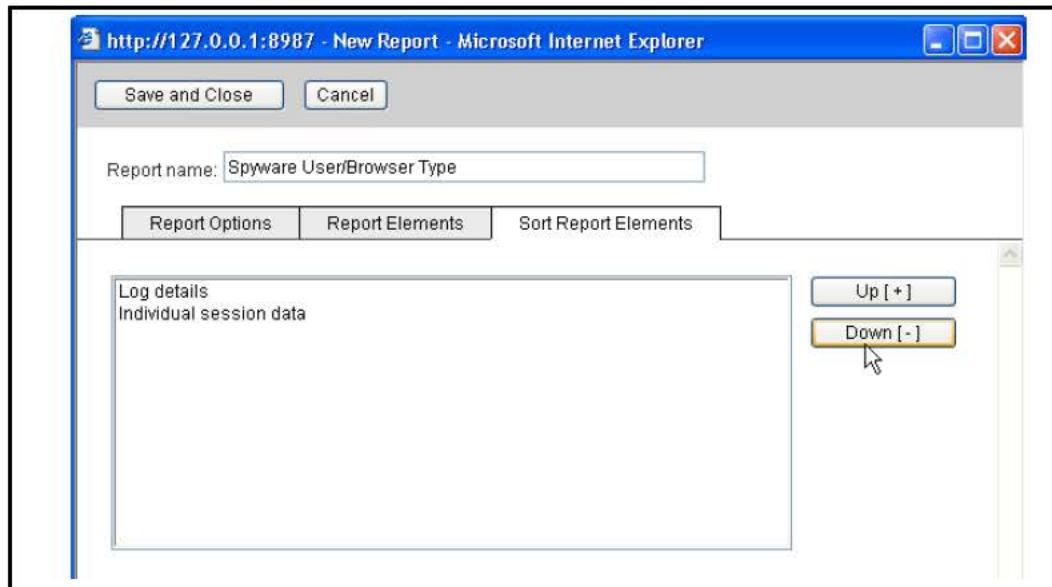


Figure 6-2. Changing the sort order.

5. The **Sort Report Elements** tab allows you to rearrange the position of the report elements.
6. Click **Save and Close**. The new report appears in alphabetical order on the Reports/Reports Menu page.

### Editing/Deleting a Report

Any report in the **Reports/Reports Menu** is editable and deletable.

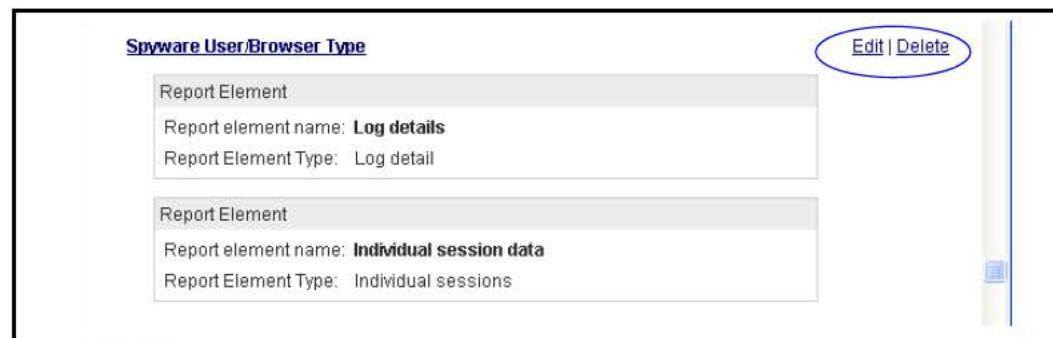


Figure 6-3. Editing a report.

- To edit a report, click **Edit**. Edit the fields and click **Save and Close**.
- To delete a report, click **Delete**. In the verification dialog, click **OK** to confirm the deletion.

### Editing the Reports Menu

The Edit Reports Menu allows to specify which reports appear on the Reports Menu and in which order; create new menus and menu groups; edit report parameters; and delete reports.

## Section A: Blue Coat v8 Data Profile Configuration

## To edit the Reports Menu:

The screenshot shows the 'Profile Summary' sidebar on the left with options like Log Source(s), Database Fields, Risk Groups, Manage Reports (General Display/Output, Graph Display), and Reports/Reports Menu. A blue arrow labeled '1' points to the 'Reports/Reports Menu' link. The main content area shows the 'Reports/Reports Menu' page with a toolbar at the top containing 'New Report | Edit Reports Menu' (with a cursor icon pointing to it) and 'Edit | Delete'. Below the toolbar, there are two sections: 'Activity detail by category' and 'Activity detail by category and group'. Each section has a 'Report Element' box with the report element name and type.

1. From the Configuration menu, select **Manage Reports > Reports/Reports Menu**.
2. Click **Edit Reports Menu**.

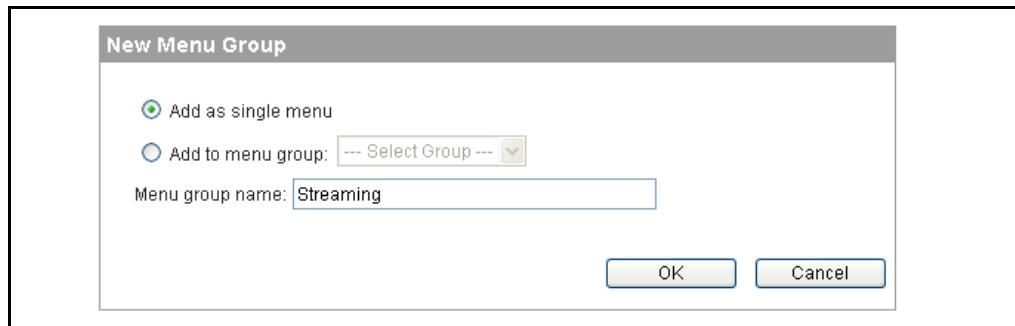
The screenshot shows the 'Edit Reports Menu' dialog box in Microsoft Internet Explorer. At the top, there are 'Save and Close' and 'Cancel' buttons. Below them, a label 'Show menu activation for' has a radio button group with 'dynamic reports' (selected) and 'static reports'. A blue arrow labeled '3' points to the 'dynamic reports' radio button. On the right side of the dialog, there are three buttons: 'New Menu', 'New Menu Group', and 'Sort Menu(s)'. The main area lists various menu items with checkboxes and 'Edit | Delete' links. A blue oval labeled '4' highlights the 'Browse Time Trends' item, which is currently unselected (checkbox is empty). The bottom of the dialog shows a toolbar with icons for Save, Cancel, and other functions, and a status bar indicating 'Internet'.

## Section A: Blue Coat v8 Data Profile Configuration

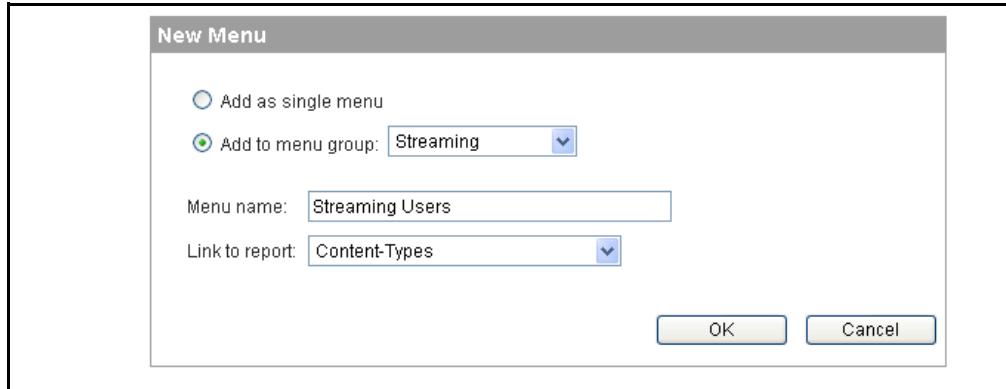
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Selected items appear on the Reports menu. The items in bold are main options, and the items below them are the suboptions.

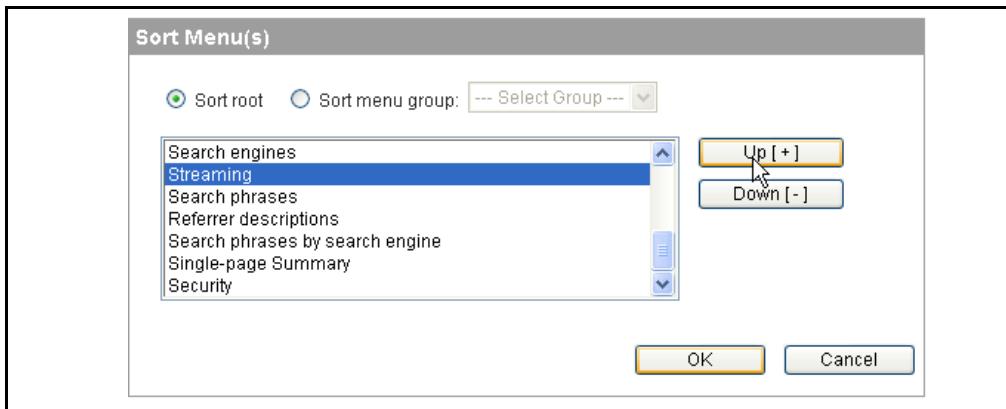
3. Select to display either **dynamic reports** or **static reports**.
4. Existing menu items:
  - To remove an item from the Report menu, deselect it. This does *not* delete the report item, only deactivates it.
  - To edit a menu name or move it to another group, click **Edit**. In the dialog, rename/change as required.
  - To *permanently* remove a menu item from this profile, click **Delete**. Deleting a main option also deletes all suboptions.
5. To create a new menu group:
  - a. Click **New Menu Group**.



- b. Select to create a new group or add to an existing group as a sub-group (select from the drop-down list).
- c. Name the menu group and click **OK**.
6. To create a new menu item:
  - a. Click **New Menu**.

Section A: Blue Coat v8 Data Profile Configuration

- b. Either select **Add as single menu** to create a single menu item or select **Add to menu group** and select a group to add this item to from the drop-down list.
  - c. Name the menu item.
  - d. From the **Link to report** drop-down list, select a report that is associated with this menu item.
  - e. Click **OK**.
7. To sort the menu items (arrange how they appear in the Reports menu):
- a. Click **Sort Menus**.



- b. To sort main menu items, select **Sort root**; to rearrange sub-menu items within a main item, select **Sort menu group** and select a group.
  - c. Click **Up** or **Down** to move sort the menu items or groups.
  - d. Click **OK**.
8. Click **Save and Close**.

The next time you navigate to the Reports page, the changed menu structure is visible.

## Rebuilding a v8 Profile Database

If you configured the profile to annotate the processed log files with `.done`, rebuilding a database for a v8 profile is a manual process.

**Section A: Blue Coat v8 Data Profile Configuration**

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**To rebuild a v8 profile database:**

1. From the **Management Console > Profile** page, delete the profile associated with the database (this deletes the database). The deletion process might require substantial time, depending on the size. Any attempts to re-create the profile before the database is finished the deletion process fail.
2. Perform one of the following:
  - a. Windows: Browse to processed log directory and enter the following command:  
`# rename *.done *`.
  - b. Linux: In the **Blue Coat Reporter > Extras** folder, there is a script named  
`# reset.done`. Run this script.
3. Recreate the profile and select the log file(s) to process.

**Section B: Blue Coat v7 Profile Configuration****Section B: Blue Coat v7 Profile Configuration**

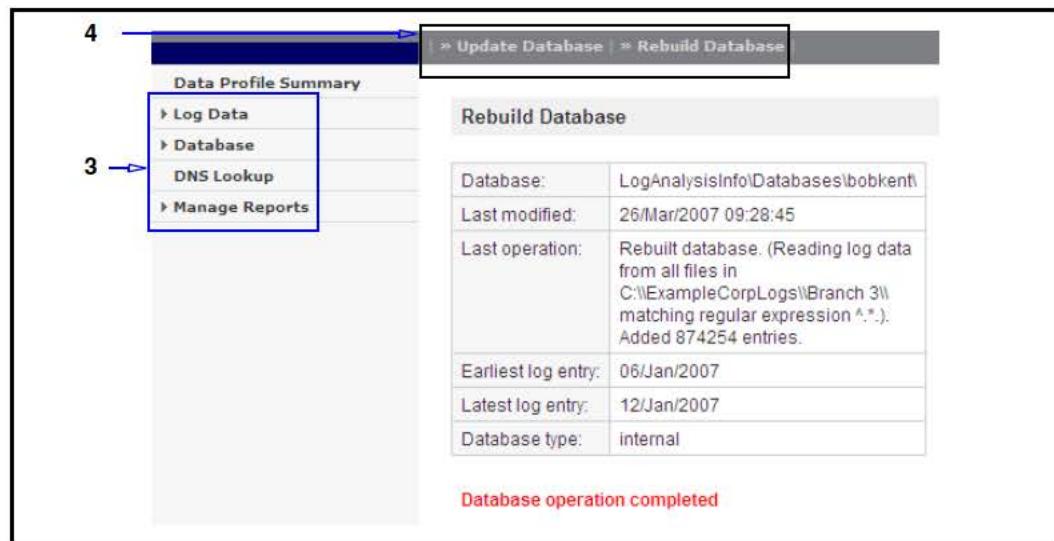
This section describes how to configure profiles for the Blue Coat Original or Custom Log File Formats.

**About the Profile Editor**

When you add a profile, it appears on the Administrative menu with a link to the Configuration menu, which provides an interface for editing most aspects of profiles, including the log source, log filters, database fields, and other options.

**To use the Profile Editor:**

1. From the Administrative menu, select **Data Profiles**.
2. For a profile that uses the Blue Coat v7 Format, click **Show Config**.



3. To navigate through the Configuration menu, click the options on the left—an arrow indicates the menu has suboptions. The following sections describe each menu option:
  - "Configuring Log Data" on page 130
  - "Configuring the Database" on page 139
  - "Configuring DNS Lookup" on page 142
  - "Configuring Report Attributes" on page 144

## Section B: Blue Coat v7 Profile Configuration

### Updating or Rebuilding the Database

The Configuration page contains two links, located just above the main display area:

- **Update Database**—Adds any new log data in the log source (data that is in the log source, but not yet in the database).
- **Rebuild Database**—Performs a database rebuild, and previous data is deleted.

## Configuring Log Data

The Log Data options allow you to configure log file attributes.

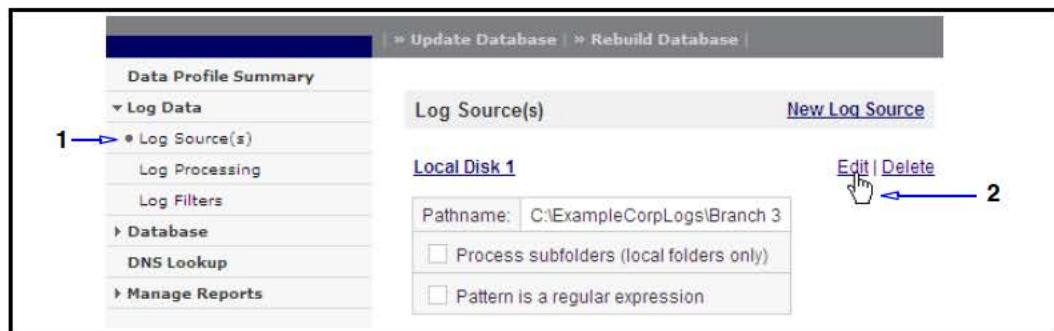
### Log Source(s)

This page allows you to edit a current log source or add another log source to the profile. The latter is useful if you have multiple SG appliances sending logs to different network locations or file directories. Reporter searches for matching log files for each log source and integrates them into the database.

### Editing a Log Source

You can edit the source attributes for an existing source.

#### To edit a profile log source:



1. From the Configuration menu, select **Log Data > Log Source(s)**.
2. Click **Edit**.
3. In the Log Source dialog; edit the log source location.
4. Click **Save and Close**.

### Adding a Log Source

You can add a new log source to an existing profile.

#### To add a new log source:

1. From the Log Source page, click **New Log Source**.
2. In the New Log Source dialog, select a log source type from the drop-down list and fill in the required fields for that type (see "To create a data profile:" on page 26 for more information).
3. Click **Save and Close**. The new log source displays on the Log Source(s) page.

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Section B: Blue Coat v7 Profile Configuration

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## Showing Matching Files

This feature allows you to verify Reporter is able to see the log files. From the Log Source page, click **Show Matching Files**.

## Log Processing

This page allows you to customize how logs are processed.

### To Edit the Log Processing Options:

The screenshot shows a 'Data Profile Summary' interface. On the left, a sidebar lists 'Log Data' (selected), 'Log Filters', 'Database', 'DNS Lookup', and 'Manage Reports'. Under 'Log Data', 'Log Processing' is highlighted with a blue arrow labeled '1'. On the right, a 'Log Processing' section contains fields: Date offset: 0 hours, Log processing threads: 0, Thread data block size: 1 MB, Log reading block size: 100 KB, Log entry pool size: 1000. Below these are three checkboxes: Allow empty log source (unchecked), Skip processed files on update (checked), and Skip most recent file (unchecked). An 'Edit Log Processing' button is at the top right, with a blue arrow labeled '2' pointing to it.

1. From the Configuration menu, click **Log Data** to display suboptions; click **Log Processing**
2. Click **Edit Log Processing**.

## Section B: Blue Coat v7 Profile Configuration

The screenshot shows a Windows Internet Explorer window titled "Edit Log Processing - Windows Internet Explorer". The URL in the address bar is [http://127.0.0.1:8987/?dp+templates.config.log\\_processing.log\\_processing\\_form+p+bobkent](http://127.0.0.1:8987/?dp+templates.config.log_processing.log_processing_form+p+bobkent). Below the address bar are two buttons: "Save and Close" and "Cancel". The main area of the window contains eight configuration options, each preceded by a label (3a through 3h) and followed by a right-pointing arrow:

- 3a → Date offset:  hours
- 3b → Log processing threads:
- 3c → Thread data block size:  MB
- 3d → Log reading block size:  KB
- 3e → Log entry pool size:
- 3f →  Allow empty log source
- 3g →  Skip processed files on update
- 3h →  Skip most recent file

3. Edit the options as required:
  - a. **Date offset**—Specifies the number of hours to add or subtract if your logs contain to the local time format ([DD/MMM/YYYY:hh:mm:ss +nnnn]) in the log file. As the SG defaults to GMT, this allows you to set Reporter to offset the date/time in the SG. For example, if the SG is set to GMT, but your time zone is GMT-8 (Pacific Standard Time), then enter -0800 (the format is hhmm) in this field. A value of zero leaves the time/dates unchanged. If you change this value after the database has been built, you must rebuild the database to generate the accurate times.
  - b. **Log processing threads**—(Enterprise version only) Specifies the number of threads of execution to use to process log data. The threads execute simultaneously, each processing a portion of the log data, and at the end of processing, their results are merged into the main database. On systems with multiple processors, using one thread per processor results in a significant speedup from using a single thread.
  - c. **Thread data block size**—Controls how much data Reporter reads during multi-processor builds at a single read.
  - d. **Log reading block size**—Controls how much data Reporter reads during single-processor builds at a single read.
  - e. **Log entry pool size**—Controls how many entries Reporter works on in memory at one time.
  - f. **Allow empty log source**—Configures Reporter not to fail if a log source is empty.
  - g. **Skip processed files on update**—Ignores previously processed files by looking at the filename. If you disable this option, Reporter scans each file for new data.
  - h. **Skip most recent file**—Skips the newest file. Helpful if, for instance, if you are processing a folder where the SG is dynamically adding new data to a file, and attempts to read from it would result in failure.
4. Click **Save and Close**. The new log processing options display on the Log Processing page.

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## Section B: Blue Coat v7 Profile Configuration

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### Log Filters

Log Filters perform translations, conversions, or selective inclusion (filter out) operations.

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**Important:** Do not confuse Log Filters with the filters that appear in reports. Log Filters affect how the log data is processed, and Report Filters affect what report data is displayed.

---

For example, employ a Log Filter to reject (exclude) all log entries from a particular IP, or all log entries during a particular time. Also, Log Filters can convert usernames to full names, or simplify a field (for example, chop off the end of a URL, which might be necessary to analyze a large proxy dataset efficiently).

Log Filters are also used for some log formats (including Web log formats) to differentiate *hits* from *page views* based on file extensions or MIME type. For example, GIF files are considered hits, not page views; therefore, the default filters for GIF hits set the hit field to **1** and the page view field to **0**. The same method can be used for any profile to perform any kind of categorization (for example, external versus internal hits for a Web log).

Reporter provides a user interface for implementing common log filter functions. An advanced configuration language syntax is also available that provides full programming language flexibility, including the use of `if/then/else` clauses, `and/or/not` expressions, loops, and more.

See [Appendix C: “Configuration File Reference” on page 199](#) for more information about log filters.

### Log Filters Tips

Reject all log entry types in which you are not interested. For example:

- Authentication prompts—reject 407s.
- If you are not interested in bandwidth calculations and only require to track where users went, rejecting non-page views significantly increases Reporter performance.

### Enabling a default Log Filter

Reporter features a default Log Filter of each type. Some Log Filters are enabled by default (depending on the access log data); enabled Log Filters are identified by check marks. The Log Filters are displayed in the order Reporter checks for criteria.

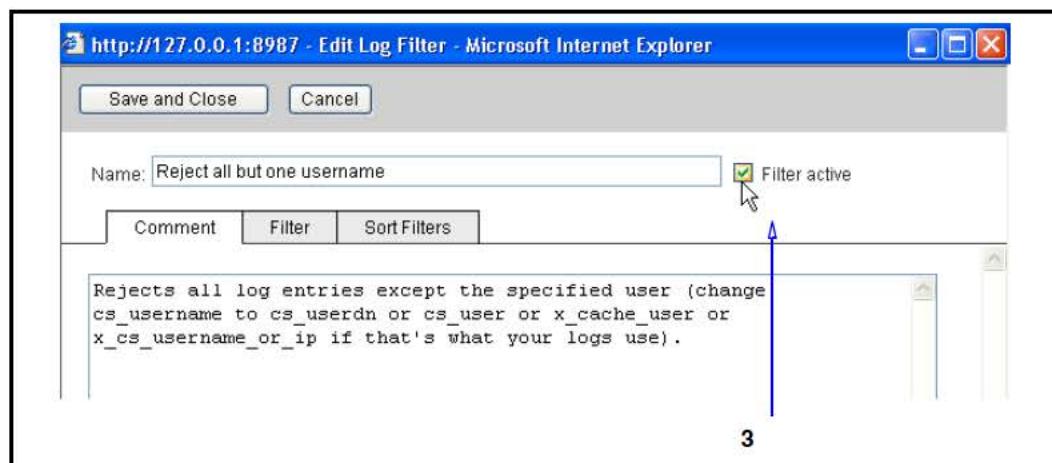
Enable other Log Filters, as required.

## Section B: Blue Coat v7 Profile Configuration

### To enable a Log Filter:



1. From the Configuration menu, select **Log Data > Log Filters**.
2. For the Log Filter to enable, click **Edit**.



3. Select **Filter Active**.
4. Click **Save and Close**.

### Creating a new Log Filter

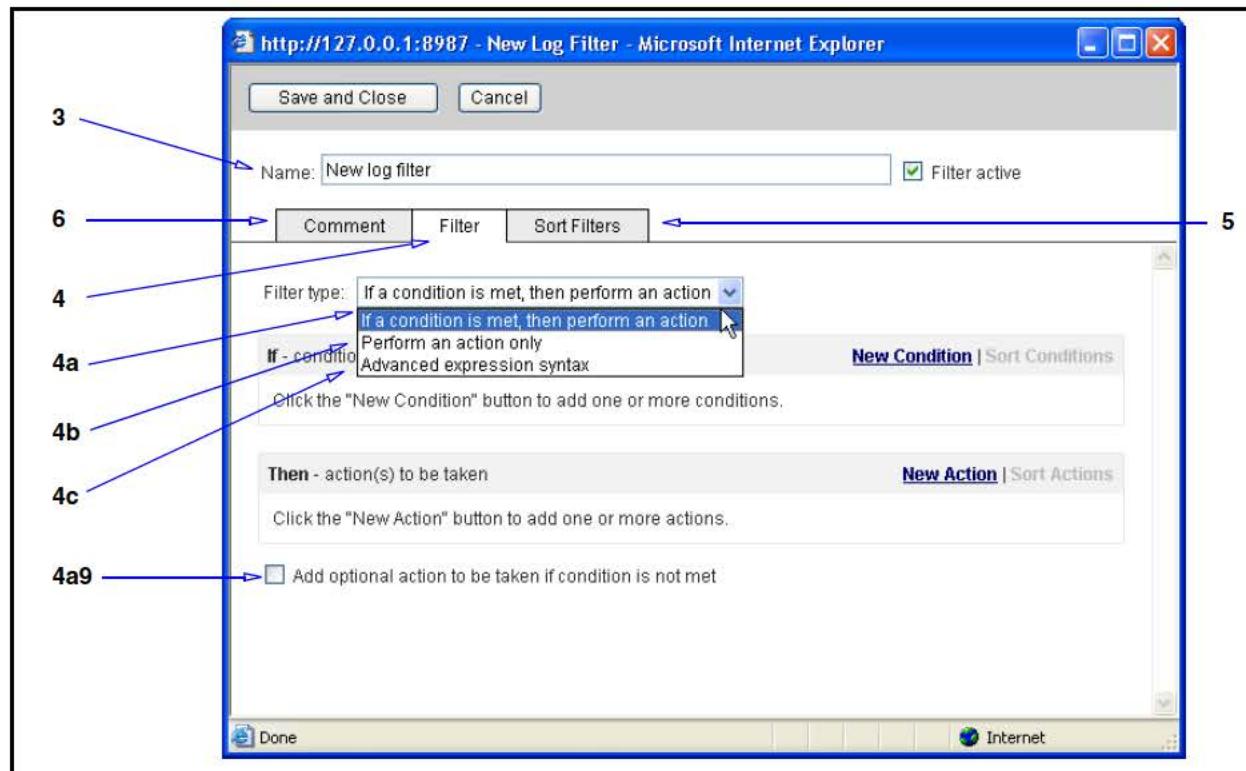
You can create custom Log Filter to suit your enterprise requirements.

## Section B: Blue Coat v7 Profile Configuration

## To create a new Log Filter:



1. From the Configuration menu, select **Log Data > Log Filters**.
2. Click **New Log Filter**.



3. In the **Name** field, assign a descriptive name for the filter.
4. There are three tabs: **Comment**, **Filter**, and **Sort Filter**. Click **Filter**. The **Filter Type** drop-down list contains three filter options.
  - a. **If a condition is met, then perform an action**—Perform a specified action if the selected criteria matches. If you select this option, you must create both a condition and an action:
    1. Click **New Condition**.
    2. From the **Log** field drop-down list, select an attribute.
    3. From the **Operator** drop-down list, select the matching criteria.

## Section B: Blue Coat v7 Profile Configuration

4. In the **Value** field, enter a value for the condition.
5. Click **OK**.
6. Click **New Action**.
7. From the **Action** drop-down list, select the action to take if the specified condition matches. When you select an action, other fields might display that require further information. Select and fill-in options as required.
8. Click **OK**.
9. (Optional) To add an action to be taken if the condition is not met, select **Add optional action to be taken if condition is not met**; from the **New Action** drop-down list, select the additional action.

The following example is a Log Filter to not log entries from client IP address 10.1.1.1, but accept all other entries.

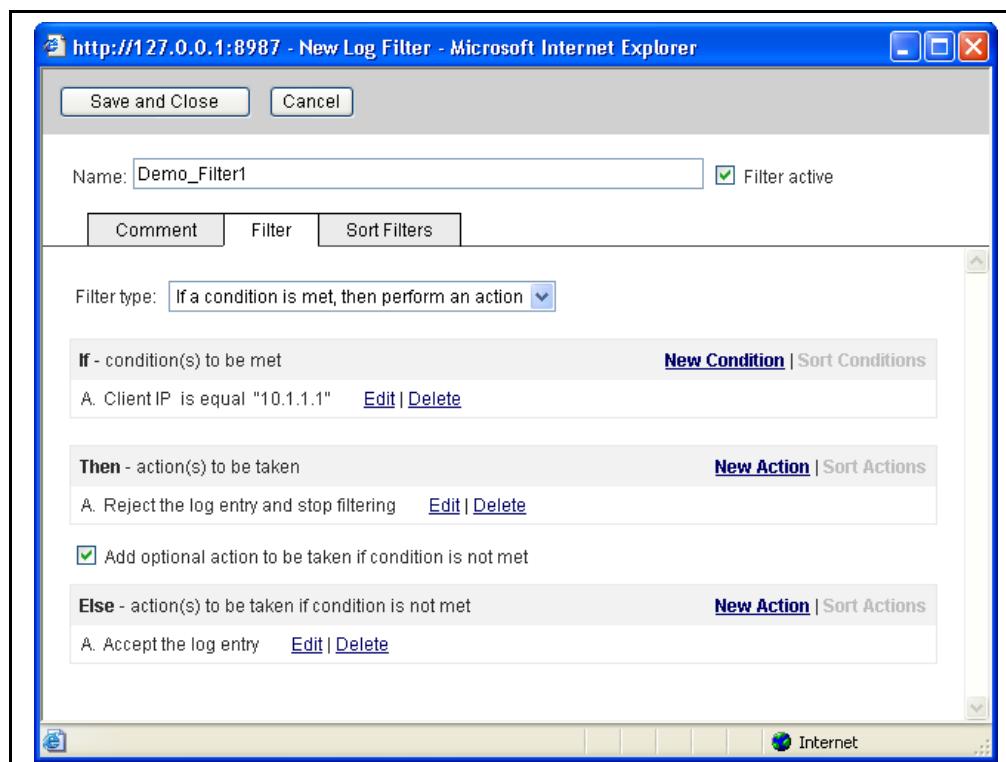


Figure 6-4. Log Filter example—action with matching criteria.

- Click **Save and Close**; proceed to Step 5.
- b. **Performance action only**—Perform a specified action; no matching criteria required. If you select this option, you must create at least one action (if you create more than one action, you can sort the actions):
    1. Click **New Action**.
    2. From the **Action** drop-down list, select the action. When you select an action, other fields might display that require further information. Select and fill-in options as required
    3. Click **OK**.

## Section B: Blue Coat v7 Profile Configuration

4. Click New Action again to add more actions. If you have more than one action, click Sort Actions to sort the actions, if necessary.

The following example is a Log Filter with multiple actions.

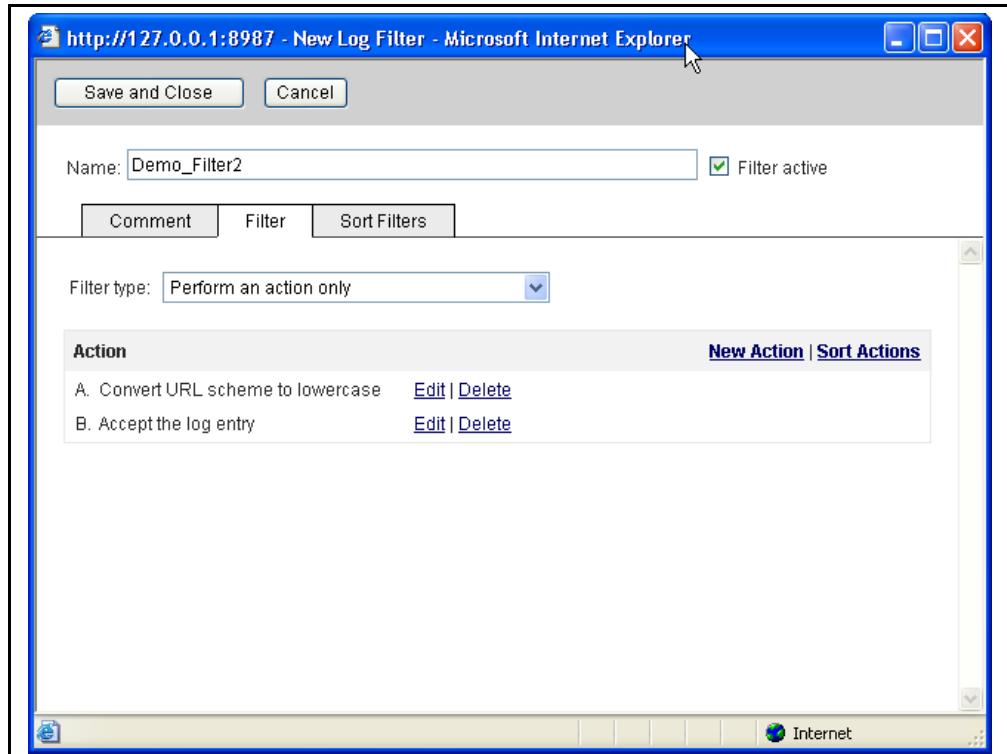


Figure 6-5. Log Filter example—multiple actions.

- Click **Save and Close**; proceed to Step 5.
- c. **Advanced expression syntax**—Use this option to add your own filter expressions. A list of valid log fields is displayed.

**Important:** Advanced expression filters must end in a semicolon to be valid.

## Section B: Blue Coat v7 Profile Configuration

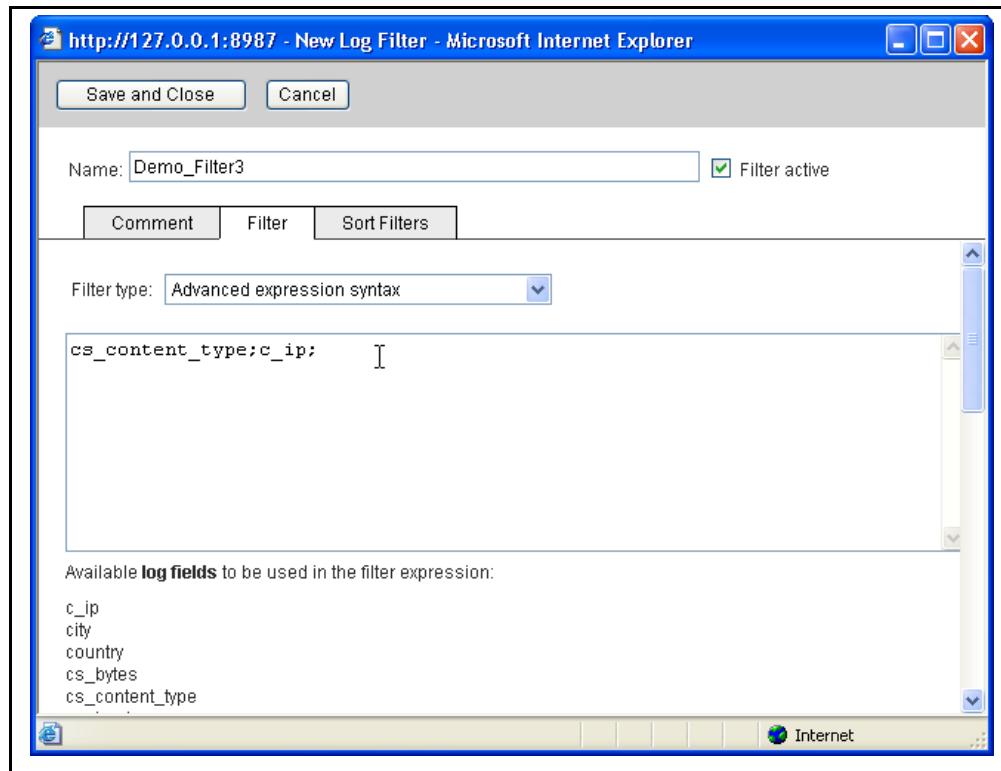


Figure 6-6. Log Filter example—advanced expression syntax.

5. The **Sort Filter** tab allows you to rearrange the position of the filter in the filter list. For example, place a *deny* filter at or near the top so that time is not wasted filtering something that will ultimately be rejected.
6. The **Comment** tab allows you to enter a text description of the custom Log Filter. Refer to default Log Filters for example text.
7. After the information on all three tabs is defined, click **Save and Close**. The filter is displayed in the Log Filters page and is active. If you used the Sort Filter feature, the newly created Log Filter appears in the proper place in the order Reporter scans the enabled Log Filters for matching criteria.

**Section B: Blue Coat v7 Profile Configuration**

The screenshot shows the Blue Coat Reporter interface with the profile set to 'test'. The left sidebar has sections for Reports, Config, Profile Summary, Log Data, Database, DNS Lookup, Manage Reports, and Category. Under Log Data, 'Log Filters' is selected. The main area displays a list of log filters:

- Reject Transparent Auth** (unchecked): Rejects transparent proxy authentication redirects. Use this if ProxySG uses transparent authentication.
 

```
if ((sc_status eq '407') and (cs_username eq '-')) then 'reject';
```
- Demo Filter1** (checked): A demo filter with the following logic:
 

```
If A. Client IP is equal "10.1.1.1"
Then A. Reject the log entry and stop filtering
Else A. Accept the log entry
```
- Reject IPs** (unchecked): Rejects IP addresses beginning with the specified octets.
 

```
if (starts_with(c_ip, '192.168.0.')) then 'reject';
```

Figure 6-7. Log Filters—The new Log Filter appears as sorted.

After a filter is created, it remains associated with this profile. You can apply or remove a filter from the report display, but you cannot select or apply this filter from another profile.

## Configuring the Database

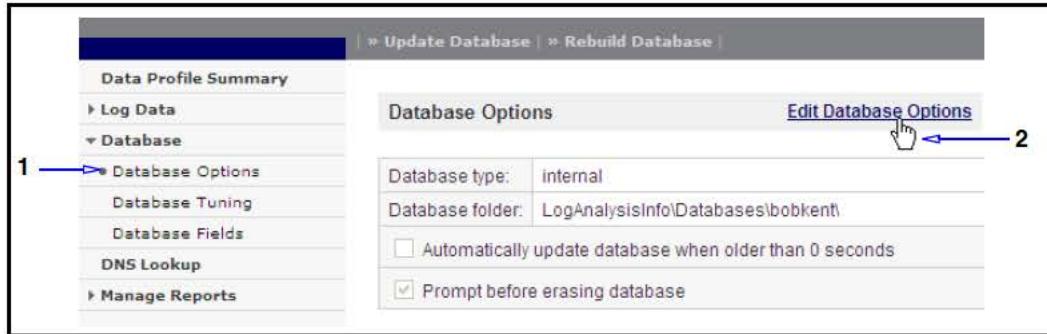
This section describes the **Database Options**, **Database Tuning**, and **Database Fields** screens.

### Database Options

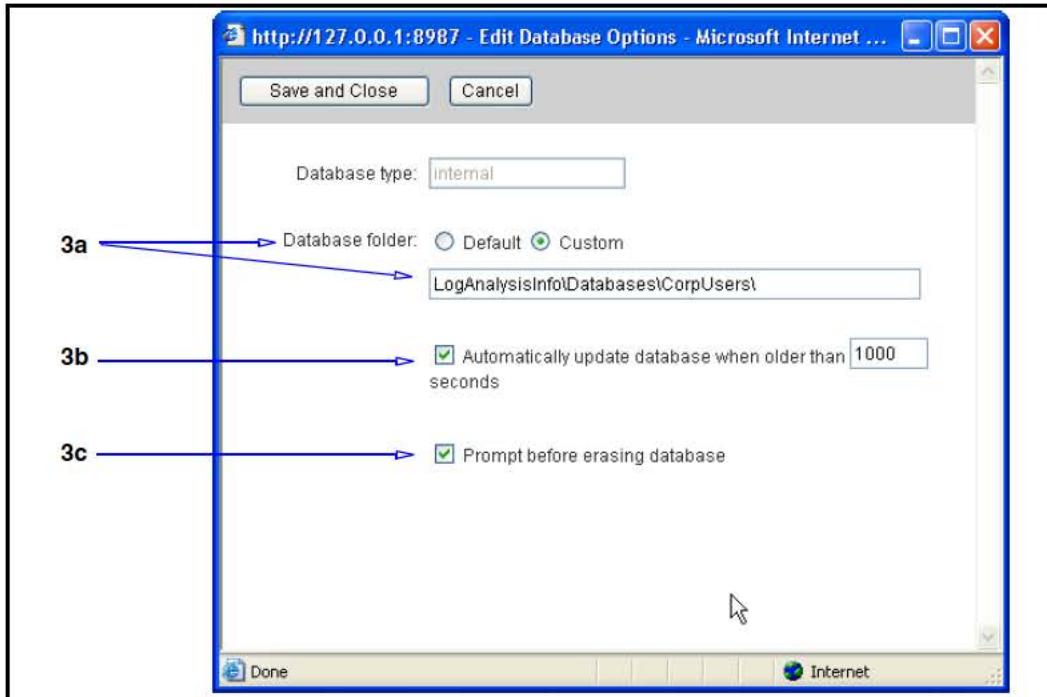
The Database Options page allows you to specify where the database is stored, how often the database is updated, whether the database is locked when in use, and whether you are prompted before a database is erased.

## Section B: Blue Coat v7 Profile Configuration

### To edit Database Options:



1. From the Configuration menu, select **Database > Database Options**.
2. Click **Edit Database Options**.

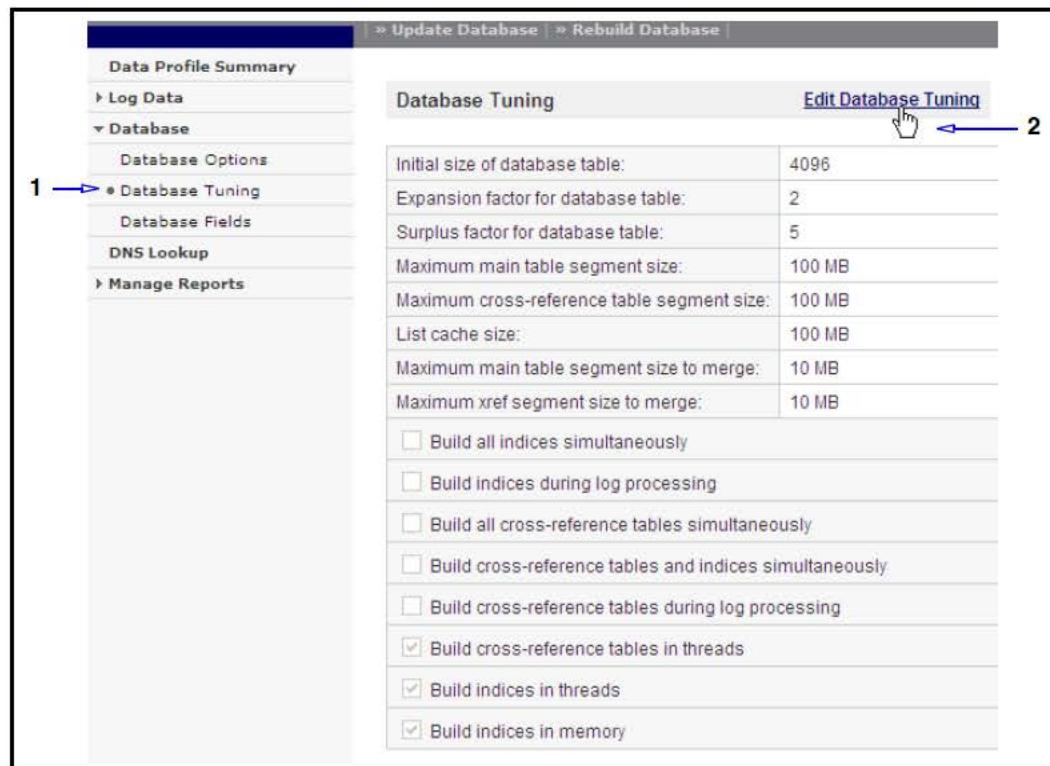


3. Configure one or more of the following options, as required:
  - a. To change the database folder locations, select **Custom** and enter the path to another folder.
  - b. The **Automatically update database** option to automatically update the database when the specified length of time (in seconds) as expired since the last build and an action, such as **Show Reports**, is invoked in Reporter. For example, if you click **Show Reports** for this profile and the selected amount of time has passed, Reporter attempts to update the database before displaying the reports.
  - c. To be notified before a database is erased, select **Prompt before erasing database**.
4. Click **Save and Close**. The new settings appear on the Database Options page.

**Section B: Blue Coat v7 Profile Configuration*****Database Tuning***

This section describes how to configure the options to tune a database.

**To edit database tuning:**



1. From the Configuration menu, select **Database > Database Tuning**.
2. Click **Edit Database Tuning**.
3. The first set of options are drop-down lists for unit measurement; select new values as required. For reference material regarding each field, see the section in Appendix B, "Tuning the Database" on page 184.
4. The second set of options are build options; select options as required. For reference material regarding each field, see the section in Appendix B, "Tuning the Database" on page 184 for information about each field.

**Important:** If you change the default values and encounter problems, Blue Coat recommends reconfiguring to the default values (see the tables for default values), which are designed to work with all hardware configurations. See "Notes About Cross-Reference Tables" on page 189 for information about building cross-reference tables.

5. Click **Save and Close**. The new settings appear on the Database Tuning page.

**Section B: Blue Coat v7 Profile Configuration****Database Fields Reference**

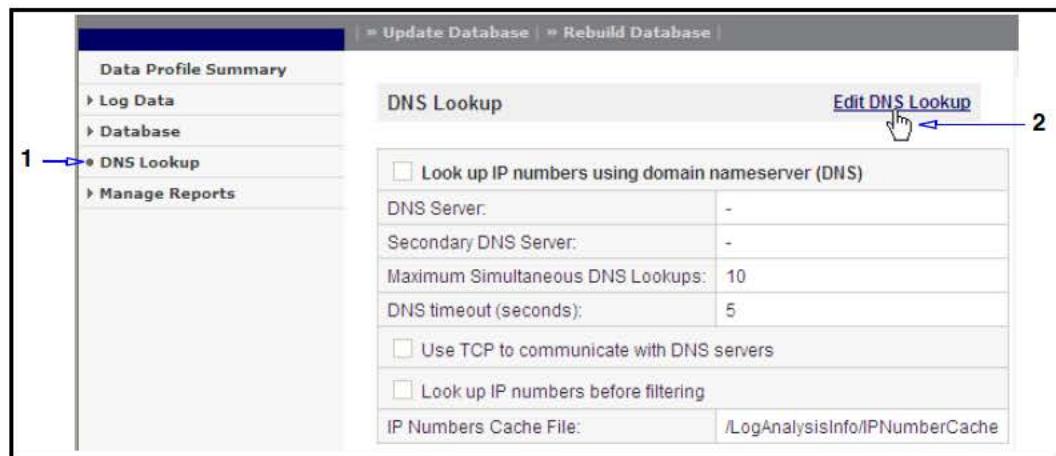
The Database Fields page is a reference for the database field values that Reporter tracks in its database. Some of these are pulled from the log format, but others are derived. They are based on the log fields. For example, an HTTP log might have a *virus type* log field, and a *virus type* database field based on that log field. The virus type is recorded in the database in a separate column, and is available for querying from the reports (to see a list of virus types, a *virus type* report is required).

For a reference of The Blue Coat default Main format (the Blue Coat custom log format) ELFF fields, see Appendix B, "Section D: v7 Log Field Reference—Blue Coat Main Format" on page 179.

**Configuring DNS Lookup**

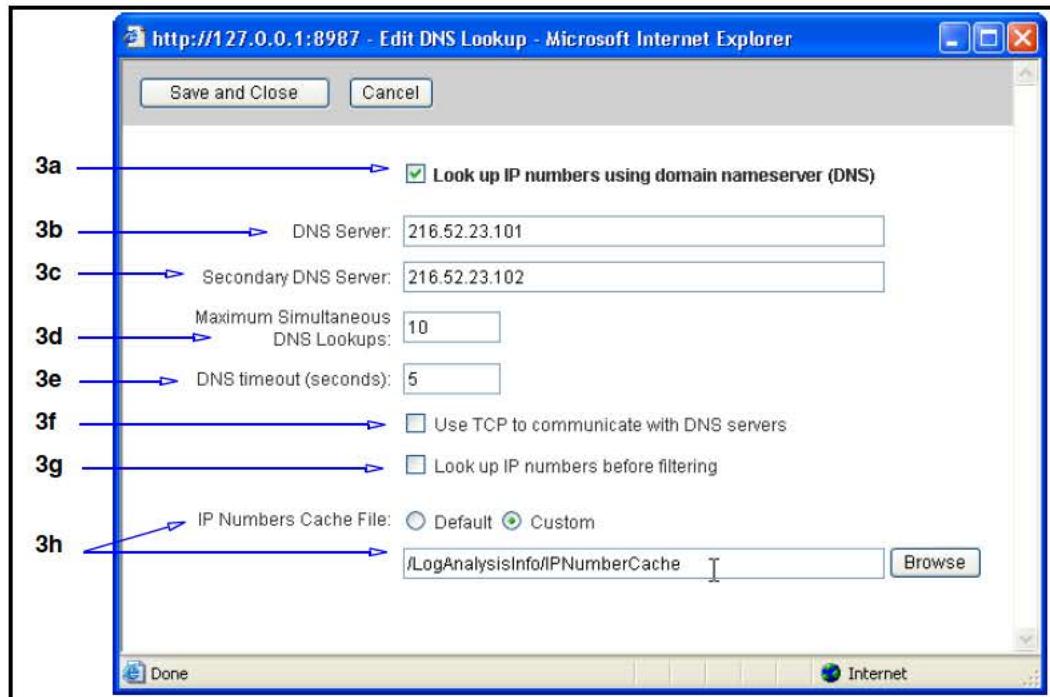
The DNS Lookup page displays how Reporter is configured to process requests to domain name servers.

This page allows you to configure DNS options.

**To edit DNS Lookup options:**

1. From the Configuration menu, select **DNS Lookup**.
2. To edit DNS lookup options, click **Edit DNS Lookup**; the Edit DNS Lookup dialog displays.

## Section B: Blue Coat v7 Profile Configuration



3. Fill in the fields as appropriate.
  - a. Enable the looking up of IP addresses using a DNS.
  - b. Enter the IP address of the DNS.
  - c. (Optional) Enter the IP address of the secondary DNS.
  - d. Enter or change the allowed Maximum Simultaneous DNS Lookups. This specifies the maximum number of IP addresses that can be looked up simultaneously. Setting this to a high value might increase DNS lookup performance; however, if you set it too high, you might exceed operating system limitations, and the log processing might fail. The default is **10**.
  - e. Enter the DNS timeout value. This option controls the amount of time, in seconds, Reporter waits for a response from a DNS when attempting to look up an IP number during log processing. Setting this to a low value might accelerate your log processing, but fewer IP numbers will be resolved successfully. The default is **5**.
  - f. Select **Use TCP to communicate with DNS servers**: DNS resolvers first attempt to use UDP for transport, then use TCP if UDP fails. This option allows you to always use TCP, bypassing UDP.
  - g. Select **Lookup IP numbers before filtering**: This option forces DNS to lookup IP addresses instead of a domain name. For example, many legitimate e-mail servers are incorrectly configured, or have intentionally not registered a name with DNS, so a reverse query does not return a matching host name.
  - h. The IP numbers cache file option allows you change the default file where IP addresses used during DNS lookups are cached.
4. Click **Save and Close**. The new settings appear on the DNS Lookup page.

**Section B: Blue Coat v7 Profile Configuration**

---

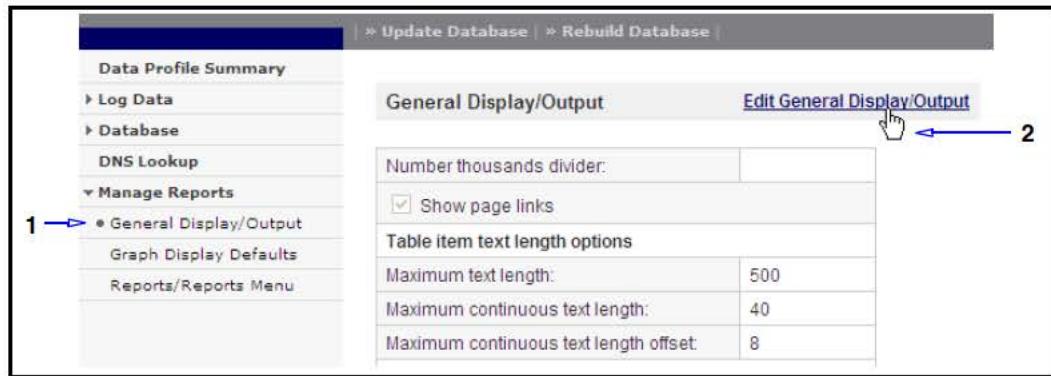
## Configuring Report Attributes

The section describes the **General Display/Output**, **Graph Display**, and **Reports** pages.

### General Display/Output

This page allows to configure report display and output options, such as whether page links display, table item or session path text lengths, and a user agent for e-mail or report files.

#### To configure the reports display and/or output:



1. From the Configuration menu, select **Manage Reports > General Display/Output**.
2. Click **Edit General Display/Output**.

## Section B: Blue Coat v7 Profile Configuration

The dialog box contains the following sections:

- 3a** Number thousands divider: ,
- 3b** Show page links
- 3c** Table item text length options
 

Maximum text length:	<input type="text" value="500"/>
Maximum continuous text length:	<input type="text" value="40"/>
Maximum continuous text length offset:	<input type="text" value="8"/>
- 3d** Session path text length options
 

Maximum text length:	<input type="text" value="140"/>
Maximum continuous text length:	<input type="text" value="70"/>
Maximum continuous text length offset:	<input type="text" value="20"/>
- 3e** Cost Options
 

Employee Time Cost (dollars per hour):	<input type="text" value="20"/>
Bandwidth Byte Cost (cents per Megabyte):	<input type="text" value="20"/>
- 3f** Table Options
 

Table Rows:	<input type="text" value="20"/>
Subtable Rows:	<input type="text" value="5"/>
Third-level Rows:	<input type="text" value="4"/>

## 3. Configure the options, as required:

- a. **Number thousands divider**—Specifies the divider to use between three-digit groups in large integers (for example, a comma). If this field is left blank, no dividers display.
- b. **Show page links**—If this option is enabled, all table items that begin with `http://` are shown as a link and open the page as specified by the table item URL.
- c. **Table item text length options**—Specifies the maximum number of characters per table item. Characters exceeding the maximum text length are truncated.
- d. **Session path text length options**—Specifies the maximum number of characters of page names in the session path and path through a page report. Characters exceeding the maximum session path text length are truncated.
- e. **Cost options**—Reports involving bandwidth use (bytes transferred or time spent) can display values that represent cost (in dollars) to the company. Enter the cost multipliers. The default is 20 for each field.
- f. **Table options**—Specifies how many table rows appear in data tables and tables in drill-down reports.

Dialog continued in next step.

## Section B: Blue Coat v7 Profile Configuration

The screenshot shows the 'Report Caching' section of the Blue Coat Reporter configuration. It includes four numbered steps:

- 4a** Cache reports: A dropdown menu set to "True".
- 4b** Page headers and page footers: Includes fields for Header file (C:\CorpGraphics\CompanyLogo.html), Footer file (empty), Header text ("Confidential -- HR eyes only"), and Footer text ("Branch Office Report").
- 4c** Email Options: Includes fields for Recipient email address (HR\_Manager@example.com, VP\_Engineering@example.com), Return email address (BC\_ReportAdmin@example.com), User agent for email (Microsoft Internet Explorer), User agent for report files (Netscape/Mozilla), and Maximum email pages (10).
- 4d** Generated Report Options: Includes a field for Maximum file pages (10).

## 4. Continued options:

- a. **Report caching**—Determines whether generated reports are stored locally in the browser cache (for faster viewing) or never cached.
- b. **Page headers and page footers**—The first two options allow you to select files to be used as the source for report header and footer text. The only valid file types are text and HTML files. To use a custom graphic, create an HTML file with just the reference to file. For example:

```
CompanyLogo.html
<img src= "C:\Documents and Settings\Username\My Documents\My Pictures\ExampleEmblem.jpg" width = 100%>
```

The second two options allow you to compose header and footer text for this profile.

- c. **Email Options**—The first two fields allow you to specify default e-mail addresses for the profile (to and from addresses).

The second two drop-down lists allow you to specify the target user agent (Web browser) when sending e-mails or when generating report files. Specifying the user agent allows Reporter to optimally handle line breaking for the target Web browser. Select a user agent from the drop-down list; you can select **Microsoft Internet Explorer**, **Safari**, **Netscape/Mozilla**, or **Unknown**. Selecting **Unknown** breaks lines by spaces and by inserting a `<br/>` tag; setting it to a known user agent breaks lines by spaces, characters and tags as supported in the specified Web browser.

**Section B: Blue Coat v7 Profile Configuration**

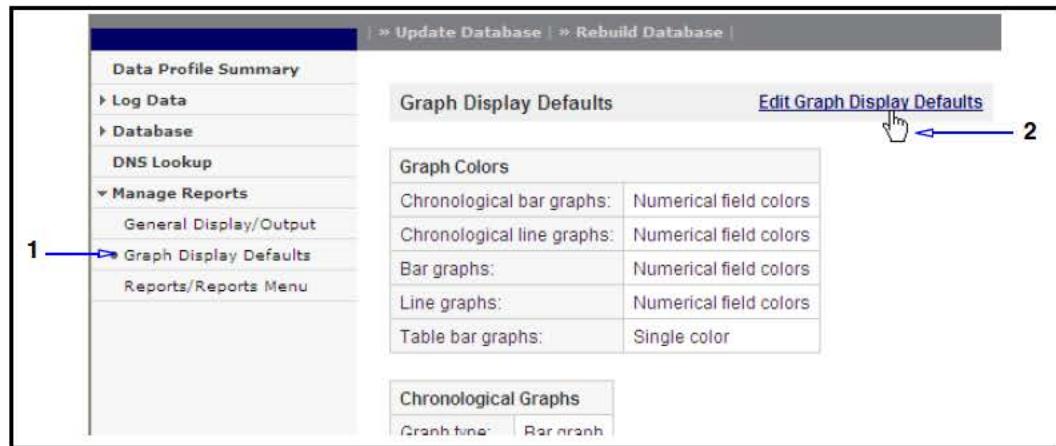
The **Maximum email pages** field specifies how many pages are allowed to be sent in a single e-mail message. The maximum is 10. If the generated report exceeds to maximum or specified value, the remaining pages are not generated.

5. Click **Save and Close**. The new settings appear on the **General Display/Output** page.

## *Graph Display*

This page allows you to configure the visual style of report graphs.

### To configure report graph styles:



1. From the Configuration menu, select **Manage Reports > Graph Display**.
2. Click **Edit Graph Display**.

## Section B: Blue Coat v7 Profile Configuration

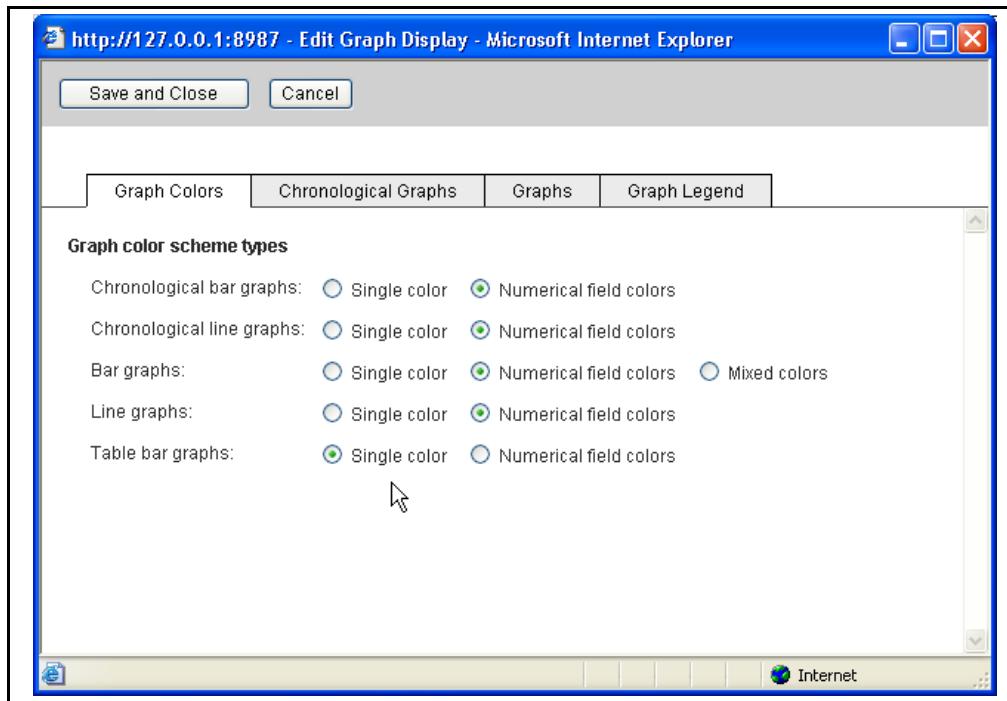


Figure 6-8. The Edit Graph Display dialog.

3. The four tabs allow you to edit various graph display options for the different types of graphs. Edit options as required.
  - **Graph Colors**—Select color schemes for each graph type.
  - **Chronological Graphs**—Configure chronological graph and chart component sizes.
  - **Graphs**—Configure graph and chart component sizes.
  - **Graph Legend**—Configure legend text parameters.
4. Click **Save and Close**. The new settings appear on the Graph Display page.

## Reports/Reports Menu

**Note:** The Reports/Reports Menu options are visible if an Enterprise License has been entered. See "[Adding an Enterprise License](#)" on page 18.

The Reports/Reports Menu page allows you to:

- Create a new report.
- Edit an existing report.
- Edit the Reports menu.

### Creating a New Report

This section describes how to create a new report and configure its menu attributes.

## Section B: Blue Coat v7 Profile Configuration

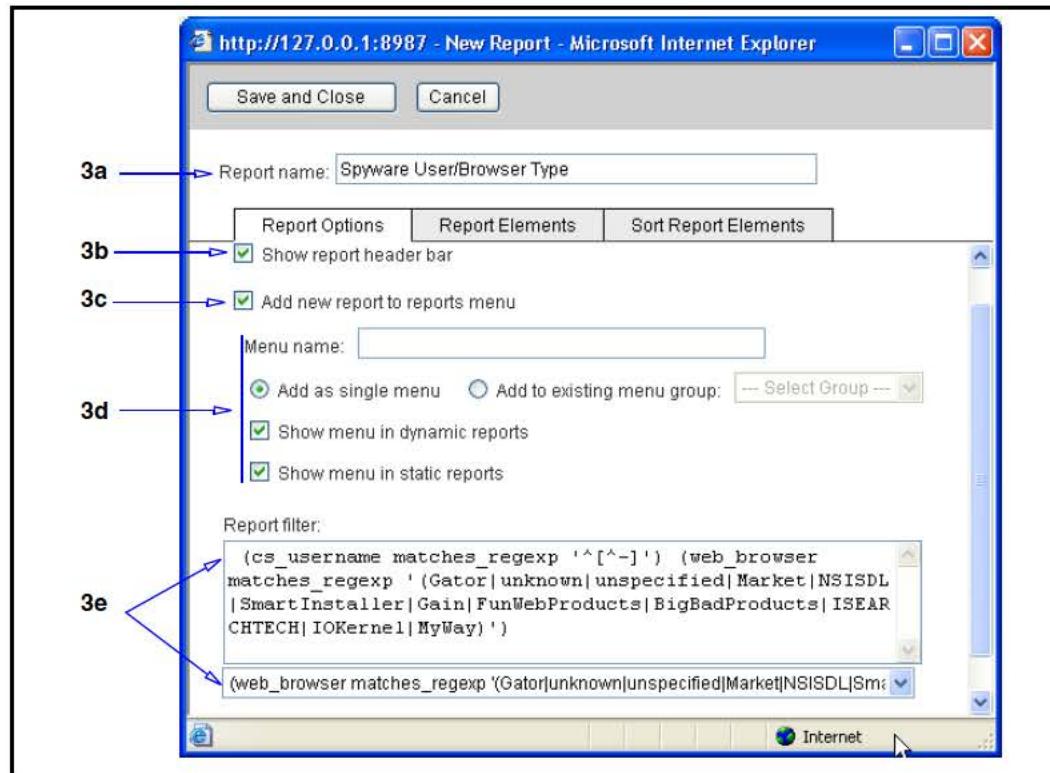
- After you have created a new report, you can edit the Reports menu to name a menu item and link the report to that item. You can also group menu items to be a list of suboptions under the main menu group that you create. You can further customize the Reports menu by editing, deleting, or rearranging default menu items and the reports to which they are linked.

### To create a new report:



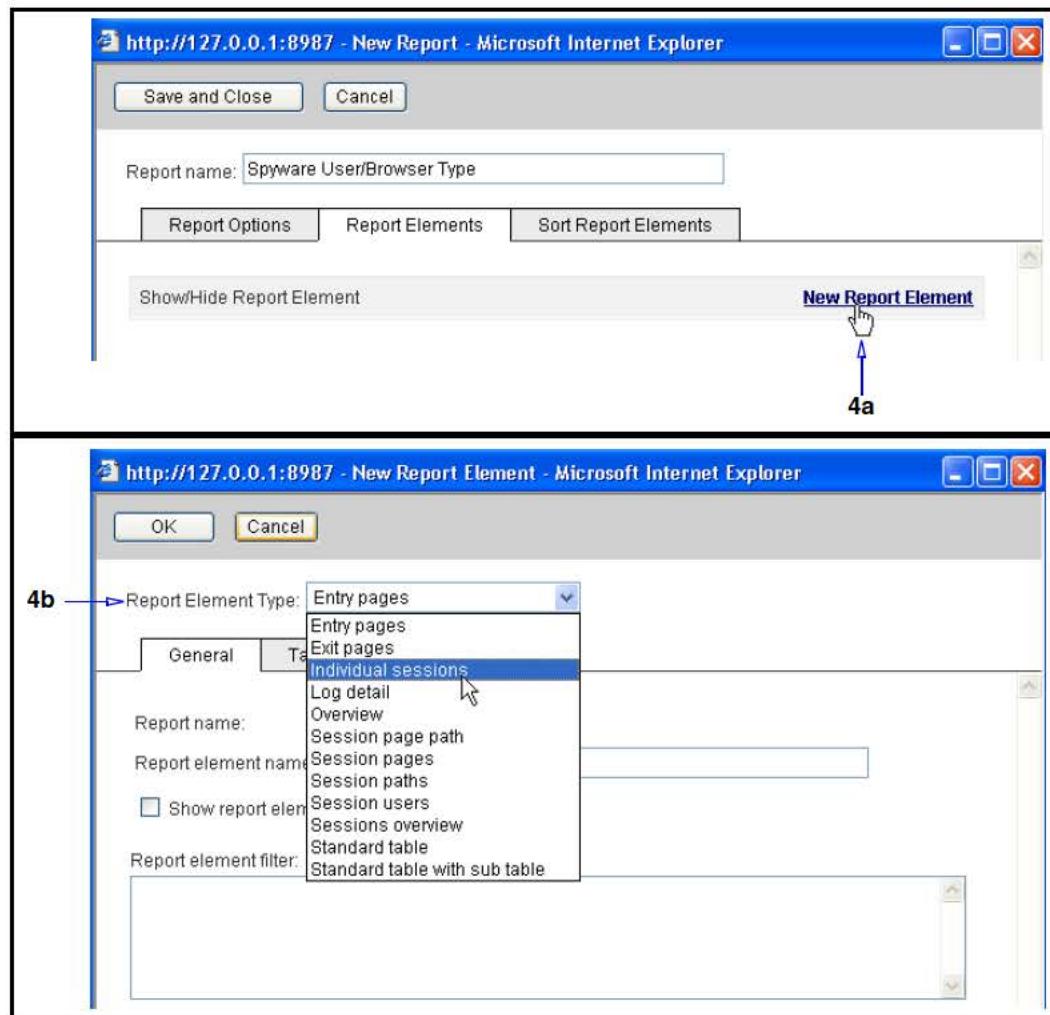
1. From the Configuration menu, select **Manage Reports > Reports/Reports Menu**.
2. Click **New Report**. Three tabs are available in the New Reports dialog: **Report Options**, **Report Elements**, and **Sort Report Elements**.

## Section B: Blue Coat v7 Profile Configuration



3. The **Report Options** tab allows you to configure options, such as the report header and menu parameters.
  - a. **Report name**—What name the report appears as in the **Report/Reports Menu** (this field is available on all three tabs).
  - b. **Show report header bar**—Contains report information, such as name of profile and user logged in.
  - c. **Add new report to reports menu**—The new report is visible from the menu. If you select this option, the sub-fields become active. If this option is not selected, the report does not appear in the menu.
    - **Menu name**—What name the report appears as in the Reports page.
    - **Single/Existing menu**—You have the option to add the report as a stand alone report title or add the report to an existing menu group (selectable from the drop-down list).
    - **Show menu in dynamic reports**—?
    - **Show menu in static reports**—?
  - d. **Report filter**—Use the drop-down list to add one or more filters.

## Section B: Blue Coat v7 Profile Configuration



4. The **Report Elements** tab allows you to add or more elements. These elements specify the contents and presentation of the report.

- Click **New Report Element**.
- In the New Report Element dialog, select an element from the **Report Element Type** drop-down list. This dialog is dynamic. As you select different elements, different option fields appear.

**Note:** Given the flexibility of this feature, element configuration might require familiarity and trial and error to achieve the look you want for each report.

- Click **OK**. The new element appears on the **Report Elements** tab.
- (Optional) Repeat Steps 4a through 4c to add more elements to the report.

## Section B: Blue Coat v7 Profile Configuration

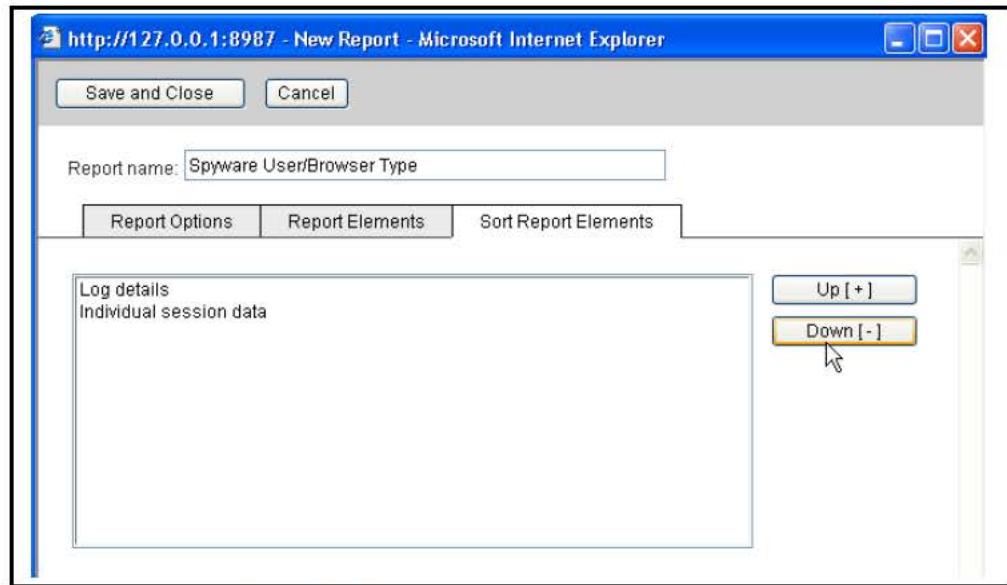


Figure 6-9. Changing the sort order.

5. The **Sort Report Elements** tab allows you to rearrange the position of the report elements.
6. Click **Save and Close**. The new report appears in alphabetical order on the Reports/Reports Menu page.

### Editing/Deleting a Report

Any report in the Reports/Reports Menu is editable and deletable.



Figure 6-10. Editing a report.

- ❑ To edit a report, click **Edit**. Edit the fields and click **Save and Close**.
- ❑ To delete a report, click **Delete**. In the verification dialog, click **OK** to confirm the deletion.

### Editing the Reports Menu

The Edit Reports Menu allows you to specify which reports appear on the Reports Menu and in which order; create new menus and menu groups; edit report parameters; and delete reports.

## Section B: Blue Coat v7 Profile Configuration

## To edit the Reports Menu:

Report Name	Report Element Name/Type
Authentication Failures	Authentication Failures Standard table
Blocked Suspected Spyware	Blocked Content Standard table
categories	categories Standard table

1. From the Configuration menu, select **Manage Reports > Reports/Reports Menu**.
2. Click **Edit Reports Menu**.

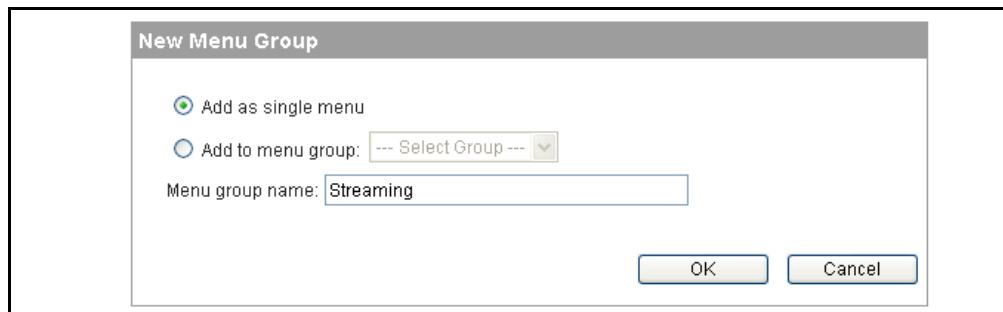
<input checked="" type="radio"/> Overview	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Traffic	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Years/months/days	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Days	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Days of week	<a href="#">Edit</a>   <a href="#">Delete</a>
<input type="checkbox"/> Hours of day	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Anti-Virus	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> ICAP virus IDs	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Worms By IP	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> ICAP virus IP detail	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> ICAP virus URL detail	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> ICAP virus user Detail	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Filtering	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Content categories	<a href="#">Edit</a>   <a href="#">Delete</a>
<input checked="" type="radio"/> Categories by User	<a href="#">Edit</a>   <a href="#">Delete</a>

Selected items appear on the Reports menu. The items in bold are main options, and the items below them are the suboptions.

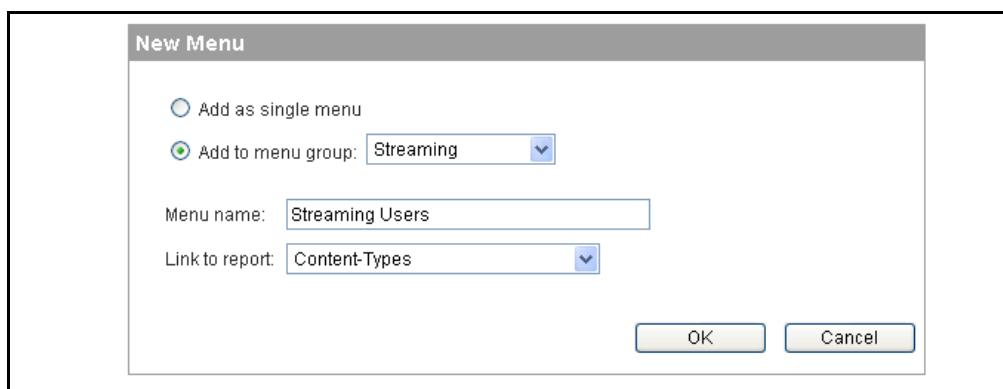
3. Select to display either **dynamic reports** or **static reports**.
4. Existing menu items:

## Section B: Blue Coat v7 Profile Configuration

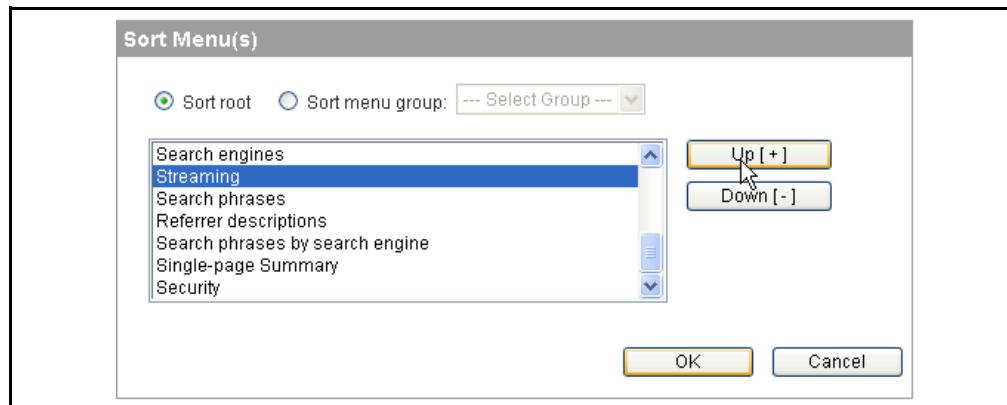
- To remove an item from the Report menu, deselect it. This does *not* delete the report item, only deactivates it.
  - To edit a menu name or move it to another group, click **Edit**. In the dialog, rename/change as required.
  - To *permanently* remove a menu item from this profile, click **Delete**. Deleting a main option also deletes all suboptions.
5. To create a new menu group:
- a. Click **New Menu Group**.



- b. Select to create a new group or add to an existing group as a sub-group (select from the drop-down list).
  - c. Name the menu group and click **OK**.
6. To create a new menu item:
- a. Click **New Menu**.



- b. Either select **Add as single menu** to create a single menu item or select **Add to menu group** and select a group to add this item to from the drop-down list.
  - c. Name the menu item.
  - d. From the **Link to report** drop-down list, select a report that is associated with this menu item.
  - e. Click **OK**.
7. To sort the menu items (arrange how they appear in the Reports menu):
- a. Click **Sort Menus**.

Section B: Blue Coat v7 Profile Configuration

- b. To sort main menu items, select **Sort root**; to rearrange sub-menu items within a main item, select **Sort menu group** and select a group.
  - c. Click **Up** or **Down** to move sort the menu items or groups.
  - d. Click **OK**.
8. Click **Save and Close**. The next time you navigate to the Reports page, the changed menu structure is visible.

**Section B: Blue Coat v7 Profile Configuration**

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## *Appendix A: Report Concepts and Reference*

This appendix describes various concepts about reports aimed to help you further understand the reporting process and provides a reference to the Blue Coat v7 and v8 report architecture.

This Appendix contains the following sections:

- "Section A: Report Concepts" on page 158.
- "Section B: v8 Profile and Report Log Field Reference" on page 165.
- "Section C: v8 Profile Default Export File Names" on page 176.
- "Section D: v7 Log Field Reference—Blue Coat Main Format" on page 179.

## Section A: Report Concepts

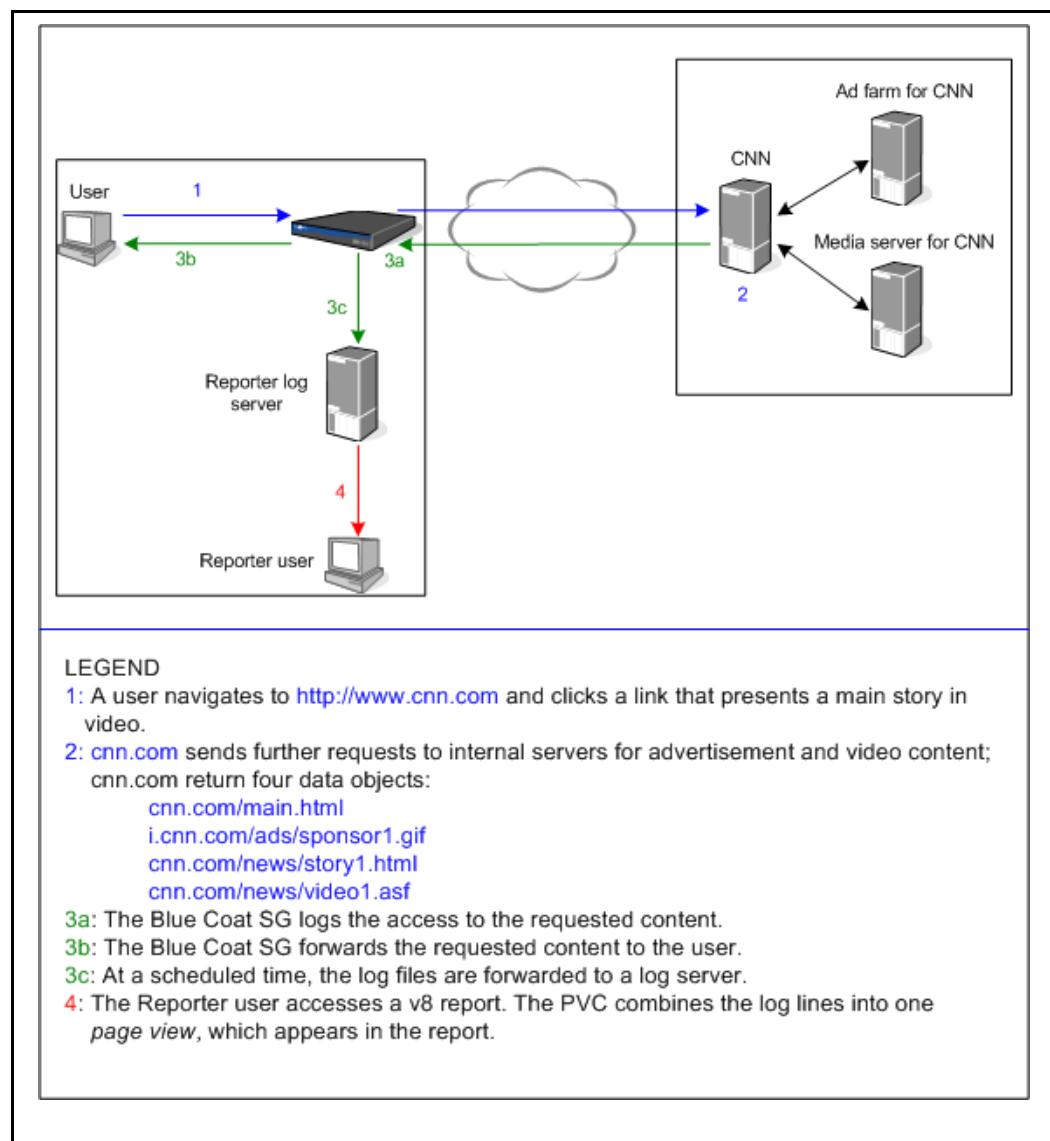
# Section A: Report Concepts

This section provides deeper background information regarding Blue Coat Reporter processes.

## About the Page View Combiner (v8)

This section applies to Reporter v8 profiles.

The Page View Combiner (PVC) is called during Blue Coat Reporter v8 log processing. The PVC combines multiple HTTP requests that are associated with a single Web page into a single log line. When a user browses to a Web page, most often that page triggers requests for more content, either from the same Web server or another server (for example, a media server that stores video or image content). Rather than regard each of these as separate requests, the PVC combines all of the related page requests into one.



## Section A: Report Concepts

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The goals of the PVC are to:

- Reduce the number of database entries from the original log file, which improves report generation performance.
- More closely represent user browsing activity reports, as each object (requested by the first page from content servers) is not counted as a separate entry.

It is possible that Web objects normally combined to represent one page view might be split into two page views. This occurs when, as a result of internal SG processing, the profile log readers are halted or restarted.

If this occurs, no data is lost, but the profile database contains two page views. Continuing with the example in the previous illustration:

```
8:40:20 cnn.com/html  
8:40:20 i.cnn.com/ads/sponsor1.gif  
[-----end of log file-----]  
[-----beginning of new log file----]  
8:40:21 cnn.com/news/story1.html  
8:40:21 cnn.com/news/video1.asp
```

The first two entries are shown as one page view; the second two as another. However, they represent a single page view requested by a user.

### Requirements

The PVC requires the following fields in the logs:

- cs-referer
- sc-status
- rs (Content-Type)

The Blue Coat-recommended log formats (see "[Optimal Blue Coat SG Appliance Log Formats](#)" on page 23) contain these fields.

If these log fields are not present, no page-view combining occurs, and report data represents separately every object requested.

## About Field Value Normalization

By default when processing logs, Reporter *normalizes* the `username` and `domain` field values in log files to lowercase. This occurs because differences in case in these fields would affect the page view combining process (PVC) used by Reporter to combine multiple log lines from a single page view (see "[About the Page View Combiner \(v8\)](#)" on page 158).

---

**Note:** The `auth-group` field is also normalized, but this field is irrelevant to the PVC.

---

You can configure Reporter to not normalize these fields to lower case. However, you must do this *before* any log data is processed for a profile. When a new profile is created and there are unprocessed log files in the specified location, Reporter immediately begins processing these log files. To prevent `username` and `domain` normalization, the profile must be customized when there are no log files in the specified log source location.

To disable normalization on a database field:

1. Open the file called `profile_name.cfg`, which is located in the `LogAnalysisInfo\profiles` folder.

## Section A: Report Concepts

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2. Search in this file for the string: `case_insensitive = "true"`. By default, it is located under the database field definitions for both `cs_host` and `cs_username`.
3. Either delete this line or changing it to `case_insensitive = "false"` to disable normalization for that field.
4. Save and close the file. Add log files to the target folder to begin processing.

---

**Note:** You can enable normalization for other fields, such as `cs_auth_group`. Add the line `case_insensitive = "true"` to the definition section for that database field.

---

## About Browse Time Calculations

This section describes how Reporter approximates how long a user was browsing.

Before discussing the current method, this is how Reporter 8.1 determined take taken. The browse time value was in all reports except the `Users > Sessions > Daily Session Details` report. For the sessions report, the calculated browse time was an estimation of time spent in browsing sessions. A session is defined by a start time (the time at which a user initiates activity (first request)) and an end time (the time at which the user is inactive for seven continuous minutes). The seven minutes was a value determined by Blue Coat and coded in Reporter.

Beginning with Reporter 8.2.x, only the session browse time is used for calculation; however, the seven minute inactivity window is not tracked anymore. The PVC provides a more accurate of user browse activity, but browse time is found in several reports in version 8.2.

### Additional Notes

- One component of a unique session is the user-agents; therefore, if one system is using two different browsers types (for example, Internet Explorer and Firefox), those are counted as two different sessions.
- If one browser is employing *tab browsing* (more than one tab open in the same Web browser window, all tabs constitute *one* session).
- If a user is logged into more than two systems and using authenticated credentials on both systems:
  - If the report is based on user names, the sessions are combined.
  - If the report is based on IP addresses, the sessions are processed as different.

## About Date Offset Calculations

Reporter v7 profiles have a value called `date_offset` that can be set to shift the times in log file entries by a given number of hours. For example, if you are GMT+7 hours, and your logs are in UTC, you can set a `date_offset` of 7 and your logs are converted to local time when the database is built.

Reporter v8 profiles do *not* check the `date_offset` value, as v8 logs are assumed to be in GMT and date/time values are converted to local time for reports. If you set a date filter, it is calculated in local time. For example, if you want to see entries from March 1, the hour boundaries for the day (00:00:00 - 23:59:59) are calculated in local time.

## Section A: Report Concepts

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### About Optimizing Log Processing Configurations (v8)

This section describes some conditions that affect log processing efficiency.

#### *About Access Log Naming Conventions*

This section provides suggestions for Blue Coat SG appliance access log naming conventions, especially for deployments that require processing a large number of log files over a longer duration of time.

For optimal Reporter performance, configure your access logs to use the following filename format:

xxxxxxxxxxxxxxNddddddddd.log.gz

where:

- x represents any valid character that can be used in naming a log file (letters, digits, underscore, dash) .
- N represents a non-decimal-digit character .
- d represents a decimal digit. This number, preceding the log file extension, determines the order in which the log files are processed. The log file ordering is performed identically for both local disk and FTP log sources. The value of the number must be positive and fit within a 32-bit integer. This basically means that the number must have no more than eleven decimal digits and be less than or equal to 2147483647. If the number is interpretable as a larger value, the result that is left in a 32-bit signed integer can give rise to odd results and the proper ordering is not assured.
- .log.gz is the extension of the (compressed) log file.

#### *DECIMAL DIGIT NOTES*

The decimal digit number is the key part of the format.

- If this number does not provide a complete ordering on the set of log files, then the log processing speed suffers because of internal log table thrashing.
- A filename format of MMDDhhmmss is inadequate because the files process chronologically, except at year-end when they temporarily process out-of-order because of the December (MM = 12) rollover into January (MM = 01) where January files sort before December.
- A filename format of hhmmss is more problematic because log files are processed out-of-order whenever one day rolls into the next.
- Given these constraints, to ensure the most efficient log file ordering, format this eleven-digit number as: YYJJJhhmmss, where:
  - YY = two-digit year (00 – 99)
  - JJJ = three-digit julian day of the year (001 – 366)
  - hh = two-digit hour of the day (00 – 23)
  - mm = two-digit minute of the hour (00 – 59)
  - ss = two-digit second of the minute (00 – 59)

Using this format allows Reporter to properly order log files through the year 2021.

## Section A: Report Concepts

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- The default filename format used for log files on the SG appliance has the following text and specifiers: `SG_%f_%c_%l%m%d%H%M%S.log.gz`.
  - `%f` = log name (facility)
  - `%c` = name of the external certificate used for encryption, if any
  - `%l` = the fourth parameter of the SG appliance IP address (101.102.103.104)
  - `%m` = two-digit month (01 – 12)
  - `%d` = two-digit day (01 – 31)
  - `%H` = two-digit hour (00 – 23)
  - `%M` = two-digit minute (00 – 59)
  - `%S` = two-digit second (00 – 59)
  - `.log.gz` = extension

The suggested filename format for log files on the SG appliance slightly alters the default and has the following text and specifiers:

`SG_%f_%c_%l%m%d_%y%j%H%M%S.log.gz`.

- `%y` = two-digit year, without century (00 – 99)
- `%j` = three-digit julian day within year (001 – 366)

The value of this naming convention for log files is very evident when processing large numbers of log files (spanning multiple days and months) occurs. The value is less evident when log file generation and processing occurs regularly (daily or more frequently) so that out-of-order files occur infrequently. However, when re-processing large sets of log files, the naming convention is essential.

## About Chronological Ordering

Each profile creates and manages its own memory resident LogTable. Each LogTable is comprised of hour-tables containing data for each hour the profile's LogProcessors spend reading log files. These tables constitute some of the most active memory in Reporter, and therefore have a significant impact on overall log processing performance. If all log files were processed in chronological order, there would never be more than one hour-table necessary in memory. It is common for LogProcessors to encounter batches of log files spanning multiple hours between them. If they are processed out of chronological order, performance significantly improves by allowing the number of hour-tables to grow, provided there is sufficient process memory. Conversely, during low memory conditions, reducing the number of hour-tables prevents unnecessary memory starvation and subsequent disk operations (swapping files in and out of memory).

In Reporter 8.2.2, additional logic was added to the LogProcessors to help process log data in a more chronological order. The LogProcessors order log files based on a numeric field in the filename, when it is present. The field is part of the filename format described in the *SG Appliance Configuration and Management Guide* (see “Configuring the Upload Client”). The default filenames created by the SG appliance contain a *Month/Day/Hour/Minute/Second* timestamp immediately preceding the `.log` or `.log.gz` suffix; for example: `SG_Main_HQ-1_1102081500.log.gz`. If the filename ends with `.log` or `.log.gz`, the LogProcessor parses it for any purely numeric sequence immediately preceding the required suffix. If one is found, it is then used to sequentially order that batch of log files.

## Section A: Report Concepts

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You can significantly improve LogProcessor performance by naming the log files with any ordered numeric values that comply with this format. For example:  
*anyfilenameprefix123.log* or *some-other-prefix-84757.log.gz*.

### About Known Conditions for Efficiency/In-efficiency

The many variables involved in processing log files prevents the ability to present a clear set of recommended profile configuration settings. Some of these variables include:

- 64 bit versus 32 bit operation systems.
- Variant log file sizes, small to extremely large (dozes of gigabytes).
- Available memory for Reporter resources.

In addition to the your knowledge of your systems and the system guidelines in the *Blue Coat Reporter Sizing Guide* (available from the Blue Coat Web site), understanding the following conditions that both aid and hinder Reporter log processing functionality can help you modify profile configuration options to optimize efficiency.

#### *Known Conditions for Efficient Processing*

- Allocating as much host resources to Reporter as possible.
- Retaining as much *active* data in memory as is physically possible.
- Processing external data in large chunks or smaller chunks, depending on a myriad of variables.

#### *Known Conditions for In-efficient Processing*

- Having insufficient memory to retain all of the active data.
- Consuming extra time to write processed data and inactive data from memory to disk.
- Inactive data or other applications are consuming too much memory.
- Reporter runs slow because it forces the system to constantly read and write because there is not enough data in memory or there is too much data in memory.
- Reporter runs well, but other errors occur:
  - Data is not available for report generation because it has not been written to disk yet.
  - Reporter crashes because the dataset is too large.
  - Other applications suffer from Reporter's resource use.

### About Database Purging

Each profile maintains its own database. Most of the database is kept in memory. If the entire database is not occasionally purged, it would continue to consume more of the process memory as new log files are processed. As the database grows, profile configuration settings that were previously beneficial might now become detrimental. As a general guideline, Blue Coat recommends databases contain a maximum of 30 days of log data. However, the amount of log data is just as, if not more, relevant than the number of days in the data sets.

**Section A: Report Concepts**

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## ***About Configuration Options***

The profile configurations in "Configuring Log Settings (v8)" on page 56 and "Altering Log Processing Options" on page 112 allow you to specify various memory allocation and database action options to attempt to balance these opposing requirements. The default values of these options were determined by Blue Coat through moderate internal testing. Increasing some LogTable and buffer sizes might be beneficial if there is process memory available and the buffers are always being filled to capacity. However, many of thresholds are constantly changing from moment to moment. Even breaching just over a threshold can also cause significant degradation. Also, reading data from external locations in small segments is generally slower than reading large segments. Conversely, creating large buffers might be affect performance because they take too much time to read in or write out all at once.

[Section B: v8 Profile and Report Log Field Reference](#)

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## Section B: v8 Profile and Report Log Field Reference

This section lists each report, organized by category, and lists the SG access log fields required to populate each particular report.

### Report Field/Log Field Names

This section provides a reference table that lists the report field to log field association. Report fields are what comprise various reports, based on the information contained in the access log. The contents of an access log are determined by the log field names (which determine what data types are captured during the SG appliance logging process). Some log field names correlate to absolute data (such as URLs), others derive information access log variables (such as browsing duration).

#### Main Logs

In the following table, italicized report field name text indicates the *derived* data.

Report Field Name	Log Field Name
cs (Referer)	cs (Referer)
browse_time	Calculated at run-time from user session and stored as database field.
c-ip	c-ip
cs_auth_group	cs_auth_group
cs_bytes	cs_bytes
cs_host	cs-host
cs-method	cs-method
cs_uri_extension	cs-uri-extension
cs_uri_path	cs-uri-path
cs_url_query	cs-url-query
cs_url_scheme	cs-url-scheme
cs_user_agent	cs (User-Agent)
cs_username	cs-username
date	date
date_time	date + time
day_of_week	Derived from date.

Section B: v8 Profile and Report Log Field Reference

<b>Report Field Name</b>	<b>Log Field Name</b>
hits	Calculated from page_views + all related log entries.
hour_of_day	Derived from time.
month	Derived from date.
requests (same as page views or hits)	Calculated during database generation and stored as database field.
risk_group	Dependent on sc-filter-category.
rs_content_type	rs (Content-Type)
s_action	s-action
sc_bytes	sc_bytes
sc_filter_category	cs-categories (or cs-category or sc-filter-category)
sc_filter_result	sc-filter-result
sc_status	sc-status
session_number	Calculated during report generation.
time	time
time_taken	time-taken
total_bytes	cs_bytes + sc_bytes
url	Combined from (uri-scheme://cs-host/cs-url-path [cs-url-query]).
week	Derived from date.
x_virus_id	x-virus-id
year	Derived from date.

**CIFS Logs**

<b>Report Field Name</b>	<b>Log Field Name</b>
cifs_reserve	x-cifs-path
year	date
month	date

Section B: v8 Profile and Report Log Field Reference

<b>Report Field Name</b>	<b>Log Field Name</b>
week	date
hour	date
day_of_week	date
hour_of_day	date
cifs_count	calculated field
cifs_duration	calculated from date
cifs_file_size_open	calculated from date and file size
cifs_file_size_close	calculated from date and file size
cifs_bw_gain_total	x-client-connection-bytes
cifs_bw_gain_data	x-cifs-client-bytes-read
cifs_bw_gain_data_bytes	x-cifs-client-bytes-read
cifs_client_bytes_data	x-cifs-client-bytes-read
cifs_cache_bytes	x-cifs-client-bytes-read
cifs_cache_hits	x-cifs-client-bytes-read
cifs_client_operations	x-cifs-client-read-operations
cifs_open_operations	x-cifs-method
cifs_read_operations	x-cifs-client-read-operations
cifs_write_operations	x-cifs-client-write-operations
cifs_other_operations	x-cifs-client-other-operations
cifs_server_operations	x-cifs-server-operations

Section B: v8 Profile and Report Log Field Reference

<b>Report Field Name</b>	<b>Log Field Name</b>
cifs_client_bytes_total	x-client-connection-bytes
cifs_client_bytes_read	x-cifs-client-bytes-read
cifs_client_bytes_written	x-cifs-bytes-written
cifs_server_bytes_uncomp	x-server-connection-bytes
cifs_server_bytes_total	x-server-adn-connection-bytes
cifs_server_bytes_data	x-cifs-server-bytes-read
cifs_file_size	x-cifs-file-size
total_bytes	cs_bytes + sc_bytes
date_time	date
time	date
cifs_error_code	x-cifs-error-code
cifs_user_id	x-cifs-uid
cifs_share_id	x-cifs-tid
cifs_resource_id	x-cifs-fid
c_ip	c-ip
c_ip_port	c-ip and c-port
r_ip	r-ip and r-port
r_ip_port	r-port
cifs_server	x-cifs-server
cifs_share	x-cifs-share
cifs_path	x-cifs-path
s_ip	s-ip

Section B: v8 Profile and Report Log Field Reference

Report Field Name	Log Field Name
cifs_resource_type	x-cifs-file-type
cifs_action	s-action
cifs_method	x-cifs-method

## Reports/Log Field Matrix

This section provides a table that lists which log fields are required to populate each report. Use this reference to customize your SG appliance access logs to generate the type of reports required for your enterprise.

### Notes

- Any report that uses `cs_username` can use either `cs_username` or `c_ip`, depending on what was selected during the profile creation. The only exception is the spyware infected clients, which must have `c-ip`.
- To calculate date and time, v8 profiles can employ different date and time log fields.

Log field	Output
date + time	YYYY-MM-DD + HH:MM:SS (GMT/UTC)
gmttime	DD/MM/YYYY:hh:mm:ss GMT
localtime	DD/MMM/YYYY:hh:mm:ss +nnnn
timestamp	seconds since epoch in utc/gmt
x-timestamp-unix-utc	seconds since epoch in utc/gmt
x-timestamp-unix	seconds since epoch in local time

## Main Log Field Matrix

These reports are URL-centric; they display reports that reflect browsing activity.

Category	Report	Required Fields
	Overview	time_taken, sc_bytes_cs_bytes

Section B: v8 Profile and Report Log Field Reference

	Log Detail	c-ip, cs-auth-group, cs-bytes, cs-host, cs-uri-path, cs-uri-query, cs(User-Agent), cs-username, date, s-action, s-bytes, cs-categories, sc-status, time, time-taken, cs-uri-scheme, cs-uri-port, x-rs-certificate-observed-errors, x-rs-certificate-hostname, x-rs-certificate-hostname-category, x-rs-connection-negotiated-cipher-strength
Traffic	Days	date, cs-bytes, sc-bytes, time, time-taken
	Days of week	date, cs-bytes, sc-bytes, time, time-taken
	Hours of day	time, cs-bytes, sc-bytes, time-taken
	Years/months/days	date, cs-bytes, sc-bytes, time, time-taken
Security		
Anti-virus	ICAP virus IDs	cs-bytes, sc_bytes, time-taken, x-virus-id
	ICAP virus URL detail	cs-bytes, cs-uri-path, cs-uri-query, cs-uri-scheme, sc_bytes, time-taken, x-virus-id
	ICAP virus user detail	{c-ip -or- cs-username}, cs-bytes, sc_bytes, time-taken, x-virus-id
Spyware	Blocked suspected spyware	cs-bytes, cs-uri-path, cs-host, cs-uri-query, cs-uri-scheme, sc_bytes, sc-filter-result, time-taken
	Spyware infected clients	c-ip, cs-bytes, cs-host, sc-bytes, sc-filter-category, time-taken
	Spyware traffic	cs-bytes, cs-host, sc-bytes, sc-filter-category, time-taken
SSL	Certificate errors	x-rs-certificate-observed-errors, x-rs-certificate-hostname, sc-bytes, cs-uri-port
	Cipher strength	{cs-username -or- c-ip}, cs(User-Agent), x-rs-certificate-hostname, x-rs-connection-negotiated-cipher-strength, sc-bytes, cs-uri-port
	Port 443 disposition	{cs-username -or- c-ip}, cs(User-Agent), s-action, x-rs-certificate-hostname, sc-bytes, cs-uri-port
	Certificate hostname category	{cs-username -or- c-ip}, s-action, x-rs-certificate-hostname, sc-bytes, cs-uri-port

Section B: v8 Profile and Report Log Field Reference

Activity Summary		
Daily Summary	Top daily users	date, {cs-username -or- c-ip}, cs-bytes, sc-bytes
	Top daily protocols	date, cs-uri-scheme, cs-bytes, sc-bytes
	Daily categories by user	date, {cs-username -or- c-ip}, cs-categories, cs-bytes, sc-bytes
	Daily categories by group	date, cs-auth-group, cs-categories, cs-bytes, sc-bytes
	Daily filtering verdicts	date, sc-filter-result
Most active	Top summary	cs-uri-scheme, cs-bytes, sc-bytes, cs-host, sc-filter-result
	Categories by user	{cs-username -or- c-ip}, sc-filter-category or cs-categories, sc-bytes, cs-bytes
	Categories by group	cs-auth-group, cs-categories, cs-bytes, sc-bytes
	Top users	{cs-username -or- c-ip}, cs-bytes, sc-bytes
	Top groups	cs-auth-group, cs-bytes, sc-bytes
	Top categories	{cs-categories -or- sc-filter-category}, cs-bytes, sc-bytes
	Top sites	cs-host, {cs-categories -or- sc-filter-category}, cs-bytes, sc-bytes, time_taken
	Top protocols	cs-uri-scheme, cs-bytes, sc-bytes
	Top file types	cs-uri-extension, cs-bytes, sc-bytes
Most blocked	Top blocked users	sc-filter-result, {cs-username -or- c-ip}, cs-bytes, sc-bytes
	Top blocked groups	sc-filter-result, cs-auth-group, cs-bytes, sc-bytes
	Top blocked sites	sc-filter-result, cs-host, {sc-filter-category -or- cs-categories}, cs-bytes, sc-bytes
	Top blocked protocols	sc-filter-result, cs-uri-scheme, cs-bytes, sc-bytes
	Top blocked file types	sc-filter-result, cs-uri-extension, cs-bytes, sc-bytes

Section B: v8 Profile and Report Log Field Reference

Filtering verdicts	Filtering verdicts by user	{cs-username -or- c-ip}, sc-filter-result
	Filtering verdicts by group	cs-auth-group, sc-filter-result
	Filtering verdicts by risk group	sc-filter-category, sc-filter-result
Activity by site		
By date	Daily sites by user	date, {cs-username -or- c-ip}, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes
	Daily sites by group	date, cs-auth-group, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes
	Daily sites by category	date, {sc-filter-category -or- cs-categories}, cs-host, sc-bytes, cs-bytes
	Daily sites	date, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes, time_taken
	Daily sites by protocol	date, cs-uri-scheme, cs-host, cs-bytes, sc-bytes
By user	Sites by user	{cs-username -or- c-ip}, cs-host, {sc-filter-category -or- cs-categories}, cs-bytes, sc-bytes
	Sites by user and verdict	{cs-username -or- c-ip}, sc-filter-result, cs-host, cs-bytes, sc-bytes
	Sites by user and category	{cs-username -or- c-ip}, cs-host, {sc-filter-category -or- cs-categories}, cs-bytes, sc-bytes
	Sites by user and protocol	{cs-username -or- c-ip}, cs-uri-scheme, cs-host, {sc-filter-category -or- cs-categories}, cs-bytes, sc-bytes
	Sites by protocol and user	cs-uri-scheme, cs-username, cs-host, cs-bytes, sc-bytes
By group	Sites by group	cs-auth-group, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes
	Sites by group and verdict	cs-auth-group, sc-filter-result, cs-host, sc-bytes, cs-bytes
	Sites by group and protocol	cs-auth-group, cs-uri-scheme, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes
	Sites by protocol and group	cs-uri-scheme, cs-auth-group, cs-host, sc-bytes, cs-bytes

Section B: v8 Profile and Report Log Field Reference

Activity by date/time		
By user	Activity detail by user	cs-username, date, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}, sc-filter-result, cs-bytes, sc-bytes
	Activity detail by category and user	{sc-filter-category -or- cs-categories}, cs-username, date, time, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, sc-filter-result, sc-bytes, cs-bytes
	Session details	date, time, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}
By group	Activity detail by group	cs-auth-group, date, time, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}, sc-filter-result, cs-bytes, sc-bytes, time-taken
	Activity detail by category and group	cs-auth-group, date, time, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}, sc-filter-result, cs-bytes, sc-bytes
	Activity detail for users by group	cs-auth-group, cs-username or c-ip, date, time, cs-host, cs-uri-scheme, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}, sc-filter-result, cs-bytes, sc-bytes
By category	Activity detail by category	sc-filter-category or cs-categories, date, time, cs-uri-path, cs-uri-query, cs-uri-scheme, cs-host, sc-filter-result, sc-bytes, cs-bytes
By protocol	Activity detail by protocol	cs-uri-scheme, date, time, cs-host, cs-uri-query, cs-uri-path, {sc-filter-category -or- cs-categories}, sc-filter-result, sc-bytes, cs-bytes, time-taken
Trend	Filtering verdict trends	date, sc-filter-result
	Protocol trends (bytes)	date, cs-uri-scheme, cs-bytes, sc-bytes
	Protocol trends (hits)	date, cs-uri-scheme
	Risk group trends	date, sc-filter-result, {sc-filter-category -or- cs-categories}

Section B: v8 Profile and Report Log Field Reference

Cost	Cost details by user	{cs-username -or- c-ip}, cs-host, sc-filter-category or cs-categories, cs-bytes, sc-bytes
	Cost details by group	cs-auth-group, cs-host, {sc-filter-category -or- cs-categories}, sc-bytes, cs-bytes
	Cost details by user and date	date, {cs-username -or- c-ip}, cs-host, sc-bytes, cs-bytes
	Cost details by group and date	date, cs-auth-group, {cs-username -or- c-ip}, cs-host, sc-bytes, cs-bytes
	Cost summary per user (bytes)	date, {cs-username -or- c-ip}, sc-bytes, cs-bytes
	Cost summary per user (browse time)	{cs-username -or- c-ip}, date, time
	Cost summary per group	date, cs-auth-group, sc-bytes, cs-bytes

**CIFS Log Field Matrix**

These reports reflect CIFS (Microsoft application file sharing) activity.

Category	Report	Required Fields
	Overview	x-cifs-server-bytes-read, x-cifs-bytes-written, x-cifs-client-bytes-read, x-adb-server-bytes, x-server-connection-bytes, x-cifs-client-ops, x-cifs-client-write-ops, x-cifs-client-other-ops, and x-cifs-server-ops
Traffic	Month	date, x-cifs-client-bytes-read, x-cifs-server-bytes-read
	Date	date, x-cifs-client-bytes-read, x-cifs-server-bytes-read
	Days of week	date, x-cifs-client-bytes-read, x-cifs-server-bytes-read
	Hours of Day	date, x-cifs-client-bytes-read, x-cifs-server-bytes-read

Section B: v8 Profile and Report Log Field Reference

CIFS Summary Reports Spyware	CIFS Server	x-cifs-server, x-cifs-server-bytes-read, x-cifs-client-bytes-read, x-cifs-server-operations, x-cifs-client-read-operations
	CIFS Share	x-cifs-share, x-cifs-server-bytes-read, x-cifs-client-bytes-read, x-cifs-server-operations, x-cifs-client-read-operations
	CIFS UNC Path	x-cifs-unc-path, x-cifs-file-type, x-cifs-server-bytes-read, x-cifs-client-bytes-read, x-cifs-server-operations, x-cifs-client-read-operations
	CIFS Proxy IP	s-ip, x-cifs-server-bytes-read, x-cifs-client-bytes-read, x-cifs-server-operations, x-cifs-client-read-operations
	CIFS Client IP	c-ip, x-cifs-server-bytes-read, x-cifs-client-bytes-read, x-cifs-server-operations, x-cifs-client-read-operations
	CIFS Method	x-cifs-server, x-cifs-method
CIFS Diagnostics Reports	CIFS Action	x-cifs-server, x-cifs-action

Section C: v8 Profile Default Export File Names

## Section C: v8 Profile Default Export File Names

This section provides a reference for the default exported report file names. When exporting and converting a report file from .csv to a Microsoft Excel spreadsheet, the spreadsheet is given a default name (see "[Exporting a Report](#)" on page 94).

The following reference tables are categorized as they are in the Reporter menu.

<b>Report</b>	<b>Export Name</b>
Overview	overview
Log Detail	log_detail_xxxxxxx
Days	t_days
Days of week	t_days_of_week
Hours of day	t_hours_of_day
Years/months/days	t_years_months_days
ICAP virus IDs	icap_virus_ids
ICAP virus URL detail	icap_virus_url_detail
ICAP virus user detail	icap_virus_user_detail
Blocked suspected spyware	blocked_suspected_spyware
Spyware infected clients	spyware_infected_clients
Spyware traffic	spyware_traffic
Certificate errors	certificate_errors
Cipher strength	cipher_strength
Port 443 disposition	port_443_disposition
Certificate hostname category	certificate_hostname_category
Top daily users	top_daily_users
Top daily protocols	top_daily_protocols
Categories by user	categories_by_user
Categories by group	categories_by_group
Daily categories by user	daily_categories_by_user
Daily categories by group	daily_categories_by_group
Daily filtering verdicts	daily_filtering_verdicts
Top summary	monthly_overview
Top users	top_users
Top groups	top_groups
Top categories	top_categories

Top sites	top_sites
Top protocols	top_protocols
Top file types	top_file_types
Top blocked users	top_blocked_users
Top blocked groups	top_blocked_groups
Top blocked sites	top_blocked_sites
Top blocked protocols	top_blocked_protocols
Top blocked file types	top_blocked_file_types
Filtering verdicts by category	filtering_verdict_by_category
Filtering verdicts by user	filtering_verdict_by_user
Filtering verdicts by group	filtering_verdict_by_group
Filtering verdicts by risk group	filtering_verdict_by_risk_group
Daily sites by user	daily_sites_by_user
Daily sites by group	daily_sites_by_group
Daily sites by category	daily_sites_by_category
Daily sites	daily_sites
Daily sites by protocol	daily_sites_by_protocol
Sites by user	sites_by_user
Sites by user and verdict	sites_by_user_and_verdict
Sites by user and category	sites_by_user_and_category
Sites by user and protocol	sites_by_user_and_protocol
Sites by protocol and user	sites_by_protocol_and_user
Sites by group	sites_by_group
Sites by group and verdict	sites_by_group_and_verdict
Sites by group and protocol	sites_by_group_and_protocol
Sites by protocol and group	sites_by_protocol_and_group
Activity detail by user	activity_detail_by_user
Activity detail by category and user	activity_detail_by_category_and_user
Session details	session_details
Activity detail by group	activity_detail_by_group
Activity detail by category and group	activity_detail_by_category_and_group
Activity detail for users by group	activity_detail_for_users_by_group

Activity detail by category	activity_detail_by_category
Activity detail by protocol	activity_detail_by_protocol
Filtering verdict trends	filtering_verdict_trends
Protocol trends (bytes)	protocol_trends_bytes
Protocol trends (hits)	protocol_trends_hits
Risk group trends	risk_group_trends
Cost details by user	cost_details_by_user
Cost details by group	cost_details_by_group
Cost details by user and date	cost_details_by_user_and_date
Cost details by group and date	cost_details_by_group_and_date
Cost summary per user (bytes)	cost_summary_per_user_bytes
Cost summary per user (browse time)	cost_summary_per_user_browse_time
Cost summary per group	cost_summary_per_group

## Section D: v7 Log Field Reference—Blue Coat Main Format

The Blue Coat default Main format (the Blue Coat custom log format) contains the following ELFF fields:

```
date time time-taken c-ip sc-status s-action sc-bytes cs-bytes cs-
method cs-uri-scheme cs-host cs-uri-port cs-uri-path cs-uri-query cs-
username cs-auth-group s-hierarchy s-supplier-name rs(Content-Type)
cs(User-Agent) sc-filter-result cs-category x-virus-id s-ip s-sitename
```

The Main format fields are described below.

Field	Description
date	GMT Date in YYYY-MM-DD format.
time	GMT time in HH:MM:SS format.
time-taken	Time taken (in milliseconds) to process the request.
c-ip	IP address of the client.
sc-status	Protocol status code from appliance to client.
s-action	The type of action the appliance took to process this request.
sc-bytes	Number of bytes sent from appliance to client.
cs-bytes	Number of bytes sent from client to appliance.
cs-method	Request method used from client to appliance.
cs-uri-scheme	Scheme from the 'log' URL.
cs-host	Hostname from the client's request URL. If URL rewrite policies are used, this field's value is derived from the 'log' URL.
cs-uri-port	Port from the 'log' URL.
cs-uri-path	Path from the 'log' URL. Does not include query.
cs-uri-query	Query from the 'log' URL.
cs-username	Relative username of a client authenticated to the proxy (that is, not fully distinguished).
cs-auth-group	One group to which an authenticated user belongs. If a user belongs to multiple groups, the group logged is determined by the Group Log Order configuration specified in VPM. If the Group Log Order is not specified, an arbitrary group is logged.
s-hierarchy	How and where the object was retrieved in the cache hierarchy.
s-supplier-name	Hostname of the upstream host (not available for a cache hit).

Field	Description
rs (Content-Type)	Request header: Content-Type.
cs (User-Agent)	Request header: User-Agent.
sc-filter-result	Content filtering result: Denied, Proxied, or Observed.
cs-category	Single content category of the request URL (or sc-filter-category).
x-virus-id	Identifier of a virus if one was detected.
s-ip	IP address of the appliance on which the client established its connection.
s-sitename	Service used to process the transaction.

## *Appendix B: v7 Profile Reference*

This appendix provides configuration and tuning options for profiles created with a v7 database. This appendix contains the following sections:

- "Section A: v7 Database Concepts" on page 182
- "Section B: Using Log Filters" on page 190

## Section A: v7 Database Concepts

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# Section A: v7 Database Concepts

This section describes the constructs of a the v7 database.

## Database Overview

Blue Coat Reporter uses a database to store information about log data. The database contains a compact version of the log data in the main table, and a series of secondary tables that provide hierarchy information and improve performance of some queries. Each time a new log entry is read, the information contained in that entry is added to the database. Each time a report is generated, the required information is read from the database.

Reports can query data from the database based on multiple filters. For example, it is possible in a virus log to filter to show only the source IPs for a particular virus, and for a Web log it is possible to see the pages hit by a particular visitor. In general, *any* combination of filters can be used if it is possible to create complex and/or/not expressions to zoom in on any part of the dataset. See [Appendix C: "Configuration File Reference" on page 199](#) for information about using log filters.

For large datasets, it can be slow to query data directly from the main table. Query performance for some types of tables can be improved using cross-reference tables, which roll up data for certain fields into smaller, fast-access tables. For example, for a Web log, you can create a cross-reference table containing *page*, *hit*, and *page view* information; the table pre-computes the number of hits and page views for each page, and thus the standard Pages report are quickly generated. See ["Examples" on page 194](#) for more information.

The Database folder option specifies the location of the database on disk; if the option is blank, Reporter stores the database in the Database folder, in the LogAnalysisInfo folder, using the name of the profile as the name of the Database folder. See ["Database Options" on page 139](#) for information about the Database folder options.

New log data can be added to the database at any time. This allows a database to be quickly and incrementally updated, for instance, every day with that day's new log entries. This can be accomplished from the Web browser interface by using the Update Database option (at the top of any of the Database pages in the Configuration menu). A CLI command (see ["Building and Updating Databases from the Command Line" on page 220](#)) that accomplishes the same thing is:

```
bcreport -p config-file -a ud
```

If your log files are very large, or if your database is extensively cross-referenced, building a database can take a long time and use a lot of memory and disk space.

A number of advanced options exist to fine-tune database performance. To get the most out of the database feature, adjust the values of the database parameters. Database tuning is discussed in ["Database Tuning" on page 141](#).

## Memory, Disk, and Time Usage

Reporter processes a huge amount of data while building a database or displaying statistics. Because of this, it uses a lot of resources: disk space, memory, and processing time.

## Section A: v7 Database Concepts

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However, you can customize Reporter to use less of some of these resources by using more of others. You can also customize Reporter to use less of all resources by reducing the amount of data in your database. This section describes the options that let you manage your memory, disk, and time resources.

### *Building the Database Faster*

A database is built (or updated) in three stages:

- The log data is processed, creating the main table
- The main table indices are created.
- The cross-reference tables are built from the main table

One method to speed up all of these processes is to use multiple processors. The Enterprise version of Reporter has the ability to split database builds across multiple processes, building a separate database with each processor from part of the dataset, and then merging the results. This can provide a significant speedup.

If Reporter is configured to look up your IP numbers (using Look up IP numbers using domain nameserver (DNS)), the database building process is slower than usual, as Reporter looks up all the IP numbers in your log file. You can speed up the process by not using Look up IP numbers using domain nameserver (DNS), by decreasing the DNS timeout (seconds), or by improving Reporter's bandwidth to the DNS server.

You can also speed up all three stages by simplifying the database structure, by eliminating database fields or using log filters to simplify them. For example, if you add a log filter that converts all IP addresses to just the first two octets, you have a much simpler field than if you use full IP addresses.

Cross-reference tables can be eliminated to improve database build performance; however, by eliminating cross-reference tables, you slow query performance for those queries that would have used a cross-reference table. See "["Examples" on page 194](#)" for more details.

### *Using Less Memory During Database Builds*

For most large datasets, the major factor in memory usage during builds are the item lists. There is one list per field, and each list includes every value for that field. For large fields, these lists can be huge—if there are 100 million unique IP address, and each IP address is 10 bytes long, then the total memory required for that list is  $100M * 10$ , or 1GB of memory. Reporter uses memory-mapped files for these lists, so depending on the operating system's implementation of memory mapped files, these could appear to be normal memory usage, virtual memory usage, or something else.

However, most 32-bit operating systems restrict each process to 2GB of memory space, including mapped files.

Even large datasets seldom reach 1GB for the largest item list, and it is usually only a handful of fields that are large, so 2GB is usually enough.

You can also simplify your database fields using log filters. For example, a filter that chops off the last octet of the IP address significantly reduces the number of unique IP addresses, dropping a huge 1GB item list under 100MB. Also, you can eliminate the troublesome field, if the field is not needed. To determine which field is the problem, build the database until it runs out of memory, and then examine the database directory (typically in LogAnalysisInfo/Databases) to see which files are large. Pay particular attention to the items folder—if files in the xyz folder are extremely large, then the xyz field is a problem.

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Finally, if you need to use less disk space or memory due to a quota on your Web server, try running Reporter on a local machine, where you dictate disk space constraints, and setting it to fetch the log data by FTP.

## Tuning the Database

This section provides two tables that describe the database tuning options. This is reference material for the procedures given in Chapter 4, "[Database Tuning](#)" on page 141.

Table 8-1. Database Tuning Options

Option	Description
Maximum main table segment size	<p>Default: 100 MB. This determines the maximum size of one segment of the main database table. Segments are files stored in the database directory; Reporter prefers to leave the entire table in a single file, but operating system limitations sometimes make that impossible. So when the table exceeds this size, it is split into multiple files, each smaller than this size. This reduces performance somewhat, but allows arbitrarily large datasets to be represented in a database.</p> <ul style="list-style-type: none"> <li>Guidelines:           <p>If you set this higher than the operating system allows, errors occur when processing very large datasets (10 million lines of log data corresponds roughly to 1GB of main table, depending on the database structure and other factors). Increasing this value also causes Reporter to require more memory as it is processing. If set this larger than the default, and your running system memory runs out or too low when building or updating the database, return to the default value.</p> </li> </ul>
Maximum cross-reference table segment size	<p>Default: 100 MB. This determines the maximum size of one segment of a cross-reference database table. Segments are files stored in the database directory; Reporter prefers to leave the entire table in a single file, but operating system limitations sometimes make that impossible. So when the table exceeds this size, it is split into multiple files, each smaller than this size. This reduces performance significantly, but allows arbitrarily large datasets to be represented in a database. If you set this higher than the operating system allows, errors occur when processing very large datasets. Most operating systems can handle files up to 2GB in size; a setting of 1GB should be safe in most cases, and should prevent segmentation for all but the largest datasets.</p> <p>Guidelines</p> <ul style="list-style-type: none"> <li>This setting should remain at 100 MB if the Build all cross-reference tables simultaneously setting is enabled (see <a href="#">Table 8-2</a>).</li> <li>Increasing this size causes Reporter to require more memory when it is building or updating the database, especially if you have also set it to build the cross-reference tables simultaneously. If your system memory runs out or is too low and you have increased this value from the default, try returning to the default value.</li> </ul>

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Table 8-1. Database Tuning Options

Option	Description
List cache size	Default: 100 MB. This option specifies the maximum memory used by the list cache. The list cache is used when tracking unique item lists (such as visitors) or database indices, to improve performance when lists get very large. Normally, lists are stored in a form that uses minimal memory, but does not allow items to be added quickly to the list in some situations. When a list appears to be slow, it is moved to the list cache, and expanded into a high-memory-usage, high-performance format. At the end of the operation, it is compacted into the low-memory-usage format again. When the cache is full, the least-used cached lists are compacted. Setting this option higher uses more memory during database cross-reference group building and index building, but allows more lists to be kept in the fast-access format—this usually improves performance, sometimes dramatically.
Maximum main table segment size to merge	Default: 10 MB. This option specifies the maximum size of a main table segment that can be merged while merging databases. If a segment is smaller than this, the merge occurs by adding each entry to the existing final segment of the main database table; if there are more than this number of entries, the merge occurs by copying the entire table and indices to the main database, creating a new segment. Copying is faster, but because it creates a new segment it fragments the database, slowing queries slightly. Therefore, setting a high value improves the query performance of the final database, at a cost in log processing performance.
Maximum xref segment size to merge	Default: 10 MB. This option specifies the maximum size of a cross-reference table segment that can be merged during a database merge operation (such as at the end of a multiprocessor database build). Segments larger than this are copied to the main database, and form their own segments; segments smaller than this are merged into the main database. Copies can be much faster than merges, but result in a more segmented main database, making queries slower. Therefore, setting this to a high value improves the query performance of the final database, at a cost in log processing performance.

Table 8-2. Database Tuning Build Options

Option	Description
Build all indices simultaneously	Default: not selected. This option affects the stage of log processing when indices are rebuilt. If this option is selected, Reporter scans through the main database table just once during the index rebuilding stage, building all indices simultaneously. If this option is not selected, Reporter builds each index separately, scanning through the main table once per index. Selecting this option can significantly speed up index building by combining all the table scans into one, but at the cost of much more memory because all indices must be in memory at the same time. <ul style="list-style-type: none"> <li>• Guidelines: <ul style="list-style-type: none"> <li>Generally safe to turn on (as most indices do not require a lot of memory), and will speed up the index building step.</li> </ul> </li> </ul>

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Table 8-2. Database Tuning Build Options

Option	Description
Build indices during log processing	<p>Default: not selected. This option affects the stages of log processing when indices are built. When this option is selected, indices are kept in memory during log processing, and are incrementally updated as new log lines are processed. When this option is not selected, indices are updated in a single stage after all log data has been processed. Selecting this option can speed database building because it eliminates the need to re-read the main database table after processing log data, but the cost more memory consumption because all indices must be kept in memory while log data is processed.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Disabled by default. If your server has at least 1 GB of RAM, and you are using a Log Processing Threads setting greater than 0, Blue Coat recommends enabling this option. Multi-thread database build/update actions usually become <i>disk-bound</i>—the child processes spend considerable time waiting for the parent process to send them log data to work on. This option lets you push more work onto the child processes, by having them build their own indices as they go</p>
Build all cross-reference tables simultaneously	<p>Default: not selected. This option affects the stage of log processing when cross-reference tables are rebuilt. If this option is selected, Reporter scans through the main database table just once during the cross-reference rebuilding stage, building all cross-reference tables simultaneously. If this option is false, Reporter builds each cross-reference table separately, scanning through the main table once per cross-reference table. Selecting this option speeds up cross-reference building by combining all the table scans into one, but uses much more memory because all cross-reference tables must be in memory at the same time.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Disabled by default. This setting might provide a significant performance improvement, but requires that your system have a fast underlying disk subsystem. Do not enable this setting if you are using IDE or older drive technologies.</p> <p>If this setting is enabled, keep the Maximum cross-reference table segment size setting at 100 MB (see "Tuning the Database" on page 184). See "Notes About Cross-Reference Tables" on page 189 for information about building cross-reference tables. Even then, if your dataset is large and complex, you might see that your system is running out of memory. If this option is enabled and you run out of RAM, try disabling it.</p>

## Section A: v7 Database Concepts

Table 8-2. Database Tuning Build Options

Option	Description
Build cross-reference tables and indices simultaneously	<p>Default: not selected. Before trying this option, try the <b>Build all cross-reference tables simultaneously</b> option. If that works, then this one may work as well. This option affects the stages of log processing when cross-reference tables indices are rebuilt. If this option is true, Reporter combines the index-building and cross-reference table building stages of log processing into one, scanning through the main database table once and building both indices and cross-reference tables. If this option is false, Reporter builds indices and cross-reference tables separately, scanning through the main table twice. Selecting this option might speed up index and cross-reference table building by combining the two table scans into one, but uses more memory because both the cross-reference tables and the indices must be in memory at the same time.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Disabled by default. In most deployments, enabling this setting is not recommended as it might cause frequent problems and the performance gained is not significant. This setting might cause problems on systems with inadequate disk/memory resources.</p> <ul style="list-style-type: none"> <li>• If this option and the <b>Build cross-reference tables during log processing</b> option are both enabled, system memory will almost certainly run out.</li> </ul>
Build cross-reference tables during log processing	<p>Default: not selected. This option affect the stages of log processing when cross-reference tables are built. When this option is selected, cross-reference tables are kept in memory during log processing, and are incrementally updated on the fly as new log lines are processed. When this option is not selected, cross-reference tables are updated in a single stage after all log data has been processed. Selecting this option might speed database building because it eliminates the need to re-read the main database table after processing log data, but can require much more memory because all cross-reference tables must be kept in memory while log data is processed.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Disabled by default. In most deployments, enabling this setting is not recommended. This setting might cause problems on systems with inadequate disk resources.</p> <p>With smaller datasets, profiles set to use Log Processing Threads greater than 0, and on servers with at least 2 GB of RAM, this option provides a significant performance boost; however, as the dataset grows larger, system memory will certainly run out.</p>

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Table 8-2. Database Tuning Build Options

Option	Description
Build cross-reference tables in threads	<p>Default: selected. This option affects multi-processor database builds. When this option is selected, each thread (processor) builds the cross-reference tables for its part of the database separately, and they are merged in a final stage to create the cross-reference tables for the main database. When this option is not selected, threads do not build cross-reference tables; the cross-reference tables are built in the final stage from the main table (which is merged from the threads' main tables). If your system has fast disk I/O, it is generally best to select this option, to spend as much time as possible using all processors. But if disk I/O is slow, the I/O contention between processes might slow both threads down to the degree that using multiple processors is actually slower than using one.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Enabled by default. This setting provides a significant performance improvement in multi-processor environments, but doubles the disk resource requirements. This setting might cause problems on systems with inadequate disk resources. Disable this if you are having issues with multi-processor builds that seem slow.</p> <p>If this setting is enabled, keep the Maximum cross-reference table segment size setting at 100 MB (see <a href="#">"Tuning the Database" on page 184</a>). See <a href="#">"Notes About Cross-Reference Tables" on page 189</a> for information about building cross-reference tables.</p>
Build indices in threads	<p>Default: selected. This option affects multi-processor database builds. When this option is selected, each thread (processor) builds the indices for its part of the database separately, and they are merged in a final stage to create the indices for the main database. When this option is not selected, threads do not build indices; the indices are built in the final stage from the main table (which is merged from the threads' main tables). If your system has fast disk I/O, select this option to spend as much time as possible using all processors. But if disk I/O is slow, the I/O contention between processes slows both threads down to the point that using multiple processors is actually slower than using one.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Enabled by default. This setting doubles the memory requirements for building indices during multi-processor database operations, but this is usually not a significant amount; if your server has at least 512 MB of RAM, you should not experience problems with this setting. For information about the Log processing threads setting, which is available only in the Enterprise version, see <a href="#">"Log Processing" on page 131</a>.</p>
Build indices in memory	<p>Default: selected. When this option is selected (the default), database indices are held entirely in memory during database builds. When this option is not selected, database indices are mapped to files on the disk. Keeping the indices in memory can increase the performance of the index building part of database builds, sometimes by a factor of 3x or more, but requires enough memory to hold the indices.</p> <ul style="list-style-type: none"> <li>• Guidelines</li> </ul> <p>Enabled by default. This setting is the reason that indices build quickly, and Blue Coat recommends this remain enabled. Blue Coat recommends disabling the other settings with build indices rather than disabling this setting.</p>

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**Notes About Cross-Reference Tables**

With cross-reference table settings, you must make a choice between two settings: faster log processing performance or faster database queries. Cross-reference tables are very complex, and use a lot of system resources during calculation. Each cross-reference table applies to the *entire* database; therefore, longer, complex fields (for example, URL-related or others with a large number of unique values) require larger cross-reference tables. The default 100 MB segment size allows Reporter to build all cross-reference tables simultaneously during log processing on a system with SCSI disk resources. The trade-off here is database queries—for large datasets, Reporter needs to merge cross-reference tables before creating a query. This can take anywhere from one minute to a half-hour depending on the particular cross reference and the size of the database. The alternative is to set cross-reference table segment size to a large size: as much as 1GB or more. With this cross-reference table segment size, most queries are much faster because the merge is avoided. However, with the setting set to this size, you cannot enable the simultaneously or in threads options.

## Section B: Using Log Filters

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# Section B: Using Log Filters

For v7 profiles, Blue Coat Reporter provides a variety of log filters that let you selectively eliminate portions of your log data from the statistics, or convert values in log fields.

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**Note:** Do not confuse log filters with the filters that appear in reports; log filters affect how the log data is processed, and report filters affect which parts of the database data are displayed.

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There are many reasons to filter the log data, including:

- Not interested in seeing the hits on files of a particular type (for example, image files, in Web logs).
- Not interested in seeing the events from a particular host or domain (for example, Web log hits from your own domain, or e-mail from your own domain for mail logs).
- For Web logs, not interested in seeing hits that did not result in separate page views, like 404 errors (file not found) or redirects.

The Reporter default filters automatically perform the most common filtering (categorizing image files such as hits but not page views, strip off page parameters, and more) but you will add or remove filters as you fine-tune your statistics.

## About Filters

Filters are arranged in a sequence, like a computer program, starting with the first filter and continuing down through the last filter. Each time Reporter processes a log entry, it runs the filters in order, starting with the first one. Reporter applies that filter to the log entry. The filter can accept the log entry by returning *done*, in which case it is immediately selected for inclusion in the statistics. If a filter accepts an entry, the other filters are not run; once a filter accepts, the acceptance is final. Alternately, the filter can reject the entry by returning *reject*, in which case it is immediately discarded, without consulting any filters farther down the line. Finally, the filter can neither accept nor reject, but instead pass the entry on to another filter (by returning nothing); in this case, and only in this case, another filter is run.

In other words, every filter has complete power to pass or reject entries, provided the entries make their way to that filter. The first filter that accepts or rejects the entry ends the process, and the filtering is done for that entry. A filter gets to see an entry only when every filter before it in the sequence has neither accepted nor rejected that entry. So the first filter in the sequence is the most powerful, in the sense that it can accept or reject without consulting the others; the second filter is used if the first has no opinion on whether the entry should be accepted or rejected, etc.

**Note:** Both regular expression pattern filters and DOS-style pattern filters are necessary in some cases, but they should be avoided when possible because pattern filters can be considerably slower than the simpler filter types like *ends with* or *contains*.

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## Hits

Reporter distinguishes between *hits* and *page views* for most types of logs. A hit is one access to the Web server; for example, one request for a file (it may not actually result in the transfer of a file; for instance, if it's a redirect or an error). A page view is an access to a page (rather than an image or a support file such as a style sheet). For some Web sites and

## Section B: Using Log Filters

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some types of analysis, image files, .class files, .css files, and other files are not as important as HTML pages—the important number is how many pages were accessed, not how many images were downloaded. For other sites and other types of analysis, all accesses are important. Reporter tracks both types of accesses. When a filter accepts an entry, it decides whether it is a hit or a page view by setting the hits and page\_views fields to 1 or 0. Hits are tallied separately, and the final statistics can show separate columns for hits and page views in tables, as well as separate pie charts and graphs. Both hits and page views contribute to bandwidth and visitor counts, but the page view count is not affected by hits on image files and other support files.

### Log Filter Syntax

Log filters can use all syntax described in Table 8-3 (command line operators) and Table 8-4 (built-in routines), and also support a few extra variables. Specifically, log filters can refer to log fields by name, so a reference to date\_time in a log filter is a reference to the value of the date\_time field in the log entry that is currently being processed. This can be used either to get or set values; for example, if (page eq '/index.html') then 'reject' checks the current log entry's page field to see if it is /index.html, and rejects the log entry if it is; and page = '/index.html' sets the page field of the current log entry to /index.html. Log filters can also use the special variable entire\_line, whose value is the entire current line of log data.

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**Note:** The backtick (`) is not a supported character.

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Table 8-3. Command Line Operators

Operator	Purpose
==	Compares two numbers; true if they are equal; for example, 1 == 1 is true.
!=	Compares two numbers; true if they are not equal; for example, 1 != 1 is false.
<=	Compares two numbers; true if the left number is less than or equal to the right; for example, 1 <= 2 is true, and so is 1 <= 1.
>=	Compares two numbers; true if the left number is greater than or equal to the right; for example, 2 >= 1 is true, and so is 1 >= 1.
<	Compares two numbers; true if the left number is less than the right; for example, 1 < 2 is true, but 1 < 1 is false.
>	Compares two numbers; true if the left number is greater than the right; for example, 2 > 1 is true, but 1 > 1 is false.
eq	Compares two strings; true if they are equal; for example, "a" eq "a" is true.
ne	Compares two strings; true if they are not equal; for example, "a" ne "a" is false.
le	Compares two strings; true if the left string is lexically less than or equal to the right; for example, "a" le "b" is true, and so is "a" le "a".

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Table 8-3. Command Line Operators

Operator	Purpose
ge	Compares two strings; true if the left string is lexically greater than or equal to the right; for example, "b" ge "a" is true, and so is "a" ge "a".
lt	Compares two strings; true if the left string is lexically less than the right; for example, "a" lt "b" is true, but "a" lt "a" is false.
gt	Compares two strings; true if the left string is lexically greater than the right; for example, "b" gt "a" is true, but "a" gt "a" is false.
or	True if either left or right values, or both, are true; for example, true or true is true; true or false is true.
and	True if both left and right values are true; for example, true and true is true; true and false is false.
+	Adds the right value to the left value; for example, 1+2 is 3.
-	Subtracts the right value from the left value; for example, 2-1 is 1.
*	Multiplies the right value and the left value; for example, 2*3 is 6.
%	Performs module 0 division, returning the remainder, of the left value by the right value; for example, 5%2 is 1 and 6%2 is 0.
/	Divides the left value by the right value; for example, 12/4 is 3.
+=	Adds the right value numerically to the left variable; for example, x += 1 adds 1 to x.
-=	Subtracts the right value numerically from the left variable; for example, x -= 1 subtracts 1 from x.
++	Adds 1 numerically to the left variable; for example, x++ adds 1 to x.
--	Subtracts 1 numerically from the left variable; for example, x-- subtracts 1 from x.
.	Concatenates the right string to the end of the left string; for example, "a". "b" is "ab".
.=	Concatenates the right value to the left variable; for example, x .= "X" concatenates "X" to the end of x.
=	Assigns the right hand side to the left hand side; for example, x = 1 assigns a value of 1 to the variable x.
!	Performs a boolean negation of its unary parameter; for example, !true is false, and !false is true.
file	Rather than create long lists within filters, reference a file that contains the list. See the example " <a href="#">Example: Reference a File</a> " on page 194.
not	Same as !.
matches	(Not valid with v8 profiles) True if the left value matches the wildcard pattern specified by the right value.

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Table 8-3. Command Line Operators

Operator	Purpose
matches\_regexp	(Not valid with v8 profiles) True if the left value matches the regular expression specified by the right value. Note: Regular expression calculations during log processing can affect performance.
\$	Treats its unary string parameter as a variable name, and evaluates the value of the variable; for example, if the value of the variable named "variable" is 1, then the value of the expression <code>\$("variable")</code> is 1. Important—this uses the <i>value</i> of the expression immediately after it as the name of the variable, so if variable <code>x</code> has value <code>"valueX"</code> then <code>\$x</code> means the same as <code>\$("valueX")</code> ; i.e. it is the value of the variable <code>valueX</code> , not the value of the variable <code>x</code> . To get the value of the variable <code>x</code> , just use <code>x</code> , not <code>\$x</code> .

Table 8-4. Built-in Routines

Routine	Purpose
convert_escapes(string M)	This converts percent-sign escape sequences in <code>M</code> (for example, converting <code>%20</code> to a space), and returns the converted value. For instance, <code>convert_escapes("some%20string")</code> returns "some string".
length(string S)	The value of this expression is the length of the string <code>S</code> .
substr(string V, int S, int L)	The value of this expression is the substring of the string <code>V</code> , starting at index <code>S</code> and of length <code>L</code> . The <code>L</code> parameter is optional, and if it is omitted, the value of the expression is the substring of <code>V</code> starting at <code>S</code> and continuing to the end of <code>V</code> .
split(string s, string divider, string resultnode)	This splits the string <code>s</code> on the divider specified in <code>divider</code> , and puts the resulting sections into the node specified by <code>resultnode</code> . For instance, <code>split("Hello,you,there", ",", "volatile.splitresult")</code> will set <code>volatile.splitresult.0</code> to "Hello", <code>volatile.splitresult.1</code> to "you", and <code>volatile.splitresult.2</code> to "there".
starts_with(string S, string T)	The value of this expression is true if the string <code>S</code> starts with the value of the string <code>T</code> .
ends_with(string S, string T)	The value of this expression is true if the string <code>S</code> ends with the value of the string <code>T</code> .
contains(string S, string T)	The value of this expression is true if the string <code>S</code> contains the value of the string <code>T</code> .

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Table 8-4. Built-in Routines

Routine	Purpose
replace_all(string S, string T, string R)	The value of this expression is the value of S after all occurrences of T have been replaced with R.
replace_first(string S, string T, string R)	The value of this expression is the value of S after the first occurrence of T has been replaced with R. If T does not occur in S, the value of this expression is S.
replace_last(string S, string T, string R)	The value of this expression is the value of S after the last occurrence of T has been replaced with R. If T does not occur in S, the value of this expression is S.
lowercase(string S)	The value of this expression is the value of S after all uppercase letters have been converted to lowercase.
uppercase(string S)	The value of this expression is the value of S after all lowercase letters have been converted to uppercase.
matches_regular_expression(string S, string R)	The value of this expression is true if the string S matches the regular expression R. If it matches, the variables \$0, \$1, \$2, ... are set to the substrings of S that match the parenthesized subexpressions RE.
index(string S, string T)	The value of this expression is the index (character position) of the substring T in the string S. If T is not a substring of S, the value of this expression is -1.
last_index(string S, string T)	The value of this expression is the index (character position) of the final occurrence of substring T in the string S. If T is not a substring of S, the value of this expression is -1.
set_log_field(string N, string V)	The sets the value of the log field N of the current log entry to V.
capitalize(string V)	This capitalizes the value V, using the capitalization rules in the language module.
pluralizes(string V)	This pluralizes the value V, using the pluralization rules in the language module.

## Examples

### Example: Reference a File

The file operator allows an administrator to reference a file that contains a list of entries. Rather than composing a complex regular expression or manually entering a long string, such multiple `within item OR within item OR` and so on, create a text file with each entry on a new line. For example, you want a list of servers IP addresses to included in a report:

## Section B: Using Log Filters

File name: Server Farm A IPs

```
192.168.2.1
192.168.2.2
192.168.2.3
```

Or you want to exclude a group of users:

File name: Excluded E-staff Users

```
John
Mark
Steve
Sally
```

Add list files under the LogAnalysisInformation folder. They can be stored in subfolders under the LogAnalysisInformation folder, which allows you to organize lists according to content type (subfolders of these subfolders are also permissible).

The following examples illustrate how to employ the `file` operator:

- CLI command (includes list of IPs):

```
bcReporterCL.exe -p [profile_name] -a [action]
[associated_action_arguments] -rn [report_name] -f "(c_ip file
'filter_files/Server Farm A IPs')"
```

- Filter Expression in Profile (excludes list of users):

```
filter = {
    expression = "(c_ip file not 'filter_files/Excluded E-staff
Users')"
} # filter
```

- In the Management Console dialog (Config>Reports/Reports Menu>Edit link):

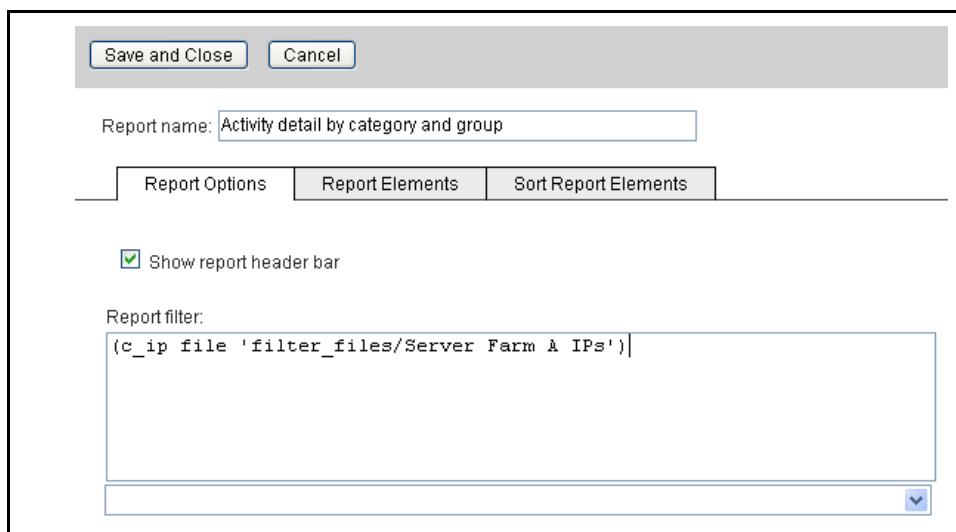


Figure 8-1. Adding a file operator filter to a report.

### Notes

- There is no stated limit to the size of the list, but the operator was tested for 3500 entries, which is comparable to a large office size.

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- On the dialog (Management Console option), the name of the file appears as the argument for the specific field that it is being compared against. If a change is made on this form and then saved, confirm that the appropriate operator, `file`, is still part of the filter expression.

### Example: Filtering Out GIFs

The following filter rejects GIF files in Web logs:

```
if (file_type eq 'GIF') then "reject";
```

### Example: Filtering Out Domains or Hosts

The following filter ignores hits from your own Web log domain:

```
if (ends_with(cs_host, ".mydomain.com")) then "reject";
```

You can use a similar filter to filter out hits from a particular hostname:

```
if (cs_host eq "badhost.somedomain.com") then "reject";
```

This type of filter can be used on any field, to accept and reject based on any criteria you wish.

Field names that appear in filters (like `file_type` or `hostname` above) should be exactly the field names as they appear in the profile (not the field label, which is used for display purposes only and might be something like *file type*). Field names never contain spaces, and are always lowercase with underscores between words.

### Example: Filtering Out Pages or Directories

The host filter above can be modified slightly to filter out entries based on any field. One common example is if you want to filter out hits on particular pages, for instance to discard hits from worm attacks. A filter like this:

```
if (starts_with(page, "/default.ida?")) then "reject";
```

rejects all hits on `/index.ida`, which eliminates many of the hits from the Code Red worm.

A filter like this:

```
if (!starts_with(page, "/directory1/")) then "reject";
```

rejects all hits except those on `/directory1/`, which can be useful if you want to create a database that focuses on only one directory (sometimes useful for ISPs).

### Example: Filtering Out Events before a Particular Date Range

The following filter rejects entries before 2007:

```
if (date_time < '01/Jan/2007 00:00:00') then "reject";
```

### Example: Filtering Out Events Older than a Particular Age

The following filter rejects entries older than 30 days:

```
(60*60*24*30 is the number of seconds in 30 days):  
if (date_time < (now() - 60*60*24*30)) then "reject";
```

### Example: Filtering Out Events outside a Particular Date Range

The following filter rejects all entries except those in 2005:

## Section B: Using Log Filters

---

```
if ((date_time < '01/Jan/2006 00:00:00') or (date_time >= '01/Jan/2007  
00:00:00')) then "reject";
```

### Advanced Example: Converting the Page Field to Strip Off Parameters

The parameters on the page field (the part after the ?) are often of little value, and increase the size of the database substantially. Because of that, Reporter includes a default filter that strips off everything after the ? in a page field (if you need the parameters, delete the filter, but do so at the risk of causing database builds to fail on large datasets). Reporter uses a special *replace everything after* filter for this use, but for the purpose of this example, the following is another filter that accomplishes the same thing (but slower, because pattern matching is a fairly slow operation):

```
if (contains(page, "?")) then if (matches_regexp(page, "^(.*)? .*$"))  
then page = "$1(parameters)";
```

This checks if the page contains a question mark; if it does, it matches the page to a regular expression with a parenthesized subexpression that is set to just the part before and including the question mark. The variable \$1 is automatically set to the first parenthesized section, and this variable is used to set the page field to the part before and including the question mark, with (parameters) appended.

For example, if the original value was /index.html?param1+param2, the result is /index.html?(parameters). That is the desired result—the parameters have been stripped off, so all hits on index.html with parameters have the same value, regardless of the parameters—and that reduces the size of the database.

The filters look the same in profile files, so you can also edit a filter in the profile file using a text editor. Use a backslash (\) to escape quotes, dollar signs, backslashes, and other special characters if you edit the profile file directly.



## *Appendix C: Configuration File Reference*

This section provides concept and reference information to assist advanced Reporter users in customizing profiles outside of the options available through the user interface. This section contains the following sections:

- "Section A: About Configuration Files" on page 200.
- "Section B: Profile Options" on page 203
- "Section C: Preference Options" on page 214.

## Section A: About Configuration Files

---

### Section A: About Configuration Files

All Blue Coat Reporter options are stored in text files called *configuration files* (or *profile files* if they contain the options of a particular profile).

---

**Note:** You only need to know about profile files if you want to edit them directly (which is usually faster than using the Web interface), use them from the command line, or if you need to change options that are not available through the Web interface.

---

### Creating Configuration Files

In configuration files, each option is given in the format:

```
name = value
```

and options can be grouped like this:

```
groupname = {  
    name1 = value1  
    name2 = value2  
    name3 = value3  
} # groupname
```

Within this group, you can refer to the second value using the syntax `groupname.name2`. Groups can be within groups like this:

```
groupname = {  
    name1 = value1  
    subgroupname = {  
        subname1 = subvalue1  
        subname2 = subvalue2  
    } # subgroupname  
    name3 = value3  
} # groupname
```

Hash characters (#) are comment markers; everything after a # is ignored to the end of the line. Multiline comments can be created using /\* before the command and \*/ after it. In this case, the subgroup name is listed as a comment on the closing bracket; this is customary, and improves legibility, but is not required. In this case, `subvalue2` can be referred to as `groupname.subgroupname.subname2`.

There are no practical limits to the number of levels, the number of values per level, the length of names or labels, or anything else.

In addition to groupings within a file, groupings also follow the directory structure on the disk. The LogAnalysisInfo folder is the root of the configuration hierarchy, and files and directories within it function exactly as though they were curly-bracket groups like the ones above. For example, the `preferences.cfg` file (`cfg` stands for configuration group) can be referred to as `preferences`; the `server` group within `preferences.cfg` can be referred to as `preferences.server`, and the `web_server_port` option within the `server` group can be referred to as `preferences.server.web_server_port`. For example, in a Reporter `start up in webserver mode` command line, you can change the default port:

```
bcreport -ws t -preferences.server.web_server_port 8111
```

Through this type of hierarchical grouping by directories within LogAnalysisInfo, and by curly-bracket groups within each configuration file, all configuration options in the entire hierarchy can be uniquely specified by a sequence of group names, separated by dots, and ending with an option name. All options in Reporter are specified in this way, including

## Section A: About Configuration Files

---

profile options, preferences, language module (localization) variables, users, scheduling options, documentation, spider/worm/search engines information, command line and internal options, and more.

Reporter creates a profile file in the profiles subfolder of the Reporter folder when you create a profile from the Web interface. Profile files can also be created using a text editor, though the large number of options makes this a difficult task to do manually—it is best scripted, or done by copying an existing profile file and editing it. To use files as profile files, you must put them in the profiles folder.

Any profile that can be specified in a profile file can also be specified in the command line interface (CLI) by using the same profile options. CLI syntax is longer if full profile names are used because each option on the command line must be specified using the full `group1.group2.group3.option`, when in the profile it appears only as option (within the groups). However, most options have shortcuts; see the option documentation for each option's shortcut (All Options). For information on using the CLI, see "[Using Reporter from the Command Line Interface](#)" on page 219.

To see a sample profile file, use the Web browser interface to create a profile, and then examine the file in the profile folder.

## Creating and Editing Profile Files

Reporter stores profile options in profile files, in the profiles folder of the LogAnalysisInfo folder.

Profile files are structured in groups of options, with subgroups inside some groups. For instance, a profile might start like this (for simplicity, only some options are listed):

```
corpusers = {
    database = {
        options = {
            database_type = "internal"
            automatically_update_when_older_than = "0"
            lock_database_when_in_use = "true"
            prompt_before_erasing_database = "true"
        } # options
        tuning = {
            hash_table_starting_size = "4096"
            hash_table_expansion_factor = "2"
        } # tuning
    } # database
    ...
}
```

This profile is named `corpusers`, and the first group shows the database group, containing all database options for the profile. Within that group, there are groups for database options and database tuning. You can edit this file with a text editor to change what the profile does—all options available in the Web interface are also available by editing the text file. Some advanced users do most of their profile editing with a text editor, rather than using the Web interface. Advanced users also often write scripts which edit or create profile files automatically, and then call Reporter using the command line to use those profiles.

## Section A: About Configuration Files

---

You can still edit the profile from the Management Console, even to make modifications to profiles you have changed with a text editor.

---

**Important:**

The Reporter Management Console re-creates the profile file using its own formatting; therefore, do not use it if you have added your own comments or changed the text formatting.

---

[Section B: Profile Options](#)

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## Section B: Profile Options

This section documents all the options available in profiles that can be modified. These generally consist of advanced settings that are not currently accessible from Reporter's administrative interface. Profiles can be found in the Reporter program directory, in the \LogAnalysisInfo\profiles\ folder.

Unless otherwise noted, these apply only to v7 profiles.

---

**Important:**

Profile options can be used on the command line only if a profile is specified with -p.

---

### Default log date year

The year to use (for example, 2006) if the date format in the log data has no year information.

#### Long Description

This option is used if the log date format is one of the few formats that does not include year information. Reporter will use this option's value as the year. For example, if the date in the log is May 7 and this option value is 2006, then Reporter assumes that the log entry is for May 7, 2006. The value of this option should be a four-digit integer between 1970 and 2030, or thisyear—if the value of this option is thisyear, Reporter fills in the current year (the year in which the log data is processed) as the year.

#### Configuration Node Name

`log.format.default_log_date_year`

#### CLI Shortcut

`dldy`

### Log data format

The format of the log data.

#### Long Description

Specifies the name of the log format of the log data. When this appears in a log format description file, it defines the name of the format being described. When this appears in a profile, it has no effect other than providing the name of the log format plug-in used to create the profile. Reporter sets this option when a new profile is created.

#### Configuration Node Name

`log.format.format_label`

#### CLI Shortcut

`f1`

### Log entry pool size

The number of log entries Reporter can work on simultaneously.

## Section B: Profile Options

---

### Long Description

This controls the number of log entries Reporter can work on at a time. Increasing this value can improve performance of DNS lookup. However, it will also use more memory.

### Configuration Node Name

`log.processing.log_entry_pool_size`

### CLI Shortcut

`eps`

## Log reading block size

Size in bytes of the blocks that are read from the log.

### Long Description

This controls the size in bytes of the blocks that are read from the log data. Reporter reads the log data in chunks, processing each chunk completely before continuing to the next. Larger settings will reduce the number of disk accesses, potentially speeding processing time, but will also require the specified number of bytes of memory.

### Configuration Node Name

`log.processing.read_block_size`

### CLI Shortcut

`rbs`

## Skip processed files on update

Skip files that have already been processed (judging by their filenames) during a database update or add operation.

### Long Description

This controls whether Reporter uses the filenames of log files to determine if the files have already been added to the database. If this option is checked (true), then Reporter will skip over any log files in the log source if it has already added a file with that name to the database. This can speed processing, especially when using FTP, because Reporter does not have to download or process the file data and use its more sophisticated checking mechanism to see if the data has been processed. However, it will not work properly if you have log files in your log source that are growing from update to update, or if you have log files with the same name but that contain different data. If this option is off, Reporter will handle those situations correctly, but it will have to download and examine the log data of all files to do it.

### Configuration Node Name

`log.processing.skip_processed_filenames_on_update`

### CLI Shortcut

`spfod`

[Section B: Profile Options](#)

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## Log processing threads

The number of simultaneous threads to use to process log data.

### Long Description

This specifies the number of threads of execution to use to process log data. The threads will execute simultaneously, each processing a portion of the log data, and at the end of processing, their results will be merged into the main database. On systems with multiple processors, using one thread per processor can result in a significant speedup of using a single thread.

### Configuration Node Name

`log.processing.threads`

### CLI Shortcut

`lpt`

## Actions email address(es) (v7 and v8)

The address(es) that Reporter should send e-mail to whenever an action completes (for example, the database is built).

### Long Description

This specifies the address or addresses Reporter should send e-mail to whenever an action occurs, for instance when the database finishes rebuilding, updating, expiring, or when HTML files are done being generated. If this option is non-empty, Reporter will send a brief description of what it just finished doing, using the SMTP server specified by SMTP Server Hostname. Multiple recipients can be specified with commas, for example, "user1@mydomain.com, user2@mydomain.com, user3@mydomain.com". If this option is empty, Reporter will not send e-mail.

### Configuration Node Name

`network.actions_email_address`

### CLI Shortcut

`aea`

### See Also

["SMTP Server Hostname \(v7 and v8\)" on page 209](#)

## DNS Server

The hostname or IP address of the DNS server to use to look up IP addresses in the log data. For v8 profiles, as DNS relates to reports.

### Long Description

This specifies the DNS server to use when looking up IP addresses in the log data (when Look up IP numbers using domain nameserver (DNS) is true). This can be either a hostname or an IP address of the DNS server. If this option is empty, and Reporter is running on a

## Section B: Profile Options

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UNIX-type operating system, it will use the system's default primary DNS server. On all other platforms (including Windows), this option must be set when Look up IP numbers using domain nameserver (DNS) is true.

### Configuration Node Name

network.dns\_server

### CLI Shortcut

ds

## DNS timeout (seconds)

Amount of time to wait for DNS response before timing out. For v8 profiles, as DNS relates to reports.

### Long Description

This option controls the amount of time Reporter waits for a response from a DNS (domain nameserver) when attempting to look up an IP number during log processing. The value is in seconds; so a value of 30 means that Reporter will give up after waiting 30 seconds for a response. Setting this to a low value might speed up your log processing, but fewer of your IP numbers will be resolved successfully.

### Configuration Node Name

network.dns\_timeout

### CLI Shortcut

dt

### See Also

"Look up IP numbers using domain nameserver (DNS)" below

## Look up IP numbers using domain nameserver (DNS)

Whether to look up IP numbers using a DNS, to try to compute their hostnames. For v8 profiles, as DNS relates to reports.

### Long Description

When this is true (checked), Reporter attempts to look up the full domain name of IPs that appear in the log as IP numbers ('reverse DNS lookup'), using the DNS server specified by the DNS Server and Secondary DNS Server options. The lookup is performed as the log data is read, so if you change this option, you will need to rebuild the database to see the effects. Looking up the IP numbers provides a more human-readable format for the IP hosts, but requires a network access as frequently as once per line, so it can take much longer than leaving them as IP numbers. There are several ways to improve the performance of DNS lookup. The most important is to make sure Reporter has a fast network connection to your DNS server; you can usually do this by running Reporter on your Web server (as a CGI program, if necessary), rather than on your desktop system. It might also be faster to configure the logging server to perform the domain name lookups, rather than having Reporter do it.

## [Section B: Profile Options](#)

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### **Configuration Node Name**

`network.look_up_ip_numbers`

### **CLI Shortcut**

`luin`

### **See Also**

["Never look up IP numbers using domain nameserver" on page 214](#) and "Maximum Simultaneous DNS Lookups" below

## [Maximum Simultaneous DNS Lookups](#)

The maximum number of IP addresses that Reporter will attempt to lookup at the same time. For v8 profiles, as DNS relates to reports.

### **Long Description**

This specifies the maximum number of IP addresses that will be looked up simultaneously. Setting this to a high value might increase DNS lookup performance, but if you set it too high, you might exceed operating system limitations, and the log processing could fail.

### **Configuration Node Name**

`network.maximum_simultaneous_dns_lookups`

### **CLI Shortcut**

`msdl`

## [Report email address\(es\)](#)

The address(es) that Reporter should send statistics reports to.

### **Long Description**

This specifies the address(es) Reporter should send e-mail statistics reports to, when the reports are emailed from the Web interface, or the Scheduler sends a report, or when a report is sent using the command line. Multiple recipients can be specified with commas, for example, `user1@mydomain.com, user2@mydomain.com, user3@mydomain.com`. One report will be emailed, with HTML formatting and embedded images, to the specified address.

### **Configuration Node Name**

`network.report_email_address`

### **CLI Shortcut**

`rea`

## [Report to email \(v7 and v8\)](#)

The name of the report that Reporter should send by e-mail.

## Section B: Profile Options

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### Long Description

This specifies the name of the report Reporter should send when it sends a report by e-mail.

### Configuration Node Name

`network.report_to_email`

### CLI Shortcut

`rte`

### See Also

["Report email address\(es\)" on page 207](#)

## Return email address (v7 and v8)

The return e-mail address that Reporter should use when sending e-mail

### Long Description

This specifies the return address Reporter should specify when sending e-mail. Unless a valid address is specified here, replies to Reporter's automatically generated emails will bounce.

### Configuration Node Name

`network.return_address`

### CLI Shortcut

`ra`

### See Also

["SMTP Server Hostname \(v7 and v8\)" on page 209](#)

## Secondary DNS Server

The hostname or IP address of the DNS server to use to look up IP addresses in the log data, if the primary DNS server fails.

### Long Description

This specifies a secondary DNS server to use when looking up IP addresses in the log data (when Look up IP numbers using domain nameserver (DNS) is true). This can be either a hostname or an IP address of the DNS server. If this option is empty, and Reporter is running on a UNIX-type operating system, it will use the system's default secondary DNS server. On all other platforms (including Windows), this option must be set when Look up IP numbers using domain nameserver (DNS) is true. This is used only if the primary DNS server (DNS Server) does not respond.

### Configuration Node Name

`network.secondary_dns_server`

---

## Section B: Profile Options

---

### CLI Shortcut

sds

### See Also

"DNS Server" on page 205.

## SMTP Server Hostname (v7 and v8)

The hostname of an SMTP (sendmail) server Reporter should use when sending e-mail.

### Long Description

This specifies the hostname of an SMTP server Reporter should use when sending e-mail. This can either be just the hostname, in which case the default SMTP port of 25 is used, or it can be `hostname:port` (for example, the hostname, followed by a colon, followed by the port number), in which case `hostname` is used as the SMTP hostname, and `port` is used as the SMTP port.

### Configuration Node Name

`network.smtp_server_hostname`

### CLI Shortcut

ssh

## Use TCP to Communicate with DNS servers

True if Reporter should use TCP (rather than the more standard UDP) to communicate with DNS servers. For v8 profiles, as DNS relates to reports.

### Long Description

This specifies whether Reporter should use the TCP protocol when communicating with DNS servers. DNS servers more commonly communicate using UDP, and UDP is generally faster, but in some cases it could be preferable to use TCP instead (for instance, if your DNS server is accessible only by TCP due to its configuration or network location).

### Configuration Node Name

`network.use_tcp_for_dns`

### CLI Shortcut

utfd

## Number thousands divider (v7 and v8)

A divider to separate thousands in displayed numbers.

## Section B: Profile Options

---

### Long Description

This option specifies the value to separate thousands in displayed numbers. For example, if this option is empty, a number might be displayed as 123456789. If the value of this option is a comma (,), the number is 123,456,789. If it is a period (.), the number is 123.456,789. If it is a space, the number is 123 456 789. This can be used to localize number divisions.

### Configuration Node Name

`output.number_thousands_divider`

### CLI Shortcut

`ntd`

## Number of seconds between progress pages (v7 and v8)

The number of seconds between progress pages.

### Long Description

This controls the number of seconds that elapse between the progress pages or command-line progress indicators, which appear when the progress display is enabled.

The progress (p) option controls whether a progress indicator appears during long operations (such as reading a large log file).

### Configuration Node Name

`output.progress_page_interval`

### CLI Shortcut

`ppi`

### See Also

["Report Filter Syntax" on page 228.](#)

## Allow viewers to rebuild/update database

Allow all statistics viewers to rebuild/update the database.

### Long Description

When this option is checked (true), anyone viewing the statistics for the profile can rebuild or update the database, using the rebuild/update links in the reports. When this option is unchecked (false), only administrators will be able to use those links—the links will not be visible for non-administrative viewers.

### Configuration Node Name

`security.allow_viewers_to_rebuild`

### CLI Shortcut

`avtr`

Section B: Profile Options

---

## Cache reports (v7 and v8)

True if reports should be cached for faster repeat display.

### Long Description

This controls whether reports are cached on disk. When this option is true, reports are saved on the disk, so if the exact same report is requested again later, it can be quickly generated without requiring database access or report generation. When this option is false, reports are regenerated every time they are viewed. Caching uses additional disk space, so it might be useful to turn this off if disk space is at a premium.

### Configuration Node Name

`statistics.miscellaneous.cache_reports`

### CLI Shortcut

`cr`

## Session timeout (seconds)

The interval after which events from the same user are considered to be part of a new session.

### Long Description

This controls the amount of time a session can be idle before it is considered complete. This affects the display of session-based statistics reports such as the *sessions overview*, and the entry/exit page views. Sessions are considered ended when a user has not contributed an event in the number of seconds specified here. For instance, if this interval is 3600 (one hour), then if a user does not contribute an event for an hour, the previous events are considered to be a single session, and any subsequent events are considered to be a new session.

### Configuration Node Name

`statistics.miscellaneous.session_timeout`

### CLI Shortcut

`st`

## Maximum session duration (seconds)

The maximum duration of a session; longer sessions are discarded from the session information.

### Long Description

This controls the maximum length of a session in the session information. This affects the display of session-based statistics reports such as the *sessions overview*, and the entry/exit page views. Sessions longer than the value specified will be ignored, and will not appear in the session information. This option is useful because some large ISPs and other large companies use Web caches that effectively make all hits from their customers to appear to be coming from one or just a few computers. When many people are using these caches at the same time, this can result in the intermixing of several true sessions in a single

## [Section B: Profile Options](#)

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apparent session, resulting in incorrect session information. By discarding long sessions, which are probably the result of these caches, this problem is reduced. Also, long visits are often the result of spider visits, which are usually not useful in session reporting. The problem with caches can be eliminated entirely by configuring your Web server to track true sessions using cookies, and then configuring Reporter to use the cookie value (rather than the hostname field) as the visitor ID. Setting this option to 0 removes any limit on session duration, so all sessions will be included.

### **Configuration Node Name**

```
statistics.miscellaneous.maximum_session_duration
```

### **CLI Shortcut**

msd

## [First weekday](#)

The first weekday of the week (0=Sunday, 1=Monday, ...).

### **Long Description**

This controls the weekday that is considered the first day of the week. The first weekday will be the first column in calendar months and it will be the first row in weekday tables. Use 0 for Sunday, 1 for Monday, 2 for Tuesday, 3 for Wednesday, 4 for Thursday, 5 for Friday, and 6 for Saturday.

### **Configuration Node Name**

```
statistics.miscellaneous.first_weekday
```

### **CLI Shortcut**

fw

## [Marked weekday](#)

The weekday that appears marked in calendar months displays (0=Sunday, 1=Monday, ...).

### **Long Description**

This controls the weekday that appears in a different color in calendar months displays. The marked weekday will be displayed in a different color than the other weekdays, for instance, weekday = 0 will display the "S" for Sunday in red color. Use 0 for Sunday, 1 for Monday, 2 for Tuesday, 3 for Wednesday, 4 for Thursday, 5 for Friday, and 6 for Saturday.

### **Configuration Node Name**

```
statistics.miscellaneous.marked_weekday
```

### **CLI Shortcut**

mw

Section B: Profile Options

---

**Log entry name (v7 and v8)**

The word to use to describe a log entry.

**Long Description**

This option specifies the word used to refer to a single log entry. For example, for Web log, this might be `hit`, or for e-mail logs it might be `message`. This option is set in the log format plug-in, and does not need to be changed unless you are creating a new plug-in. This will appear in various places in statistics pages.

**Configuration Node Name**

`statistics.miscellaneous.entry_name`

**CLI Shortcut**

`en`

**Expand paths greater than this**

The number of sessions through a path that causes the path to be expanded with “expand all” or in offline (static) statistics.

**Long Description**

This is the number of sessions that are required for a path to be expanded in the paths view when `Expand all` is clicked in statistics, or in offline (Generate HTML Files) statistics. The paths view appears with all path segments (arrows) larger than this value expanded; all paths smaller than this value is collapsed. If you set this value too small, your paths page could be extremely large.

**Configuration Node Name**

`statistics.sizes.expand_paths_greater_than`

**CLI Shortcut**

`epgt`

[Section C: Preference Options](#)

---

## Section C: Preference Options

This section documents all the options available in the preferences configuration file that can be modified. The preferences configuration file can be found in the Reporter program directory at \LogAnalysisInfo\preferences.cfg.

Unless otherwise noted, these apply only to v7 profiles.

### Never look up IP numbers using domain nameserver

Whether to ever try to look up hostnames of IP-numbered hosts

#### Long Description

When this is true (checked), Reporter never attempts to look up hostnames from IP numbers; it uses IP numbers for everything. When this is false (unchecked), it attempts to look up the local hostname when it starts a Web server, and it attempts to look up the hostname of any host which accesses it by HTTP, and it looks up the hostname of any host it encounters in the logs (if Look up IP numbers using domain nameserver (DNS) is true). This option is useful if there is no local Domain Name Server (for instance, if the computer running Reporter is not connected to a network and is not itself running a DNS).

#### Configuration Node Name

`preferences.miscellaneous.never_look_up_ip_numbers`

#### CLI Shortcut

`nluin`

### Only look up IP numbers for log entries

Look up IP numbers only when they appear in logs, not for local server or remote browsing computer

#### Long Description

When this is true (checked), Reporter looks up the hostnames of IP numbers using DNS only when they appear in a log file and Look up IP numbers using domain nameserver (DNS) is on. When this is false (unchecked), Reporter still looks up numbers in log files, but also looks up the hostname of the computer Reporter is running on, and the hostnames of computers using Reporter through Web browsers. This option is useful because when it is true, Reporter never performs any network access, so it can be run on a computer with a dial-up connection without having to be dialed in. When this option is false, Reporter performs a DNS lookup when it first starts and when other computers access it, so it must be permanently connected to the Internet (or using a DNS server on your local network).

#### Configuration Node Name

`preferences.miscellaneous.only_look_up_log_ip_numbers`

#### CLI Shortcut

`olulin`

Section C: Preference Options

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## Logout URL

The URL to go to on logout; if empty, goes to login screen

### Long Description

This specifies the URL that Reporter sends you to when you log out of Reporter. If this option is blank, it will send you to the Reporter login screen.

### Configuration Node Name

`preferences.miscellaneous.logout_url`

### CLI Shortcut

`lu`

## Temporary files lifespan (seconds) (v7 and v8)

Amount of time to keep temporary files before deleting them (in seconds)

### Long Description

This option controls the amount of time, in seconds, Reporter keeps temporary files before deleting them. Temporary files include temporary profiles (used to browse statistics) and temporary images (used to embed images in statistics pages). Setting this to a high number will ensure that temporary images are around as long as they are needed, but will use more disk space.

### Configuration Node Name

`preferences.miscellaneous.temporary_files_lifespan`

### CLI Shortcut

`tfl`

## Trusted hosts (v7 and v8)

The hostnames of computers which are "trusted," and do not need to enter passwords

### Long Description

This is a list of the hostnames of computers which are trusted. Hostnames should be separated from each other by spaces. Any browsing host which contains any of the listed hostnames as part of its hostname will be trusted, so entire subdomains can be trusted by entering the domain. Example:

`trusted.host.com 206.221.233.20 .trusteddomain.edu`

Browsers from these hosts will not be required to enter any passwords—they will be automatically validated. Use this option with caution—it simplifies the use of Reporter by eliminating all password screens for the administrative host, but can potentially be a security hole, if someone uses or spoofs the administrative machine without permission.

If you are connecting from a trusted host, it might be difficult to remove that trusted host using the Web interface, because Reporter will refuse to allow you administrative access to change the trusted host, because your host will no longer be trusted. One solution to

## Section C: Preference Options

---

this is to modify the preferences.cfg file (in the LogAnalysisInfo folder) manually, with a text editor, to remove the trusted host. Another solution is to connect from another system, log in normally, and remove the trusted host that way.

### **Configuration Node Name**

```
preferences.security.trusted_hosts
```

### **CLI Shortcut**

```
th
```

## Show full operating system details in errors (v7 and v8)

Show full operating system version details in the text of error messages

### **Long Description**

This controls whether Reporter displays the full operating system version details in error message. It is useful for Reporter to do this because this helps to debug problems when they are reported. However, full operating system details could be of use to someone attempting to gain unauthorized access to your server, since it would allow them to determine if you are running a vulnerable version of the operating system. This should not be an issue if you keep your operating system up to date, but if you'd rather that this information not be public, you should turn this option off.

### **Configuration Node Name**

```
preferences.security.show_full_operating_system_details_in_errors
```

### **CLI Shortcut**

```
sfosdie
```

## Authentication command line (v7 and v8)

The command line to run to authenticate users.

**Important:** This poses a security risk, as someone can exploit the connection and launch a malicious attack.

### **Long Description**

This specifies a command line that Reporter runs when it authenticates users. The command line program must accept two parameters: the username and the entered password. The command line must print the names of the profiles that the user is permitted to access, one name per line. A printed value of \*ADMIN\* means that the user is an administrator, and can access any profile, as well as accessing the administrative interface (any other response, and the administrative interface will not be available). A printed value of \*FAILED\* means that the username/password authentication failed. If this option is blank, Reporter uses the users.cfg file (in LogAnalysisInfo) to authenticate users.

### **Configuration Node Name**

```
preferences.security.authentication_command_line
```

---

## Section C: Preference Options

---

### CLI Shortcut

acl

## LogAnalysisInfo folder location (v7 and v8)

A folder where Reporter can store profiles and other information

### Long Description

This specifies a local folder where Reporter can store profiles, databases, preferences, and other information. This folder must exist and be writable by Reporter, or must be in a folder which is writable by Reporter (so Reporter can create it). If this option is empty, Reporter assumes that the folder is named LogAnalysisInfo, and is found in the same folder as Reporter. If a file named LogAnalysisInfoDirLoc exists in the same folder as Reporter, the contents of that file are used as the pathname of this folder, and this option is ignore. If the environment variable LOGANALYSISINFODIR is set, its value is used instead, and this option is ignored.

### Configuration Node Name

preferences.server.log\_analysis\_info\_directory

### CLI Shortcut

laid

## Web server port (v7 and v8)

The port to listen on as a Web server

### Long Description

This specifies the port Reporter should listen on when it runs as a Web server.

### Configuration Node Name

preferences.server.web\_server\_port

### CLI Shortcut

wsp

## Maximum simultaneous tasks

Maximum number of simultaneous Web tasks (threads of execution) that Reporter will perform.

### Long Description

This specifies the maximum number of simultaneous tasks (threads of execution) that Reporter will perform at a time, in Web server mode. When a user attempts to use the built-in Web server, Reporter will check if there are already this many threads or connections actively in use. If there are, Reporter will respond with a *too busy* page. Otherwise, the connection will be allowed. This prevents Reporter from becoming overloaded if too many people try to use it at the same time, or if one user works it too hard (for instance, by rapidly and repeatedly clicking on a view button in the statistics).

## Section C: Preference Options

---

### **Configuration Node Name**

`preferences.server.maximum_number_of_threads`

### **CLI Shortcut**

`mnot`

## **Maximum CPU usage percent**

Percent of CPU time to use while processing log data

### **Long Description**

This controls how much CPU (processor) time Reporter uses while it is processing log data. If this is set to 100, Reporter will use as much CPU time as possible, resulting in highest performance. If this is set to 50, Reporter will pause for one second every second of processing when possible, resulting in an average CPU usage of 50%; all tasks will take twice as long to complete. Any value from 1 to 100 is allowed, and on most platforms Reporter will use the requested percentage of the CPU, but on some platforms (especially older platforms), any value other than 100% will cause Reporter to use 50% of the CPU.

Lower values can be useful in environments where other users or processes need higher priority than Reporter, and where the operating system's own priority mechanisms are not enough to provide that. In general, you should leave this at 100 unless Reporter's CPU usage is causing problems, and when possible you should use the operating system's own priority mechanism (for example, nice for UNIX style systems, or the Task Manager in Windows) to set the process priority lower, rather than using this option. Process management is best performed by the operating system—individual processes like Reporter cannot manage themselves nearly as well as the operating system can manage them.

### **Configuration Node Name**

`preferences.server.maximum_cpu_usage_percent`

### **CLI Shortcut**

`mcup`

## **Web server IP address**

The IP address on which to run Blue Coat Reporter's Web server.

### **Long Description**

This specifies the IP address on which Blue Coat Reporter should run its Web server. Reporter uses all available IPs by default, but if you want to have Reporter's Web server bind only to a specific IP, you can set this option. Blue Coat Reporter uses the IP address you specify here as the IP address the server runs on.

### **Configuration Node Name**

`preferences.server.server_hostname`

### **CLI Shortcut**

`sh`

## Appendix D: Using Reporter from the Command Line Interface

Blue Coat Reporter can be directly invoked from the command line interface (CLI).

For instance, you might prefer to build and update your profile databases from the CLI, avoiding the overhead of the Web interface. For example, the following command rebuilds a profile database:

```
bcreportercl -p profile_name -a bd
```

where *profile\_name* represents the name of your profile.

This command updates a profile database:

```
bcreportercl -p profile_name -a ghf
```

This command specifies a profile which is to be used for the current command-line command. This is typically the first option on any command line that deals with a particular profile; for example, you might use `-p myconfig -a bd` to rebuild a database for the profile CorpUsers.

If this option is a full pathname of an existing file, that file is read as a profile file; otherwise, Reporter treats it as the name of a profile in the profiles subfolder of the LogAnalysisInfo folder. If that does not exist either, Reporter scans all profiles in that directory to see if the label of the any profile matches the specified value, and uses that profile if it matches.

## The Blue Coat Reporter Command Line

The Reporter CLI accepts a wide variety of options, including any preference options and any options that can be put into a profile file.

Every option has a location in the configuration hierarchy; that is, the page header for the profile CorpUsers is at

`profiles.corpusers.statistics.miscellaneous.page_header`, which means that it is an option in the miscellaneous group of the statistics group of the CorpUsers profile (`corpusers.cfg`) in the profiles folder of LogAnalysisInfo folder. After you know the full name of the option, you can use it on the command line. For example, to override that value of that option for the duration of the command line action, add this to the command line:

```
-profiles.corpusers.statistics.miscellaneous.page_header "SOME HEADER"
```

If you have specified the `-p` option on the command line (as you usually must), you can also shorten the option, as follows:

```
-statistics.miscellaneous.page_header "SOME HEADER"
```

Most options also have shortcuts, and if you know the shortcut, you can use that on the command line, as follows:

```
-ph "SOME HEADER"
```

In most cases, the shortcut is the first letter of each word in the option name (for example, `ph` for `page_header`), but there are a few exceptions where non-standard shortcuts were required because two options would have had the same shortcut. Some options also have no shortcuts; in that case, the full option name must be used.

Command-line options can be specified by typing them after the executable name (on Windows, make sure you use the command line executable, `bcreport`) on the command line as shown below. To improve ease of reading, a hyphen (-) can be added to the beginning of any profile option.

The example below is a sample command line that checks the log data from a profile, and adds any new log data into the existing database for that profile.

```
bcreporter -p myconfig -a ud
```

The `-p` option (profile to use) specifies the profile name; the `-a` option (Action) specifies the action. Most command lines include a `-p` and an `-a`.

## Overriding Profile Options from the Command Line

On the command line, you can modify these options by listing the groups, separated by dots. For instance, if you wanted to use a hash table size of 8192, you could add this to the command line:

```
-database.tuning.hash_table_starting_size 8192
```

Command line options are listed with a dash followed by the name or shortcut of the option; followed by a space and the option value. Any profile options can be overridden in this way. Command-line overrides persist only for the duration of that command-line action—they do not result in permanent modifications of the profile file.

## Building and Updating Databases from the Command Line

You can build and update databases from the Web interface, but in some cases you might prefer to use the command line to build or update databases. The command line is useful if you want to automatically and regularly update the database with the latest log entries (this can also be done from the Scheduler; see "Section F: Configuring the Reporter Scheduler" on page 97). For instance, it is possible to set up a cron job on a Linux system to automatically update the database every day with the previous day's log. The command line would look something like this:

```
bcreporter -p configname -a ud
```

This command line updates the database for the profile name.

## About Progress Indicator

When Reporter is used from the command line, this option causes it to show a single-line text progress indicator. There is not enough room on a single 80-character line to show all the information that is shown on the Web interface progress page, but Reporter shows the most important parts:

```
G: [oooooooooooo] 47% 643779e E00:20:42 R00:20:01 25M/1976k
```

The first character (G in this case) is the first letter of the full description of the current operation, as it would appear in the Web interface view. For instance, in this case the G stands for "Getting data by FTP." Other common operations are "(R)eading data" (from a local file or command) and "(E)rasing database."

The section in brackets is a progress meter, which gradually fills as the task progresses, and is completely full at the end. The percentage following the brackets is the percentage of the task that is now complete. If Reporter cannot determine the length of the task (for instance, if it is processing gzipped log data, or bzipped log data, or log data from a command), then it will not show anything in the bar area, and it will show ??% as the percentage.

The next section (643779e in the example above) is the number of log entries that Reporter has processed.

The next section (E00:20:42 in the example above) is the time elapsed since processing began, in hours:minutes:seconds format. That is followed by the estimated time remaining, (R00:20:01 above), in the same format. If Reporter cannot determine the length of the task, the time remaining will be R???:???:??.

The last two numbers (25M/1976k above) are the memory used by the database (25M in this case), and the disk space used by the database (1976 k in this case). Note that this is just the memory used by this database; Reporter itself will be using additional memory for other purposes, so the total Reporter memory usage will be higher than this number.

## Command Line Options

The following pages give descriptions of the command-line options. All examples use the executable name for the Windows version of Blue Coat Reporter, BCReporterCL.exe. When running Reporter under Linux, the name for the Reporter executable is bcreporter.

The command line options are broken into five sections:

- [□ "Managing the Database Managing the Database"](#)
- [□ "Getting Profile Information Getting Profile Information"](#)
- [□ "Generating Reports Generating Reports"](#)
- [□ "Command Line Debug Output Command Line Debug Output"](#)
- [□ "Report Filter Syntax Report Filter Syntax"](#)

The commands in sections A, B, and C typically utilize a common command syntax. Each command requires the profile name to be specified using the -p argument. Each command also requires an action to be specified using the -a argument. Most commands can optionally take a filter argument, -f.

The syntax for creating command line filters is documented in Section E. Other optional and command specific arguments are noted for each command.

Section D covers other run-time and debug settings that can be specified using the command line

## Section A: Managing the Database

This section applies to v7 profiles.

### build\_database (bd)

This builds or rebuilds the database from the log data, erasing any data already in the database.

#### Syntax

```
BCReporterCL.exe -p profile_name -a bd
```

### merge\_database (md)

This merges the contents of a database (specified with Merge database directory) into the current database. After it completes, the current profile's database will contain all the information it contained prior to the merge, plus the information in the added database.

This specifies the database directory for a database to merge into the current database. This is used together with -a md to add the contents of a second database to the current database. The second database must have the exact same structure as the first—the easiest way to ensure that is to use the same profile file to build both.

#### Syntax

```
BCReporterCL -p profile_name -a md -mdd database_merge_directory
```

### print\_database\_statistics (pds)

This displays statistics on the database for a profile (specified with the -p profile\_name). It is useful for tuning and debugging memory and disk usage.

#### Syntax

```
BCReporterCL.exe -p profile_name -a pds
```

### print\_items (pi)

This displays (to the command-line console) all item values for the database field specified with the -fn option.

#### Syntax

```
BCReporterCL.exe -p profile_name -a pi -fn dbfieldname
```

### rebuild\_cross\_reference\_tables (rcrt)

This rebuilds the cross-reference tables of the database from the main table (without processing any log data). It is much faster than rebuilding the database. It can be useful if you have modified the cross-reference table settings and want to update the cross-reference tables to reflect the new settings, but don't want to rebuild the database.

#### Syntax

```
BCReporterCL.exe -p profile_name -a rcrt
```

Section A: Managing the Database

---

## rebuild\_database\_hierarchies (rdh)

This rebuilds the hierarchy tables of the database.

*Syntax*

```
BCReporterCL.exe -p profile_name -a rdh
```

## rebuild\_database\_indices (rdi)

This rebuilds the indices of the main table.

*Syntax*

```
BCReporterCL.exe -p profile_name -a rdi
```

## remove\_database\_data (rdd)

This expires all data from the database that is in the filter set specified by Statistics filters.

*Syntax*

```
BCReporterCL -p profile_name -a rdd -f {filter}
```

*Example*

Remove entries before November 4th, 2005:

```
C:\Program Files\Blue Coat Reporter>BCReporterCL -p profile_name -a  
rdd -f (date_time < "04/Nov/2005 00:00:00")
```

## update\_database (ud)

This adds the log data to the database, while also leaving any existing data in the database.

*Syntax*

```
BCReporterCL -p profile_name -a ud
```

## Section B: Getting Profile Information

This section describes the commands used to get information about a specific profile. For example, using these commands you can obtain available report names or database field names for a profile. These are the names you would then use for arguments in "[Generating Reports Generating Reports](#)", and "[Report Filter Syntax Report Filter Syntax](#)".

### list\_database\_fields (ldf)

This displays (to the command-line console) a list of the internal names of the database fields in the specified profile (specified with the `-p profile_name`). These names can be used for report filters.

#### Syntax

```
BCReporterCL.exe -p profile_name -a ldf
```

### list\_log\_fields (llf)

This displays (to the command-line console) a list of the internal names of the log fields in the specified profile (specified with the `-p profilename`). These names can be used for log filters.

#### Syntax

```
BCReporterCL.exe -p profile_name -a llf
```

### list\_profiles (lp)

This displays (to the command-line console) a list of the internal names of all profiles. These names can be used for command-line options that call for profile names.

#### Syntax

```
BCReporterCL.exe -p profile_name -a lp
```

### list\_reports (lr)

This displays (to the command-line console) a list of the report in the specified profile (specified with the `-p profile_name`). These names can be used for command-line options that call for report names (such as `-rn`).

#### Syntax

```
BCReporterCL.exe -p profile_name -a lr
```

## Section C: Generating Reports

This section discusses various methods to generate reports using the Reporter command line. Reporter can generate CSV files, HTML reports, or send e-mail using the command line.

These commands all optionally take filter arguments to limit the reports to specific data. For details on how to write report filters using the command line, see "[Report Filter Syntax Report Filter Syntax](#)".

### **export\_csv\_table (ect)**

This exports a view table as CSV text. The report to export is specified by Report name (rn), and is written to the standard output stream, so this is useful only in command-line mode.

#### *Syntax*

```
BCReporterCL -p profile_name -a ect -rn report_name [> filename] [-f filter]
```

#### *Example*

Output a CSV file of the URL report from the *profile\_name* profile to *out.csv*:

```
C:\Program Files\Blue Coat Reporter>BCReporterCL -p profile_name -a ect -rn url > out.csv
```

### **generate\_all\_report\_files (garf)**

This generates HTML statistics pages for all reports and the associated images into the folder specified by Generate HTML report files to folder. The files and images are linked properly, so the HTML can be browsed directly from the resulting folder. This allows statistics to be browsed off-line, without having to run Reporter to generate each page.

Reporter generates statistics pages into this folder. This option determines what folder the files are generated in.

#### *Syntax*

```
BCReporterCL -p profile_name -a garf -rn report_name -ghtd path [-f filter]
```

#### *Example*

```
C:\Program Files\Blue Coat Reporter>BCReporterCL.exe -p profile_name -a garf -ghtd C:\output\
```

### **generate\_report\_files (grf)**

This generates HTML statistics pages for a particular report (specified by Report name), and the associated images, into the folder specified by Generate HTML report files to folder. The files and images are linked properly, so the HTML can be browsed directly from the resulting folder. This allows one report to be browsed off-line, without having to run Reporter to generate each page.

Reporter generates statistics pages into this folder. This option determines what folder the files are generated in.

## Section C: Generating Reports

---

### Syntax

```
BCReporterCL.exe -p profile_name -a grf -rn report_name -ghtd  
output_directory [-f filter]
```

### Example

```
C:\Program Files\Blue Coat Reporter>BCReporterCL.exe -p profile_name -  
a grf -rn cs_username -ghtd d:\reporter7\
```

## print\_values (pv)

This displays (to the command-line console) the numerical field values for a particular filter set.

### Syntax

```
BCReporterCL.exe -p profile_name -a pv
```

## send\_report\_by\_email (srbe)

This sends a statistical report using HTML e-mail. The report is sent to Report email address(es) with return address Return email address using SMTP Server Hostname. The report to send is specified by Report to email.

### Syntax

```
BCReporterCL -p profilename -a srbe -rn report_name -rca to:email -rna  
from:email -res email_subject -ss smtp_server [-f filter] [-df  
datefilter]  
rn - reportname  
rca - destination email address  
rna - 'from' email address  
res - "email subject line"  
ss - smtp server
```

## Section D: Command Line Debug Output

The types of command-line output to generate.

This controls the types of debugging output generated during a command-line action. This option is a sequence of letters, each representing a particular type of command-line output. If the letter corresponding to a type is present in the sequence, that type of output will be generated; if it is not present, that type of output will not be generated. The types, and their corresponding letters, are:

- e**: Error message output.
- g**: Generate Blue Coat Reporter logo (banner) output.
- b**: Built-in Web server basic output.
- P**: Progress indicator (command line and Web).
- w**: Built-in Web server debugging output.
- f**: Filter debugging output.
- p**: Log parsing debugging output.
- i**: Database I/O debugging output.
- d**: Database access debugging output.
- D**: Detailed database access debugging output.
- s**: Statistics generation debugging output.
- I**: Log reading debugging output.
- a**: Administrative debugging output.
- m**: Language module debugging output.
- n**: DNS debugging output.
- N**: Detailed DNS debugging output.
- t**: Network debugging output.
- q**: SQL query debugging.
- o**: Add a timestamp to every output line.

For instance, a value of **eW** will show only error messages and basic Web server output. A value of **elbwfpidDslamnNtqo** will show all possible output.

---

**Important:**

You must also specify the CLI progress indicator shortcut (**-v**) in conjunction with the debugging output commands.

---

*CLI Shortcut*

**-v**

*Syntax*

`BCReporterCL -v {options}`

*Example:*

`BCReporterCL -v elbwfpidDslamnNtqo`

## Section E: Report Filter Syntax

# Section E: Report Filter Syntax

Filters used in reports take a special variant syntax that allows only certain operations. Subroutines are not allowed, and only database field names are allowed as variables. Only strings are allowed as constants. The <, >, <=, and => operators are permitted for the date\_time field only. The inside, matches, and matches\_regexp operators are permitted for any field. Expressions can be combined using and, or, and not; arbitrary parentheses are permitted to allow any combinations. No other syntax is permitted.

This syntax is typically used when generating reports using the command line or specifying Extra options from the Scheduler (see "Section F: Configuring the Reporter Scheduler" on page 97 for information about using filters with Scheduler).

## Report Statistics Filters

Report statistics filters specify the filters to use when showing a report; i.e., they filter out all data *not* matching this expression, so only part of the data is reported.

The value of this option is an expression using configuration language syntax. This syntax starts with -f and uses two sets of quotes, as follows: use a set of double quotes ("") around the entire filter expression, and use single quotes ('') inside the filter expression.

However, only a subset of the configuration language syntax is available for this option. Specifically, the option can use the following syntax in the following formats:

- within:** for example:

```
-f "(page within '/directory')"
```

-or-

```
-f "(date_time within '__/Jan/2006 __:__:__')"
```

- <, >, <=, >=: for date/time field only, for example:

```
-f "(date_time < '01/Jan/2006 00:00:00')"
```

- and:** between any two expressions to perform the boolean 'and' of those expressions

- or:** between any two expressions to perform the boolean 'or' of those expressions

- not:** before any expression to perform the boolean 'not' of that expressions

- matches:** wildcard matching, for example:

```
"(cs_uri_path matches '/index.*')"
```

- matches\_regexp:** regular expression matching, for example:

```
"(cs_uri_path matches regexp '^/index\\..*$')"
```

Date/time filters are always in the format dd/mmm/yyyy hh:mm:ss; underscores are used as wildcards, to match any value in that position. For instance, '15/Oct/2006 \_\_:\_\_:\_\_' refers to a single day, and '\_\_/Oct/2006 \_\_:\_\_:\_\_' refers to a month, and '\_\_/\_\_/Oct \_\_:\_\_:\_\_' refers to a year.

### Examples

To show only events from October, 2006:

```
-f "(date_time within '__/Oct/2006 __:__:__')"
```

To show only events within the page directory /picts/:

```
-f "(cs_uri_path within '/picts/')"
```

## Section E: Report Filter Syntax

---

To show only events from October, 2006, for the user BobKent:

```
-f "((date_time within '__/Oct/2006 __:__:_') and (cs_username within  
'BobKent'))"
```

To show only events from October 4, 2006 through October 10, 2006:

```
-f "((date_time >= '04/Oct/2006 00:00:00') and (date_time < '10/Oct/  
2006 00:00:00'))"
```

To show only events with source port ending with 00:

```
-f "(cs_uri_port matches '*00')"
```

To show only events with source port ending with 00, or with destination port not ending in 00:

```
-f "((cs_uri_port matches '*00') or not(s_port matches '*00'))"
```

To show only events with server\_response 404, and on pages whose names contain three consecutive digits:

```
-f "((sc_status inside '404') and (cs_uri_path matches_regex '[0-  
9][0-9][0-9]'))"
```

### *Configuration Node Name*

```
command_line.filters
```

### *CLI Shortcut*

```
-f
```

## Cross Referencing and Simultaneous Report Filters

Reporter lets you *zoom in* using complex filters, for instance to break down the events on any particular day by page (in a Web log, to see which pages were hit on that day), or to break down the events on any page by day (to see which days the page was accessed).

Reporter can be configured to allow this sort of cross-referencing between any or all fields in the database. This zooming ability is always available, but without cross-reference tables it must scan the entire main table to compute results, which can be slow for large datasets. Cross-reference tables provide roll-ups of common queries, so they can be computed quickly without reference to the main log data table.

Cross-references are not an *enabling* feature, as they were in earlier versions of Reporter—all reports are available, even if no cross-reference tables are defined. Cross-reference tables are an *optimizing* feature, which increase the speed of certain queries.

Another way of looking at this feature is in terms of filters; when two fields are cross-referenced against each other, Reporter is able to apply filters quickly to both fields at the same time, without needing to access the main table.

If two fields are *not* cross-references against each other, Reporter can apply filters to one field or the other quickly, but filtering both simultaneously requires a full table scan. If the page field is not cross-referenced against the date/time field, for instance, Reporter can quickly show the number of hits on a /myfile.html, or the number of hits on Jun/2004, but not the number of hits on /myfile.html which occurred during Jun/2004 (which requires a full table scan). This means not only that Reporter cannot quickly show a page with filters applied to both fields in the Filters section, but also that Reporter cannot quickly show pages report when there is a filter on the date/time field, or a years/months/days or days report when there is a filter on the page field, since the individual items in these views effectively use simultaneous filters to compute the number of hits.

**Section E: Report Filter Syntax**

---

## Appendix D: About Upgrading

This appendix describes how to prepare your system to upgrade Blue Coat Reporter from previous versions.

### About Profile Compatibility

#### v8.2.x to v8.3.x

A system running Reporter 8.2.x can be upgraded directly to v8.3.x. When you log in and access a profile, it is automatically updated and contains the v8.3.x features.

---

**Important:** You cannot access the databases from v8.2.x after running them in v8.3.x.

---

#### v8.1.x to v8.3.x

If you have backup copies of your logs, you can uninstall the current version of Reporter, install v8.3.x, and re-process the old logs.

Reporter 8.3.x does *not* support databases or profiles created from v8.1.x. To continue to access databases created by pre-8.2.1 releases of Reporter, convert previous-version databases before using them with Reporter 8.3.x. Blue Coat provides a database converter. Read the v8.1.1 to v8.2.1 upgrade section in the *Blue Coat Reporter 8.3.x Release Notes* to learn about this procedure. You must then upgrade to Reporter 8.2.x before upgrading to 8.3.x.

#### v7.x to v8.3.x

Existing 7.1.x profiles and databases are *not* compatible with Reporter 8.2.2.x. If you are running any versions before Reporter 8.2.1.x, you *must* upgrade to v8.1.1.x before upgrading to v8.2.2.x:

1. Run the upgrade preparation script (as described in the “[Upgrade Options \(7.x or 8.1.x to 8.3.x\)](#)” section below).
2. Upgrade to Reporter 8.1.1.x.
3. Remove the Reporter 7.1.x version from your system.
4. Run the database converter.
5. Upgrade to Reporter 8.2.2.x.

### Windows

The new InstallShield install for Reporter 8.2.x automatically detects (if installing to the previous install location) the **LogAnalysisInfo** folder and renames it to **LogAnalysisInfo.old**. Installations of Reporter 8.2.2.x are compatible with the newer profile and database formats, so no rename is required.

## Linux

Rename the **LogAnalysisInfo** folder (for example: **LogAnalysisInfo.old**) *before* running the .tar file.

## Upgrade Options (7.x or 8.1.x to 8.3.x)

There are two methods for upgrading:

- "Upgrade Preparation Option A: Running a Script"
- "Upgrade Preparation Option B: Performing Tasks Manually"

---

**Note:** Both upgrade procedures retain your existing preferences, schedules, and users.

---

### Upgrade Preparation Option A: Running a Script

This section describes how to run a Blue Coat-provided script that performs the following tasks that prepares a system that is currently running Reporter 7.1.x for Reporter 8.2.1.x installation:

- Stops and removes the existing Blue Coat Reporter Service.
- Renames the existing Reporter 7 installation.
- Renames the existing Reporter 7 shortcuts on the Windows Start Menu.
- Removes the Reporter 7 registry entries.
- Saves existing preferences (**preferences.cfg**) to a **SavedFiles** folder.

#### To upgrade using the script process:

1. Refer to the *Blue Coat Reporter 8.2.x Release Notes* for the download link. Copy the script, **bcrupgrade**, to a local folder on your hard drive.
2. Open a command prompt and navigate to the same folder. Enter the command: **bcrupgrade**.
3. The utility prompts you for confirmation of your existing Reporter installation and prompts for confirmation before it begins the procedure.
4. When the script is finished, you can proceed with the installation of Reporter 8.2.x, as described in [Chapter 2: “Installation” on page 11](#).
5. After completing the installation, copy the **C:\Program Files\Blue Coat Reporter\SavedFiles\preferences.cfg** file back into the **C:\Program Files\Blue Coat Reporter\LogAnalysisInfo** folder.

When you access Reporter 8.2.1.x, all of your existing schedules, databases, and users are retained.

### Upgrade Preparation Option B: Performing Tasks Manually

This section describes how to manually perform tasks that prepares a system that is currently running Reporter 7.1.x for Reporter 8.2.1.x installation. This method allows you to create a Reporter folder other than the default.

#### Stop the Blue Coat Reporter service:

Perform one of the following:

- Windows 2000/2003:
  - a. Select **Start > Control Panel > Administrative Tools > Services** applet. -or-  
Select **Start > Run**; in the **Open** field, enter `services.msc`; click **OK**.
  - b. Right-click the **Blue Coat Reporter** service and select **Stop**.
- Windows XP:
  - a. Select **Start > Control Panel > Performance and Maintenance > Administrative Tools**; double-click the **Services** applet. -or-  
Select **Start > Run**; in the **Open** field, enter `services.msc`; click **OK**.
  - b. Select the **Blue Coat Reporter** service and click **Stop the service**.
- Windows 2000/2003/XP: Run the following two commands from a command prompt:

```
net stop "Blue Coat Reporter"  
sc delete bcreporterservice
```

---

**Note:** The `sc.exe` utility used above is available for Windows 2000 as part of the Windows 2000 Server Resource Kit. The `sc.exe` utility is included automatically for versions of Windows XP and above. If you do not have `sc.exe`, this step can be excluded.

---

#### **Close all programs:**

1. Close all open browsers, explorers and command prompts that are running Reporter or pointing to a Reporter directory.
2. Access the Windows Task Manager and verify that all **bcReporterCL.exe** processes have stopped running; if any processes remain, end them.

#### **Rename the existing Blue Coat Reporter installation directory:**

Reporter 8.1.1 is installed in a generically named directory that is no longer identified by version number. Rename the Blue Coat Reporter 7 directory to Blue Coat Reporter. For example (from a command prompt):

```
ren "C:\Program Files\Blue Coat Reporter 7" "Blue Coat Reporter"
```

The above command fails if you have any Explorer or command prompt residing in (pointing to) the **C:\Program Files\Blue Coat Reporter 7 directory**. This is a common cause of failure.

#### **Rename the existing Start Menu shortcut:**

1. Select **Start > All Programs**.
2. Right-click **Blue Coat Reporter 7** and select **rename**.
3. In the dialog, rename to **Blue Coat Reporter** and click **OK**.

#### **Save existing preferences/delete profiles and databases:**

1. In Windows Explorer, navigate to the newly named Reporter directory. For example: **C:\Program Files\Blue Coat Reporter**; delete the profiles and databases.
2. In the **Blue Coat Reporter** folder, create a new folder named **SavedFiles**.
3. Copy the existing **C:\Program Files\LogAnalysisInfo\preferences.cfg** file to the newly created **SavedFiles** folder.

Alternately, you can enter the following commands at command prompt:

```
cd /d "C:\Program Files\Blue Coat Reporter"
md SavedFiles
copy /y LogAnalysisInfo\preferences.cfg SavedFiles
```

**Install Reporter 8.2.x:**

Install Reporter as described in [Chapter 2: “Installation” on page 11](#). If you created a folder (and Start Menu shortcut) that differs from the default (**C:\Program Files\Blue Coat Reporter**), install Reporter in the same folder that you created in this procedure.

**Copy back preferences:**

After completing the installation, copy the **C:\Program Files\Blue Coat Reporter\SavedFiles\preferences.cfg** file back into the **C:\Program Files\Blue Coat Reporter\LogAnalysisInfo** folder.

The upgrade procedure is complete. When you launch Reporter 8.2.x, all of your existing profiles, schedules, databases, and users are retained.

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8.1

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@author Vincent Rijmen <[vincent.rijmen@esat.kuleuven.ac.be](mailto:vincent.rijmen@esat.kuleuven.ac.be)>

@author Antoon Bosselaers <[antoon.bosselaers@esat.kuleuven.ac.be](mailto:antoon.bosselaers@esat.kuleuven.ac.be)>

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