SAS® Web Analytics 5.2

User's Guide

The Power to Know.®

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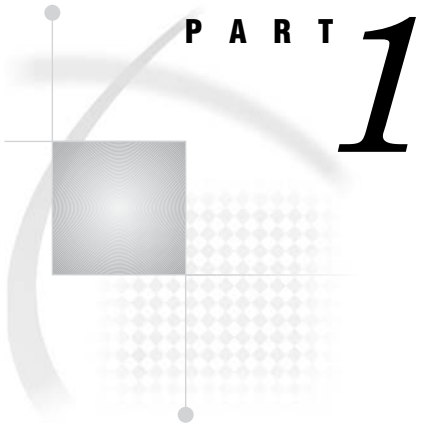
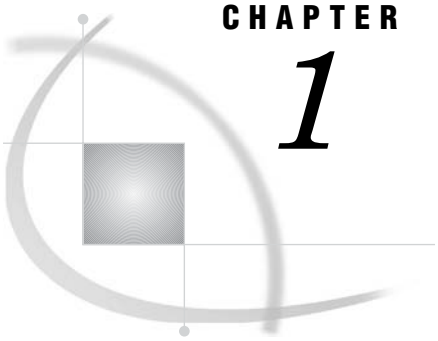


PART 1

Introduction



CHAPTER

1

Using This Manual

Purpose

This document explains how to view, create, and interpret the following categories of SAS Web Analytics reports:

- traffic reports
- scorecard reports
- dashboard reports
- funnel reports
- path analysis reports
- segmentation reports

This document contains both conceptual and task-oriented information. The conceptual information assists with understanding the tasks.

Intended Audience

This document is intended for the beginning, intermediate, and advanced user who creates reports for analysis.

The companion manual, *SAS Web Analytics: Administrator's Guide*, shows administrators how to create new reports or report groups, and how to modify existing reports.

The Web Analytics Team

Overview: The Web Analytics Team

It is useful for users of SAS Web Analytics reports to understand the functions of other SAS Web Analytics team members.

Report users might use the SAS Web Analytics administrative tools to define reports, but this task will probably be the responsibility of the report administrator. However, report consumers will likely provide input into report design.

The task of defining Web mart structure and maintaining Web marts typically belongs to the SAS Web Analytics warehouse administrator. Report users might have some direct contact with the warehouse administrator to determine which metrics are needed for specific reports.

Report User

The SAS Web Analytics report user uses the application to select report types and parameters, and to create the reports. This user does not need to know how new reports are defined or modified, but does need to be able to interact with the SAS Web Analytics administrator to obtain the type of data that is needed.

Examples of report users include users having the following job descriptions:

- marketing managers who want to judge campaign effectiveness and return on investment
- CFOs or COOs who are interested in a variety of specific high-level metrics
- Web analysts who track Web visitors' behavior, analyze the Web site and sections within the Web site, and create funnel reports that show how effectively the Web site is moving traffic
- warehouse and report administrators who ensure the performance of data marts and report definitions

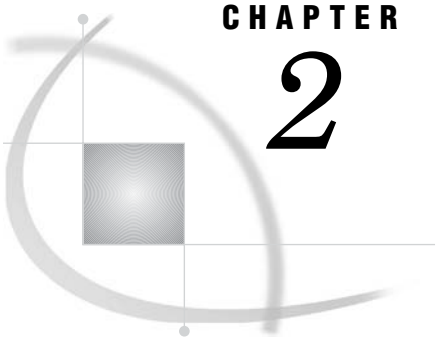
Report Administrator

The SAS Web Analytics report administrator is responsible for maintaining and modifying standard report definitions and creating new report definitions. The software tool that is used to define reports is the SAS Web Analytics Administrator. Most SAS Web Analytics users will not directly use this tool, but will work with the report administrator to create and refine reports.

Warehouse Administrator

The SAS Web Analytics warehouse administrator is responsible for managing the conversion of the detail data sets (derived from your company's Web logs) to the SAS Web Analytics Web mart. This administrator might also be the e-Data ETL administrator, who is responsible for managing the conversion of Web logs to the detail data sets. Getting the reports you need depends on extracting the right information from the Web logs.

The administrator also defines, creates, and modifies specific reports.



CHAPTER

2

Introduction to SAS Web Analytics

What Is SAS Web Analytics?

SAS Web Analytics is a graphical reporting tool that enables businesses to better understand their customers by analyzing the origin, path, duration of visit, and destination of each visitor to the business Web site. By understanding their customers, businesses can motivate customers to purchase products and increase the use of Web-based services. With SAS Web Analytics, you can learn who your Web customers are, where they come from, how often they visit your Web site, which Web pages they like, and more. You can use the information from SAS Web Analytics to increase Web site usage and customer retention.

Why Use the SAS Web Analytics Report Viewer?

Analyzing Web Site Traffic

The SAS Web Analytics Report Viewer provides a Web-based, dynamic reporting application that enables you to perform sophisticated analyses of Web site activity from

available Web marts. It provides you with a substantial collection of analytical reports that provide information about your Web site traffic. SAS Web Analytics reports help you perform the following tasks:

- determine which parts of your Web site are most frequently used, which parts visitors find most (or least) interesting, and which parts are buried too deep for them to find
- identify pages that repeat visitors return to, and determine whether they saw the special offers that you are promoting
- discover why potential purchasers abandon their transactions
- reduce business costs

SAS Web Analytics provides a number of standard reports. Your SAS Web Analytics report administrator can create custom reports or groups of reports and can modify standard reports to meet your company's analysis objectives. Most reports provide the data that you request in both a table and a graph format.

Reporting Flexibility

SAS Web Analytics provides flexibility that enables you to rapidly change parameters for generating reports. You can specify the following options for most of your reports:

Date Range	specifies a date or date range for a report.
Previous Days	enables you to select a number of days before the current date of a report.
Summary Level	refines the report by specifying a summary level of day, week, month, quarter, or year.
Graphics Format	specifies that your reports display in either HTML or Java format.
Table Format	specifies that your report displays as a table.
Graph Format	specifies that your report displays as a graph.

You can create URLs for report graphs and tables to reference from other documents. You can also export report information to other business applications, such as Microsoft Excel.

Reports That Are Supplied by the Report Viewer

Supplied Reports

The SAS Web Analytics Report Viewer supplies a set of standard reports for the analysis of the activity on your Web site. These reports include traffic reports, a scorecard, a dashboard, static and interactive funnel reports, path analysis reports, and the segmentation report.

Traffic Reports

Traffic reports monitor the activity of your Web site. You can view metrics and status codes, as well as other traffic information.

Scorecard

In addition to graphical and tabular reports, SAS Web Analytics software provides a scorecard that enables you to compare your company Web site's actual performance with projected targets. For example, you can view actual sales for a three-month period and compare the results with your expected results. This kind of information can help you predict future sales.

Dashboard

The dashboard enables you to determine how a current business trend relates to the desired business direction. For example, you might want to see whether your Web site hit count is increasing, or whether access errors are decreasing over time.

Funnel Reports

Funnel reports enable you to determine how effectively your Web site is moving traffic to a target page.

Path Analysis Reports

Path analysis reports identify paths that originate within the Web site as well as outside the Web site from sites such as Yahoo and Google.

Segmentation Reports

Segmentation reports help to predict which visitors will return to your Web site.

List of Supplied Reports

The following table lists the types of reports in each category.

Table 2.1 Standard Categories of SAS Web Analytics Reports

Report Category	Description	Report Types
Traffic	Monitors the volume of activity and reports the status codes that were generated for your Web site.	Visitor Browser and Platform Status Codes Navigation Overview Referrer
Scorecard	Determines which variables in the input data set have a statistically significant impact on the target metric.	Scorecard: Site Metrics
Dashboard	Alerts and notifies you of changes in business direction by displaying a trend of key performance indicators.	Dashboard: Site Metrics
Funnel	Shows how many visits viewed a sequence of pages.	Interactive Funnel Static Funnel

Report Category	Description	Report Types
Path Analysis	Shows the different paths that visitors took to go from one page to another.	Entry Path Referrer Entry Paths Interactive Path Analysis
Segmentation	Creates a set of rules (segments) that help predict which visitors will return to the site.	Repeat Visitor-Totals Repeat Visitor-Averages

For detailed descriptions of the reports, see "List of Standard Traffic Reports" on page 185.

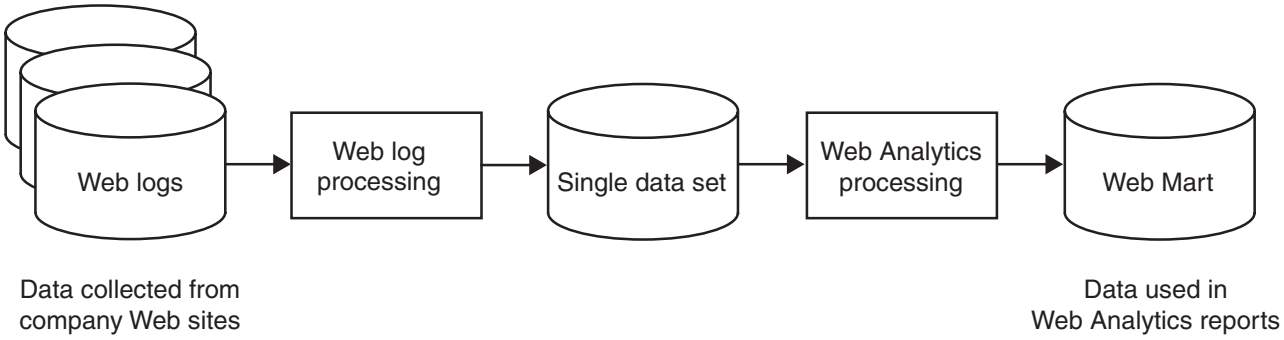
Where Does SAS Web Analytics Get the Information in Its Reports?

The raw data for SAS Web Analytics reports comes from your company's Web server log files (Web logs). Web log data is collected on a periodic basis, usually daily. Web logs can be gathered from a single server or multiple servers.

SAS Web Analytics Workflow

A program that works in conjunction with SAS Web Analytics, SAS e-Data ETL, processes Web log data into a single SAS data set. SAS Web Analytics uses this data set to create dated, detailed summary files called Web (data) marts. When you use the SAS Web Analytics interface to view reports, you select an analysis-ready Web mart from which to generate reports. The following figure shows the flow of data to SAS Web Analytics.

Figure 2.1 The Flow of Data to SAS Web Analytics



Access Online Help

You can read a detailed description of the standard SAS Web Analytics reports by clicking **Help** in the banner of the SAS Web Analytics Report Viewer page and selecting

a report. If you want to view a traffic report, you must first select a Web mart from the **`Select a Web Mart (Refresh)`** drop-down menu.

Browser Requirements

SAS Web Analytics requires you to use one of the following browsers:

- Internet Explorer 6.0 or greater
- Mozilla 6.0 or greater

CHAPTER

3

Setting Up Your Browser for SAS Web Analytics

Procedure for Setting Up Your Browser

You need to set up your browser so that Java can run in your environment. Reports can then be displayed in Java format. To set up the browser, do the following:

1. Configure your Internet Explorer Java settings.
2. Install the Java Runtime Environment (JRE).
3. Configure the JRE.

The following sections describe how to accomplish these tasks.

Configure Your Internet Explorer Java Settings

Before you can access reports in Java format, you need to configure your Java environment.

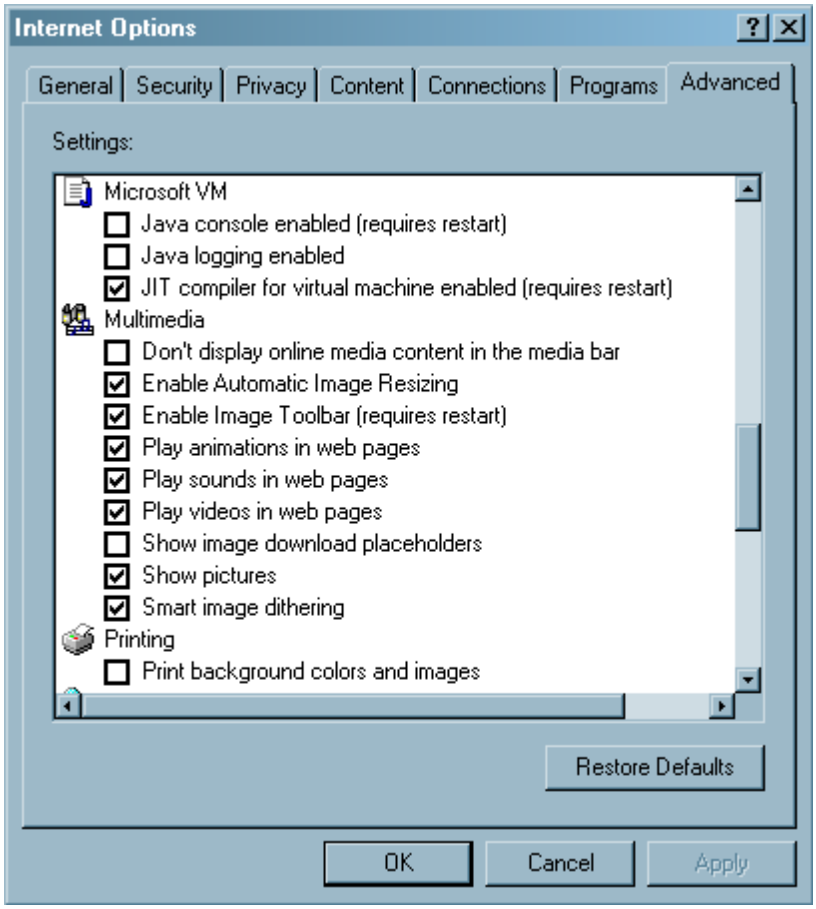
To configure your Internet Explorer Java settings, do the following in the Internet Explorer window:

1. From the Toolbar, select **Tools ▶ Internet Options**.

   The Internet Options dialog box opens.
2. Click the **`Advanced`** tab.
3. In the **`Advanced`** tab of the Internet Options dialog box, determine whether a Java (Sun) heading is listed. If this item is listed, ensure that the **`Use Java 2 [applet version] for`** option is *not* selected.
4. Scroll down to the **`Microsoft VM`** heading.

5 Ensure that the option **JIT compiler for virtual machine enabled** is selected. The following display shows that this item is selected:

Display 3.1 The Internet Options Dialog Box



6 Click **OK** to close the window.

Install the Java Runtime Environment (JRE)

To use SAS Web Analytics, you need to install the latest Java Runtime Environment (JRE) plug-in from Sun Microsystems, Inc. The JRE executes applets that enable you to access SAS Web Analytics. (An applet is a Java application that runs in a Web browser.) You can find information about downloading the JRE at the following address: **http://java.sun.com/j2se/1.4.2/download.html**.

To install the JRE, do the following:

1 In Internet Explorer, go to the following address: **http://java.sun.com/j2se/1.4.2/download.html**.

2 Scroll down to section **J2SE v. 1.4.2 JRE**, and click the **Download J2SE JRE** link.

Note: Accept all of the default settings during installation. △

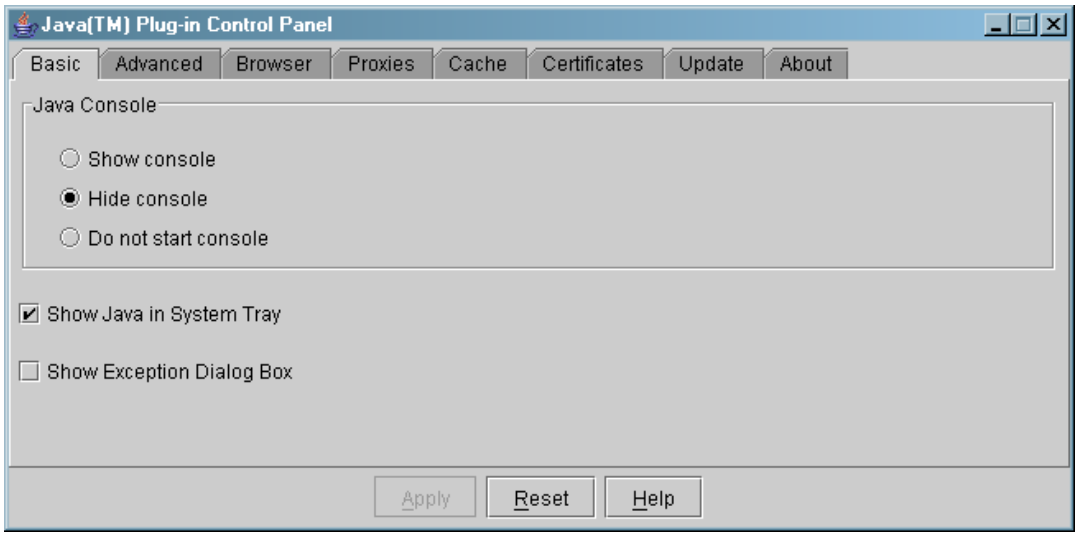
3 Accept the license agreement by clicking **Accept License Agreement**.

4 Scroll to the **Windows Platform-Java(TM) 2 Runtime Environment, Standard Edition** section.
5 Under the **Windows Platform** section, click **Windows Installation, Multi-language**.
6 In the File Download-Security Warning dialog box, select **Run**.
7 In the Internet Explorer-Security Warning dialog box, select **Run**.
8 When the InstallShield Wizard appears, follow these instructions:
   a Click **Next** in the Maintenance Welcome page.
   b In the Program Maintenance page, select **Modify** and click **Next**.
   c In the Custom Setup page, select **Java 2 Runtime Environment** and click **Next**.
   d When the Java installation completes, click **Finish**.

Configure the JRE

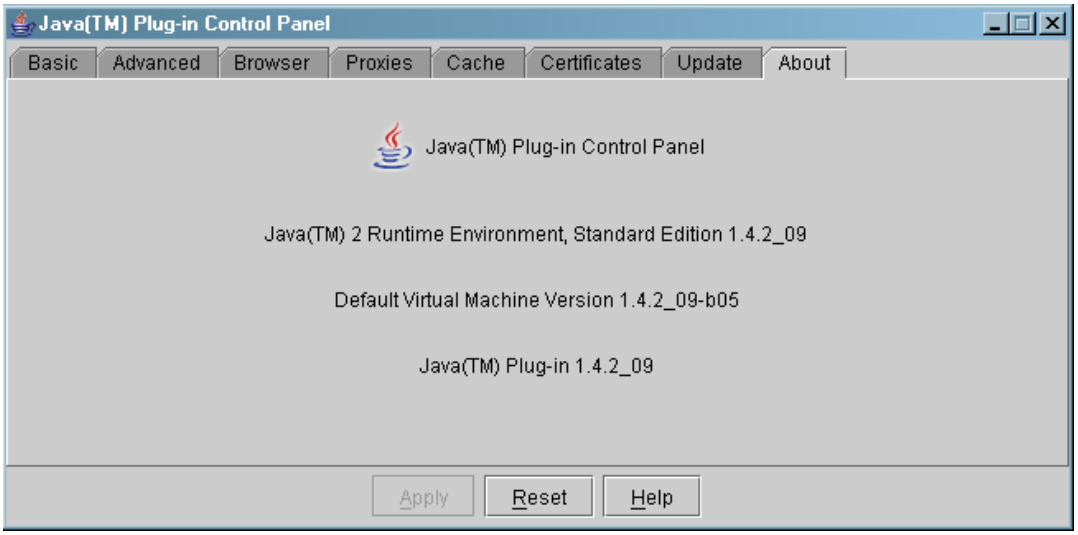
After you install the JRE, you need to configure the environment. Follow these steps to configure the JRE:

1 From the Windows **Start** menu, select **Start ▶ Settings ▶ Control Panel**.
2 In the Control Panel window, double-click **Java Plug-in** to access the Java Plug-in Control Panel, as shown in the following display. Be sure that **Hide console** and **Show Java in System Tray** are selected.

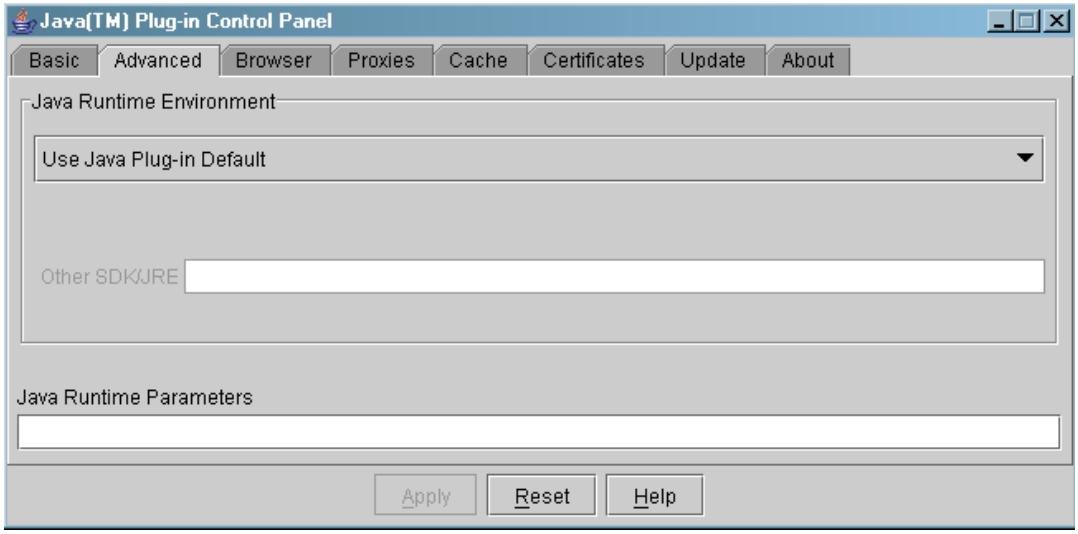


3 Click **Apply** if you need to apply changes.

4 Click the **About** tab and verify that the JRE version is 1.4.2, as shown in the following display.

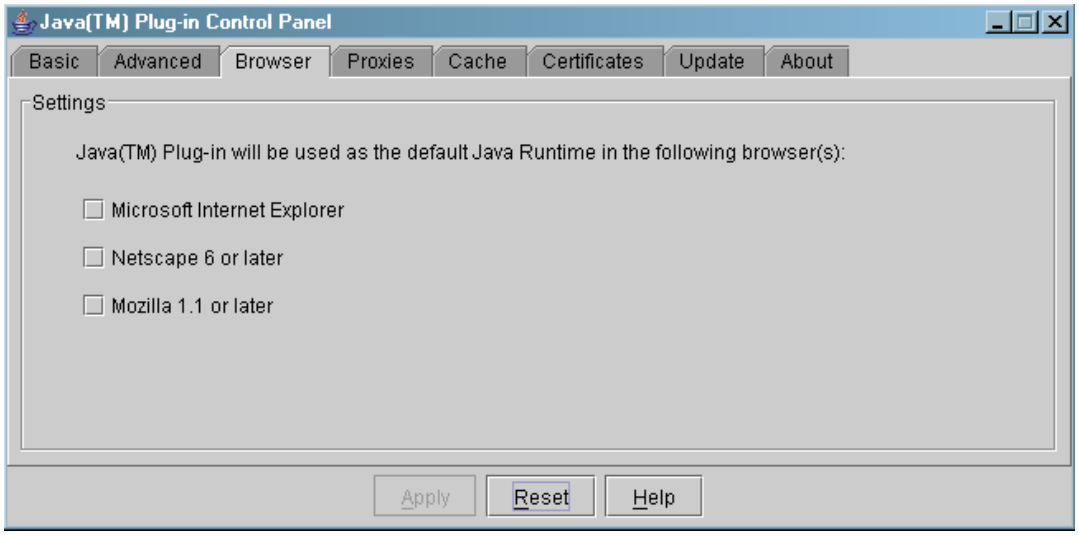


5 Click the **Advanced** tab, and select **Use Java Plug-in Default**, as shown in the following display.



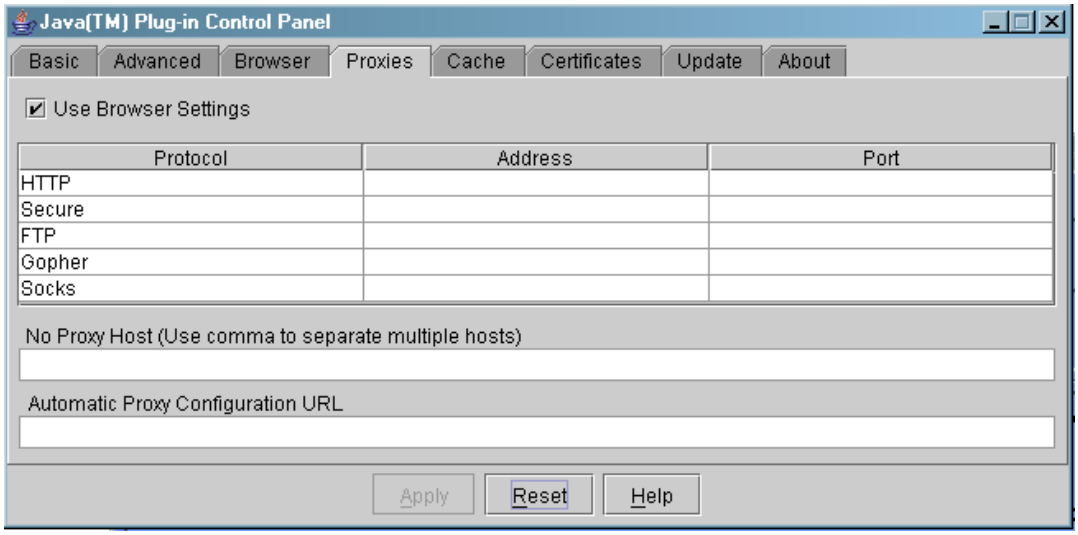
6 Click **Apply** if you need to apply changes.

7 Click the **Browser** tab, and be sure that none of the check boxes are selected, as shown in the following display.



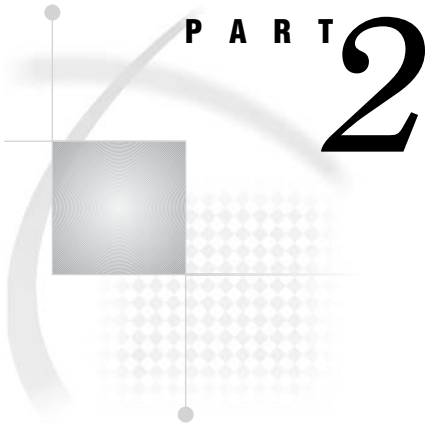
8 Click **`Apply`** if you need to apply changes.

9 Click the **`Proxies`** tab, and select **`Use Browser Settings`**. Be sure that the **`HTTP`**, **`Secure`**, **`FTP`**, **`Gopher`**, and **`Socks`** protocols are listed, as shown in the following display.



10 Click **`Apply`** if you need to apply changes.

You will now be able to view reports in Java format.



PART 2

SAS Web Analytics Report Viewer Interface

CHAPTER

4

Using the SAS Web Analytics Report Viewer

Overview: Viewing Reports

How the information for your reports is processed depends on several factors, including the following:

- the type and extent of information (specific fields) that your Web server captures in its Web logs
- your definition of visitor types such as spiders, your own employees, and so on
- your definition of the levels of your Web site
- the choice of visitors to allow or disallow cookies
- the number of generations of data you want to keep

SAS Web Analytics settings that are related to these factors are configured by an administrator or programmer. You can, however, create reports for different time intervals by specifying valid parameters in the SAS Web Analytics Report Viewer interface, and then generating the report to create a new display.

The SAS Web Analytics Report Viewer Page

The Report Viewer

When you access the SAS Web Analytics Report Viewer, the following introductory page displays, describing a list of report types that you can create.

Display 4.1 SAS Web Analytics Report Viewer Introductory Page

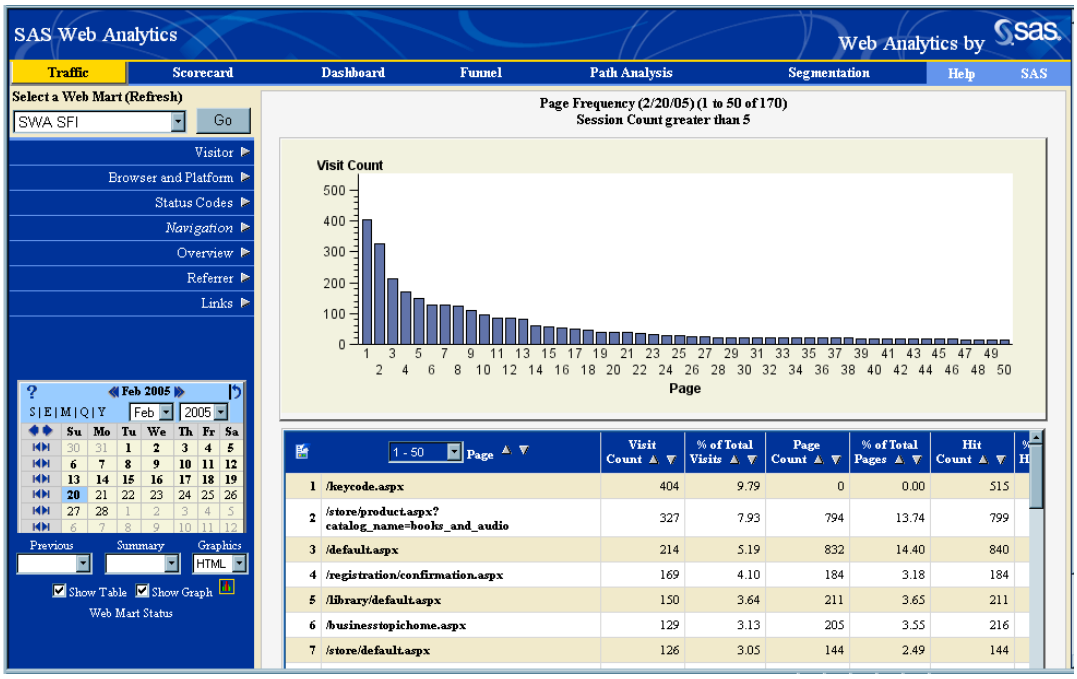
Components of the Report Viewer Page

The SAS Web Analytics Report Viewer interface contains the following three areas that you use for navigating, selecting dates, and viewing reports:

- the banner, which contains links to all of the report categories
- the left section, from which you can access individual reports and select dates from the calendar
- the main display area, which contains the report that you create

The following is an example of a SAS Web Analytics traffic report.

Display 4.2 Example of a Page Frequency Traffic Report



For the Static and Interactive Funnel reports, as well as for the Interactive Path Analysis report, a form window opens in which you enter information to create your reports. Clicking **Run** in the form window creates the reports. These interfaces are described in Chapter 11, “Tracking Visitors by Using Funnel Reports,” on page 145 and Chapter 12, “Identifying a Sequence of Pages with Path Analysis Reports,” on page 153.

Banner

The banner is located at the top of the Report Viewer page. You use the banner to select a report category, to access help, and to contact SAS. The banner contains the following links:

Traffic opens a status report for your Web mart and displays a list of reports that you can create to monitor Web site traffic.

Scorecard opens a scorecard from which you can view metrics for your Web mart.

Dashboard opens a dashboard from which you can view Web site trends and performance.

Funnel displays a list of funnel reports that provide information about the number of visitors that viewed a sequence of pages.

Path Analysis displays a list of path analysis reports from which you can view paths that originated both within the Web site and outside of the Web site.

Segmentation opens a segmentation report, which enables you to view statistics to help predict which visitors will return to the Web site.

Help opens the SAS Web Analytics Help viewer, which provides detailed descriptions of the standard reports that are provided with SAS Web Analytics software.

SAS opens the SAS Institute Web site.

Left Section

Use the left section of the Report Viewer page to select a Web mart and a report, and to change the dates of the reports that you create. For traffic reports, you can select summary information. For all reports, you select HTML or Java display format. For most traffic reports, you can choose to display your output as a graph, a table, or as both a graph and a table.

Main Viewing Area

Use the main viewing area to view the reports that you create. For the Interactive Funnel and the Interactive Path Analysis reports, a second window opens that displays the output.

Creating Reports in the Report Viewer

What Do I Do First?

To begin creating reports, you select a Web mart from the **`Select a Web Mart (Refresh)`** drop-down list, and then click **`Go`**. You then select a report category from the banner. For all reports except the funnel report, you select an individual report from a menu that is located in the left section of the page. Next, you select a date or date range from the calendar. The report you select is automatically created.

Select a Web Mart

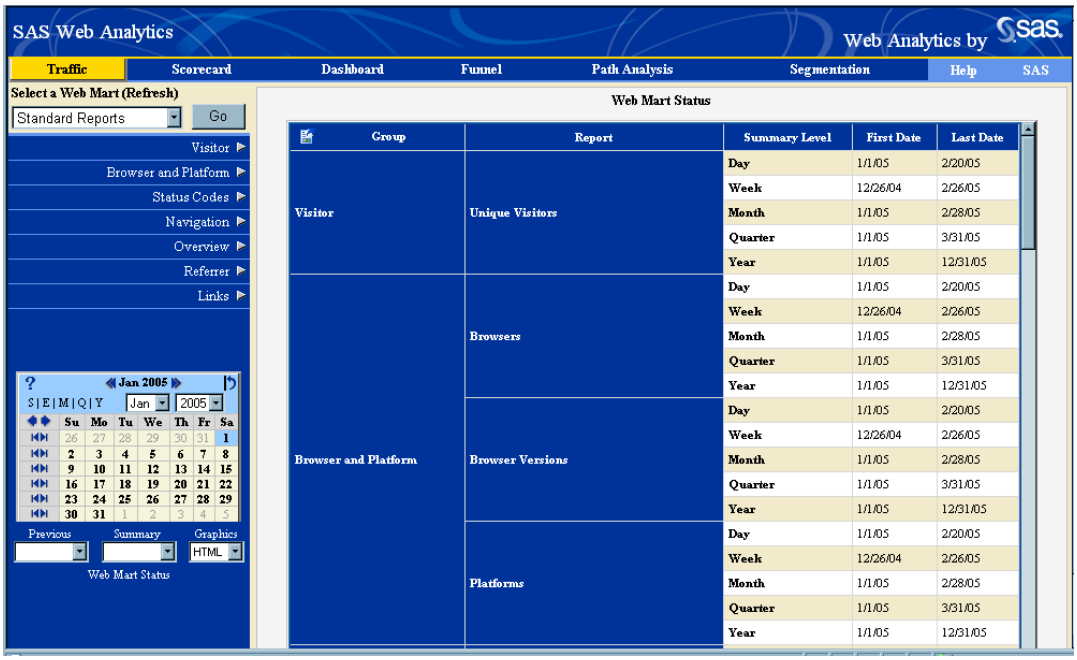
A Web mart contains an accumulation of Web log information for a specific Web site. The Web marts that are available are added by your SAS Web Analytics administrator. SAS Web Analytics software parses Web log data and transforms the data into information that you can access through the reports that you create.

Selecting a Web mart is the first step in creating a report. All reports are based on information in a selected Web mart. To select a Web mart, do the following:

1. From the **`Select a Web Mart (Refresh)`** drop-down list, select the Web mart for which you want to create reports.
2. Click **`Go`** to display the Web Mart Status report.

An example of a partial Web Mart Status report is shown in the following display.

Display 4.3 Example of a Web Mart Status Report Showing Custom Reports



The information from the Web Mart Status report automatically populates the calendar that is located in the left section of the page. The dates that are shown in bold are valid dates for your Web mart. The current date is highlighted in red.

Note that the summary level is listed along with the first and last valid dates for the Web mart. If, for example, the first date of the Day summary level is January 1, 2005 (which is a Saturday), the first date of the Week summary level will be December 26, 2004, which is the previous Sunday. This is the first week for which there is data. The first day of the week can be any day. The day that is selected as the beginning of the week is set by your SAS Web Analytics administrator.

Similarly, if the first day for which there is data is January 1, 2005 and the last day is February 20, 2005, then the last day of the Quarter summary level is March 31, 2005. No quarterly data is available after this date for this Web mart.

Select a Report Category from the Banner

From the Report Viewer banner, select one of the following report categories:

- **Traffic**
- **Scorecard**
- **Dashboard**
- **Funnel**
- **Path Analysis**
- **Segmentation**

The default report category is **Traffic**.

Select an Individual Report

For all categories of reports except the funnel reports, you select an individual report from drop-down menus that are located in the left section of the page. You access the

drop-down menus from the report categories. For example, when you select **`Traffic`** from the banner, you can create the Page Frequency report by selecting this report from the **`Navigation`** drop-down menu.

Using the Calendar with Traffic Reports

Select a Day or Range of Days for Your Report

The following calendar is available with traffic reports.

To select a single day for your report, click the date twice in the calendar. The date you select is highlighted, and the chosen report is automatically produced for that date. The date you select appears in the title of your report.

To select a range of days, click the beginning or ending date for your report. Then click a second date to complete the range. The range you select is highlighted in the calendar, and the chosen report is automatically produced for this date range. The date range appears in the title of your report.

Move from One Date to Another

To sequentially move from one date or set of dates to another, click the arrows  at the upper left of the labels for the days of the week. The left arrow moves the date(s) backwards and the right arrow moves the date(s) forwards. The chosen report is automatically produced for the selected dates.

Select a Week as the Date Range for Your Report

To select a specific week as the date range for your report, click  to the left of the dates in the calendar. When you click the icon, the week is highlighted.

To select another week as the date range for your report, click the forward and backward arrows  that are located to the left of the labels for the days of the week. If you click the left arrow, then the previous week is selected. If you click the right arrow, then the following week is selected. You can click the arrows multiple times to select the week that you want. The chosen report is automatically produced for the selected dates.

Select a Month and Year for Your Report

Select a month and year for your report in one of the following ways:

- Click the forwards and backwards double arrows at the top center of the calendar to select the month and year you want. The month and year that you select appears between the arrows.
- Use the drop-down menus in the upper right of the calendar to select a month and year.

Choose First and Last Dates and Month, Quarter, or Year Time Intervals

You can click the letters that are located near the top left of the calendar to move to the first and last available dates in your Web mart, as well as to select month, quarter, or year time intervals:

S moves the calendar display to the month of the first available date in the Web mart. Note that this move does not select the first date. (To select the first date, click the date in the calendar.)

E moves the calendar display to the month of the last available date in the Web mart. Note that this move does not select the last date. (To select the last date, click the date in the calendar.)

M selects all the days of the month for the month that is currently displayed and automatically creates the chosen report. The report contains data only for the valid days of the month. For example, if you select a monthly time interval, and the initial date of the data is the fifteenth day of the month, then the monthly report reflects data only for the last half of the month. The date range appears in the title of your report.

Q selects all of the dates for a quarter of a year based on the month that is currently displayed and automatically creates the chosen report.

Quarterly intervals are determined by counting from the beginning of the year. For example, if you have the month of May selected, and then click **Q**, the calendar displays the month of April because this is the first month of the quarter in which May belongs. The calendar months of the quarter that you select are highlighted. The date range that you select appears in the title of your report.

Y selects the dates for an entire year based on the month that is currently displayed, and automatically creates the chosen report.

If the valid dates for your Web mart do not contain data for the entire year, then the report is generated only for the valid date range. The valid date range appears in the title of your report.

Identify Missing Data

If data is missing for a particular date, then the date in the calendar appears in italics. In the following example, the month of February is shown in bold (the dates in bold are valid dates for your Web mart), and there is no data for February 11, 2005 and February 12, 2005.

Clear All Dates

The arrow icon  at the top right corner of the calendar enables you to deselect any dates that you have previously selected. Click the arrow to clear the calendar. If you do not select a date after clearing all dates, and you select a report to run, then the current date will be used for the report.

Selecting a Previous Range of Days for Your Traffic Report

Select an Interval from the Previous Menu

For traffic reports, use the **Previous** drop-down menu to create a report for a range of days that is previous to the last date for which data is available in your Web mart. The date range that you select appears in the title of the report.

The following ranges of dates are available from the **Previous** menu:

- **1 Day**
- **7 Days**
- **30 Days**
- **90 Days**
- **180 Days**
- **1 Year**

When you make a selection, the first date of the report's date range is highlighted in the calendar. For example, if you select **30 Days** as the date range for your report, and the Web mart does not yet have data for 30 days, then the highlighted date in the calendar is earlier than the first date in the report date range.

Note: The date ranges that are specified by the **Previous** menu are all based on the last date for which data is available in the Web mart. If a date is already highlighted in the calendar before you select a date range from the **Previous** menu, than that date will be disregarded. △

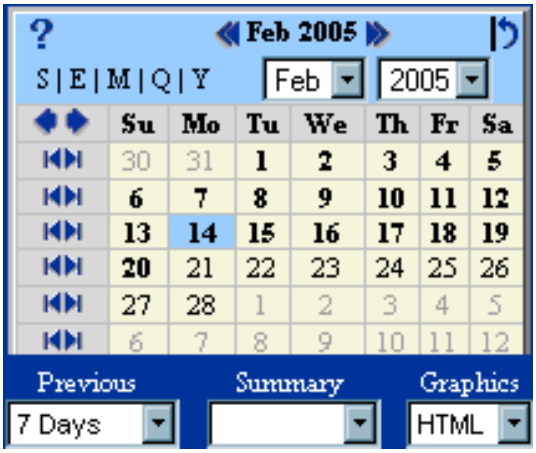
Select the Previous Day

When you select **1 Day** from the **Previous** drop-down menu, the last date for which there is data for the Web mart is highlighted, and your report is created for this day.

Select the Previous Seven Days

When you select **7 Days** from the **Previous** menu, the last seven days for which there is data in your Web mart are selected. The first day of the seven-day period is highlighted, and a report is created for the seven-day date range.

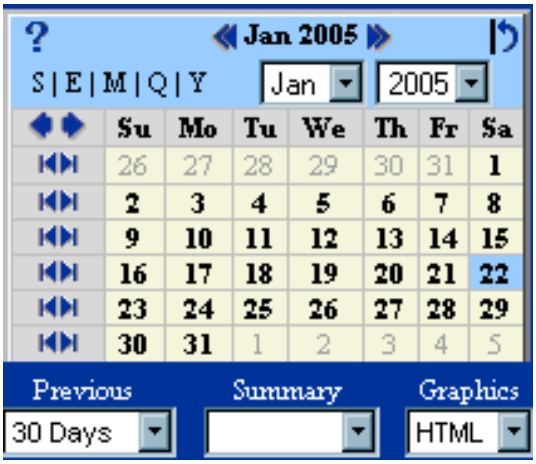
In the following example, **7 Days** is selected from the **Previous** menu. When you select this range, the date that is highlighted on the calendar is seven days from the last available date for the Web mart. In this case, February 20, 2005 is the last day for which data is available for the Web mart. Therefore, February 14, 2005 is highlighted in the calendar.



Select the Previous 30 Days

When you select **30 Days** from the **Previous** menu, the last 30 days for which there is data for your Web mart are selected. The first day of the thirty-day period is highlighted, and a report is created for the thirty-day date range.

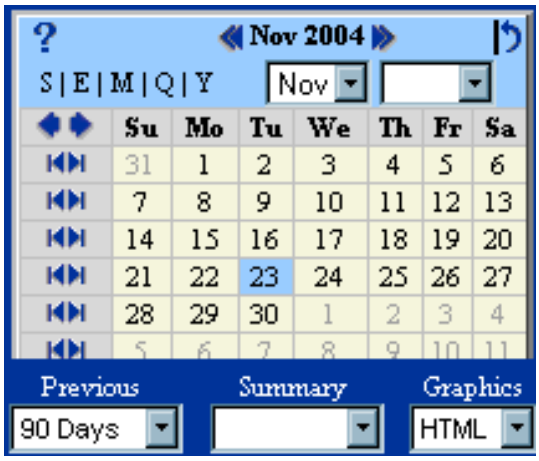
In the following example, the end date for the Web mart is February 20, 2005. When you select **30 Days** from the **Previous** menu, January 22, 2005 is highlighted, because this date is 30 days previous to February 20, 2005, the last day for which there is data for the Web mart.



Select the Previous 90 Days

When you select **90 Days** from the **Previous** menu, the last 90 days for which there is data for your Web mart are selected. The first day of the 90-day period is highlighted, and a report is created for the 90-day date range.

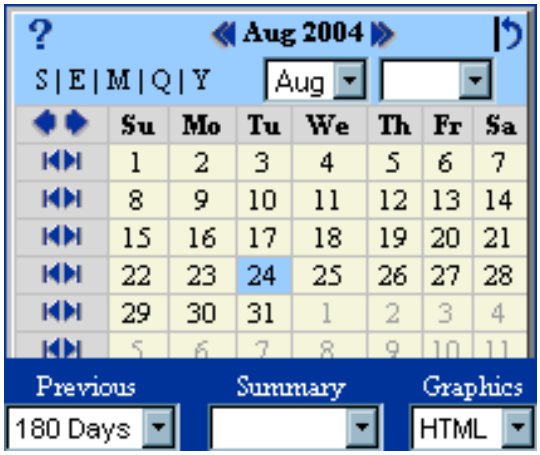
In the following example, November 23, 2004 is highlighted because it is the first day of the 90-day period. Because this is not a valid date for the Web mart (the date is not in bold), no data is gathered from this or the subsequent dates that are not in bold. The report begins on January 1, 2005, the first day for which the Web mart has data.



Select the Previous 180 Days

When you select **180 Days** from the **Previous** menu, the last 180 days for which there is data for your Web mart are selected. The first day of the 180-day period is highlighted, and a report is created for the 180-day date range.

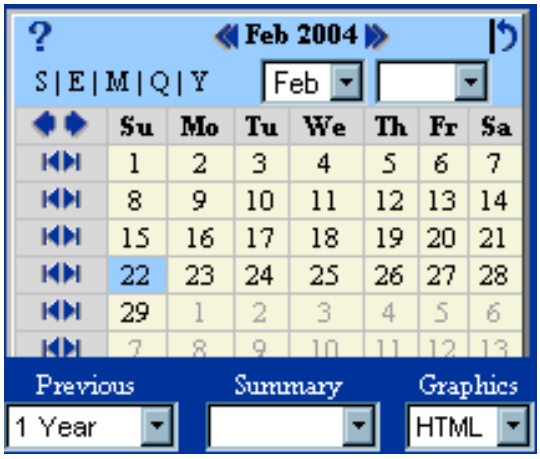
In the following example, August 24, 2004 is highlighted. Because this is not a valid date for the Web mart (the date is not in bold), no data is gathered from this or the subsequent dates that are not in bold. The report begins on January 1, 2005, the first day for which the Web mart has data.



Select the Previous Year

When you select **1 Year** from the **Previous** menu, the last year for which there is data for your Web mart is selected. The first day of the previous year interval is highlighted, and a report is created for that interval.

In the following example, February 22, 2004 is highlighted. Because this is not a valid date for the Web mart (the date is not in bold), no data is gathered from this or the subsequent dates that are not in bold. The report begins on January 1, 2005, the first day for which the Web mart has data.



Summarizing Your Data

About the Summary Menu

For traffic reports, you can use the **Summary** drop-down menu to select whether you want to see daily, weekly, monthly, quarterly, or yearly summary data for the dates that you have selected in the calendar.

The following selections are available from the **Summary** menu:

- **Day**
- **Week**
- **Month**
- **Quarter**
- **Year**

The first column in a summary report table is a Date column. The Date column lists the time periods for the summary you select. For example, if you select a weekly summary, then the dates in the Date column list the weeks that are included in the date range that you selected in the calendar.

Daily Summary

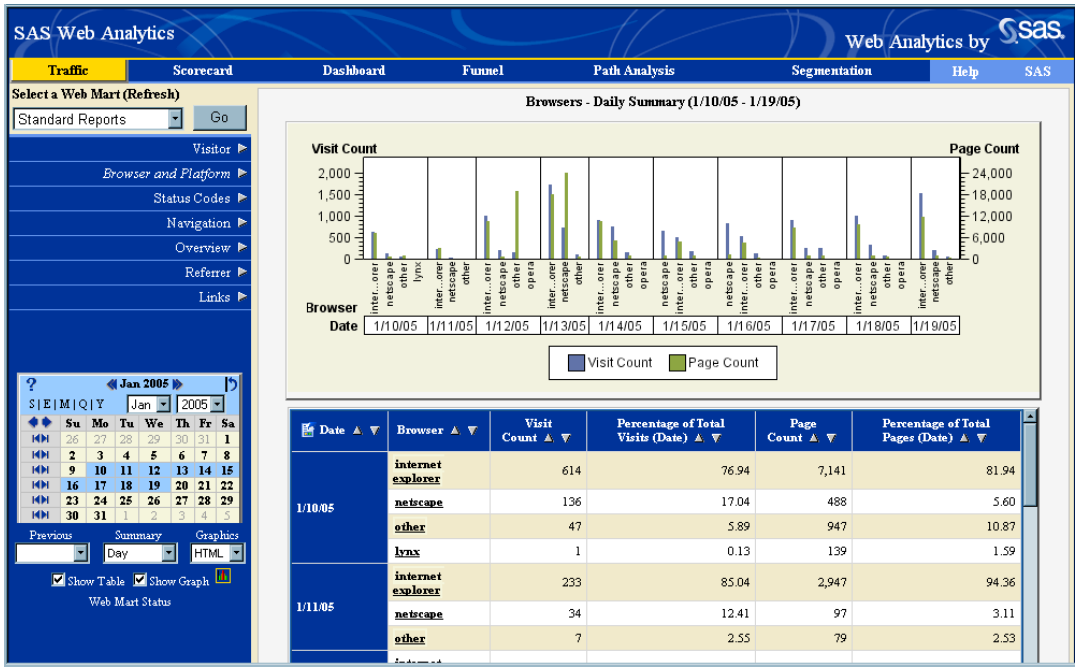
You can create daily summary reports for one or more days. To create a daily summary report, do the following:

1. Select **`Day`** from the **`Summary`** menu.
2. Select a date or date range from the calendar.

If you double-click a date, then the summary report will be produced for that date. If you click a date and then click a second date to complete the range, the summary report will produce daily summaries for all the dates in that date range. The date range is highlighted in the calendar.

The following is an example of the Browsers report with the **`Day`** summary selected. The report dates range from January 10, 2005 through January 19, 2005, which is the date range that is highlighted in the calendar. The Date column in the summary report table lists the daily summaries for the date range. Note that the word "summary" is included in the title of the report.

Display 4.4 Example of a Daily Summary Report



Weekly Summary

You can create a weekly summary report for one or more weeks. To create a weekly summary report, do the following:

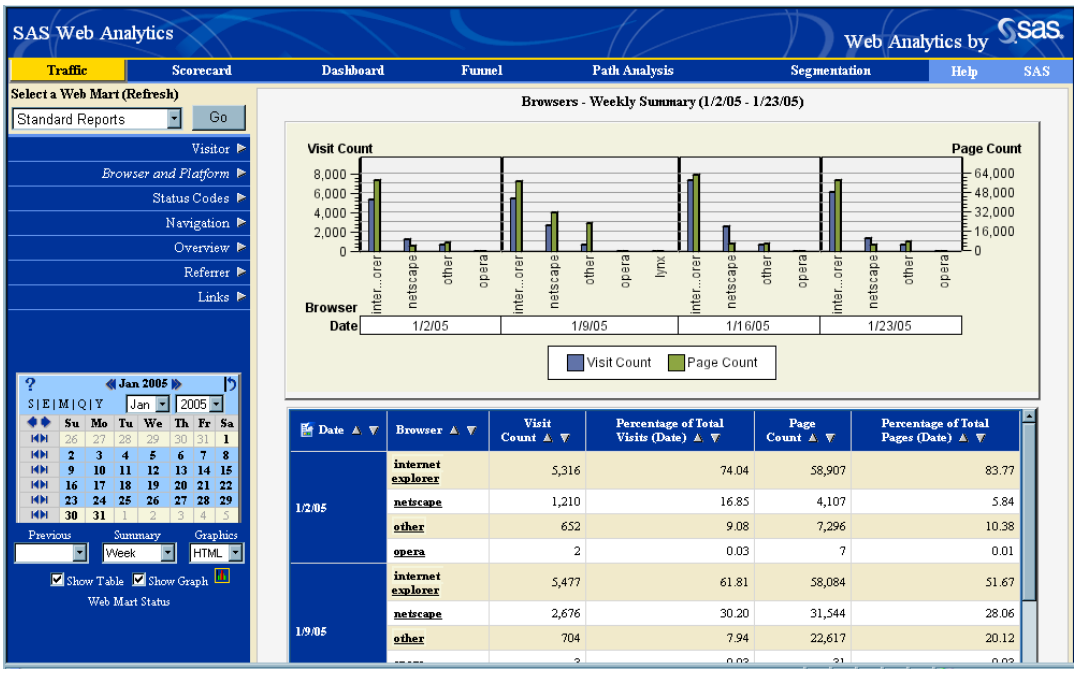
1. Select **Week** from the **Summary** menu.
2. Select a week or date range from the calendar.

Click  to the left of the dates in the calendar one or more times to select the week or weeks for which you want to produce a summary report. Alternately, click a date and then click a second date to complete the range for your weekly summary report. The date range that you selected is highlighted in the calendar.

If you select **Week** from the **Summary** menu, and then click a date in the calendar, the first day of that week is highlighted. If you click a second date in the calendar, then that week is selected, and the date range is highlighted. A report is created for the weeks that you selected.

The following is an example of a Browsers report with a weekly summary selected. Beginning on January 2, 2005, four weeks are selected for the report. The calendar highlights the week of January 2, 2005 as the first week of the report, and January 23, 2005 as the last week of the report. The Date column in the summary report table lists the weekly summaries for the date range. Note that the word "summary" is included in the title of the report.

Display 4.5 Example of a Weekly Summary Report



Monthly Summary

You can create a monthly summary report for one or more months. To create a monthly summary report, do the following:

1. Select **`Month`** from the **`Summary`** menu.
2. Select a date or date range from the calendar.

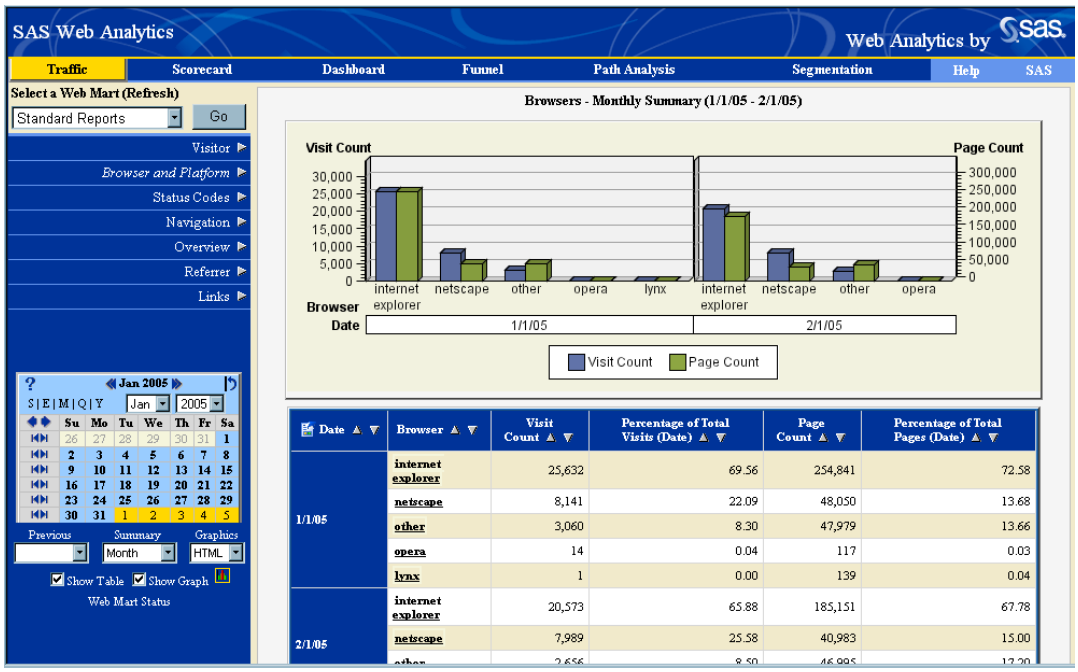
   Note: You can click the **`M`** interval (located at the top left of the calendar) to select the current month. △

If you select **`Month`** from the **`Summary`** menu, and then click a date in the calendar, the first day of that month is highlighted. If you click a second date in the month, then the entire month is highlighted and a report is created for that month.

If you click a date in the calendar, and then click a date in another month, the entire date range is highlighted and a report is created for those months that you have selected.

The following is an example of a Browsers report with a monthly summary selected. The report dates range from January 1, 2005 through February 28, 2005. These two months are summarized in the report. The Date column in the summary report table lists the monthly summaries for the two months in the date range. Note that the word "summary" is included in the title of the report, along with the beginning dates for the months for which the report was created.

Display 4.6 Example of a Monthly Summary Report



Quarterly Summary

You can create quarterly summary reports for your Web mart data. To create a quarterly summary report, do the following:

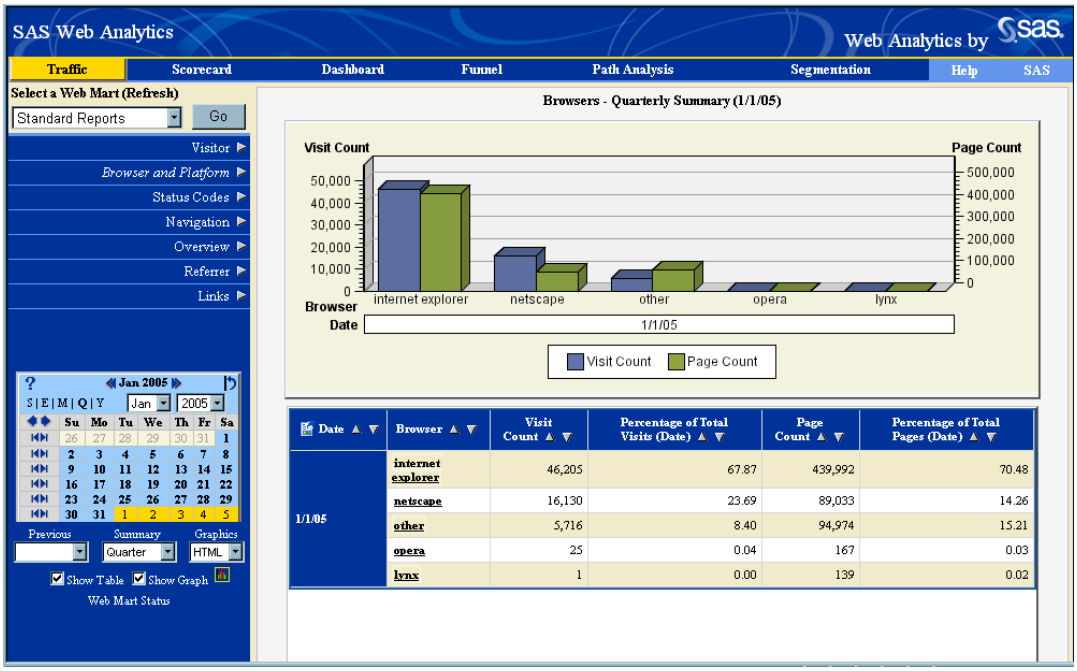
1. Select **`Quarter`** from the **`Summary`** menu.
2. Select a date from the calendar.

   Note: You can click the **`Q`** interval (located at the top left of the calendar) to select a quarterly interval. △

When you select **`Quarter`** from the **`Summary`** menu and then click a date in the calendar, the first date of the quarter is highlighted. When you click a second date, a quarterly report is created.

The following is an example of a Browsers report with a quarterly summary selected. The report date begins on January 1, 2005. Even though the Web mart contains data for only two months, a quarterly summary is created. The Date column in the summary report table lists the quarterly summaries for the date range you selected. Note that the word "summary" is included in the title of the report, along with the beginning date for the quarter for which the report was created.

Display 4.7 Example of a Quarterly Summary Report



Yearly Summary

You can create a yearly summary report. To create a yearly summary report, do the following:

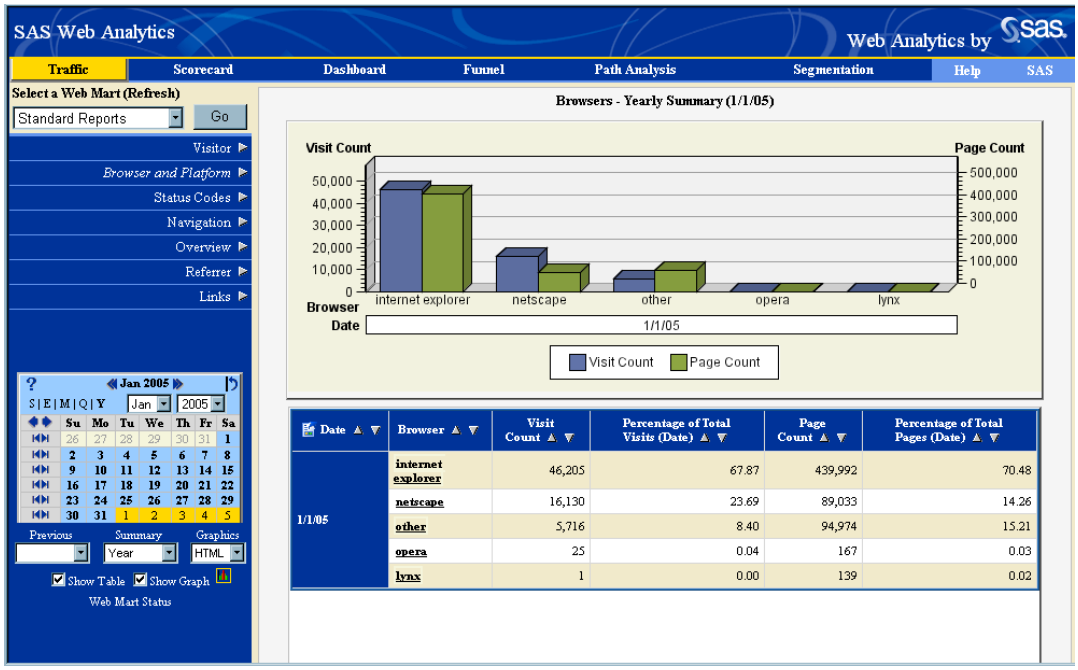
1. Select **Year** from the **Summary** menu.
2. Select a date from the calendar.

   Note: You can click the **Y** interval (located at the top left of the calendar) to select a yearly interval. △

When you select **Year** from the **Summary** menu and then click a date in the calendar, the first day of the current month is highlighted. When you click a second date, the yearly interval is highlighted. The summary report for the yearly interval you selected is automatically produced. Yearly summaries always begin with January 1st.

The following is an example of a Browsers report with a yearly summary selected. The report date begins on January 1, 2005. Even though the Web mart contains data for only two months, a yearly summary is created. The Date column in the summary report table lists the yearly summaries for the date range you selected. Note that the word "summary" is included in the title of the report.

Display 4.8 Example of a Yearly Summary Report



Date	Browser	Visit Count	Percentage of Total Visits (Date)	Page Count	Percentage of Total Pages (Date)
1/1/05	internet explorer	46,205	67.87	439,992	70.48
	netscape	16,130	23.69	89,033	14.26
	other	5,716	8.40	94,974	15.21
	opera	25	0.04	167	0.03
	lynx	1	0.00	139	0.02

Generating Previous and Summary Data Together

You can use the **Previous** menu and the **Summary** menu together to produce reports. To use this combination, do the following:

1. Select a report from the drop-down menus on the left side of the page.
2. Select a value from the **Previous** menu.

   A report is created based on the value that you selected from the **Previous** menu.
3. Select a value from the **Summary** menu.

A summary report is created based on the dates that you selected from the **Previous** menu.

If you select **7 Days** from the **Previous** menu and then select **Day** from the **Summary** menu, a daily summary report is created for those seven days. The Date column in the summary report table lists the dates of the daily summaries.

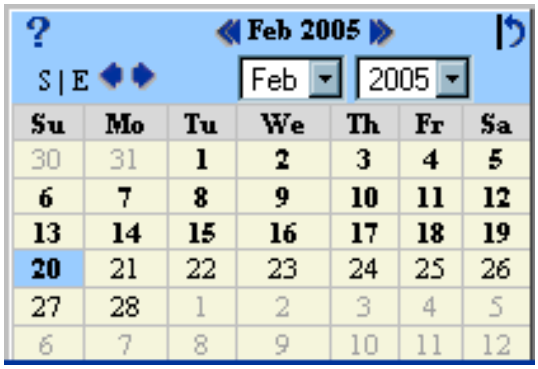
If you select **30 Days** from the **Previous** menu and then select **Week** from the **Summary** menu, a weekly summary report is created for the weeks that comprise the 30-day period. The Date column in the summary report table lists the weekly summaries for the date range that you selected.

If you select **90 Days** from the **Previous** menu and then select **Month** from the **Summary** menu, a monthly report that spans three months is created. The Date column in the summary report table lists the monthly summaries for the date range that you selected. If your Web mart has fewer than 90 days of data, then a monthly report that spans the available months is created. The first month for which there is data becomes the first date in the summary report.

Using the Calendar with Dashboard, Scorecard, and Segmentation Reports

Select a Day for Your Report

The following calendar is available with scorecard, dashboard, and segmentation reports.



To select a single day, click the date in the calendar. The date you select is highlighted, and a report is automatically produced for this date. The date appears in the title of your report.

Move from One Date to Another

To sequentially move from one date to another, click the arrows  at the upper left of the calendar. The left arrow moves the date backwards and the right arrow moves the date forwards. A report is automatically produced after you move the date.

Select a Month and Year for Your Report

Select a month and year for your report in one of the following ways:

- Click the forward and backward double arrows at the top center of the calendar to select a month and year. The month and year you select appears between the arrows.
- Use the drop-down menus in the upper right of the calendar to select the month and year.

Move to the First and Last Dates of Your Web Mart

You can click the letters that are located near the top left of the calendar to move the calendar to the first and last dates of your Web mart:

S moves the calendar to the first available date in the Web mart. Note that this move does not select the first date. (To select the first date, click the date in the calendar.)

E moves the calendar to the last available date in the Web mart. Note that this move does not select the last date. (To select the last date, click the date in the calendar.)

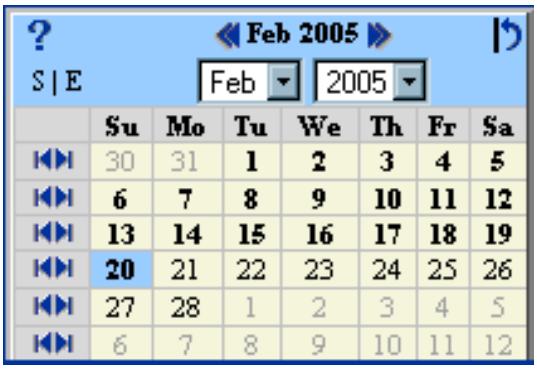
Clear all Dates

The arrow icon () at the top right corner of the calendar enables you to deselect any dates that you have previously selected. Click the arrow to clear the calendar. If you do not select a date after clearing all dates, and you select a report to run, then the most recently selected date will be used for the report.

Using the Calendar with Funnel and Interactive Path Analysis Reports

Select a Day or Range of Days for Your Report

The following calendar is available with Static and Interactive Funnel reports, as well as with Interactive Path Analysis reports.



To select a single date, first clear all dates from the calendar by clicking  . Then click a date in the calendar. The date you select is highlighted. After you complete the Interactive Funnel Form or the Interactive Path Analysis Form and click **Run**, a report is created for this date.

To select a range of dates, you must select each date in the range. To select all of the dates in a week, click  to the left of the week in the calendar. To deselect a

selected date, click the date in the calendar. The dates do not need to be contiguous. After you complete the Interactive Funnel Form or the Interactive Path Analysis Form and click **Run**, a report is created for the dates you have selected.

Select a Week as the Date Range for Your Report

To select a specific week as the date range for your report, first clear all dates from the calendar by clicking  . Then click  to the left of the dates in the calendar. When you click the arrows, the week is highlighted. If you click another week, then two weeks are selected for your report. The weeks do not need to be contiguous. The report is created only for the weeks that you select. To deselect a selected date in the week, click the date in the calendar.

Select a Month and Year for Your Report

Select a month and year for your report in one of the following ways:

- Click the forward and backward arrows at the top center of the calendar to select a month and year. The month and year you select appears between the arrows.
- Use the drop-down menus in the upper right of the calendar to select the month and year.

Move to the First and Last Dates of Your Web Mart

You can click the letters that are located near the top left of the calendar to move to the first and last dates of your Web mart:

S moves the calendar to the first available date for funnels and path analysis. Note that this move does not select the first date. (To select the first date, click a date in the calendar.)

E moves the calendar to the last available date for funnels and path analysis. Note that this move does not select the last date. (To select the last date, click a date in the calendar.)

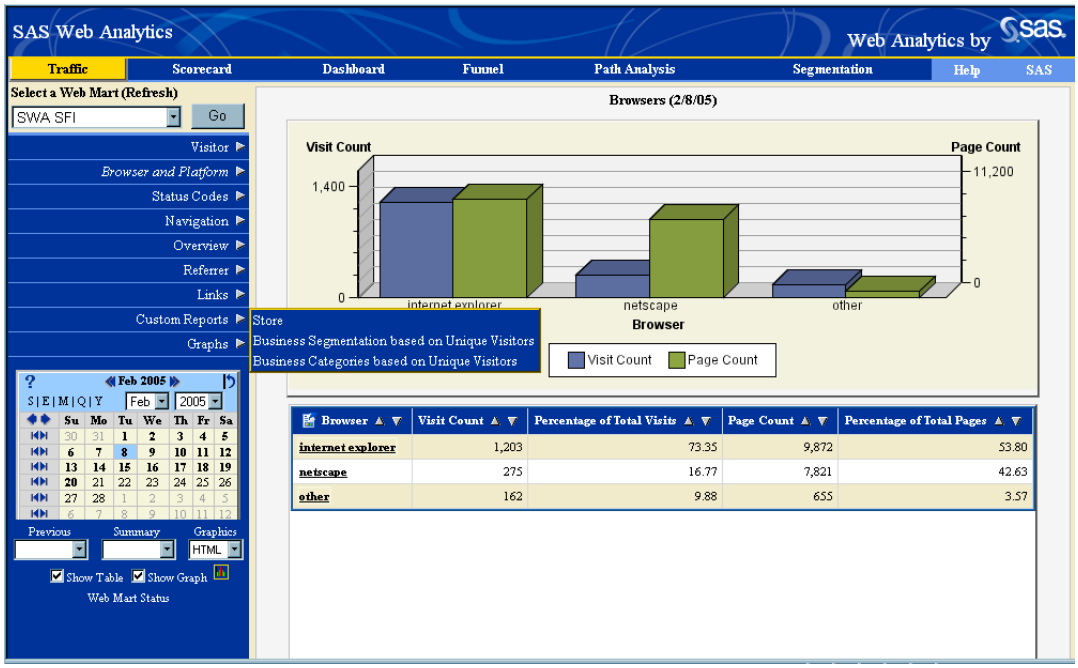
Clear all Dates

The arrow icon () at the top right corner of the calendar enables you to deselect any dates that you have previously selected. Click the arrow to clear the calendar. If you do not select a date after clearing all dates, and you select a report to run, then you will be presented with an error message stating that you must select at least one date.

Creating Custom Traffic Reports

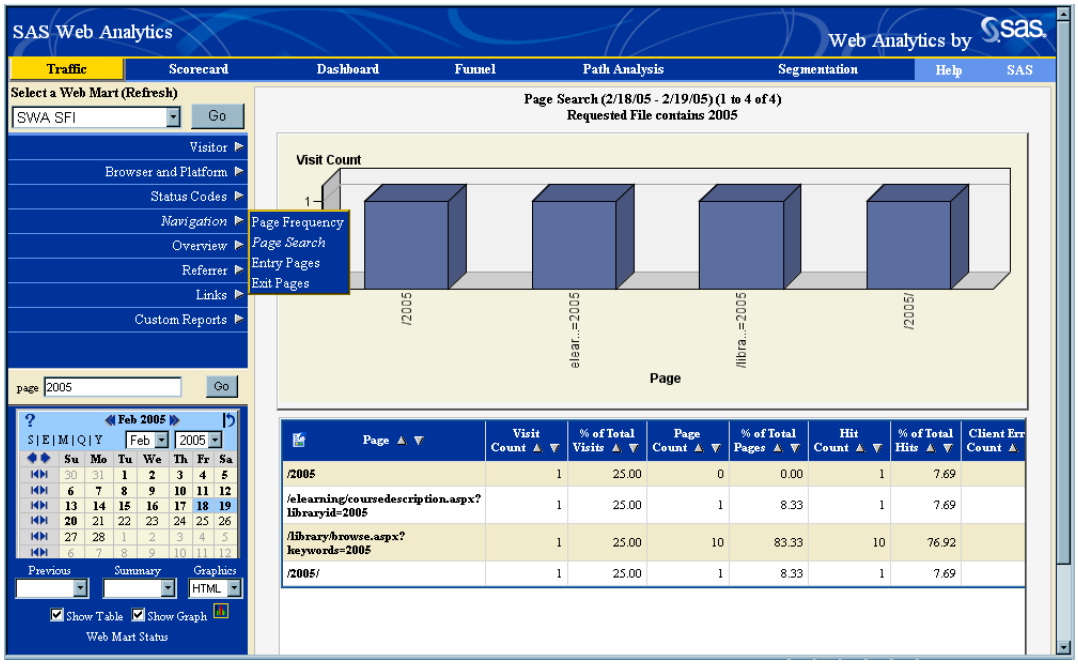
Your SAS Web Analytics administrator can create custom traffic reports for your site. After the reports are created, you can select them from the **Custom Reports** menu on the left side of the page. The following example shows the drop-down menu for three custom reports that were previously created.

Display 4.9 Example of a Drop-down Menu That Lists Custom Reports



You can also add custom reports to the existing default reports. The following example shows the custom Page Search report, which you access from the Navigation menu.

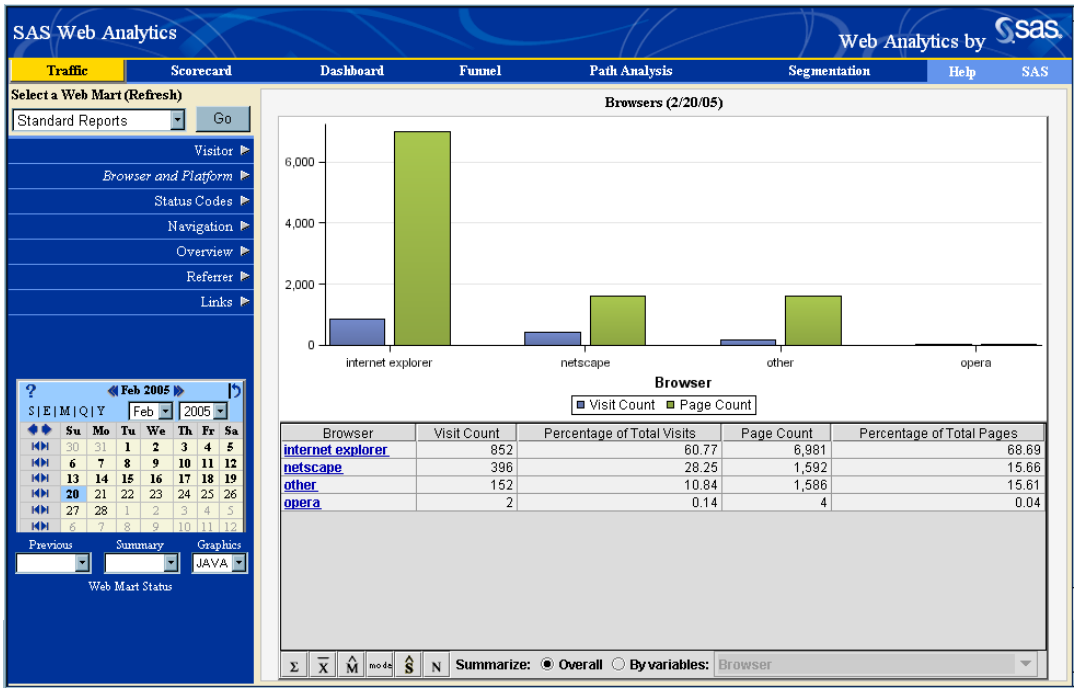
Display 4.10 Example of the Custom Page Search Report Showing the Drop-down Menu



Select HTML or Java Format for Your Report

For traffic, scorecard, dashboard, and segmentation reports, you can select either an HTML or Java format to view your report. Select **HTML** or **JAVA** from the **Graphics** drop-down menu that is located under the calendar. The following is an example of the Browsers report in Java format.

Display 4.11 Browsers Report: Java Format



If you click  under the **Graphics** menu, you can edit the properties of your graph.

Select a Graph or Table Report

After you select an individual traffic report, you can view the HTML report in table, graph, or both table and graph formats. To do this, check the **Show Table** and/or **Show Graph** boxes that are located under the calendar. These options are available only if you select **HTML** from the **Graphics** menu.

Note that if you select the **Show Graph** option, and your report is not suitable for a graphic representation, then the graph will not display. This is the case for the Unique Visitors traffic report.

View Web Mart Status

You can view the status of your Web mart by clicking the **Web Mart Status** link that is located under the calendar. This link is available for all traffic reports. Use this report to identify the valid dates for your Web mart.

Access Links to Other Web Sites

If you select the traffic category of reports, you can view links to the following Web sites:

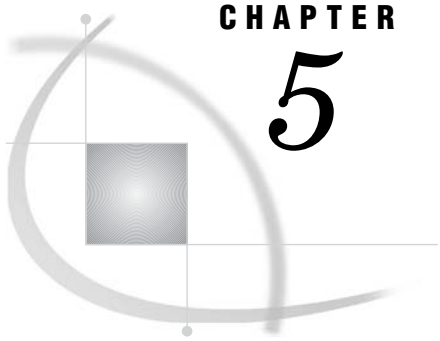
Sas.com
opens the SAS Institute Web site.

Bettermanagement.com
opens the BetterManagement.com portal, which focuses on performance improvement. You can do the following from this portal:

- Read articles from key industry publications.
- Access resources such as Web presentations, online courses, and interviews with thought leaders.
- Access books and executive videos.

Google
opens the page for the Google search engine.

HTTP Status Codes
opens the W3C status code page. SAS Web Analytics status reports use codes that are based on the W3C definitions.



CHAPTER

5

Viewing Graph and Table Reports in HTML Format

Overview: HTML Graph and Table Reports

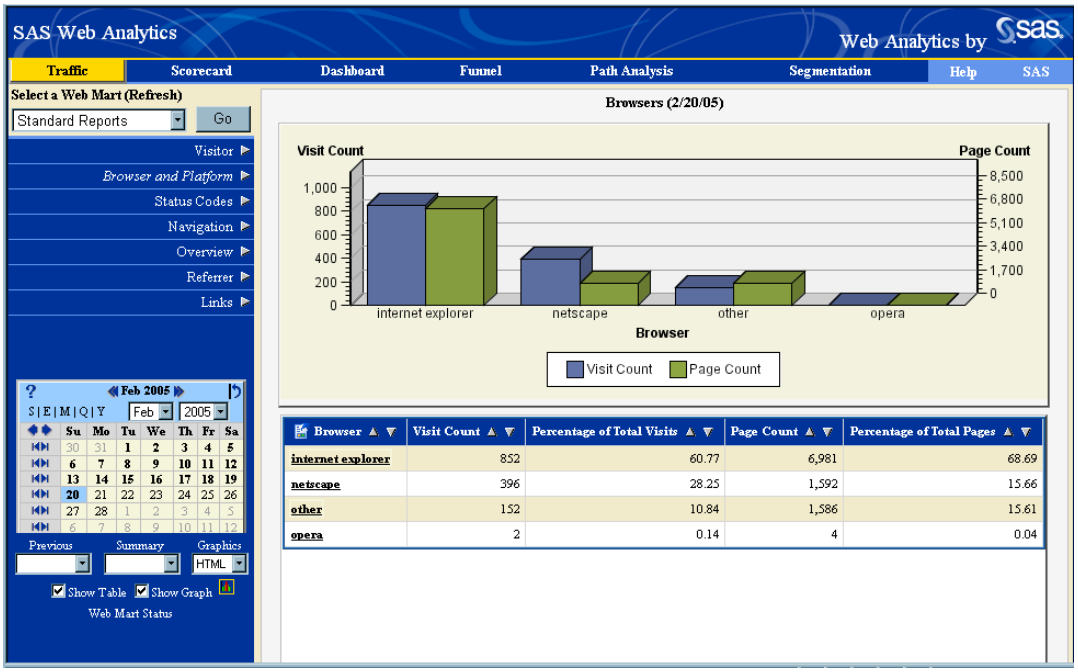
Graphs in your report are displayed as plots, histograms, or bar charts. You use menu options to change the format of your report and to subset data. If you click a link in the column of the graph, then the corresponding row in the table is highlighted.

Table columns in your report can be sorted in ascending or descending order by clicking the up arrow (sort ascending) or the down arrow (sort descending) in the column heading. Clicking the column heading arrows changes the order of the rows in the table according to the values in that column.

Note: To view reports in HTML format, be sure that you select **`HTML`** from the **`Graphics`** drop-down menu in the left section of the page. △

The following is an example of an HTML graph and table for a Browsers report. The analysis variables are sorted in descending order.

Display 5.1 Example of a Browsers Report in HTML Format



Changing the Appearance of Your HTML Table

Highlight Rows in an HTML Table

You can highlight a row in a table by clicking a link in the graph part of the report. Links are located on the X-axis of the graph and correspond to columns in the table.

Sort Columns in an HTML Table

Click the up arrow in the column heading to sort the column in ascending order. Click the down arrow to sort the column in descending order. Note that the presentation of the graph changes to reflect the sort order.

Export Your Report to a Microsoft Excel Spreadsheet

When you view your report in HTML format, you can export your report to an Excel spreadsheet. To do this, follow these steps.

1. In the SAS Web Analytics Report Viewer, select the report that you want to link to.
2. Start Excel.
3. Click the Page icon  at the top left corner of the table, as shown in the following table.

Platform	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total Pages
windows nt	1,029	69.72	12,309	75.62
unknown	325	22.02	3,169	19.47
windows 98	88	5.96	551	3.38
windows	16	1.08	23	0.14
macintosh	10	0.68	20	0.12
windows 95	6	0.41	5	0.03
linux	1	0.07	2	0.01
unix (unknown)	1	0.07	199	1.22

A dialog box that contains an active URL appears:

4 Copy the URL.

5 In Excel, import the URL by clicking **Data ▶ Import External Data ▶ New Web Query**.

   a After the New Web Query dialog box opens, paste the URL that you copied into the **Address** field.
   b Click **Go**.
   c Click the **Options** button in the right corner of the dialog box.
      The Web Query Options dialog box appears.
   d Select **Full HTML formatting** in the Web Query Options dialog box, and click **OK**.

6 Click the **Import** button in the **New Web Query** dialog box.

7 In the **Import Data** dialog box, select where you want to put the table and click **OK**.
   The table displays in Excel.

Note that you can import files from every HTML report that has a Page icon ( ).

Drilling Down to View Related Reports

Many of the traffic reports enable you to drill down to access other related reports. Move your cursor over a link in the table (usually the first item in the table) to view the title of the related report. Click the link to view the report.

The following table lists the reports that you can access by drilling down from a main report:

Table 5.1 List of Drill-down Reports

Main Report	Drill-down Reports
Browsers	Browser Versions
Day of Week Metrics	Site Metrics by Day of Week
Entry Pages	Referrer by Entry Page ▶ Entry Pages by Referrer
Error Status Codes	Error Status Code Pages ▶ Error Status Code Page Referrers
Like Search Terms	Referrer by Search Terms ▶ Search Terms by Referrer
Search Terms	Referrer by Search Terms ▶ Search Terms by Referrer
Status Codes	Hourly Status Codes
Visit Referrer Domains	Entry Pages by Referrer ▶ Referrer by Entry Page

CHAPTER

6

Viewing a Graph in Java Format

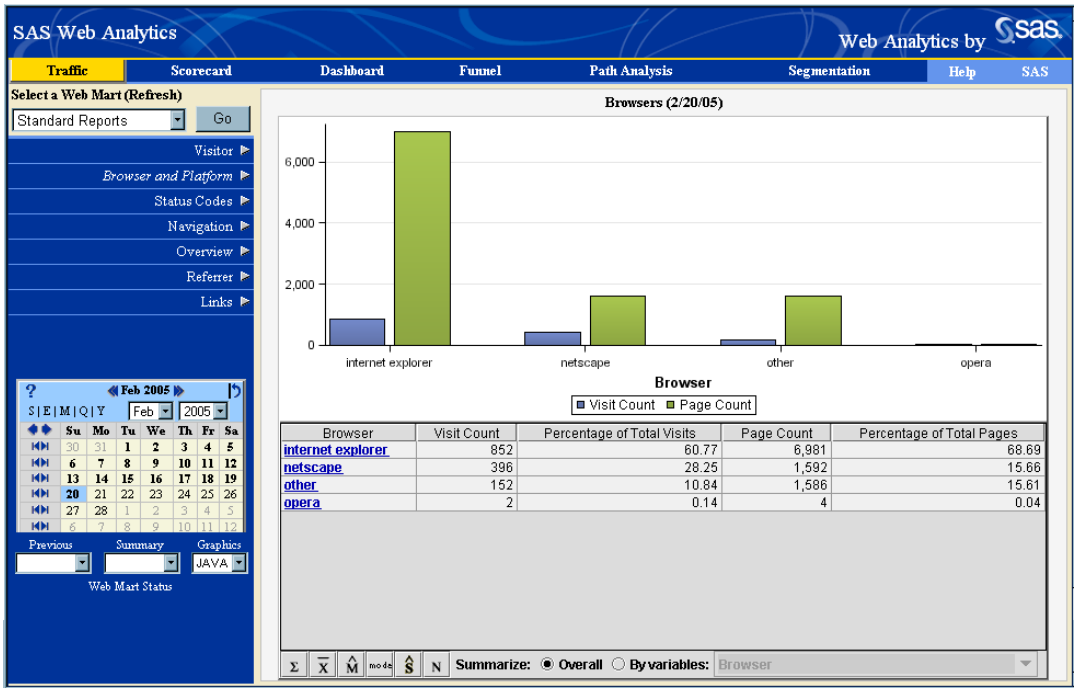
Overview: Java Graphs

Graphs in your report are displayed as plots, histograms, or bar charts. You use menu options to change the format of your report and to subset data.

Note: To view reports in Java format, be sure that you select **`JAVA`** from the **`Graphics`** drop-down menu in the left section of the page. △

The following is an example of a Java graph and table in a Browsers report.

Display 6.1 Example of a Browsers Report in Java Format



Selecting Options for Your Java Graph

You can manipulate your Java graph by selecting options from a pop-up menu. Position your cursor in a Java graph and right-click the mouse to display the following menu:

From this menu, you can change the appearance of your graph, create a subset of data, select other options, and print your graph and table.

Changing Java Graph Properties

Modifying the Layout of Your Graph

You can modify the layout of your graph by selecting options in the tabs that display in the Properties dialog box. To access the Properties dialog box, do the following:

1 Position your cursor in a Java graph.

2 Right-click the mouse to open the pop-up menu.

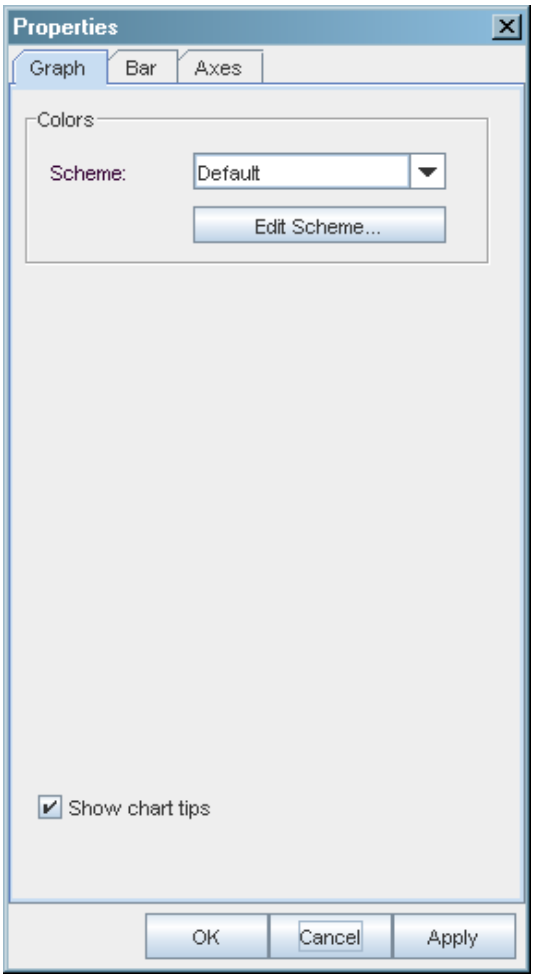
3 Select **`Properties`** from the menu.

Property tabs that are valid for the type of graph you are viewing are displayed.

Depending on the type of your graph, you can access the **`Graph`**, **`Bar`**, **`Axes`**, **`Plot`**, and **`Bins`** tabs.

When you select **`Properties`** from the pop-up menu in a Browsers report, a dialog box similar to the following appears:

Display 6.2 Browsers Report Properties Dialog Box



For this Browsers report, you can use the **Graph**, **Bar**, and **Axes** tabs to change the appearance of your graph.

The **Plot** tab is available only for scatter plots, the **Bins** tab is available only for histograms, and the **Bar** tab is available only for bar charts.

Change the Color Scheme

Click the **Graph** tab in the Properties dialog box to select a color scheme for the graph and to control the appearance of chart tips.

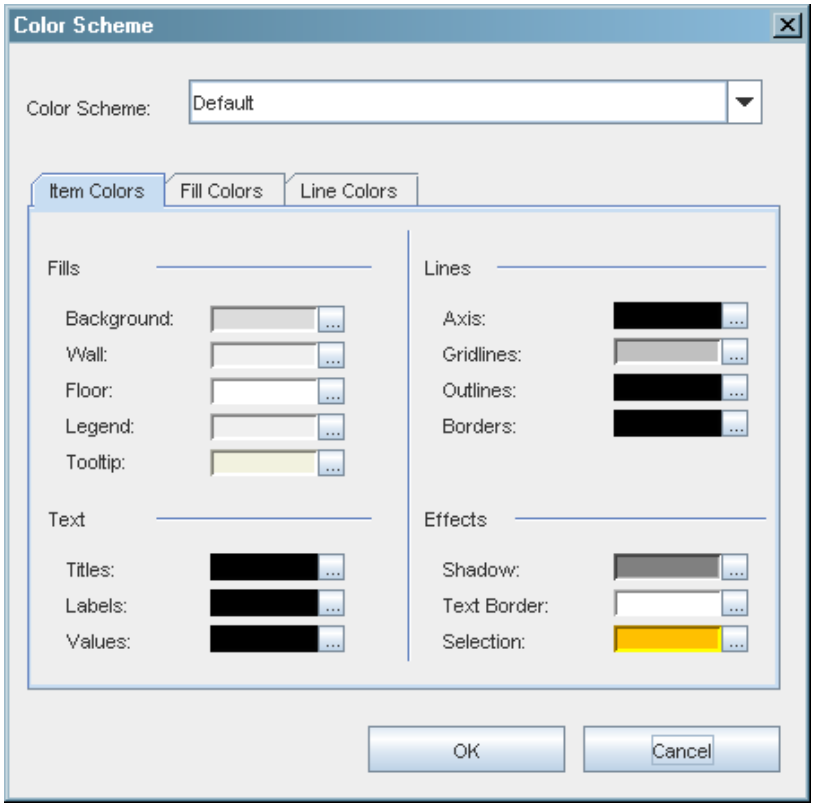
To select a color scheme, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open the pop-up menu.
3. Select **Properties** from the menu.

   The Properties dialog box appears.
4. Select the **Graph** tab.
5. Click the down arrow in the **Scheme** drop-down list.
6. Select a color scheme.
7. Click **Apply** to apply changes.
8. Click **OK** to close the window.

You can edit the colors of the current color scheme by clicking **Edit Scheme** in the **Colors** section of the **Graph** tab. The Color Scheme dialog box opens, as shown in the following display:

Display 6.3 The Color Scheme Dialog Box



Select the **Item Colors**, **Fill Colors**, and **Line Colors** tabs to define your color scheme.

This dialog box reflects the configurability of Java features. Changes that you make in this dialog box are temporary. When you close the dialog box, all changes are lost.

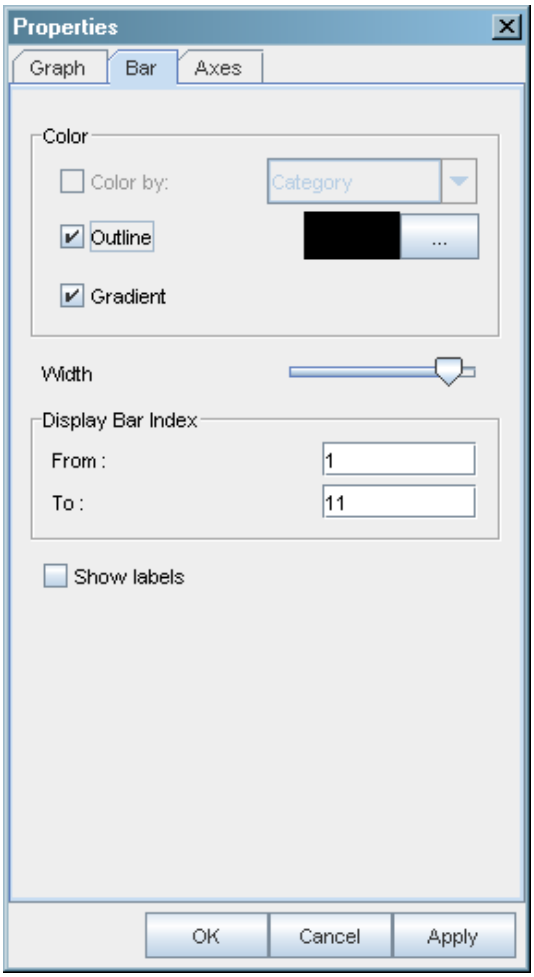
Show Chart Tips

You have the option of viewing chart tips in your report graph. In the **Graph** tab of the Properties dialog box, select **Show chart tips** to enable chart tips to appear when you move your cursor over a plot symbol in the chart. Chart tips display information about variables that are listed in the table of the report. Your SAS Web Analytics administrator or programmer creates the chart tips.

Change How Bars Appear in Your Graph

Use the **Bar** tab in the Properties dialog box to change the properties of the bars in your graph. The following shows the **Bar** tab in the Properties dialog box:

Display 6.4 The Bar Tab in the Properties Dialog Box



In the **Color** section of the dialog box, select the **Outline** option to display an outline around the bars in your chart. You can select the color of the outline by clicking ... .

In the **Color** section of the dialog box, select the **Gradient** option and then click ... to display the gradients of color that you can choose.

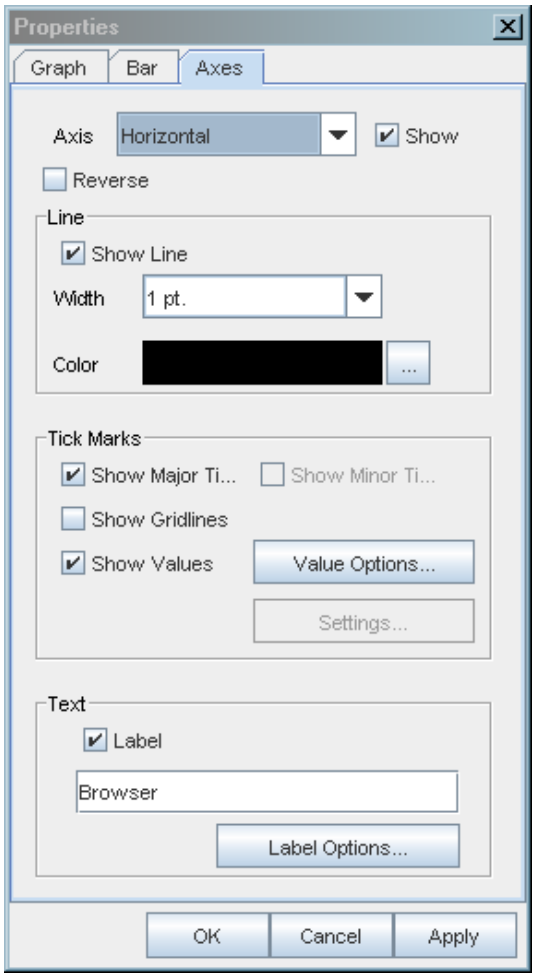
You can move the **Width** slider to increase or decrease the width of the bars in your chart.

In the **Display Bar Index** section, you can change the number of bars that are displayed. Enter the beginning and ending numbers for the bars that you want to display in the **From** and **To** fields, respectively.

Change the Display of the Vertical and Horizontal Axes

Use the **Axes** tab in the Properties dialog box to change the display of the vertical and horizontal axes of your graph. The following figure shows the **Axes** tab.

Display 6.5 The Axes Tab in the Properties Dialog Box



Select the **Show** option to display the axis properties of the chart. When this option is selected, you can make changes to the properties of your axes. In the **Axis** drop-down list, click the down arrow to select an axis that you want to modify.

Select the **Reverse** option to display the values on the X axis from maximum to minimum, rather than from minimum to maximum, which is the way graphs are normally displayed.

In the **Line** section, you can modify how the axis line is displayed. Select the **Show Line** option to display the attributes of the axis line. In the **Width** drop-down list, use the down arrow to select the width of your axis. In the **Color** field, select a color for your axis by clicking  and making a color selection.

In the **Tick Marks** section, you can modify the display of tick marks along the axis that you selected. To modify tick marks, select or deselect the following options:

- **Show Major Ticks**
- **Show Gridlines**
- **Show Values**

In the **Tick Marks** section, click **Value Options** to open the Axis Values Text Options dialog box. Click the **Font** tab to modify the font, font style, and size of the value text. Click the **Color** tab to select a color.

In the **Text** section of the **Axes** tab, you can modify the label text properties. Select the **Label** option to show text labels. The label is displayed in the window. You can modify your label by typing a new label in the window. Click **Label Options** to open the Axis Label Text Options dialog box. Click the **Font** tab to modify the font, font style, and size of the label text. Click the **Color** tab to select a color. Deselect the **Label** option to hide labels.

Make Changes to Your Scatter Plot

The **Plot** tab in the Properties dialog box is available only if you are viewing a scatter plot. Use the **Plot** tab to modify the presentation of any lines and markers that are displayed in your chart.

In the **Lines** section, you can modify the **Style**, **Thickness**, and **Color** of a line.

In the **Area Fill** section, you can choose to fill in the area below a line by selecting the **Fill Area** option. You must choose a line style to enable this option.

In the **Markers** section, you can modify the display of the markers in the scatter plot in the following ways:

- Select the **Show Markers** option to display markers in the plot.
- Select the **Fill Markers** option to display markers that are filled.
- Select the **Show Outlines** option to display outlines around the markers.
- Click the down arrow in the **Shape** drop-down list to access a menu from which you can change the shape of the marker.
- Click  next to the **Color** field to change the fill color of the marker.
- Click  next to the **Outline** field to change the color of the marker outline.
- Select the **Autosize Markers** option to enable the plot to automatically size the markers. Deselect the option to enable the **Size** slider. Drag the slider to resize the markers.

Display Bins on Your Histogram Plots

Use the **Bins** tab to change the display of bins in your histogram plots. In the **Color** section, you can choose the following:

Color By Stat
Select a different color for each bin, based on the value of the statistic.

Color By Chart

Select the color of each bin by opening the Color dialog box and clicking  . (Each bin is the color that you select in the Color dialog box.)

Outline

Select the option to display an outline around each bin. Click  to change the color of the outline.

In the **Bins** section, you can choose the following options:

Option	Action
Show Missing Bin	Select the option to display missing bins.
Horizontal Discrete	If the bins are located on the horizontal axis, then select the option to display only the bins that contain non-zero values.
Vertical Discrete	If the bins are located on the vertical axis, then select the option to display only the bins that contain non-zero values.
Horizontal Sort Order	If the value axis is the horizontal axis, then select from the drop-down menu to sort the axis values by ascending order, descending order, or by data set order.
Vertical Sort Order	If the value axis is the vertical axis, then select from the drop-down menu to sort the axis values by ascending order, descending order, or by data set order.
Horizontal	If the bins are located on the horizontal axis, then select from the drop-down menu to choose the number of bins to display. You can choose from five to 30 bins, in five-bin increments.
Vertical	If the bins are located on the vertical axis, then select from the drop-down menu to choose the number of bins to display. You can choose from five to 30 bins, in five-bin increments.
Width	Use the slider to change the size of the symbol in the histogram. Slide the bar to the right to increase the symbol size. Slide the bar to the left to decrease the symbol size. By default, the symbol size equals the size of the cell in the plot.

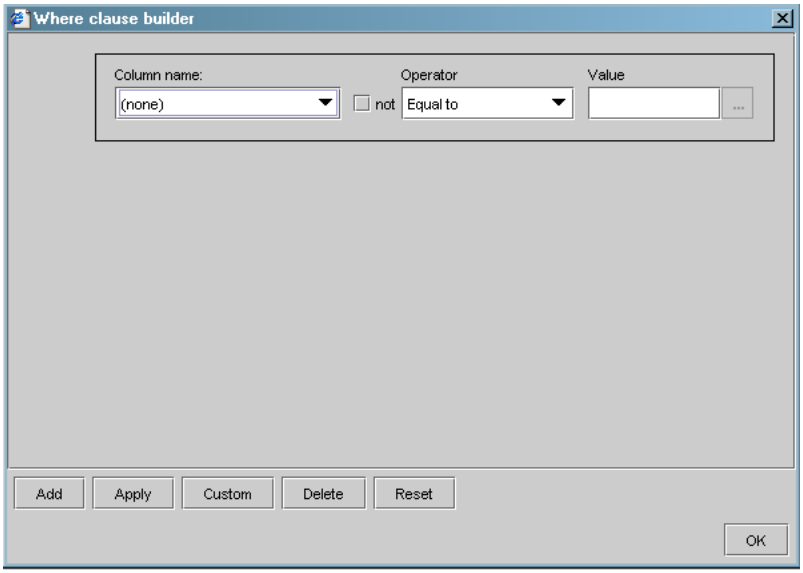
Subset Data by Using the Where Clause Builder

You can subset the data in your report by using Where clause processing in the Where clause builder. To access the Where clause builder dialog box, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open a pop-up menu.
3. Click **Where** to open the Where clause builder dialog box.

   The following dialog box displays.

Display 6.6 The Where Clause Builder Dialog Box



Use the Where clause builder dialog box to build Where clauses that subset the data that you plot. You can subset the data that you plot by more than one variable.

In the **Column name** drop-down list, choose the variable that you want to subset. You can subset the variable by using operators in the **Operator** drop-down list.

Note: To subset data by more than one variable, click **Add** to add the variable to the Where clause. △

In the **Value** field, select the values by which you want to subset the variable. When you click  to pick a variable or value, the item that you select is displayed in the field. When you click **Apply** to apply your changes, the graph that you are viewing shows the changes. You can click **Reset** to reset changes. When you click **Reset**, the changes are discarded.

The following table describes the buttons that you use in the Where clause builder dialog box:

Button	Action
Add	Opens a dialog box that enables you to add another variable to the Where clause.
Apply	Applies your changes to the plot.
Custom	Opens a text box in which you can type your own Where clause.
Delete	Opens a dialog box that enables you to select the Where clauses that you can delete.
Reset	Clears the Where clause construct and displays the default dialog box settings.
OK	Closes the dialog box.

Making Selections from the Bar Menu

View Bar Menu Options

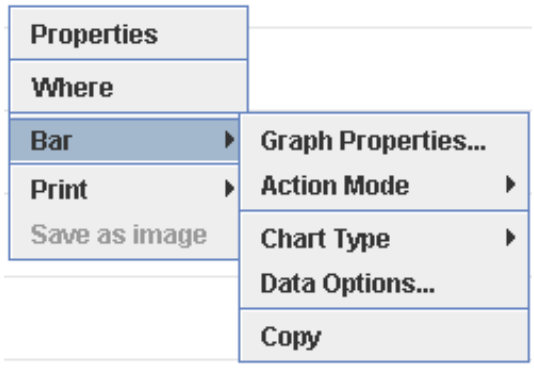
Use the **Bar** menu option to make changes to how your graph is displayed, and to add a caption, title, or footnote to your graph.

To access the pop-up menu for the **Bar** option, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open a pop-up menu.
3. Select **Bar** from the menu.

The following display shows the options that are available when you select **Bar** from the menu.

Display 6.7 Bar Menu Options

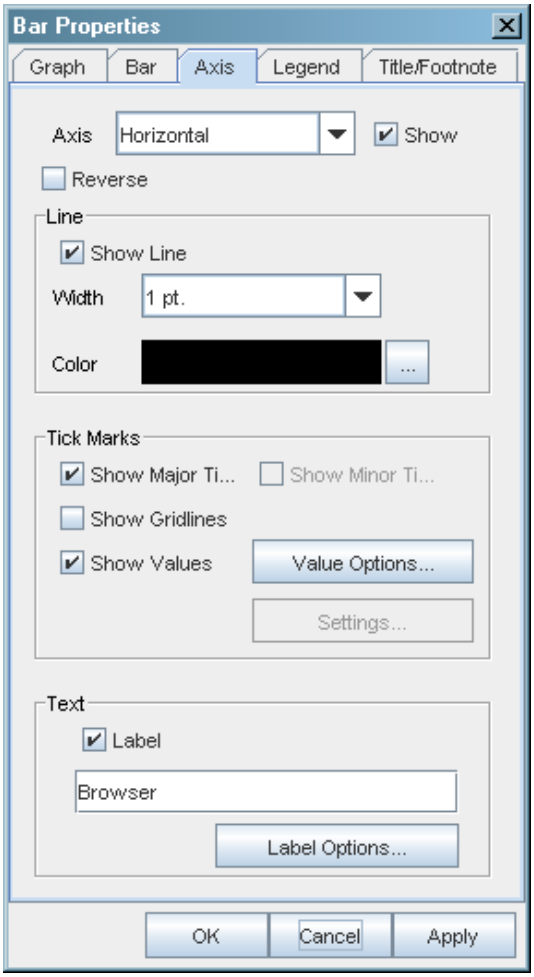


Graph Properties

Description of the Graph Properties Dialog Box

When you select **Graph Properties** from the **Bar** menu, the Bar Properties dialog box opens. This dialog box contains five tabs, as shown in the following display.

Display 6.8 The Axis Tab in the Bar Properties Dialog Box



In addition, the following tabs might be present, depending on the type of plot you are viewing:

Plot displays scatter plot properties.

Advanced displays additional scatter plot properties.

Bar displays bar properties.

Bin displays bin properties.

Make Changes by Selecting the Graph Tab

Click the **Graph** tab in the Bar Properties dialog box to select a color scheme and to select whether you want to show chart tips. For more information about the options in the **Graph** tab, see "Change the Color Scheme" on page 50.

Make Changes by Selecting the Bar Tab

Click the **Bar** tab in the Bar Properties dialog box to change the width of the bars in your chart or to add an outline to the bars. For more information about the options in the **Bar** tab, see "Change How Bars Appear in Your Graph" on page 51.

Make Changes by Selecting the Axis Tab

Click the **Axis** tab in the Bar Properties dialog box to change the display of the vertical and horizontal axes of your graph. For more information about the options in the **Axis** tab, see "Change the Display of the Vertical and Horizontal Axes" on page 52.

Add or Change a Legend in Your Graph

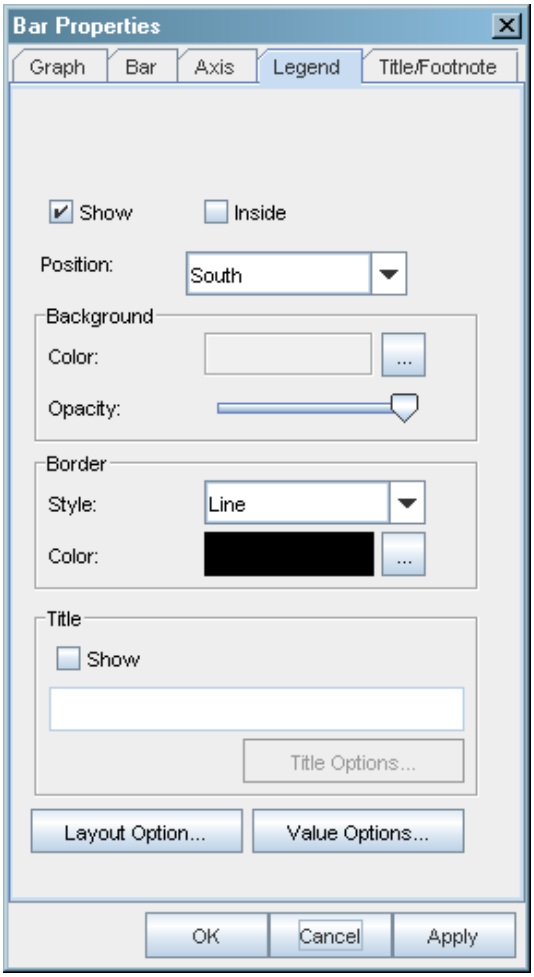
You can add a legend (caption) to your graph, change a legend, hide a legend, and position a legend on your graph. You can also change the background and color of a legend.

To access the **Legend** tab, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open a pop-up menu.
3. Select **Bar** from the menu.
4. Select **Graph Properties**.
5. Select the **Legend** tab.

The following dialog box displays.

Display 6.9 The Legend Tab in the Bar Properties Dialog Box



Check the **`Show`** box to display all captions in your graph.

You can also check the **`Inside`** box if you want to position the legend on the wall of the graph instead of under the horizontal axis. This placement conserves space under the horizontal axis, and uses the white space inside the graph to display the legend.

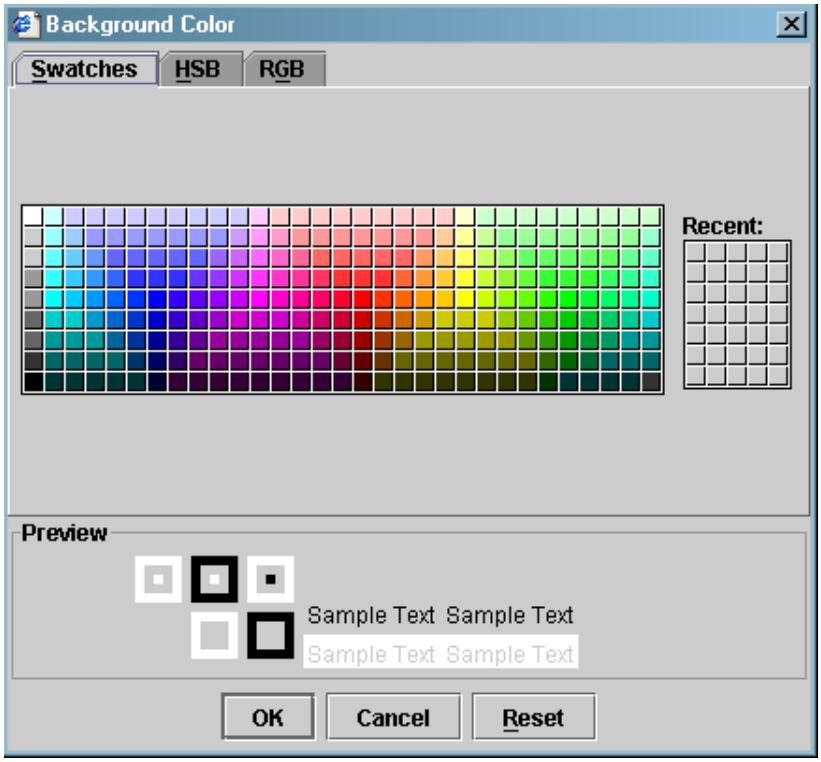
In the **`Position`** drop-down menu, you can select the following options:

Orientation	Description
`North`	Positions the legend at the top of the graph.
`Northeast`	Positions the legend at the top right section of the graph.
`Northwest`	Positions the legend at the top left section of the graph.
`South`	Positions the legend at the bottom of the graph.
`Southwest`	Positions the legend at the lower left section of the graph.
`Southeast`	Positions the legend at the lower right section of the graph.

Orientation	Description
East	Positions the legend to the right of the graph.
West	Positions the legend to the left of the graph.

In the Background section of the **Legend** tab, click  to open the Background Color dialog box, as shown in the following display.

Display 6.10 Background Color Dialog Box



Select a color. You can preview the color in the **Preview** section of the **Swatches** tab. Selecting the **HSB** and **RGB** tabs enables you to use a slider to change your color scheme.

In the **Background** section of the **Legend** tab, use the slider to adjust the opacity of your colors.

In the **Border** section of the **Legend** tab, use the **Style** drop-down list to select whether you want your legend to be enclosed by lines. The **Color** field enables you to select a border color for your legend.

In the **Title** section of the **Legend** tab, select or deselect the **Show** option to display or hide the legend that you created. Type your legend in the field that is located beneath the **Show** check box. If you select the **Show** option, you can click **Title Options** to access the Title Options dialog box, from which you can select the **Font**, **Color**, **Effects**, and **Position** tabs. Use these tabs to change the font and size of your title, to change the color and position of the title in the graph, and to add shadow, underline, or strikethrough options.

You can click **Layout Option** in the Bar Properties dialog box to select layout options for your graph.

You can click **Value Options** in the Bar Properties dialog box to access the Value Options dialog box, from which you can select the **Font**, **Color**, **Effects**, and **Format** tabs. Use these tabs to change the font and size of your legend, to change the color and format of your legend, and to add shadow, underline, or strikethrough options.

After making your selections, click **Apply** to view the changes that you made, and click **OK** to save your changes and close the window. Click **Cancel** to cancel your changes.

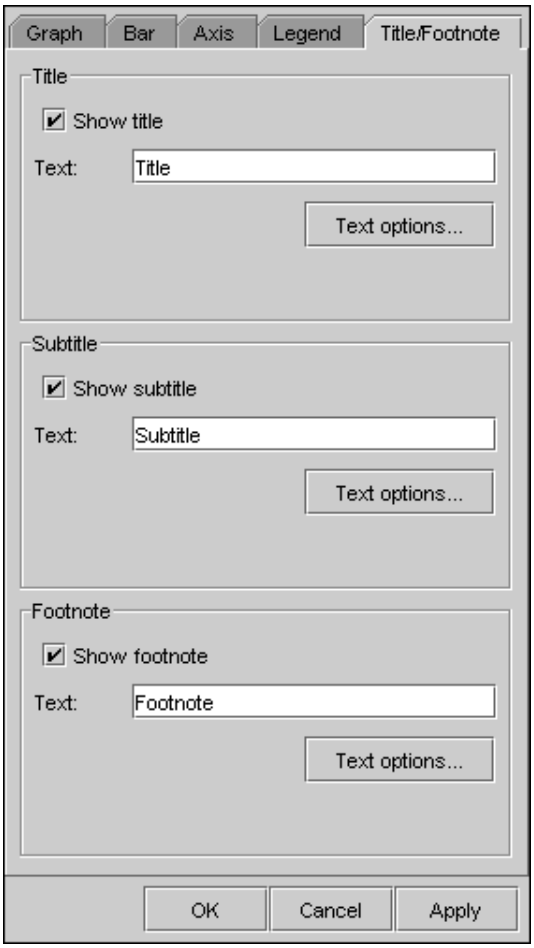
Add, Delete, and Change Titles and Footnotes

You can add, delete, or change titles, subtitles, and footnotes in your plot by selecting options in the **Title/Footnote** tab.

To access the **Title/Footnote** tab, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open a pop-up menu.
3. Select **Bar** from the menu.
4. Select **Graph Properties**.
5. Select the **Title/Footnote** tab.

The following dialog box displays.



Select or deselect the **Show title**, **Show subtitle**, and **Show footnote** check boxes to choose these options.

Click **Text options** to change the font, color, effects (shadow, underline, strikethrough), and position of your title, subtitle, or footnote.

Make Changes by Selecting the Advanced Tab

The **Advanced** tab is available only if your output is a scatter plot. In the Scatter Plot Properties dialog box, use the **Advanced** tab to set marker selection options and regression lines.

In the **Marker Selection** section, you can make the following selections:

Restrict Brush to Chart Area
Keep the brush area that you create within the chart.

Always Show Selected Markers
Show the markers that you have selected.

Select Indicator
Choose the method that you want to use to indicate that markers have been selected. You can choose **Smart**, **Use Selection Color**, or **Grow Marker Size**.

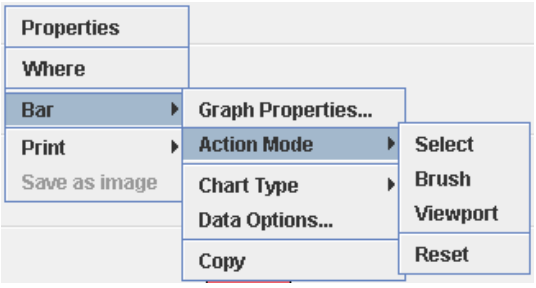
In the **Regression** section, select the **Show Line** option to display a regression line plotted on your scatter plot. You can set the line color and width in this section.

In the **Coalesce** section, select the **Coalesce Markers** option to bring together markers based on the statistic that you select in the **Statistic** box. The **Coalesce Distance** slider increases or decreases the distance between markers.

Action Mode

You can choose the **Select**, **Brush**, **Viewport**, and **Reset** options from the **Action Mode** selection of the **Bar** menu, as shown below.

Display 6.11 Action Mode Menu Items



Clicking **Select** enables you to change the presentation of the bars in your graph. To change the presentation, do the following:

1. Right-click **Select**.
2. Position your cursor below or to the left of an axis.
3. Right-click again to access the following menu:

Zoom	shortens or lengthens columns. To zoom in, click and drag from bottom to top. To zoom out, click and drag from top to bottom.
Pan	moves the graph within the graph image area.
Reset Axis	returns the graph to its original dimensions.

4. Select **Zoom** or **Pan** by right-clicking the mouse.

5 Position your cursor below or to the right of an axis and drag your cursor to change the appearance of your graph.

Clicking **Brush** enables you to select multiple markers by creating a selection box around them. Click and drag the cursor to create the selection box. Selected markers are highlighted.

Clicking **Viewport** enables you to display a larger view of a subset of the elements in the current graph. Click and hold the left mouse button, drag a rectangle around the area of interest, and release the mouse button to change the display.

Change the Chart Orientation

Selecting **Chart Type** from the **Bar** drop-down menu enables you to select a horizontal or vertical view of your chart.

Selecting Data Options to Change Variables

View the Data Options Dialog Box

Selecting **Data Options** from the **Bar** drop-down menu enables you to use the Data Options Dialog box to change the variables that are displayed in your scatter plot.

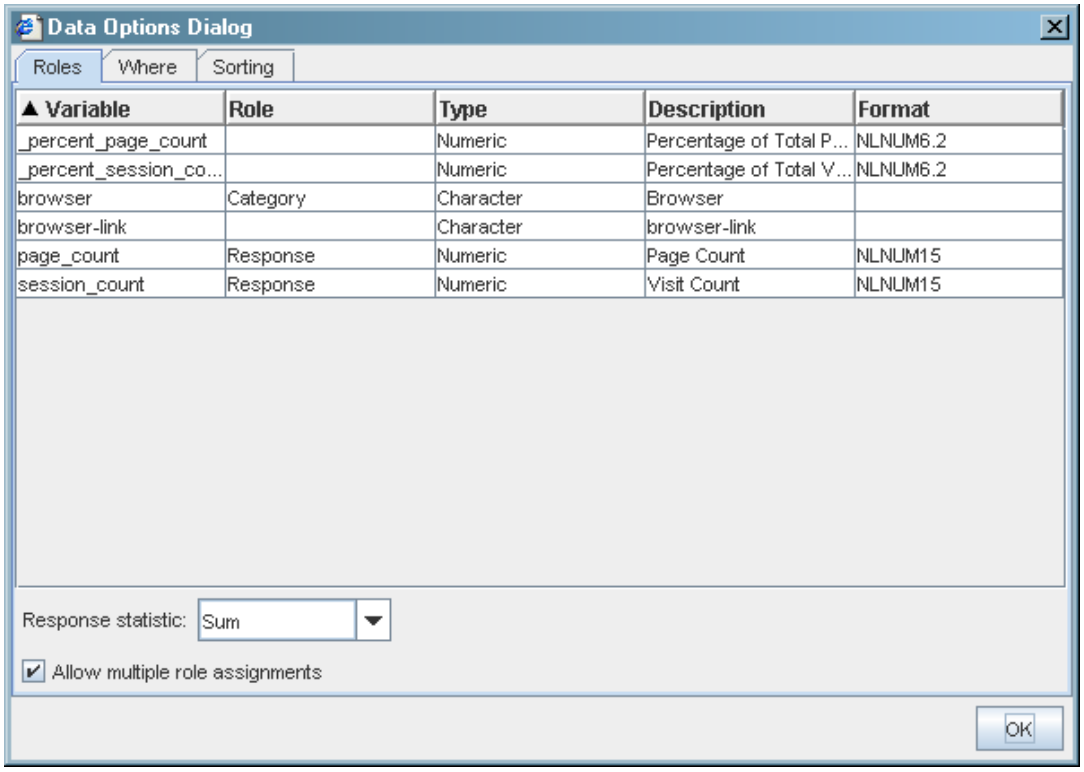
The Data Options Dialog box contains three tabs:

- **Roles**
- **Where**
- **Sorting**

Select the Roles Tab

The **Roles** tab displays a table of the variables that you can use to create your scatter plot. The following example shows the **Roles** tab in the Data Options Dialog box. The information that is presented is from a Browsers report.

Display 6.12 The Roles Tab in the Data Options Dialog Box



The table in the **`Roles`** tab contains the following columns:

Column	Description
Variable	Specifies the name of the variable.
Role	Specifies the variable role that you assign.
Type	Specifies the type of variable.
Description	Specifies the description of the variable.
Format	Specifies the SAS format of the variable.

You can assign the following roles to numeric variables:

Role	Description
None	Specifies that the variable is not used in the plot.
Category	Specifies the X-axis variable.
Response	Specifies the Y-axis variable.
Group	Specifies the group variable. Markers in the same group are displayed with the same color.
Group Index	Specifies the Group Index variable.

Role	Description
Size	Specifies the Size variable. The marker is directly proportional to the value of the variable.
Color	Specifies the Color variable. The marker color is based on the value of the variable.
Type	Specifies the Type variable. The marker symbol is based on the value of the variable.
Opacity	Specifies the opacity value. The marker opacity is directly proportional to the value of the variable.
Tip	Specifies the Tip variable. The value of the variable is displayed in the Chart Tip window.

Note: You cannot assign the roles of size, color, and opacity to character variables. Select the **`Allow multiple row assignments`** option to enable roles to be assigned to more than one variable. You can use this feature to plot multiple response variables (such as variables that represent money received) versus a single category variable. You can assign the category role only to a single variable. △

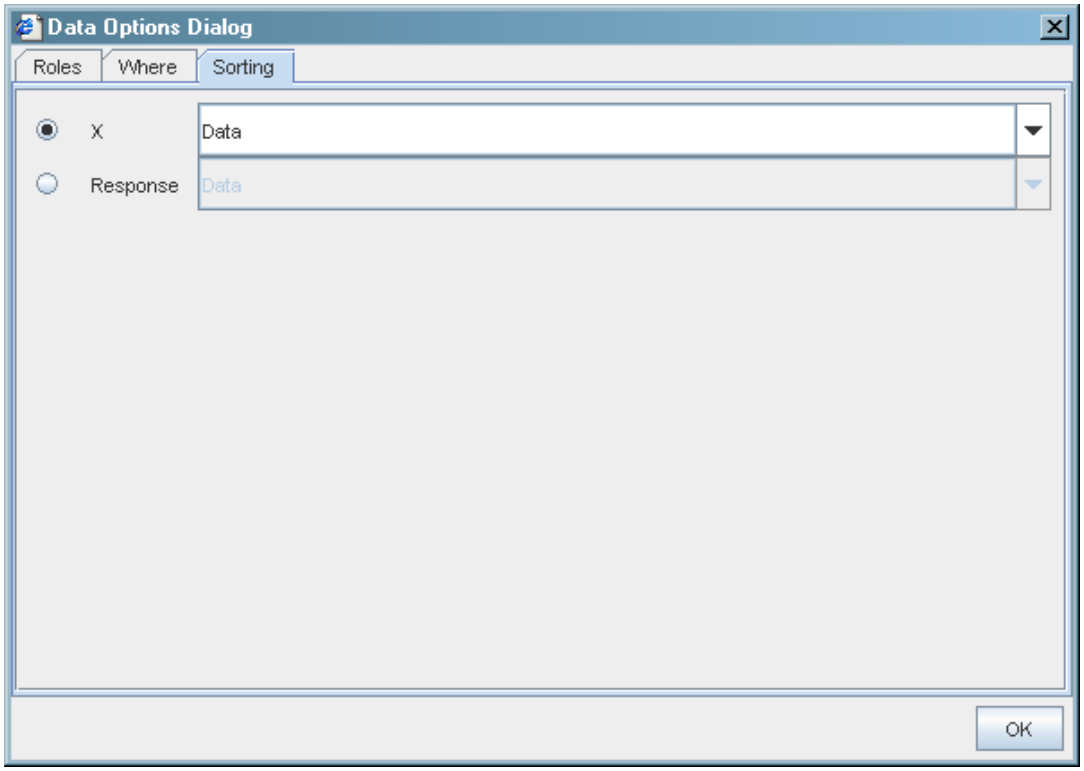
Select the Where Tab to Subset Data

The **`Where`** tab enables you to use the Where clause builder to subset the data that is used to create the plot. For information about how to use the Where clause builder, see "Subset Data by Using the Where Clause Builder" on page 55.

Sorting Your Data

The **`Sorting`** tab enables you to select whether to sort your data in ascending or descending order. Use the drop-down menus to make your selections. The following is a display of the **`Sorting`** tab in the Data Options Dialog box.

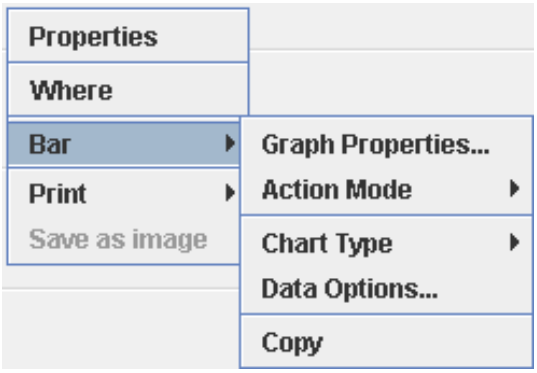
Display 6.13 Sorting Tab in the Data Options Dialog Box



Copy the Chart

Clicking **`Copy`** from the **`Bar`** drop-down menu, shown below, copies the chart to the clipboard.

Display 6.14 The Copy Menu Item



Print a Graph and Table

You can print the graph or the table of your report, or print them both, by selecting an option from the **`Print`** menu.

To access the **`Print`** menu, do the following:

1. Position your cursor in a Java graph.
2. Right-click the mouse to open a pop-up menu.
3. Select **`Print`** from the menu.
4. Select **`All`** to print the graph and the table, or select **`Component`** to print either the graph or the table, depending on which report has focus in your window.

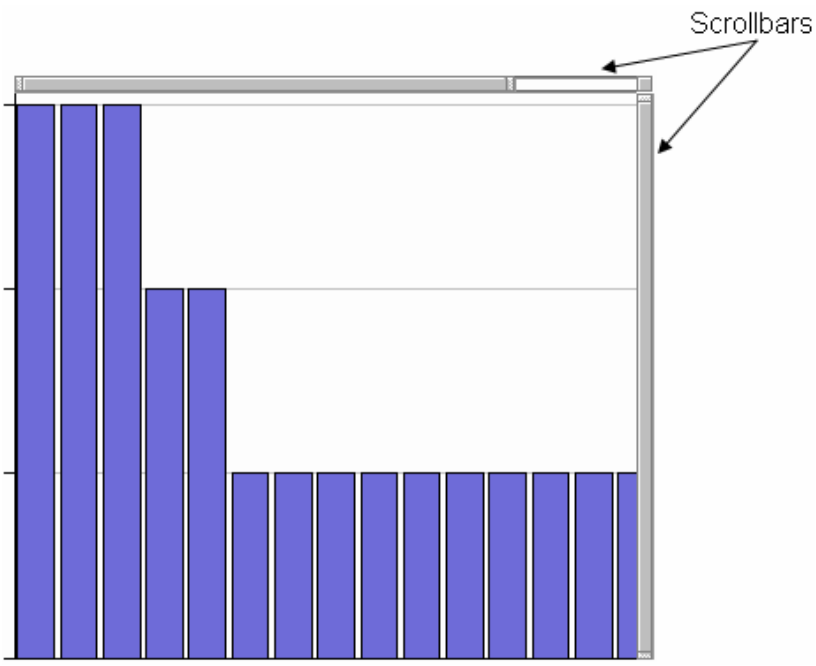
Using the Graph Scrollbars

Change the Range of Data That You View

Each plot has horizontal and vertical scrollbars. They are located at the top and right sides of the plot. Use the scrollbars to adjust the range of the data that you view in the plot.

The following display shows the location of the scrollbars.

Display 6.15 Location of Scrollbars in a Java Graph



Horizontal Scrollbar

Use the horizontal scrollbar to change the range of data that is displayed on the X-axis. To change the range, do the following:

1. Position your cursor on the left or right side of the scrollbar, and click and hold the right mouse button.
2. Move the scrollbar to the left or to the right to change the data range.

If you click the left side of the scrollbar and move the scrollbar to the right, then you display proportionately more data with lower values. If you click the right side of the scrollbar and move the scrollbar to the left, then you display proportionately more data with higher values.

Vertical Scrollbar

Use the vertical scrollbar to change the range of data that is displayed on the Y-axis. To change the range, do the following:

1. Position your cursor at the top or bottom of the scrollbar, and click and hold the right mouse button.
2. Move the scrollbar up or down to change the data range.

If you click the top of the scrollbar and move the scrollbar down, then you display proportionately more data with lower values. If you click the bottom of the scrollbar and move the scrollbar up, then you display proportionately more data with higher values.

Reset the Plot

Click the button that is located in the upper right corner of the graph, between the two scrollbars, to reset the graph. If you click the button a second time, then the data in the graph is magnified to twice its original size.

CHAPTER 7

Viewing a Table in Java Format

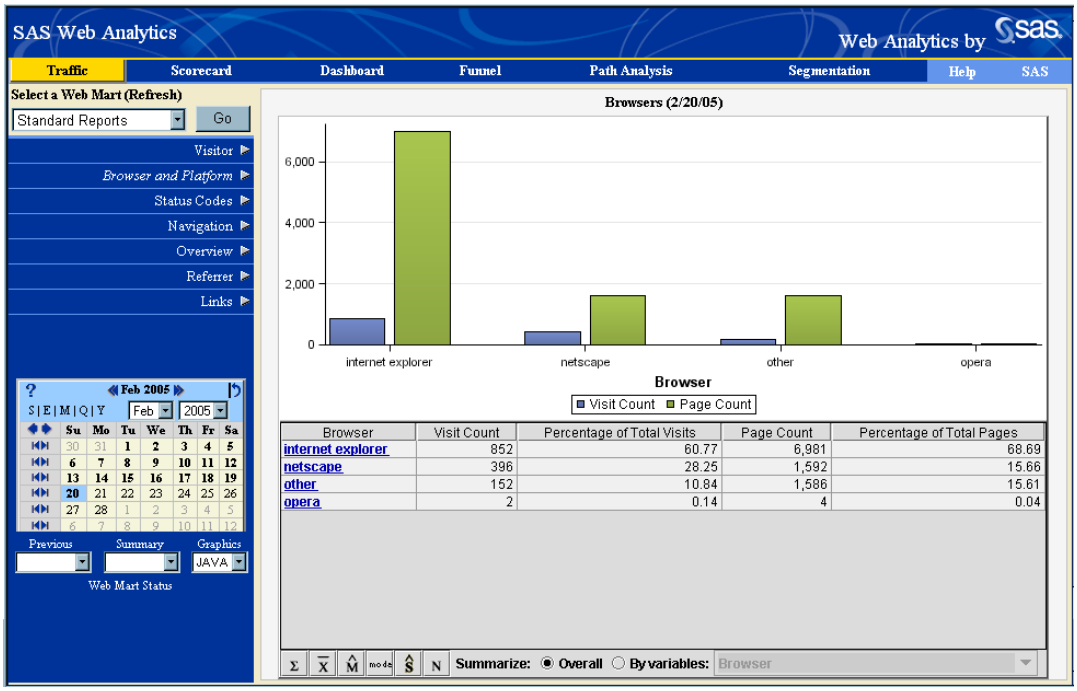
Overview: Java Tables

You can view your table in Java format by selecting **JAVA** from the **Graphics** drop-down menu that is located under the calendar.

Table columns in your Java report can be sorted. You can change the view of numeric columns and highlight rows in the table. Using the bar at the bottom of the table, you can generate statistics based on the values in the table.

The following is an example of a Java graph and table in a Browsers report.

Display 7.1 Example of a Browsers Report in Java Format



Browser	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total Pages
internet explorer	852	60.77	6,981	68.69
netscape	396	28.25	1,592	15.66
other	152	10.84	1,586	15.61
opera	2	0.14	4	0.04

Changing the Appearance of Your Java Table

Change How Your Table Is Displayed

You can change how your table is displayed in traffic reports by making selections from the **GTable** menu. To access the menu, do the following:

1 Position your cursor in a table column that represents an analysis variable.

2 Right-click the mouse to open a pop-up menu.

The following menu appears:

3 Select **GTable** to display the following menu:

Use the options in the menu to change the appearance of your table and to copy or print your table.

Sorting a Column

Sort a Column by Selecting an Item from a Menu

To sort a column by selecting an item from a menu, do the following:

1. Position your cursor in a column data cell of a Java table.
2. Right-click the mouse to open a pop-up menu.
3. Select **`GTable`** from the menu.
4. Select **`Sort`** from the **`GTable`** menu.
5. Select one of the following options:
   - **`Ascending`**
   - **`Descending`**
   - **`by Data Order`**

Note that when you sort one column of data, the other columns are sorted as well. You cannot sort individual columns.

Sort a Column by Clicking the Column Heading

You can sort a column by clicking the column heading. To sort a column in this way, do the following:

1. Position your cursor in the column heading.
2. Click the heading once with either the left or right mouse button to sort the column.

   If the column values are listed in ascending order, then the position of the values changes to descending order. If the column values are listed in descending order, then the position of the values changes to ascending order.
3. Click the heading a second time to sort the column in the opposite order.

Note that when you sort one column of data, the other columns are sorted as well. You cannot sort individual columns.

Change the View of Numeric Columns

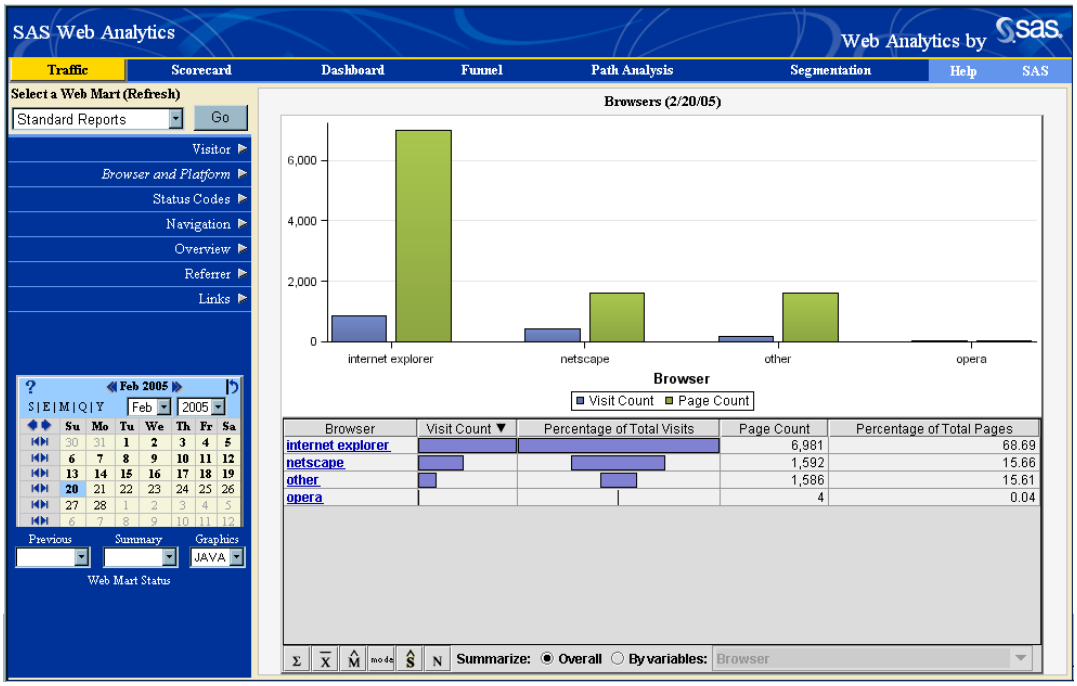
You can display numeric column data as text, as graphics, or as a funnel. To change the display of the data, do the following:

1. Position your cursor in a data cell of a numeric column.
2. Right-click the mouse to open a pop-up menu.
3. Select **GTable** from the menu.
4. Select **Display As**.
5. Select one of the following options:

Text	displays numeric data as text. Use this option to return to a text format after viewing column data in graphics or funnel format.
Graphics	displays numeric data in a graph format. Each value is represented by a bar in the table cell.
Funnel	displays numeric data as a funnel. Each value is represented by a bar in the table cell. The width of the bar that is displayed is directly proportional to the number size.

In the following example, the Visit Count column is displayed as a graph. The Percentage of Total Visits column is displayed as a funnel. The Page Count and Percentage of Total Pages columns are displayed as text.

Display 7.2 Column Data Displayed in Different Formats



Hide a Column in a Table

To hide a column in a table, do the following:

1. Position your cursor in a table column.

2 Right-click the mouse to open a pop-up menu.

3 Select **GTable** from the menu.

4 Select **Hide Column** from the **GTable** menu.

The column is hidden from the current view only. If you save the report, all columns, including the hidden columns, are saved.

To redisplay the hidden column, select **Show All Columns** from the **GTable** menu, or click the **Select a Web Mart (Refresh)** link at the top of the left section of the SAS Web Analytics Report Viewer page.

Display All Columns in a Table

To display the original view of the table, including hidden columns, do the following:

1 Position your cursor in a table column.

2 Right-click the mouse to open a pop-up menu.

3 Select **GTable** from the menu.

4 From the **GTable** menu, select **Show All Columns**.

Selecting this option displays the original view of the table and shows any columns that were previously hidden.

Highlight Rows

To highlight a row in the table, click any cell in the row. You can click on each row while holding down the CTRL key or the SHIFT key in order to highlight multiple rows.

When you select rows in the table, the data points in the graph that correspond to the rows in the table are also highlighted.

You can also highlight rows in the table by selecting data points in the graph. The rows in the table that correspond to the data points in the graph are highlighted.

Copy the Table Report

You can copy the table report as an image or as a spreadsheet:

1 Position your cursor in a table column that represents an analysis variable.

2 Right-click the mouse to open a pop-up menu.

3 Select **GTable** from the menu.

4 Select **Copy**.

5 Select one of the following options:

Image	copies the table to the clipboard. You can open a file and paste your table to the file.
As Spreadsheet	opens a dialog box that lists your spreadsheet copy options.

6 Open a spreadsheet and paste the table into the spreadsheet.

Print the Table Report

You can print part of a table or an entire table by making selections from a menu:

1 Position your cursor in a table column that represents an analysis variable.

2 Right-click the mouse to open a pop-up menu.
3 Select **GTable** from the menu.
4 Select **Print**.
5 Select one of the following options:

Print Screen View Only	opens the Print dialog box, from which you can print the part of the table that is displayed.
Print Entire Table on Single Page	opens the Print dialog box, from which you can print the entire table.

Generating Statistics from the Values in the Table

The Statistics Bar

You can automatically generate statistics by clicking an icon in the statistics bar that is located at the bottom of the table. The following example shows the SAS Web Analytics Report Viewer statistics bar.

Display 7.3 The Statistics Bar

You can generate the following statistics from the values in your Java table:

Statistic	Description
Sum	Computes the sum of nonmissing values.
Mean	Computes the arithmetic average.
Median	Computes the midpoint of the table values.
Mode	Identifies the most frequent value of a variable.
Standard deviation (STD)	Computes the variation in a distribution.
Number of Observations (N)	Computes the number of observations in a table.

Moving your cursor over each of the statistical symbols displays the name of the statistic.

To generate a statistic, click the icon for the statistic you want to generate. A new column called Summary is added to the table, and the statistic displays in a table row. To cancel the statistic computation, click the icon again.

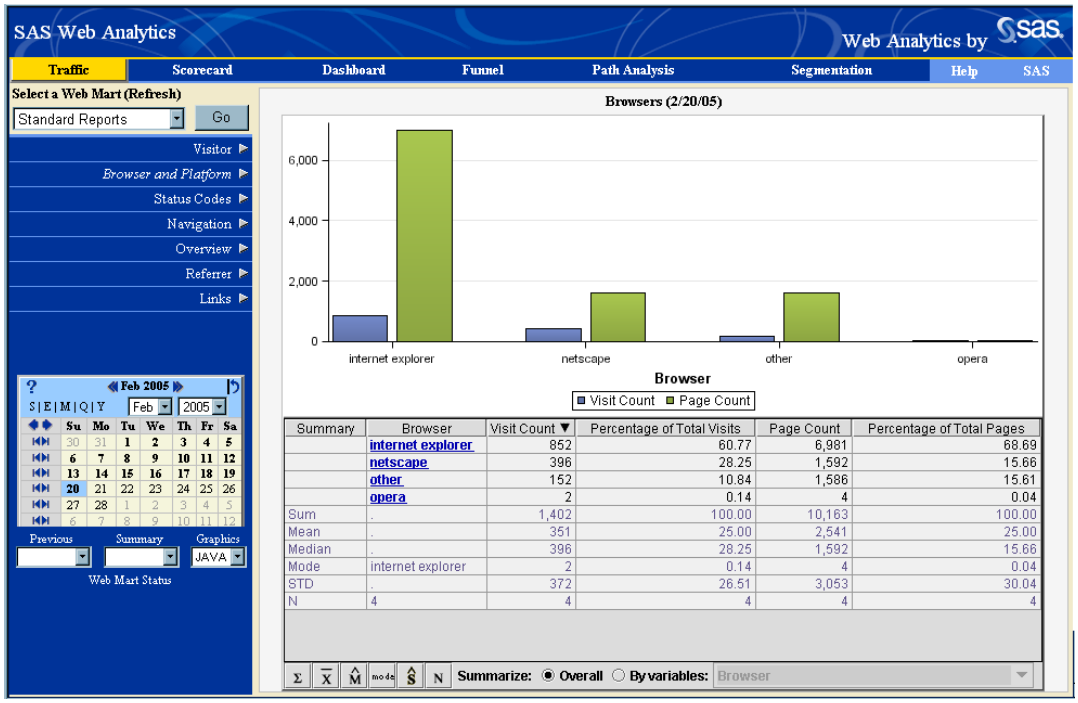
You can generate summary statistics or statistics for each value of the class variable by selecting the **Overall** or **By variables** options.

Generate Overall Statistics

To generate overall statistics, select the **Overall** option in the statistics bar. Then select the statistics that you want to create.

The following is an example of a Browsers report with all of the statistics selected.

Display 7.4 Example of a Browsers Report with All Statistics Selected



The following display shows a larger view of the Java table.

Display 7.5 Larger View of the Java Table

Summary	Browser	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total Pages
	internet explorer	7,201	69.84	70,817	57.02
	netscape	1,988	19.28	24,457	19.69
	other	1,120	10.86	28,922	23.29
	opera	2	0.02	2	0.00
Sum	.	10,311	100.00	124,198	100.00
Mean	.	2,578	25.00	31,050	25.00
Median	.	1,988	19.28	28,922	23.29
Mode	internet explorer	2	0.02	2	0.00
STD	.	3,188	30.91	29,402	23.67
N	4	4	4	4	4

Σ X̄ M̂ mode Ŝ N **Summarize:** ◉ **Overall** ○ **By variables:** Browser

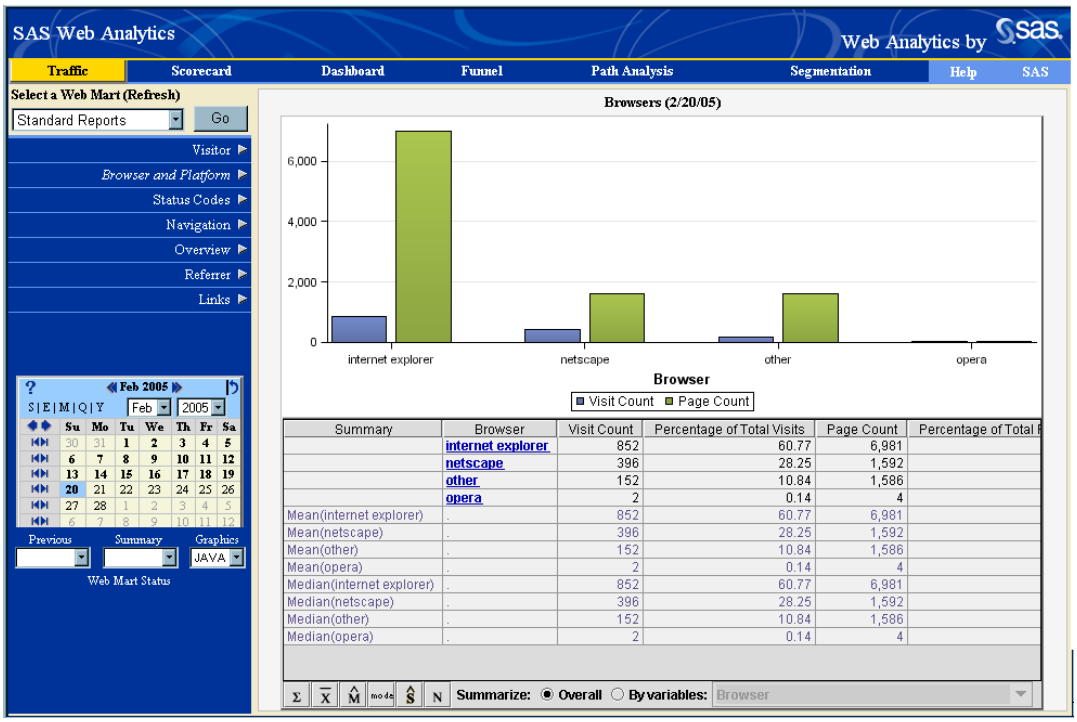
When you select the **`Overall`** option, any statistic that you choose creates one additional row in the table. For example, if you select **`Overall`** and then click the sum statistic, the table displays one additional row that contains the overall sums for each analysis column.

Generate Statistics by the Class Variable Value

To generate statistics by the class variable value, select the **`By variables`** option in the statistics bar. Then select the statistics that you want to create.

The following is an example of a Browsers report with the mean and median statistics selected by variable.

Display 7.6 Example of a Browsers Report with Mean and Median Statistics Selected



Summary	Browser	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total P
	internet explorer	852	60.77	6,981	
	netscape	396	28.25	1,592	
	other	152	10.84	1,586	
	opera	2	0.14	4	
Mean(internet explorer)	.	852	60.77	6,981	
Mean(netscape)	.	396	28.25	1,592	
Mean(other)	.	152	10.84	1,586	
Mean(opera)	.	2	0.14	4	
Median(internet explorer)	.	852	60.77	6,981	
Median(netscape)	.	396	28.25	1,592	
Median(other)	.	152	10.84	1,586	
Median(opera)	.	2	0.14	4	

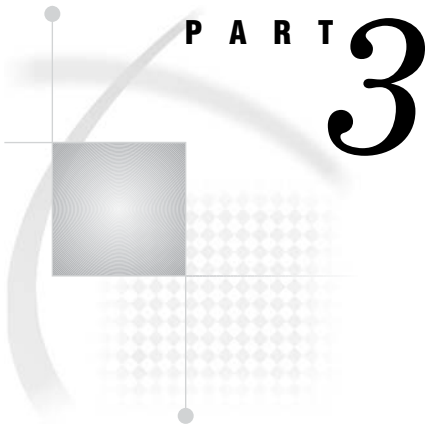
The following display shows a larger view of the Java table:

Display 7.7 Larger View of the JAVA Table

Summary	Browser	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total P
	internet explorer	852	60.77	6,981	
	netscape	396	28.25	1,592	
	other	152	10.84	1,586	
	opera	2	0.14	4	
Mean(internet explorer)	.	852	60.77	6,981	
Mean(netscape)	.	396	28.25	1,592	
Mean(other)	.	152	10.84	1,586	
Mean(opera)	.	2	0.14	4	
Median(internet explorer)	.	852	60.77	6,981	
Median(netscape)	.	396	28.25	1,592	
Median(other)	.	152	10.84	1,586	
Median(opera)	.	2	0.14	4	

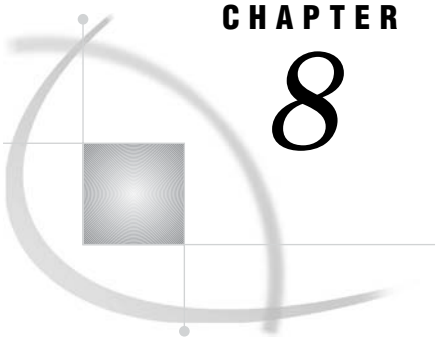
Summarize: Overall By variables: Browser

When you select the **`By variables`** option, any statistic that you choose creates one additional row for each value of the class variable. For example, if you select **`By variables`** and then click the sum statistic, the table displays one additional row that contains the sums for each value of the class variable. In this case, the class variable is Browser.



PART 3

Creating Reports with the SAS Web Analytics Report Viewer



CHAPTER

8

Analyzing Traffic on Your Web Site

Overview: Traffic Reports

Traffic reports monitor the volume of activity on your Web site. You can select reports that generate metrics that provide information about the number of visitors to your Web site and the kinds of browsers and platforms that your visitors use. You can identify the most commonly used Web site pages and identify links that were used to access these Web pages. You can also identify status codes.

Types of Standard Traffic Reports

The following is a list of the standard types of traffic reports that you can create for your Web mart. Each type of report is described in detail later in this section.

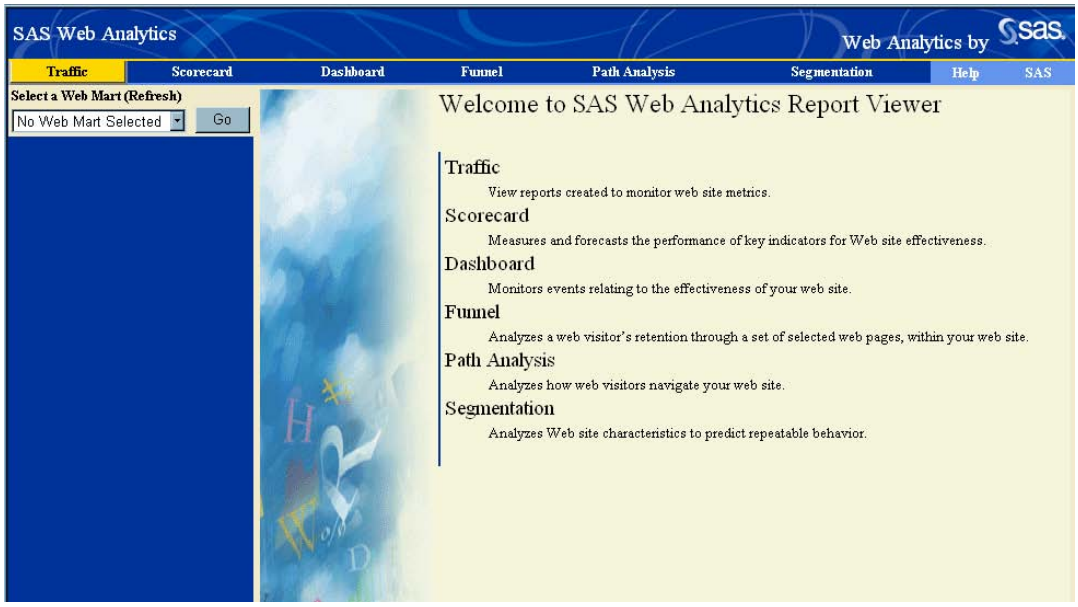
Report type	Description
"Visitor Reports" on page 84	Provide information about the number of unique visitors to your Web site.
"Browser and Platform Reports" on page 86	Identify visitors' browsers and platforms.
"Status Codes Reports" on page 93	Provide information about the frequency of status codes that are returned by a server.
"Navigation Reports" on page 101	Display information about which Web sites visitors entered and track visitor page requests.
"Overview Reports" on page 111	Display basic traffic statistics for the site.
"Referrer Reports" on page 118	Provide information about where visits originated.

Create a Traffic Report

You can create reports for any Web mart that is listed in the **`Select a Web Mart (Refresh)`** drop-down menu. The menu contains standard reports that are supplied with the SAS Web Analytics Report Viewer, as well as reports that are defined by your SAS Web Analytics administrator.

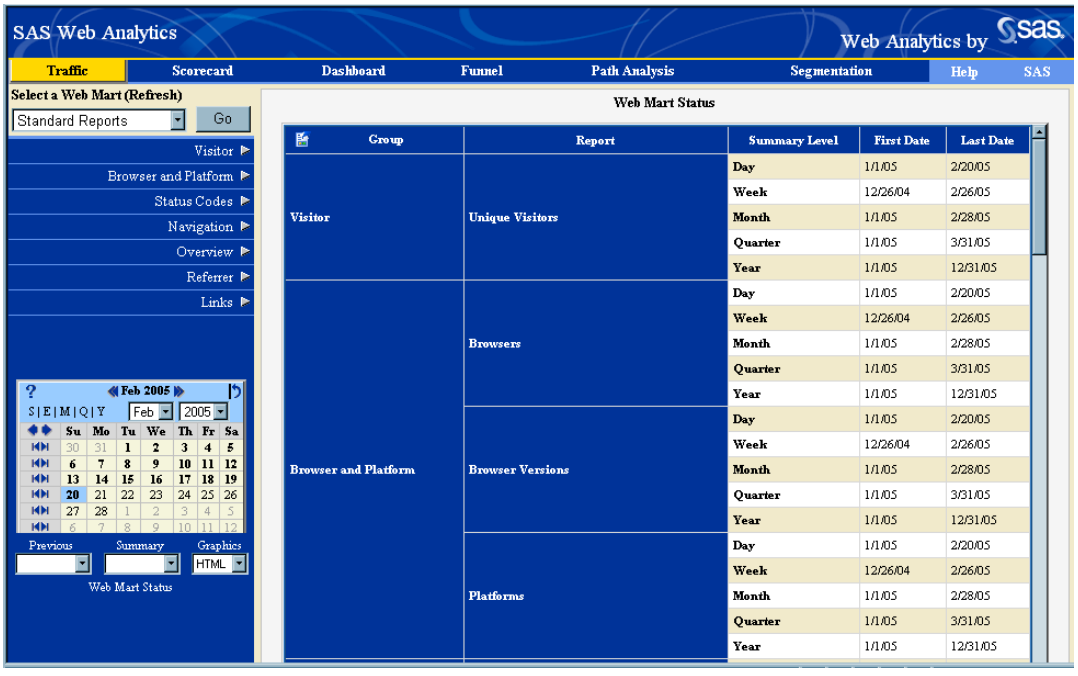
To create a traffic report, follow these steps:

1 Select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu, which is located near the top of the left section of the page, as shown in the following display.



2 Click **Go** to access the Web mart.

The Web Mart Status report for the Web mart that you selected appears in the main window, as shown in the following display.



3 Click the **Traffic** link in the banner, if **Traffic** is not already selected.

A list of the types of traffic reports that you can create is displayed in the left section of the page.

4 Select the type of traffic report that you want to create.

5 From the drop-down menu for that report type, select an individual traffic report that you want to create.

The report you select is automatically created. The date of the report is highlighted in the calendar. The default report date is the last date for which there is data in your Web mart.

6 From the calendar, which is located in the left section of the page, you can select new dates for your report. For information about how to use the calendar, see "Using the Calendar with Traffic Reports" on page 25.

When you select new dates, the report is automatically created.

Note: Be sure that you select valid dates for your Web mart. You can view the Web Mart Status report to determine the range of dates that are valid for your traffic report. The dates in the Web Mart Status report correspond to the dates shown in bold in the calendar. △

7 From the **Previous** drop-down menu, you can optionally select a range of previous days for your report. (Previous days are based on the last (most recent) day for which data exists in the Web mart.) For more information about how to use the **Previous** menu, see "Selecting a Previous Range of Days for Your Traffic Report" on page 27.

The report is automatically created when you make a selection.

8 From the **Summary** drop-down menu, you can optionally select a time interval (day, week, month, quarter, or year) for which the data in your report will be summarized, based on the dates you select for your report. For more information about how to use the **Summary** menu, see "Summarizing Your Data" on page 30.

The report is automatically created when you make a selection.

9 From the **Graphics** drop-down menu, select **HTML** or **JAVA** as the format to display your graphics.

If you select a new format, then the report is automatically created.

10 Optionally, deselect **Show Table** or **Show Graph** if you want to view the data only as a table or as a graph.

In an HTML report, you can click the up arrow in the column heading of an analysis variable to sort the table in ascending order. Click the down arrow to sort the table in descending order.

In a Java report, click the column heading to sort the report.

Accessing More Information in a Traffic Report

For some traffic reports, such as the Browsers report and the Status Codes report, you can access more detailed information by clicking a link and drilling down within the report. These types of traffic reports are actually composed of two reports:

- the main report
- the drilled report

The main report is the report from which you select links to drill down to. The drilled report is the report that displays when you select a link from the main report.

Exporting Your Report to an Excel Spreadsheet

When you view your report in HTML format, you can export your report to an Excel spreadsheet. For information about how to export your report, see “Export Your Report to a Microsoft Excel Spreadsheet” on page 44.

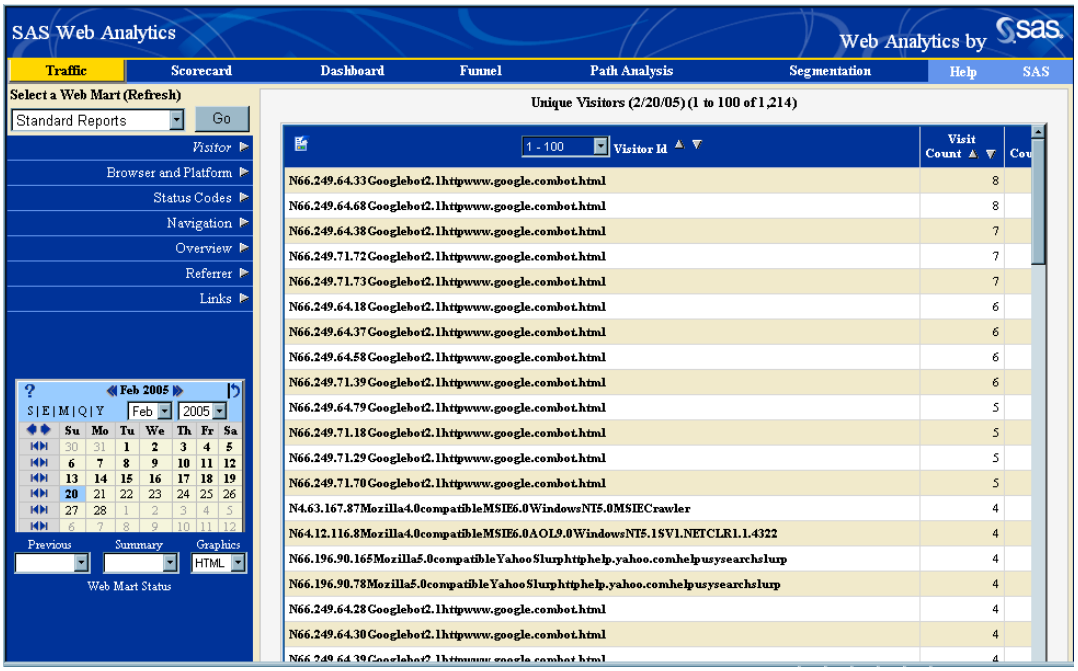
Visitor Reports

Example of the Unique Visitors Report

The Unique Visitors report identifies the visitors who have the most activity on your Web site. The report lists each unique visitor whose visit count is greater than one.

The following is an example of the Unique Visitors report.

Display 8.1 Example of the Unique Visitors Report



The following table describes the variables in the Unique Visitors report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Visitor Id	A class variable that specifies the identifier that possibly matches a user who navigated your Web site. Visitor Id identifies each unique visitor to your site. A visitor can accumulate one or more visits. The Visitor Id can be constructed with a cookie value, a client IP, or a combination of user agent and IP. This information is available in the Web server log.
Visit Count	An analysis variable that specifies the number of visits that have occurred for the Web site.
Page Count	An analysis variable that specifies the number of valid page views (pages) for all visits.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

How the Number of Visits Is Calculated

A unique visit ID is created by combining the user ID with the date/time stamp of the first hit of the visit. The default for this report is a visit that is not dormant for 30 minutes. Therefore, if a visit includes more than 30 minutes of inactivity, then it will be counted as two visits. Likewise, a visit that crosses a processing boundary is counted as two separate visits. For example, if a visit's activity is not entirely contained in a single Web log, then the visit crosses a processing boundary and is counted as two separate visits. An administrator can set the default inactivity level by using the e-Data ETL Administrator.

Browser and Platform Reports

Types of Browser and Platform Reports

The following browser and platform reports are available:

Report	Description
Browsers	Displays a distribution of the different Web browsers that are used by visitors who navigate the Web site.
Browser Versions	Displays a distribution of the different Web browser versions that are used by visitors who navigate the Web site.
Platforms	Displays a distribution of the different platforms (operating systems) that are used by visitors who navigate the Web site.

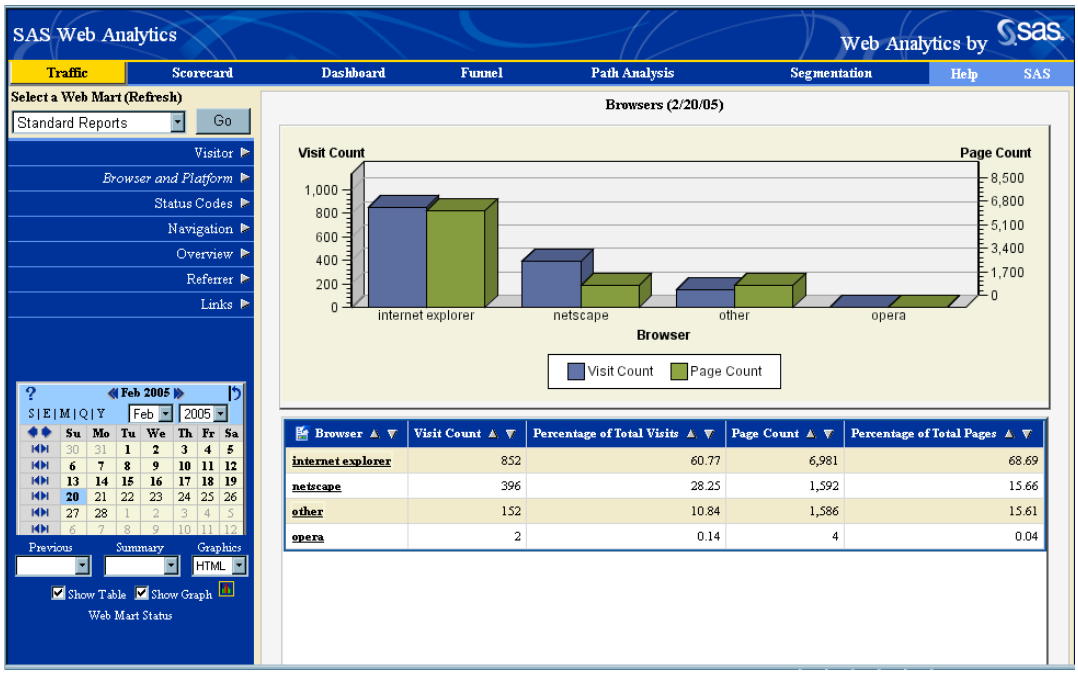
Browsers Report

Example of the Browsers Report

The Browsers report displays a distribution of the different Web browsers that are used by visitors who navigate the Web site. This report enables you to determine which browsers your Web site should support.

The following is an example of the Browsers report.

Display 8.2 Example of the Browsers Report



The following table describes the variables in the Browsers report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Browser	A class variable that specifies the browser that is used to access the Web site.
Visit Count	An analysis variable that specifies the number of visits that are logged per browser type.
Percentage of Total Visits	An analysis variable that specifies the percentage of total visits that used a specific browser type.
Page Count	An analysis variable that specifies the number of page views per browser type. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.
Percentage of Total Pages	An analysis variable that specifies the measure of the frequency of the page views per browser type relative to the total number of page views.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percentage of Total Visits Variable

The Percentage of Total Visits variable is calculated in the following way: percentage of total visits = (the number of visits that used the browser type / the total number of visits) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Calculating the Percentage of Total Pages Variable

The Percentage of Total Pages variable is calculated in the following way: percentage of total pages = (the number of page requests per browser type that resulted in a status of 200-299, or 304 / the total number of page requests) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of page requests for the specified interval that begins on this date.

Find More Information in a Browsers Report

By clicking a value in the Browser column of the report, you can drill down to view the Browser Versions Report, which provides information about specific versions of that browser. See “Browser Versions Report” on page 88 for more information.

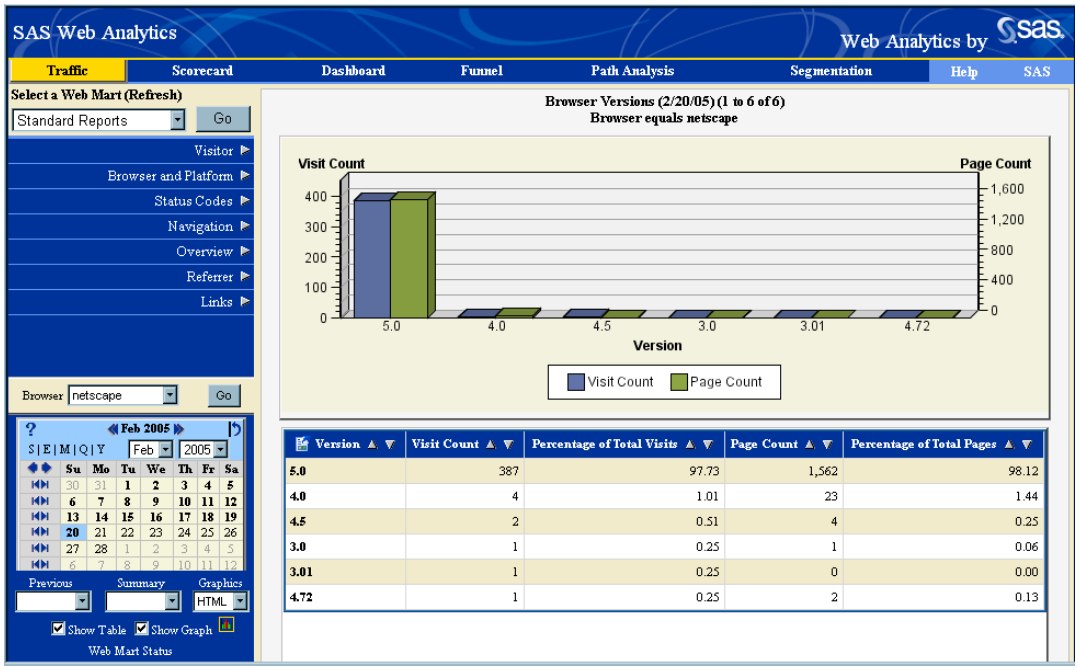
Browser Versions Report

Example of the Browser Versions Report

The Browser Versions report displays a distribution of the different Web browser versions that are used by visitors who navigate the Web site. This report enables you to determine the browser versions that your Web site should support. You access this report by drilling down on a value in the Browser column of the Browsers report.

The following is an example of the Browser Versions report, with Netscape selected as the browser.

Display 8.3 Example of the Browser Versions Report



The following table describes the variables in the Browser Versions report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Version	A class variable that specifies the version identifier for the browser.
Visit Count	An analysis variable that specifies the number of visits that are logged per browser version.
Percentage of Total Visits	An analysis variable that specifies the percentage of total visits that used a specific browser version.
Page Count	An analysis variable that specifies the number of page views per browser version. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.
Percentage of Total Pages	An analysis variable that measures the frequency of the page views per browser version relative to the total number of page views.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percentage of Total Visits Variable

The Percentage of Total Visits variable is calculated in the following way: percentage of total visits = (the number of visits that used the browser version / the total number of visits that used the browser) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits that used the browser for the specified interval that begins on this date.

Calculating the Percentage of Total Pages Variable

The Percentage of Total Pages variable is calculated in the following way: percentage of total pages = (the number of page requests per browser version that resulted in a status of 200-299, or 304 / the total number of page requests that used the browser) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of page requests that used the browser for the specified interval that begins on this date.

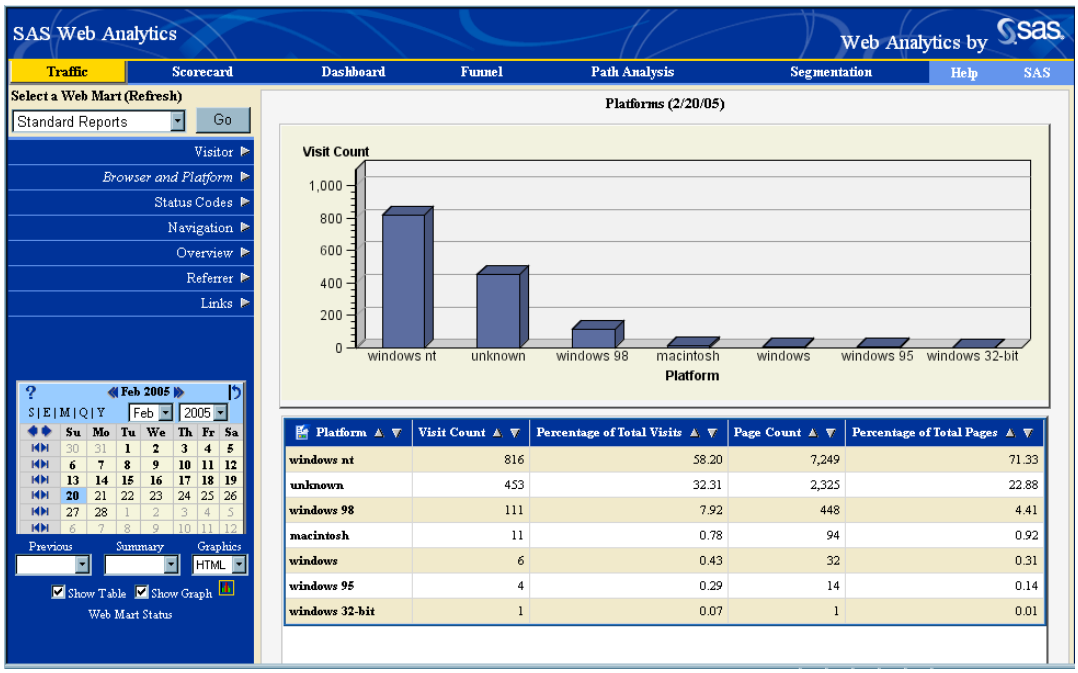
Platforms Report

Example of the Platforms Report

The Platforms report displays a distribution of the different platforms (operating systems) that are used by visitors who navigate the Web site. Your Web site is displayed differently on different platforms. This report enables you to determine the platforms that your Web site should support.

The following is an example of the Platforms report.

Display 8.4 Example of the Platforms Report



Platform	Visit Count	Percentage of Total Visits	Page Count	Percentage of Total Pages
windows nt	816	58.20	7,249	71.33
unknown	453	32.31	2,325	22.88
windows 98	111	7.92	448	4.41
macintosh	11	0.78	94	0.92
windows	6	0.43	32	0.31
windows 95	4	0.29	14	0.14
windows 32-bit	1	0.07	1	0.01

The following table describes the variables in the Platforms report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Platform	A class variable that specifies the platform that is used while accessing the Web site.
Visit Count	An analysis variable that specifies the number of visits that are logged per platform type.
Percentage of Total Visits	An analysis variable that specifies the percentage of total visits that used a specific platform type.

Variable	Description
Page Count	An analysis variable that specifies the number of page views per platform type. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.
Percentage of Total Pages	An analysis variable that measures the frequency of the page views per platform type relative to the total number of page views.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percentage of Total Visits Variable

The Percentage of Total Visits variable is calculated in the following way: percentage of total visits = (the number of visits that used the platform type / the total number of visits) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Calculating the Percentage of Total Pages Variable

The Percentage of Total Pages variable is calculated in the following way: percentage of total pages = (the number of page requests per platform type that resulted in a status of 200-299, or 304) / the total number of page requests) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of page requests for the specified interval that begins on this date.

Status Codes Reports

Types of Status Codes Reports

The following types of standard status code reports are available:

Report	Description
Status Codes	Provides information about the frequency that a code was returned by the server to the visitor's browser to report the outcome of a request.
Hourly Status Codes	Provides information about the frequency of status codes by hour of day.
Error Status Codes	Provides information about the frequency of errors that occur when visitors attempt to access a Web site.
Error Status Code Pages	Provides information about individual pages that generated errors.
Error Status Code Page Referrers	Provides information about the frequency of error status codes for each page that was requested by a referrer domain.

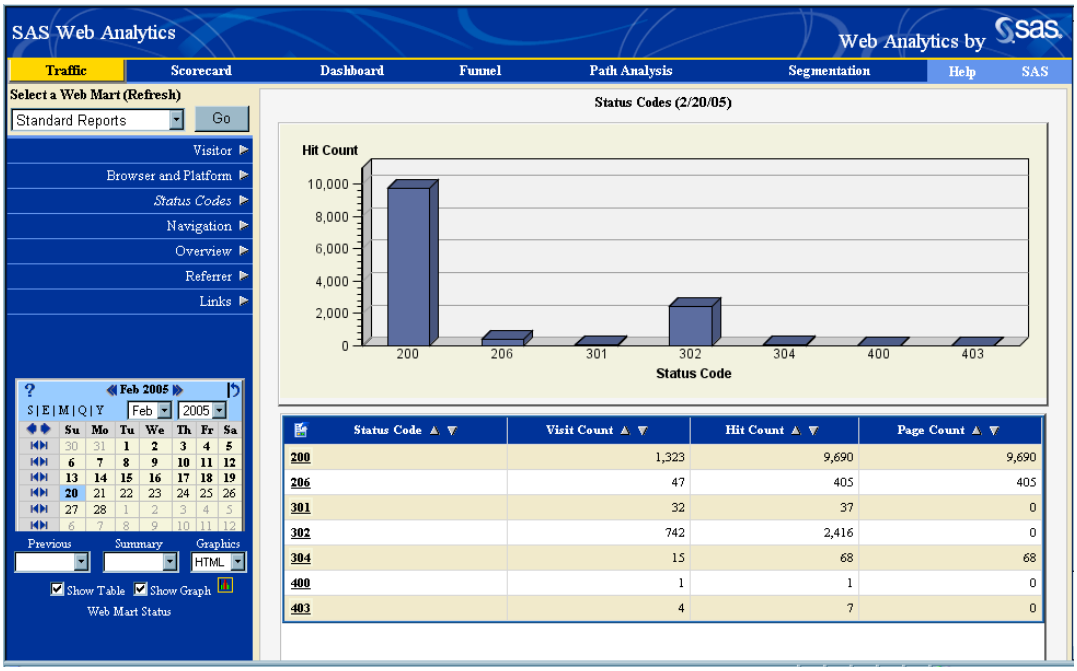
Status Codes Report

Example of the Status Codes Report

The Status Codes report provides information about the frequency that a code was returned by the server to the visitor's browser to report the outcome of a request. Status codes that range from 400 to 499 indicate errors that resulted from the visitor's browser. Status codes that range from 500 to 599 indicate errors that occurred on the Web site's server. See Appendix 2, "HTTP Status Codes," on page 191 for a list of HTTP status codes and their descriptions.

The following is an example of the Status Codes report.

Display 8.5 Example of the Status Codes Report



Status Code	Visit Count	Hit Count	Page Count
200	1,323	9,690	9,690
206	47	405	405
301	32	37	0
302	742	2,416	0
304	15	68	68
400	1	1	0
403	4	7	0

The following table describes the variables in the Status Codes report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Status Code	A class variable that specifies the code that was returned by the server to the visitor's browser to report on the outcome of a request.
Visit Count	An analysis variable that specifies the number of visits that had a minimum of one request with the designated status code.
Hit Count	An analysis variable that specifies the number of requests that have the designated status code.
Page Count	An analysis variable that specifies the number of requests with the designated status code that are also valid page views. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Find More Information in a Status Codes Report

By clicking a value in the Status Code column of the report, you can drill down to view the Hourly Status Codes report. See "Hourly Status Codes Report" on page 95 for more information.

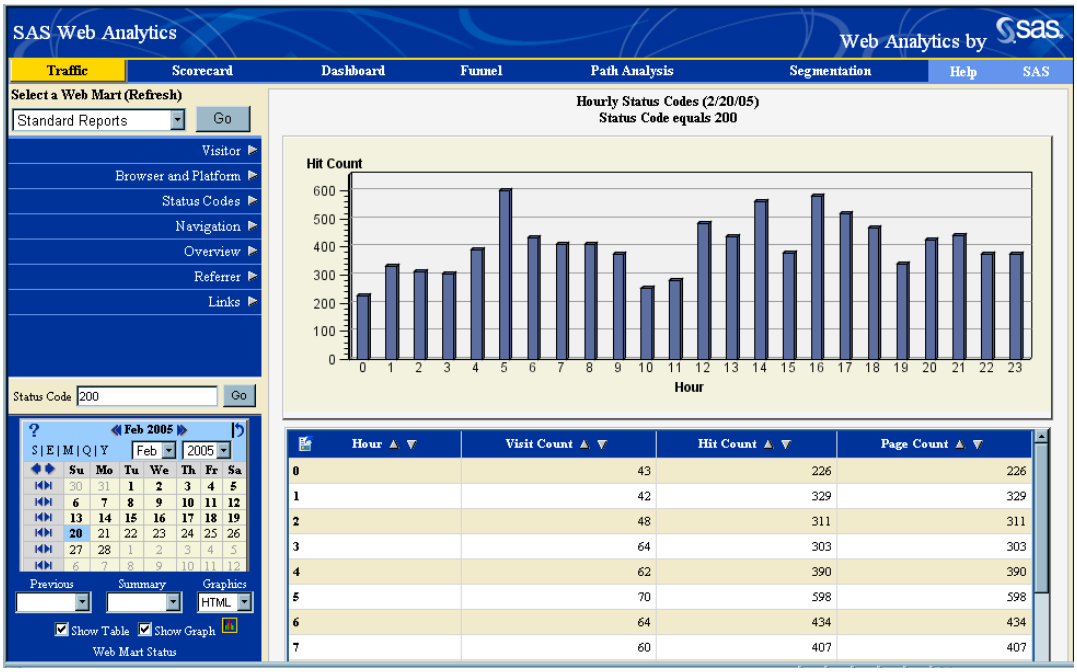
Hourly Status Codes Report

The Hourly Status Codes report provides information about the frequency of status codes categorized by hour of day. Status codes that range from 400 to 499 indicate errors that resulted from the visitor's browser. Status codes that range from 500 to 599 indicate errors that occurred on the Web site's server.

You access this report by drilling down on a value in the Status Code column of the Status Codes report.

The following is an example of the Hourly Status Codes report.

Display 8.6 Example of the Hourly Status Codes Report



Hour	Visit Count	Hit Count	Page Count
0	43	226	226
1	42	329	329
2	48	311	311
3	64	303	303
4	62	390	390
5	70	598	598
6	64	434	434
7	60	407	407

The following table describes the variables in the Hourly Status Codes report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Hour	A class variable that specifies the hour in which the data was collected, based on a 24-hour clock (hour 0 is midnight to 12:59 a.m., and so forth).
Visit Count	An analysis variable that specifies the number of visits that had a minimum of one request with the designated status code during the designated hour.

Variable	Description
Hit Count	An analysis variable that specifies the number of requests that have the designated status code.
Page Count	An analysis variable that specifies the number of requests with the designated status code that are also valid page views. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

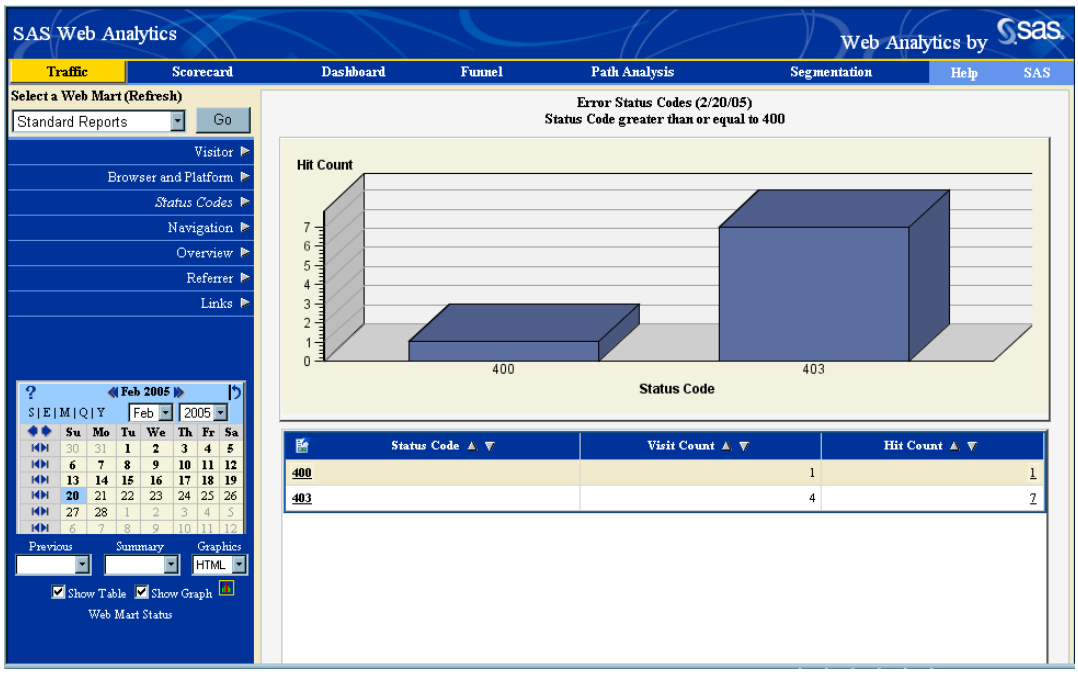
Error Status Codes Report

Example of the Error Status Codes Report

The Error Status Codes report provides information about the frequency of errors that occur when visitors attempt to access your Web site. Status codes that range from 400 to 499 indicate errors that resulted from the visitor's browser. Status codes that range from 500 to 599 indicate errors that occurred on the Web site's server.

The following is an example of the Error Status Codes report.

Display 8.7 Example of an Error Status Codes Report



The following table describes the variables in the Error Status Codes report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Status Code	A class variable that specifies the code that was returned by the server to the visitor's browser to report the outcome of a request.
Visit Count	An analysis variable that specifies the number of visits that had a minimum of one request with the designated status code.
Hit Count	An analysis variable that specifies the number of requests that have the designated status code.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Find More Information in an Error Status Codes Report

By clicking a value in the Status Code column of the report, you can drill down to the Error Status Code Pages report, which provides information about individual pages that generated errors. See "Error Status Code Pages Report" on page 98 for more information.

By clicking a value in the Hit Count column of the report, you can drill down to view the Hourly Status Codes report. See "Hourly Status Codes Report" on page 95 for more information.

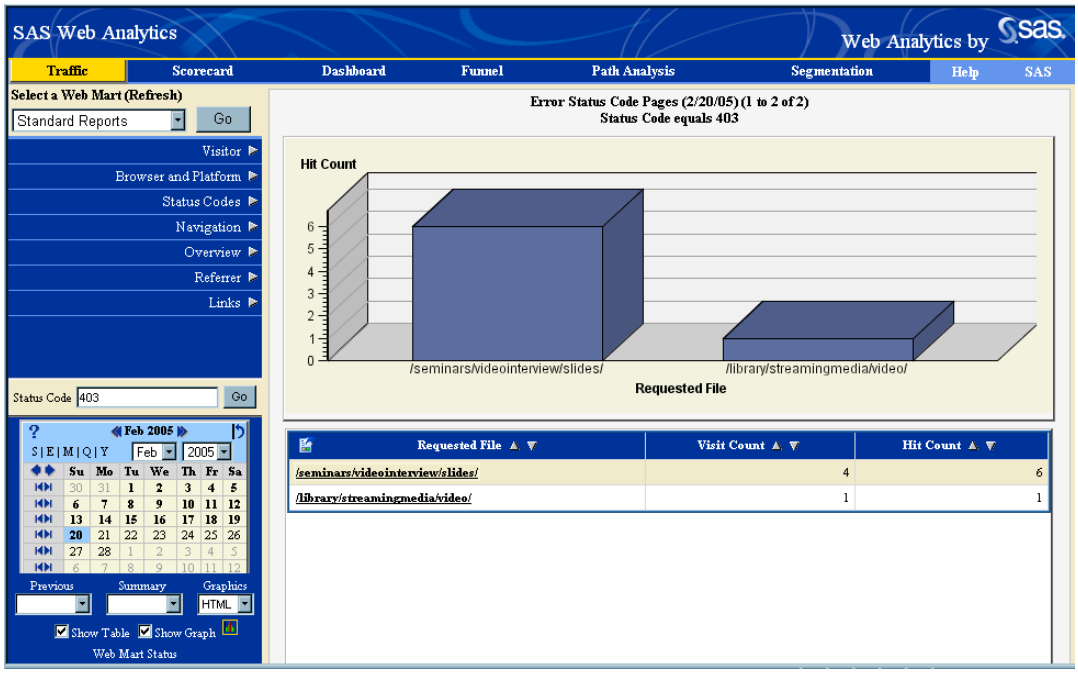
Error Status Code Pages Report

Example of the Error Status Code Pages Report

The Error Status Code Pages report provides information about the individual pages that generated errors. You access this report by drilling down on a value in the Status Code column of the Error Status Codes report.

The following is an example of the Error Status Code Pages report.

Display 8.8 Example of the Error Status Code Pages Report



The following table describes the variables in the Error Status Code Pages report.

Variable	Description
Date	A class variable that specifies the date range of a report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Requested File	A class variable that specifies the page or URI (Uniform Resource Identifier) that was visited on the Web site. (URIs are formatted strings that identify a resource through name, location, or any other characteristic.)
Visit Count	An analysis variable that specifies the number of visits that had at least one request with the designated status code.
Hit Count	An analysis variable that specifies the number of requests that have the designated status code.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Find More Information in an Error Status Code Pages Report

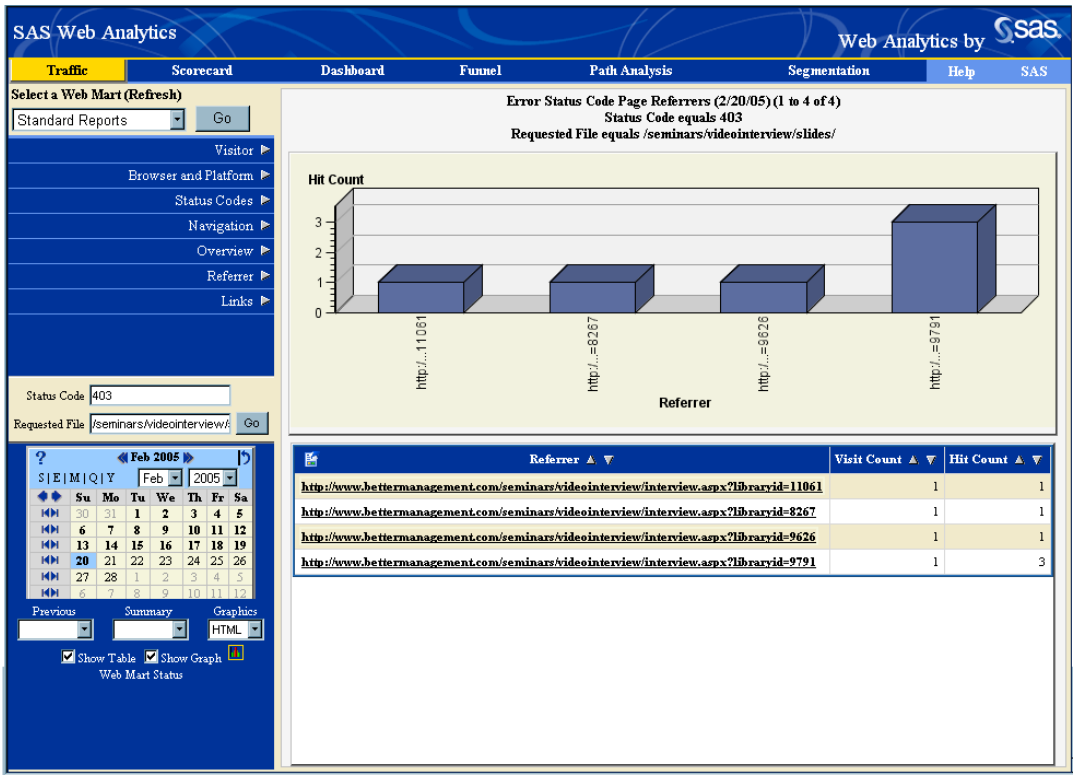
By clicking a value in the Requested File column of the report, you can drill down to the Error Status Code Page Referrers report, which provides information about the page that was requested immediately prior to the requested file. See “Error Status Code Page Referrers Report” on page 100 for more information.

Error Status Code Page Referrers Report

The Error Status Code Page Referrers report provides information about the frequency of status codes for each page that was requested. You access this report by drilling down on a value in the Requested File column of the Error Status Code Pages report.

The following is an example of the Error Status Code Page Referrers report. Note that the status code you previously selected, as well as the name of the requested file, is displayed above the calendar in the left section of the page.

Display 8.9 Example of the Error Status Code Page Referrers Report



The following table describes the variables in the Error Status Code Page Referrers report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Referrer	A class variable that specifies the page or URI (Uniform Resource Identifier) that was requested immediately prior to the requested file on the Web site. (URIs are formatted strings that identify a resource through name, location, or any other characteristic.)
Visit Count	An analysis variable that specifies the number of visits that were made with the designated status code.
Hit Count	An analysis variable that specifies the number of requests that have the designated status code.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Navigation Reports

Types of Navigation Reports

The following types of navigation reports are available:

Report	Description
Page Frequency	Displays a distribution of the pages that were requested. This report enables you to identify the pages and families of pages that are most often viewed.
Entry Pages	Displays the most common requests that visitors make to enter the Web site.
Referrer by Entry Page	Displays a list of entry pages for each referrer.
Entry Pages by Referrer	Displays the pages and visit information that are associated with the domains.
Exit Pages	Displays a list of all Web pages from which the current site was exited.

Page Frequency Report

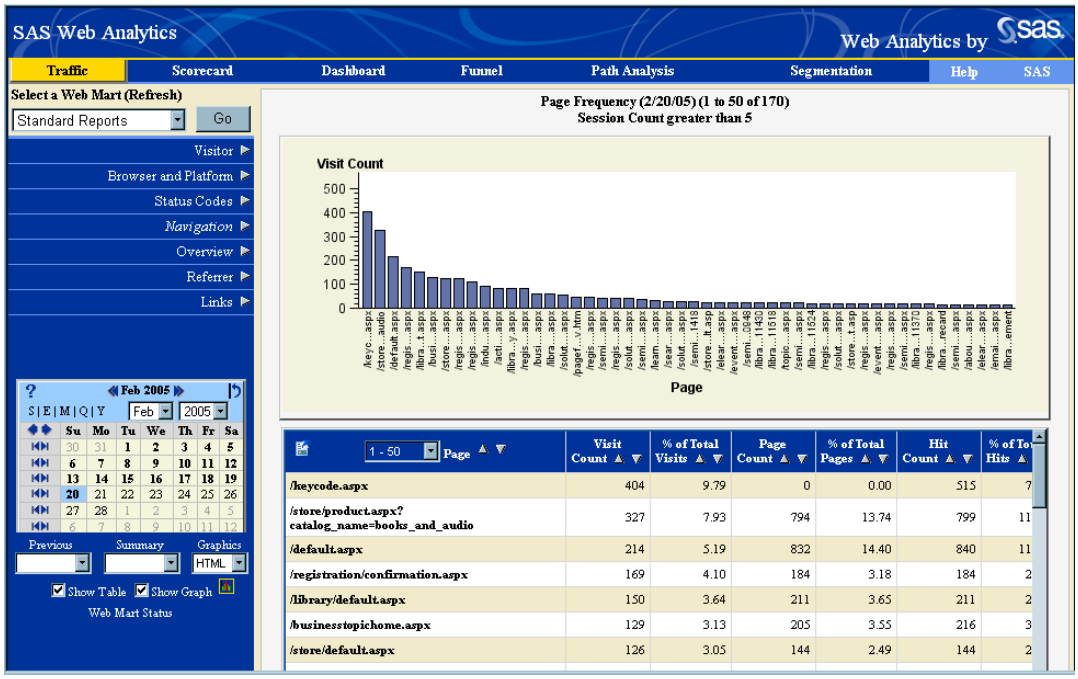
Example of the Page Frequency Report

The Page Frequency report displays a distribution of the pages that were requested. This report enables you to identify the pages and families of pages that are most often viewed. You can also view visit and error counts and percentages for the pages. Use this information to define business segments and to modify or optimize paths.

Note: If you compare the tallies from a Page Frequency report with the tallies from the Interactive Funnel report, you might find that there are differences. This occurs because these two reports have different purposes and use different data. The Page Frequency report shows frequencies of page requests, both successful and unsuccessful. The Interactive Funnel report shows how many visits follow a specific path or chain of pages. Because a path must begin with a successful page request, all unsuccessful page requests prior to the first successful one are excluded from the Interactive Funnel report data. No records are excluded from the Page Frequency report data. △

The following is an example of the Page Frequency report.

Display 8.10 Example of the Page Frequency Report



The following table describes the variables in the Page Frequency report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Page	A class variable that specifies the page or URI (Uniform Resource Identifier) that was visited on the site. (URIs are formatted strings that identify a resource through a name, location, or any other characteristic.)
Visit Count	An analysis variable that specifies the total number of visits in which visitors viewed the page or URI.
% of Total Visits	An analysis variable that specifies the percentage of all visits in which visitors viewed the page or URI.
Page Count	An analysis variable that specifies the number of page views. A page view occurs when a page of a valid application type is loaded from a server to a browser with a status code of 200 through 299, or 304.
% of Total Pages	An analysis variable that specifies the percentage of page views for the specific page or URI.
Hit Count	An analysis variable that specifies the number of file views that are associated with a given page or URI.
% of Total Hits	An analysis variable that specifies the percentage of file views for the specific file.
Client Error Count	An analysis variable that specifies the total number of client errors for a given page. Client errors are identified as requests whose status codes range from 400 to 499.
Server Error Count	An analysis variable that specifies the total number of server errors for a given page. Server errors are identified as requests whose status codes range from 500 to 599.
Entry Page Count	An analysis variable that specifies the total number of requests for a given page that are the first requests of visits.
Exit Page Count	An analysis variable that specifies the total number of requests for a given page that are the last requests of visits.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the % of Total Visits Variable

The % of Total Visits variable is calculated in the following way: % of total visits = (the number of visits in which visitors viewed the page / the total number of visits) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the interval that begins on this date.

Calculating the % of Total Pages Variable

The % of Total Pages variable is calculated in the following way: % of total pages = (the number of requests for the page that resulted in a successful status code / the total number of requests with a successful status code) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of successful page views for the specified interval that begins on this date.

Calculating the % of Total Hits Variable

The % of Total Hits variable is calculated in the following way: % of total hits = (the number of file views for the specific page or URI / the total number of file views for all pages) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of files for the specified interval that begins on this date.

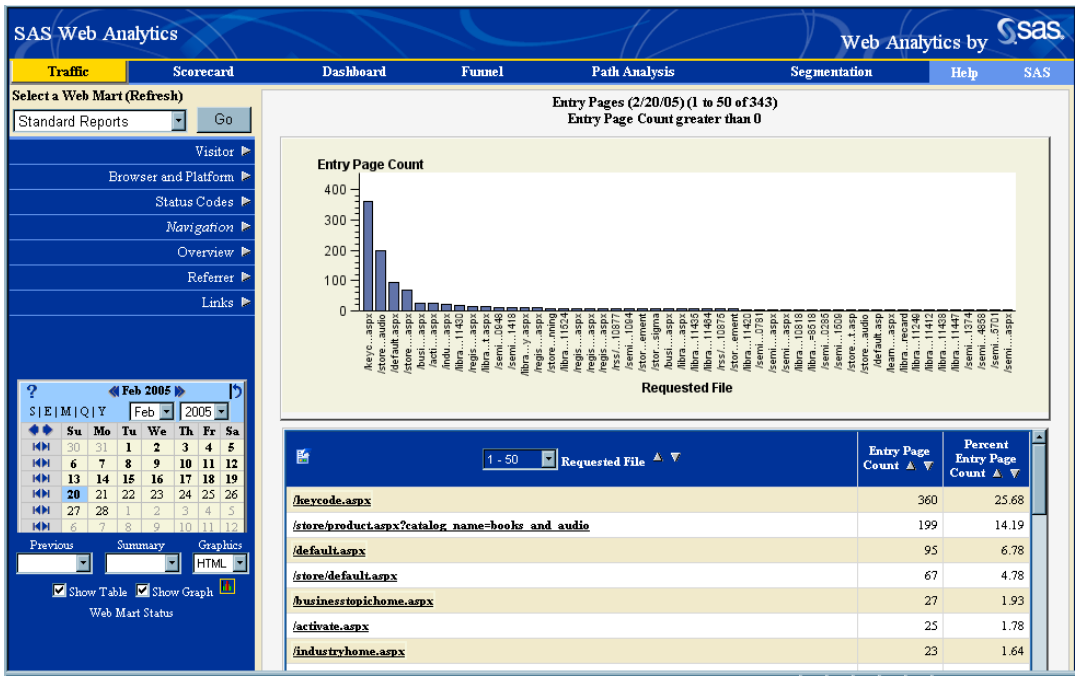
Entry Pages Report

Example of the Entry Pages Report

The Entry Pages report displays the most common requests that visitors make to enter a Web site. This report enables you to determine which pages are most frequently visited first in a visit.

The following is an example of the Entry Pages Report.

Display 8.11 Example of the Entry Pages Report



The following table describes the variables in the Entry Pages report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Requested File	A class variable that specifies the page or URI (Uniform Resource Identifier) that was visited on the site. (URIs are formatted strings that identify a resource through a name, location, or any other characteristic.)
Entry Page Count	An analysis variable that specifies the number of times that a requested file is an entry page to the Web site.
Percent Entry Page Count	An analysis variable that specifies the percentage of the Entry Page Count.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Entry Page Count Variable

The Percent Entry Page Count variable is calculated in the following way: percent entry page count = (the number of successful requests for a given page that is the first request of a visit / the total number of successful requests for all pages that are the first requests for visits) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Find More Information in an Entry Pages Report

By clicking a value in the Requested File column of the report, you can drill down to the Referrer by Entry Page report, which provides information about pages that were requested immediately prior to the requested file. See “Referrer by Entry Page Report” on page 106 for more information.

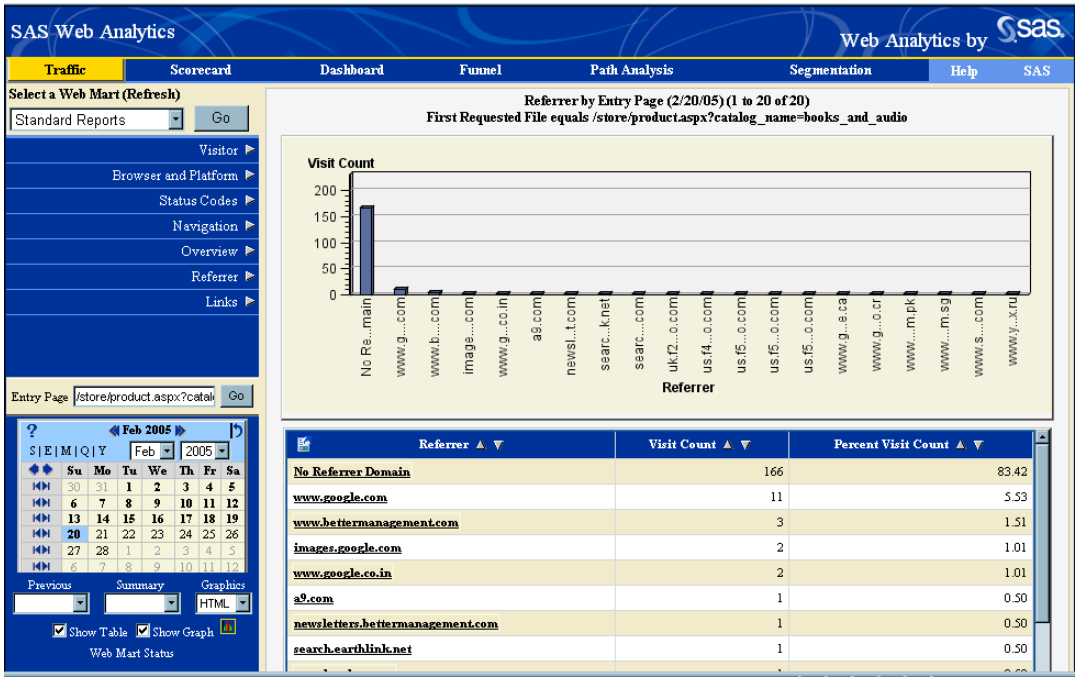
Referrer by Entry Page Report

Example of the Referrer by Entry Page Report

The Referrer by Entry Page report displays the pages that were requested immediately prior to the requested file. You access this report by drilling down on a value in the Requested File column of the Entry Pages report.

The following is an example of the Referrer by Entry Page report.

Display 8.12 Example of the Referrer by Entry Page Report



The following table describes the variables in the Referrer by Entry Page report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Referrer	A class variable that specifies the page or URI (Uniform Resource Identifier) that was requested immediately prior to the requested file on the Web site. (URIs are formatted strings that identify a resource through name, location, or any other characteristic.)
Visit Count	An analysis variable that specifies the number of visits that had at least one request with the designated status code.
Percent Visit Count	An analysis variable that specifies the percentage of visits that had at least one request with the designated status code.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

If you click a link in the Referrer column of the Referrer by Entry Page Report, you return to the Entry Pages by Referrer Report.

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits in which visitors entered by way of a page / the total number of visits for the given entry page) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Find More Information in a Referrer by Entry Page Report

By clicking a value in the Referrer column of the report, you can drill down to the Entry Pages by Referrer report, which displays visit activity for the first requested file. See “Entry Pages by Referrer Report” on page 107 for more information.

Entry Pages by Referrer Report

Example of the Entry Pages by Referrer Report

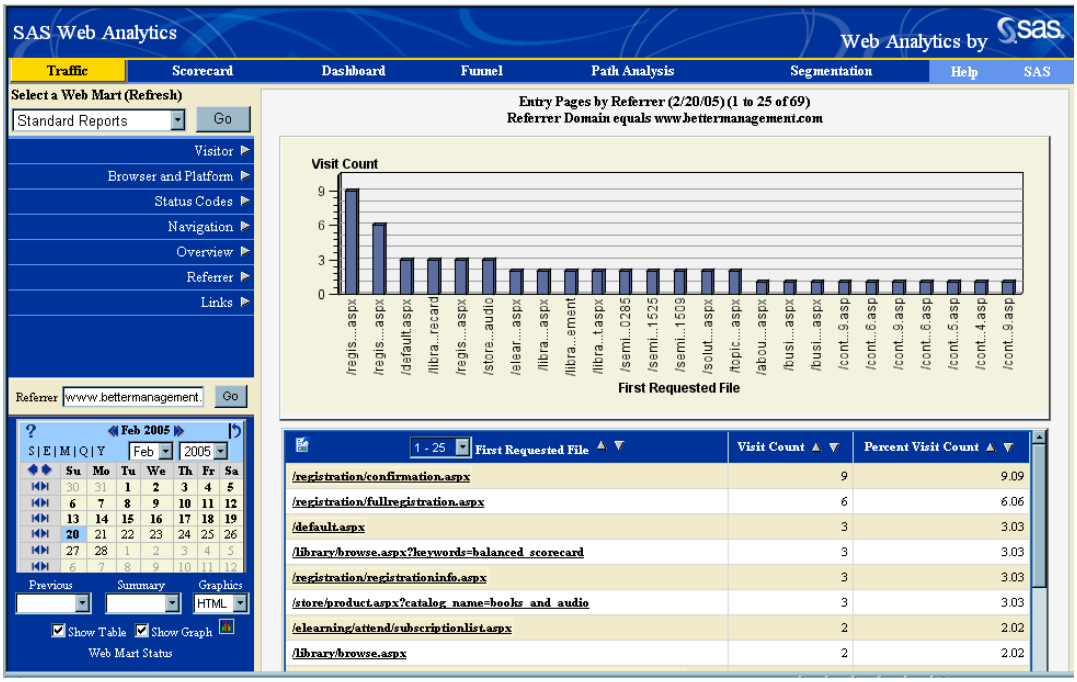
The Entry Pages by Referrer report displays the visit activity for the first requested file. This report enables you to determine from which referrers the traffic originates,

and to which pages traffic is directed. This report provides useful information for properly channeling traffic to desired sections of the Web site. It can also be used to assess affiliate referrer traffic volumes while monitoring incoming visits.

You access this report by drilling down on a value in the Referrer column of the Referrer by Entry Page report.

The following is an example of the Entry Pages by Referrer report.

Display 8.13 Example of the Entry Pages by Referrer Report



The following table describes the variables in the Entry Pages by Referrer report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
First Requested File	A class variable that specifies the page or URI (Uniform Resource Identifier) that was first visited on the site. (URIs are formatted strings that identify a resource through a name, location, or any other characteristic.)

Variable	Description
Visit Count	An analysis variable that specifies the number of visits that had at least one request for the given page by the given referrer domain.
Percent Visit Count	An analysis variable that specifies the percentage of visits that had at least one request for the given page by the given referrer domain.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits in which visitors entered by way of a page / the total number of visits for the given page by the given referrer domain) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Find More Information in an Entry Pages by Referrer Report

By clicking a value in the First Requested File column of the report, you can drill down to the Referrer by Entry Page report, which displays the pages that were requested immediately prior to the requested file. See “Referrer by Entry Page Report” on page 106 for more information.

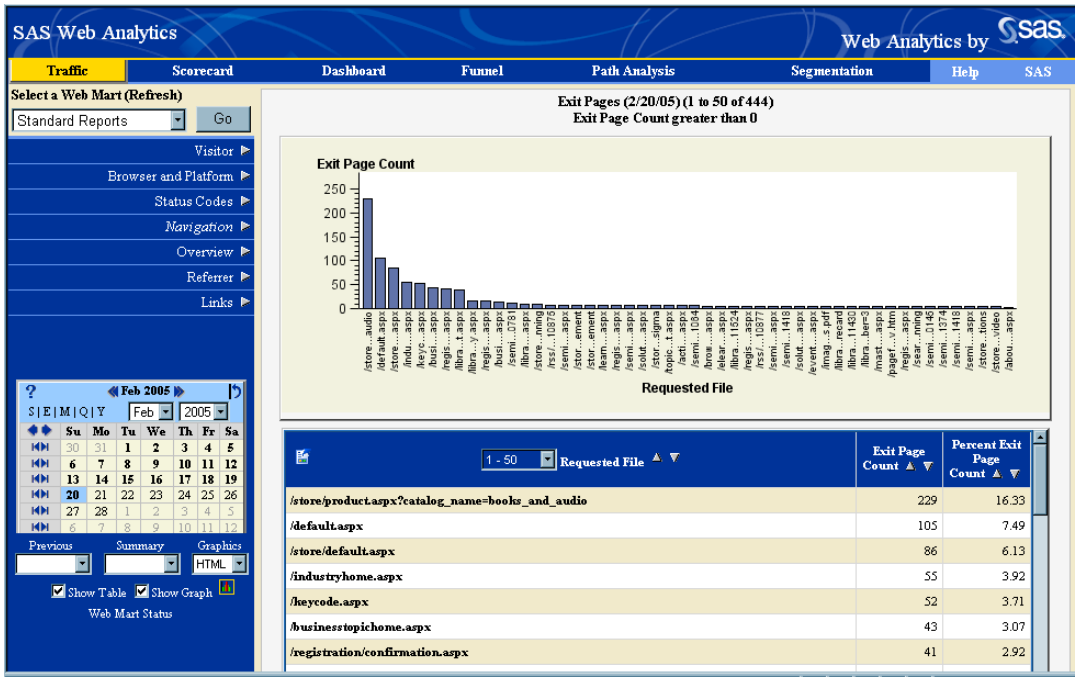
Exit Pages Report

Example of the Exit Pages Report

The Exit Pages report provides a list of all Web pages from which the current site was exited.

The following is an example of the Exit Pages report.

Display 8.14 Example of the Exit Pages Report



The following table describes the variables in the Exit Pages report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Requested File	A class variable that specifies the page or URI (Uniform Resource Identifier) that was visited on the site. (URIs are formatted strings that identify a resource through a name, location, or any other characteristic.)
Exit Page Count	An analysis variable that specifies the number of times that a requested file is an exit page to the Web site.
Percent Exit Page Count	An analysis variable that specifies the percentage of the Exit Page Count.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Exit Page Count Variable

The Percent Exit Page Count variable is calculated in the following way: percent exit page count = (the number of exit pages for a given requested file / total number of exit pages) * 100.

Overview Reports

Types of Overview Reports

The following types of overview reports are available:

Report	Description
Hourly Metrics	Displays basic traffic statistics for the site on an hourly basis.
Site Metrics	Displays basic traffic statistics for the site.
Day of Week Metrics	Displays basic daily traffic statistics for the site by day of week.
Site Metrics by Day of Week	Displays statistics for the site for a specific day of the week.

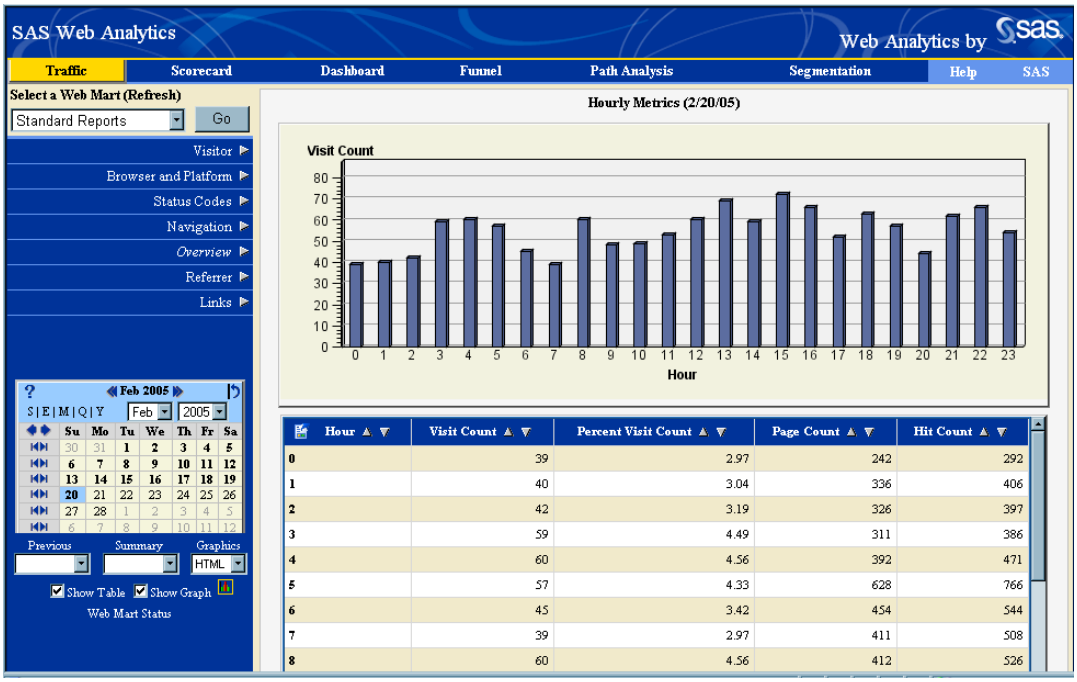
Hourly Metrics Report

Example of the Hourly Metrics Report

The Hourly Metrics report enables you to view basic daily traffic statistics for the site on an hourly basis. You can use the information in this report to detect traffic irregularities within the time frame of a day and to outline hourly behavioral characteristics.

The following is an example of the Hourly Metrics report.

Display 8.15 Example of the Hourly Metrics Report



Hour	Visit Count	Percent Visit Count	Page Count	Hit Count
0	39	2.97	242	292
1	40	3.04	336	406
2	42	3.19	326	397
3	59	4.49	311	386
4	60	4.56	392	471
5	57	4.33	628	766
6	45	3.42	454	544
7	39	2.97	411	508
8	60	4.56	412	526

The following table describes the variables in the Hourly Metrics report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Hour	A class variable that specifies the hour in which the data was collected, based on a 24-hour clock (hour 0 is midnight to 12:59 a.m., and so forth).
Visit Count	An analysis variable that specifies the number of visits that were logged per hour.
Percent Visit Count	An analysis variable that specifies the percentage of the visits that occurred during a given hour.
Page Count	An analysis variable that specifies the number of page views during a given hour.
Hit Count	An analysis variable that specifies the number of times that a file was requested during a given hour.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits that occurred during a given hour / the total number of visits) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

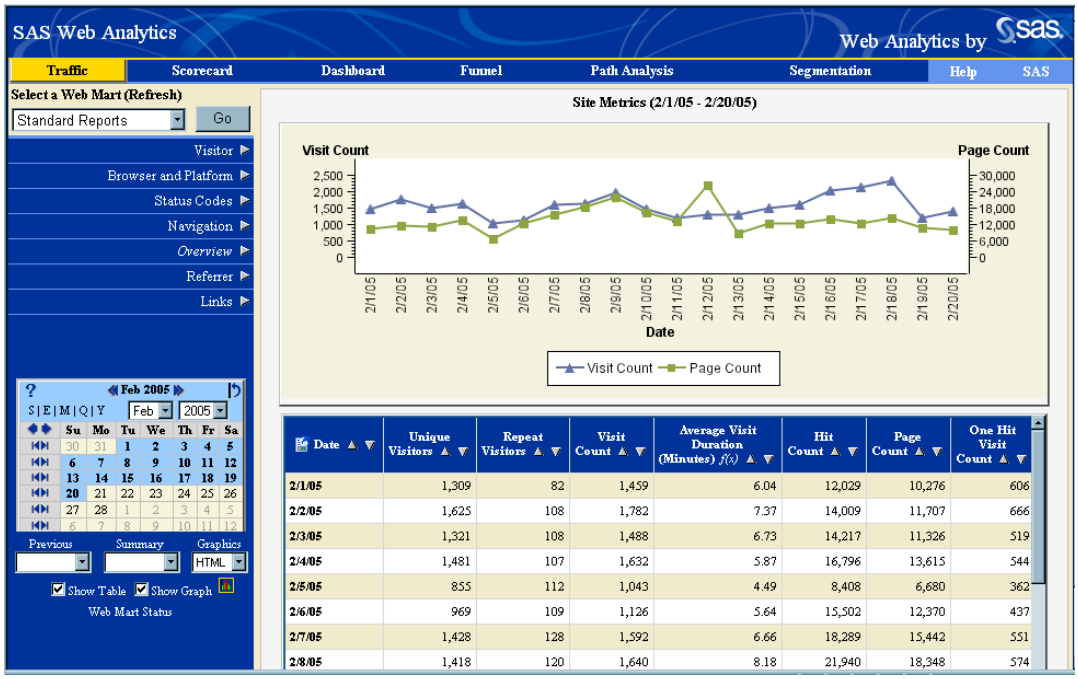
Site Metrics Report

Example of the Site Metrics Report

The Site Metrics traffic report displays basic traffic statistics for the site. You can use the information in this report to detect traffic irregularities and to outline behavioral characteristics.

The following is an example of the Site Metrics traffic report.

Display 8.16 Example of the Site Metrics Traffic Report



Date	Unique Visitors	Repeat Visitors	Visit Count	Average Visit Duration (Minutes)	Hit Count	Page Count	One Hit Visit Count
2/1/05	1,309	82	1,459	6.04	12,029	10,276	606
2/2/05	1,625	108	1,782	7.37	14,009	11,707	666
2/3/05	1,321	108	1,488	6.73	14,217	11,326	519
2/4/05	1,481	107	1,632	5.87	16,796	13,615	544
2/5/05	855	112	1,043	4.49	8,408	6,680	362
2/6/05	969	109	1,126	5.64	15,502	12,370	437
2/7/05	1,428	128	1,592	6.66	18,289	15,442	551
2/8/05	1,418	120	1,640	8.18	21,940	18,348	574

The following table describes the variables in the Site Metrics traffic report.

Variables	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column displays daily dates.
Unique Visitors	An analysis variable that specifies the number of unique visitors that came to the Web site during a specific time period.
Repeat Visitors	An analysis variable that specifies the number of repeat visitors that had more than one visit for a specified time period.
Visit Count	An analysis variable that specifies the number of visits that were logged in the time frame that is specified by the date.
Average Visit Duration (Minutes)	An analysis variable that specifies the average time (in minutes) for all visits.
Hit Count	An analysis variable that specifies the number of page hits that were detected.
Page Count	An analysis variable that specifies the number of page views for the specified time frame.
One Hit Visit Count	An analysis variable that specifies the number of visits that have only one page hit.
Total Bytes Sent	An analysis variable that specifies the total number of bytes that a server delivered in response to requests. Because of retransmissions and network problems, the total number of bytes sent can sometimes be larger than the size in bytes of the resource or file that was received. (Bytes sent is sometimes referred to as bytes transferred).
0-1 Page Visit Count	An analysis variable that specifies the number of visits with zero or one page hits.
2-4 Page Visit Count	An analysis variable that specifies the number of visits with two, three, or four page hits.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Average Visit Duration (Minutes) Variable

The Average Visit Duration (Minutes) variable is calculated in the following way: average visit duration (minutes) = (total duration in seconds / visit count) / 60.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of page requests for the specified interval that begins on this date.

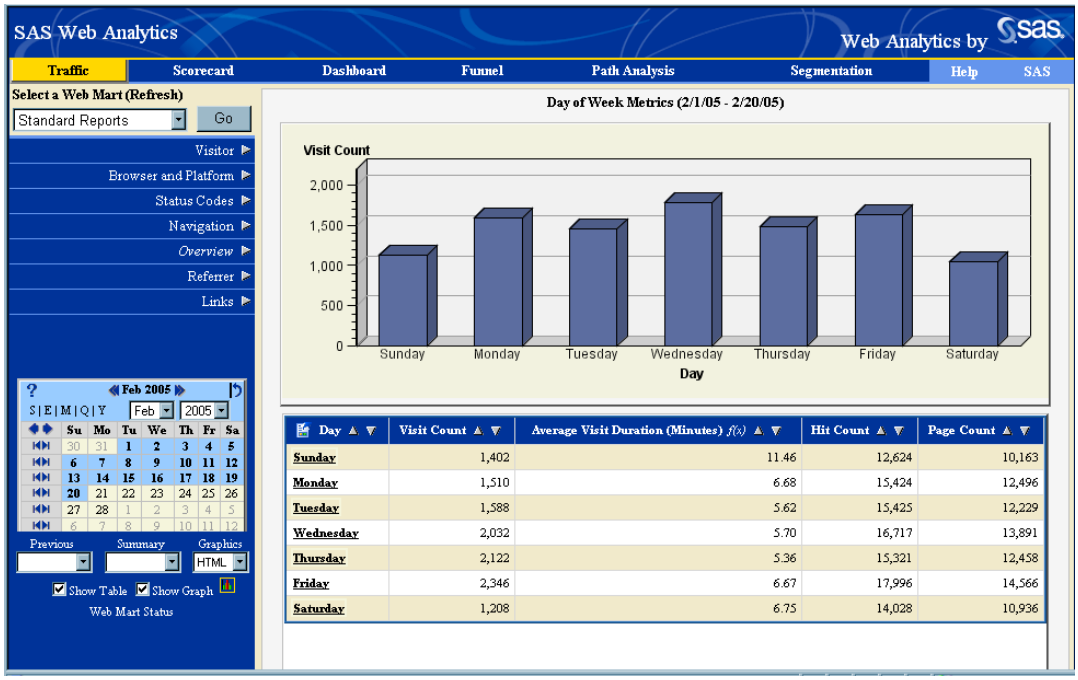
Day of Week Metrics Report

Example of the Day of Week Metrics Report

The Day of Week Metrics report enables you to view basic daily traffic statistics for the site by day of week. You can use the information in this report to detect traffic irregularities within days of the week and to outline behavioral characteristics by day of week.

The following is an example of the Day of Week Metrics report.

Display 8.17 Example of the Day of Week Metrics Report



Day	Visit Count	Average Visit Duration (Minutes) *f(x)*	Hit Count	Page Count
Sunday	1,402	11.46	12,624	10,163
Monday	1,510	6.68	15,424	12,496
Tuesday	1,588	5.62	15,425	12,229
Wednesday	2,032	5.70	16,717	13,891
Thursday	2,122	5.36	15,321	12,458
Friday	2,346	6.67	17,996	14,566
Saturday	1,208	6.75	14,028	10,936

The following table describes the variables in the Day of Week Metrics report.

Variable	Description
Day	A class variable that specifies the day of the week in which the data was collected. (You can change which day will be the first day of the week by using the value of the week_start parameter in the SAS Web Analytics configuration table.)
Visit Count	An analysis variable that specifies the number of visits that were logged per weekday.
Average Visit Duration (Minutes)	An analysis variable that specifies the average time (in minutes) for all visits for a given weekday.

Variable	Description
Hit Count	An analysis variable that specifies the number of page hits that were detected on a given weekday.
Page Count	An analysis variable that specifies the number of page views for a given weekday.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Average Visit Duration (Minutes) Variable

The Average Visit Duration (Minutes) variable is calculated in the following way: average visit duration (minutes) = (total duration in seconds / visit count) / 60.

Find More Information in the Day of Week Metrics Report

By clicking a value in the Day column of the report, you can drill down to the Site Metrics by Day of Week report. See "Site Metrics by Day of Week Report" on page 116 for more information.

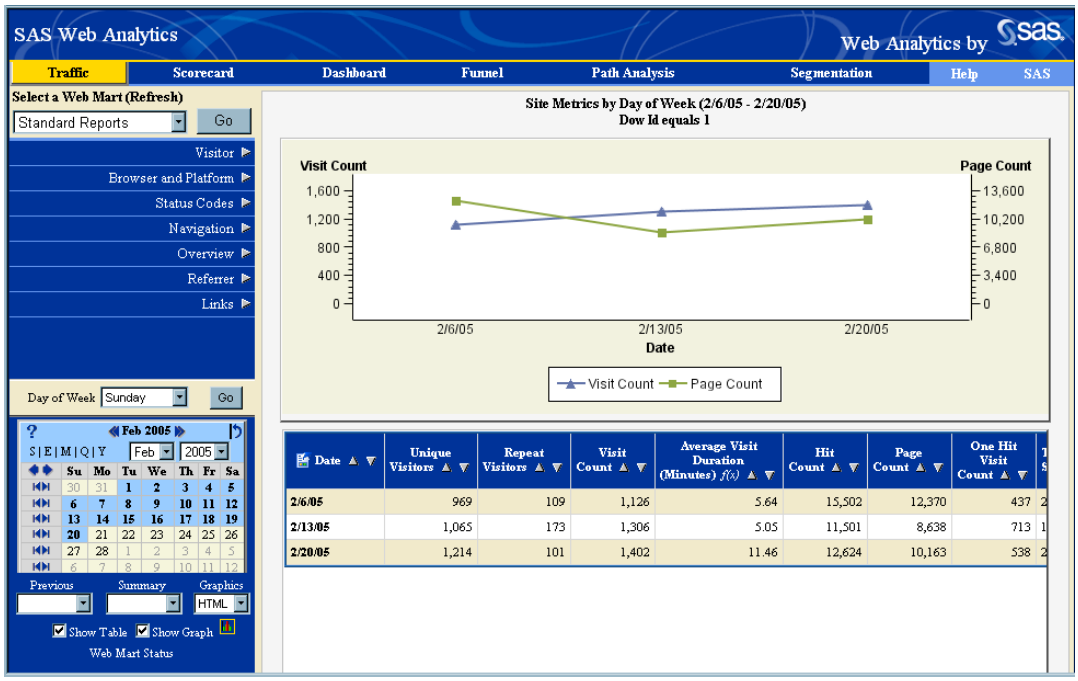
Site Metrics by Day of Week Report

Example of the Site Metrics by Day of Week Report

The Site Metrics by Day of Week report enables you to view traffic statistics for the site by a particular day of the week. You access this report by drilling down on a value in the Day column of the Day of Week Metrics report.

The following is an example of the Site Metrics by Day of Week report.

Display 8.18 Example of the Site Metrics by Day of Week Report



The following table describes the variables in the Site Metrics by Day of Week report.

Variable	Description
Date	A class variable that specifies the dates for the given day of the week.
Unique Visitors	An analysis variable that specifies the number of unique visitors that came to the Web site on the date that is specified in the Date column.
Repeat Visitors	An analysis variable that specifies the number of repeat visitors that had more than one visit on the date that is specified in the Date column.
Visit Count	An analysis variable that specifies the number of visits that were logged on the date that is specified in the Date column.
Average Visit Duration (Minutes)	An analysis variable that specifies the average time (in minutes) for all visits on the date that is specified in the Date column.
Hit Count	An analysis variable that specifies the number of page hits that were detected on a given weekday for the date that is specified in the Date column.
Page Count	An analysis variable that specifies the number of page views for a given weekday on the date that is specified in the Date column.
One Hit Visit Count	An analysis variable that specifies the number of visits that have only one page hit on the date that is specified in the Date column.

Variable	Description
Total Bytes Sent	An analysis variable that specifies the total number of bytes that a server delivered in response to a request on the date that is specified in the Date column. Because of retransmissions and network problems, the total number of bytes sent can sometimes be larger than the size in bytes of the resource or file that was received. (Bytes sent is sometimes referred to as bytes transferred.)
0-1 Page Visit Count	An analysis variable that specifies the number of visits with zero or one page hits on the date that is specified in the Date column.
2-4 Page Visit Count	An analysis variable that specifies the number of visits with two, three, or four page hits on the date that is specified in the Date column.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Average Visit Duration (Minutes) Variable

The Average Visit Duration (Minutes) variable is calculated in the following way: average visit duration (minutes) = (total duration in seconds / visit count) / 60.

Referrer Reports

Types of Referrer Reports

The following types of referrer reports are available:

Report	Description
Visit Referrer Domains	Displays a distribution of referrer domains, which enables you to determine the origin of visitors.
Entry Pages by Referrer	Displays the pages and visit information that are associated with the domains. This report enables you to determine from which referrers the traffic originates, and to which pages traffic is directed.
Referrer by Entry Page	Displays a list of entry pages for each referrer.
Search Terms	Displays a distribution of search terms that are used by visitors to find your Web site. This report shows search terms that are used to reach the site through a search engine from a referring party.

Report	Description
Referrer by Search Terms	Displays the domains from which visitors searched for specific items of information. This report shows search terms that are used to reach the site through a search engine from a referring party.
Search Terms by Referrer	Displays a distribution of search terms that are used by visitors within referrer domains to find your Web site.
Like Search Terms	Displays a list of search terms that are similar to a term that you specify.

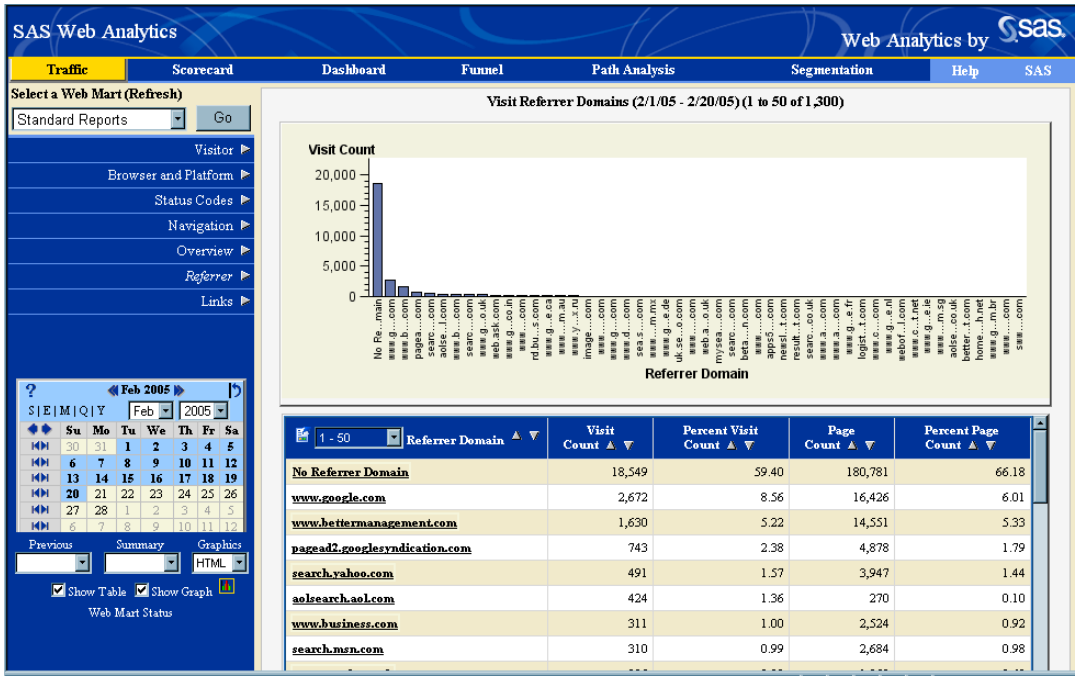
Visit Referrer Domains Report

Example of the Visit Referrer Domains Report

The Visit Referrer Domains report displays a distribution of referrer domains. This distribution of domains enables you to determine the origin of visitors. This report provides valuable information that can help you evaluate affiliate campaign strategies and assess incoming referral traffic patterns.

The following is an example of the Visit Referrer Domains report.

Display 8.19 Example of the Visit Referrer Domains Report



The following table describes the variables in the Visit Referrer Domains report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Referrer Domain	A class variable that specifies the domain from which the visit originated. The domain is a series of alphanumeric strings that are separated by periods (for example, www.sas.com). The domain is the address of a computer network connection and identifies the owner of the address. The data can contain an unlimited number of referrers, but only 25 are displayed at one time.
Visit Count	An analysis variable that specifies the total number of visits that were referred through a specific domain.
Percent Visit Count	An analysis variable that specifies the percentage of total visits that were referred through a specific domain.
Page Count	An analysis variable that specifies the total number of viewed pages in visits that were referred through a specific domain.
Percent Page Count	An analysis variable that specifies the percentage of total viewed pages in visits that were referred through a specific domain.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits that were referred through a domain / the total number of visits) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Calculating the Percent Page Count Variable

The Percent Page Count variable is calculated in the following way: percent page count = (the number of viewed pages in visits that were referred through a domain / the total number of viewed pages) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of viewed pages for the specified interval that begins on this date.

Find More Information in a Visit Referrer Domains Report

By clicking a value in the Referrer Domain column of the report, you can drill down to the Entry Pages by Referrer report, which displays pages that are associated with the domain. See “Entry Pages by Referrer Report” on page 121 for more information.

Entry Pages by Referrer Report

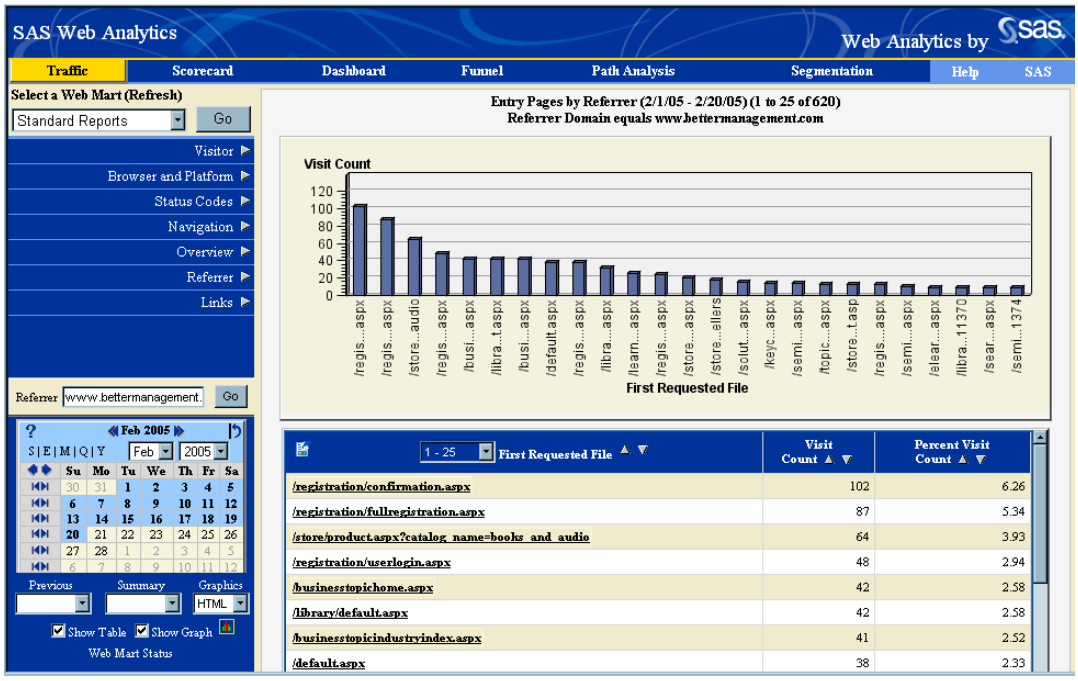
Example of the Entry Pages by Referrer Report

The Entry Pages by Referrer report displays information about the pages and visits that are associated with domains. This report enables you to determine from which referrers the traffic originates, and to which pages traffic is directed. This provides useful information for properly channeling traffic to desired sections of the Web site. The report can also be used to assess affiliate referrer traffic volumes while monitoring incoming visits.

You access this report by drilling down on a value in the Referrer Domain column of the Visit Referrer Domains report.

The following is an example of the Entry Pages by Referrer report.

Display 8.20 Example of the Entry Pages by Referrer Report



The following table describes the variables in the Entry Pages by Referrer report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
First Requested File	A class variable that specifies the page or URI (Uniform Resource Identifier) that was first visited on the site. (URIs are formatted strings that identify a resource through a name, location, or any other characteristic.)
Visit Count	An analysis variable that specifies the total number of visits that were referred through a specific domain.
Percent Visit Count	An analysis variable that specifies the percentage of total visits that were referred through a specific domain.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits for a given page that were referred through the given domain / the total number of visits that were referred through the given domain) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Find More Information in the Entry Pages by Referrer Report

By clicking a value in the First Requested File column, you can drill down to the Referrer by Entry Page Report, which displays a list of entry pages for each referrer. See “Referrer by Entry Page Report” on page 123 for more information.

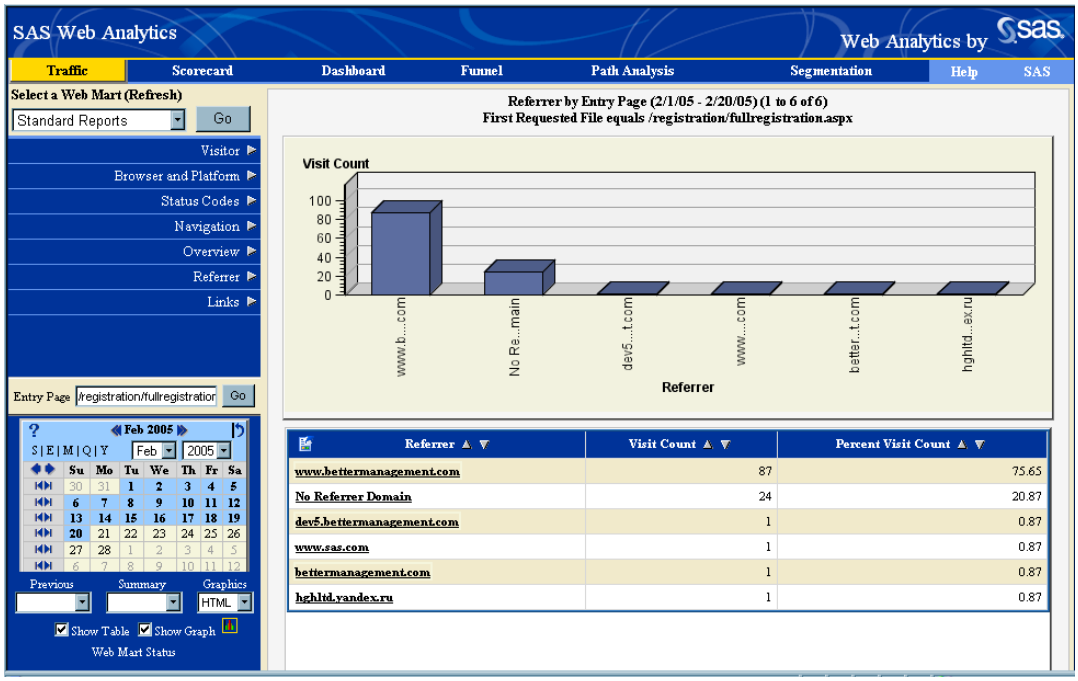
Referrer by Entry Page Report

Example of the Referrer by Entry Page Report

The Referrer by Entry Page report displays a list of entry pages for each referrer. You access this report by drilling down on a value in the First Requested File column of the Entry Pages by Referrer report.

The following is an example of the Referrer by Entry Page report.

Display 8.21 Example of the Referrer by Entry Page Report



The following table describes the variables in the Referrer by Entry Page report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Referrer	A class variable that specifies the domain from which the visit originated. The domain is a series of alphanumeric strings that are separated by periods (for example, www.sas.com). The domain is the address of a computer network connection and identifies the owner of the address.
Visit Count	An analysis variable that specifies the total number of visits that were referred through a specific domain for the given entry page.
Percent Visit Count	An analysis variable that specifies the percentage of total visits that were referred through a specific domain for the given entry page.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

If you click a link in the Referrer column, you go back to the Entry Pages by Referrer report.

Calculating the Percent Visit Count Variable

The Percent Visit Count variable is calculated in the following way: percent visit count = (the number of visits that were referred through a domain for the given entry page / the total number of visits for the given entry page) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

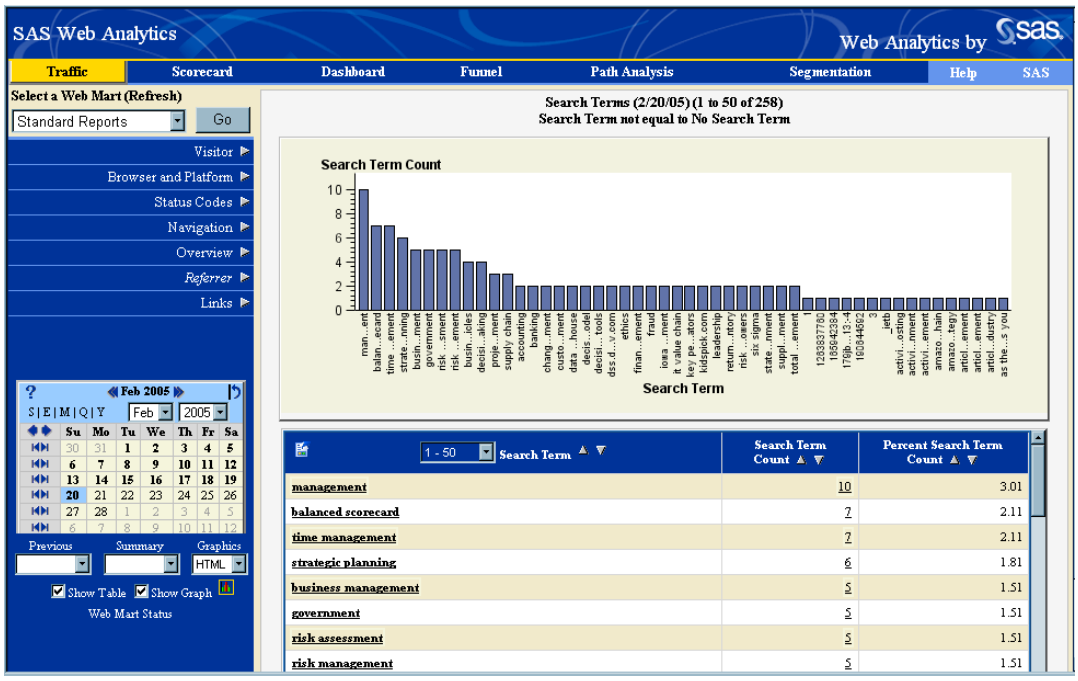
Search Terms Report

Example of the Search Terms Report

The Search Terms report displays a distribution of search terms that are used by visitors to find your Web site. This report shows search terms that are used to reach the site through a search engine from a referring party. This information can be useful when determining which keywords to place in search engines in order to direct new traffic to your site.

The following is an example of the Search Terms report.

Display 8.22 Example of a Search Terms Report



The following table describes the variables in the Search Terms report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Search Term	A class variable that specifies a search or query that is entered by a visitor at a referring site and results in a link that sends visits to your Web site. The data can contain an unlimited number of search terms, but only 50 are displayed at one time.
Search Term Count	An analysis variable that specifies the number of visits in which the search term was used by the referring site to direct a visitor to your Web site.
Percent Search Term Count	An analysis variable that specifies the percentage of total search terms.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Search Term Count Variable

The Percent Search Term Count variable is calculated in the following way: percent search term count = (the number of visits that were attributed to the search term / the total number of visits) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of search terms for the specified interval that begins on this date.

Find More Information in a Search Terms Report

By clicking a value in the Search Term column of the report, you can drill down to the Referrer by Search Terms report, which displays the domains that directed traffic to your Web site for a given search term. See "Referrer by Search Terms Report" on page 127 for more information.

Referrer by Search Terms Report

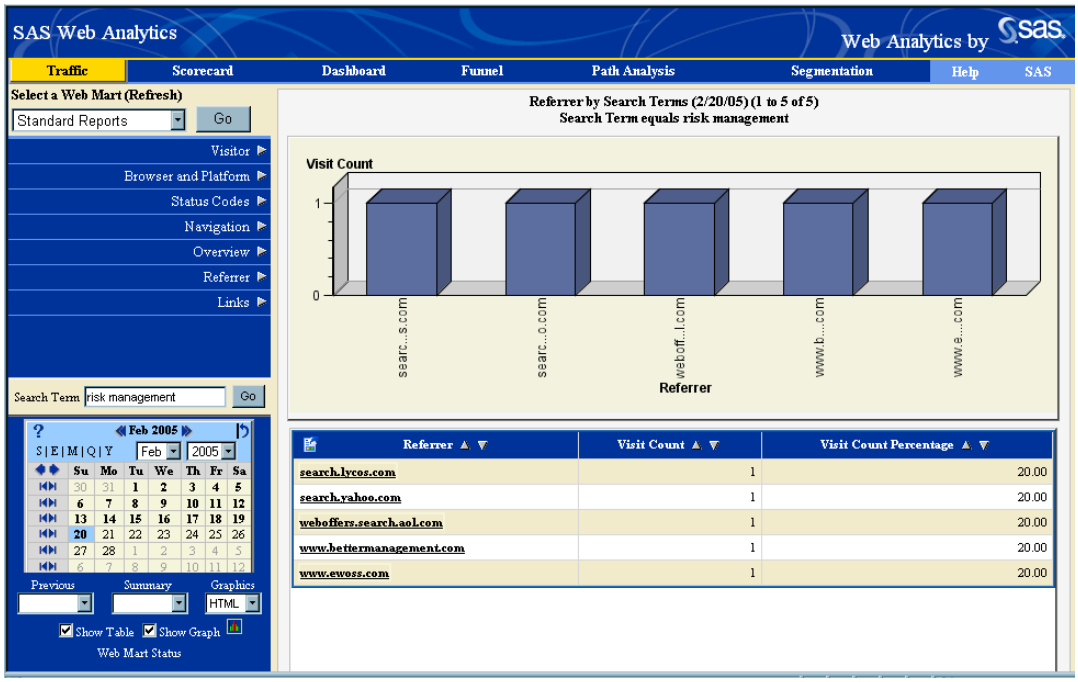
Example of the Referrer by Search Terms Report

The Referrer by Search Terms report displays the domains that directed traffic to your Web site for a given search term. This information can be useful when determining which keywords to place in search engines in order to direct new traffic to the site.

You access this report by drilling down on a value in the Search Term column of the Search Terms report.

The following is an example of the Referrer by Search Terms report.

Display 8.23 Example of the Referrer by Search Terms Report



The following table describes the variables in the Referrer by Search Terms report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Referrer	A class variable that specifies the domain that directed a visitor to your Web site for a given search term. The domain is a series of alphanumeric strings that are separated by periods (for example, www.sas.com). The domain is an address of a computer network connection and identifies the owner of the address.
Visit Count	An analysis variable that specifies the total number of visits that were referred by a specific referrer for the given search term.
Visit Count Percentage	An analysis variable that specifies the percentage of total visits.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Visit Count Percentage Variable

The Visit Count Percentage variable is calculated in the following way: visit count percentage = (the number of visits that were attributed to the referrer for the given search term / the total number of visits for the given search term) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits for the specified interval that begins on this date.

Find More Information in a Referrer by Search Terms Report

By clicking a value in the Referrer column of the report, you can drill down to the Search Terms by Referrer report, which displays a distribution of search terms that are used by visitors within referrer domains to find your Web site. See “Search Terms by Referrer Report” on page 129 for more information.

Search Terms by Referrer Report

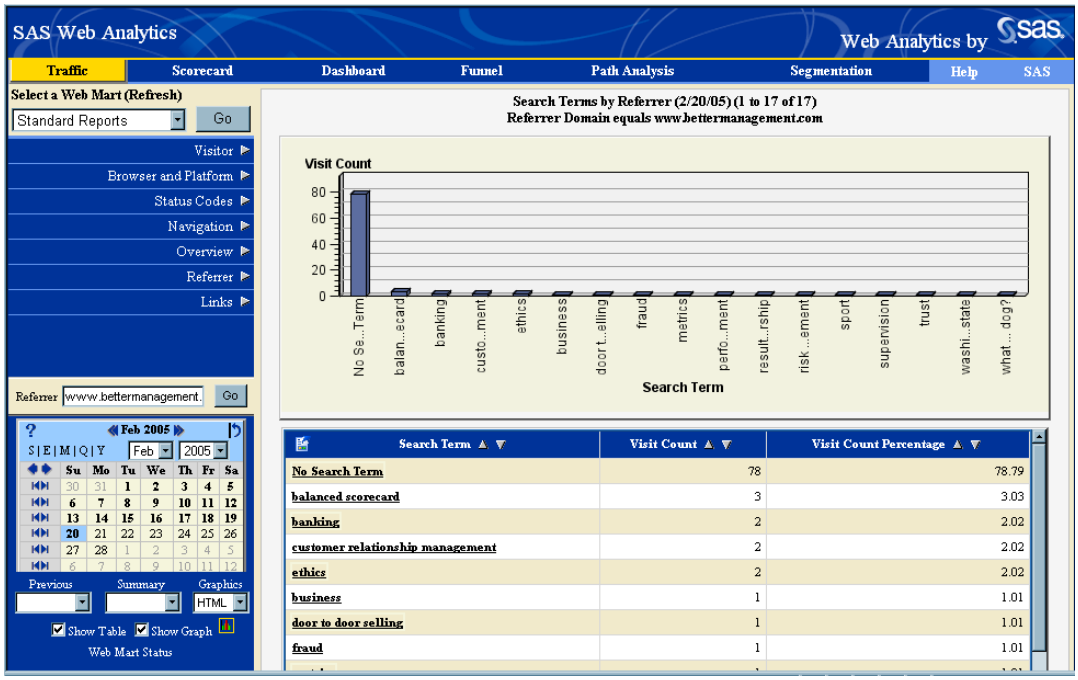
Example of the Search Terms by Referrer Report

The Search Terms by Referrer report displays a distribution of search terms that are used by visitors within referrer domains to find your Web site. This report shows the breakdown by referrer domain of search terms that are used to reach the site through a search engine. This information can be useful when determining which keywords to place in search engines in order to direct new traffic to the site.

You access this report by clicking a value in the Referrer column of the Referrer by Search Terms report.

The following is an example of the Search Terms by Referrer report.

Display 8.24 Example of the Search Terms by Referrer Report



The following table describes the variables in the Search Terms by Referrer report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Search Term	A class variable that specifies a search or query that is entered by a visitor at a referring site and resulted in a link that sent visits to your Web site. The data can contain an unlimited number of search terms, but only 25 are displayed at one time.
Visit Count	An analysis variable that specifies the total number of visits that were referred through a specific referrer or search term.
Visit Count Percentage	An analysis variable that specifies the percentage of total visits.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report.

Clicking a link in the Search Term column returns you to the Referrer by Search Terms report. △

Calculating the Visit Count Percentage Variable

The Visit Count Percentage variable is calculated in the following way: visit count percentage = (the number of visits that were attributed to the given referrer domain for the given search term / the total number of visits that were attributed to the given referrer domain) * 100.

If a time interval is selected from the **Summary** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits that were attributed to the given referrer domain for the specified interval that begins on this date.

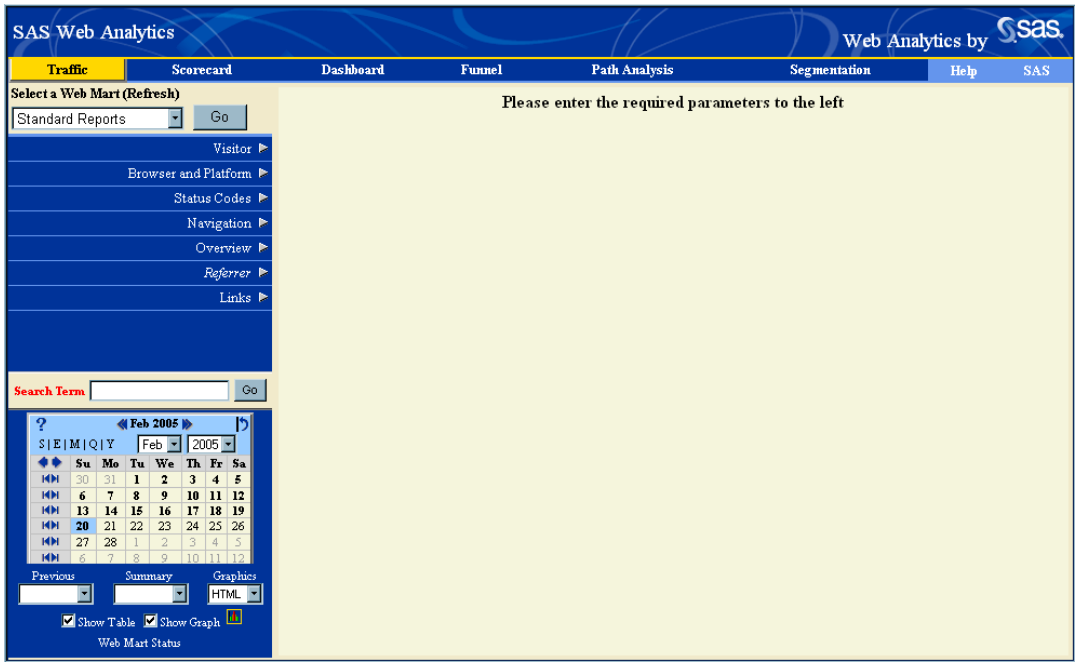
Like Search Terms Report

Example of the Like Search Terms Report

The Like Search Terms report displays a list of search terms that are similar to a term that you specify. This information can be useful when determining which keywords to place in search engines in order to direct new traffic to your site.

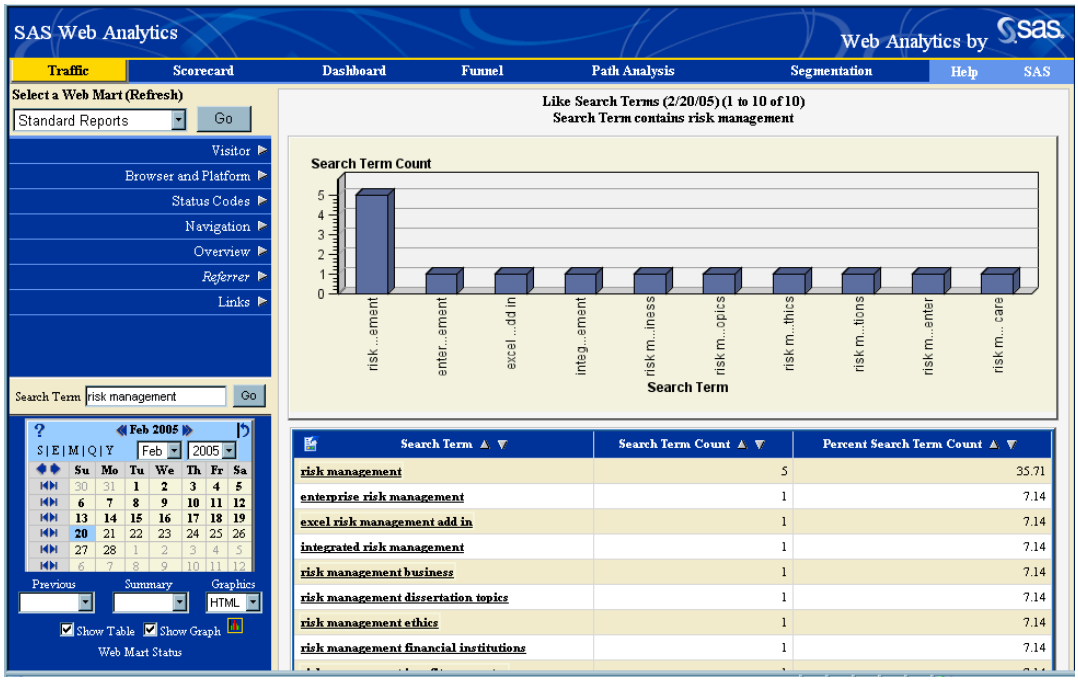
The following is an example of the Like Search Terms entry page, in which you enter a search term to create a report. You enter the term in the **Search Term** field in the left section of the page, and then click **Go** to begin the search.

Display 8.25 Example of the Like Search Terms Entry Window



The following is an example of the Like Search Terms report. The phrase “risk management” was entered as the search term.

Display 8.26 Example of the Like Search Terms Report



The following table describes the variables in the Like Search Terms report.

Variable	Description
Date	A class variable that specifies the date range of the report. □ If you select a time interval from the **Summary** drop-down menu, then Date specifies the first date in the summary level (that is, day, week, month, quarter, or year). □ If you do not select a time interval from the **Summary** drop-down menu, then the Date column is not displayed in the report.
Search Term	A class variable that specifies a search or query that is entered by a visitor and results in a list of links that identifies the location of the term. (A page on your site was among the list of links.)
Search Term Count	An analysis variable that specifies the number of visits in which the search term was used by the referring site to direct a visitor to your Web site.
Percent Search Term Count	An analysis variable that specifies the percentage of total search terms.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the Percent Search Term Count Variable

The Percent Search Term Count variable is calculated in the following way: percent search term count = (the number of visits that were attributed to the search term / the total number of visits that were attributed to like search terms) * 100.

If a time interval is selected from the **`Summary`** drop-down menu, then the Date column contains the initial date of the summary, and the denominator is the total number of visits that were attributed to like search terms for the specified interval that begins on this date.

Find More Information in a Like Search Terms Report

By clicking a value in the Search Term column of the report, you can drill down to the Referrer by Search Terms report, which displays the domains that directed traffic to your Web site for a given search term. See “Referrer by Search Terms Report” on page 127 for more information.

CHAPTER

9

Displaying Web Metrics by Using the Scorecard

Overview: Scorecard

The scorecard is a report that you can use for decision support. It enables you to view the performance and the forecast values of the key performance indicators (KPIs) that drive your business on the Internet. The scorecard enables you to determine which variables in the input data set have a statistically significant impact on the target variable. The scorecard lists the variables in the order of their importance in affecting and predicting the target variable. By default, Visits is the scorecard's target metric, and Actual Values for the day that is being viewed is the scorecard's key performance indicator.

How a Scorecard is Created

The scorecard runs as part of the SAS Web Analytics extract, transform, and load (ETL) process. The %WAETL macro summarizes the detail table data and creates the Daily_Total_Day data set, which is used as the default input to the scorecard. This data set contains values for all the traffic metrics for the Web site.

Data Requirements for the Scorecard

The value of the target metric is determined by examining all of the visitors for the current day and determining what proportion of the visitors visited the Web site over the previous 15 days. The first 15 days of reporting do not provide an accurate assessment of the number of repeat visitors. Therefore, in order for the scorecard to be

processed for a given day, at least 30 continuous days of data must exist in the input data set (Daily_Total_Day) previous to that day. This means that until your Web mart contains 30 continuous days of data, no scorecard will be produced. For example, if the first Web log process begins with January 1, the first scorecard data will not be generated until you have processed your Web logs for January 30. In the SAS Web Analytics Report Viewer, scorecards for January 1 through January 29 will display the following message in the table:

```
NOT ENOUGH PREVIOUS DAYS OF DATA
```

All numeric columns will be set to zero.

After the initial 30 days, scorecards can be produced each day. Clicking a valid date in the calendar automatically displays the scorecard for that date. You can produce historical scorecards by selecting previous dates from the calendar. The default number of days for which you can display a scorecard is 365. An administrator can change this default by using SAS Web Analytics Administrator.

Description of the Scorecard Tables

The Scorecard Tables

The scorecard consists of two tables. The first table, located at the top of the main viewing area, contains the scorecard data for a specified date. The second table, located at the bottom of the main viewing area, contains goal-seeking data.

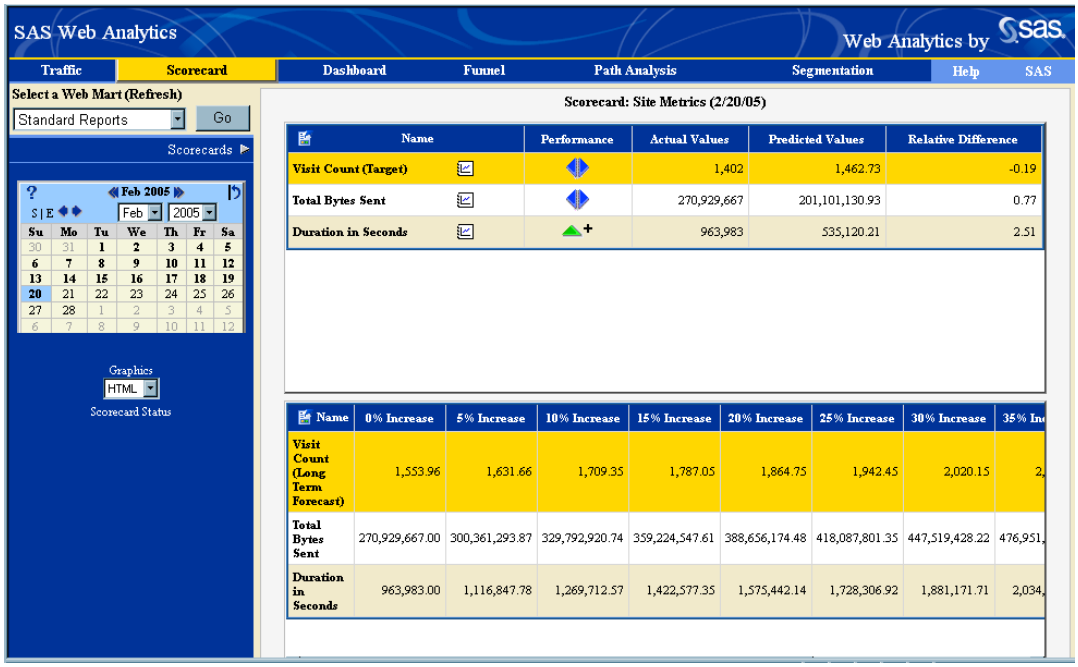
The first table lists the name of the scorecard and the date for which it was processed. This date matches the date you selected in the calendar in the left section of the page. The Name column in the scorecard lists the metrics that are being measured. The table also contains a column that has a performance indicator, which shows how the metric has performed relative to its Positive Business Direction.

The second table is the goal-seeking table. Use this table to determine how an increase or decrease in specified metrics will affect the value of the target metric. The target metric is always listed first in the Name column. The goal-seeking table displays increases in the target metric from 0% to 50% in increments of 5%.

Note: The goal-seeking table determines only the increase in the target metric through a one-to-one relationship between the target metric and the individual metrics, while all other metrics are held at the 0% mark. The table does not determine the increase in the target metric when other multiple metrics increase or decrease. △

The following is an example of a Scorecard: Site Metrics report. The date of the report matches the date that was selected in the calendar.

Display 9.1 Example of a Scorecard: Site Metrics Report



Description of the Scorecard Variables

The following table describes the variables in the scorecard tables.

Variable	Description
Name	Specifies the metric to be measured. The word "Target" is enclosed in parentheses after the name of the target variable for the scorecard.
Actual Values	Specifies the value for the metric on the day for which the report was created.
Predicted Values	Specifies the values that were predicted for the specified day given the values for that metric in the past.
Relative Difference	Specifies the value that is calculated using the following formula: (actual value – predicted value) / standard deviation. This result gives a scaled magnitude measure of the difference in the actual value and the predicted value for each metric in the scorecard. (You can use this value to determine how common the actual value is today versus how common the value typically is.)
Percent Increase	Displays increases in the target metric from 0% to 50% in increments of 5%.

Create a Scorecard

You can create a Scorecard: Site Metrics report in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu.
2. Click **Go** to access the Web mart.
3. Select the **Scorecard** link from the banner of the SAS Web Analytics Report Viewer.
4. Select **Site Metrics** from the **Scorecards** drop-down menu, which is located in the left section of the page.
5. Select a valid date from the calendar. (Valid dates are shown in bold in the calendar.)

   When you select a date, the scorecard is automatically created. For information about how to use the calendar, see "Using the Calendar with Dashboard, Scorecard, and Segmentation Reports" on page 36.
6. If you want to change the graphic presentation of the scorecard, then select **HTML** or **JAVA** from the **Graphics** drop-down menu.

   If you select a new presentation, the scorecard is automatically created.

You can change the date of your scorecard by clicking a valid date in the calendar. Whenever you do this, the new scorecard automatically displays.

You can click **Scorecard Status**, which is located in the left section of the page, to display the first and last valid dates for your scorecard. The valid dates correspond to the dates in bold in the calendar. To return to the Site Metrics report for your scorecard, select **Site Metrics** from the **Scorecards** drop-down menu.

How Forecast Models Are Created

Model selection is based on minimization of the error of the forecast. The forecast models are created by using all of the historical data that has been collected (actual values). The current daily actual values are not used. The forecast model for the current day is computed from the selected model, and the corresponding prediction intervals and standard errors for the forecast estimates are reported in the graph. The forecast value that is reported in the table is the predicted value for the report date.

What Is the Positive Business Direction?

The Performance column contains icons that indicate how a metric has performed with respect to its Positive Business Direction. The Positive Business Direction can be assigned a value of UP or DOWN. This assignment indicates to the scorecard which direction is desirable for a given metric. For example, you might want the values for Hit Count to increase over time. Therefore, the Positive Business Direction for Hit Count is UP. For another metric such as Error 404 Count, whose values you want to see decrease over time, you might set the Positive Business Direction to DOWN.

The Positive Business Direction value for each metric is stored in the report definition for the scorecard. An administrator can view and modify report definitions by using SAS Web Analytics Administrator.

Five icons can appear in the Performance column:

Indicates that the metric is performing at a steady business state. The actual value for this metric falls within the 95% confidence limit for the predicted value.

Indicates that the metric value is increasing, and that this trend matches the desired business direction. The actual value is above the 95% confidence level for the predicted value.

Indicates that the metric value is increasing, and that this trend does not match the desired business direction. The actual value is above the 95% confidence level for the predicted value.

Indicates that the metric value is decreasing, and that this trend matches the desired business direction. The actual value is below the 95% confidence level for the predicted value.

Indicates that the metric value is decreasing, and that this trend does not match the desired business direction. The actual value is below the 95% confidence level for the predicted value.

Note: The plus (+) and minus (–) signs next to the arrows are another way of indicating the desired business direction of the metric. The signs have no additional meaning. △

Identify Trends and Forecasts

In the HTML scorecard table, you can click the icon in the Name column and view a graph of the actual and predicted values, as well as the upper and lower 95% confidence levels over time for that metric.

In the Java scorecard, click the icon in the Trend column to view the actual and predicted values.

Special Case: No Statistically Significant Metrics

If the scorecard processing determines that there are no metrics in the input data set that have a statistically significant impact on the target variable, then the scorecard reflects this condition by displaying the following message:

```
NO SIGNIFICANT INPUTS FOUND FOR TARGET
```

All numeric columns are set to zero.

CHAPTER
10

Generating Performance Reports by Using the Dashboard

Overview: Dashboard

The dashboard is a report that you can use for decision support. The dashboard displays the values for each site's metrics, assigns a performance level to that metric based on its desired business direction, and displays an historical average, minimum, and maximum for that metric for a given date. The dashboard also identifies the standard trend and provides a plot of the historical values for a metric by using an overlaid trend line.

How a Dashboard is Created

The dashboard runs as part of the SAS Web Analytics extract, transform, and load (ETL) process. The %WAETL macro summarizes the detail table data and creates the Daily_Total_Day data set, which is used as the default input to the dashboard. This data set contains values for all traffic metrics for the Web site.

Data Requirements for the Dashboard

In order to produce the dashboard statistics for a given date, at least 30 continuous days of data must exist in the input data set (Daily_Total_Day) before that date. Therefore, no dashboard will be created for the first 30 days for which SAS Web Analytics processes Web log data. For example, if the first Web log you process begins with January 1, the first dashboard data will not be generated until you have processed Web logs for January 30. In the SAS Web Analytics Report Viewer, dashboards for January 1 through January 29 will display the following message in the table:

```
NOT ENOUGH PREVIOUS DAYS OF DATA
```

After the initial 30 days, dashboards can be produced each day. You can produce historical dashboards by selecting a previous date from the calendar. The default number of days for which you can display a dashboard is 365. An administrator can change this default by using SAS Web Analytics Administrator.

Description of the Dashboard

The Dashboard

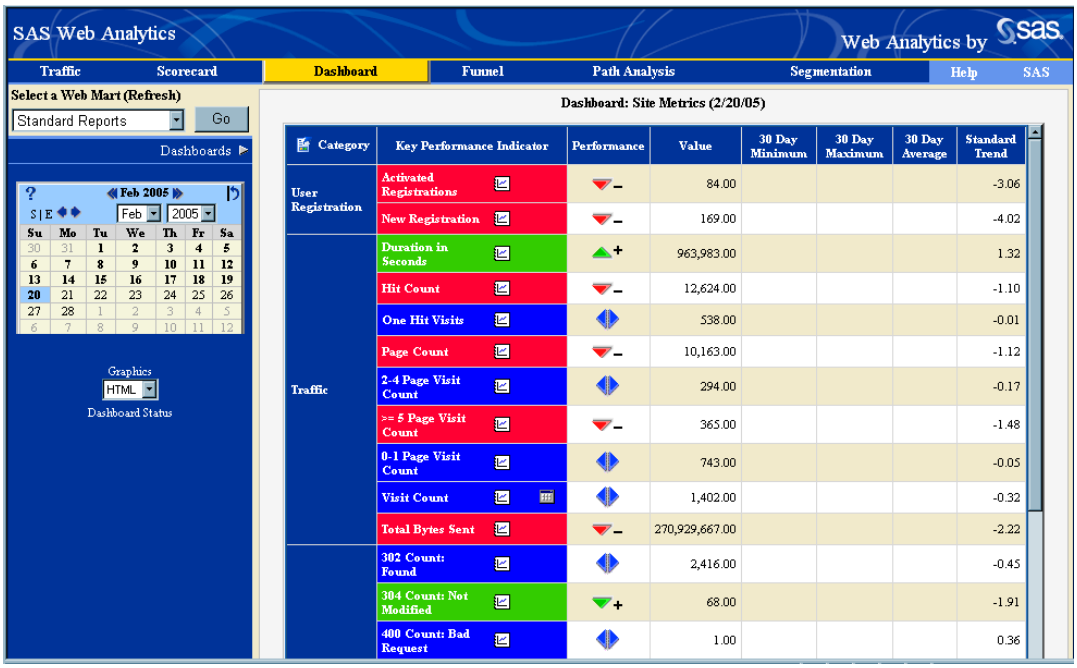
The name of the dashboard and the date for which it was produced appear at the top of the report. The date of the dashboard matches the date that you selected in the calendar, which is located in the left section of the page. The name of the metric is listed in the Key Performance Indicator column. In the HTML report, the background of this field is color-coded to match its performance in terms of its desired business direction, as follows:

- Green - indicates a positive direction
- Red - indicates a negative direction
- Blue - indicates a steady performance

The Dashboard: Site Metrics report gives you an overview of the daily operation of your Web site. The report displays key metrics, called Key Performance Indicators (KPIs) that enable you to quickly identify areas that are performing above or below expectation. In the Key Performance Indicator column, you can click the icon to view a trend graph for the KPI that you select.

The following is an example of a Dashboard: Site Metrics report.

Display 10.1 Example of a Dashboard: Site Metrics Report



Description of the Dashboard Variables

The following table describes the variables in the Dashboard: Site Metrics report.

Column	Description
Category	Specifies a grouping of traffic metrics.
Key Performance Indicator	Specifies the metric to be measured. Click the icon next to the metric to view the trend graph.
Value	Specifies the value for the metric on the day the report was created.
30 Day Minimum	Specifies the lowest value for the metric in the past 30 days.
30 Day Maximim	Specifies the highest value for the metric in the past 30 days.
30 Day Average	Specifies the average value for the metric over the past 30 days.
Standard Trend	Specifies the value for the slope of a seven-day trend. The slope is standardized by the slope standard error.

Calculating the Standard Trend Variable

The slope and the slope standard error are calculated by an autoregression procedure that is applied to 30 days of data. The standard trend is calculated in the following way: standard trend = slope / slope standard error. The standard trend gives you the ability to see how extreme the increase or decrease for a set of values has been for the past seven days. Positive values indicate a positive slope (increasing trend), and negative values indicate a decreasing slope (decreasing trend).

Create a Dashboard

You can create a Dashboard: Site Metrics report in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **`Select a Web Mart (Refresh)`** drop-down menu.
2. Click **`Go`** to access the Web mart.
3. Select the **`Dashboard`** link from the banner of the SAS Web Analytics Report Viewer.
4. Select **`Site Metrics`** from the **`Dashboards`** drop-down menu, which is located in the left section of the page.
5. Select a valid date from the calendar. (Valid dates are shown in bold in the calendar.)

   When you select a date, the dashboard is automatically created.

   For information about how to use the calendar, see "Using the Calendar with Dashboard, Scorecard, and Segmentation Reports" on page 36.

6 If you want to change the graphic presentation of the dashboard, then select **HTML** or **JAVA** from the **Graphics** drop-down menu.

If you select a new format, the dashboard is automatically created.

You can change the date of your dashboard by clicking a valid date in the calendar. Whenever you do this, the new dashboard is automatically created.

You can click **Dashboard Status**, which is located in the left section of the page, to display the first and last valid dates for your dashboard. The valid dates correspond to the dates in bold in the calendar. To return to the Site Metrics report for your dashboard, select **Site Metrics** from the **Dashboards** drop-down menu.

What is the Positive Business Direction?

The Performance column contains icons that indicate how a metric has performed with respect to its Positive Business Direction. The Positive Business Direction can be assigned a value of UP or DOWN. This assignment indicates to the dashboard which direction is desirable for a given metric. For example, you might want the values for Visit Count to increase over time. Therefore, the Positive Business Direction for Visit Count is UP. For another metric such as Error 404 Count, whose values you want to see decreased over time, you might set the Positive Business Direction to DOWN. The Positive Business Direction value for each metric is stored in the report definition for the dashboard.

Five icons can appear in the Performance column:

Indicates that the metric is performing at a steady business state. The seven-day trend is level.

Indicates that the metric value is increasing, and that this trend matches the desired business direction.

Indicates that the metric value is increasing, and that this trend does not match the desired business direction.

Indicates that the metric value is decreasing, and that this trend matches the desired business direction.

Indicates that the metric value is decreasing, and that this trend does not match the desired business direction.

Note: The plus (+) and minus (–) signs next to the arrows are another way of indicating the desired business direction of the metric. The signs have no additional meaning. △

CHAPTER

11

Tracking Visitors by Using Funnel Reports

Overview: Funnel Reports

A funnel report provides a detailed description of any sequential process on a Web site, such as a sequence of Web pages that are visited. For example, you can find the point at which visitors leave a particular path of Web pages. The information is given in the form of conversion and drop-off rates. You can also use this information to discover how effectively your Web site is moving traffic through to a specific target page.

Types of Funnel Reports

Two types of funnel reports are available: Static Funnel reports and Interactive Funnel reports. Static Funnel reports are created during the ETL process, and cover the standard date ranges (the most recent one-day, seven-day, and thirty-day intervals).

Interactive Funnel reports are created by using the SAS Web Analytics Report Viewer, and cover the date range that you specify in the calendar. Interactive Funnel reports can be pre-defined or ad hoc reports.

Description of a Funnel Report

The Funnels

A sequence of pages or Uniform Resource Locators (URLs) define a funnel. A funnel definition can contain up to seven pages or URLs. A funnel report is produced from the funnel definition, and dates are not part of this definition. You can define a new funnel and save it so that you can use the funnel to create a report at a later date.

Because static funnels are created during the ETL process rather than in real time, static funnels are good to use if you want to process large amounts of data. Static funnels are created for specific time periods: the most recent one-day, seven-day, or thirty-day periods. To create a static funnel, select **`Yes`** from the **`Is this a static funnel?`** drop-down menu. If you create a static funnel, you can choose to run the report interactively by selecting the funnel from the **`Funnels`** drop-down menu.

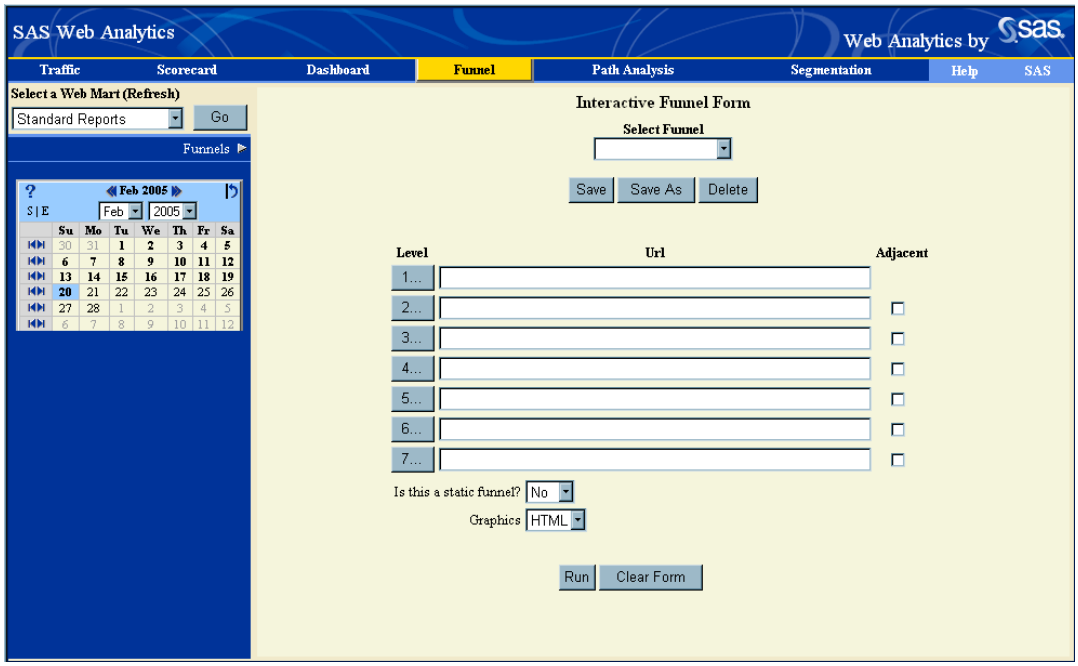
Pre-defined interactive funnels are similar to static funnels because the funnel definitions are saved. Pre-defined interactive funnels are created in real time, rather than during the ETL process. For interactive funnels, you must choose the dates of the funnel from the calendar.

Ad hoc interactive funnels are created for specific purposes. You choose the URLs, the **`Adjacent`** indicators, and the dates of the report from the calendar. Ad hoc interactive funnels run in real time. You do have the option, however, of creating a static funnel from an ad hoc funnel by selecting **`Yes`** from the **`Is this a static funnel?`** drop-down menu, and clicking **`Save`**. In this case, a report is produced for the standard date ranges of the most recent one-day, seven-day, and thirty-day intervals.

The Interactive Funnel Form and Report

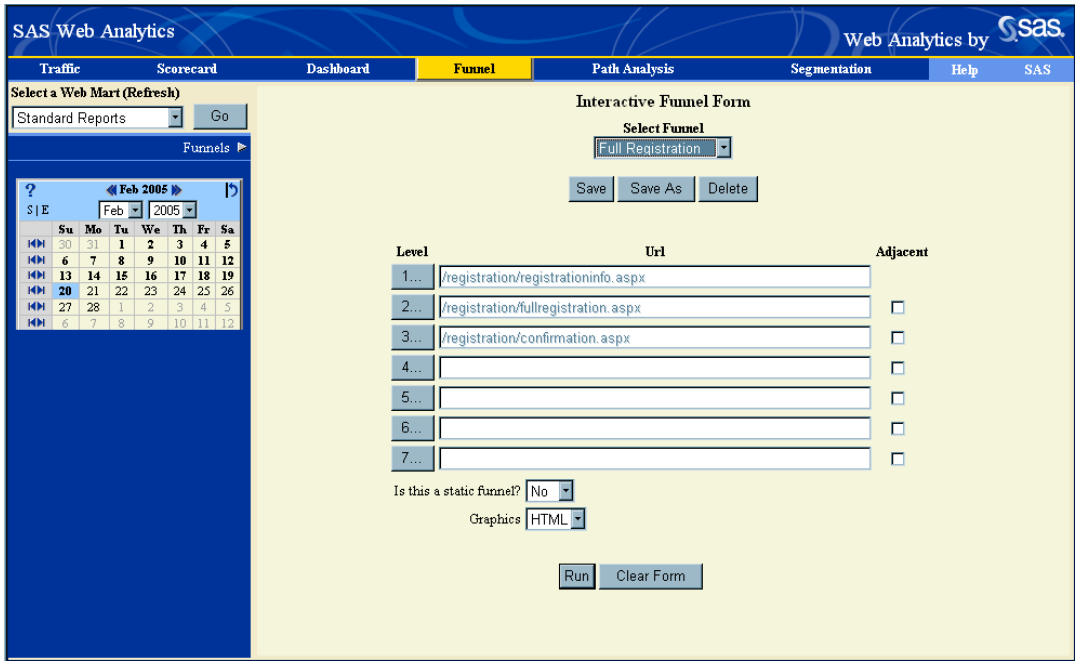
The following is an example of the Interactive Funnel Form.

Display 11.1 Example of the Interactive Funnel Form



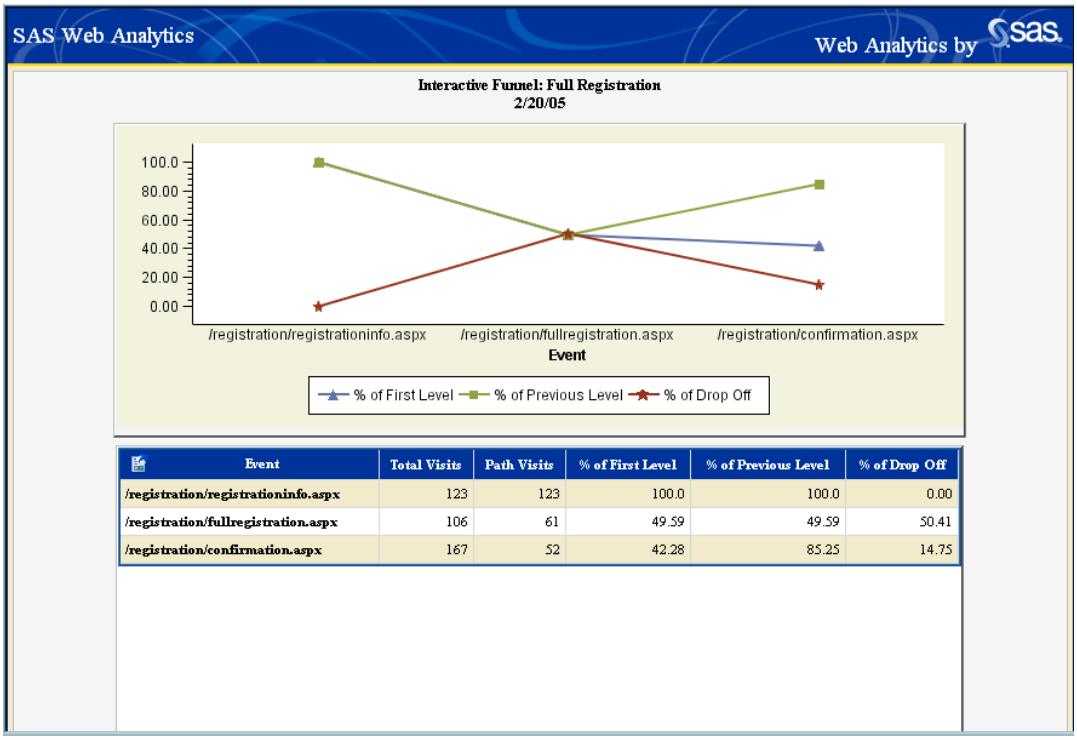
The following is an example of the Interactive Funnel Form, with **`Full Registration`** selected as the funnel. (**`Full Registration`** has been defined and saved previously.)

Display 11.2 Example of the Interactive Funnel Form with a Previously Defined Funnel Selected



The following is an example of the Interactive Funnel report that is produced when you click **Run** in the Interactive Funnel Form window.

Display 11.3 Example of the Interactive Funnel Report



Event	Total Visits	Path Visits	% of First Level	% of Previous Level	% of Drop Off
/registration/registrationinfo.aspx	123	123	100.0	100.0	0.00
/registration/fullregistration.aspx	106	61	49.59	49.59	50.41
/registration/confirmation.aspx	167	52	42.28	85.25	14.75

The following table describes the fields in the Interactive Funnel report.

Field	Description
Event	A class variable that specifies the URLs that you selected in the Interactive Funnel Form.
Total Visits	An analysis variable that specifies the total number of visits for each entry point.
Path Visits	An analysis variable that specifies the total number of visits for each path.
% of First Level	An analysis variable that specifies the percentage of first URL path visits.
% of Previous Level	An analysis variable that specifies the percentage of a previous URL's path visits.
% of Drop Off	An analysis variable that shows the drop-off rate of visits that do not continue from the previous level.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Calculating the % of First Level Variable

The % of First Level variable is calculated in the following way: % of first level = (path visits for the current URL / path visits for the first URL) * 100.

Calculating the % of Previous Level Variable

The % of Previous Level variable is calculated in the following way: % of previous level = (path visits for the current URL / path visits for the previous URL) * 100.

Calculating the % of Drop Off Variable

The % of Drop Off variable is calculated in the following way: % of drop off = (100 – the value of the % of Previous Level column for the level).

Comparing the Interactive Funnel Report with the Page Frequency Report

If you compare the tallies from the Interactive Funnel report with the tallies from the Page Frequency report, you might find that there are differences. The differences exist because these two reports have different purposes and use different data. The Interactive Funnel report is intended to show how many visits follow a specific path or chain of pages. The Page Frequency report shows frequencies of page requests, both successful and unsuccessful. Because a path must begin with a successful page request, all unsuccessful page requests prior to the first successful one are excluded from the Interactive Funnel data. No records are excluded from the Page Frequency data.

Display a Static Funnel Report

You can display a Static Funnel report in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu and click **Go**.
2. Select **Funnel** from the banner.
3. If you already created one or more static funnels and the %WAETL macro has run, then select the name of the static funnel from the **Funnels** drop-down menu in the left section of the page. If static funnels have not been created, the **Funnels** drop-down menu does not display.

   When you select a funnel, a one-day interval version of the static funnel report automatically displays.
4. To see results for other time intervals, select **Seven Day** or **Thirty Day** from the **Interval** drop-down menu.

Displaying Interactive Funnel Reports

Display a Pre-defined Interactive Funnel Report

You can display a pre-defined Interactive Funnel report in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu and click **Go**.
2. Select **Funnel** from the banner.
3. Select a funnel definition from the **Select Funnel** drop-down menu.

   Note: You can select a static funnel and change it if you want to see the results for a date range other than the standard one-day, seven-day, and thirty-day intervals. You can modify the funnel definition by following the instructions in "Display an Ad Hoc Interactive Funnel Report" on page 150. △
4. Select a date or date range for the report by using the calendar in the left section of the page. For information about how to use the calendar, see "Using the Calendar with Funnel and Interactive Path Analysis Reports" on page 37.
5. If you want the funnel definition to be created for the standard date ranges during the ETL process, select **Yes** from the **Is this a static funnel?** drop-down menu. Otherwise, select **No**.
6. Click **Run** to display the report.
7. Click **Save** or **Save As** if you modified the current funnel definition and want to be able to recall the definition as a pre-defined interactive funnel.

Display an Ad Hoc Interactive Funnel Report

You can display an ad hoc Interactive Funnel report in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu and click **Go**.
2. Select **Funnel** from the banner.
3. Select two or more URLs that you want to include in your report. You can select up to seven URLs. To select a URL, follow these steps:
   a. Click a button under **Level** to open a URL selection list.
   b. To limit the entries in the URL selection list, type a string in the text box and click **Filter**. For example, using /a in the text box limits the list to URLs that contain /a.
      - To cancel the effects of the filter, click **Clear**.
      - To close the URL selection list, click **Close**.
   c. Locate the URL you want to select and click the URL. The URL selection list automatically closes and your selection is displayed in the **URL** field.
4. If you want to require that the URL you selected immediately follow the previous URL, then select the **Adjacent** option.
5. Repeat steps 3 and 4 for each URL that you want to include in your report. You must select at least two URLs.
6. Select a date or date range by using the calendar in the left section of the page. For information about using the calendar, see "Using the Calendar with Funnel and Interactive Path Analysis Reports" on page 37.

7 Select **No** from the **Is this a static funnel?** drop-down menu to run the report in real time. Select **Yes** if you want to create a static funnel.

8 Click **Run** to display the report.

9 Click **Save** or **Save As** if you modified the current funnel definition and want to be able to recall the definition as a pre-defined interactive funnel.

Delete a Stored Funnel Definition

You can delete a stored funnel definition by following these steps:

1 From the **Select Funnel** drop-down menu, select the stored funnel definition that you want to delete.

2 Click **Delete** to delete the definition.

CHAPTER 12

Identifying a Sequence of Pages with Path Analysis Reports

Overview: Path Analysis

Path analysis helps you to identify the visitor navigation patterns of your Web site. Path analysis identifies the sequence of pages that are viewed by a unique visitor. Each page that is viewed is assigned a unique identifier. Based on the date/time stamp, the SAS Web Analytics Report Viewer extracts path information that shows how visitors navigated your site.

The Path Analysis reports show paths that originate within the Web site (entry paths), as well as from outside the Web site (referrer paths). Referrer paths can originate, for example, from sites such as Yahoo or Google.

Types of Path Analysis Reports

The following types of path analysis reports are available:

Report	Description
Interactive Path Analysis	Traces a path from any starting page, to any ending page, or between any starting and ending pages.
Entry Paths	Displays a list of the most popular points of entry into the Web site.
Referrer Entry Paths	Displays a list of referrers that sent the most traffic to your Web site.

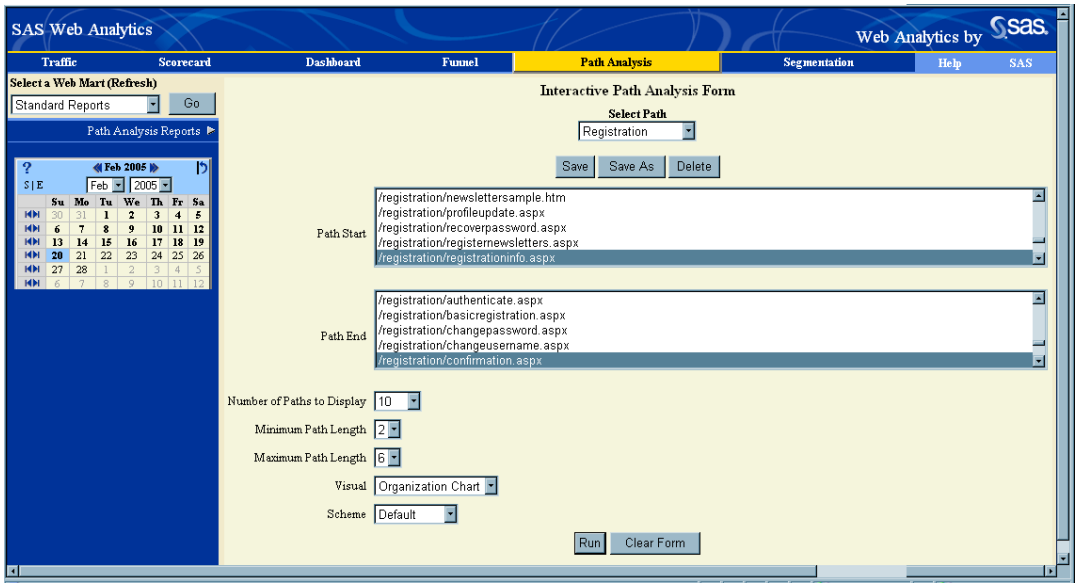
Interactive Path Analysis Report

Description of the Interactive Path Analysis Report

The Interactive Path Analysis report generates navigational information about the order in which pages or URIs occur in visits whose visitors navigate the Web site. The report traces a path from any starting page or to any ending page, or between any starting and ending pages. You can determine frequent navigational sequences and subsequences with interactive path analysis. Interactive path analysis provides information about conversion to a final page or URI, based on a sequence that ends with the final page or URI.

To create an Interactive Path Analysis report, you enter information in an entry form and then run the report. The following is an example of the Interactive Path Analysis Form with **`Registration`** chosen from the **`Select Path`** drop-down menu.

Display 12.1 Example of the Interactive Path Analysis Form

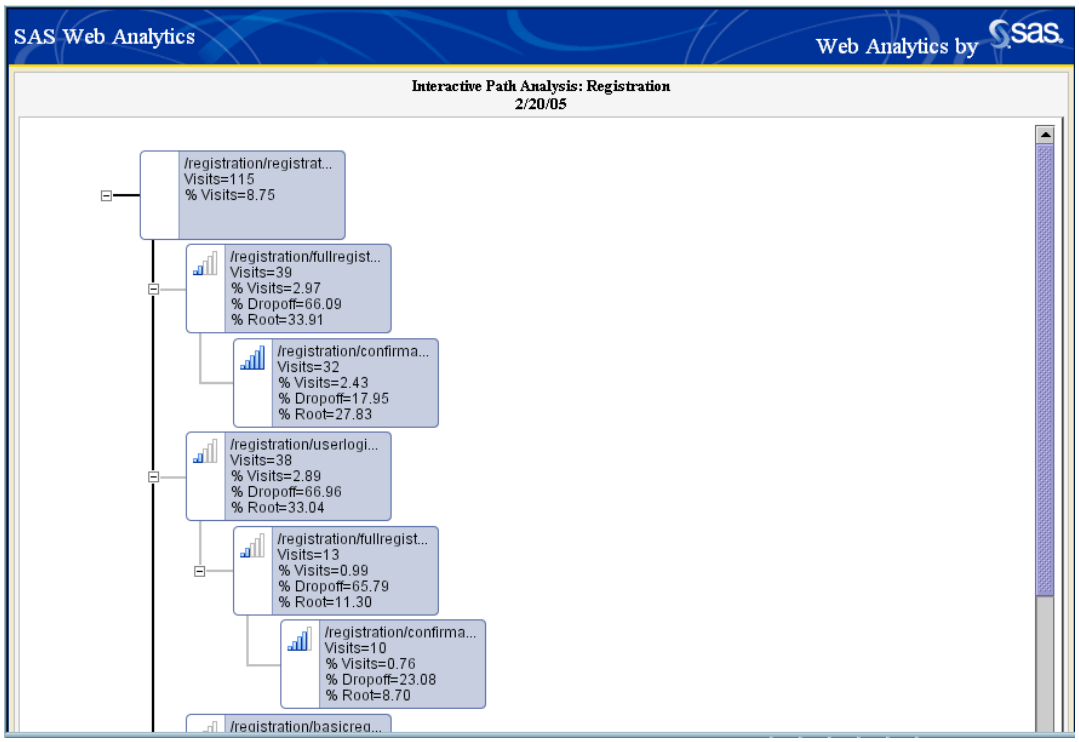


The following table describes the fields in the Interactive Path Analysis Form.

Field	Description
Select Path	Provides a drop-down menu of saved path requests.
Path Start	Specifies the beginning path URIs for your analysis.
Path End	Specifies the ending path URIs for your analysis.
Number of Paths to Display	Specifies the number of paths you want to display.
Minimum Path Length	Specifies the minimum length for a path.
Maximum Path Length	Specifies the maximum length for a path.
Visual	Provides a drop-down menu for designating your preference of visual presentation.
Scheme	Provides a drop-down menu from which you can choose a color scheme for your output.

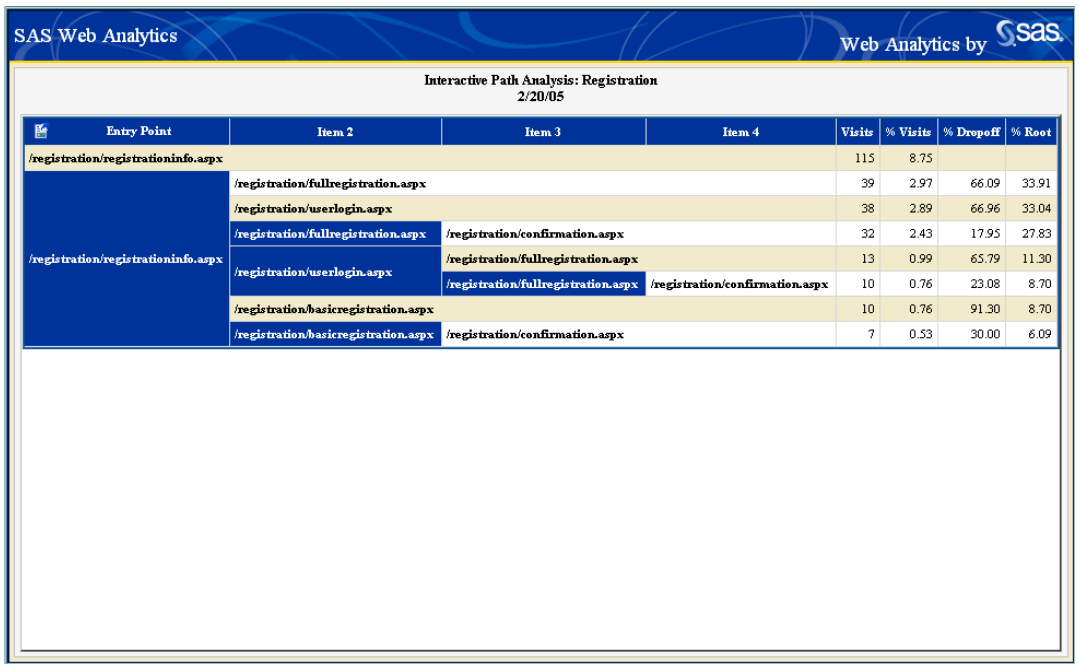
The following is an example of output in organization chart presentation for an Interactive Path Analysis report.

Display 12.2 Example of an Interactive Path Analysis Report in Organization Chart Format



The following is an example of the same report in table presentation.

Display 12.3 Example of an Interactive Path Analysis Report in Table Format



Entry Point	Item 2	Item 3	Item 4	Visits	% Visits	% Dropoff	% Root
/registration/registrationinfo.aspx				115	8.75		
/registration/registrationinfo.aspx	/registration/fullregistration.aspx			39	2.97	66.09	33.91
	/registration/userlogin.aspx			38	2.89	66.96	33.04
	/registration/fullregistration.aspx	/registration/confirmation.aspx		32	2.43	17.95	27.83
	/registration/userlogin.aspx	/registration/fullregistration.aspx		13	0.99	65.79	11.30
		/registration/fullregistration.aspx	/registration/confirmation.aspx	10	0.76	23.08	8.70
	/registration/basicregistration.aspx			10	0.76	91.30	8.70
	/registration/basicregistration.aspx	/registration/confirmation.aspx		7	0.53	30.00	6.09

The following table describes the fields in the table presentation of the Interactive Path Analysis report.

Variable	Description
Entry Point	A class variable that represents the first page or URI in a path.
Item 2–*n*	A class variable that represents the second through the *n*th page or URI (Uniform Resource Identifier) in a path.
Visits	An analysis variable that specifies the number of visits that traversed the path.
%Visits	An analysis variable that specifies the percentage of visits that traversed the path.
%Dropoff	An analysis variable that specifies the percentage of visits that traversed all the previous nodes in the path (Entry Point through Item *n*-1) but did not continue to the current node (Item *n*).
%Root	An analysis variable that specifies the percentage of visits for the current node (Item *n*) that had an Entry Point of Item 1.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

Create an Interactive Path Analysis Report

The creation of the Interactive Path Analysis report is based on the field information that you enter in the Interactive Path Analysis Form. You must know your Web site's data well in order to select meaningful entries in the form.

The following steps describe how to create an Interactive Path Analysis report.

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **`Select a Web Mart (Refresh)`** drop-down menu.
2. Click **`Go`** to access the Web mart.
3. Click the **`Path Analysis`** link in the banner.
4. From the **`Path Analysis Reports`** drop-down menu in the left section of the page, select **`Interactive Path Analysis`**.
5. From the calendar, select the date or dates for your report by clicking the dates that are shown in bold. (These dates are the valid dates for your Web mart.) For information about using the calendar, see "Using the Calendar with Funnel and Interactive Path Analysis Reports" on page 37.
6. Select one or more start path URIs or end path URIs from the **`Path Start`** and **`Path End`** list boxes. You must specify at least one start path URI or one end path URI.
7. From the **`Number of Paths to Display`** drop-down menu, select the number of most frequent sequences (paths) to display in the output.

8 In the **Minimum Path Length** drop-down menu, select the minimum page sequence length to include in the path analysis.
9 In the **Maximum Path Length** drop-down menu, select the maximum page sequence length to include in the path analysis.
10 From the **Visual** drop-down menu, select a presentation type (table, organization chart, constellation chart, tree view) for your report.
11 From the **Scheme** field, select a color scheme for your output.
12 Click **Run** to create the Interactive Path Analysis report for the parameters that you have specified.

Select Valid Dates for the Interactive Path Analysis Report

In the calendar in the left section of the page, the dates that are valid for your report are shown in bold. These dates correspond to the dates that are listed in the Web Mart Status report. To select a date, click the date with your left mouse button. To select a date range, click the beginning or ending date for your report. Then click a second date to complete the range. The dates that you select appear in the title of the report. For more information about using the calendar, see "Using the Calendar with Funnel and Interactive Path Analysis Reports" on page 37.

Save an Interactive Path Analysis Report Definition

You can save the report definition of an Interactive Path Analysis report by clicking **Save** or **Save As** in the Interactive Path Analysis Form. If you save a report definition, the interactive path analysis information is saved. You can then run the report by selecting an item from the **Select Path** drop-down menu, and then selecting the dates for which you want to create the report.

Delete a Path Definition

You can delete a path definition by following these steps:
1 From the **Select Path** drop-down menu in the Interactive Path Analysis Form, select the path definition that you want to delete.
2 Click **Delete** to delete the path definition.

What to Do If Your Report Returns No Data

If the path analysis returns no paths found, make one or more of the following changes to the selections for your report:
- Increase the number of dates selected. It is possible the starting and/or ending pages were not accessed within visits during the dates selected.
- Reduce the value in the **Minimum Path Length** field.
- Reduce the value in the **Maximum Path Length** field.
- Select only a starting or ending path, but not both.

Create an Entry Paths or a Referrer Entry Paths Report

You can create an Entry Paths or a Referrer Entry Paths report by following these steps:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu.
2. Click **Go** to access the Web mart.
3. Click the **Path Analysis** link in the banner.
4. From the **Path Analysis Reports** drop-down menu in the left section of the page, select **Entry Paths** or **Referrer Entry Paths**.
5. Select a time interval (one day, seven days, or thirty days) from the **Interval** drop-down menu in the left section of the page.
6. Select **HTML** or **JAVA** as the format from the **Graphics** drop-down menu.
7. Select a type of visual presentation (table, organization chart, constellation chart, tree view) from the **Visual** drop-down menu.
8. Select the type of layout you want to view from the **Layout** drop-down menu.
9. Select a color scheme for your report from the **Scheme** drop-down menu.
10. If you selected an HTML format for your report, then click the icon in the Entry Point column of the Entry Paths report or the Referrer column of the Referrer Entry Paths report to display the report. (If you have already clicked the icon, and then you choose another type of presentation, the report is automatically displayed in the presentation you have chosen.)

    If you selected a Java format for your report, then click the icon in the Path Detail column. (If you have already clicked the icon, and then you choose another type of presentation, the report is automatically displayed in the presentation you have chosen.)

Entry Paths Report

Description of the Entry Paths Report

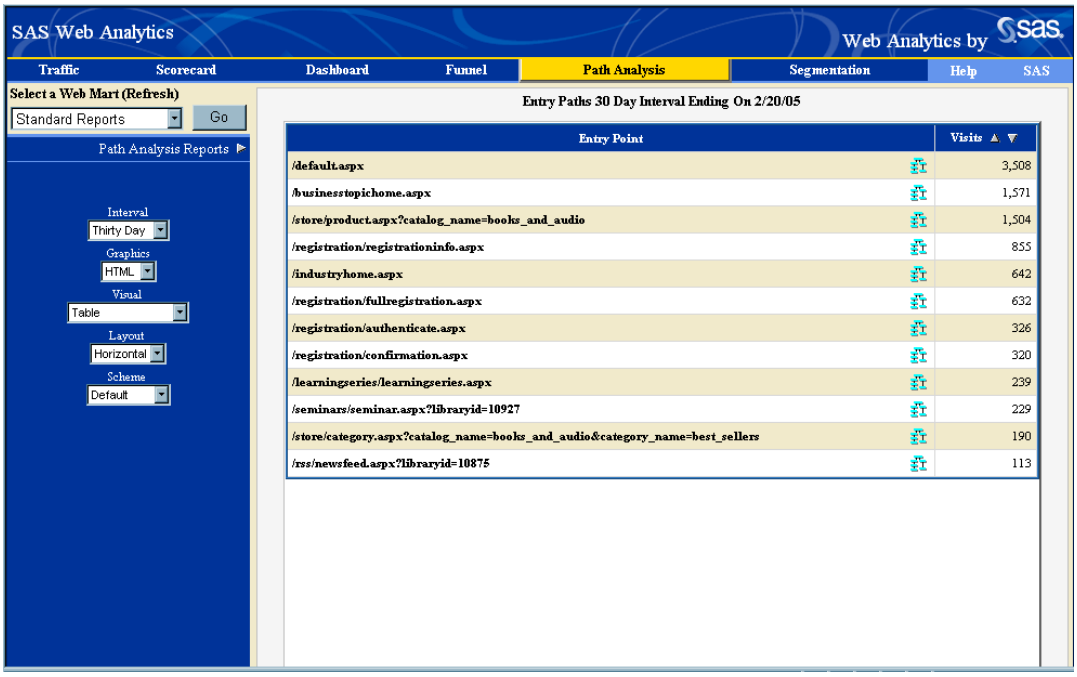
The Entry Paths report displays a list of the most popular points of entry into the Web site. This report shows the detailed navigation patterns that visitors follow after they reach the site. Understanding these navigation patterns can help you interpret the user experience when visiting your Web site by identifying the following:

- areas that draw interest
- frequent site exit paths (paths that lead to site abandonment)
- paths to key return on investment (ROI) events
- hottest links from any entry point

Example of an Entry Paths Report

The following is an example of the page that appears when you first access the Entry Paths report.

Display 12.4 Example of the Entry Page of an Entry Paths Report



The following table describes the variables in the entry page of the Entry Paths report.

Variable	Description
Entry Point	A class variable that specifies the address in the site that the visitor enters.
Visits	An analysis variable that specifies the number of visits that traversed the entry point.

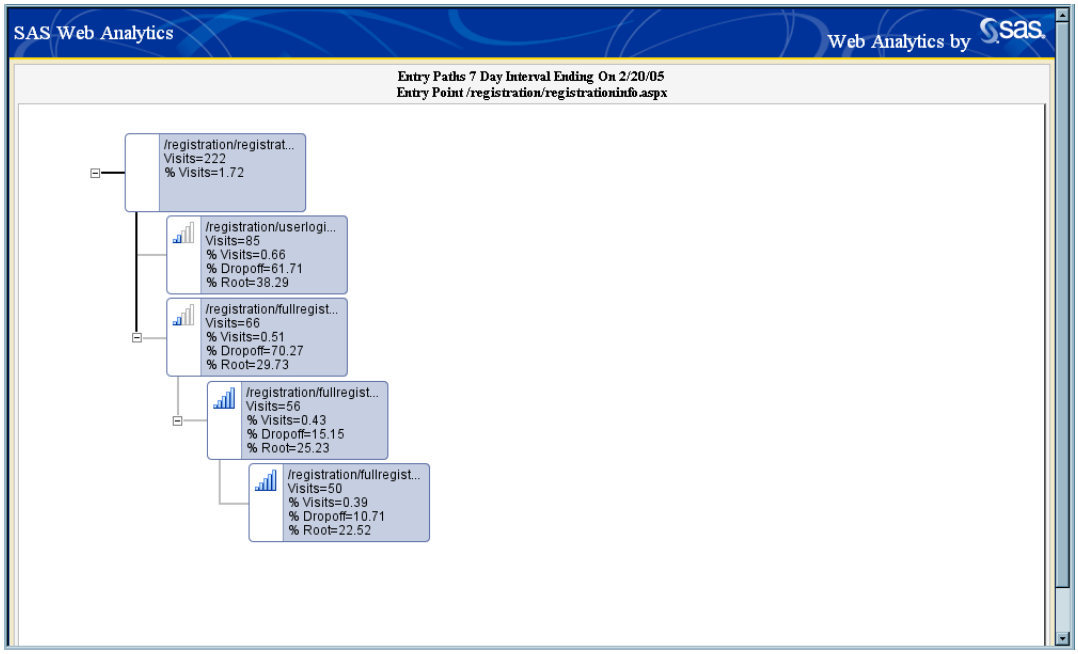
Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

You can choose a visual presentation for your report by selecting an option from the **`Visual`** drop-down menu. You can view your report as a table, an organization chart, a constellation chart, or a tree view. (For more information about these options, see “Selecting a Visual Presentation for Your Entry Paths Reports” on page 163.)

After you select a presentation, click the icon in the Entry Point column in the Entry Paths report to display your report.

The following example shows a report in an organization chart presentation. A **`7 Day`** interval was selected from the **`Interval`** drop-down menu. In this report, you can view a succession of paths that were requested in one visit.

Display 12.5 Example of an Organization Chart Presentation of the Entry Paths Report



Referrer Entry Paths Report

Description of the Referrer Entry Paths Report

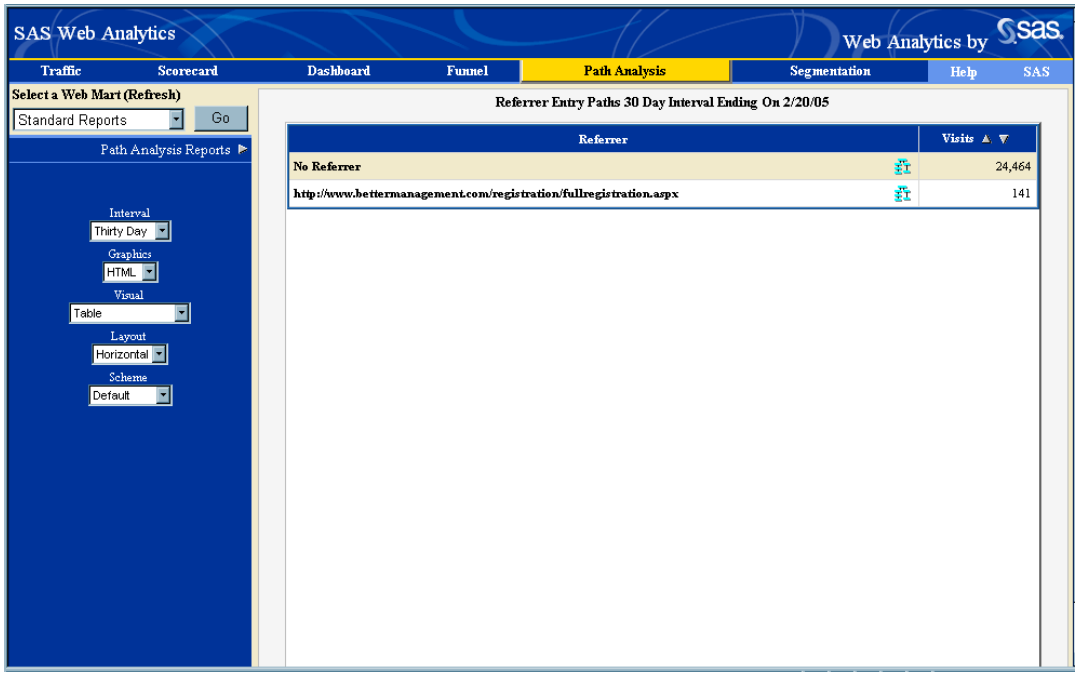
The Referrer Entry Paths report displays a list of referrers that sent the most traffic to your Web site. The report shows the detailed navigation patterns that visitors follow after they reach the site from different referring agents. Understanding these navigational patterns can help you interpret the user experience when visiting your Web site by identifying the following from each referrer:

- areas that draw interest
- frequent site exit paths (paths that lead to site abandonment)
- paths to key return on investment (ROI) events
- the location to which affiliate programs are sending visitors
- the affiliate programs that are performing well or poorly
- the banner advertisements that are performing well or poorly

Example of a Referrer Entry Paths Report

The following is an example of the page that appears when you first access the Referrer Entry Paths report.

Display 12.6 Example of the Entry Page of a Referrer Entry Paths Report



The following table describes the variables in the entry page of the Referrer Entry Paths report.

Variable	Description
Referrer	A class variable that identifies the domain from which the visits originated. The domain is a series of alphanumeric strings that are separated by periods (for example, www.sas.com). The domain is an address of a computer network connection and identifies the owner of the address.
Visits	An analysis variable that specifies the number of visits that traversed the entry point.

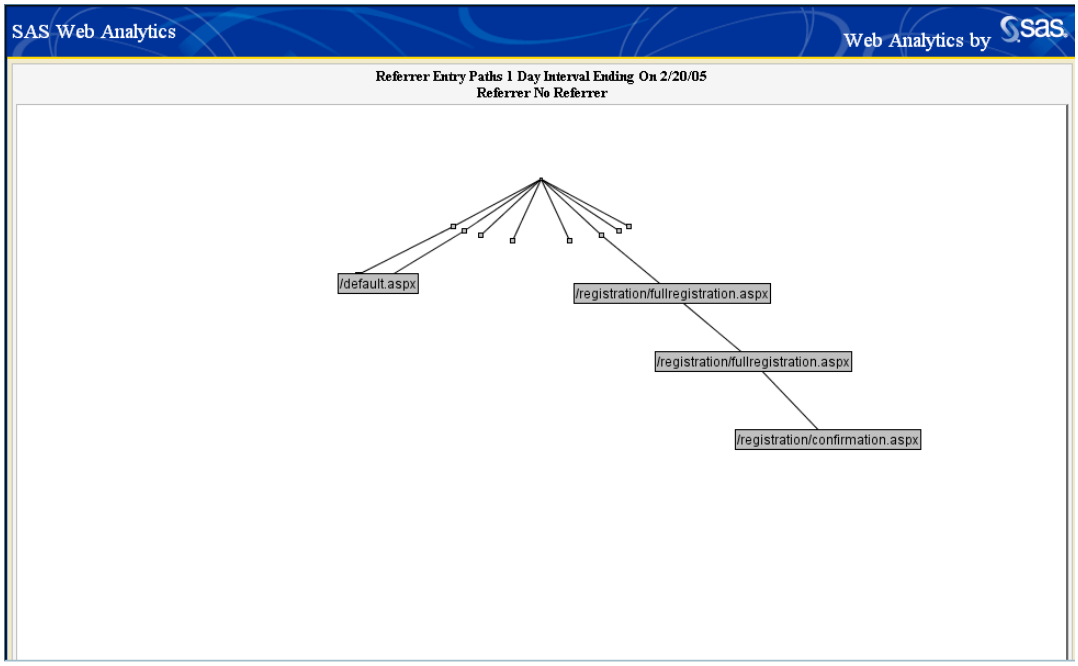
Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

You can choose a visual presentation for your report by selecting an option from the **`Visual`** drop-down menu. You can view your report as a table, an organization chart, a constellation chart, or a tree view. (For more information about these options, see "Selecting a Visual Presentation for Your Entry Paths Reports" on page 163.)

After you select a presentation, click the icon in the Referrer column of the Referrer Entry Paths report to display your report.

The following example shows a report in a tree view presentation.

Display 12.7 Example of a Tree View Presentation of the Referrer Entry Paths Report



Selecting a Visual Presentation for Your Entry Paths Reports

Types of Presentations

You can view your Entry Paths and Referrer Entry Paths reports in one of the following presentations:

- table
- organization chart
- constellation chart
- tree view

After you select a Web mart and an Entry Paths or a Referrer Entry Paths report from the **`Path Analysis Reports`** drop-down menu in the left section of the page, you can select how you want to present your report.

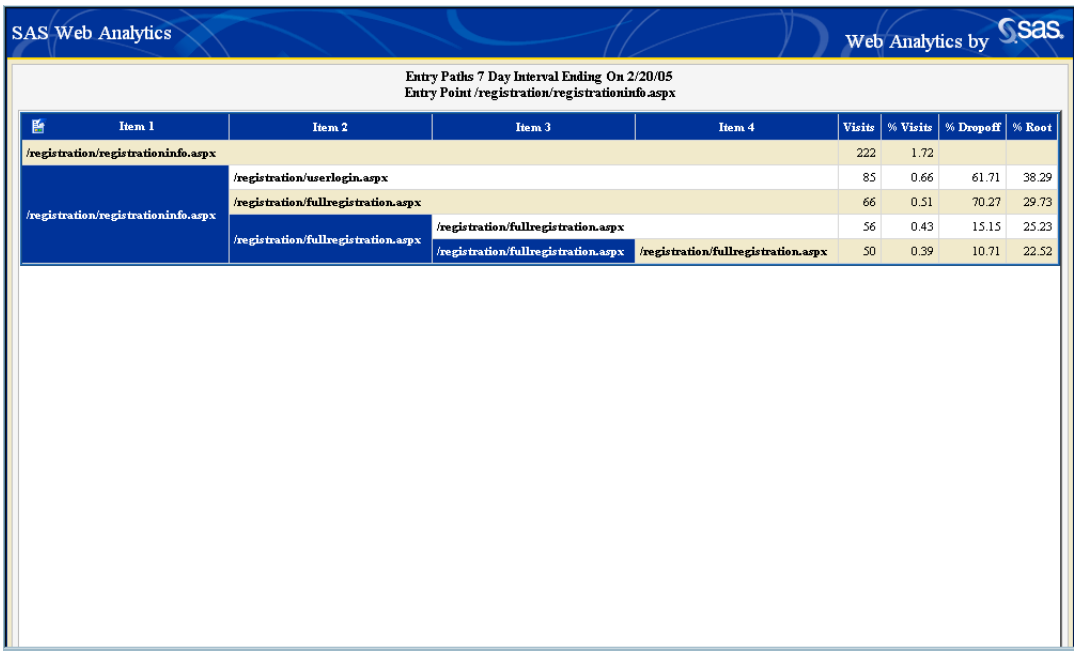
Select a presentation from the **`Visual`** drop-down menu. Then click the icon in the Entry Point column of the Entry Paths report or the Referrer column of the Referrer Entry Paths report to display the type of report that you have selected.

Select the Report Table

You can view a tabular presentation of your report by selecting **`Table`** from the **`Visual`** drop-down menu, and then clicking the icon in the Entry Point column of the Entry Paths Report or the Referrer column in the Referrer Entry Paths report.

The following is an example of the Entry Paths report presented as a table.

Display 12.8 Example of the Entry Paths Report in Table Presentation



The following table describes the variables in the report table for the Entry Paths report. (Note that you must use the bottom scrollbar to view all of the variables in the report.)

Variable	Description
Item 1–*n*	A class variable that represents the page or URI (Uniform Resource Identifier) that specifies the succession of paths that were requested in one visit.
Visits	An analysis variable that specifies the number of visits that traversed the entry point.
%Visits	An analysis variable that specifies the percentage of visits that traversed the entry point (Item 1, Item 2, and so on).
%Dropoff	An analysis variable that specifies the percentage of visits that traversed all the previous nodes in the path (Item 1 through Item *n*-1) but did not continue to the current node (Item *n*).
%Root	An analysis variable that specifies the percentage of visists for the current node (Item *n*) that had an Entry Point of Item 1.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

The following is an example of the Referrer Entry Paths report presented as a table.

Display 12.9 Example of a Referrer Entry Paths Report

The following table describes the variables in the report table for the Referrer Entry Paths report.

Variable	Description
Item 1–*n*	A class variable that represents the page or URI (Uniform Resource Identifier) that specifies the succession of paths that were requested in one visit.
Visits	An analysis variable that specifies the number of visits that traversed the path.
%Visits	An analysis variable that specifies the percentage of visits that traversed the path (Item 1, Item 2, and so on).
%Dropoff	An analysis variable that specifies the percentage of visits that traversed all the previous nodes in the path (Item 1 through Item *n*-1) but did not continue to the current node (Item *n*).
%Root	An analysis variable that specifies the percentage of visits for the current node (Item *n*) that had an Entry Point of Item 1.

Note: A class variable is a character or numeric variable that is used to group (or classify) data. An analysis variable is a numeric variable that is summed as a column in the report. △

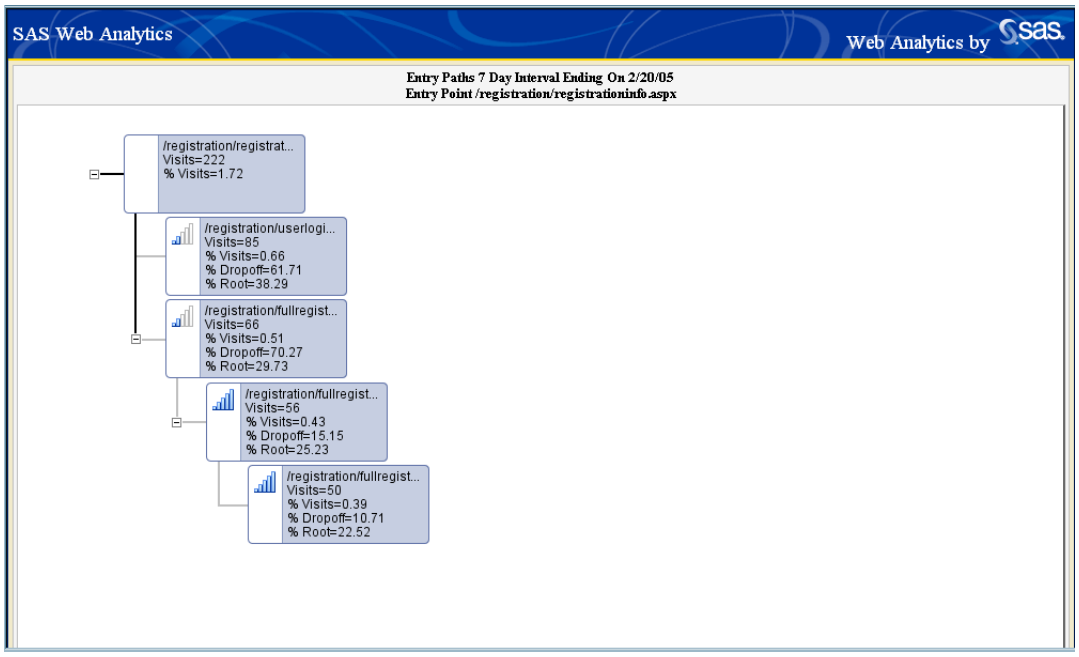
Select the Organization Chart

You can view the organization chart for your reports by selecting **Organization Chart** from the **Visual** drop-down menu, and then clicking the icon in the Entry Point column of the Entry Paths report or the Referrer column of the Referrer Entry Paths report. The chart displays a succession of the most recent paths for the selected interval.

The organization chart displays the navigational paths in a horizontal form. These paths are associated with the starting and/or ending pages that are specified in the path analysis.

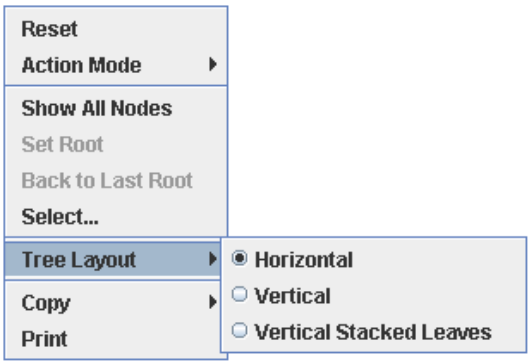
The following is an example of an Entry Paths report presented as an organization chart.

Display 12.10 Example of an Organization Chart Presentation



To change the layout of the organization chart, do the following:

1 Click the right mouse button anywhere in the chart window to access a pop-up menu, and select **Tree Layout**, as shown below:



2 Select one of the following orientations:

- **Horizontal**
- **Vertical**
- **Vertical Stacked Leaves**

You can expand or contract the organization chart by clicking the plus (+) and minus (-) signs that are located at the nodes. If you right-click and select **Show All Nodes** from the pop-up menu, then the organization chart expands to show all nodes. If you select **Reset**, all of the nodes are expanded, and the organization chart is centered on the page.

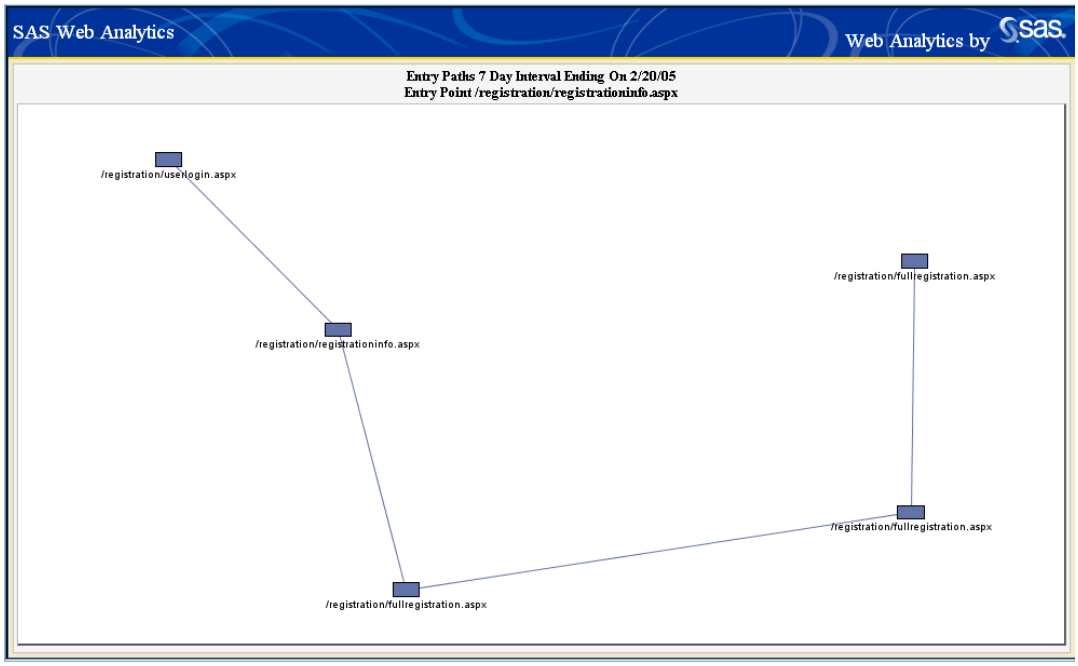
Select the Constellation Chart

You can view a constellation chart for your reports by selecting **Constellation Chart** from the **Visual** drop-down menu, and then clicking the icon in the Entry Point column of the Entry Paths report or the Referrer column of the Referrer Entry Paths report.

The Constellation chart is an applet (a type of Java application that runs in a Web browser) that is part of the SAS Web Analytics software. It provides a graphical view of Web site traffic. Each node in the chart corresponds to a distinct page (URL).

The following is an example of the Entry Paths report presented as a constellation chart.

Display 12.11 Example of a Constellation Chart for an Entry Paths Report

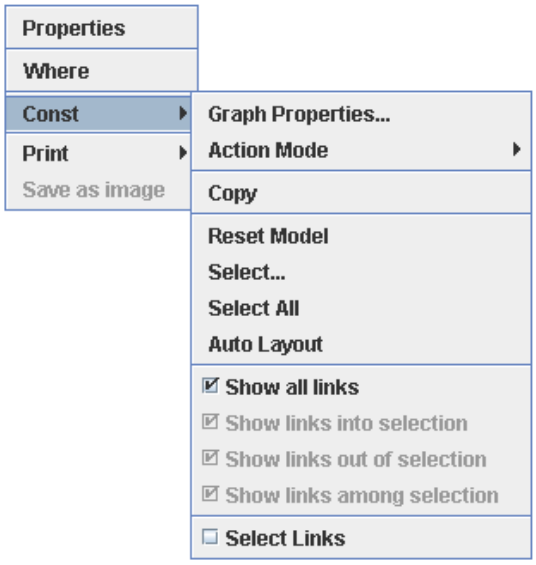


If you move your mouse pointer over the boxes (nodes) in the constellation chart, then Visits, %Visits, %Dropoff and %Root are displayed for the node.

Selecting Options in a Constellation Chart

Access the Constellation Menu Options

You can right-click anywhere in the constellation chart to access a pop-up menu, and then select **Const**, as shown below.



The following options for the constellation chart are available. Note that any of these optional customizations are temporary and apply only to your current display.

Option	Description
Graph Properties	Enables you to access a menu and select **Graph**, **Nodes**, and **Link** tabs.
Action Mode	Enables you to select options for manipulating the constellation chart.
Copy	Copies the chart to the clipboard.
Reset Model	Resets the chart to its original state.
Select	Opens the Selection Dialog box from which you can use a Where clause to select specific nodes.
Select All	Selects all of the nodes in the constellation.
Auto Layout	Recreates the constellation layout based on the current node positions. The graph layout algorithm uses the current node positions instead of the initial node positions.
Show all links	Displays all of the links between nodes. All links are displayed by default.
Show links into selection	Displays only the links into selected nodes.
Show links out of selection	Displays only the links out of selected nodes.

Option	Description
Show links among selection	Displays links both into and out of selected nodes.
Select Links	Enables you to select individual links.

Note: If **Show all links** is selected, then **Show links into selection**, **Show links out of selection**, and **Show links among selection** will be dimmed. △

Changing the Appearance of Your Chart

Use the **Const** menu to modify the appearance of your chart.
To access this menu, do the following:

1. Right-click in a constellation chart to access the **Const** (Constellation) pop-up menu.
2. Select **Graph Properties** from the **Const** menu to open the Constellation Properties dialog box.

The Constellation Properties dialog box contains the following tabs:

- **Graph**
- **Nodes**
- **Links**

Change the Color of Your Chart

Use the **Graph** tab to select a color scheme for the plot. To select a color scheme, click the arrow next to the **Scheme** drop-down menu in the **Colors** section of the tab. You can modify the colors in the scheme that you choose by clicking **Edit Scheme** and making additional selections.

Select the **Show chart tips** option to enable chart tips to be displayed when you move your cursor over a plot symbol in the chart.

Define a Node

Use the **Nodes** tab to define a node. In the **Color**, **Size**, and **Shape** sections, you can define the node based on a fixed value or values that are mapped from data values.

Select the **Show Node Labels** option to display labels on your chart.

Define a Link

Use the **Links** tab to define a link in your chart. In the **Color** and **Width** sections, you can define the link based on a fixed value or values that are mapped from data values.

In the **Threshold** section, select the **Scale Link Values** option to set the link threshold based on percentages. Move the slider to the left to show all links, or move the slider to the right to show only the links that have the highest count.

Selecting the Tree View

The Tree View Structure

The tree view is created by an applet that displays an interactive, hierarchical tree structure. The tree structure is composed of a root node in the center and child nodes placed in circles of increasing radius around it. The focal point of the tree structure is at the center of the viewing area. Nodes near the focal point are magnified and shown in more detail, while the nodes that are located near the edge of the display window are compressed. You can change the focal point and navigate the tree structure by clicking different nodes.

A pop-up menu provides several functions that help control the navigation and display of the tree view. Right-click to access the pop-up menu. The mouse and keyboard are also available for navigation.

The tree view enables you to do the following:

- search for specific nodes in the tree structure
- select, display, and hide subtrees
- quickly return to the root level view
- view data tips that are associated with a tree node

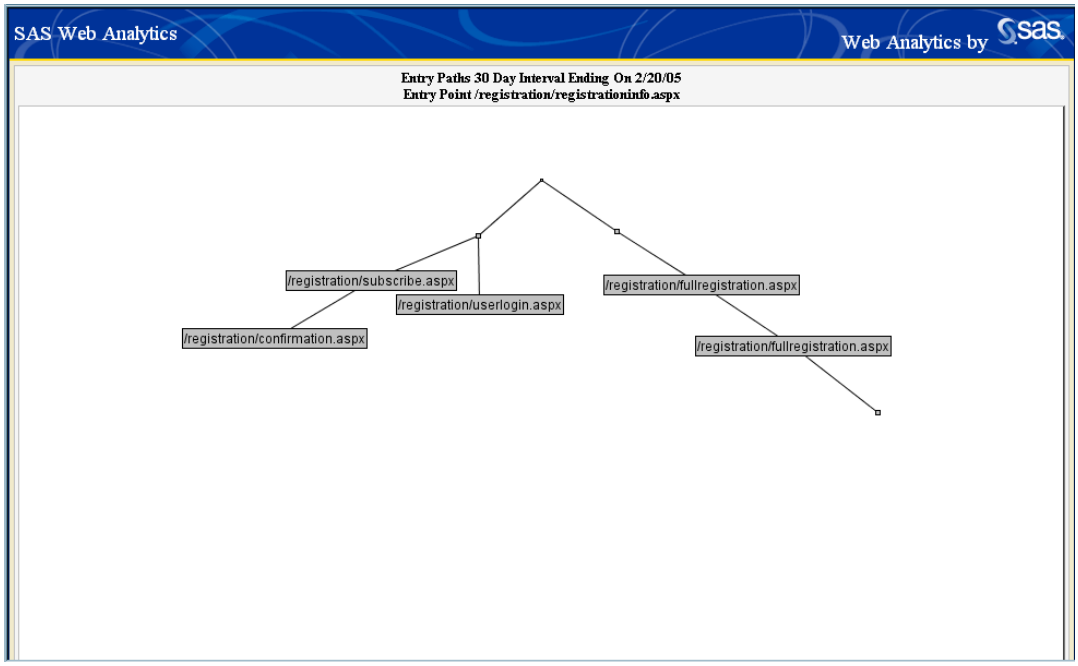
Access the Tree View

You can see a tree view of your Entry Paths and Referrer Entry Paths reports by selecting **`Tree View`** from the **`Visual`** drop-down menu, and then clicking the icon in the Entry Point column of the Entry Paths report or the Referrer column of the Referrer Entry Paths report.

To see a tree view in an Interactive Path Analysis report, select **`Tree View`** from the **`Visual`** drop-down menu, and click **`Run`** after you have selected options for the report fields.

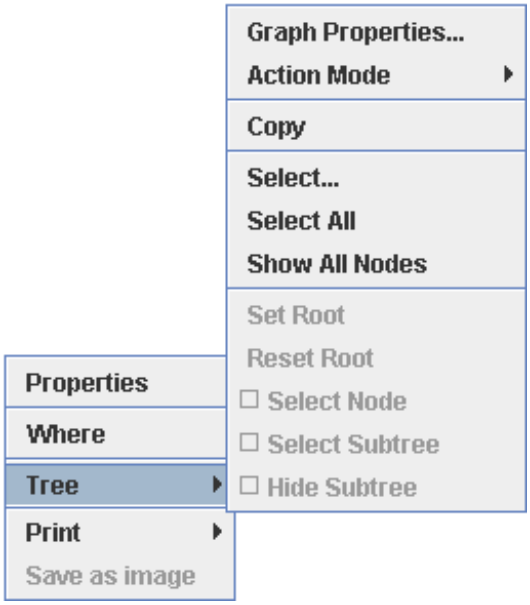
The following is an example of a tree view for an Entry Paths report for a thirty day interval.

Display 12.12 Example of a Tree View for an Entry Paths Report



Accessing the Tree View Menu Options

You can right click your mouse anywhere in the tree view to access a pop-up menu, and then select **`Tree`**, as shown below.



The following are options for the tree view display:

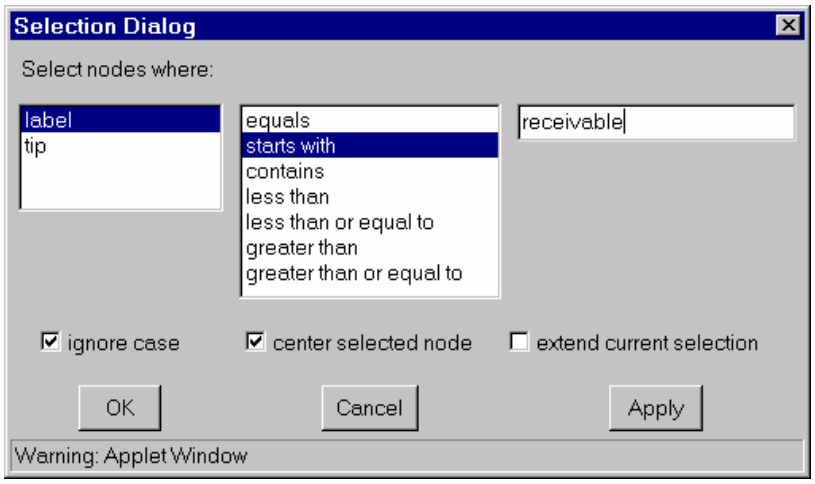
Option	Description
Graph Properties	Enables you to access the tree view Properties dialog box and change the color scheme of your graph.
Action Mode	Enables you to select options for manipulating your graph.
Copy	Copies the graph to the clipboard.
Select	Opens the Selection Dialog box, from which you can select nodes based on node label and tip.
Select All	Highlights the nodes and enables you to copy the nodes to the clipboard.
Show All Nodes	Displays all of the nodes in the graph.

Search for Specific Nodes in the Tree Structure

The tree view structure can be navigated by clicking one node at a time. This enables you to access the focal point for the node and any subtree nodes. However, depending on the complexity of the tree structure, this approach might be time consuming. An alternative approach is to choose the **Select** option from the **Tree** drop-down menu.

The **Select** option enables you to search the tree structure for specific nodes. When you choose the **Select** option from the menu, the Selection Dialog box opens:

Display 12.13 The Selection Dialog Box



In the Selection Dialog box you can choose to search on either a node label or on a data tip that is associated with the node. You can then choose a search criteria (for example, **starts with** or **contains**) and specify a search string. You can also select the following search options to further customize your search:

ignore case ignores the case of the text that is being searched.

center selected node changes the display of the tree structure to focus on the node that is found and selected with the Selection Dialog box search.

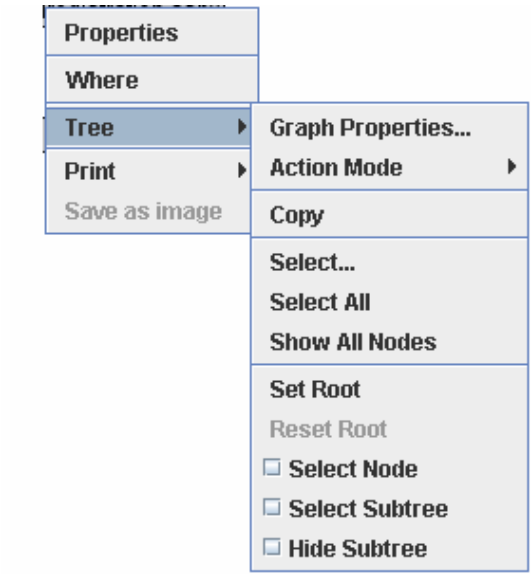
extend current selection	maintains any currently selected nodes while simultaneously selecting the node that is being searched. The tree structure display is not changed.

After making your selections, select one of the following options:

- Select **Apply** to execute a search and keep the Selection Dialog box open.
- Select **OK** to execute a search and close the Selection Dialog box.
- Select **Cancel** to skip the search and close the Selection Dialog box.

Select, Display, and Hide Nodes and Subtrees

A tree structure consists of a hierarchical arrangement of nodes. A tree view contains a single, top-level node with subtree levels branching out of it. The tree structure is determined by the author of the tree view applet. You can control the display of the tree structure and hierarchy from the following menu, which you access by right-clicking a node:



When you select the **Select Node** option, the node is selected and outlined.

When you select the **Select Subtree** option, the node and its subtrees are selected and outlined.

When you select the **Hide Subtree** option, the subtree is hidden from view.

Note: To quickly display all hidden subtrees and nodes, select **Show All Nodes** from the pop-up menu. △

Return to the Root Level View

You can navigate the tree view hierarchy by selecting the various nodes at both the root and subtree levels of the tree structure. To quickly return to the root level of the tree structure, select **Tree ▶ Show All Nodes** from the menu.

Rotate the Tree Structure

To rotate (pan) the tree structure and display subtree nodes, do the following:

1 Position your cursor over the tree.

2 Click and hold the left mouse button.

3 Rotate the tree by moving the mouse.

View Data Tips That Are Associated with a Tree Node

Data tips are text boxes that appear in the tree view when you pass the mouse pointer over a tree node. The tree view has no default display of data tips, but it can display application-defined data tips. The Data Tips option must be explicitly defined in the HTML file that drives the tree view applet. If Data Tips is enabled for your tree structure, then you can display detailed information about selected nodes.

To display a data tip about a tree node, position your mouse pointer over the node. You do not need to click the node. Information about the node is displayed in a floating data tip.

Launch a Web Page

One of the features of the tree view applet is the ability to launch a Web page from a specific node in the tree structure. This option must be explicitly defined in the applet when it is created. A node in the tree view can be labeled with any text. If a tree view node is set up to launch a Web page, then the pop-up menu will provide this option. Otherwise, this function is not available.

Selecting Other Options from a Menu

You can right-click anywhere in the tree view to access the following pop-up menu:

When you select **Properties** from the menu, the Properties dialog box opens. Select the **Graph** tab to change the color scheme of your output and to choose whether to show chart tips. For more information about using the **Graph** tab, see “Change the Color Scheme” on page 50. For information about chart tips, see “Show Chart Tips” on page 51.

When you select **Where** from the menu, the Where clause builder dialog box opens. For information about the Where clause builder, see “Subset Data by Using the Where Clause Builder” on page 55.

When you select **Print** from the menu, you have the option of printing your report. For information about the Print option, see “Print a Graph and Table” on page 66.

CHAPTER

13

Using a Segmentation Report

Overview: Segmentation

You can use a segmentation report for decision support. A segmentation report creates a set of rules which help predict which visitors will return to the Web site. You can then target your Web site to those visitors or update your Web site to attract less-frequent visitors.

Description of Segmentation

Segmentation analysis categorizes or classifies visitors by using decision tree analytical techniques. The analysis defines a set of visitor groups for visitors who have common characteristics. For more information about decision tree analysis, see the ARBORETUM procedure.

One of the key business initiatives for segmentation is the ability to personalize the Web experience in real time by using the segment rules that are provided and the corresponding probabilities. A segment definition with a large expected response rate (for example, > .7) indicates a behavior that can be captured in real time to identify visitors that have a higher likelihood of returning to the site given current and past behaviors. This likelihood might indicate the need for a banner, pop-up, or real-time enticement to motivate people to return, thus producing high-value results and return on investment (ROI).

Types of Segmentation Reports

Two types of segmentation reports are available:

- Repeat Visitor - Totals
- Repeat Visitor - Averages

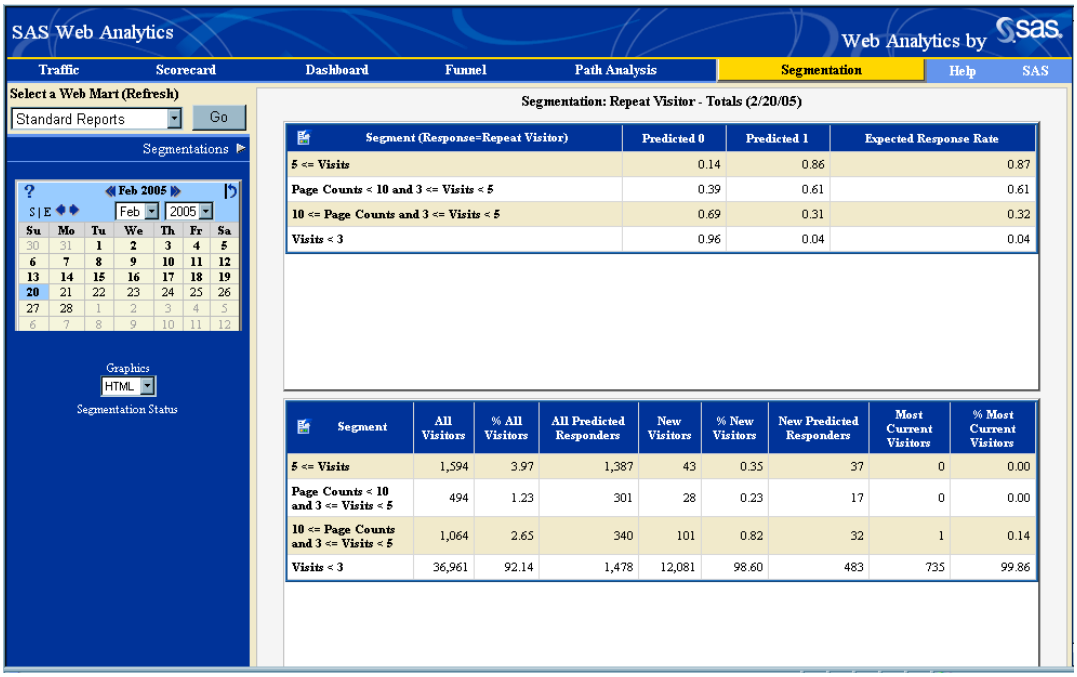
Each report consists of two tables. The table at the top of the report is the Segment Definition table, which predicts actions that are taken by visitors. The table at the bottom of the report is the Segment Assignment table, which applies segmentation rules to all of the available data.

The target (response) variable is the same for both types of reports, but the metrics that are used as input to the model are different.

Example of a Segmentation Report

The following is an example of a segmentation report that shows totals for repeat visitors.

Display 13.1 Example of a Segmentation Report for Repeat Visitor - Totals



Segment (Response=Repeat Visitor)	Predicted 0	Predicted 1	Expected Response Rate
5 <= Visits	0.14	0.86	0.87
Page Counts < 10 and 3 <= Visits < 5	0.39	0.61	0.61
10 <= Page Counts and 3 <= Visits < 5	0.69	0.31	0.32
Visits < 3	0.96	0.04	0.04

Segment	All Visitors	% All Visitors	All Predicted Responders	New Visitors	% New Visitors	New Predicted Responders	Most Current Visitors	% Most Current Visitors
5 <= Visits	1,594	3.97	1,387	43	0.35	37	0	0.00
Page Counts < 10 and 3 <= Visits < 5	494	1.23	301	28	0.23	17	0	0.00
10 <= Page Counts and 3 <= Visits < 5	1,064	2.65	340	101	0.82	32	1	0.14
Visits < 3	36,961	92.14	1,478	12,081	98.60	483	735	99.86

How Segments Are Created

Decision Tree Analysis

Segments are created by using a type of predictive model called a decision tree. This model uses a set of independent variables to determine whether a visitor will return to

the Web site at some time in the future. The target (response) variable for this model represents a visitor who returned to the Web site within a specific period of time (repeat visitor). The decision tree analysis uses the independent variables to create segments that predict whether a visitor will return in the future.

Identifying Repeat Visitors

The repeat visitor is classified by response code as follows:

Response = 0 indicates that the visitor does not return during the response period.

Response = 1 indicates that the visitor does return during the response period.

The segmentation analysis of repeat visitors requires 30 days of data and uses up to 90 days of data in the analysis. The available number of days are divided into an explanatory period and a response period. The duration of each period is determined by the available number of days.

The following table describes the time periods that are used for the segmentation report.

Time Period	Description
Explanatory Period	Specifies the initial days of data, calculated in the following way: the first date in the data through Total Days – 15.
Response Period	Specifies the remaining days of data after the Explanatory Period, calculated in the following way: Total Days – 16 through the last date in the data.
Total Days (TD)	Specifies the total number of days of data (30 to 90 days).

Description of the Segment Definition Table Variables

The Segment Definition table contains all of the segments that are defined by decision tree analysis. The following table describes the variables in the Segment Definition table.

Variable	Description
Segment	Specifies a condition that a visitor needs to meet in order to be classified as a member of a specific rule.
Predicted 0	Specifies the proportion of visitors who did not perform an action (for example, returning to the site within the response period).
Predicted 1	Specifies the proportion of visitors who did perform an action (for example, returning to the site within the response period).
Expected Response Rate	Specifies the predictive rate that is calculated by the decision tree analysis. The segments are sorted in descending order using the Expected Response Rate.

Calculating the Expected Response Rate Variable

The Expected Response Rate variable is calculated by using the probabilities that are generated from the decision tree analysis. The Expected Response Rate is calculated in the following way: expected response rate = training_percent * predicted_1 + (1 – training_percent) * validated_1. The variables are defined as follows:

Training_Percent
specifies the proportion of the visitor data that is used in creating the segments.

Predicted_1
specifies the proportion of the training visitors who did perform the action.

Validated_1
specifies the proportion of the validation visitors who did perform the action.

Note: The segmentation analysis uses all of the visitor data, but divides the data into two groups: training and validation. The training data is used by the decision tree analysis to create the segments, and the validation data is used to determine whether a decision node should be kept. △

Description of the Segment Assignment Table Variables

The Segment Assignment table displays visitor assignments to each segment within three time periods: the total time period, after the explanatory time period, and during the current day. The following table describes the variables in the Segment Assignment table.

Variable	Description
Segment	Corresponds to the Segment column in the Segment Definition table. Segment is used to match the segment rule to the classified numbers.
All Visitors	Specifies the number of visitors who were classified by each segment rule within the total time period.
% All Visitors	Specifies the percentage of total visitors.
All Predicted Responders	Specifies the expected number of visitors who will return to the Web site within a specific number of days (Response Period). This value is calculated in the following way: all visitors * expected response rate.
New Visitors	Specifies the number of visitors, classified by each segment rule, who visited the Web site for the first time after the explanatory time period.
% New Visitors	Specifies the percentage of total new visitors.
New Predicted Responders	Specifies the expected number of new visitors who will return to the Web site within a specific number of days (Response Period). This value is calculated in the following way: new responders * expected response rate.

Variable	Description
Most Current Visitors	Specifies the number of visitors who were classified by each segment rule within the current day.
% Most Current Visitors	Specifies the percentage of the most current visitors.

Create a Segmentation Report

You can create two types of segmentation reports: a Repeat Visitor - Totals report or a Repeat Visitor - Averages report.

You can create these reports in the following way:

1. If you do not have a Web mart selected, or if you want to change your Web mart, then select a Web mart from the **Select a Web Mart (Refresh)** drop-down menu.
2. Click **Go** to access the Web mart.
3. Select the **Segmentation** link from the banner of the SAS Web Analytics Report Viewer.
4. Select **Repeat Visitor - Totals** or **Repeat Visitor - Averages** from the **Segmentations** drop-down menu.
5. Select a valid date from the calendar. (Valid dates are shown in bold in the calendar.) For information about using the calendar, see "Using the Calendar with Dashboard, Scorecard, and Segmentation Reports" on page 36.

   When you select a date, the Segmentation report is automatically created.
6. If you want to change the format of the report, select **HTML** or **JAVA** from the **Graphics** drop-down menu.

   If you select a new format, the Segmentation report is automatically created.

You can click on **Segmentation Status** to display the first and last valid dates for your segmentation report. The valid dates correspond to the bolded dates in the calendar. To return to your report, select **Repeat Visitors - Totals** or **Repeat Visitors - Averages** from the **Segmentations** drop-down menu.

CHAPTER 14

Printing and Saving Reports by Using Microsoft Excel

Print Your Reports

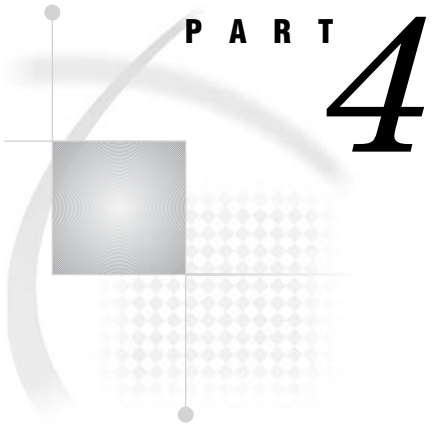
To print a report that you have created, you must first export your table data to Microsoft Excel. With your cursor in the table data, right-click and select **`Export to Microsoft Excel`**. Your report automatically appears in an Excel spreadsheet.

Save Your Reports

To save a report that you have created, you must first export your table data to Microsoft Excel:

1. With your cursor in the table data, right-click and select **`Export to Microsoft Excel`**.
2. Select **File ▶ Save** from the Excel menu bar.

See also “Export Your Report to a Microsoft Excel Spreadsheet” on page 44 for instructions about creating a dynamic link between a report and an Excel spreadsheet.



PART 4

Appendixes

APPENDIX

1

List of Standard SAS Web Analytics Reports

List of Standard Traffic Reports

The following table lists and describes each standard traffic report that is provided with SAS Web Analytics. Some of the reports are available only as drill-down reports from other reports. See the "Alphabetical List of Standard SAS Web Analytics Reports" on page 187 to identify the access path to individual reports.

Table A1.1 Standard Traffic Reports

Type	Report	Description
Visitor	Unique Visitors	Identifies the visitors who have the most activity on your Web site. The report lists each unique visitor whose visit count is greater than one.
Browser and Platform	Browsers	Displays a distribution of the different Web browsers that are used by visitors who navigate the Web site.
	Browser Versions	Displays a distribution of the different Web browser versions that are used by visitors who navigate the Web site.
	Platforms	Displays a distribution of the different platforms (operating systems) that are used by visitors who navigate the Web site.
Status Codes	Status Codes	Provides information about the frequency that a code was returned by the server to the visitor's browser to report the outcome of a request.
	Hourly Status Codes	Provides information about the frequency of status codes categorized by hour of day.
	Error Status Codes	Provides information about the frequency of errors that occur when visitors attempt to access your Web site.

Type	Report	Description
	Error Status Code Pages	Provides information about individual pages that generated errors.
	Error Status Code Page Referrers	Provides information about the frequency of status codes for each page that was requested.
Navigation	Page Frequency	Displays a distribution of the pages that were requested. This report enables you to identify the pages and family of pages that are most often viewed.
	Entry Pages	Displays the most common requests that visitors make to enter the Web site.
	Referrer by Entry Page	Displays a list of entry pages for each referrer.
	Entry Pages by Referrer	Displays the pages and visit information that are associated with the domains.
	Exit Pages	Provides a list of all Web pages from which the current site was exited.
Overview	Hourly Metrics	Displays daily basic traffic statistics for the site on an hourly basis.
	Site Metrics	Displays basic traffic statistics for the site.
	Day of Week Metrics	Displays daily basic traffic statistics for the site by day of week.
	Site Metrics by Day of Week	Displays statistics for the site by a particular day of the week.
Referrer	Visit Referrer Domains	Displays a distribution of referrer domains, which enables you to determine the origin of visitors.
	Entry Pages by Referrer	Displays the pages and visit information that are associated with the domains.
	Referrer by Entry Page	Displays a list of entry pages for each referrer.
	Search Terms	Displays a distribution of search terms that are used by visitors to find your Web site.
	Referrer by Search Terms	Displays the domains from which visitors searched for specific items of information.
	Search Terms by Referrer	Displays a distribution of search terms that are used by visitors within referrer domains to find your Web site.
	Like Search Terms	Displays a list of search terms that are similar to a term that you specify.
	Referrer by Search Terms	Displays the domains from which visitors searched for specific items of information.

List of Standard Non-Traffic Reports

The following table lists and describes each standard non-traffic report.

Table A1.2 Standard Non-Traffic Reports

Category	Report	Description
Scorecard	Site Metrics	Enables you to view the performance and the forecast values of the key performance indicators (KPIs) that are related to traffic on the site that is being analyzed.
Dashboard	Site Metrics	Displays the values for each site's metrics, assigns a performance level to that metric based on its desired business direction, and displays historical information for that metric for a given date.
Funnel	Interactive Funnel	Provides a detailed description of any sequential process on a Web site, such as a sequence of Web pages that are visited.
	Static Funnel	Provides a detailed description of any sequential process on a Web site, such as a sequence of Web pages that are visited. A Static Funnel report is created during the ETL process.
Path Analysis	Entry Paths	Displays a list of the most popular points of entry into the Web site.
	Referrer Entry Path	Displays a list of referrers that sent the most traffic to your Web site.
	Interactive Path Analysis	Displays navigational information about the order in which pages or URIs occur in visits whose visitors navigate the Web site. The report traces a path from any starting page or to any ending page, or between any starting and ending pages.
Segmentation	Repeat Visitors - Totals	Displays a list of repeat visitors (totals) to the Web site, based on a set of rules which help predict which visitors will return.
	Repeat Visitors - Averages	Displays a list of repeat visitors (averages) to the Web site, based on a set of rules which help predict which visitors will return.

Alphabetical List of Standard SAS Web Analytics Reports

The following table lists the standard SAS Web Analytics reports. The first column lists the name of the report, and the second column contains the path by which you access the report. The access path always begins with a selection from the banner of the SAS Web Analytics page. Some of the reports are available only as drill-down reports from other reports. You access the drill-down reports by clicking a link in the first column of the report table. If there is no link in the first column of the table, then no drill-down report is available.

Alphabetical List of Standard SAS Web Analytics Reports

Report	Access path to reports
Browser Versions	Traffic ▶ Browser and Platform ▶ Browsers ▶ Browser Versions
Browsers	Traffic ▶ Browser and Platform ▶ Browsers
Day of Week Metrics	Traffic ▶ Overview ▶ Day of Week Metrics
Entry Pages	Traffic ▶ Navigation ▶ Entry Pages
Entry Pages by Referrer (Navigation menu)	Traffic ▶ Navigation ▶ Entry Pages ▶ Referrer by Entry Page ▶ Entry Pages by Referrer
Entry Pages by Referrer (Referrer menu)	Traffic ▶ Referrer ▶ Visit Referrer Domains ▶ Entry Pages by Referrer
Error Status Code Page Referrers	Traffic ▶ Status Codes ▶ Error Status Codes ▶ Error Status Code Pages ▶ Error Status Code Page Referrers
Error Status Code Pages	Traffic ▶ Status Codes ▶ Error Status Codes ▶ Error Status Code Pages
Error Status Codes	Traffic ▶ Status Codes ▶ Error Status Codes
Exit Pages	Traffic ▶ Navigation ▶ Exit Pages
Hourly Metrics	Traffic ▶ Overview ▶ Hourly Metrics
Hourly Status Codes	Traffic ▶ Status Codes ▶ Status Codes ▶ Hourly Status Codes
Interactive Funnel	Funnel ▶ Interactive Funnel
Interactive Path Analysis	Path Analysis ▶ Path Analysis Reports ▶ Interactive Path Analysis
Like Search Terms	Traffic ▶ Referrer ▶ Like Search Terms
Page Frequency	Traffic ▶ Navigation ▶ Page Frequency
Platforms	Traffic ▶ Browser and Platform ▶ Platforms
Referrer by Entry Page (Navigation menu)	Traffic ▶ Navigation ▶ Entry Pages ▶ Referrer by Entry Page
Referrer by Entry Page (Referrer menu)	Traffic ▶ Referrer ▶ Visit Referrer Domains ▶ Entry Pages by Referrer ▶ Referrer by Entry Page
Referrer by Search Terms	Traffic ▶ Referrer ▶ Search Terms ▶ Referrer by Search Terms
Repeat Visitor - Averages	Segmentation ▶ Segmentations ▶ Repeat Visitors - Averages
Repeat Visitor - Totals	Segmentation ▶ Segmentations ▶ Repeat Visitors - Totals
Search Terms	Traffic ▶ Referrer ▶ Search Terms
Site Metrics (Dashboard)	Dashboard ▶ Site Metrics
Site Metrics (Scorecard)	Scorecard ▶ Site Metrics
Site Metrics (Traffic)	Traffic ▶ Overview ▶ Site Metrics
Site Metrics by Day of Week	Traffic ▶ Overview ▶ Day of Week Metrics ▶ Site Metrics by Day of Week

Report	Access path to reports
Static Funnel*	Funnel
Status Codes	Traffic ▶ Status Codes ▶ Status Codes
Unique Visitors	Traffic ▶ Visitors ▶ Unique Visitors
Visit Referrer Domains	Traffic ▶ Referrer ▶ Visit Referrer Domains

* Static Funnel reports consist of individual reports that are created during the ETL process.

APPENDIX

2

HTTP Status Codes

The HTTP status codes are based on the World Wide Web Consortium (W3C) definitions. For more information about HTTP status codes, see Status Code Definitions at the World Wide Web Consortium at **`http://www.w3.org/Protocols/rfc2616/rfc2616-sec10.html`**.

The first digit of the HTTP status code defines the class of the response. The last two digits have no categorization role. The first digit of the status code is one of the following:

Class of Status Code Response

Status Code	Description
1xx: Informational	The request was received and is continuing to be processed.
2xx: Success	The action was successfully received, understood, and accepted.
3xx: Redirection	Further action must be taken in order to complete the request.
4xx: Client Error	The request contains bad syntax or cannot be fulfilled.
5xx: Server Error	The server failed to fulfill an apparently valid request.

The following table lists the W3C HTTP status codes.

HTTP Status Codes

Status Code	Status Code Name	Status Code Definition
200	OK	The request was fulfilled.
201	Created	The request was fulfilled and resulted in a new resource being created.
202	Accepted	The request was accepted for processing, but the processing has not completed. The request might not be acted upon, because it might be disallowed when processing actually occurs.

Status Code	Status Code Name	Status Code Definition
203	Non-Authoritative Information	The information that is returned in the header is not the definitive set as available from the origin server. The information is instead gathered from a local or a third-party copy. The set that is presented might be a subset or superset of the original version.
204	No Content	The server has fulfilled the request but does not need to return the body of the request.
205	Reset Content	The server has fulfilled the request and the user agent should reset the document view that caused the request to be sent. This response is intended primarily to allow actions to take place from user input. The input form is then cleared so that the user can easily initiate another input action.
206	Partial Content	The server has fulfilled the partial GET request for the resource.
300	Multiple Choices	The requested resource corresponds to any one of a set of representations, each with its own specific location. Agent-driven negotiation information is provided so that the user (or user agent) can select a preferred representation and redirect its request to that location.
301	Moved Permanently	The requested resource was assigned a new permanent URI and any future references to this resource should use one of the returned URIs.
302	Found	The requested resource resides temporarily under a different URI. Because the redirection might be altered on occasion, the client should continue to use the Request-URI for future requests.
303	See Other	The response to the request is found under a different URI and should be retrieved using a GET method on that resource.
304	Not Modified	If the client performed a conditional GET request and access is allowed, but the document was not modified, the server responds with a 304 status code. If a 304 response indicates that an entity is not currently cached, then the cache must disregard the response and repeat the request without the condition. If a cache uses a received 304 response to update a cache entry, the cache must update the entry to reflect any new field values given in the response.
305	Use Proxy	The requested resource must be accessed through the proxy given by the Location field. The Location field gives the URI of the proxy. The recipient is expected to repeat this single request by using the proxy. 305 responses must be generated only by origin servers.
307	Temporary Redirect	The requested resource resides temporarily under a different URI. Because the redirection might be altered on occasion, the client should continue to use the Request-URI for future requests.

Status Code	Status Code Name	Status Code Definition
400	Bad Request	The request could not be understood by the server due to invalid syntax. The client should not repeat the request without modifications.
401	Unauthorized	The request requires user authentication. The client might repeat the request with a suitable Authorization header field. If the request already included Authorization credentials, then the 401 response indicates that authorization has been refused for those credentials.
403	Forbidden	The server understood the request, but is refusing to fulfill it. Authorization will not help and the request should not be repeated.
404	Not Found	The server has not found a match for the Request-URI. No indication is given of whether the condition is temporary or permanent. This status code is commonly used when the server does not want to reveal exactly why the request has been refused, or when no other response is applicable.
405	Method Not Allowed	The method that is specified in the Request-Line is not allowed for the resource identified by the Request-URI.
406	Not Acceptable	The resource that is identified by the request is only capable of generating response entities which have content characteristics that are not acceptable according to the accept headers sent in the request.
407	Proxy Authentication	This code is similar to 401 (Unauthorized), but indicates that the client must first authenticate itself with the proxy.
408	Request Timeout	The client did not produce a request within the time that the server was prepared to wait. The client might repeat the request without modifications at any later time.
409	Conflict	The request could not be completed due to a conflict with the current state of the resource. This code is allowed only in situations where it is expected that the user might be able to resolve the conflict and resubmit the request.
410	Gone	The requested resource is no longer available at the server and no forwarding address is known. This condition is expected to be permanent. Clients with link editing capabilities should delete references to the Request-URI after user approval.
411	Length Required	The server refuses to accept the request without a defined Content-Length. The client might repeat the request if it adds a valid Content-Length header field containing the length of the message-body in the request message.

Status Code	Status Code Name	Status Code Definition
412	Precondition Failed	The precondition given in one or more of the request-header fields evaluated to false when it was tested on the server.
413	Request Entity Too Large	The server is refusing to process a request because the request entity is larger than the server is willing or able to process. The server might close the connection to prevent the client from continuing the request.
414	Request URI Too Long	The server is refusing to service the request because the Request-URI is longer than the server is willing to interpret. This rare condition occurs under the following conditions: □ when a client has improperly converted a POST request to a GET request with long query information □ when the client has descended into a URI "black hole" of redirection (for example, a redirected URI prefix that points to a suffix of itself) □ when the server is under attack by a client attempting to exploit security holes present in some servers using fixed-length buffers for reading or manipulating the Request-URI
415	Unsupported Media Type	The server is refusing to service the request because the entity of the request is in a format that is not supported by the requested resource for the requested method.
416	Requested Range Not Satisfiable	A server returns a response with this status code if a request included a Range request-header field and none of the range-specifier values in this field overlap the current extent of the selected resource, and if the request did not include an If-Range request-header field.
417	Expectation Failed	The expectation given in an Expect request-header field could not be met by this server, or, if the server is a proxy, the server has unambiguous evidence that the request could not be met by the next-hop server.
500	Internal Server Error	The server encountered an unexpected condition that prevented it from fulfilling the request.
501	Not Implemented	The server does not support the functionality required to fulfill the request. This is the appropriate response when the server does not recognize the request method and is not capable of supporting it for any resource.
502	Bad Gateway	The server, while acting as a gateway or proxy, received an invalid response from the upstream server it accessed in attempting to fulfill the request.

Status Code	Status Code Name	Status Code Definition
503	Service Unavailable	The server is currently unable to handle the request due to a temporary overloading or maintenance of the server. This is a temporary condition that will be alleviated after some delay.
504	Gateway Timeout	The server, while acting as a gateway or proxy, did not receive a timely response from the upstream server that is specified by the URI (for example, HTTP, FTP, LDAP), or some other auxiliary server (for example, DNS), that it needed to access in attempting to complete the request. Note to implementors: some deployed proxies are known to return codes of 400 or 500 when DNS lookups time out.
505	HTTP Version Not Supported	The server does not support, or refuses to support, the HTTP protocol version that was used in the request message. The server is indicating that it is unable or unwilling to complete the request using the same major version as the client. The response contains an entity describing why that version is not supported and what other protocols are supported by that server.

Glossary

bytes received
the number of bytes that a Web server has received from a particular client browser. Most Web server log files do not record bytes received. See also bytes sent.

bytes sent
the total number of bytes that a server has delivered in response to a request. Because of retransmissions and network problems, bytes sent can sometimes be larger than the size in bytes of the resource or file that was received. Bytes sent is sometimes referred to as bytes transferred.

dashboard
a report that shows at a glance the trends for Key Performance Indicators (KPIs) of Web site activity. The dashboard compares KPIs for a specific day with the 30-day average, minimum, and maximum. See also Key Performance Indicator (KPI).

entry page
the first page that a visitor views when entering a Web site.

entry point
the first page that an Internet visitor views when visiting a Web site. In SAS Web Analytics, the entry point page marks the start of a session. See also exit point.

ETL (extract, transform, load) process
the process of extracting data from a data source, transforming the data based on your business rules, and loading the data into your data warehouse.

exit page
the last page that a visitor views before leaving a Web site.

exit point
the last page that a visitor views before leaving a Web site. In SAS Web Analytics, the exit point marks the end of a session.

funnel
a sequence of Web pages or URLs.

funnel definition
a sequence of up to seven Web pages or URLs that have an indicator that shows whether the URLs are adjacent. Reports can be created from a funnel definition.

funnel report
a report that provides a detailed description of any sequential process on a Web site, such as a sequence of Web pages that are visited. For example, a funnel report can be used to determine the page from which users leave a particular sequence of Web pages. The report can also be used to determine how many visitors visit a group of pages in a specific sequence.

hit
the result of a successful request (sent to a Web server) for a resource such as an HTML page, a GIF file, or an executable file. Each hit generates an entry in a Web server log file. By contrast, a page request (a particular type of hit) does not include the objects on the page. Requests for an HTML file and a GIF file are both considered to be hits, but only the request for the HTML file is typically considered to be a page request. See also page request.

interactive funnel
a funnel definition from which a report can be created in real time. See also funnel definition.

Key Performance Indicator (KPI)
a measurement that shows whether an organization is progressing toward its stated goals.

page count
the total number of pages identified in a Web server log file. The page count does not include objects on a Web page, such as GIF files or audio files. Page count and page views are synonyms. See also file count, hit.

page request
an attempt to access a Web page. Each page request generates an entry in a log file. Unlike a hit, a page request does not include the objects on the page, such as GIF files and audio files. A hit includes all objects on the page as well as the page itself. See also visit, hit.

referrer ID
the URL of the Web page that a visitor clicked on in order to visit the current page.

report definition
a specification that is used for generating a report. A report definition includes information such as the table and level, the names of the variables, the report style, and other attributes.

request
an attempt to access a Web page or a resource on a Web server. A request can be either a page request or a hit. See also page request, hit.

scorecard
a report that shows at a glance how metrics of Web site activity compare to predicted levels that are derived from the previous 30 days' activity.

segment
a group of Web site visitors with one or more common attributes that have been identified by a rule. Segments are created by using a type of predictive model called a decision tree. The decision tree uses a set of independent variables to determine whether a visitor will return to the Web site at some time in the future.

session
a period of activity that starts when a visitor first accesses a particular Web site and that ends when the visitor has not performed any actions at that Web site within a specified time interval (usually 30 minutes). A session ID is associated with each

session, and the activity that occurs during the session is recorded in a Web server log file.

session ID
a unique number that is assigned to a Web site visitor and which is used to track the visitor's path and the time of entry and exit.

static funnel
a funnel definition from which a report can be created during the Extract, Transform, Load (ETL) process. See also ETL (extract, transform, load) process, funnel definition.

status code
in a Web server log file, a three-digit code that the server issues to describe the success or failure of a visitor's request for a file from a Web site. A status code between 200 and 299 indicates that the request was successful. A status code of 400 or greater indicates a bad request, an unauthorized request, a page not found, or some other type of failure.

traffic
the number of visits that are made to a Web site.

unique visitor
an individual visitor to a Web site. Unique visitors can be identified by various methods, such as an IP address+user agent, a cookie, or a login ID. Depending on how a visitor is identified, the visitor's identity might or might not correspond to an actual person.

visit
an instance of a person using a Web browser to access one or more files on a Web site.

Web mart
a shortened form of the term Web data mart, which refers to a generic data mart that contains Web log information.

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Your Turn

If you have comments or suggestions about *SAS Web Analytics 5.2: User's Guide*, please send them to us on a photocopy of this page, or send us electronic mail.

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