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SAS® Web Analytics 5.4
User's Guide

SAS® Documentation

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SAS® Web Analytics 5.4: User's Guide

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About This Book

Audience

SAS Web Analytics is designed for the following users:

- persons, such as SAS Web Analytics analysts, who are responsible for administering, designing, and viewing SAS Web Analytics reports for their organization
- persons who have only view access to the reports

You might be assigned to a specific role that determines which tasks you can perform. This documentation describes all of the tasks that can be performed with SAS Web Analytics. If you are not authorized to perform specific tasks, then your SAS Web Analytics interface will not display those options.

What's New in SAS Web Analytics 5.4

Overview

SAS Web Analytics 5.4 is a major product release with significant user interface changes and new features. SAS Web Analytics 5.4 is the first SAS Customer Intelligence solution to provide a completely Flash-based user interface.

SAS Web Analytics 5.4 includes the following new and enhanced features:

- new Adobe Flash user interface
- enhanced Online Analytics Data Model
- improved performance
- extended search reporting with new internal search capabilities
- response tracking for SAS Real-Time Decision Manager
- click-based page overlay
- third-party platform support changes
- updated support for Google Adwords 2009
- search engine handling for new search engines (including Baidu, Bing, Najdi, Terra.com, and Voila.fr)

New Adobe Flash User Interface

The new SAS Web Analytics interface is the first to use the new SAS Flex Workspace Shell to provide a single, integrated Flash-based interface for all SAS Customer Intelligence solutions. The interface provides access to all of the advanced and analytical reports, such as path analysis, funnel, performance monitor, performance insight, and page overlay. Flexible search capabilities, a dock, and the capabilities to arrange multiple reports in a single workspace increase productivity and efficiency.

Enhanced Online Analytics Data Model

The enhanced Online Analytics Data Model is the foundation of the new Online Analytics platform and provides a detailed and historical view of customer activities,

from viewed pages to executed searches and clicked links. The Online Analytics Data Model also keeps a full history of every campaign and every keyword that brought visitors to your site and links the campaigns and keywords to the goals that were achieved, such as purchases, registrations, or applications. With that level of detail, SAS Web Analytics enables you to analyze the efficiency of your interactive marketing by using the analytical capabilities of SAS. SAS Web Analytics shares its data model with SAS Customer Experience Analytics, providing a seamless upgrade path for businesses that want to move from Web site performance analysis into multi-channel customer analytics.

Improved Performance

The performance of the analytical reports, such as the path analysis, funnel, and page overlay reports, has been significantly improved to handle large volumes of data.

Extended Search Reporting with New Internal Search Capabilities

The extended reporting for internal and external searches in SAS Web Analytics enables users to report not only on exact search terms, but also on terms that contain a certain substring. For example, you can search for all terms that contain ‘SAS.’

Response Tracking for SAS Real-Time Decision Manager

The SAS Customer Intelligence platform uses the common customer contact and response history to provide an accurate view of any inbound or outbound contacts with customers and their responses. SAS Real-Time Decision Manager is the SAS Customer Intelligence component that delivers personalized offers to customers in real time. SAS Web Analytics 5.4 enables you to assign an online response, such as a purchase or registrations, to the offer that is provided by SAS Real-Time Decision Manager. This response can then be used to determine the next best offer or to create more accurate analytical models.

Click-Based Page Overlay

The Page Overlay report in SAS Web Analytics 5.4 provides even more accurate results than before. The report uses the exact location of a link in the document object model to avoid double-counting clicks in case the same link appears multiple times on the same page. This functionality requires SAS tag-based data collection technology, which is included in the package. Web logs do not provide the necessary level of detail, but the SAS Page Tag automatically collects the exact location of each link that has been

clicked on the Web page. This creates a very precise representation of which links were actually clicked.

Third-Party Platform Support Changes

The following platforms are now supported in addition to those supported in SAS Web Analytics 5.3:

- Windows 7 client support
- Windows 2008 R2 support
- JBOSS Application Server 4.3
- Websphere 7.0 (Network Development version only, not Base version)
- Internet Explorer 8

Part 1

Introduction to SAS Web Analytics

Chapter 1

About 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. SAS Web Analytics provides advanced analytics and visualization in a Web-based reporting framework. This framework helps businesses increase their Web profitability by increasing ROI and decreasing costs.By understanding their customers, businesses can motivate customers to purchase products and increase the use of Web-based services. SAS Web Analytics enables you to 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. You can determine how customers, particularly profitable ones, arrive at your Web site.

SAS Web Analytics turns high volumes of Web data into key metrics that are specific to your business. It integrates online data sources with offline data sources. You can gauge the success of your online operations and refine business strategies as needed. By monitoring key performance indicators (KPIs), you can identify the drivers that influence bottom-line results and gain an accurate picture of how well you are achieving your business objectives at every point in the process.

Advanced analytics provides the basis for flexible reporting. With analytics and interactive visualization tools, you can derive intelligence that will help decision makers understand how to deliver more efficient, effective offline and online marketing campaigns.

Customer Intelligence Integration

SAS Web Analytics is part of the Customer Intelligence suite of solutions and integrates with the SAS Marketing Automation and SAS Digital Marketing products. The integration provides online behavior details to better determine the success of campaigns that are created and executed through Customer Intelligence products. Reporting within SAS Web Analytics can show the end-to-end results of campaigns, including the number of clicks and click-thrus, click-thru rate, bounce rate, average number of pages viewed, goals achieved, and total value. You can analyze the data to further improve the effectiveness of an outbound campaign or a communication. For example, you can create campaign profiles for funnel and path analysis.

The Web analyst has the ability to create goals within the SAS Web Analytics interface and associate a Customer Intelligence response code with a given goal. This association enables you to analyze how Customer Intelligence campaigns are driving traffic to Web sites, or how campaigns are driving actions within Web sites. The Web analyst is also able to perform the following tasks:

- define a goal with a name that contains one or many pages
- select a goal condition, such as a visitor viewing any page in a set of selected pages
- assign a response code from SAS Marketing Automation to the goal

Benefits of Using SAS Web Analytics

SAS Web Analytics provides major benefits to your organization. The analytics and visualization tools help you to perform the following tasks:

- improve customer retention
- focus clearly on key metrics
- provide a better customer experience and an improved bottom line
- generate sophisticated reports on time, every time
- conduct effective, efficient e-marketing campaigns
- improve margins through improved service quality
- measure and forecast the performance of key indicators for Web effectiveness

What Types of Reports Can I Design?

Analytical Reports

Analytical reports provide you with analytics, which calculates output data from the data in your Web log or from the SAS Clickstream Data Collector. You access the analytical reports through the SAS Web Analytics graphical user interface (GUI). The following analytical reports are available:

- Performance Monitor
- Performance Insight
- Path Analysis
- Funnel
- Page Overlay

Traffic Reports

Traffic reports monitor the volume of activity on your Web site. You can design reports that show metrics such as status codes, basic traffic statistics, and visitor frequency. You can conduct organic searches, and search engine bid campaigns. You access these reports through *SAS Web Report Studio*, a business intelligence component of the SAS Intelligence Platform. *SAS Web Report Studio* enables you to view, design, and share Web-based reports. The following types of traffic reports are available in *SAS Web Report Studio*:

Browser and Platforms reports
: provide information about the number of unique visitors to your Web site.

Status Codes reports
: provide information about the frequency of status codes that are returned by a server.

Site Metric reports
: provide information by the hour or by the day of the week.

Visitor reports
: provide information about the frequency of visitors to your Web site.

Page Usage reports
: provide information about entry pages, exit pages, and bounce rate.

Referrer and Search Terms reports
: provide information about referring pages and organic searches.

Search Engine Bid reports
: provides information about search engine bid campaigns and paid keyword performance.

How to Get Help for SAS Web Analytics

You can access Help for SAS Web Analytics in the following ways:

- from the online *SAS Web Analytics User's Guide* (PDF format). To access the documentation, select **Help ⇨ User's Guide (PDF)**.
- from embedded help within the application by clicking  in the windows that have this button.
- from the *SAS Web Report Studio User's Guide* for traffic reports.

Documentation on the Web

Documentation for SAS Web Analytics is available at **`http://support.sas.com/documentation/solutions/webanalytics/`**.

User ID: **sas**

Password: **WAuser123**

Chapter 2

Using SAS Web Analytics to Design and View Analytical Reports

About SAS Web Analytics

You use SAS Web Analytics to design, view, save, and print analytical reports. You can add metrics that create forecast, trend, and goal graphs. You can perform path analyses and view metrics from a Web page overlay. You can track the path a customer takes to a specific page on a Web site.

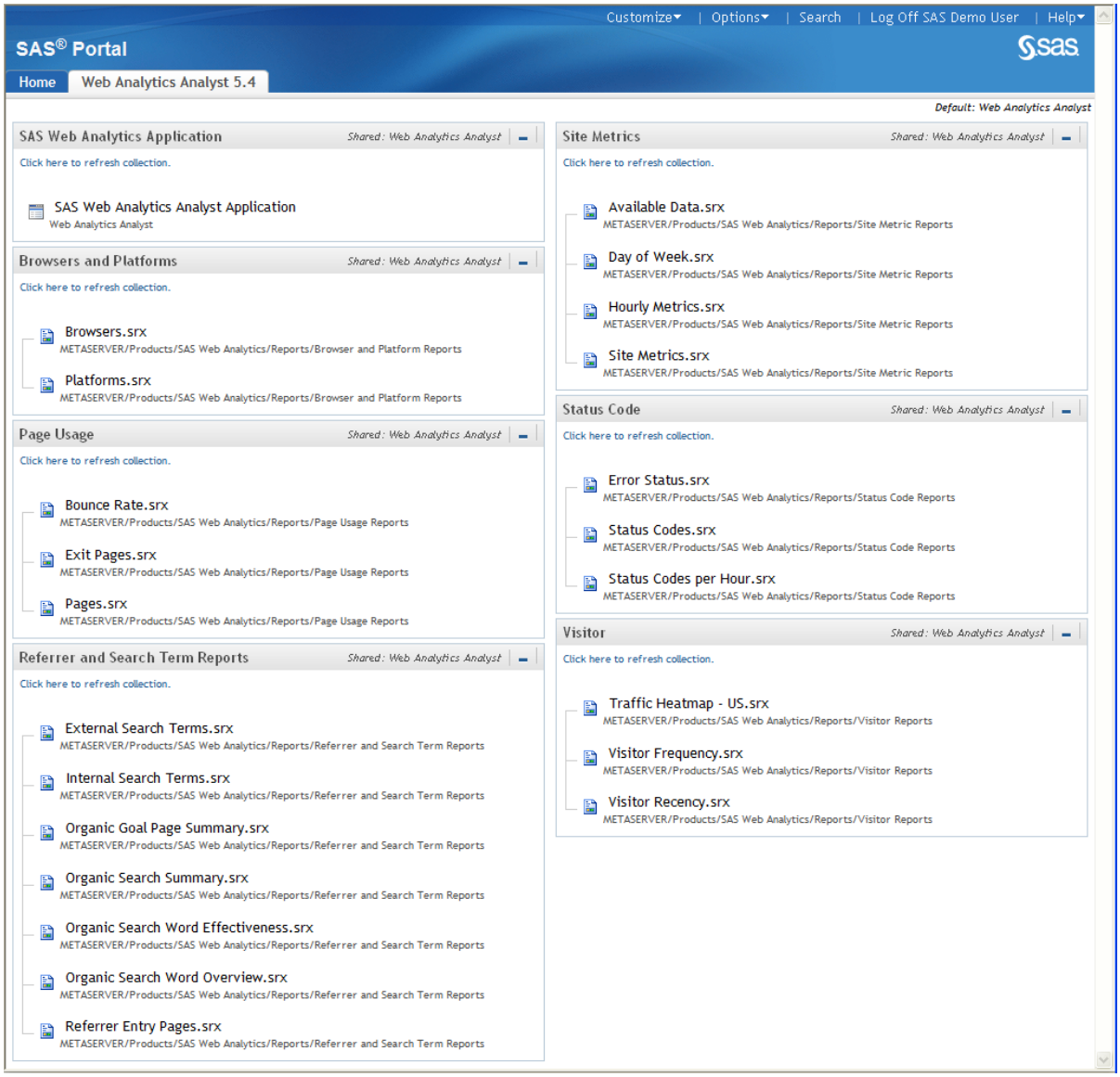
The user interface enables you to create folders in which to save the reports that you design. The folders become part of the file hierarchy through which you can navigate to view saved reports.

Accessing the SAS Web Analytics Application and Reports

Depending on the type of authorization you have, you can use a portal page in the SAS Information Delivery Portal to access the SAS Web Analytics application, SAS Web Report Studio, and the traffic reports.

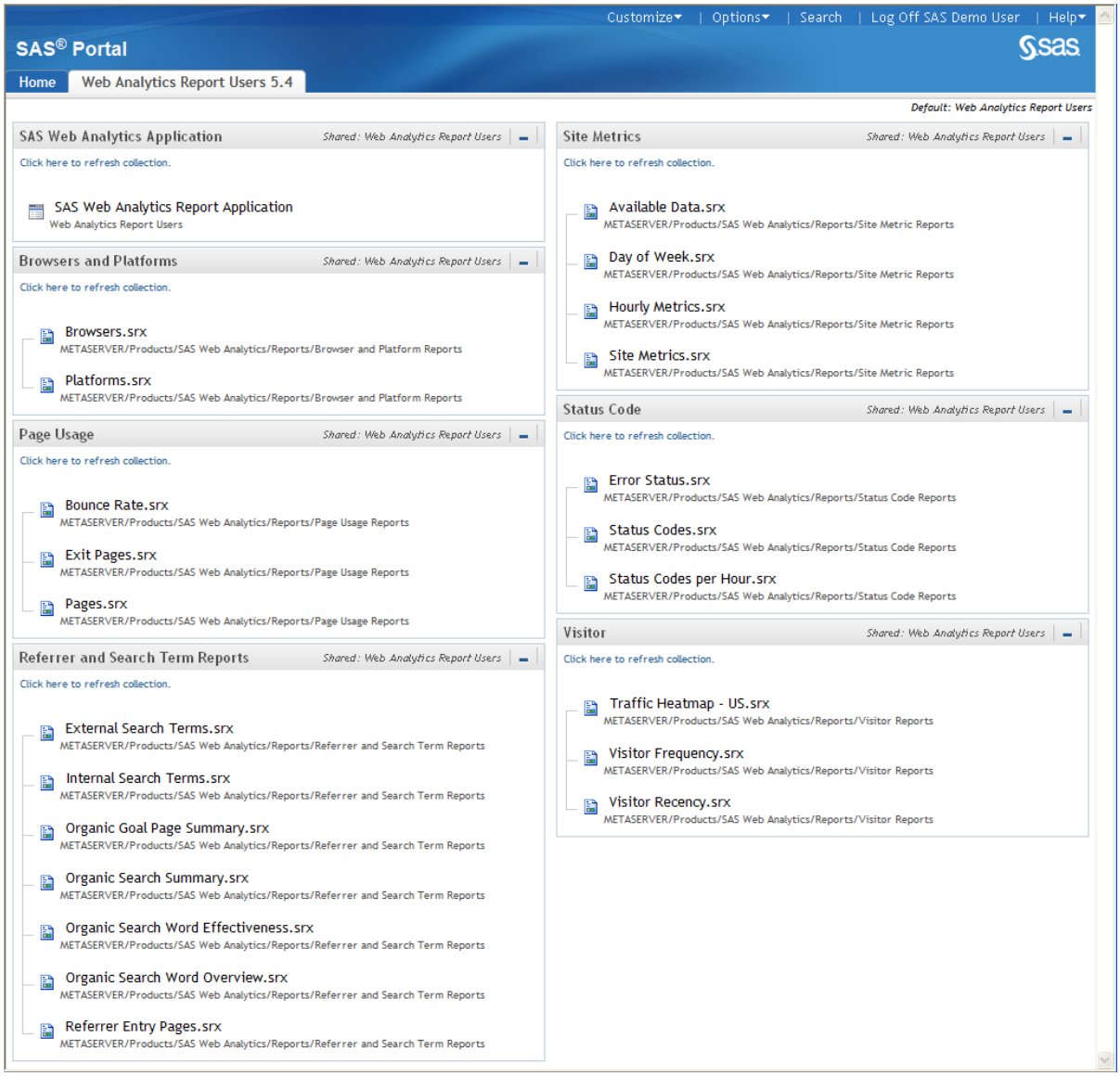
If you have SAS Web Analytics Analyst authorization, you can access the SAS Web Analytics application and all of the traffic reports:

Display 2.1 *SAS Web Analytics Analyst Portal Page*



If you have SAS Web Analytics Report User authorization, you can access SAS Web Report Studio and all of the traffic reports:

Display 2.2 *SAS Web Analytics Report User Portal Page*



For information about your type of authorization, contact your system administrator.

Log On to SAS Web Analytics

To log on to SAS Web Analytics, click the appropriate link in the portal page or use a link that is provided by your system administrator. Then you enter your user name and password, and click **Log On**. Your password is case sensitive. Your user name might be case sensitive, depending on the operating system that supports SAS Web Analytics.

Your SAS Web Analytics session will time out after 30 minutes of inactivity. Your system administrator can change the default value.

Note: If you are running a Funnel or Path report and you have "report viewer only" permission, you might receive the following error message: **`Cannot get server`**

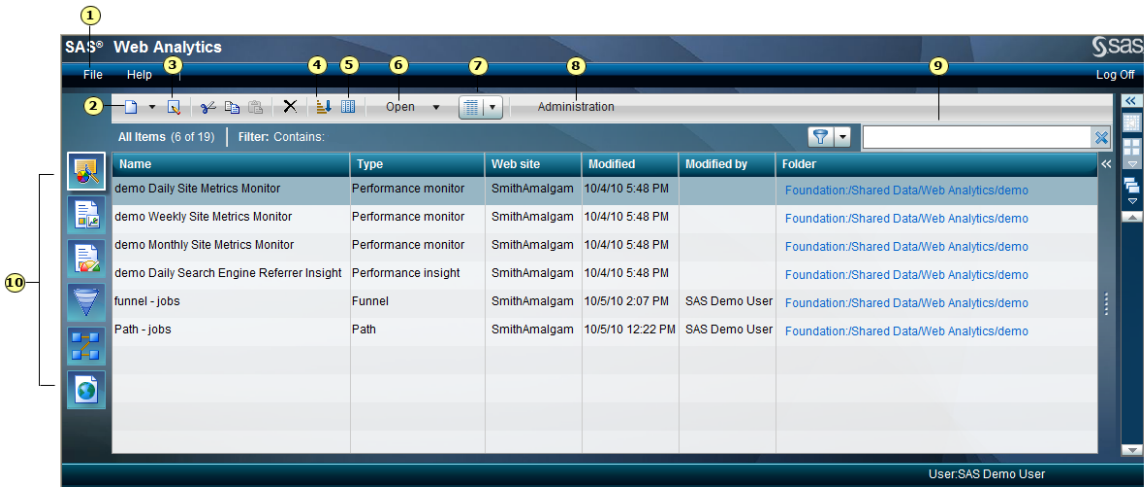
`login.` This means that authentication to the workspace server failed. To correct this error, ensure that your Web site has an account associated with it.

The SAS Web Analytics Main Window

View of the Main Window

When you log on to SAS Web Analytics, the main SAS Web Analytics window appears.

Display 2.3 *SAS Web Analytics Main Window*



The following items correspond to the numbered items in the main window:

1. The **File** menu enables you to save reports that you have created or edited, view reports that you have recently opened or edited, edit your preferences, and log off of SAS Web Analytics.
2. The **New** icon displays a list of analytical reports that you can design and view.
3. The **Edit** icon enables you to edit the input parameters of the selected report.
4. The **Sort** icon enables you to sort the list of reports by any of the available attributes for the reports.
5. The **Customize Columns** icon enables you to customize the columns that are displayed in the main application window. This option is available only when the reports are displayed as a grid.
6. The **Open** menu enables you to open one or more selected reports. You can choose to open the reports in the application workspace or open and then minimize the reports.
7. The **Select view** icon enables you to select how you want to view the list of reports in the main window of the SAS Web Analytics application. You can choose to view the reports in one of three ways:
   - **Grid**

The Grid view displays the reports in a table view with a column for each attribute.

- **Detail**

  The Detail view displays the reports in a list with all of their attributes.

- **Hierarchy**

  The Hierarchy view displays the reports in the SAS folders tree structure.

8. The **Administration** menu enables you to access the following administrative features:

   - **Web Site Availability**

     Web Site Availability lists the names of the available Web sites that you can choose from for your report, as well as the start and end dates for which data is available.

   - **Search Term Goal Management**

     Search Term Goal Management enables you to create search term goals. When you create a search term goal, you can associate one or more Web pages with that goal and specify a goal value that indicates the relative importance of each page. The goal is then used to analyze how often the goal pages are reached by visitors who click either a paid or an organic link within a search site result page.

   - **Campaign Goal Management**

     Campaign Goal Management enables you to associate SAS Marketing Automation campaign responses with Web site behavior. You can associate a set of goal pages and a condition with a specific SAS Marketing Automation campaign response. This feature is available only when SAS Marketing Automation 5.4 is licensed and installed in the same SAS 9.2 environment.

9. The filtering area enables you to create and manage the filters that control which reports are displayed in the main application window.

10. The report buttons enable you to choose which types of reports you want to display in the main application window.

SAS Web Analytics Report Buttons

You can use the report buttons to determine which types of reports are displayed in the main application window of SAS Web Analytics:

All Items 
displays reports of all types.

Performance Monitors 
displays only Performance Monitor reports. Performance Monitor reports analyze Web site data by using a set of key performance indicators (KPIs) for short-term and long-term performance based on the business direction of the metric.

Performance Insights 
displays only Performance Insight reports. You can use the Performance Insight report to determine which metrics produce a positive response for a specific metric. The report enables you to determine which variables in the input data set have a statistically significant impact on the target metric.

Funnels 
displays only Funnel reports. Funnel reports enable you to see the sequence of Web pages that were visited.

Paths 
displays only Path reports. Path reports analyze the sequence of Web pages that were visited within your Web site.

Page Overlays 
displays only Page Overlay reports. The Page Overlay feature generates a site's Web page with associated metrics for each link that is overlaid on the page.

Metadata Tree Structure

The SAS Folders and WebDAV Repository tree structure is the organizational structure for metadata. You can see the tree structure when you select use the **Select view** () menu to view the reports in the **Hierarchy** view. The tree structure contains the following folders:

- **SAS Folders**

  The Performance Monitor, Performance Insight, Path, and Funnel reports are stored here. Page Overlay reports are stored in the WebDAV repository.

  - **My Folder**

    This folder is a standard location for the work you are doing. It is the initial default location for open and save dialog boxes in SAS client applications. This folder is private and the contents of this folder cannot be shared with other users. The owner of the folder can add, delete, and rename items, but cannot change permissions for the folder.

  - **Shared Data**

    This folder is the default location for shared library, table, cube, and information map definitions. This folder is also the location for reports that you want to share with others.

- **WebDAV Repository**

  The Page Overlay reports are stored here.

  - **Users**

    This folder contains your subfolder for storing Page Overlay reports. The name of the subfolder is your user name. Performance Monitor, Performance Insight, Funnel, and Path reports are stored in the SAS Folders.

Move and Copy Items

You can move or copy items from one folder to another in SAS Web Analytics. To move or copy an item, perform these tasks:

Note: You can select multiple reports to move or copy, but you cannot move or copy a group of reports that includes both a Page Overlay report and any other type of report. Page Overlay reports can be moved and copied only within the WebDAV repository. Performance Monitor, Performance Insight, Funnel, and Path reports can be moved and copied only within the Foundation repository.

1. Select one or more reports that you want to move or copy and click the **Cut** icon or the **Copy** icon .
2. Use the **Select view** icon  to view the reports in either the grid view or the hierarchy view and select the folder to which you want to copy the reports.
3. Click the **Paste** icon to move or copy the reports to the selected folder.

   Note: You can paste reports only in the hierarchy view.

Log Off from SAS Web Analytics

To log off from SAS Web Analytics, click the **Log Off** button, which is located in the upper right corner of the SAS Web Analytics window.

Part 2

Analytical Reports and Features

Chapter 3

View Changes in Business Direction

About the Performance Monitor Report

You can use the Performance Monitor report for decision support. The Performance Monitor report analyzes data from a set of key performance indicators (KPIs) for short-term and long-term performance based on the business direction of the metric.

The Performance Monitor report displays the values for a site's metrics and assigns a performance level to that metric based on its desired business direction. The report displays actual, minimum, and maximum values for that metric on a given date.

The Performance Monitor enables you to perform the following tasks:

- Select one or more metrics. You can edit the labels of individual KPIs after the metric has been selected.
- Set a goal for a metric. The goal is represented in the goal graph.
- Set a date range for the monitoring of a goal. The range is represented in the goal graph.
- Forecast a value based on a goal date.
- View the trend of a metric.
- Determine whether a forecast of a value is above, below, or on target with the goal value for a goal date.
- Specify daily, weekly, and monthly data intervals.
- View summary level information and display KPI-related metrics so that you can view data until the goal date has been met.

For more information about metrics, see the *SAS Web Analytics 5.4: Administrator's Guide*.

The Performance Monitor Report: Basic Concepts

What Are Key Performance Indicators (KPIs)?

A KPI is a metric that you select that tracks the performance of a particular aspect of your business. You must have at least one KPI.

What Is a Goal?

The goal value is assigned by the analyst and should be an attainable level by that metric. Key performance indicators (metrics) can have a goal value assigned to the metric for a specific time period.

What Is Forecasting?

Forecasting analyzes a metric over time (days, weeks, or months) to predict the likely values for the next seven time periods. The analysis uses Econometric Time series techniques to forecast values.

What Is Trending?

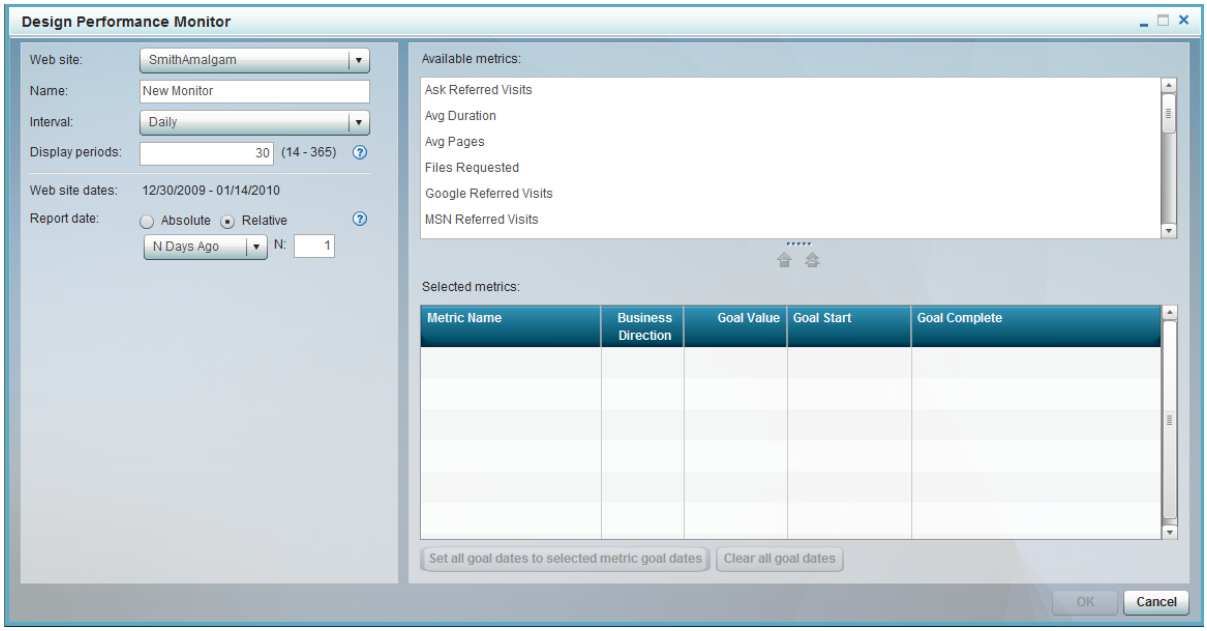
A trend graph plots a metric over time (days, weeks, or months) after a trend analysis is performed. The trend line that is displayed is based on the outcome of the trend analysis.

Input Requirements for the Performance Monitor Report

The Design Performance Monitor Window

For the Performance Monitor report, the following window appears when you select ⇨ **New Performance Monitor**:

Display 3.1 *Design Performance Monitor Window*



The following fields are displayed in the Design Performance Monitor window:

Field	Description
Web site	specifies a collection of related Web pages, or the data that is stored with the Web site's data mart, which contains Web log information.
Name	specifies the name of the report.
Interval	specifies a summary interval. The available options are daily, weekly, and monthly.
Display Periods	specifies the number of intervals that appear on the trend, forecast, and goal graphs. The value of **Display Periods** determines the number of periods that are graphed.
Web site dates	displays the range of dates that are available for the selected Web site.

Field	Description
Report date	specifies the date on which the report data is based. The report date should fall within the range of the Web site dates. You can specify the report date as an absolute date or a relative date. An absolute date is a specific calendar date, such as December 21, 2010. Relative dates express the time difference with respect to today's date. If you want to specify the date as a specific number, **N**, of days, weeks, months, or years ago, you must also enter a value for **N**. The results of an analysis that is based on relative dates change each time you run the analysis because the date is calculated using today's date.
Metric Name	specifies any standard of measurement that is used as a basis for evaluation or comparison. For example, ROI (return on investment) is a metric that is commonly used by businesses as a basis for making decisions, and bytes per second throughput is a common performance metric.
Business Direction	specifies the desired business direction for the metric. You can select a positive (Up) or negative (Down) business direction.
Goal Value	specifies the value that you want the metric to reach.
Goal Start	specifies the beginning date on which you measure a goal.
Goal Complete	specifies the ending date on which you measure a goal.

Default Performance Monitor Reports

By default, SAS Web Analytics automatically creates basic Performance Monitor reports for each Web site. Reports are generated for daily, weekly, and monthly intervals.

The following metrics are included in the report with the specified labels and business directions:

Metric	Metric Label	Business Direction
ASK	Ask Referred Visits	Up
AVG_DURATION	Avg Duration	Up
AVG_PAGES	Avg Pages	Up
FILE_COUNT	Files Requested	Up

Metric	Metric Label	Business Direction
FILE_ERRORS	Status Code File Errors	Down
GOOGLE	Google Referred Visits	Up
MSN	MSN Referred Visits	Up
ONE_HIT_SESSION_COUNT	Visits with One File Request	Up
OTHERS	Other Search Engine Referred Visits	Up
PAGE_COUNT	Pages Viewed	Up
PAGE_VIEW_HIGH_SESSION_CNT	Visits - High Pages Viewed	Up
PAGE_VIEW_LOW_SESSION_CNT	Visits - Low Pages Viewed	Up
PAGE_VIEW_MED_SESSION_CNT	Visits - Medium Pages Viewed	Up
PC_ERRORS	% Errors	Down
SERVER_ERRORS	Status Code Server Errors	Down
SESSION_COUNT	Visits - Total	Up
TOTAL_ERRORS	Total Status Code Errors	Down
YAHOO	Yahoo Referred Visits	Up

The report date is set to the most current completed period (day, week, or month) that is available within the Web data mart. The default name of the report is ***Web-site-name time-interval*** **Site Metrics Monitor**.

Days of Data Needed to Produce the Performance Monitor Report

The Performance Monitor report can be produced no matter how many days of data exist in the input data set. However, the forecast graph does not appear until at least 12 periods of data are available. A data period (day, week, or month interval) is specified in the Monitor definition. The trend graph does not have a trend line until there are 12 periods of data.

The value of **Display Periods** determines the number of periods that are graphed.

Goal Dates

In designing the Performance Monitor report, you can choose to enter no goal dates, either a goal start date or a goal completion date, or both goal start and goal completion dates.

How a Goal Period Is Evaluated

The following rules apply to evaluating a goal period:

- If the goal start date is blank, then the goal value applies to all data that is analyzed before or on the goal end date.

- If the goal end date is blank, then the goal value applies to all data with dates equal to or greater than the goal start date.
- If the goal start and end dates are specified, then that is the period that is analyzed.
- If the goal start date and goal completion dates are blank, then the goal value applies to all dates within the analytical data.

Example of a Performance Monitor Report

The Performance Monitor Report

The name of the Web site, the report name, and the report date appear at the top of the report. If there is a problem with the report output, such as dates that are out of range for the Web site, the report window opens with an icon on the toolbar. Click the arrow, review the error message, correct the error, and then view the report again. If the error involves a date that is out of range, you can quickly change the date by clicking the arrow beside the icon.

The Performance Monitor report contains dial meter indicators so that you can see short-term and long-term performance of each metric. The red area indicates below average performance; the yellow area indicates average performance; and the green area indicates above average performance.

To view a graph, click the graph that you want to view in the Performance Monitor report. The graph opens in a new window beside the report. By default, a table that contains all the values in the graph is also displayed.

Display 3.2 *Performance Monitor Report*

Description of the Fields in the Performance Monitor Report

Field	Description
Metric	specifies the name of a measurement that is selected from the metric list. *Note:* Metric names must not contain the following special characters: “ ^ / \ & ,
Business Direction	specifies whether the metric values should be increasing or decreasing.
Actual	specifies the value of the metric on the report date.
Min	specifies the minimum value of the metric for all data that is available within the analytical data set.
Max	specifies the maximum value of the metric for all data that is available within the analytical data set.
Performance — Short	specifies a Performance Indicator that displays short-term performance. The display is in the form of a dial meter.
Performance — Long	specifies a Performance Indicator that displays long-term performance. The display is in the form of a dial meter.

The **Forecast**, **Trend**, and **Goal** columns display graphs, if graphs are available.

How the Dial Meter Interprets Data

The color of the dial meter indicates short-term performance and long-term performance. The red area indicates "not as intended" performance; the yellow area indicates neutral performance; and the green area indicates "as intended" performance.

The following example shows how to interpret short-term and long-term performance. A monitor was designed that has three metrics. The actual, minimum, and maximum values are listed, along with the dial meter color for short-term and long-term performance:

```
                    Actual Min Max  Short   Long
    400 Bad Request:     0     0   0   yellow  yellow
   401 Unauthorized:     0     0   37  red     yellow
408 Request Timeout:     0     0   0   yellow  yellow
```

The line for 400 Bad Request shows that the value for **Actual** is 0. Even though you want this metric to be low, the Short and Long indicators are yellow and not green. The color of the Long indicator is correct because all of the available data is being used for this metric, and the trend line is flat.

The line for 401 Unauthorized shows that the value for **Actual** is 0. Even though you want this metric to be low, the Short indicator is red and the Long indicator is yellow and not green. The color of the Long indicator is correct because long-term performance evaluates the trend and not the forecast, and all of the available data is being used for this metric. The trend line is going up, but not so significantly that the Long indicator is red.

The line for 408 Request Timeout shows that the value for **Actual** is 0. The forecast line is at 0 and the trend line is at 0. Even though you want this metric to be low, the Short and Long indicators are yellow and not green. The color of the indicators is correct because the color is determined by using auto regression analysis, and that indicates no change to this metric.

Positive or Negative Business Direction

The Business Direction column contains arrow icons that indicate whether the value of the metric should be increasing or decreasing. For example, you might want the values for Google Referred Visits to increase over time. Therefore, the business direction for Google Referred Visits is indicated by an up arrow. For another metric such as Error 404 Count (File Not Found), whose values you want to see decrease over time, the business direction is indicated by a down arrow.

The business direction value for each metric is stored in the Performance Monitor report definition. A user with Web Analytics analyst permissions can create and modify report definitions.

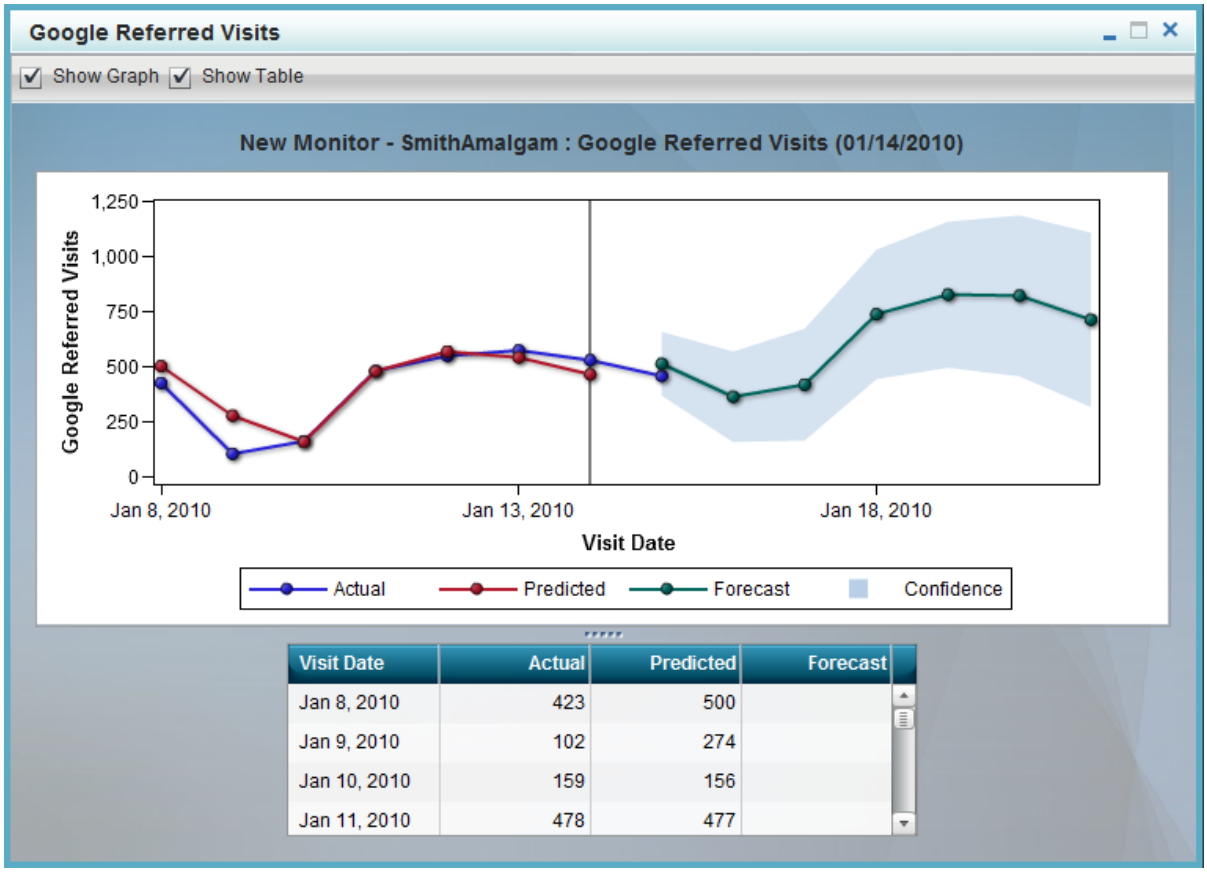
Description of the Graphs in the Performance Monitor Report

Forecast Graph

A forecast graph is available for each metric within the Performance Monitor when there are at least 12 time periods (days, weeks, or months) of data before the selected report date. The graph plots the actual and predicted values of a metric up to the report date. After the report date, forecast values are plotted for the next seven calendar periods (days, weeks, or months).

Here is an example of the forecast graph:

Display 3.3 *Forecast Graph*



The Performance Monitor forecast graph displays the following items:

- Date
- Actual values
- Predicted values
- Forecast values
- Forecast upper confidence limits
- Forecast lower confidence limits

The forecast confidence limits appear as a shaded region to the right of the report date.

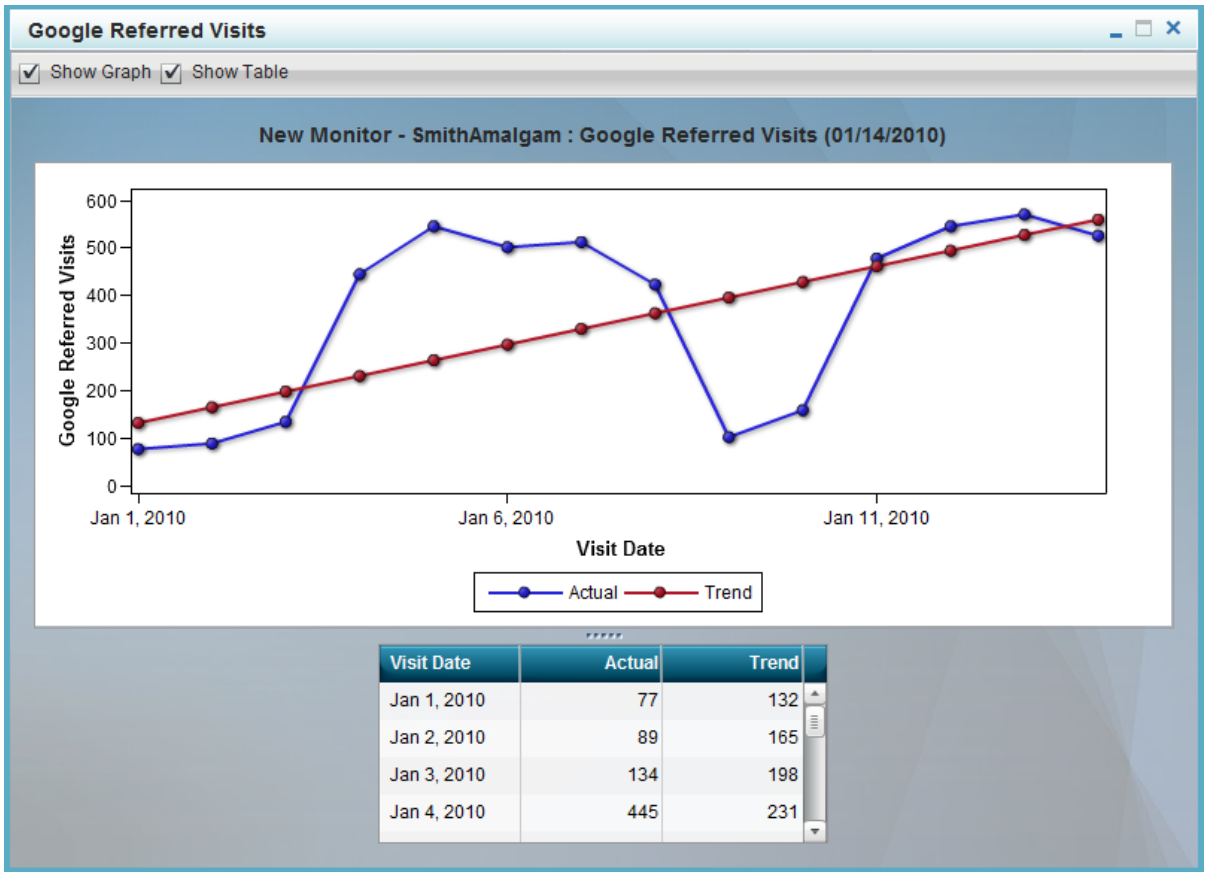
A reference line that denotes the report date appears at the correct day. The forecast values appear to the right of this reference line. If the report is being run for a past date, and actual values exist, then the actual values are plotted to the right of the reference line along with the forecast values.

To view a graph that is associated with the report, click the graph that you want to view. The graph opens in a new window beside the report.

The default presentation of the forecast graph includes both a graph and a data table. To view only the graph, clear the **Show Table** check box . To view only the data table, clear the **Show Graph** check box.

Trend Graph

The trend graph displays all values for a metric up to the report date. A trend line is produced when there are at least 12 calendar periods (days, weeks, or months), up to and including the report date. Upward and downward movements are based on the report data for the requested dates.



The Performance Monitor trend graph displays the following fields:

- Visit Date
- Actual Values
- Trend values

To view a graph that is associated with the report, click the graph that you want to view. The graph opens in a new window beside the report.

The default presentation of the trend graph includes both a graph and a data table. To view only the graph, click the **Show Table** box to deselect the table. To view only the table, click the **Show Graph** box to deselect the graph.

Goal Graph

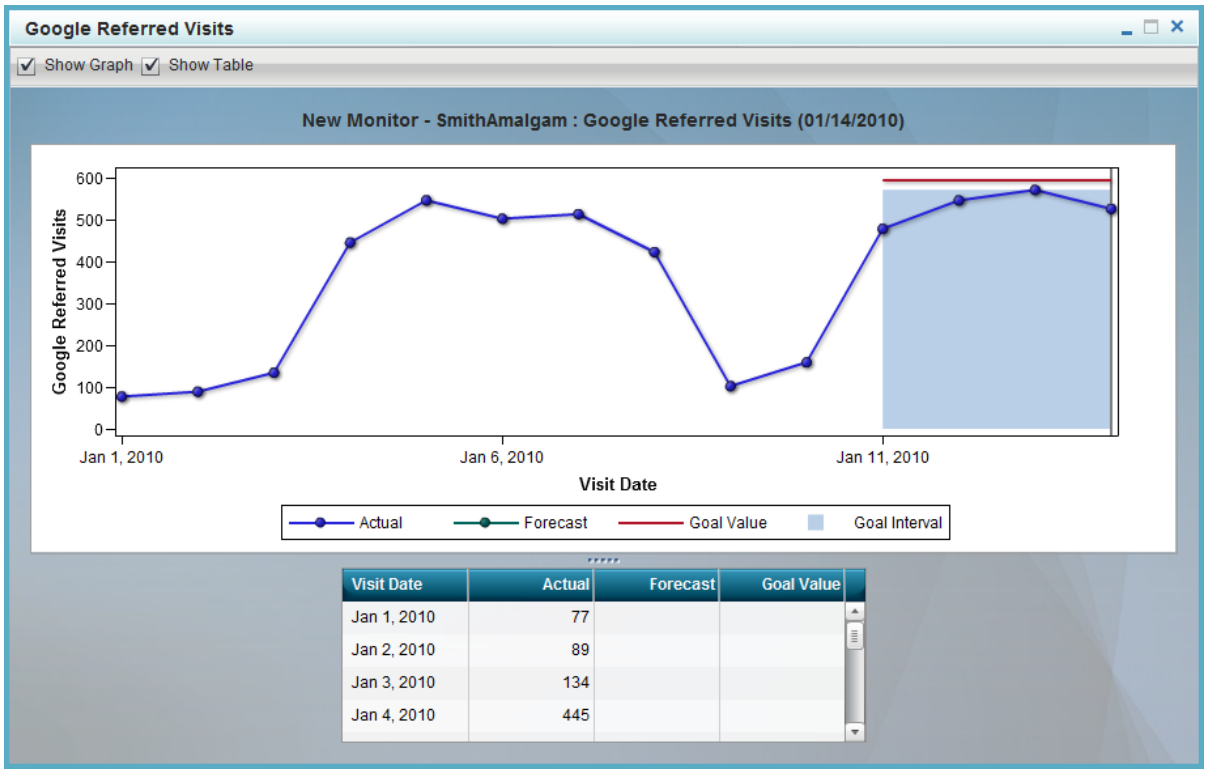
A goal graph is created for a metric if the following criteria are met:

- a goal value was set for a specific metric within the Performance Monitor definition
- the report date that is selected is within the goal start and completion dates

The goal graph can contain a total number of days that are specified in the **Display Periods** field. The dates that the goal graph display include the report date. The goal graph display ends on the goal completion date, or up to eight days past the report date.

The goal graph contains a line that represents the actual values of the KPI with a vertical line that indicates the report date. A forecast line can be present in the graph if the analytical data contains at least 18 days of data, the report date is less than the goal completion date, and the analytical data does not contain actual values for periods after the report date.

Here is an example of a goal graph:



The Performance Monitor goal graph displays the following fields:

- Date
- Actual values
- Forecast
- Goal values (A constant horizontal line denotes the value set for the goal.)

The goal interval is represented by a reference band on the graph.

To view a graph that is associated with the report, click the graph that you want to view. The graph opens in a new window beside the report.

The default presentation of the goal graph includes both a graph and a data table. To view only the graph, clear the **Show Table** check box. To view only the table, clear the **Show Graph** check box.

Design a Performance Monitor Report

Who Can Design a Performance Monitor Report?

To design a Performance Monitor report, you must have SAS Web Analytics Analyst permissions. If you have Report User permissions, you will not be able to design reports.

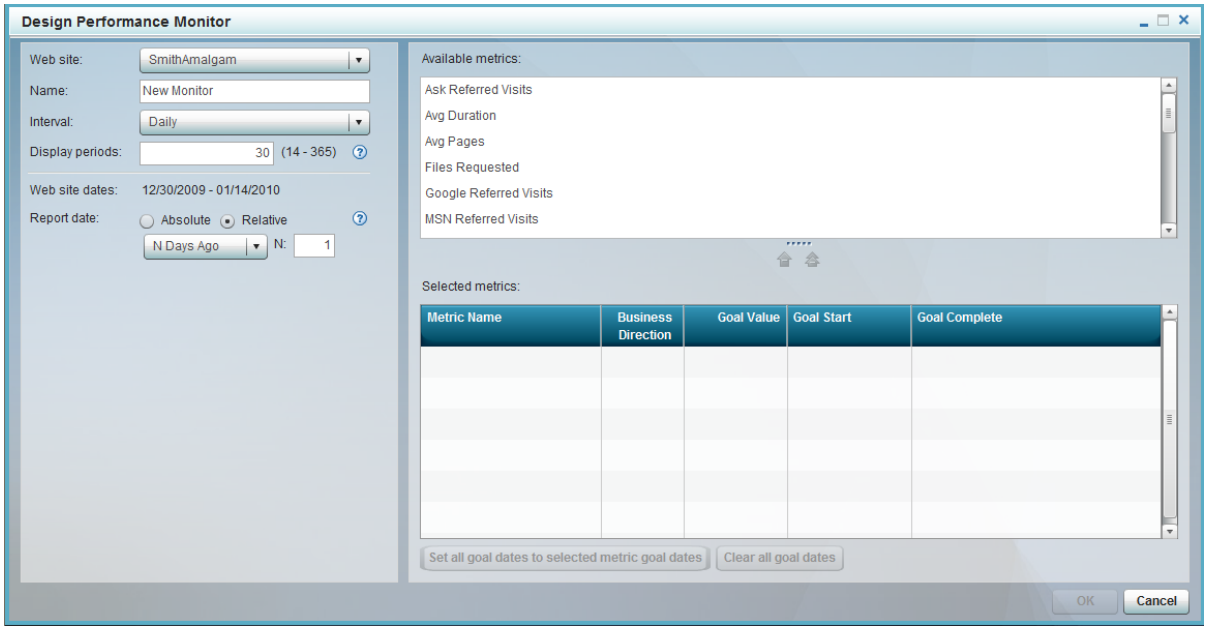
Step 1: Access the Performance Monitor Report Window

Log on to SAS Web Analytics.

Step 2: Open the Design Performance Monitor Window

On the toolbar, select ⇨ **New Performance Monitor**.

The Design Performance Monitor window appears:



Step 3: Select Performance Monitor Properties

1. Select the Web site that you want to use. Click the arrow in the **Web site** field and choose from the list of available Web sites.
2. Enter a name for your report so that you can save the report and open it later.

   Note: Report names must not contain the following special characters: \ / < > * : ? [ ] “
3. Choose a summary interval. The available options are daily, weekly, and monthly.

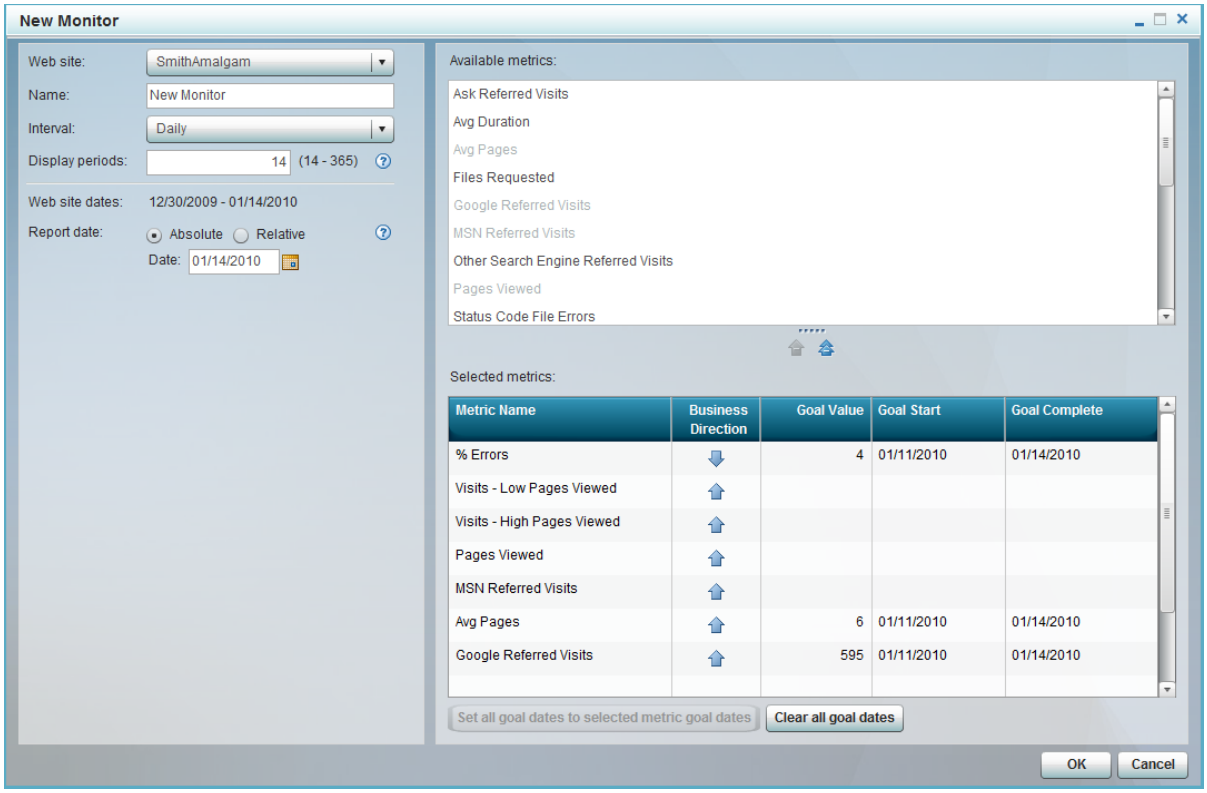
   Note: Goal information is not available for weekly or monthly data.
4. Enter a number in the **Display periods** field.

Display periods are the number of intervals that appear on the trend, forecast, and goal graphs.

5. Select the date on which you want the report data to be based. You can specify the report date as either an absolute date, such as December 21, 2010, or a relative date, such as 7 days ago. If you want to specify the date as a specific number, N, of days, weeks, months, or years ago, you must also enter a value for **N**.

Step 4: Add Report Metrics

1. From the **Available metrics** list, select one or more metrics to add to your report. Click to add the metrics to the **Selected metrics** list. Click to add all of the metrics to the **Selected metrics** list. To remove a metric from the **Selected metrics** list, select one or more metrics and click. To remove all metrics, click. The metrics return to the **Available metrics** list.
2. Click **OK** to run the report.



Step 5: (Optional) Change the Business Direction of a Metric

In the **Selected Metrics** list, you can change the preferred business direction of a metric. By default, the business direction is up, or positive. To change the direction, click the appropriate arrow in the **Business Direction** column. The Performance Monitor report evaluates the metric according to the business direction.

Step 6: (Optional) Enter a Goal Value

Enter a goal value by clicking in a table cell in the **Goal Value** column. The goal value specifies the metric value that you want to meet within the time period specified. If a metric is a time value, then enter the number of seconds for the goal time value. For example, for average duration, if the goal value is 3 minutes and 30 seconds, then enter 210 seconds.

Note: This option is available only when the summary interval is **Daily**.

Step 7: (Optional) Select Goal Start and Goal Completion Dates

A report designer can choose to enter a goal start date, a goal completion date, or both.

Note: These options are available only when the summary interval is **Daily**.

1. Enter a goal start date by clicking in a table cell in the **Goal Start** column. Enter a date or select a date from the calendar.

   The goal start date specifies the beginning of the goal period.

2. Enter a goal completion date by clicking in a table cell in the **Goal Complete** column. Enter a date or select a date from the calendar.

   The goal completion date specifies the date by which the goal should be reached (that is, the end of the goal period).

The goal graph will appear on the Performance Monitor report only if a goal value has been defined

Step 8: View the Performance Monitor Report That You Designed

To view the report that you designed, click **OK**.

Step 9: Save the Report

Click  or  to save your report. When you enter a report name, click **Save**. The report is saved to your directory.

Step 10: (Optional) Changing the Date in a Report

After you have run a report, you can change the date without editing all of the input parameters for the report. To change the date, click the arrow beside the  icon and select the date that you want to use. Click **OK** to save the date and rerun the report.

Change the Input Parameters for a Performance Monitor Report

After you view your report, you can change the input parameters in the following ways:

- Click  on the toolbar of the report.

The Design Performance Monitor window displays the information that you entered when you last updated the report's definition. Change any information in the fields, and click **OK** to rerun the report.

- To change the date of your report, click  on the toolbar and select a new date. No other fields in your report will change. Click **OK** to rerun the report.

Using the Performance Monitor Report to Conduct Business

Identify Business KPI Goals

If you are given a quota that you must reach every week, month, or quarter, you can use the Performance Monitor report to determine whether you are reaching your goal. If you find that you are not reaching your goal based on the current trend, you can determine what you need to do to change the current trend.

Monitor a Web Campaign

You can monitor and report on the status and progress of a Web campaign. Your report contains a campaign metric, and by using the goal capability you can enter the start and end dates for the campaign, and the goal value of the campaign metric. You can report on the current status of the metric relative to the campaign date range and goal. You can forecast where the metric will be on the goal date, and determine whether the campaign is on, above, or below the target you set.

If you monitor a pay per click (PPC) campaign, you monitor visits from each PPC service. You can create metrics that count the number of visits for search engines such as Google, Yahoo, or MSN. For each PPC service you might want the business trend to increase (that is, you might want more visits from each PPC referrer). However, for Yahoo, you might want fewer visits if you are trying to phase out that PPC service. After adding metrics, you can open the Performance Monitor report to see the results for the previous day. If the Yahoo visit count is performing negatively, you can open the trend graph and see that the metric has a decreasing trend, but that currently the metric is above the trend. You can then open the Forecast report and see that the forecast indicates that while the metric might decrease in the short term, it will increase again over time.

Chapter 4

View the Performance and Forecast Values of KPIs

About the Performance Insight Report

You can use the Performance Insight report to determine which metrics can positively affect a specific target metric.The report enables you to determine which variables in the

input data set have a statistically significant impact on the target metric. The Performance Insight report lists the variables in the order of their importance in affecting and predicting the target metric.

The Performance Insight Report: Basic Concepts

What Is a Target Metric?

A target metric is the metric whose value you want to affect by adjusting the other metrics. Selection of a metric depends on business reasons. For example, you might want to determine how the number of visits are affected by various marketing campaigns (pay per click, banner ads, flyers).

What Is an Input Metric?

An input metric is a metric whose value can affect the value of the target metric. For example, an increase in total visits might be associated with visits that start because a potential prospect was sent to your site by a link on a search engine result page.

Target Driver Determination

Performance insight is considered to be data modeling. The target metric is analyzed using High-Performance Forecasting techniques to determine which of the input metrics are associated with the target.

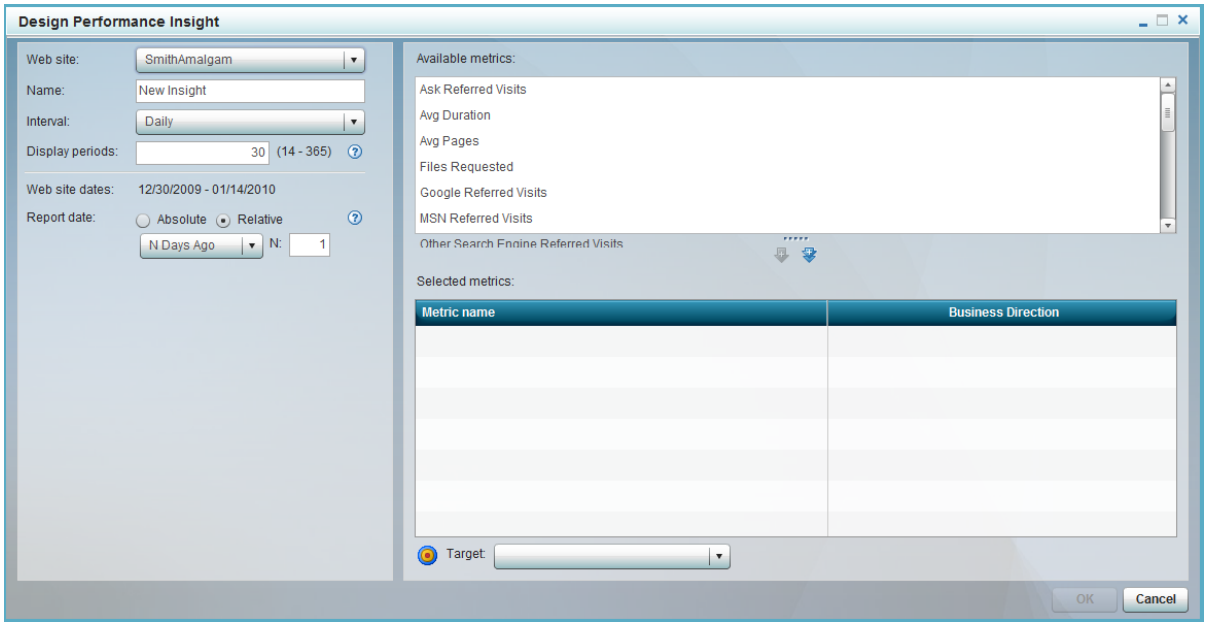
Forecasting Individual Metrics

Forecast analysis occurs for the target metric and for significantly associated input metrics. This analysis is the same as the analysis in the Performance Monitor.

Input Requirements for the Performance Insight Report

The following window appears when you select  ⇨ **New Performance Insight** from the toolbar:

Display 4.1 *Design Performance Insight Window*



The following fields are displayed in the Design Performance Insight window:

Field	Description
Web site	specifies a collection of related Web pages, or the data that is stored with the Web site's data mart, which contains Web log information.
Name	specifies the name of the report.
Interval	specifies a summary interval. The available options are daily, weekly, and monthly.
Display Periods	specifies the number of intervals that appear on the forecast graphs. The value of **Display Periods** determines the number of periods that are graphed.
Web site dates	displays the range of dates that are available for the selected Web site.

Field	Description
Report date	specifies the date on which the report data is based. The report date should fall within the range of the Web site dates. You can specify the report date as an absolute date or a relative date. An absolute date is a specific calendar date, such as December 21, 2010. Relative dates express the time difference with respect to today's date. If you want to specify the date as a specific number, **N**, of days, weeks, months, or years ago, you must also enter a value for **N**. The results of an analysis that is based on relative dates change each time you run the analysis because the date is calculated using today's date.
Metric Name	specifies any standard of measurement that is used as a basis for evaluation or comparison. For example, ROI (return on investment) is a metric that is commonly used by businesses as a basis for making decisions, and bytes per second throughput is a common performance metric.
Business Direction	specifies the desired business direction for the metric. You can select a positive (Up) or negative (Down) business direction.
Target	specifies the target metric for the report. You can choose the target from any of the selected metrics.

Default Performance Insight Reports

By default, SAS Web Analytics automatically creates basic Performance Insight reports for each Web site for which there is enough data. Based on the amount of data that is available, reports are generated for the following intervals:

- Daily interval—if at least 14 days of data are available
- Weekly interval—if at least 12 weeks of data are available
- Monthly interval—if at least 12 months of data are available

The following metrics are included in the report with the specified labels, business directions, and roles:

Metric	Metric Label	Business Direction	Role
ASK	Ask Referred Visits	Up	Input
GOOGLE	Google Referred Visits	Up	Input
MSN	MSN Referred Visits	Up	Input

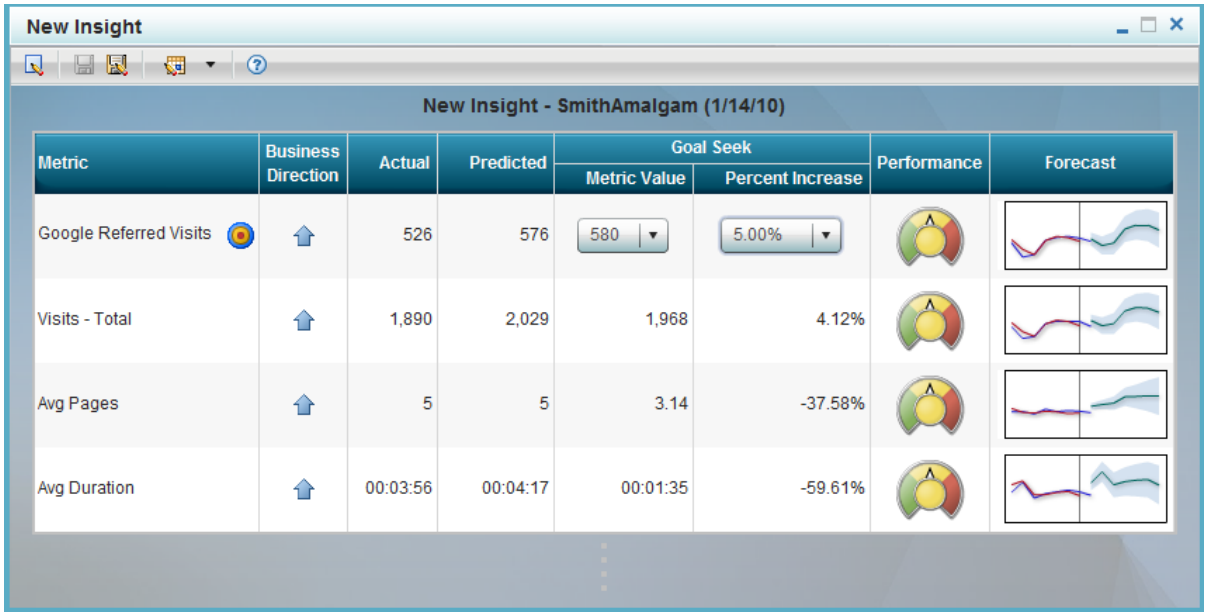
Metric	Metric Label	Business Direction	Role
OTHERS	Other Search Engine Referred Visits	Up	Input
SESSION_COUNT	Visits - Total	Up	Target
YAHOO	Yahoo Referred Visits	Up	Input

The report date is set to the most current completed period (day, week, or month) that is available within the Web data mart. The default name of the report is ***Web-site-name time-interval*** **Search Engine Referrer Insight**.

Example of a Performance Insight Report

The Performance Insight Report

Display 4.2 *Performance Insight Report*



The name of the Web site, the report name, and the report date appear at the top of the report. The report contains the target metrics and only those input metrics that are significantly associated with the target. That is, not all selected input metrics might be associated with the target. It is possible when you initially define a Performance Insight report to not select input metrics that are significantly associated with a target metric.

Each of the metrics contains an arrow icon in the column that indicates the desired business direction for that metric. The **Up** arrow indicates that you want values for that metric to increase, and the **Down** arrow indicates that you want values for that metric to decrease. For example, you might want the values for a metric such as Pages Viewed to increase over time. The business direction for that metric is **Up**. For another metric, such

as an error count, you might want the values to decrease over time. The business direction of this metric is **Down**.

The Performance Insight report contains dial meter indicators so that you can see the short-term performance of each metric. The red area indicates “not as intended” performance; the yellow area indicates neutral performance; and the green area indicates “as intended” performance.

To view a forecast graph, click the graph that you want to view in the Performance Insight report The graph opens in a new window beside the report. By default, a table that contains all the values in the graph is also displayed. A legend identifies the lines in the graph.

Description of the Fields in the Performance Insight Report

Fields	Description
Metric	specifies a measurement that is a KPI. The first metric in a report is always the target metric. All subsequent metrics are input metrics in order of how significantly they are associated with the target. *Note:* Metric names must not contain the following special characters: \ / < > * : ? [ ] “
Business Direction	specifies whether the metric values should be increasing or decreasing.
Actual	specifies the value of the metric for the summary period (day, week, or month) that you request.
Predicted	specifies the predicted value of the metric for the summary period (day, week, or month) that you request.
Goal Seek — Metric Value	enables you to select the specific goal value that you would like for the target metric. When you select a goal value for the target metric, the goal value of each input metric automatically changes to show you the value that would be required for that input metric in order to achieve the goal value for the target metric.
Goal Seek — Percent Increase	enables you to select the specific percent increase that you would like for the target metric. When you select a percent increase for the target metric, the percent increase of each input metric automatically changes to show you how much that input metric would need to increase in order to achieve the specified percent increase in the target metric.

Fields	Description
Performance	specifies the short-term performance of the metric. The display is in the form of a dial meter. The red area indicates "not as intended" performance; the yellow area indicates neutral performance; and the green area indicates "as intended" performance.

The Forecast column displays the forecast graphs, if graphs are available.

How the Traffic Light Interprets Data

For information about how the dial meter interprets data, see"How the Dial Meter Interprets Data" on page 23.

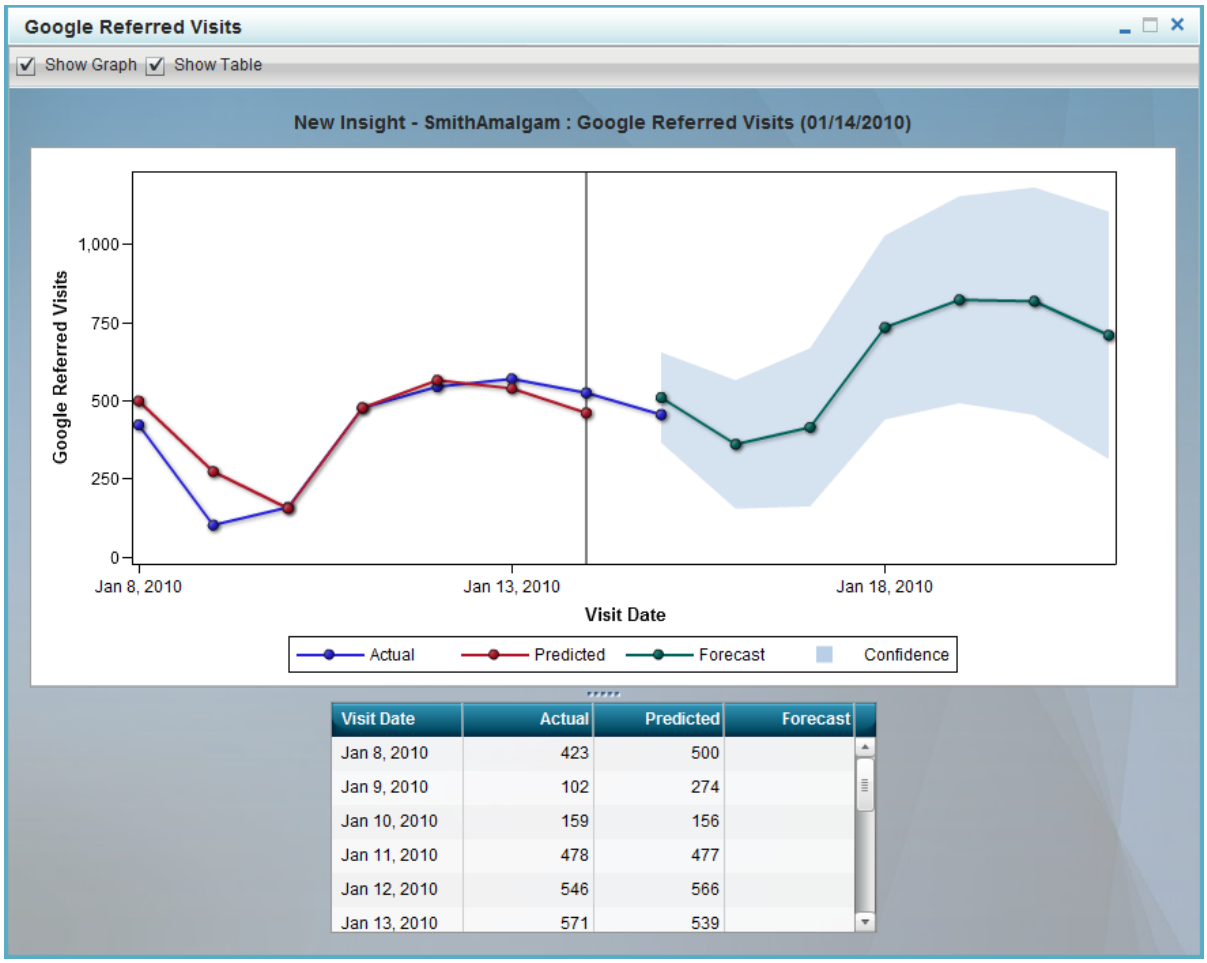
Positive or Negative Business Direction

The Business Direction column contains arrow icons that indicate whether the value of the metric should be increasing or decreasing. For example, you might want the values for Google Referred Visits to increase over time. Therefore, the positive business direction for Google Referred Visits is indicated by an up arrow. For another metric such as Error 404 Count (File Not Found), whose values you want to see decrease over time, the business direction is indicated by a down arrow.

The business direction value for each metric is stored in the Performance Insight report definition. A user with Web Analytics analyst permissions can create and modify report definitions.

The Forecast Graph from a Performance Insight Report

Display 4.3 *Forecast Graph*



Visit Date	Actual	Predicted	Forecast
Jan 8, 2010	423	500	
Jan 9, 2010	102	274	
Jan 10, 2010	159	156	
Jan 11, 2010	478	477	
Jan 12, 2010	546	566	
Jan 13, 2010	571	539	

Description of the Forecast Graph in the Performance Insight Report

The Performance Insight forecast graph displays the following items:

- Date
- Actual values
- Predicted values
- Forecast values
- Forecast upper confidence limits
- Forecast lower confidence limits

The forecast confidence limits appear as a shaded region to the right of the report date.

A reference line that denotes the report date appears at the report day. The forecast values appear to the right of this reference line. If the report is being run for a past date,

and actual values exist, then the actual values are plotted to the right of the reference line along with the forecast values.

There can be a difference between values in the main report and values in the forecast graph. This difference is the result of how the forecast value is created. In the main report, the predicted value is determined by excluding the report date from the forecast analysis. In the forecast graph, the report date is included in the forecast analysis.

Troubleshooting Report Problems

If There Is a Problem with Report Output

If there is a problem with the report output, such as dates that are out of range for the Web site, a  icon appears in the toolbar. Click the arrow, review the error message, correct the error, and view the report again. If the error involves a date that is out of range, you can quickly change the date by clicking the arrow beside the  icon.

When the Response-Seeking Analysis Returns Zero Values

Sometimes there is not enough data to produce a response-seeking analysis even though the report generates data and a forecast graph. In this case, SAS Web Analytics returns an informational message about the analysis you want to perform.

When Your Report Returns No Data

To generate output from your Performance Insight, you must use valid dates for your Web site. Under certain conditions, your report will return no data even if you use valid dates. When this condition occurs, SAS Web Analytics issues the following message:

```
Insight analysis may not find statistically significant drivers for the
target metric.  Please select a date that is greater than the current report
date and rerun or change the input metrics.
```

Insight analysis first uses regression analysis to determine which input variables significantly affect a target in the period (day, week, or month) that is selected. If there is only one driver, the preceding message could be expected. In addition, if you have multiple drivers for a target, the drivers that are significant could vary from period (day, week, or month) to period, and that situation would affect whether you received the message.

Design a Performance Insight Report

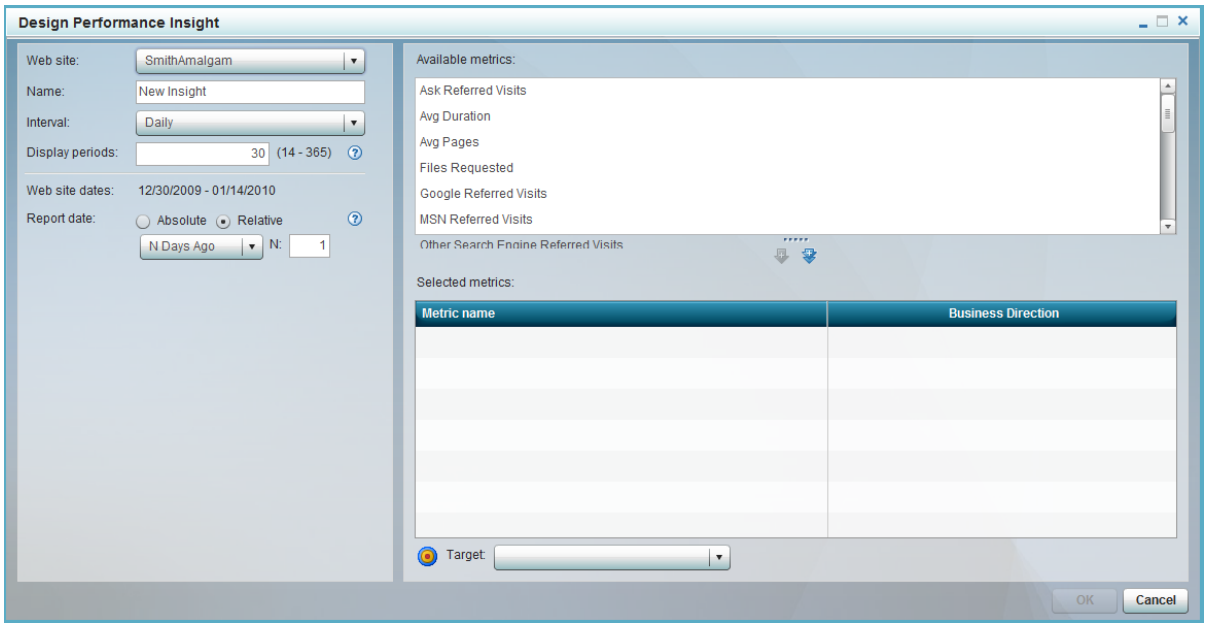
Who Can Design a Performance Insight Report?

To design a Performance Insight report, you must have SAS Web Analytics Analyst permissions. If you have Report User permissions, you will not be able to design reports.

Step1: Access the Performance Insight Report Window

1. Log on to SAS Web Analytics.
2. On the toolbar, select ⇨ **New Performance Insight**.

   The Design Performance Insight window appears:



Step 2: Select Performance Insight Properties

1. Select a Web site which contains the data for your report. Click the arrow in the **Web site** field and choose from the list of available Web sites.
2. Enter a name for your report so that you can save the report and open it later.

   Note: Report names must not contain the following special characters: \ / < > * : ? [ ] “
3. Choose a time interval. The available options are daily, weekly, and monthly.
4. Enter a number in the **Display Periods** field.

   Display periods are the number of intervals that appear on the forecast graph.
5. Select the date on which you want the report data to be based. You can specify the report date as either an absolute date, such as December 21, 2010, or a relative date, such as 7 days ago. If you want to specify the date as a specific number, N, of days, weeks, months, or years ago, you must also enter a value for **N**.

Step 3: Add Report Metrics

From the **Available metrics** list, select one or more metrics that you want to add to your report. Click to add the metrics to the **Selected metrics** list. Click to add all of the metrics to the **Selected metrics** list. To remove a metric from the **Selected metrics** list,

select one or more metrics and click . To remove all metrics, click . The metrics return to the **Available metrics** list.

Step 4: Select a Target Metric

Select a target metric by clicking the arrow in the **Target** field. You can choose from any of the metrics that you have added to the **Selected Metrics** list.

Step 5: (Optional) Change the Business Direction of a Metric

In the **Selected Metrics** list, you can change the preferred business direction of a metric. By default, the business direction is up, or positive. To change the direction, click the appropriate arrow in the **Business Direction** column. The Performance Insight report evaluates the metric according to the business direction

Step 6: View the Performance Insight Report That You Designed

To view the report that you designed, click **OK**.

Step 7: Save the Report

Click or to save your report. When you enter a report name, click **Save**. The report is saved to your directory

Step 8: (Optional) Changing the Date in a Report

After you have run a report, you can change the date without having to edit all of the input parameters for the report. To change the date, click the arrow beside the icon and select the date that you want to use. Click **OK** to save the date and rerun the report.

Change the Input Parameters for a Performance Insight Report

After you view your report, you can change the input parameters in the following ways:

- Click on the toolbar of the report.

  The Design Performance Insight window displays the information that you entered when you last updated the report's definition. Change any information in the fields, and click **OK** to rerun the report.

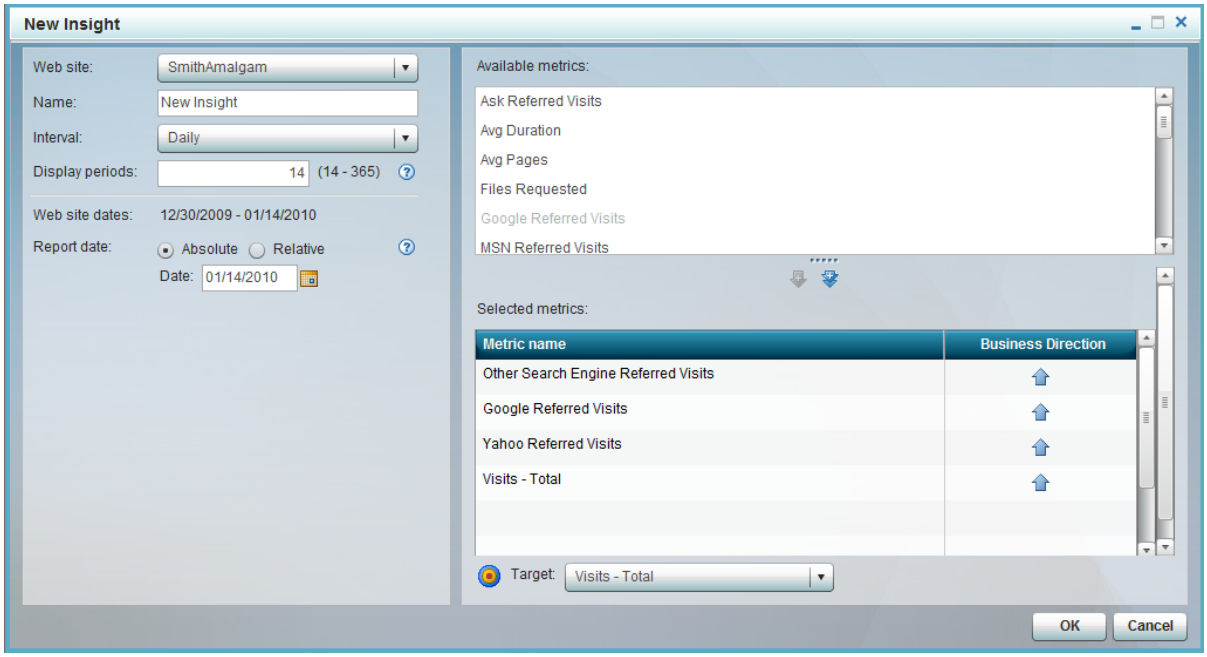
- To change the date of your report, click on the toolbar and select a new date. No other fields in your report will change. Click **OK** to rerun the report.

Using the Performance Insight Report to Conduct Business

You can use the Performance Insight report to answer specific questions. In the following example, this question is answered: Which search engines drive visitors to your Web site? The report is set up as follows: The target metric is equal to the number of total visits. The input metrics equal the number of visits referred by Google, the visits referred by Yahoo, and the visits referred by other search engines.

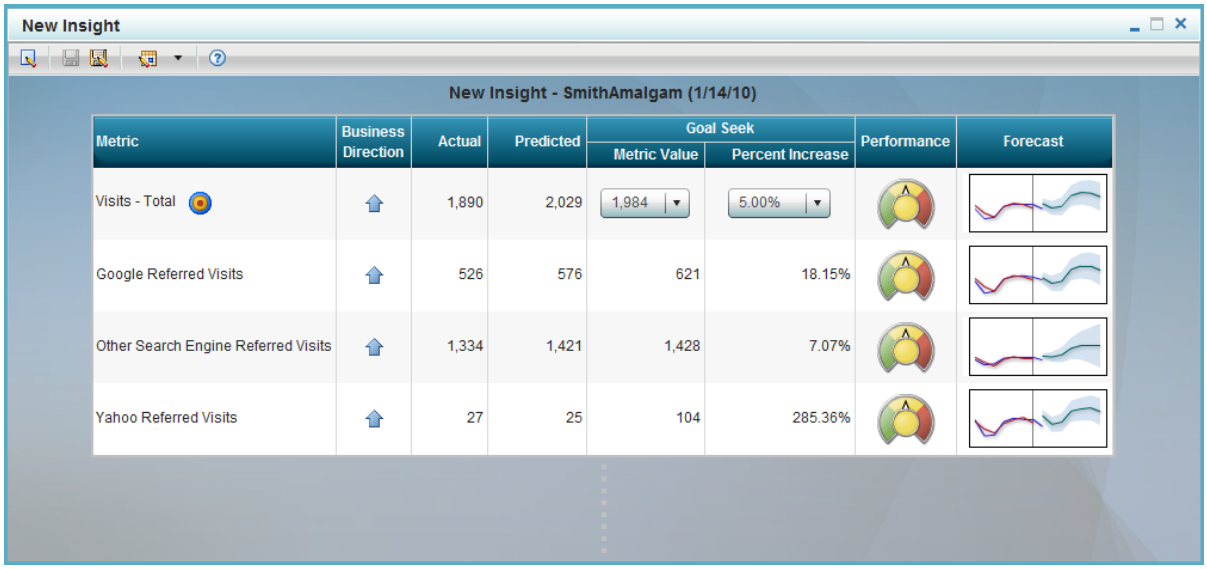
The following example shows the report definition:

Display 4.4 *Business Case Example of a Performance Insight Report*



The following example shows the report output:

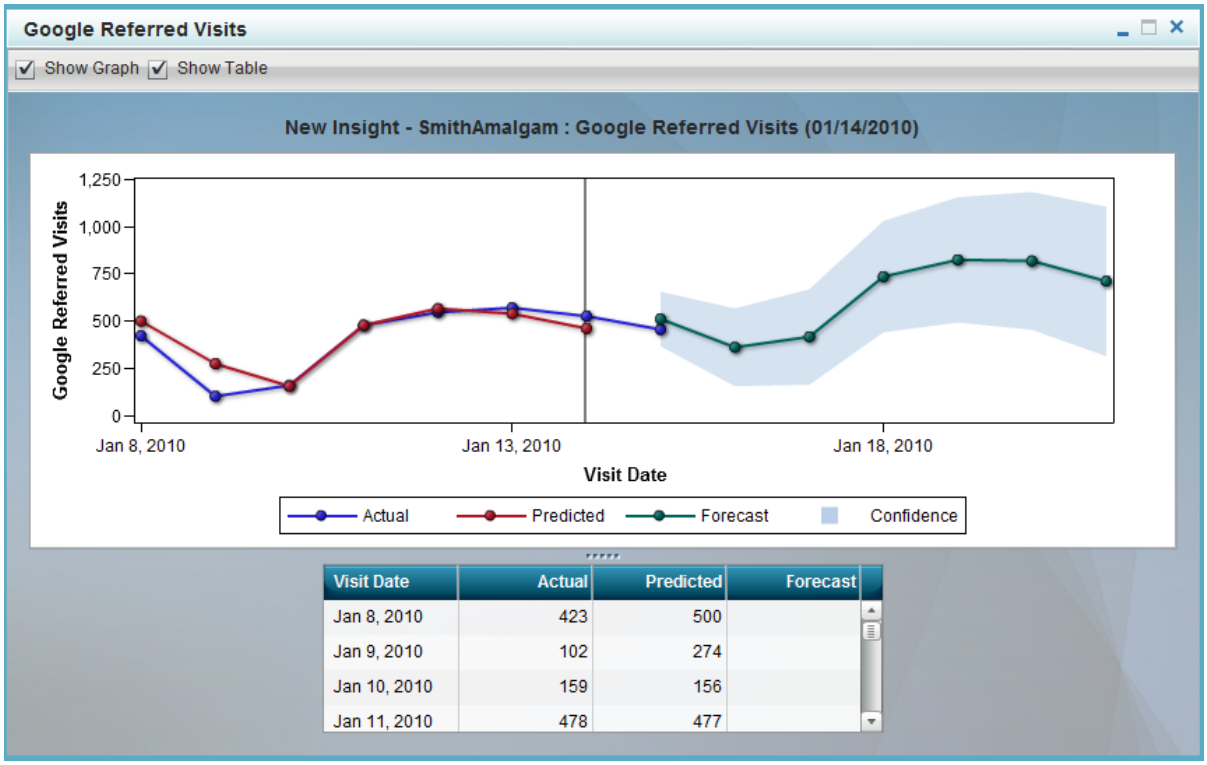
Display 4.5 *Business Case Report Output*



To display both the forecast graph and table, click the graph that you want to view.

The following example shows the forecast graph for the target metric:

Display 4.6 *Business Case Forecast Graph*



The analysis can initially be run on daily data to determine what the drivers are on different days of the week or at different times of the year. Once enough data has been collected, you can run the same analysis on weekly and monthly data.

Chapter 5

Analyze Paths That Visitors Take to Your Web Site

About Path Analysis

The purpose of path analysis is to analyze the sequence of Web pages that were visited within your Web site. A path can begin with one or more designated starting pages, and end at one or more designated ending pages. The path analysis process gathers information about which pages visitors are viewing and the order in which the pages are being seen. Path analysis can identify the sequence of page requests that have the following characteristics:

- begin with a designated start page
- end with a designated stop page
- both begin and end with designated start and stop pages, respectively

One main use of path analysis information is to help focus Web site redesign efforts to increase visitor movement to high value pages within your site.

Basic Concepts of Path Analysis

Path Analysis Concepts

Path analysis creates a report that you can use to track visitor navigation patterns from or to a specified page within your Web site.

A path is a set of pages requested by a visitor in the order that they are viewed.

The Path interface enables the user to dynamically create and run path report definitions. A path report definition consists of the selection of a Web site, starting and ending pages, and the optional selection of one or more profiles.

Profiles are sets of filtering criteria that are defined for your data and are used to subset the data in the results. Profiles are created during the Extract, Load, and Transform (ETL) process and defined by the ETL administrator or developer.

Example of a Path Report

A Path Report

Display 5.1 *Path Report*

Web Site Dates in the Report Title

The date range that is displayed in the report title shows the dates that were requested. The date range does not indicate which dates actually contributed data to the report. As long as at least one day within the date range has pathing data, the report is created and the title shows the requested dates.

Output Fields in a Path Report

Field	Description
Page	specifies a page in a path that was visited by visitors to the Web site.
Related reports	enables you to run a page overlay  or funnel report  based on the same criteria that you used to define the path report.
Visits	specifies the number of visits to the page via the path. Only visits that originate on the start page and follow the path are counted. If the page is the start page then **Visits** is the number of visitors that have viewed the page.
% Entry page	specifies the percentage of visitors who advanced to this page in the path from the start page.
% Retention	specifies the percentage of visitors who advanced from the previous page in the path. **% Retention** is calculated by dividing the number of visits to the current page by the number of visits to the preceding page in the path.
% Total Visits	is the number of visits to a page within a path (see **Visits** above) divided by the total number of visits to a Web site for the selected date range.

Understanding Paths

The **Page** field in a Path report displays the multiple paths viewed by visitors to your site during a specific time period. The pages are displayed in an indented format so that you can see the order in which visitors traversed pages in your site. The + and – boxes enable you to expand and collapse the path. Each successive indention is the next page viewed within the path. Two paths are shown in the Path report example. Each path begins in the leftmost position in the table.

The home page is represented as a slash. The first level of indention is the second page that was visited, the third level of indention is the third page, and so on. The last level is the page at the end of the path. The number of indentions (levels of data) is related to the number that you entered in the **Path Length** field. If you enter 3 as the minimum path length, then the results will show paths that have at least three levels. If you enter 18 as the maximum path length, then paths up to eighteen levels will display. The level of indention displays as a hierarchy. Each successive path in the report contains the previous path.

After performing ad hoc exploratory queries, you might find that you want to save one of the reports. You can do this by clicking or on the toolbar. One of the reasons that you might want to keep the report is to monitor the information every day.

Differences between Path and Funnel Output

The Path report is different from the Funnel report in the following ways:

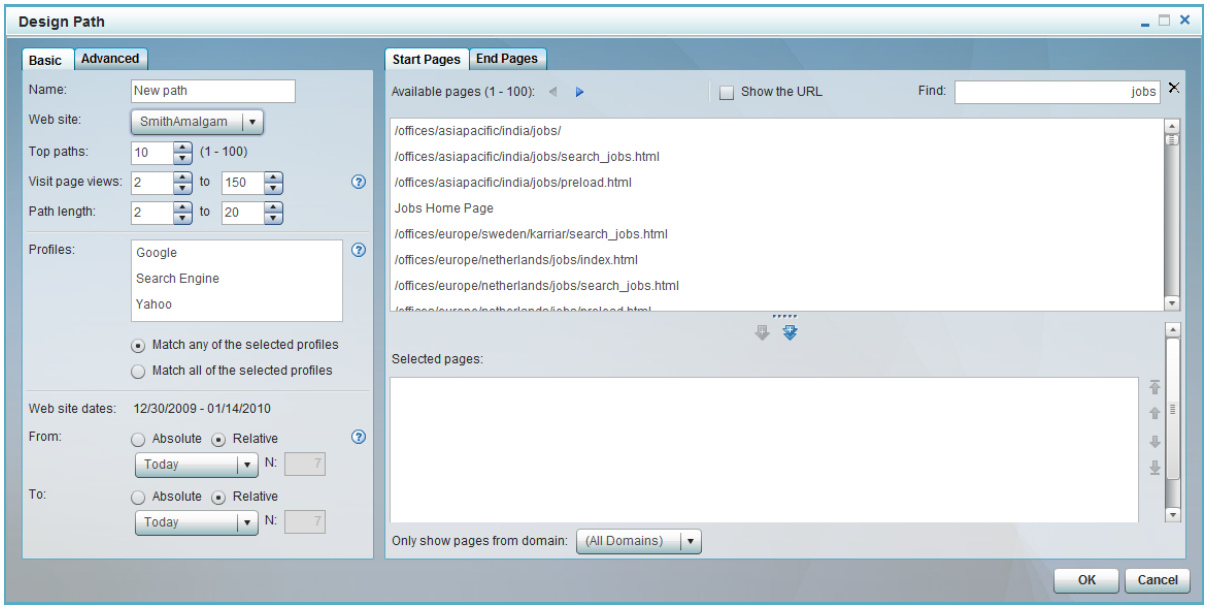
- Each report has different presentation and aggregation strategies. For the Path report, each subpath is aggregated based on where it is within the whole path. For the Funnel report, aggregates are based on the page visits and not on where it is within the session.
- There are no one-hit sessions in a Path report, while the Funnel report includes them.
- The Path report can be limited by the **Top paths**, **Visit page views**, and **Path length** fields, depending on whether these are entry page parameters. The Funnel report does not have these limitations.

Input Requirements for Designing a Path Report

The Design Path Window

Before you view your report, you must enter data for the fields in the Design Path window. The following display shows the default input window for the Path report. A description of the fields in the Design Path window follows the display:

Display 5.2 *SAS Web Analytics - Design Path Window*



Fields on the Basic Tab of the Design Path Window

Description of Input Fields

The following table describes the input fields on the **Basic** tab of the Design Path window:

Field	Description
Name	specifies the name of the report.
Web site	is a shortened form of the term Web data mart, which refers to a data mart that contains information about a Web site's visits and related customer intelligence.
Top paths	specifies the number of paths that are returned to the user based on the number of visitors viewing a specific path. The range for this field is 1–100.
Visit page views	specify an upper and lower limit for the number of page requests for a visit. Visits with a number of page requests that exceed or are below the specified range are excluded from the Path report. The range for this field is 2–150.
Path length	specifies the minimum and maximum length of paths that you want to track. The range for this field is 2–20.
Profiles	are sets of filtering criteria that are defined for your data and are used to subset the data in interactive analysis results. For example, a profile might include a category for visits that are driven by the Google search engine. If you select this profile, then the results of your analysis include only data for visits that were sent to the site by Google. If you select more than one profile, then you can subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.
Web site dates	displays the range of dates that are available for the selected Web site.

Field	Description
From and **To**	specifies the start and end dates of the data in the report. For path analysis, only path data from the last 30 days of data stored in the Web site is available by default. The number of days of data which is available is set in the ETL job weba_2300_create_pathing_analytics. You can specify the dates as absolute dates or as relative dates. An absolute date is a specific calendar date, such as December 21, 2010. Relative dates express the time difference with respect to today's date. If you want to specify the date as a specific number, **N**, of days, weeks, months, or years ago, you must also enter a value for **N**. The results of an analysis that is based on relative dates change each time you run the analysis because the date is calculated using today's date. The Web site dates specify the range of dates for which data is available from the Web site. However, for path analysis, only a subset of data is available for reporting. By default, the most recent 30 days of data stored in the Web site is available. Ask your Web Analytics Administrator to determine if the default value has been changed.

Set the Top Number of Paths That Are Displayed

Top Paths specifies the number of paths that are displayed within a report based on the number of visits. If you view your output and find that the value for **Top Paths** is too low (not enough paths are displayed) or too high (too many paths are displayed), you can change **Top Paths** and view an updated report.

Select a Value for the Visit page views Field

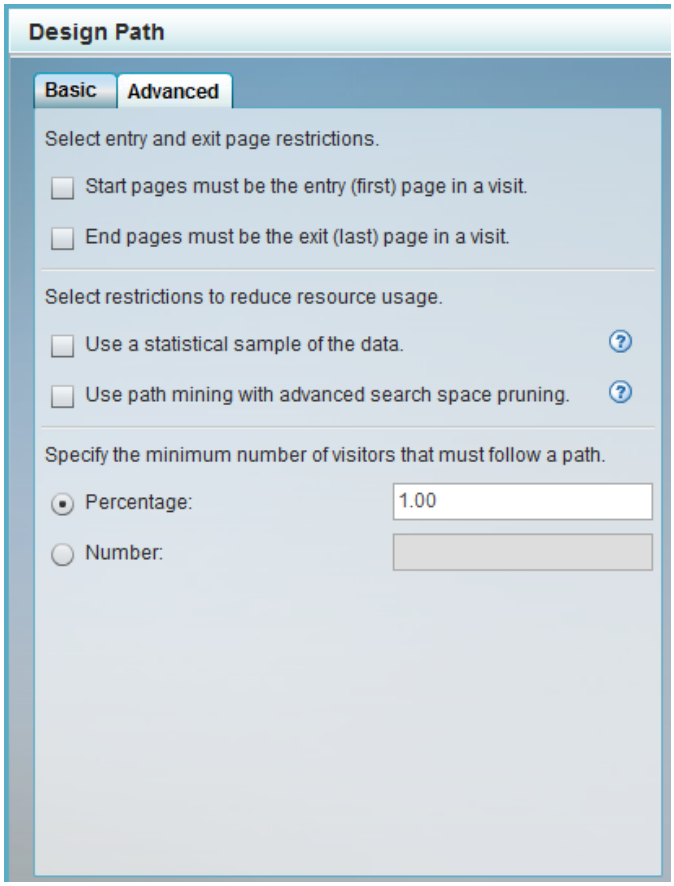
The **Visit page views** field sets an upper and lower limit on the number of page requests that a visit can have before it is excluded from the analysis. If the number of page requests exceeds or is below the value in **Visit page views**, then the Path report does not include any data from that visit in the analysis. For example, if you set the **Visit page views** range to 2 – 100, then the visit pages requested must fall between 2 and 100. If the number of page requests exceeds 100, then SAS Web Analytics does not use any of the data because it assumes that the visit was the result of an automated process (such as a spider) and not a human visitor.

Fields on the Advanced Tab of the Design Path Window

Description of Input Fields

The following display shows the **Advanced** tab of the Design Path window:

Display 5.3 *Advanced Tab of the Design Path Window*



The following table describes the input fields on the **Advanced** tab of the of the Design Path window:

Field	Description
Start pages must be the entry (first) page in a visit	specifies that the pages that are specified in the **Selected pages** list on the **Start Pages** tab must be the first page in a visit.
End pages must be the exit (last) page in a visit	specifies that the pages that are specified in the **Selected pages** list on the **End Pages** tab must be the last page in a visit.
Use a statistical sample of the data	specifies that a subset of the data be used to create your report. Select this option to reduce the amount of data that is processed without reducing the date range or the minimum number of visitors for the paths, or as an alternative to using search space pruning. Selecting this option is a good choice when the report takes too long to generate, or when the report creation fails due to resource limitations.

Use path mining with advanced search space pruning	is a technique for reducing the resources that are required to produce a path report by limiting the criteria used to define candidate paths. This enables the path report to process more data without using a statistical sample of the data. A start page, an end page, or both must be specified. When you select this option, the list of paths that are returned might not include all possible paths because of the pruning techniques that are used. Specifically, only the first path in a visit that matches the start page specifications, the end page specifications, or both is selected and counted.
Specify the minimum number of visitors that must follow a path	enables you to specify a minimum percentage or number of visitors that must follow a path for it to be included in the report.

Selecting Profiles

Categorize Visits by Using Profiles

Profiles are sets of filtering criteria that are defined for your data and are used to subset the data in path analyses, funnel analyses, and page overlays. A profile can be programmed to key off of any event that happens within a visit. For example, a profile might include a category for visits that are driven by the Google search engine. If you select this profile, then the results of your analysis include only data for visits that were sent to the site by Google.

It is important to set up your use of profiles carefully, keeping in mind the relationship among the profiles. In the example of the Path report, the following three profiles have been defined:

- The Google profile contains all visits that were referred to a site by Google.
- The Yahoo profile contains all visits that were referred to a site by Yahoo.
- The Search Engines profile contains all visits that were referred to a site by any search engine.

If you select both the Search Engines profile and either the Google or Yahoo profile, the results do not include any additional visits because Google and Yahoo visits are already included as search engine visits. You need to decide which profiles or profile combinations you want to use as filters.

If you select both the Google and Yahoo profiles and then select the **Match any of the selected profiles** option, then the results include both visits that were referred by Google and by Yahoo. If you select the **Match all of the selected profiles** option, no results are returned because these profiles are mutually exclusive. That is, you can either come to a site through Google or Yahoo, but not through both search engines at the same time.

You need to evaluate the relationship among the profiles that you define to determine whether you want to include visits in multiple profiles. Part of this evaluation depends on how you define your profiles. The other part depends on whether you select the **Match any of the selected profiles** option or the **Match all of the selected profiles** option.

If your ETL administrator creates profiles for a Web site, these profiles will be displayed in the **Profiles** section of the window whenever you use the Web site to design a new Path report.

Select the Profile Option

Profiles are used in conjunction with the options that control the relationship among the profiles. When you select the **Match all of the selected profiles** option, a visit is included only if it fits all of the profiles that you have selected. When you select the **Match any of the selected profiles** option, a visit is included if it matches any of the profiles that you have selected.

How Profiles Are Implemented

You select profiles from a list of available profiles that are created during the ETL process. These profiles act like filters, and are displayed in the Profiles section of the Design Path window.

Add Start and End Page Metrics

The path analysis tracks how groups of visitors move through a Web site. The starting page identifies the starting point for a path, and the ending page identifies the last page within the path. The number of intervening page requests is controlled by the **Path Length** field.

It is important to know the start page that a group of visitors viewed if you want to track where the visitors first entered a Web site, regardless of the destination, as well as to track subsequent visits to other pages. It is important to know the end page that a group of visitors viewed if you want to know the destination, regardless of the path taken to that destination. Selecting both start and end pages tracks the path of a visitor up to the limits you set in **Path Length**. If you know the path that visitors follow, you can alter your Web site so that visitors are less likely to leave the path.

For example, you might want to specify a start page to help analyze the success of an e-mail campaign that includes a customized link in an e-mail message. You want to know if visitors are clicking the link and starting their visit with the page that is specified in the e-mail. In this case, you would specify the Web site in the e-mail as a start page. You would also use the **Start pages must be the entry (first) page in a visit** option to ensure that the analysis includes only paths in which users enter the Web site using the specified start page. While this does not mean that every visitor who entered the Web site with the start page used the e-mail link, the results can be useful in a comparison of data before and after the e-mail campaign was started.

Change the Input Parameters for a Path Report

After you view your report, you can change the input parameters in the following ways:

- Click  on the toolbar of the report.

  The Path window displays the information that you entered when you last updated the report's definition. Change any information in the fields, and click **OK** to rerun the report.

- To change the date of your report, click  on the toolbar and select a new date. No other fields in your report will change.

Click **OK** to display the updated report.

Add a Sub-Profile

After you view your report, you can further refine the results by adding one or more sub-profiles. Sub-profiles are used with the profiles that you selected when you created the report. The sub-profiles that you select are combined with the profiles by using an AND operator.

Suppose that you have created a report that uses a Search Engine profile to return only results that were sent to the site by a search engine. You could then add a Google sub-profile to further specify that you want to include only results that were sent to the site by the Google search engine.

To add a sub-profile, click  on the report toolbar and select one or more sub-profiles. If you select more than one sub-profile, you must specify the relationship among the sub-profiles. To subset the data by one or more of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match all of the selected profiles**. Click **OK** to display the updated report.

Note: Sub-profile selections cannot be saved.

Design a Path Report

To design a Path report:

1. Log on to SAS Web Analytics.
2. On the toolbar, select  ⇨ **New Path**.

   The Design Path window appears.
3. Click the **Basic** tab.
4. Enter a name for your report so that you can save the report and open it later.

   Note: Report names must not contain the following special characters: \ / < > * : ? [ ] “
5. Select a Web site by clicking the down arrow to the right of the **Web site** field.
6. In the **Top Paths** field, enter the number of paths that you want returned to you.
7. In the **Visit page views** field, enter or select values for the minimum and maximum number of page requests that a visit must have in order to be included in the analysis.
8. In the **Path length** field, enter or select values for the minimum and maximum length that a path must have in order to be included in the analysis.
9. From the **Profiles** window, select one or more profiles. If you select more than one profile, then you can choose to subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.

10. In the **From** and **To** fields, select the range of dates on which you want the report data to be based. For path analysis, only path data from the last 30 days of data stored in the Web site is available by default. You can specify the report date as either an absolute date, such as December 21, 2010, or a relative date, such as 7 days ago. If you want to specify the date as a specific number, N, of days, weeks, months, or years ago, you must also enter a value for **N**.
11. Click the **Advanced** tab.
12. To specify that the start pages be the first requested page in any visits that are included in the report, select **Start pages must be the entry (first) page in a visit**.
13. To specify that the end pages be the last page in any visits that are included in the report, select **End pages must be the exit (last) page in a visit**.
14. To reduce the amount of data that is processed by creating a statistical sample, select **Use a statistical sample of the data**.
15. To limit the criteria that are used to define possible paths in the report, select **Use path mining with advanced search space pruning**.
16. To specify a minimum percentage or number of visitors that a path must have to be included in the report, select either **Percentage** or **Number** and enter the appropriate value. The percentage value must be between 0.01 and 100. The numeric value must be an integer that is greater than or equal to 1. You must enter a value for one of these options.
17. To add start pages, click the **Start Pages** tab.
18. From the **Available pages** list, select one or more pages that you want to add to your report. Click to add the pages to the **Selected pages** list. Click to add all of the pages to the **Selected pages** list. To remove a page from the **Selected pages** list, select one or more pages and click . To remove all pages, click . The pages return to the **Available pages** list.
19. To add end pages, click the **End Pages** tab and repeat the above step by adding one or more pages from the Available Pages window:
20. On the **Start Pages** and **End Pages** tabs, you can also perform the following tasks:
    - Check the **Show the URL** box to show the complete URL (including protocol and domain) for the pages in the list.
    - Select a domain from the **Only show pages from domain** field by clicking the arrow that is located to the right of the field. The domain you select restricts the list of URL pages to those that are found in the domain.
    - (Optional) In the **Find** field, enter a string that you want to search for, and then press ENTER to begin the search.
    - Click the and buttons to display the previous and next lists of URLs. You can also scroll through the list using the scroll bar on the right side of the display.
    - To find a Web page within a specific domain, select a domain from the **Only show pages from domain** field, and then enter your search criteria in the **Find** field and press ENTER. Pages that contain the string you searched for appear at the top of the list.
21. Click **OK** to run the report.
22. To save your path definition, click or on the toolbar.

If SAS Returns No Output

If SAS returns no output, then you might not have specified valid parameters for your Web site. At the top of the page, click the icon in the toolbar.

Follow the instructions in the message, correct the error, and view the report again. If the error involves a date that is out of range, you can quickly change the date by clicking the arrow beside the button.

If the error involves the profiles that you have selected, you can quickly change the profiles by clicking the arrow beside the button.

Select a Page Overlay or a Funnel Report from a Path Report

When you run a path report, you can also create a page overlay or a funnel report that is based on the same criteria that you used to define the path report. The page overlay displays the selected Web page in the path report with the metrics for each link, such as number of clicks and number of unique visitors, overlaid on the page. The funnel report tracks the number of visitors from the root of the path to the selected Web page in the path report.

To run a page overlay, click the icon beside the appropriate page in the path report.
To run a funnel report, click the icon beside the appropriate page in the path report.

The values that you specified for the From date, To date, and Profiles in the path report are also used for the page overlay and funnel report. In addition, the following criteria are used:

- If you are creating a page overlay from a path report, the URL for the page overlay is the URL of the selected page in the path report.
- If you are creating a funnel report from a path report, the pages in the funnel definition are the pages that occur from the root of the path to the selected page in the path report.

For all of the other options, the default values are used.

Chapter 6

Direct Report Data

About Funnel Reporting

Web sites are designed to lead visitors through a series of Web pages to a destination Web page such as an advertisement, a news article, or a purchase page. You can analyze this traffic over a period of time, and change the design of your Web site to better funnel visitors to the desired page.

A Funnel report can be designed to track the navigation of a visitor to a specific page within the Web site. Visitors to a Web site are categorized as either prospects or non-prospects. Prospects are visitors who visit the first node in the funnel and therefore have the chance of visiting all of the nodes in the funnel. A non-prospect is a visitor who enters the funnel by visiting a page other than the first node in the funnel. By identifying prospects and non-prospects, a Funnel report shows how traffic is routed from node to node. Only visitors described as prospects enter the first node of the funnel. From there, the distinction is made between prospects and non-prospects.

Basic Concepts of Funnel Design

When you design a funnel, you are actually designing a funnel definition. A funnel definition contains a sequential list of Web pages that constitutes how visitors navigate through a Web site. A funnel definition is defined by your system administrator, but you can change some of the parameters when you design a funnel report.

If you have the appropriate permissions, you can save the funnel definition and run reports by using this definition with different data. Designing a funnel enables you to track the number of visitors who begin on a particular Web page and end at a desired Web page within the site. You can design a funnel to encourage users to take a different route to a desired page. The order of pages in the path is critical. When you design a funnel report, you must select a start page and an end page, as well as all of the intermediate pages visitors are likely to visit.

The funnel tool, which is designed to funnel traffic through a series of Web pages, analyzes Web traffic as it relates to arrival at a destination. It does this by attaching a visitation history to a predefined path.

Designing a Funnel: An Example

If you are a manufacturer and you have one item for sale through your Web site, you can design a funnel definition to help you keep visitors on your Web site so that they will purchase the item. To do this, assume you have three Web pages:

- Page1 (www.example.com)
- Page2 (www.example.com/item1)
- Page3 (www.example.com/purchase)

Page1 (www.example.com) is the home page; page2 (www.example.com/item1) is an informational page about the item; and page3 (www.example.com/purchase) is the order page for the item. These Web pages are referred to as funnel pages. Each page is referred to as a node, and the order of the pages is critical. Information about visitors who proceed from page 1 to page 3 is more important than information about visitors who proceed from page 3 to page 2. The goal for this funnel is for the visitor to go from the first funnel node and travel through the funnel.

Each pair of abutting funnel nodes within a particular funnel can be defined as adjacent or nonadjacent. Adjacent nodes require sessions to progress immediately from one funnel node to the next in order to remain in the funnel. If this progression fails, the visitor is considered to have exited the funnel. Conversely, nonadjacent nodes can visit any number of pages in between funnel node hits and remain in the funnel.

You can change the preceding example by adding another item for sale, and adding another Web page to your site. The new page is called item2, which is an informational page about item2. Page 1 now has two informational links on it—one for item1 and another for item2. Page 2 has a link to item2. With this scenario, a visitor might travel the following path:

1. Begin at www.example.com.
2. Click www.example.com/item2.

3. Decide this item is not acceptable and proceed to click www.example.com/item1.
4. From www.example.com/item1, click www.example.com/purchase to purchase the item.

In the original example, if the link between www.example.com and www.example.com/item1 is adjacent, then the results will be limited to those buyers who proceed directly from www.example.com to the purchase page. Because www.example.com and www.example.com/item1 are adjacent, a visitor (prospect) leaves the funnel after proceeding to www.example.item2 instead.

Conversely, if nodes www.example.com and www.example.com/item1 are not adjacent, the funnel definition will track visitors from page to page, regardless of whether visitors visit intervening pages. Visitors can visit any number of pages between www.example.com and www.example.com/item1 and still remain in the funnel. The results of the funnel are limited to purchasers, regardless of the order of pages they visited.

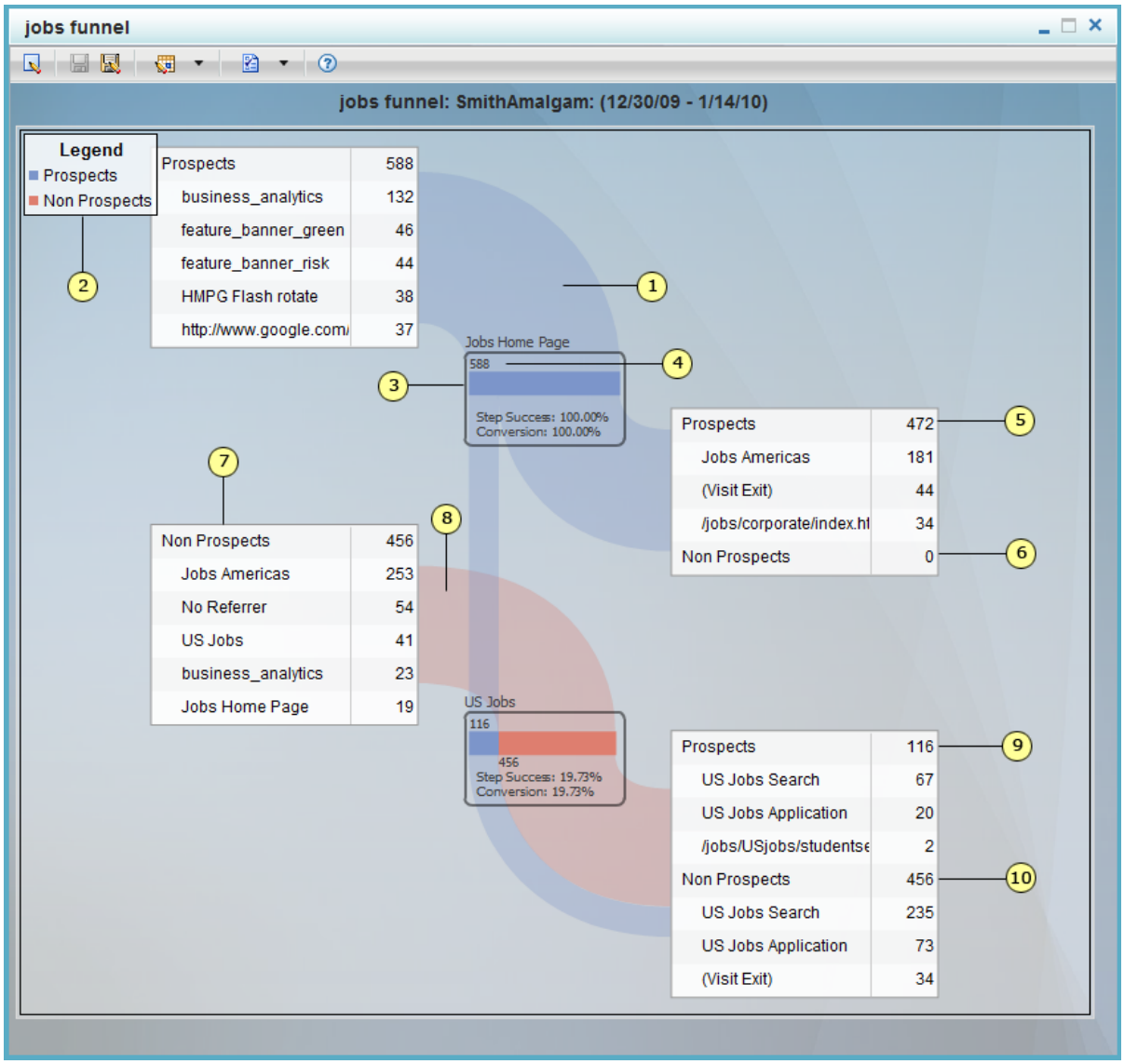
Advantages of Using a Funnel Report

After you run a funnel report, the same report can be selected again and run with different dates. The output from the two reports can be displayed side by side in the application workspace, which enables you to directly compare visitor behavior on different dates.

The funnel chart breaks down the top pages visited before the funnel pages and the top destinations. You have access to information that tells you where visitors came from and where they are going. With this information, you can try to change the sources or destinations to send the visitors back into the funnel. For example, if the top referring page to www.xyz.com is a search engine such as Yahoo, then you could advertise more heavily on yahoo.com to attempt to gain more visitors who search for a given keyword.

Example of a Funnel

Display 6.1 *Funnel Report*



The following items correspond to the numbered items in the Funnel report:

1. This line represents the places where the 588 incoming prospects are coming from.
2. **Prospects** identifies visitors who enter a funnel on the funnel entry page, and remain until they have completed or exited the funnel, or closed the browser. **Non-Prospects** identifies visitors who enter a funnel at a level other than the funnel entry page, and then complete or exit the funnel, or close the browser.
3. Each box represents a funnel node. A funnel node represents each page within the funnel.
4. This number, 588, is the number of incoming prospects.

5. This box lists the places where the prospects go after they leave the node. In this example, 472 (from a total of 588) prospects leave the funnel and go to locations that are listed in the box.
6. This number is the number of non-prospects who viewed a page within the funnel, and then exited the funnel. This value is always zero for the first node.
7. These are the top five referring pages.
8. This line represents the 456 non-prospects that flow into the second funnel node.
9. One hundred sixteen (116) prospects went through the first funnel node, proceeded to the second funnel node, and then went to the locations that are listed in the box. These prospects did not proceed past the second funnel node. One reason for this departure could be that the second funnel node is the last node of the funnel.
10. Four hundred fifty-six (456) non-prospects left the funnel and went to the locations that are listed in the box.

Differences between Funnel and Path Output

The Funnel report is different from the Path report in the following ways:

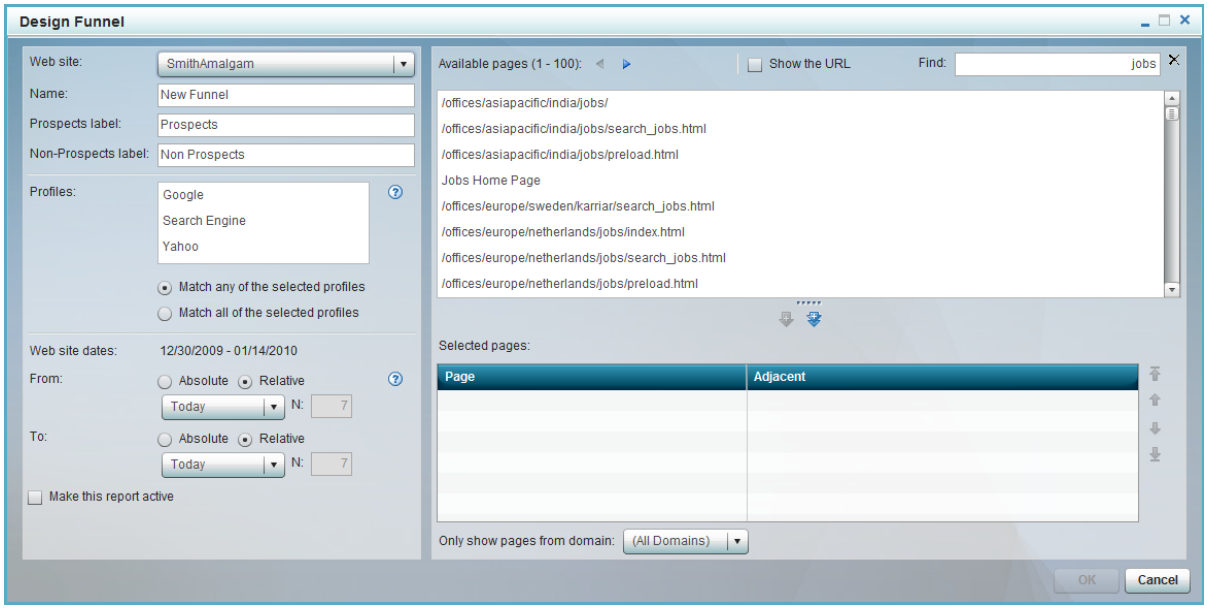
- Each report has different presentation and aggregation strategies. For the Path report, each subpath is aggregated based on where it is within the whole path. For the Funnel report, aggregates are based on the page visits and not on where it is within the session.
- There are no one-hit sessions in a Path report, while the Funnel report includes them.
- The Path report can be limited by the **Top paths**, **Visit page views**, and **Path length** fields, depending on whether these are entry page parameters. The Funnel report does not have these limitations.

Input Requirements for Designing a Funnel

The Design Funnel Window

Before you view your report, you must enter data for the fields that are displayed in the Design Funnel window. The following display shows the input window for the Funnel report. A description of fields in the Design Funnel window follows the display:

Display 6.2 *Design Funnel Window*



Fields in the Design Funnel Window

Description of Input Fields

Field	Description
Web site	refers to a collection of related Web pages, or to the data that is stored within the Web site's data mart, which contains Web log information.
Name	specifies the name of the report.
Prospects label	the label that is used to identify visitors who are prospects.
Non-Prospects label	the label that is used to identify visitors who are non-prospects.

Field	Description
Profiles	Profiles are sets of filtering criteria that are defined for your data and are used to subset the data in interactive analysis results. For example, a profile might include a category for visits that are driven by the Google search engine. If you select this profile, then the results of your analysis include only data for visits that were sent to the site by Google. If you select more than one profile, then you can choose to subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.
Web site dates	displays the range of dates that are available for the selected Web site.
From and **To**	specifies the start and end dates of the data in the report. You can specify the dates as absolute dates or as relative dates. An absolute date is a specific calendar date, such as December 21, 2010. Relative dates express the time difference with respect to today's date. If you want to specify the date as a specific number, **N**, of days, weeks, months, or years ago, you must also enter a value for **N**. The results of an analysis that is based on relative dates change each time you run the analysis because the date is calculated using today's date.
Make this report active	specifies a predefined report that runs during ETL processing. Keeping your funnels active improves system performance.
Selected pages	lists the pages in your funnel according to the position you assign.

Adjacent and Non-Adjacent Paths

When you select nodes for your Funnel report, you can designate them as adjacent to one another or non-adjacent, depending on how you design the funnel. If nodes are adjacent, the funnel tracks visitors who proceed to the target destination without making intervening stops. If nodes are non-adjacent, the funnel tracks visitors who proceed to the target destination even though they make intervening stops. Non-adjacent funnels include all nodes, even those that are designated as adjacent.

Selecting Profiles

Filtering Visits by Using Profiles

Profiles are sets of filtering criteria that are defined for your data and are used to subset the data in path analyses, funnel analyses, and page overlay reports. A profile can be programmed to key off of any event that happens within a visit. For example, a profile might include a category for visits that are driven by the Google search engine. If you select this profile, then the results of your analysis include only data for visits that were sent to the site by Google.

It is important to set up your profiles carefully, keeping in mind the relationship among the profiles. For example, assume the following three profiles have been defined:

- The Google profile contains all visits that were referred to a site by Google.
- The Yahoo profile contains all visits that were referred to a site by Yahoo.
- The Search Engines profile contains all visits that were referred to a site by any search engine.

If you select both the Search Engines profile and either the Google or Yahoo profile, the results do not include any additional visits because Google and Yahoo visits are already included as search engine visits. You need to decide which profiles or profile combinations you want to use as filters.

If you select both the Google and Yahoo profiles and then select the **Match any of the selected profiles** option, then the result include both visits that were referred by Google and by Yahoo. If you select the **Match all of the selected profiles** option, no results are returned because these profiles are mutually exclusive. That is, you can either come to a site through Google or Yahoo, but not through both search engines at the same time.

You need to evaluate the relationship among the profiles that you define to determine whether you want to include visits in multiple profiles. Part of this evaluation depends on how you define your profiles. The other part depends on whether you select the **Match any of the selected profiles** option or the **Match all of the selected profiles** option.

If your ETL administrator assigns profiles to your Web site, these profiles appear in the **Profiles** section of the window whenever you use the Web site to design a new Funnel report.

Selecting the Profile Operator

Profiles are used in conjunction with the options that control the relationship among the profiles. When you select the **Match all of the selected profiles** option, a visit is included only if it fits all of the profiles that you have selected. When you select the **Match any of the selected profiles** option, a visit is included if it matches any of the profiles that you have selected.

How Profiles Are Implemented

The administrator defines the profiles, and the profile definitions are processed during ETL processing. You are then able to select the profiles from a list of available profiles that automatically appear in the **Profiles** section of the Design Funnel window.

Change the Input Parameters for a Funnel Report

After you view your report, you can change the input parameters in the following ways:

- Click on the toolbar of the report.

  The Funnel window displays the information that you entered when you last updated the report's definition. Change any information in the fields, and click **OK** to rerun the report.

- To change the date of your report, click on the toolbar and select a new date. No other fields in your report will change.

  Click **OK** to display the updated report.

Add a Sub-Profile

After you view your report, you can further refine the results by adding one or more sub-profiles. Sub-profiles are used with the profiles that you selected when you created the report. The sub-profiles that you select are combined with the profiles by using an AND operator.

Suppose that you have created a report that uses a Search Engine profile to return only results that were sent to the site by a search engine. You could then add a Google sub-profile to further specify that you want to include only results that were sent to the site by the Google search engine.

To add a sub-profile, click on the report toolbar and select one or more sub-profiles. If you select more than one sub-profile, you must specify the relationship among the sub-profiles. To subset the data by one or more of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match all of the selected profiles**. Click **OK** to display the updated report.

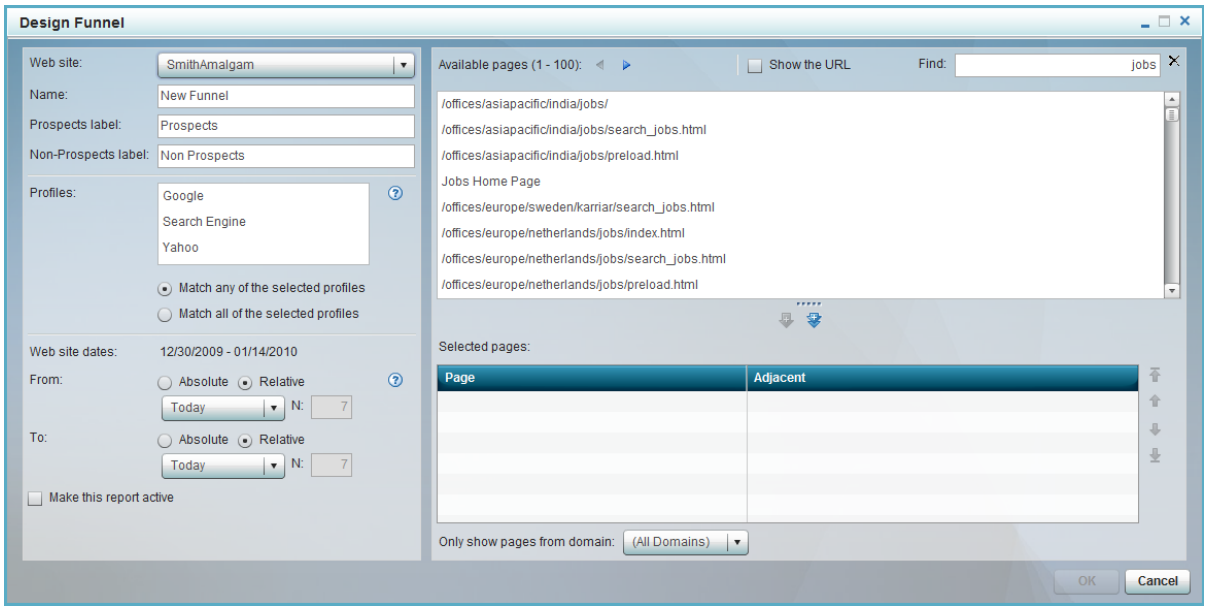
Note: Sub-profile selections cannot be saved.

Design a Funnel Report

To design a Funnel report:

1. Log on to SAS Web Analytics.
2. On the toolbar, select ⇨ **New Funnel**.

   The Design Funnel window appears:



3. Select a Web site by clicking the down arrow to the right of the **Web site** field.
4. In the **Name** field, enter a name for your report.
5. In the **Prospects Label** field, enter a label for prospective customers.
6. In the **Non-Prospects Label** field, enter a label for visitors who are not considered prospects.
7. From the **Profiles** list, select one or more profiles. If you select more than one profile, then you can choose to subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.
8. In the **From** and **To** fields, select the range of dates on which you want the report data to be based.
9. Check the **Make this report active** box to run a predefined report that runs during ETL processing.
10. To add pages to the funnel, select one or more pages from the **Available pages** list. Click to add the pages to the **Selected pages** list. Click to add all of the pages to the **Selected pages** list. To remove a page from the **Selected pages** list, select one or more pages and click . To remove all pages, click . The pages return to the**Available pages** list.
11. When you are adding pages to the funnel, you can also perform the following tasks:
    - (Optional) Check the **Show the URL** box to show the complete URL, including protocol and domain, for the pages in the list.
    - Select a domain from the **Only show pages from domain** field by clicking the arrow that is located to the right of the field. The domain you select restricts the list of URL pages to those that are found in the domain.
    - (Optional) In the **Find** field, enter a string that you want to search for, and then press ENTER to begin the search.
    - Click the and buttons to display the previous and next lists of URLs. You can also scroll through the list using the scroll bar on the right side of the display.

12. To move a page up or down in the **Selected pages** list, select the page you want to move and click or . To move the item to the top or bottom of the list, click or .
13. To designate whether a node is adjacent to another node, click a cell in the **Adjacent?** column and select **Yes** or **No**.
14. To view the Funnel report, click **OK**.
15. To save your funnel report, click or on the toolbar.

Select a Page Overlay or a Path Report from a Funnel Report

When you run a funnel report, you can also create a page overlay or a path report that is based on the same criteria that you used to define the funnel report. The page overlay displays the selected Web page in the funnel report with the metrics for each link, such as number of clicks and number of unique visitors, overlaid on the page. The path report tracks the visitor navigation from the selected Web page in the funnel report.

To run a page overlay or a path report from a funnel report, move your mouse pointer over the appropriate box in the funnel report until the icon appears in the upper right corner of the box. If there are multiple Web pages listed in the box, select the Web page that you want to use. Then click the icon and select the type of report that you want to run from the pop-up menu.

The values that you specified for the From date, To date, and Profiles in the funnel report are also used for the page overlay and path report. In addition, the following criteria are used:

- If you are creating a page overlay from a funnel report, the URL for the page overlay is the URL that is associated with the selected box in the funnel report.
- If you are creating a path report from a funnel report, the start page in the path definition is the page that is associated with the selected box in the funnel report.

All other input fields are set to their default values.

Chapter 7

Overlay Pages to Find Visitor Counts for a Specific Link

About the Web Page Overlay Feature

The Web Page Overlay feature displays a site's Web page with each link's associated metrics overlaid on the page. You can access the Web Page Overlay feature by using the **Design Page Overlay** window. You can also view a page overlay from a Path or Funnel report.

In the Web page overlay, you can position your cursor over a highlighted area and display the following metrics:

- the view count
- the visit count
- the number of unique visitors who clicked on the link

Your system administrator can add metrics to the list so that you can view those metrics that are meaningful to your site.

A heat map shows the amount of activity for a given path. The more intense the hue, the greater the activity.

Creating a Web Page Overlay

A Web Page Overlay

The Web Page Overlay feature displays a Web page that contains  icons to indicate which links on the page were accessed. Clicking an icon displays information about the link.

Display 7.1 *Page Overlay Report*

Items on the Menu Bar for a Web Page Overlay

The menu bar in the Web Page Overlay feature contains the following items:

Item	Description
	enables you to change the parameters of your report.
 or 	enables you to save the parameters to create the report.
	enables you to change the date of the report.

Item	Description
	enables you to change the profiles that you have selected.
Heat Indicator menu	enables you to select the metric that controls the intensity of the heat maps.
Heat Color menu	enables you to select the color of the heat map.
Show menu	specifies the number of pages to show. The options are **All**, **Top 10**, and **Top 25**.
Referrers button	displays a list of referrer pages.
Next Pages button	displays a list of the most frequently accessed pages.

Identify Data in a Web Page Overlay

At the top of the Web Page Overlay is the name of the Web site you used for the overlay, the URL, and the dates you selected from the Web site. The profiles that you used to filter the report are listed at the top of the Web Page Overlay.

The Web Page Overlay has a heat map feature that shows metrics about the Web page, such as the number of unique visitors who visited the page. The  icon represents the heat map, and is assigned a color. You can select a color scheme for your heat map by choosing a color from the **Heat Color** menu. The more intense the color, the greater the value of the metric. The menu to the right of the **Heat Indicator** field enables you to select the metric that drives the page overlay. If a selectable feature on the overlay page does not have an associated heat map, then no one clicked that link on the Web page. A window similar to the following appears when you move your cursor over a heat map icon:

Display 7.2 *Heat Map Metrics table*

/software/		
View Count	291	0.93%
Visit Count	284	1.00%
Unique Visit Count	277	1.05%

The following metrics are available for each link that has been clicked on within the page during the time period of the report:

- **View Count**

  The View Count is the number of times a page was viewed by visitors to the site. The View Count percentage is calculated as (View Count / Total Pages Viewed) * 100. The value of total pages viewed is the total number of page views that occurred because of visitors selecting links on the page.

- **Visit Count**

The Visit Count is the number of visits in which the page was viewed. The Visit Count percentage is calculated as (Visit Count / Total Visits) * 100. The value of total visits is the total number of visits in which links were selected on the page.

- **Unique Visit Count**

  The Unique Visit Count is the number of unique visitors who viewed the page. The Unique Visit Count percentage is calculated as (Unique Visit Count / Total Unique Visits) * 100. The value of total unique visits is the total number of unique visitors who selected links on the page.

- **Click Count**

  The Click Count is the total number of times a link was clicked by visitors to a site. The Click Count is available only if the SAS Page Tag was used and an ID parameter was added to the anchor tag. The Click Count percentage is calculated as (Click Count / Total Clicks) * 100. The value of total clicks is the total number of clicks on any link on the page in which the anchor tag for that link contains an ID parameter. For more information, see Chapter 7, "SAS Page Tagging" in the *SAS Data Surveyor for Clickstream Data: User's Guide*.

The heat map icon appears as close as possible to the location of the field that contains the overlaid data. When you position your cursor over the icon, a window appears that displays the URL for the link, along with the metrics and their percentages. (Your system administrator can add to or change these metrics.) The window is shaded, as is the item associated with it, so that you can see a visual connection.

When you position your cursor over a  icon, you can click the icon and the associated window remains open. You can permanently open the windows for several icons and compare their metrics. Click the icon of a permanently open window to close it.

If you select **Referrers** or **Next Pages** at the top of the menu bar, a left pane and a right pane open that list the top referrers and top pages that were viewed next, respectively.

Advantages of Using a Web Page Overlay

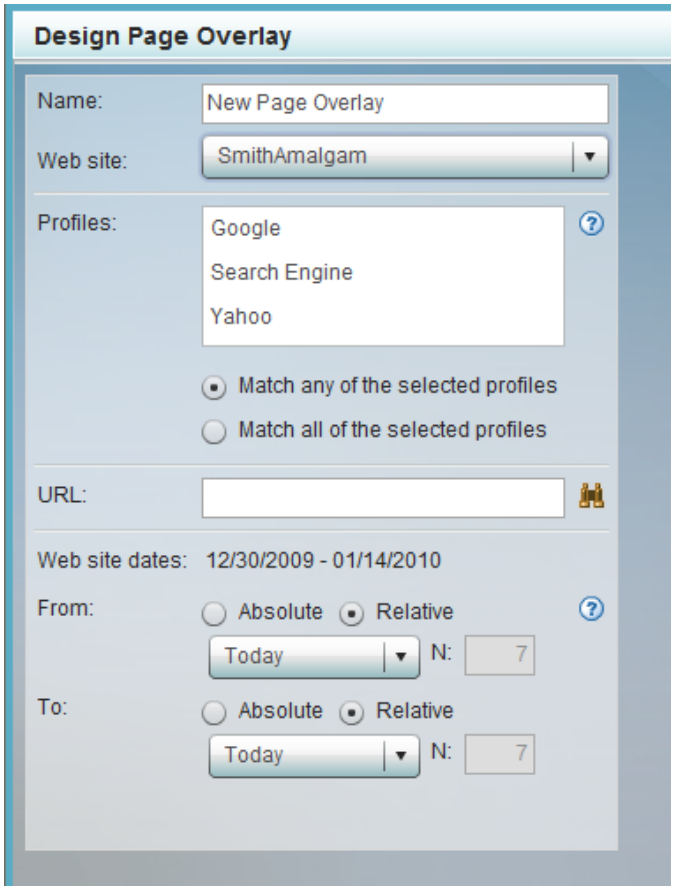
One of the advantages of using the Web Page Overlay feature is that you can view where the majority of actions occurred, and thereby assess the effectiveness of your Web page. For example, if you find that you have more heat map clusters at the top of the page than at the bottom, your visitors might not be seeing the bottom of your Web page. You can redesign the page to account for this problem by including redundancy in your design.

Input Requirements for Generating a Web Page Overlay

The Design Page Overlay Window

Before you view the page overlay, you must enter data for the fields that appear in the Design Page Overlay window:

Display 7.3 *Design Page Overlay Window*



Fields in the Design Page Overlay Window

Description of Input Fields

Field	Description
Name	specifies the name of the report. The name cannot include the following characters: \, /, <, >, *, :, ?, [,], or “.
Web site	specifies a collection of Web pages, or the data that is stored within the Web site's data mart, which contains Web log information.

Field	Description
Profiles	Profiles are sets of filtering criteria that are defined for your data and are used to subset the data in interactive analysis results. For example, a profile might include a category for visits that are driven by the Google search engine. If you select this profile, then the results of your analysis include only data for visits that were sent to the site by Google. If you select more than one profile, then you can choose to subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.
URL	specifies the Uniform Resource Locator (URL) for the overlay page.
Web site dates	displays the range of dates that are available for the selected Web site.
From and **To**	specifies the start and end dates of the data in the report. You can specify the dates as absolute dates or as relative dates. An absolute date is a specific calendar date, such as December 21, 2010. Relative dates express the time difference with respect to today's date. If you want to specify the date as a specific number, N, of days, weeks, months, or years ago, you must also enter a value for N. The results of an analysis that is based on relative dates change each time you run the analysis because the date is calculated by using today's date.

Note: You must have some knowledge about the URLs that make up your Web site so that you can choose a meaningful URL for your overlay page.

Change Input Parameters for a Web Page Overlay

After you view the Web Page Overlay, you can change the input parameters in the following ways:

- Click  on the toolbar of the report.

  The Page Overlay window displays the information that you entered when you last updated the report's definition. Change any information in the fields, and click **OK** to rerun the report.

  Note: If you need to change the name of a Page Overlay report, click  to save the report with a different name, and then delete the original report.

- To change the date of your report, click  on the toolbar and select a new date. No other fields in your report will change.

  Click **OK** to display the updated report.

Add a Sub-Profile

After you view your report, you can further refine the results by adding one or more sub-profiles. Sub-profiles are used with the profiles that you selected when you created the report. The sub-profiles that you select are combined with the profiles by using an AND operator.

Suppose that you have created a report that uses a Search Engine profile to return only results that were sent to the site by a search engine. You could then add a Google sub-profile to further specify that you want to include only results that were sent to the site by the Google search engine.

To add a sub-profile, click  on the report toolbar and select one or more sub-profiles. If you select more than one sub-profile, you must specify the relationship among the sub-profiles. To subset the data by one or more of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected sub-profiles *and* the profiles that you selected when you created the report, select **Match all of the selected profiles**. Click **OK** to display the updated report.

Note: Sub-profile selections cannot be saved.

Design a Web Page Overlay

To design a Web Page Overlay:

1. Log on to SAS Web Analytics.
2. On the toolbar, select  ⇨ **New Page Overlay**.

   The Design Page Overlay window appears.
3. In the **Name** field, enter a name for your report.
4. Select a Web site by clicking the down arrow to the right of the **Web site** field.
5. From the **Profiles** list, select one or more profiles. If you select more than one profile, then you can choose to subset the data by any one or more of the profiles by selecting **Match any of the selected profiles**. To subset the data so that only visits that match all of the selected profiles are used, select **Match all of the selected profiles**.
6. In the **URL** field, enter the URL for the Web page that you want to use in the report.

   To display a list of available URLs, click the  icon to the right of the **URL** field.

   In the Page List window that opens, you can perform one or more of the following tasks:

   - Click the **Show the URL** field if you want the entire URL, including the protocol and domain, to display.

- Select a URL on which the page overlay will be based.
- Click the down arrow in the **Only show pages from domain** field and select a domain for the URL.
- To search for a string in the Available Pages window, enter the string in the **Find** field, and then press ENTER.

  The value in the **Find** field remains until you delete it.

After you select a URL, click **OK**.

7. In the **From** and **To** fields, select the range of dates on which you want the report data to be based. These dates must be valid dates for your Web site.
8. Click **OK** again in the Design Page Overlay window to generate the Web page overlay.

Chapter 8

Manage Campaign Goals and View Web Site Dates

Administration Menu

There are three options that are available from the **Administration** menu and that enable you to perform the following tasks:

- view the start and end dates for the Web sites that you have access to
- manage search term goals
- manage campaign goals

View Web Site Dates

The Web Site Availability window, which you access by selecting **Administration** ⇨ **Web Site Availability**, lists the names of the available Web sites that you can choose from for your report, as well as the start and end dates for which data is available.

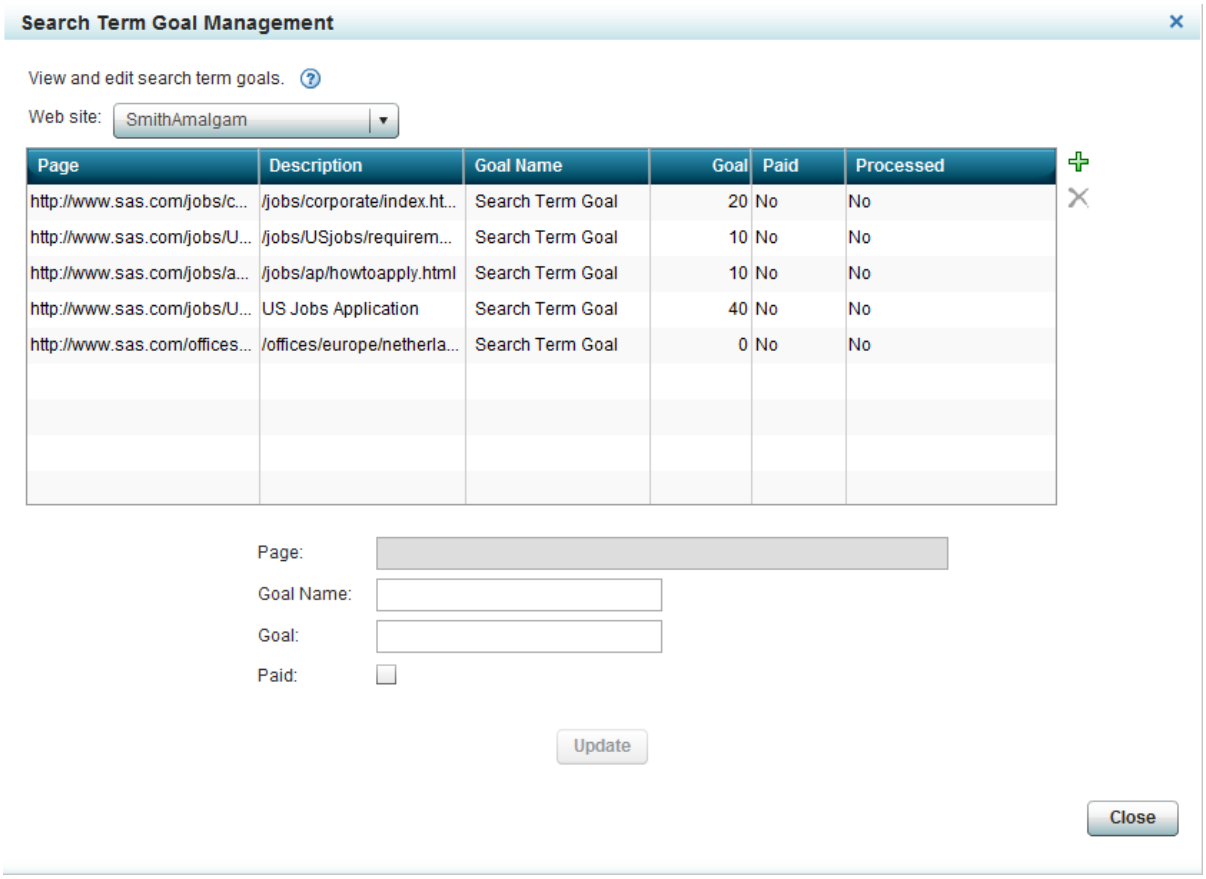
Manage Search Term Goals

Search Term Goal Management enables you to create search term goals. When you create a search term goal, you can associate one or more Web pages with that goal and specify a goal value that indicates the relative importance of each page. The goal is then used to analyze how often the goal pages are reached by visitors who click either a paid

link or an organic link from a search site result page. The Search Term Goal Management window lists the goal values for each page and indicates whether the search is a paid search.

The Search Term Goal Management window opens automatically when you select **Administration ⇨ Search Term Goal Management**. In this example, the window is already populated with data:

Display 8.1 *Search Term Goal Management Window*



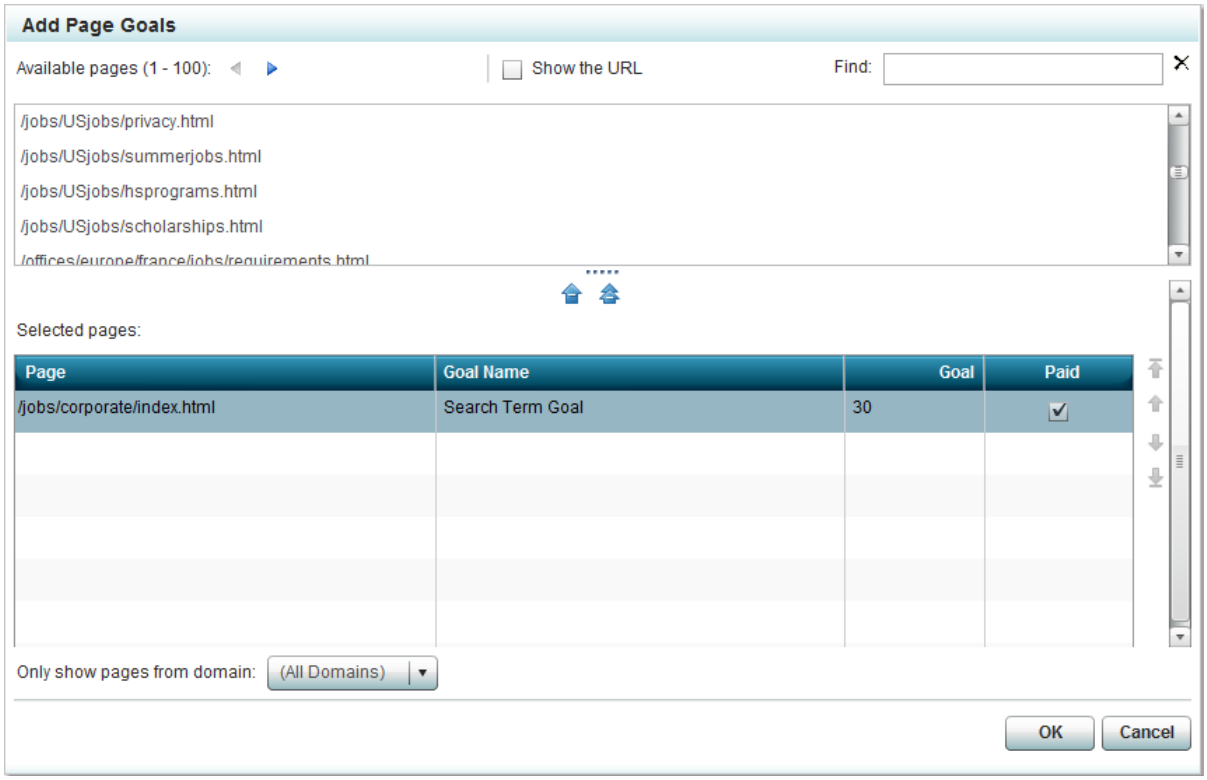
The Search Term Goal Management window contains the following fields:

Field	Description
Web site	specifies a collection of related Web pages, or the data that is stored within the Web site's data mart, which contains Web log information.
Page	specifies a Web page that you want to include as part of the search term goal. You can have multiple pages per goal.
Description	displays a description of the Web page.
Goal Name	displays the name of the search term goal.

Field	Description
Goal	specifies the relative importance of the goal page. For example, a retail checkout page might have a higher relative goal value than a product information page. You can change the goal value by selecting the appropriate row and entering a new value in the **Goal** field at the bottom of the page.
Paid	specifies whether the search is a paid or non-paid search. You can change the value of the field by selecting the appropriate row and selecting or clearing the **Paid** check box at the bottom of the page.
Processed	indicates whether ETL processing has occurred for the search term goal. If ETL processing has occurred, then you can no longer edit the goal.

To add a new goal page, click in the right side of the window. If there are currently no goal pages listed, then click **Add new page goal(s)**. The Add Page Goals window appears. In the following example, the **Page** has been selected. A goal value was entered and the **Paid** field is checked:

Display 8.2 *Add Page Goals Window*



In this window, you can check the **Show the URL** box to display the full URL, including the domain. You can add a goal page to your report by selecting a page, or by

searching for a particular URL in the list that is displayed. Enter a goal value and check the box if the search is a paid search.

You can also make changes to the information in the Search Term Goal Management window directly:

- To delete a page from that window, click the ✕ icon to the right of the list of pages.
- To update the **Goal Name**, **Goal**, or **Paid** fields for a page, select the page that you want to update and enter the new values in the appropriate boxes below. Click **Update** to save your changes.

Managing Campaign Goals

About Managing Campaign Goals

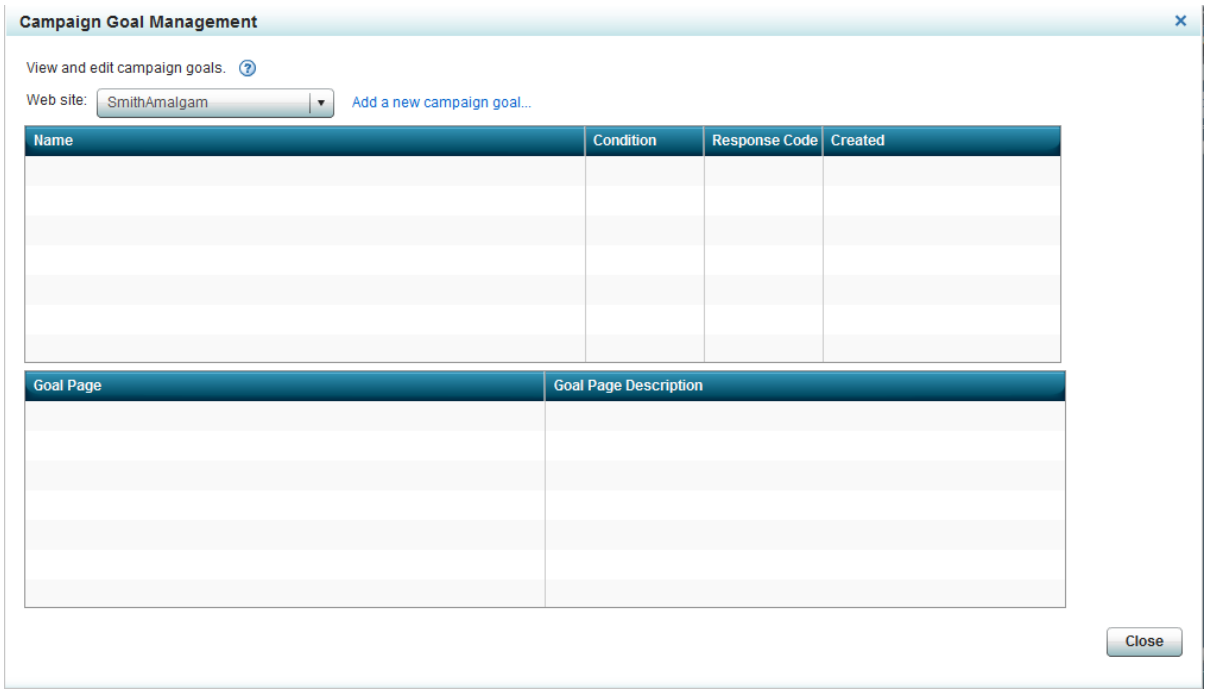
Campaign goal management, which is part of Customer Intelligence Integration, enables you to associate the SAS Marketing Automation campaign responses with Web site behavior. You can associate a set of goal pages and a condition with a specific SAS Marketing Automation campaign response. When a visit to your site is referred by a SAS Marketing Automation campaign, and if the visit satisfies a defined goal, then the respective response code is returned to the Customer Intelligence common data mart as the response history.

This feature of SAS Web Analytics is available only when SAS Marketing Automation 5.4 is licensed and installed in the same SAS 9.2 environment.

Edit Campaign Goals

You access the Campaign Goal Management window by selecting **Administration** ⇨ **Campaign Goal Management**. The following display shows the Campaign Goal Management window.

Display 8.3 *Campaign Goal Management Window*



To delete a campaign goal, click the ✕ icon.

The Campaign Goal Management window contains the following items:

Item	Description
Web site	specifies a collection of related Web pages, or the data that is stored within the Web site's data mart, which contains Web log information. You can switch between Web sites. When the Web site is changed, the **Campaign Goals** section shows the campaign goals that are defined for that Web site.
Name	specifies the name of a campaign goal. A campaign goal name can contain a maximum of 32 characters, must start with a letter or an underscore, and can contain only English letters, numbers, and underscores. Using an underscore as the first character is not recommended.
Condition	specifies whether reaching the goal was successful. Select **Any Page Viewed** if you want any page in the goal to be viewed for success. Select **All Pages Viewed** if you want all of the pages in the goal to be viewed for success.
Response Code	specifies the campaign response code that is retrieved from SAS Marketing Automation.

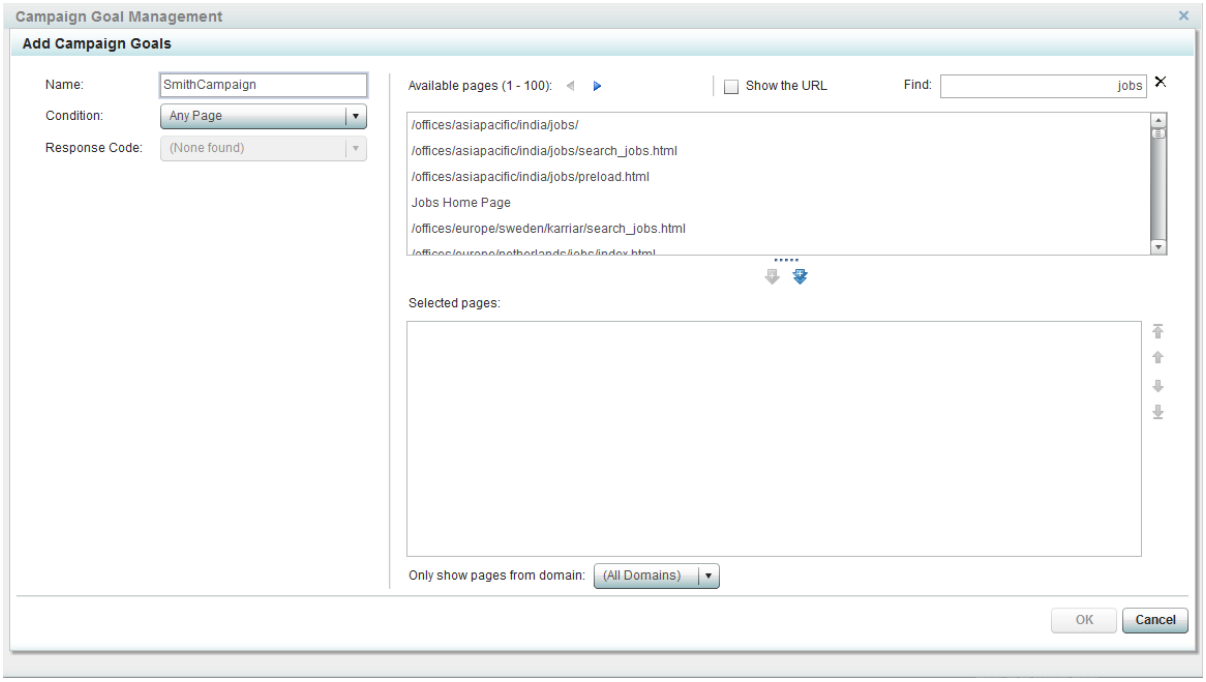
Item	Description
Created	specifies the creation date of the campaign goal.
Goal Page	specifies the Web page that you want to analyze.
Goal Page Description	specifies the description of the goal page.

Add a Campaign Goal

Click **Add a new campaign goal** to open the Add Campaign Goals window. This window enables you to add a campaign goal for the currently selected Web site.

The following is an example of the Add Campaign Goals window. Note that the items in the **Response Code** menu are examples of what might be returned by SAS Marketing Automation. The codes are administered using the SAS Marketing Automation system for the Web campaign, and that system is queried for the list of codes.

Display 8.4 *Add Campaign Goals Window*



The Add Campaign Goals window contains the following fields:

Field	Description
Name	specifies the name of the campaign goal.

Field	Description
Condition	specifies whether reaching the goal was successful. Select **Any Page** if you want any page in the goal to be viewed for success. Select **All Pages** if you want all of the pages in the goal to be viewed for success.
Response Code	specifies the campaign response code that is retrieved from SAS Marketing Automation.
Available pages	specifies the pages that are available to choose from.
Selected Pages	specifies pages that you select for your campaign goal.
Show the URL	specifies that the entire URL, including the domain, be displayed.
Find	specifies that you can enter a value to search for in a URL.
Only show pages from domain	specifies a database of users that was set up by an administrator by using a specific authentication provider such as Lightweight Directory Access Protocol (LDAP) or a host operating system. Domain names should be unique throughout your organization.

Revise a Campaign Goal

You can revise an existing campaign goal by selecting the goal that you want to edit in the Campaign Goal Management window and clicking  . The Add Campaign Goals window opens. All of the fields are initialized to the values of the currently selected campaign. You can change any of the fields in this window. This button is enabled only when a campaign goal is selected. When you click **OK**, one of the following actions occurs:

- If the currently selected goal has completed an ETL cycle, then a new goal definition is created, which is totally independent of the selected goal.
- If the currently selected goal has not completed an ETL cycle, then the selected definition is updated with the new values and pages.

Search for a Campaign Goal Web Page

You can search for a particular Web page for your campaign goal in the Add Campaign Goals window. Enter your search value in the **Find** field and press ENTER. A list of URLs that contain the value you searched for appears in the **Available pages** section of the window. When you select a URL from this list, and click  , the URL is displayed in the **Selected pages** section of the window. Enter a name for your goal in the **Name** field, and then select a condition and a response code. Click **OK**.

Part 3

Traffic Reports

Chapter 9

Identify a Visitor's Web Browser and Platform

Browsers Report

About 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.

Input Requirements for the Browsers Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Browsers report, the following fields are displayed:

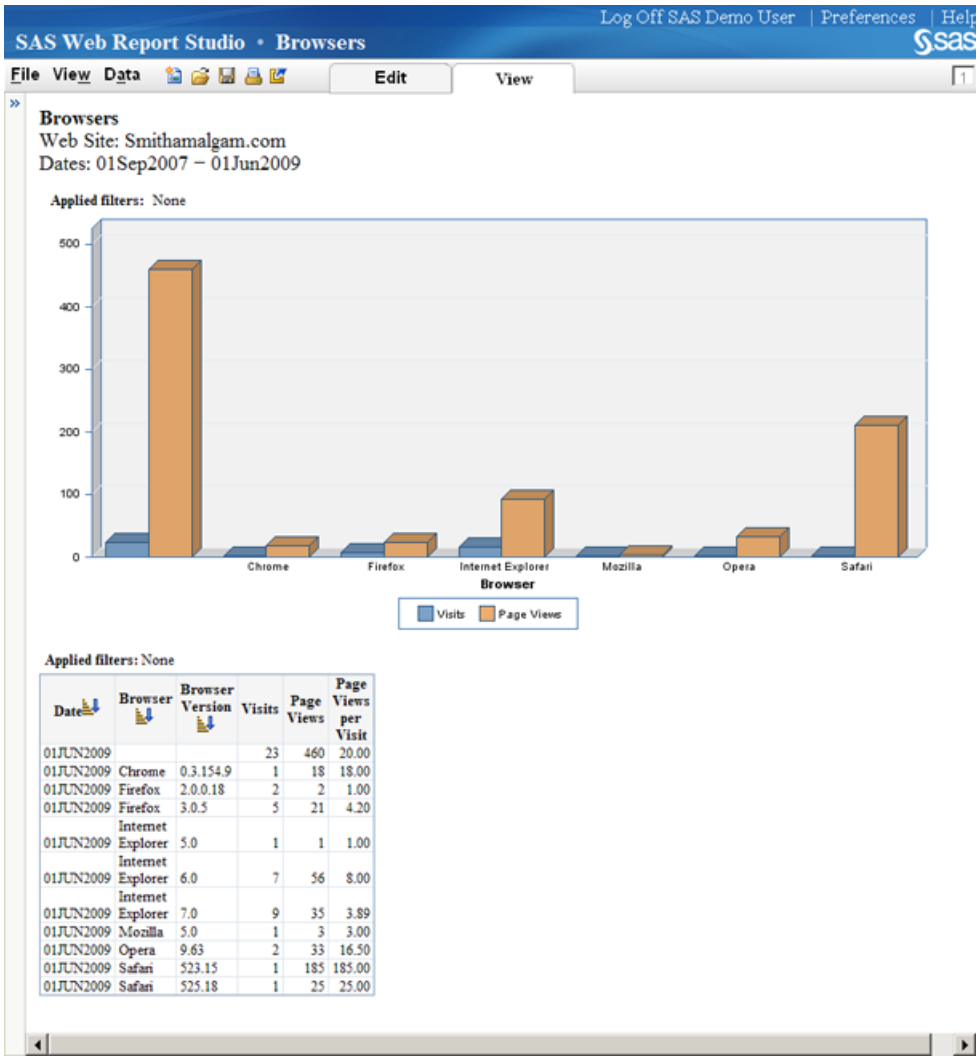
Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.

Field	Description
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Browsers Report

Display 9.1 *Browsers Report*



Date	Browser	Browser Version	Visits	Page Views	Page Views per Visit
01JUN2009			23	460	20.00
01JUN2009	Chrome	0.3.154.9	1	18	18.00
01JUN2009	Firefox	2.0.0.18	2	2	1.00
01JUN2009	Firefox	3.0.5	5	21	4.20
01JUN2009	Internet Explorer	5.0	1	1	1.00
01JUN2009	Internet Explorer	6.0	7	56	8.00
01JUN2009	Internet Explorer	7.0	9	35	3.89
01JUN2009	Mozilla	5.0	1	3	3.00
01JUN2009	Opera	9.63	2	33	16.50
01JUN2009	Safari	523.15	1	185	185.00
01JUN2009	Safari	525.18	1	25	25.00

The **Date**, **Browser**, and **Browser Version** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Browsers Report

Field	Description
Date	specifies the calendar date for the visits.
Browser	specifies the browser that was used by visitors who navigate the Web site.
Browser Version	specifies the version identifier for the browser that was used by visitors who navigate the Web site.
Visits	specifies the number of times the Web browser attempted to access a Web page within the Web site, and the Web site acknowledged the attempt. The visit concludes either when the same browser closes, or if a visitor elects to navigate to another Web site and does not return.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200–206 and 304.
Page Views per Visit	specifies the number of pages that are viewed by a visitor per browser visit. Adding the numbers together across multiple days does not equal the total number of pages viewed, because an average cannot be computed with data that is summed.

Design a Browsers Report

For information about designing a Browsers report, see the *SAS Web Report Studio User's Guide*.

Platforms Report

About 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.

Input Requirements for the Platforms Report

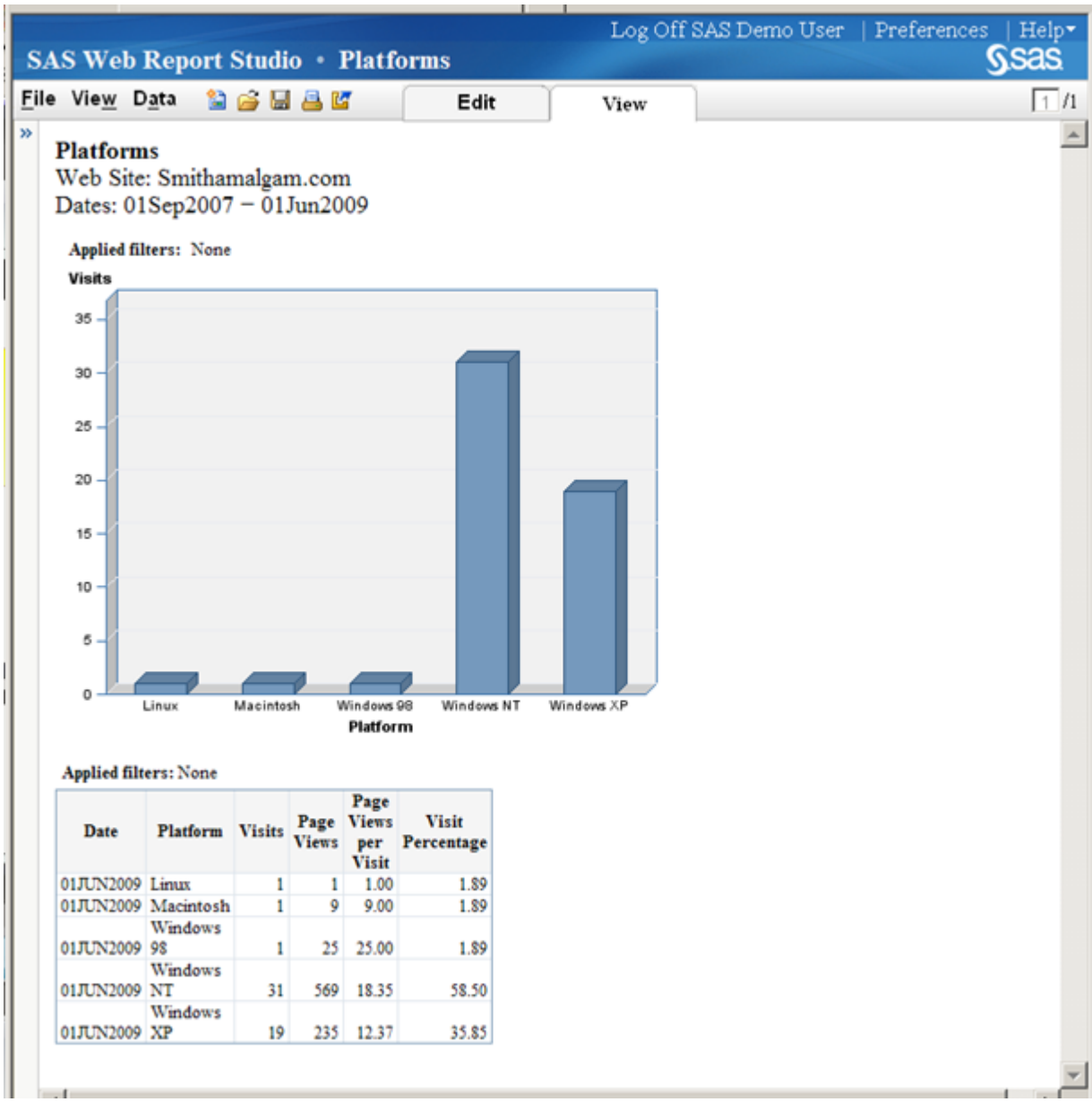
Before you view your report, you must enter data for the fields that display when you select a report. For the Platforms report, the following fields are displayed:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Platforms Report

Display 9.2 *Platforms Report*



Date	Platform	Visits	Page Views	Page Views per Visit	Visit Percentage
01JUN2009	Linux	1	1	1.00	1.89
01JUN2009	Macintosh	1	9	9.00	1.89
01JUN2009	Windows 98	1	25	25.00	1.89
01JUN2009	Windows NT	31	569	18.35	58.50
01JUN2009	Windows XP	19	235	12.37	35.85

Description of the Fields in the Platforms Report

Field	Description
Date	specifies the calendar date of the visits.
Platform	specifies the platform that was used while accessing the Web site.

Field	Description
Visits	specifies the total number of visits for a particular platform.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Page Views per Visit	specifies the total number of pages in a visit that were viewed by a visitor per platform per day. Adding the numbers together across multiple days does not equal the total number of pages viewed, because an average cannot be computed with data that is summed.
Visit Percentage	specifies the percentage of visits that occurred on a specific platform type by visitors who accessed one or more pages on a Web site. Adding the numbers together across multiple days does not equal the total number of visitors, because an average cannot be computed with data that is summed.

Calculating the Percentage of Total Visits

The **Visit Percentage** variable is calculated as follows: percentage of total visits = (the number of visits that used the platform type / the total number of visits) * 100.

Design a Platforms Report

For information about designing a Platforms report, see the *SAS Web Report Studio User's Guide*.

Chapter 10

Identify the Frequency of Status Codes That Are Returned from a Web Site

Error Status Report

About the Error Status Report

The Error Status report identifies error status codes based on the requested URL. 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.

Input Requirements for the Error Status Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Error Status report, the following fields are displayed:

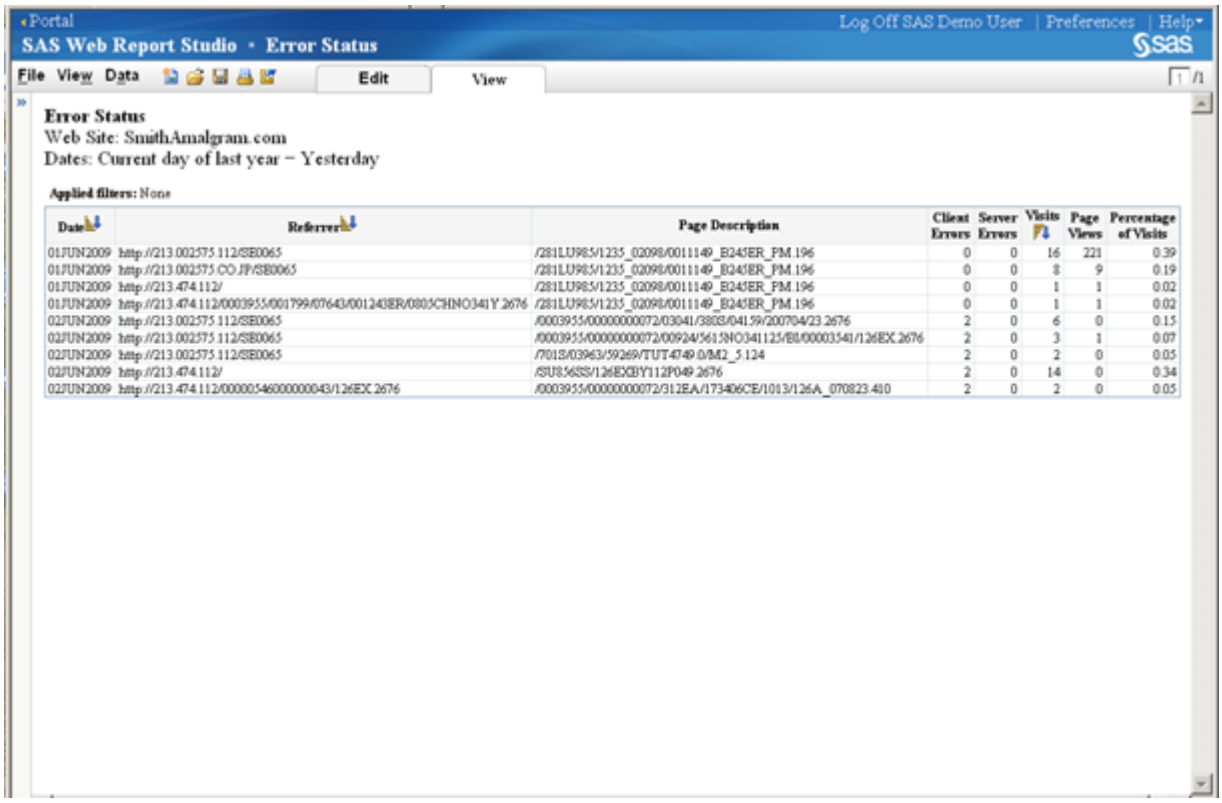
Field	Description
Starting Date	specifies the start date of your report.

Field	Description
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of pages to return per date	specifies the number of report pages that are returned per date.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. Enter a number in the **Number of pages to return per date** field. To reset the fields to their default values, click **Reset to Default**.

Example of the Error Status Report

Display 10.1 *Error Status Report*



The **Date**, **Referrer**, and **Visits** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Error Status Report

Field	Description
Date	specifies the calendar date of the visits.
Referrer	specifies a Web page that provides a link to another page.
Page Description	specifies the URI of the Web page that was viewed by a visitor to the Web site.
Client Errors	specifies errors that were generated by the client. Status codes that begin with 400 and end with 499 identify Client errors.
Server Errors	specifies errors that were generated by the server. Status codes that begin with 500 and end with 599 identify Web server errors.
Visits	specifies the total number of visits for a particular referrer and page combination. *Note:* Visits contain counts where no valid pages were viewed.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Percentage of Visits	specifies the percentage of all visits for the time period that is selected. Adding the numbers together across multiple days does not equal the total number of visitors, because an average cannot be computed with data that is summed.

Design an Error Status Report

For information about designing an Error Status report, see the *SAS Web Report Studio User's Guide*.

Status Codes per Hour Report

About the Status Codes per Hour Report

The Status Codes per Hour 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 result when a requested file could not be found. Status codes that range from 500 to 599 indicate Web server errors that occurred on the Web site's server, typically when the Web server was not available.

Input Requirements for the Status Codes per Hour Report

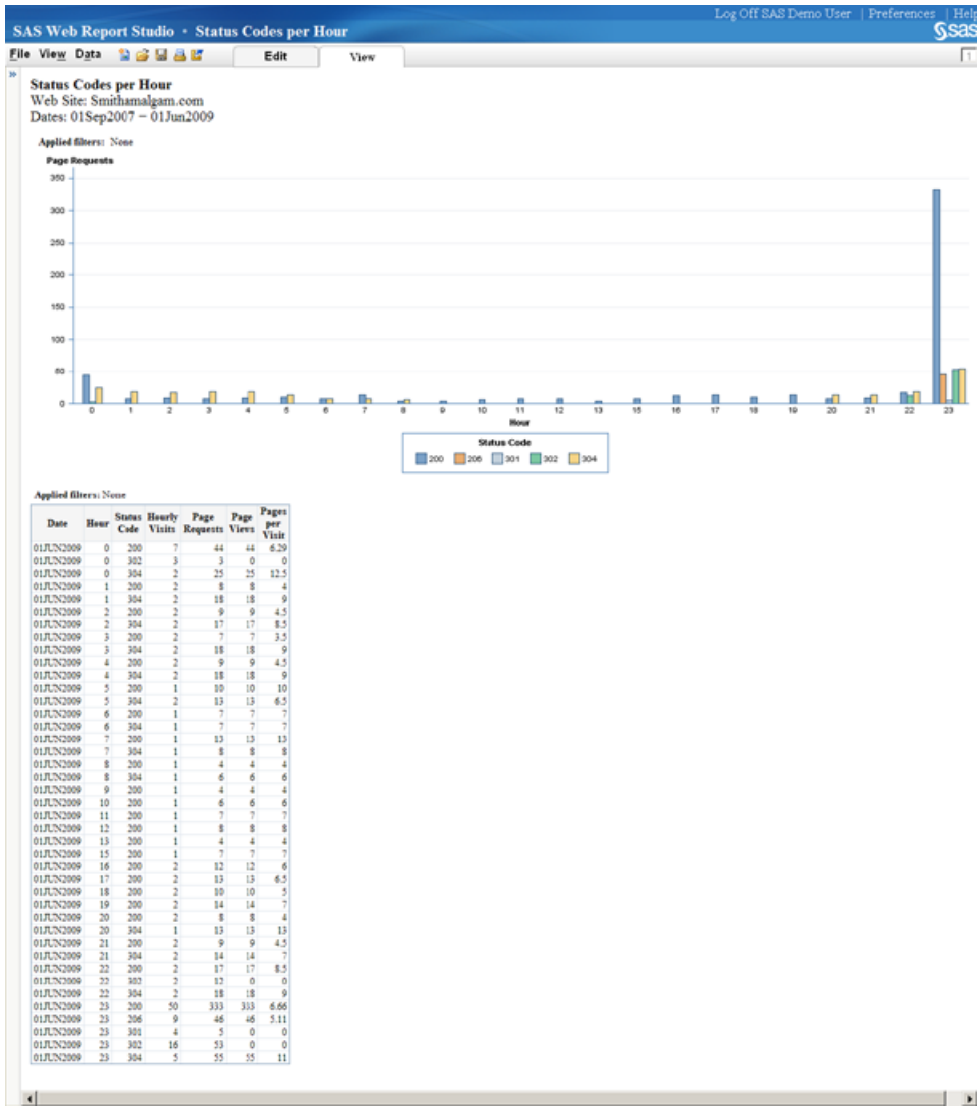
Before you view your report, you must enter data for the fields that display when you select a report. For the Status Codes per Hour report, the following fields are displayed:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. Enter a number in the **Number of pages to return per date** field. To reset the fields to their default values, click **Reset to Default**.

Example of the Status Codes per Hour Report

Display 10.2 *Status Codes per Hour Report*



Date	Hour	Status Code	Hourly Visits	Page Requests	Page Views	Pages per Visit
01JUN2009	0	200	7	44	44	6.29
01JUN2009	0	302	3	3	0	0
01JUN2009	0	304	2	25	25	12.5
01JUN2009	1	200	2	8	8	4
01JUN2009	1	304	2	18	18	9
01JUN2009	2	200	2	9	9	4.5
01JUN2009	2	304	2	17	17	8.5
01JUN2009	3	200	2	7	7	3.5
01JUN2009	3	304	2	18	18	9
01JUN2009	4	200	2	9	9	4.5
01JUN2009	4	304	2	18	18	9
01JUN2009	5	200	1	10	10	10
01JUN2009	5	304	2	13	13	6.5
01JUN2009	6	200	1	7	7	7
01JUN2009	6	304	1	7	7	7
01JUN2009	7	200	1	13	13	13
01JUN2009	7	304	1	8	8	8
01JUN2009	8	200	1	4	4	4
01JUN2009	8	304	1	6	6	6
01JUN2009	9	200	1	4	4	4
01JUN2009	10	200	1	6	6	6
01JUN2009	11	200	1	7	7	7
01JUN2009	12	200	1	8	8	8
01JUN2009	13	200	1	4	4	4
01JUN2009	15	200	1	7	7	7
01JUN2009	16	200	2	12	12	6
01JUN2009	17	200	2	13	13	6.5
01JUN2009	18	200	2	10	10	5
01JUN2009	19	200	2	14	14	7
01JUN2009	20	200	2	8	8	4
01JUN2009	20	304	1	13	13	13
01JUN2009	21	200	2	9	9	4.5
01JUN2009	21	304	2	14	14	7
01JUN2009	22	200	2	17	17	8.5
01JUN2009	22	302	3	12	0	0
01JUN2009	22	304	2	18	18	9
01JUN2009	23	200	50	333	333	6.66
01JUN2009	23	206	9	46	46	5.11
01JUN2009	23	301	4	5	0	0
01JUN2009	23	302	16	53	0	0
01JUN2009	23	304	5	55	55	11

Description of the Fields in the Status Codes per Hour Report

Field	Description
Date	specifies the calendar date of the visits.
Hour	specifies the hour, based on a 24-hour clock (hour 0 is midnight to 12:59 a.m., and so forth).

Field	Description
Status Code	specifies 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.
Hourly Visits	specifies the number of visits that receive a certain status code within a certain hour.
Page Requests	identifies an attempt to access a Web page. Each page request generates an entry in a log file.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Pages per Visit	specifies the total number of pages that are viewed by a visitor per visit. Adding the numbers together across multiple days does not equal the total number of visitors, because an average cannot be computed on data that is summed.

Design a Status Codes per Hour Report

For information about designing a Status Codes per Hour report, see the *SAS Web Report Studio User's Guide*.

Status Codes Report

About the Status Codes Report

The Status Codes report provides information about the frequency of status codes that were 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.

Input Requirements for the Status Codes Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Status Codes report, the following fields display:

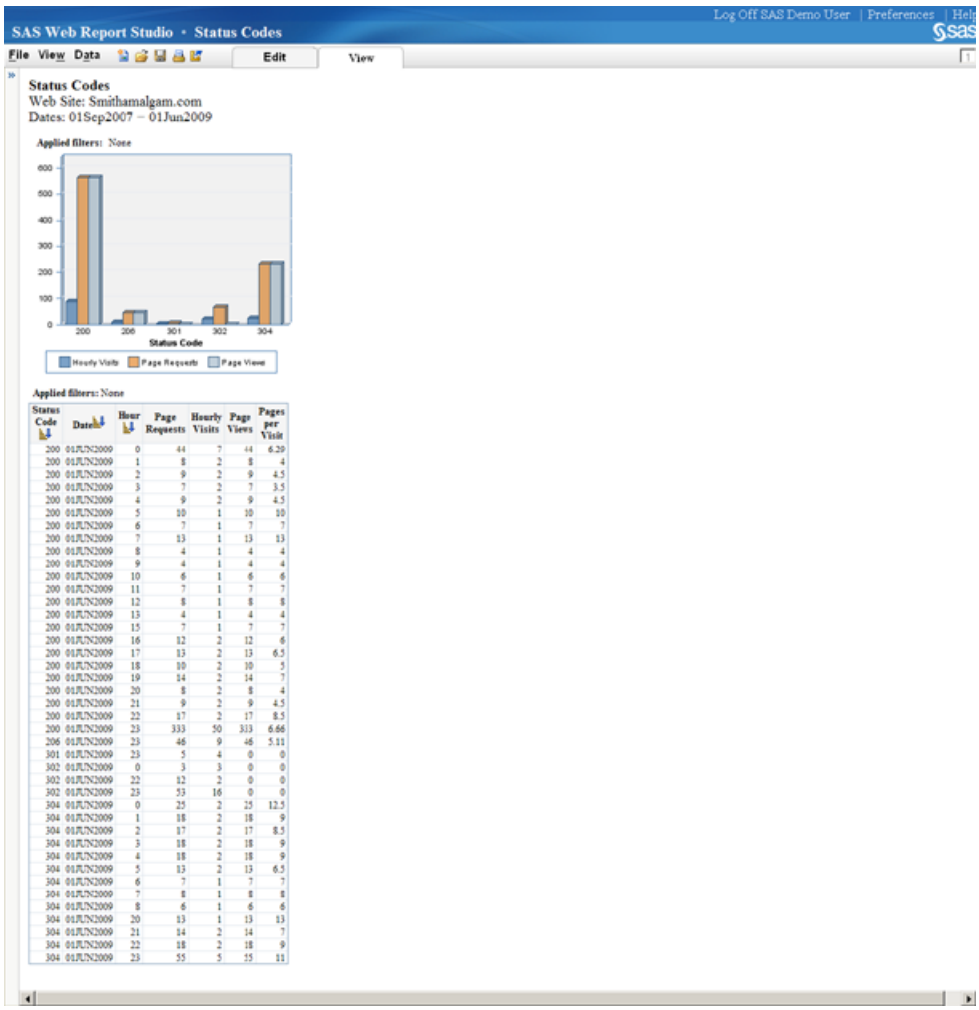
Field	Description
Starting Date	specifies the start date of your report.

Field	Description
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Status Codes Report

Display 10.3 *Status Codes Report*



The **Status Code**, **Date**, and **Hour** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Status Codes Report

Field	Description
Status Code	specifies 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.
Date	specifies the calendar date of the visits.
Hour	specifies the hour, based on a 24-hour clock (hour 0 is midnight to 12:59 a.m., and so forth).
Page Requests	identifies an attempt to access a Web page. Each page request generates an entry in a log file.
Hourly Visits	specifies the number of visits that receive a certain status code within a certain hour.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Pages per Visit	specifies the total number of pages that are viewed by a visitor per visit. Adding the numbers together across multiple days does not equal the total number of visitors, because an average cannot be computed with data that is summed.

Design a Status Codes Report

For information about designing a Status Codes report, see the *SAS Web Report Studio User's Guide*.

Chapter 11

Identify Traffic Statistics for a Site

Available Data Report

About the Available Data Report

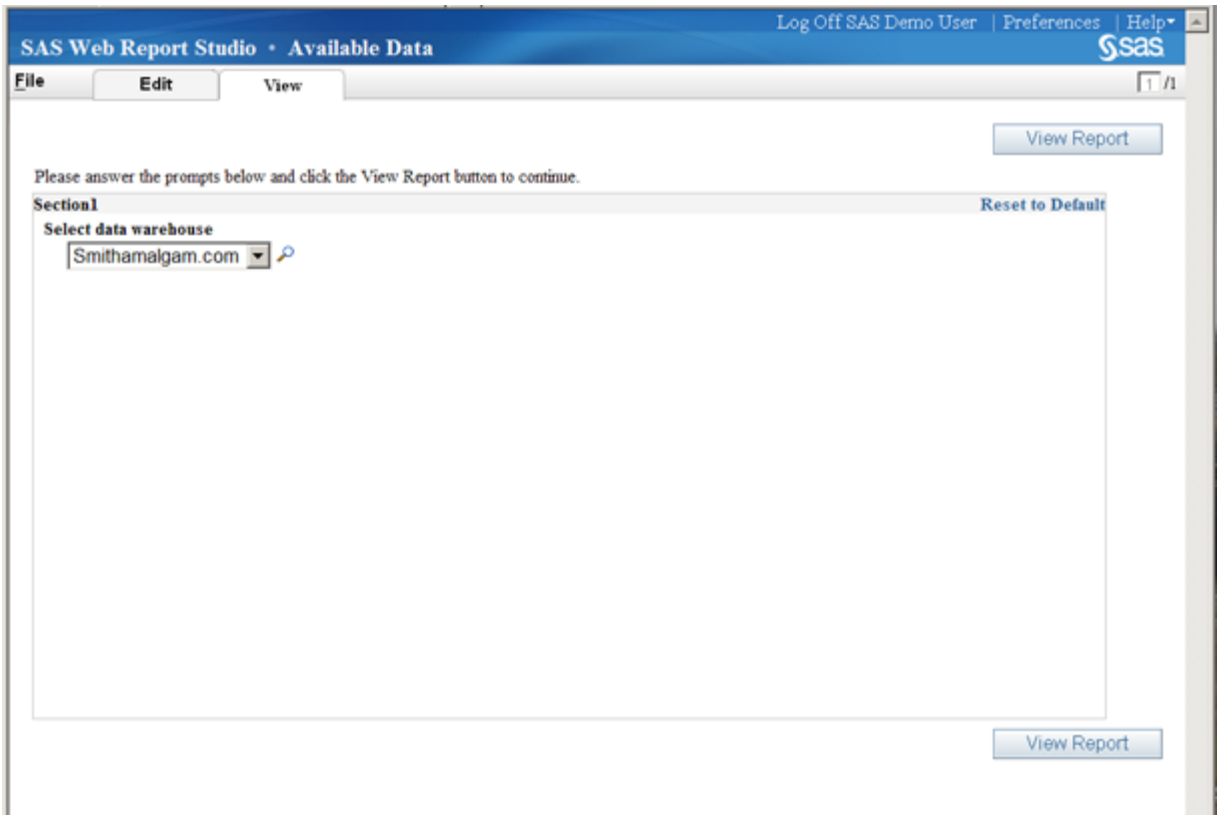
The Available Data report lists the earliest date and latest date for which data is available for a Web site. You use this data as input to design other traffic reports.

Input Requirements for the Available Data Report

Before you view your report, you must enter data for the fields that display when you select a report. In the **Select data warehouse** field, choose a warehouse that contains data for your report, and then click **View Report**.

Example of the Input Window for the Available Data Report

Display 11.1 *Input Window for the Available Data Report*



Description of the Fields in the Available Data Report

Field	Description
Earliest Date	specifies the date for which the earliest data is available in the specified data warehouse.
Latest Date	specifies the date for which the latest data is available in the specified data warehouse.

Design an Available Data Report

For information about designing an Available Data report, see the *SAS Web Report Studio User's Guide*.

Day of Week Report

About the Day of Week Report

The Day of Week report enables you to view basic daily traffic statistics for the site by day of the week.

Input Requirements for the Day of Week Report

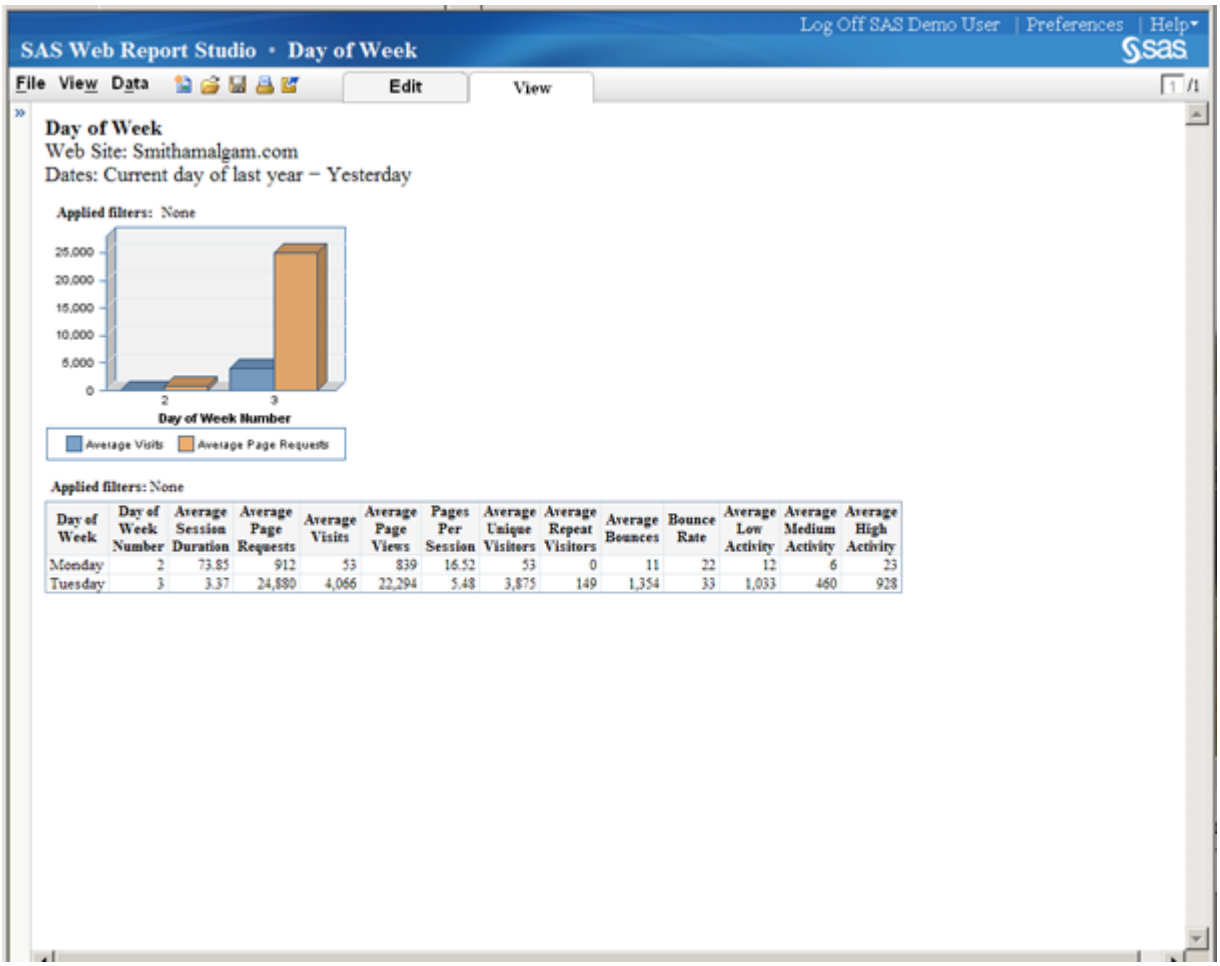
Before you view your report, you must enter data for the fields that display when you select a report. For the Day of Week report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Day of Week Report

Display 11.2 *Day of Week Report*



Day of Week	Day of Week Number	Average Session Duration	Average Page Requests	Average Visits	Average Page Views	Pages Per Session	Average Unique Visitors	Average Repeat Visitors	Average Bounces	Bounce Rate	Average Low Activity	Average Medium Activity	Average High Activity
Monday	2	73.85	912	53	839	16.52	53	0	11	22	12	6	23
Tuesday	3	3.37	24,880	4,066	22,294	5.48	3,875	149	1,354	33	1,033	460	928

Description of the Fields in the Day of Week Report

Field	Description
Day of Week	specifies the day of the week in which the data was collected. (You can change which day is the first day of the week by using the value of the week_start parameter in the SAS Web Analytics configuration table.)
Day of Week Number	specifies a number that corresponds to the day of the week. Sunday is considered the first day of the week.

Field	Description
Average Visit Duration	specifies the average duration of a visit. The average duration of a visit cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Page Requests	specifies the average requested page count. The average requested page count cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Visits	specifies the average number of visits that were logged. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Page Views	specifies the average number of pages that were viewed. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Pages Per Visit	specifies the average pages per visit. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Unique Visitors	specifies the average number of unique visitors who came to the Web site. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Repeat Visitors	specifies the average number of repeat visitors who came to the Web site. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Bounces	specifies the average number of bounces. Bounces are defined as visits where only a single page is viewed by the visitor. The number cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Bounce Rate	specifies the number of bounces that returned a page, divided by the number of bounces that were requested. The average bounce rate cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.

Field	Description
Average Low Activity	specifies the average low activity (low activity visits / total visits). The average low activity cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average Medium Activity	specifies the average medium activity (medium activity visits / total visits). The average medium activity cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.
Average High Activity	specifies the average high activity (high activity visits / total visits). The average high activity cannot be computed with data that is summed. Therefore, do not aggregate the data across multiple days.

Design a Day of Week Report

For information about designing a Day of Week report, see the *SAS Web Report Studio User's Guide*.

Hourly Metrics

About the Hourly Metrics Report

The Hourly Metric 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.

Input Requirements for the Hourly Metrics Report

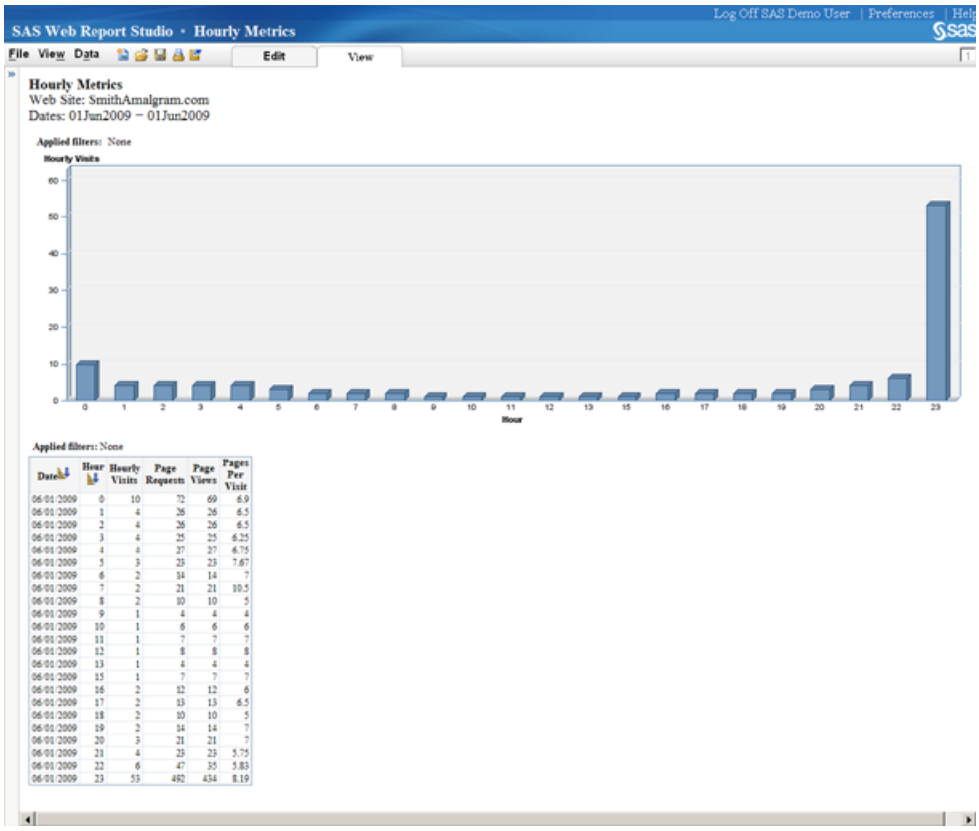
Before you view your report, you must enter data for the fields that display when you select a report. For the Hourly Metrics report, the following fields are displayed:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Hourly Metrics Report

Display 11.3 *Hourly Metrics Report*



Description of the Fields in the Hourly Metrics Report

Field	Description
Date	specifies the calendar date of the visits.
Hour	specifies the hour, based on a 24-hour clock (hour 0 is midnight to 12:59 a.m., and so forth).
Visits	specifies the number of visits that receive a certain status code within a certain hour.
Page Requests	identifies an attempt to access a Web page. Each page request generates an entry in a log file.

Field	Description
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Pages Per Visit	specifies the total number of pages that are viewed by a visitor per visit. You can view the number of pages on an hourly basis, or for periods that last more than one hour. Adding the numbers of pages together for multiple visits does not equal the total number of pages, because an average cannot be computed correctly by adding averages.

Design an Hourly Metrics Report

For information about designing an Hourly Metrics report, see the *SAS Web Report Studio User's Guide*.

Site Metrics Report

About the Site Metrics Report

The Site Metrics 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.

Input Requirements for the Site Metrics Report

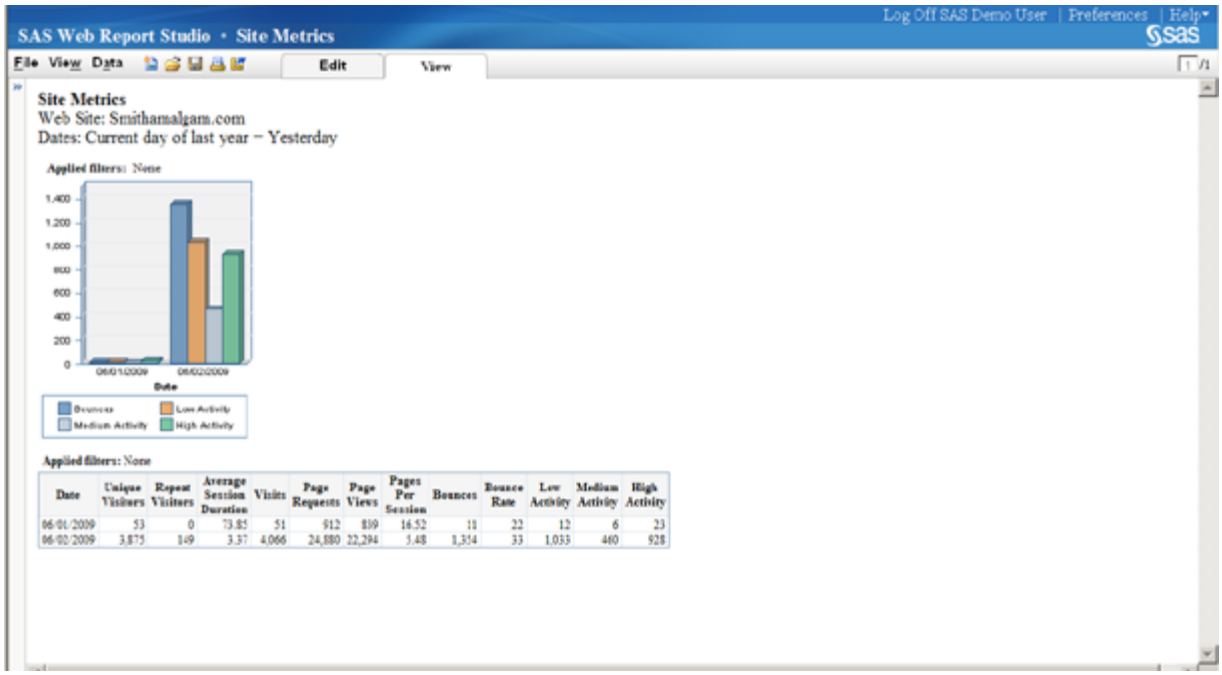
Before you view your report, you must enter data for the fields that display when you select a report. For the Site Metrics report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Site Metrics Report

Display 11.4 *Site Metrics Report*



Description of the Fields in the Site Metrics Report

Field	Description
Date	specifies the calendar date of the visits.
Unique Visitors	specifies the number of distinct visitors who visit your Web site. Adding the numbers of distinct visitors together does not equal the total number of visitors, because an average cannot be computed correctly by adding averages.
Repeat Visitors	specifies the total number of visitors who come to the Web site more than once. Adding the numbers of visitors together does not equal the total number of visitors, because an average cannot be computed correctly by adding averages.

Field	Description
Average Visit Duration	specifies the average length of time (in minutes) for a visit. Adding together the values for the average length of time does not equal the total time, because an average cannot be computed correctly by adding averages.
Visits	specifies a count of individual visits by day.
Page Requests	identifies an attempt to access a Web page. Each page request generates an entry in a log file.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Bounces	specifies visits where a single page is viewed by the visitor. This page is both the entry and exit page.
Bounce Rate	specifies the number of bounces that returned a page, divided by the number of bounces that were requested. Adding the numbers of bounces together does not equal the total number of bounces, because an average cannot be computed correctly by adding averages.
Low Activity	specifies the number of Web visits that experienced low activity.
Medium Activity	specifies the number of Web visits that experienced medium activity.
High Activity	specifies the number of Web visits that experienced high activity.
Pages Per Visit	specifies the number of pages that were viewed per visit.

Design a Site Metrics Report

For information about designing a Site Metrics report, see the *SAS Web Report Studio User's Guide*.

Chapter 12

Identify Frequently Visited Web Sites

Visitor Frequency Report

About the Visitor Frequency Report

The Visitor Frequency report shows the average time (number of days) between visits to a Web site. The average time is calculated for visitors who return in the time frame specified in the reporting range (start date and end date), but considers all lifetime visits.

Input Requirements for the Visitor Frequency Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Visitor Frequency report, the following fields are displayed:

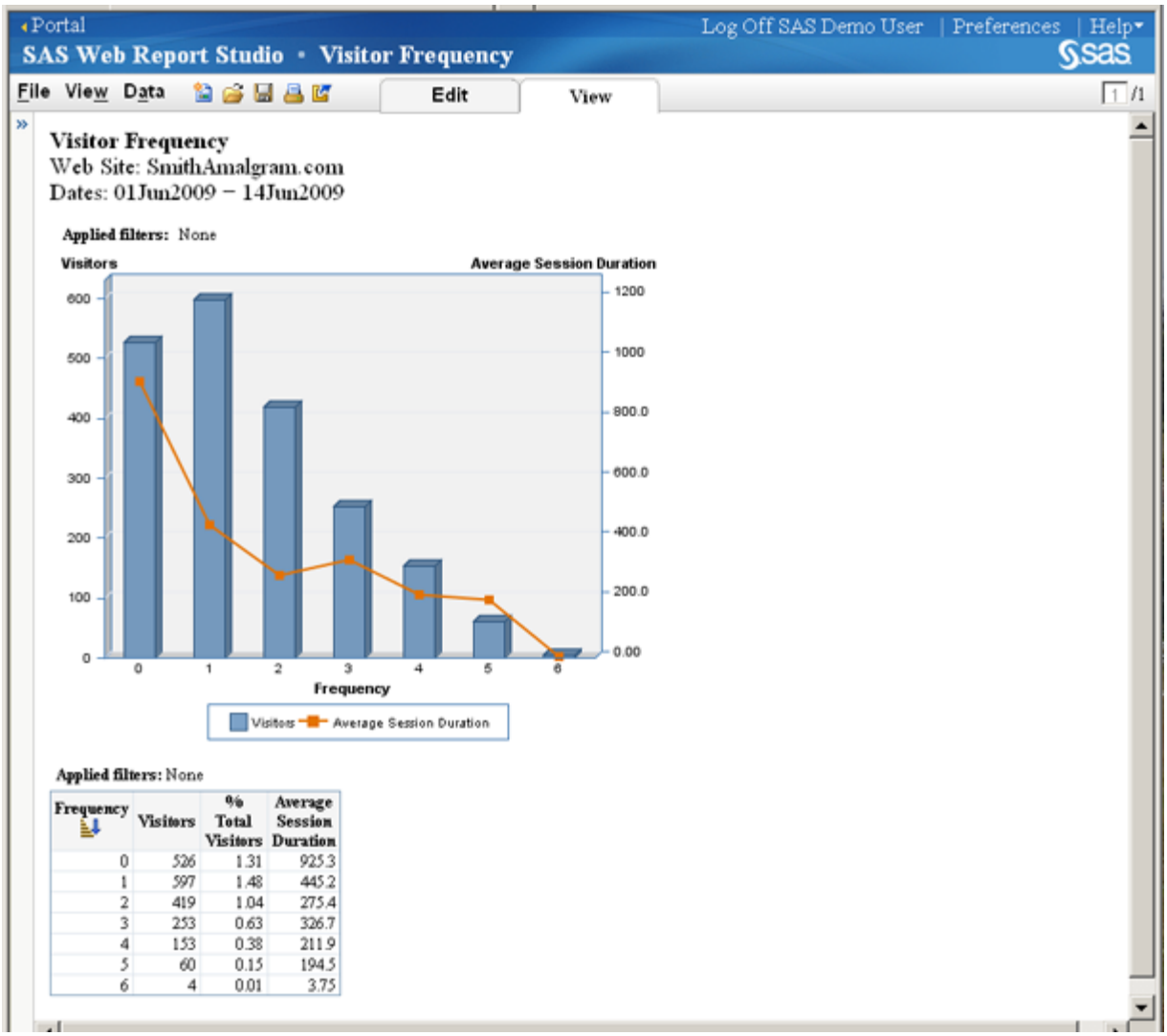
Field	Description
Starting Date	specifies the start date of your report.

Field	Description
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Visitor Frequency Report

Display 12.1 *Visitor Frequency Report*



The **Frequency** column contains a down arrow. Right-click the arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

How Frequency of Visitors Is Calculated

The frequency for each visitor = ((Date of last visit) - (Date of first visit)) / (number of visits - 1). This calculation assumes that date values increment by one for each calendar date, as SAS dates do.

Visitors to the site are defined as unique visitors. A unique visitor visits a Web site one or more times. For this report, a unique visitor who visits the Web site multiple times is counted as a single visitor (with multiple visits). Visitors who visit the site only once are excluded from the result because it is not possible to generate a frequency for them. Percentages appear to be low because the visitors who visit once are included in the denominator when calculating the percentage. Results are limited to dates on or after the start date but before the end date.

The time span does not include the end date (the most recent date). The valid dates begin with the start date and end before the end date.

Description of the Fields in the Visitor Frequency Report

Field	Description
Frequency	specifies the average time between visits to a Web site.
Visitors	specifies the number of visitors to the Web site.
% Total Visitors	specifies the percentage of all visitors who viewed the Web site or URI.
Average Session Duration	specifies the average number of seconds for a session.

Design a Visitor Frequency Report

For information about designing a Visitor Frequency report, see the *SAS Web Report Studio User's Guide*.

Visitor Recency Report

About the Visitor Recency Report

The Visitor Recency report shows the number of visitors who returned to the Web site after a specified number of days.

Input Requirements for the Visitor Recency Report

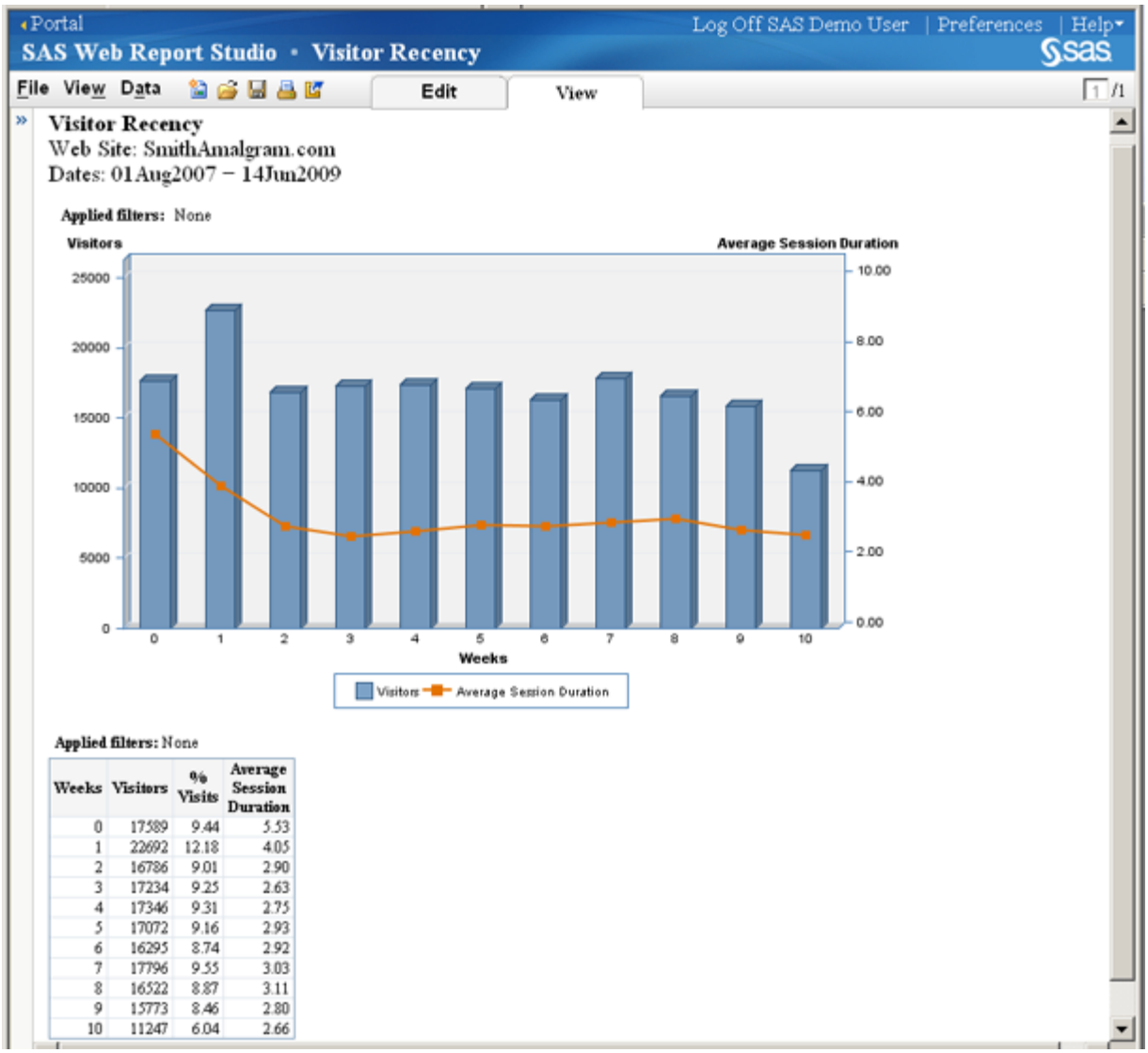
Before you view your report, you must enter data for the fields that display when you select a report. For the Visitor Recency report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Visitor Recency Report

Display 12.2 *Visitor Recency Report*



Weeks	Visitors	% Visits	Average Session Duration
0	17589	9.44	5.53
1	22692	12.18	4.05
2	16786	9.01	2.90
3	17234	9.25	2.63
4	17346	9.31	2.75
5	17072	9.16	2.93
6	16295	8.74	2.92
7	17796	9.55	3.03
8	16522	8.87	3.11
9	15773	8.46	2.80
10	11247	6.04	2.66

How Recency Is Calculated

Recency refers to how recently a prospect made a visit to a Web site, and is usually part of a Recency, Frequency, Duration (RFD) analysis. Recency is calculated as the number of days from the end of the reporting period to the most recent visit in that time frame. For example, if you have a period of time between the start date and end date, the end date is the date from which you calculate recency, and the start date is the start of the reporting time frame.

No visitors are excluded or removed from this analysis during the report time span. Single-visit visitors, or single-page view visitors are not removed from the calculation.

The time span does not include the end date (the most recent date). The valid dates begin with the start date and end before the end date.

Visitors to the site are defined as unique visitors. A unique visitor visits a Web site one or more times. For this report, a unique visitor who visits the Web site multiple times is counted as a single visitor (with multiple visits). Visitors who visit the site only once are

excluded from the result because it is not possible to generate a recency for them. Percentages appear to be low because the visitors who visit once are included in the denominator when calculating the percentage. Results are limited to dates on or after the start date but before the end date.

Time is grouped by week, and 0 weeks cannot be displayed as "less than 7 days." Therefore, a value of 0 is substituted in this case.

Description of the Fields in the Visitor Recency Report

Field	Description
Weeks	specifies the number of weeks that visits were made to the Web site.
Visitors	specifies the number of visitors who came to the Web site.
% Visits	specifies a count of individual visits for a particular visitor and day combination that is expressed as a percentage.
Average Session Duration	specifies the average number of minutes for a session. The average duration is calculated as the total time the visitors of that recency group spent on the Web site divided by the number of visits by those visitors during the reporting time frame.

Design a Visitor Recency Report

For information about designing a Visitor Recency report, see the *SAS Web Report Studio User's Guide*.

Traffic Heat Map

About the Traffic Heat Map

The Traffic Heat Map presents a color-coded map of the United States. The colors indicate the level of Web activity for geographical areas.

Input Requirements for the Traffic Heat Map

Before you view the heat map, you must enter data for the fields that are displayed when you select a report. For the Traffic Heat Map, the following fields are displayed:

Field	Description
Starting Date	specifies the start date of your report.

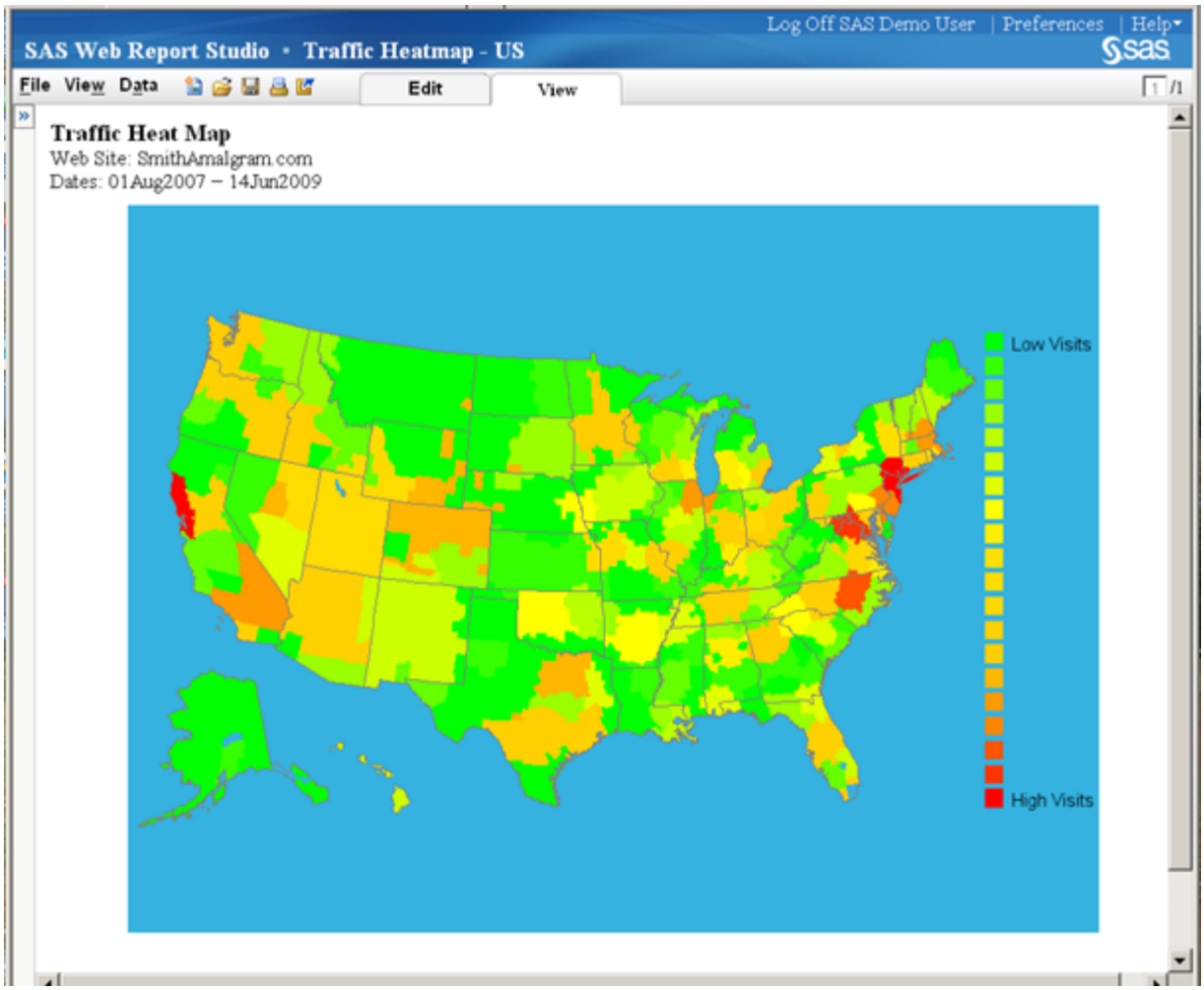
Field	Description
Ending Date	specifies the end date of your report.
Select Web Mart	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Display unique visitors?	enables you to select whether to display unique visitors in the report.
Display MSA Name?	enables you to select whether to display the metropolitan statistical area (MSA) name. The MSA is a geographic area defined by the U.S. Office of Management and Budget (OMB) to ensure consistency in the collection and tabulation of federal statistics. Each metropolitan statistical area includes at least one urban area with a minimum population of 50,000. Outlying counties with clear social and economic ties to the main urban area are also included.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Mart** field to select a Web mart. For the unique visitors and MSA name, select **Yes** or **No** from the menu. To reset the fields to their default values, click **Reset to Default**.

Example of the Traffic Heat Map for the United States

The following is an example of the Traffic Heat Map for the United States. Light green colors indicate light Web activity from those geographical areas. Dark red represents high Web activity.

Display 12.3 *Traffic Heat Map*



The colors on the map represent the number of Web visits that originate from specific areas on the map.

If you selected **Yes** to the questions about unique visitors or the metropolitan statistical area (MSA), values for these items appear when you position your cursor over the different parts of the map. For example, if you click and position the cursor over an area in North Carolina, the following type of information displays:

```
Primary MSA Greensboro: Winston-Salem- -High Point, NC MSA DMA Number:
560 Visits: 368 Visitors: 294
```

The MSA is a geographic area that you are targeting for a marketing campaign. The designated market area (DMA) is a geographic area where visitors have access to the same Web content in a campaign.

Design a Traffic Heat Map

For information about designing a Traffic Heat Map report, see the *SAS Web Report Studio User's Guide*.

Chapter 13

Identify Pages from Your Web Site That Visitors Requested

Pages Report

About the Pages Report

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

Input Requirements for the Pages Report

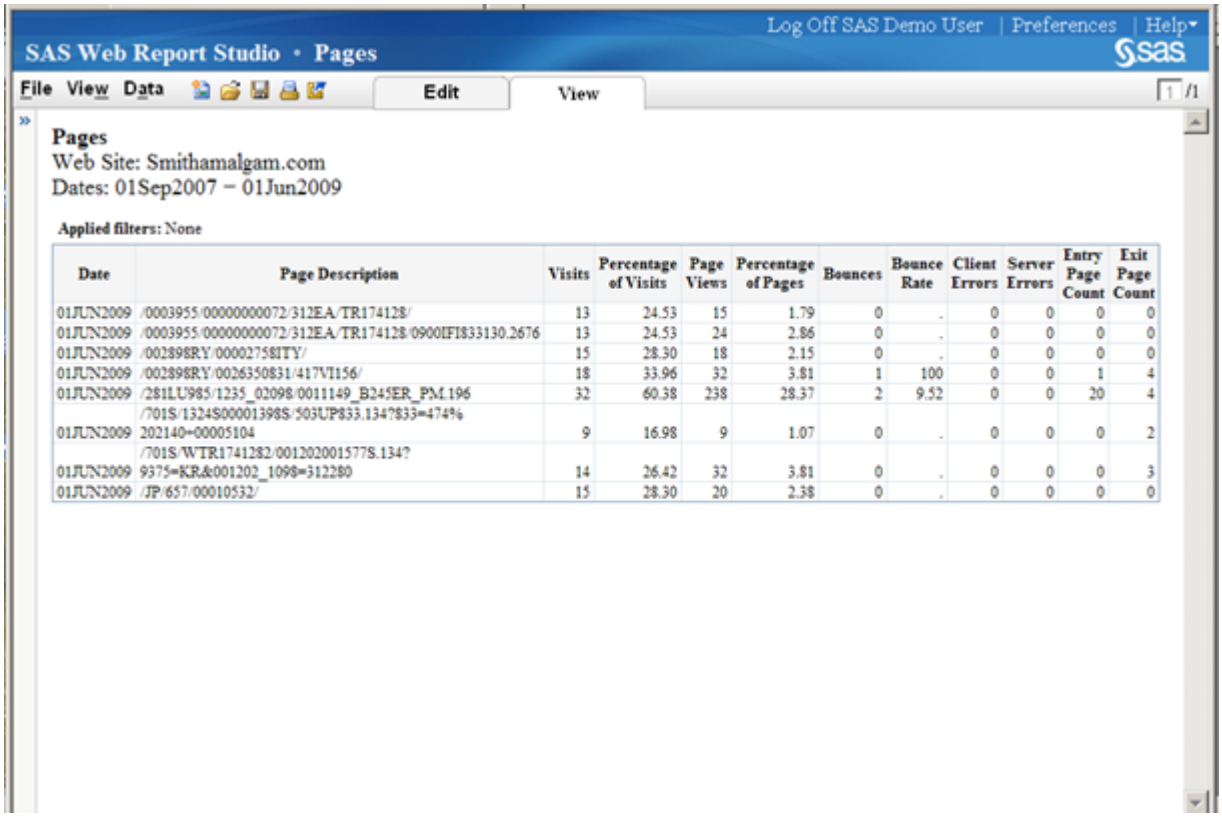
Before you view your report, you must enter data for the fields that display when you select a report. For the Pages report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of pages per day to return	specifies the number of pages to return per day for a visitor who visits your Web site.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site. To reset the fields to their default values, click **Reset to Default**.

Example of the Pages Report

Display 13.1 *Pages Report*



Date	Page Description	Visits	Percentage of Visits	Page Views	Percentage of Pages	Bounces	Bounce Rate	Client Errors	Server Errors	Entry Page Count	Exit Page Count
01JUN2009	/0003955/00000000072/312EA/TR174128/	13	24.53	15	1.79	0	.	0	0	0	0
01JUN2009	/0003955/00000000072/312EA/TR174128/0900IFI833130.2676	13	24.53	24	2.86	0	.	0	0	0	0
01JUN2009	/002898RY/0000275ITY/	15	28.30	18	2.15	0	.	0	0	0	0
01JUN2009	/002898RY/0026350831/417VI156/	18	33.96	32	3.81	1	100	0	0	1	4
01JUN2009	/281LU985/1235_02098/0011149_B245ER_PM.196	32	60.38	238	28.37	2	9.52	0	0	20	4
01JUN2009	/701S/1324S000013985/503UP833.134?833=474% 202140=00005104	9	16.98	9	1.07	0	.	0	0	0	2
01JUN2009	/701S/WTR1741282/001202001577S.134? 9375=KR&001202_1098=312280	14	26.42	32	3.81	0	.	0	0	0	3
01JUN2009	/JP/657/00010532/	15	28.30	20	2.38	0	.	0	0	0	0

Description of the Fields in the Pages Report

Field	Description
Date	specifies the calendar date of the visits.
Page Description	specifies the URL of the Web page that was viewed by a visitor to the Web site.
Visits	specifies an attempt of a Web browser to access a Web page within the Web site, and the Web site acknowledging the attempt. The visit concludes either when the same browser closes, or if you elect to navigate to another Web site and do not return.
Percentage of Visits	specifies the percentage of visits by visitors who access one or more pages on a Web site. Adding the percentages together does not equal the total, because an average cannot be computed correctly by adding averages.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200-206 and 304.
Percentage of Pages	specifies the percentage of pages that are viewed by a visitor to the Web site. Adding the numbers of pages together does not equal the total number of pages, because an average cannot be computed correctly by adding averages.
Bounces	specifies visits that consist of a one-page view, where the entry page and exit page are the same page.
Bounce Rate	specifies the percentage of requests (prospective bounces) that successfully returned a page. Adding the numbers of prospective bounces together does not equal the total number of prospective bounces, because an average cannot be computed correctly by adding averages.
Client Errors	specifies errors that were generated by the client. Status codes that begin with 400 and end with 499 identify Client errors.
Server Errors	specifies errors that were generated by the server. Status codes that begin with 500 and end with 599 identify Web server errors.

Field	Description
Entry Page Count	specifies the number of pages that were entry pages to the Web site.
Exit Page Count	specifies the number of pages that were exit pages from the Web site.

Design a Pages Report

For information about designing a Pages report, see the *SAS Web Report Studio User's Guide*.

Bounce Rate Report

About the Bounce Rate Report

The Bounce Rate report lists the pages within a Web site that "bounced." Bounces are defined as sessions where a single page is viewed by the visitor, and that page is both the entry and exit page. Bounce rate is the percentage of requests (prospective bounces) that successfully returned a page. A prospective bounce is the first valid page that is returned to a user within a session.

A session can have more than one page request before the first page that is viewed. Examples of this are redirected pages and error pages. A session is not a bounce session if any page request occurs after the one-page view.

The top URLs are selected from each day, not from the overall period. This method enables you to add the date value to the report and to subset the results accordingly.

Input Requirements for the Bounce Rate Report

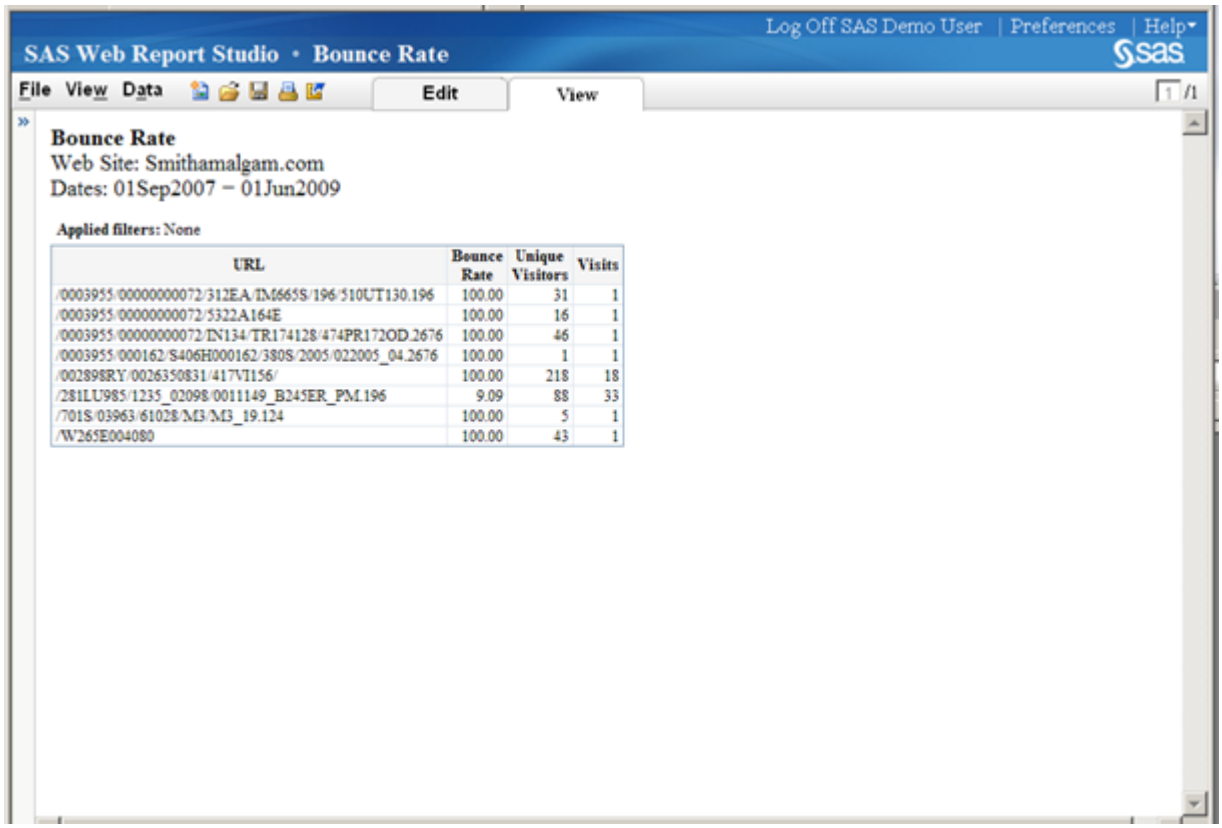
Before you view your report, you must enter data for the fields that display when you select a report. For the Bounce Rate report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of URLs to display	specifies the number of URLs to display, based on the number of URLs you entered in the input field.

Example of the Bounce Rate Report

In the following example of the Bounce Rate Report, eight URLs are displayed (that is, the number that was entered in the input data):

Display 13.2 *Bounce Rate Report*



URL	Bounce Rate	Unique Visitors	Visits
/0003955/00000000072/312EA/IM665S/196/510UT130.196	100.00	31	1
/0003955/00000000072/5322A164E	100.00	16	1
/0003955/00000000072/IN134/TR174128/474PR172OD.2676	100.00	46	1
/0003955/000162/S406H000162/380S/2005/022005_04.2676	100.00	1	1
/002898RY/0026350831/417VI156/	100.00	218	18
/281LU985/1235_02098/0011149_B245ER_PM.196	9.09	88	33
/701S/03963/61028/M3/M3_19.124	100.00	5	1
/W265E004080	100.00	43	1

Description of the Fields in the Bounce Rate Report

Field	Description
URL	specifies the Web page that visitors viewed.
Bounce Rate	specifies the percentage of requests (prospective bounces) that successfully returned a page.
Unique Visitors	specifies the number of unique visitors who visited the Web site. Adding the numbers of unique visitors together does not equal the total number, because an average cannot be computed correctly by adding averages.

Field	Description
Visits	specifies an attempt of a Web browser to access a Web page within the Web site, and the Web site acknowledging the attempt. The visit concludes either when the same browser closes, or if you elect to navigate to another Web site and do not return.

Design a Bounce Rate Report

For information about designing a Bounce Rate report, see the *SAS Web Report Studio User's Guide*.

Top Entry Pages Report

About the Top Entry Pages Report

The Top Entry Pages report displays a distribution of points of entry by a referrer. 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.

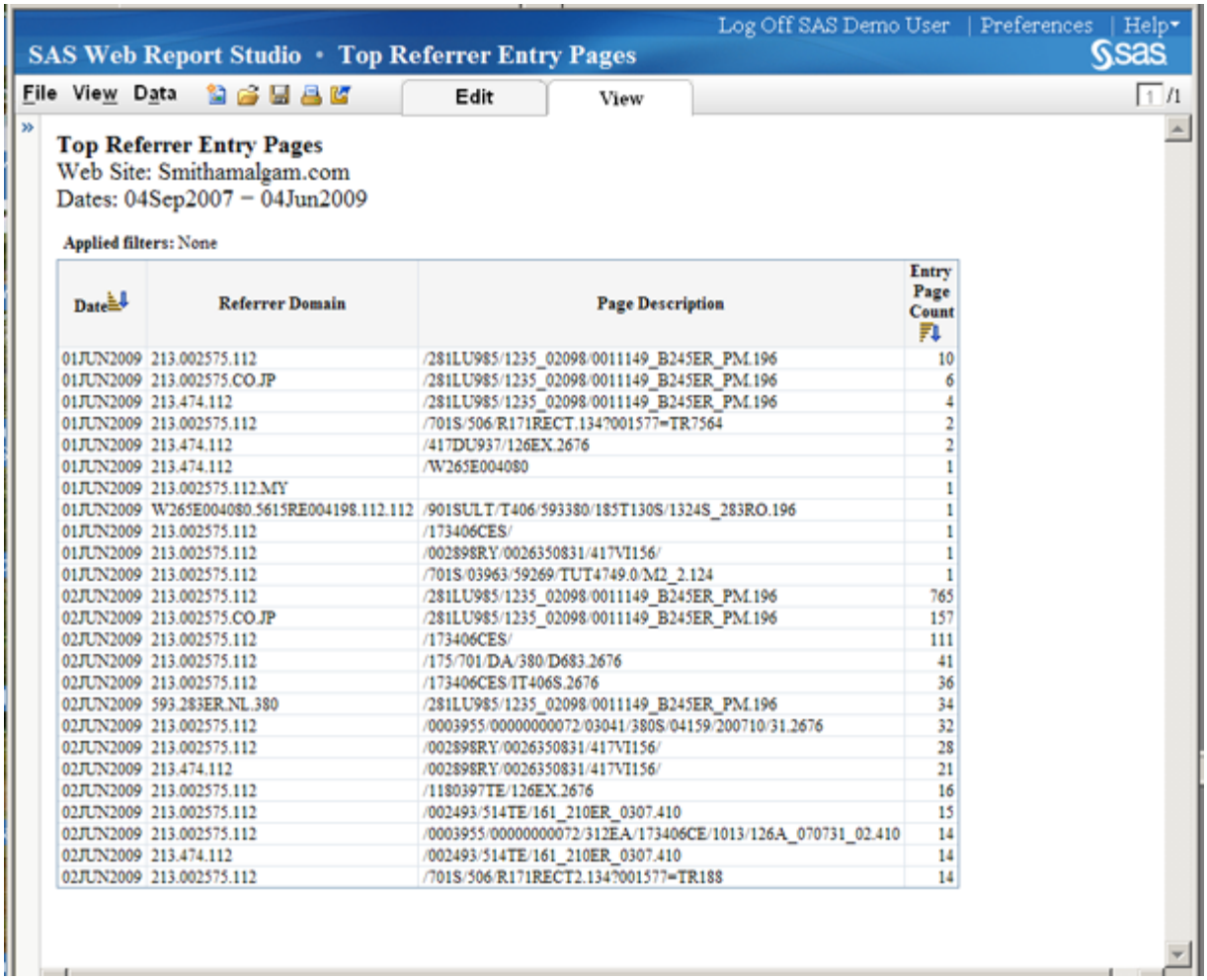
Input Requirements for the Top Entry Pages Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Top Entry Pages report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of Referrer/Entry Page combinations to display per day	specifies the number of page combinations to display per day.

Example of the Top Entry Pages Report

Display 13.3 *Top Entry Pages Report*



Log Off SAS Demo User | Preferences | Help

SAS Web Report Studio • Top Referrer Entry Pages

File View Data Edit View 1 /1

Top Referrer Entry Pages
Web Site: Smithamalgam.com
Dates: 04Sep2007 – 04Jun2009

Applied filters: None

Date	Referrer Domain	Page Description	Entry Page Count
01JUN2009	213.002575.112	/281LU985/1235_02098/0011149_B245ER_PM.196	10
01JUN2009	213.002575.CO.JP	/281LU985/1235_02098/0011149_B245ER_PM.196	6
01JUN2009	213.474.112	/281LU985/1235_02098/0011149_B245ER_PM.196	4
01JUN2009	213.002575.112	/701S/506/R171RECT.1347001577=TR7564	2
01JUN2009	213.474.112	/417DU937/126EX.2676	2
01JUN2009	213.474.112	/W265E004080	1
01JUN2009	213.002575.112.MY		1
01JUN2009	W265E004080.5615RE004198.112.112	/901SULT/T406/593380/185T130S/1324S_283RO.196	1
01JUN2009	213.002575.112	/173406CES/	1
01JUN2009	213.002575.112	/002898RY/0026350831/417VI156/	1
01JUN2009	213.002575.112	/701S/03963/59269/TUT4749.0/M2_2.124	1
02JUN2009	213.002575.112	/281LU985/1235_02098/0011149_B245ER_PM.196	765
02JUN2009	213.002575.CO.JP	/281LU985/1235_02098/0011149_B245ER_PM.196	157
02JUN2009	213.002575.112	/173406CES/	111
02JUN2009	213.002575.112	/175/701/DA/380/D683.2676	41
02JUN2009	213.002575.112	/173406CES/IT406S.2676	36
02JUN2009	593.283ER.NL.380	/281LU985/1235_02098/0011149_B245ER_PM.196	34
02JUN2009	213.002575.112	/0003955/00000000072/03041/380S/04159/200710/31.2676	32
02JUN2009	213.002575.112	/002898RY/0026350831/417VI156/	28
02JUN2009	213.474.112	/002898RY/0026350831/417VI156/	21
02JUN2009	213.002575.112	/1180397TE/126EX.2676	16
02JUN2009	213.002575.112	/002493/514TE/161_210ER_0307.410	15
02JUN2009	213.002575.112	/0003955/00000000072/312EA/173406CE/1013/126A_070731_02.410	14
02JUN2009	213.474.112	/002493/514TE/161_210ER_0307.410	14
02JUN2009	213.002575.112	/701S/506/R171RECT2.1347001577=TR188	14

The **Date** and **Entry Page Count** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Top Entry Pages Report

Field	Description
Date	specifies the calendar date for the record.
Referrer Domain	specifies the domain name for a Web page that provides a link to another page or URI.
Page Description	specifies the URI of the Web page that was viewed by a visitor to the Web site.

Field	Description
Entry Page Count	specifies the number of pages that were entry pages to the Web site.
Bounces	specifies the number of requests that successfully returned a page.
Bounce Rate	specifies the percentage of requests (prospective bounces) that successfully returned a page.

Design a Top Entry Pages Report

For information about designing a Top Entry Pages report, see the *SAS Web Report Studio User's Guide*.

Exit Pages Report

About the Exit Pages Report

The Exit Pages report displays the number of pages per date that were exit pages from a Web site.

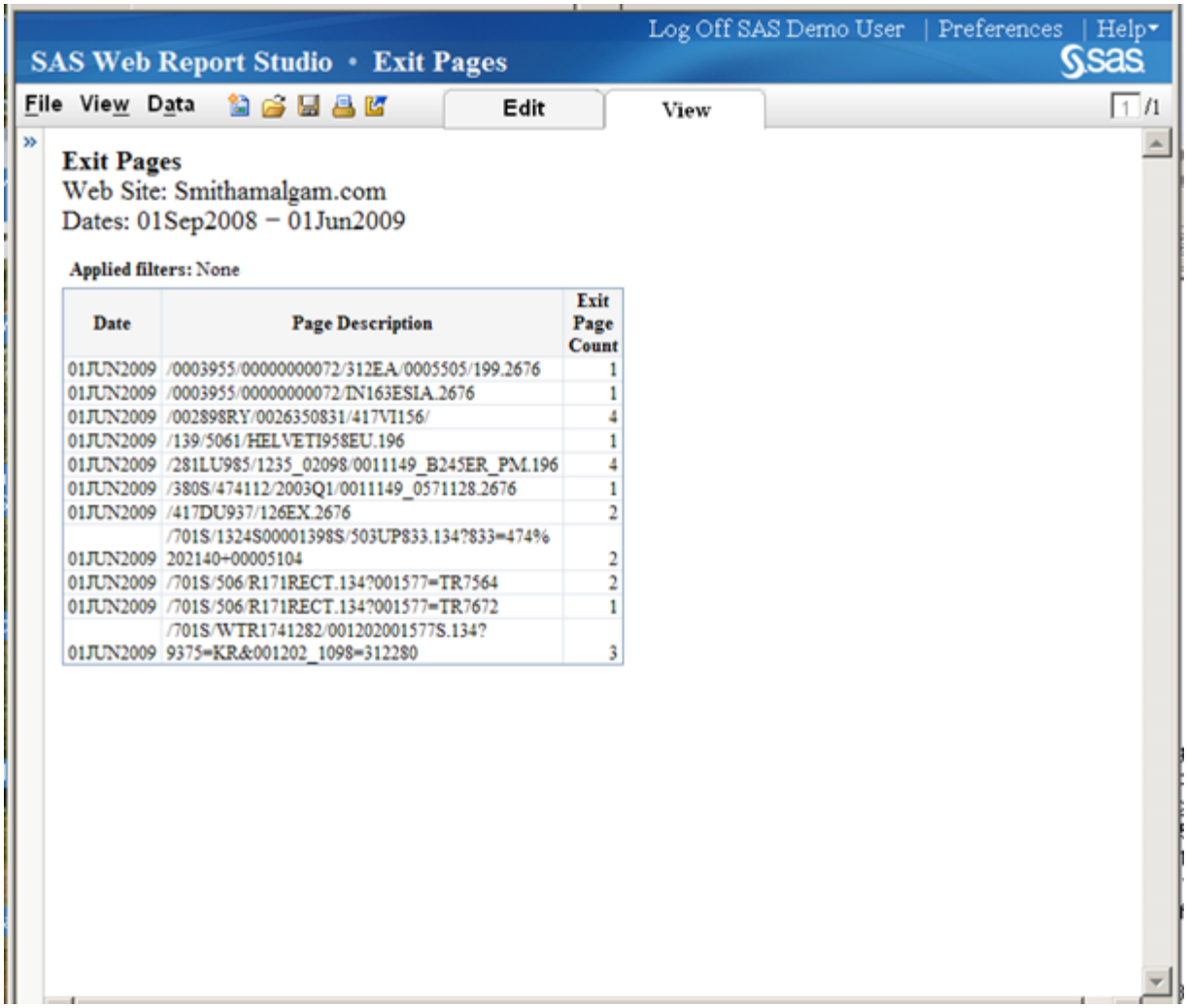
Input Requirements for the Exit Pages Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Exit Pages report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of pages to return per date	specifies the number of pages that are returned for each date.

Example of the Exit Pages Report

Display 13.4 *Exit Pages Report*



Date	Page Description	Exit Page Count
01JUN2009	/0003955/00000000072/312EA/0005505/199.2676	1
01JUN2009	/0003955/00000000072/IN163ESIA.2676	1
01JUN2009	/002898RY/0026350831/417VI156/	4
01JUN2009	/139/5061/HELVETI958EU.196	1
01JUN2009	/281LU985/1235_02098/0011149_B245ER_PM.196	4
01JUN2009	/380S/474112/2003Q1/0011149_0571128.2676	1
01JUN2009	/417DU937/126EX.2676	2
01JUN2009	/701S/1324S00001398S/503UP833.134?833=474%202140=00005104	2
01JUN2009	/701S/506/R171RECT.134?001577=TR7564	2
01JUN2009	/701S/506/R171RECT.134?001577=TR7672	1
01JUN2009	/701S/WTR1741282/0012020015775.134?9375=KR&001202_1098=312280	3

Description of the Fields in the Exit Pages Report

Field	Description
Date	specifies the calendar date of the exit pages.
Page Description	specifies the URL of the Web page that was viewed by a visitor to the Web site.
Exit Page Count	specifies the number of last pages that visitors viewed before leaving a Web site.

Design an Exit Pages Report

For information about designing an Exit Pages report, see the *SAS Web Report Studio User's Guide*.

Chapter 14

Identify Points of Entry and Search Terms

Referrer Entry Pages Report

About the Referrer Entry Pages Report

The Referrer Entry Pages report displays a distribution of points of entry by a referrer. 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.

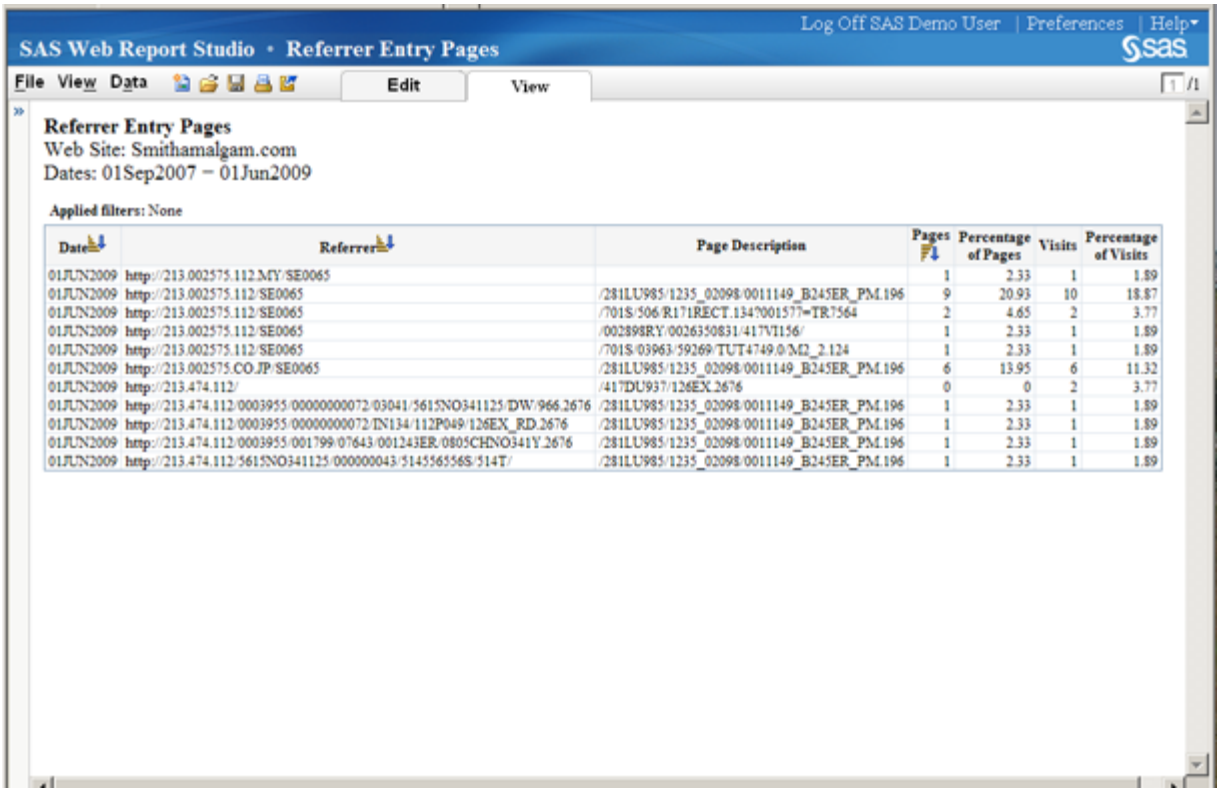
Input Requirements for the Referrer Entry Pages Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Referrer Entry Pages report, the following fields display:

Field	Description
Starting Date	specifies the first date of your report.
Ending Date	specifies the last date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of Referrer/Page combinations to return per date	specifies the number of referrers that accessed a Web page per date.

Example of the Referrer Entry Pages Report

Display 14.1 *Referrer Entry Pages Report*



Date	Referrer	Page Description	Pages	Percentage of Pages	Visits	Percentage of Visits
01JUN2009	http://213.002575.112.MY/SE0065		1	2.33	1	1.89
01JUN2009	http://213.002575.112/SE0065	/281LU985/1235_02098/0011149_B245ER_PM.196	9	20.93	10	18.87
01JUN2009	http://213.002575.112/SE0065	/701S/506/R171RECT.134?001577=TR7564	2	4.65	2	3.77
01JUN2009	http://213.002575.112/SE0065	/002898RY/0026350831/417VI156/	1	2.33	1	1.89
01JUN2009	http://213.002575.112/SE0065	/701S/03963/59269/TUT4749.0/M2_2.124	1	2.33	1	1.89
01JUN2009	http://213.002575.CO.JP/SE0065	/281LU985/1235_02098/0011149_B245ER_PM.196	6	13.95	6	11.32
01JUN2009	http://213.474.112/	/417DU937/126EX.2676	0	0	2	3.77
01JUN2009	http://213.474.112/0003955/00000000072/03041/5615NO341125/DW/966.2676	/281LU985/1235_02098/0011149_B245ER_PM.196	1	2.33	1	1.89
01JUN2009	http://213.474.112/0003955/00000000072/IN134/112P049/126EX_RD.2676	/281LU985/1235_02098/0011149_B245ER_PM.196	1	2.33	1	1.89
01JUN2009	http://213.474.112/0003955/001799/07643/001243ER/0805CHNO341Y.2676	/281LU985/1235_02098/0011149_B245ER_PM.196	1	2.33	1	1.89
01JUN2009	http://213.474.112/5615NO341125/00000043/514556556S/514T/	/281LU985/1235_02098/0011149_B245ER_PM.196	1	2.33	1	1.89

The **Date** and **Pages** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Referrer Entry Pages Report

Field	Description
Date	specifies the calendar date for the record.
Referrer	specifies a Web page that provides a link to another page.
Page Description	specifies the URI of the Web page that was viewed by a visitor to the Web site.
Pages	specifies the number of times the page for that particular referrer was the entry page in that session. This value also includes the number of times the page was viewed in a session if all of the prior pages were redirects.

Field	Description
Percentage of Pages	specifies the number of pages as a percentage of all first requested pages on that day.
Visits	specifies a count of individual visits for the referrer and page combination, in which the page was the first requested page.
Percentage of Visits	specifies the number of visits as a percentage of all visits for that day. Adding the numbers of visits together does not equal the total number of visits, because an average cannot be computed correctly by adding averages.
Bounces	specifies the number of requests that successfully returned a page.
Bounce Rate	specifies the percentage of requests (prospective bounces) that successfully returned a page.

Design a Referrer Entry Pages Report

For information about designing a Referrer Entry Pages report, see the *SAS Web Report Studio User's Guide*.

Organic Goal Page Summary Report

About the Organic Goal Page Summary Report

The Organic Goal Page Summary report categorizes visits from search engines by non-paid keyword search terms and by the goal pages that you select. A goal page has a significant meaning. It is the page to which you want to drive offline traffic. You can select any number of goal pages. SAS Web Analytics reports on the visits with search terms that visit a goal page within a session.

Input Requirements for the Organic Goal Page Summary Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Organic Goal Page Summary report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.

Field	Description
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Description of the Fields in the Organic Goal Page Summary Report

Field	Description
Goal Pages	specifies special pages to which a customer is trying to drive offline traffic.
Total Visits	specifies the number of visits to a Web site by a visitor using a Web browser to access one or more pages.
Converted Visits	specifies the number of visits in which visitors progressed from one page to another within the Web pages on your site.
% of Total Goal Page Visits	specifies the percentage of goal page visits by visitors who access one or more pages on a Web site: % of Total Goal Page Visits = (Converted Visits/Total Visits)*100.

Design an Organic Goal Page Summary Report

For information about designing an Organic Goal Page Summary report, see the *SAS Web Report Studio User's Guide*.

Organic Search Summary Report

About the Organic Search Summary Report

The Organic Search Summary report displays a chart and two tables that show total organic (not pay-per-click) visits by day. It includes a total summary of all organic searches, and an organic search summary by search engine.

Input Requirements for the Organic Search Summary Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Organic Search Summary report, the following fields display:

Field	Description
Start Date	specifies the start date of your report.
End Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Description of the Fields in the Organic Search Summary Report

Field	Description
Search Engine Desc	specifies the search engine that was used.
Search Visits	specifies the total number of visits for that time period where a search engine and search term were used, and where the search was organic. That is, it was not a pay-per-click search.
% Total Visits	specifies the total number of search visits divided by the total number of all visits for that time period.
Converted Visits	specifies the total number of search visits where one of the goal pages was viewed during that time period.
% Goal Page Visits	specifies the total number of converted visits divided by the total number of all visits that viewed at least one of the goal pages during that time period.
Conversion Rate	specifies the total number of converted visits divided by the number of search visits, multiplied by 100. The conversion rate is expressed as a percentage.
Effective Score	specifies the sum of the goal values for all of the converted visits divided by the number of converted visits. For example, if there were three converted visits and the value of the goal hit for each converted visit was 10, 40, and 50, then the effective score would be 100 divided by 3 (33.33%).

Organic Search Word Effectiveness Report

About the Search Word Effectiveness Report

The Organic Search Word Effectiveness report contains search terms that are specified by the customer for a time period based on the total number of searches. The Organic Search Word Effectiveness report generates information from unpaid searches.

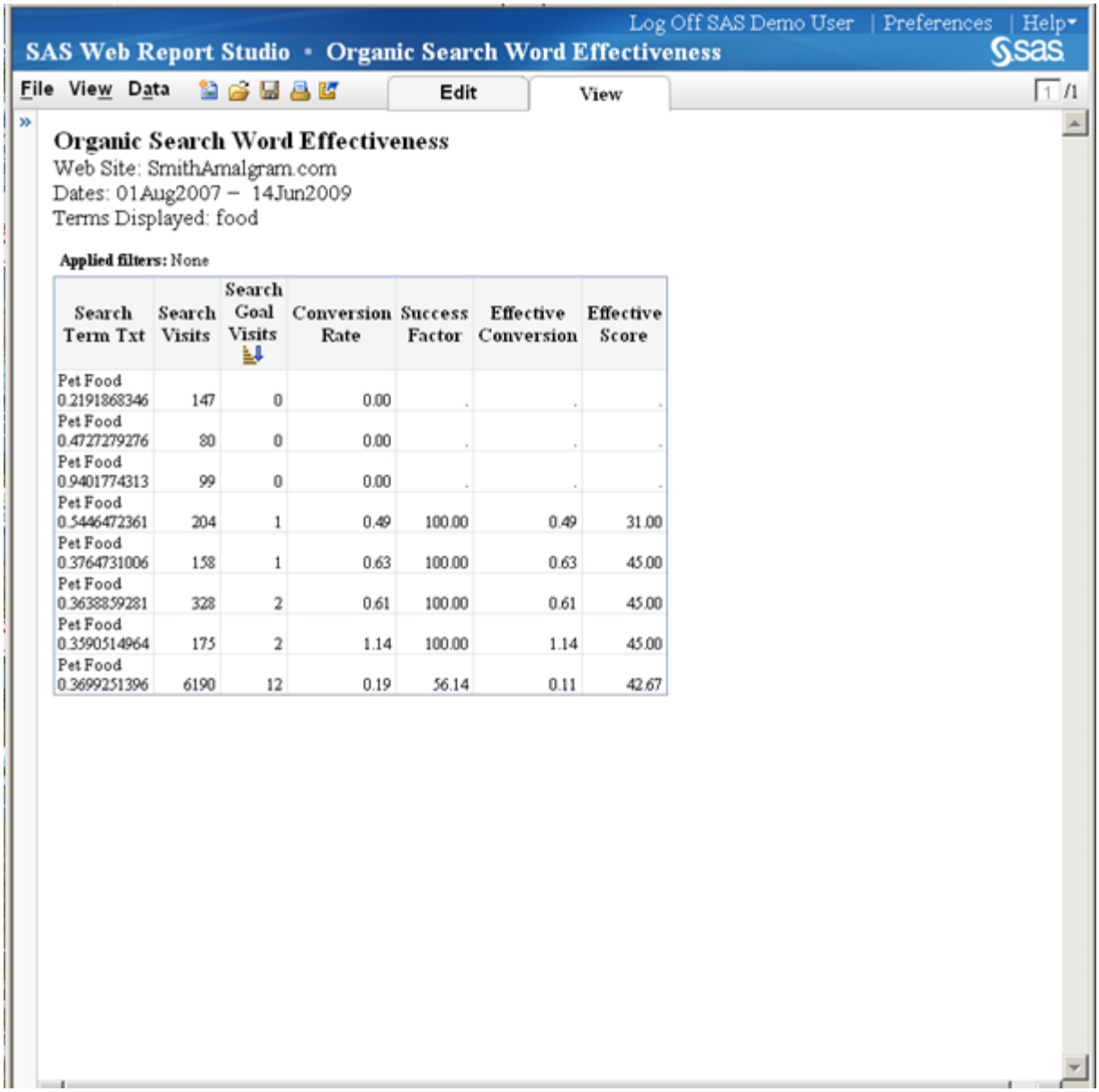
Input Requirements for the Organic Search Word Effectiveness Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Organic Search Word Effectiveness report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.
Number of top search terms to display	specifies the number of search terms to display. Top search terms are defined as the search terms that have the highest total number of search visits within the time period selected.
Enter search term or partial term to report on	specifies search terms to report on. A prompt enables you to enter a word or string to display. The query uses a CONTAINS clause so that any search term that contains the term will be selected. If this field is not blank, it overrides the number of top search terms to display.

Example of the Organic Search Word Effectiveness Report

Display 14.2 *Organic Search Word Effectiveness Report*



Organic Search Word Effectiveness
Web Site: SmithAmalgram.com
Dates: 01Aug2007 – 14Jun2009
Terms Displayed: food

Applied filters: None

Search Term Txt	Search Visits	Search Goal Visits	Conversion Rate	Success Factor	Effective Conversion	Effective Score
Pet Food 0.2191868346	147	0	0.00	.	.	.
Pet Food 0.4727279276	80	0	0.00	.	.	.
Pet Food 0.9401774313	99	0	0.00	.	.	.
Pet Food 0.5446472361	204	1	0.49	100.00	0.49	31.00
Pet Food 0.3764731006	158	1	0.63	100.00	0.63	45.00
Pet Food 0.3638859281	328	2	0.61	100.00	0.61	45.00
Pet Food 0.3590514964	175	2	1.14	100.00	1.14	45.00
Pet Food 0.3699251396	6190	12	0.19	56.14	0.11	42.67

The **Search Goal Visits** column contains a down arrow. Right-click the arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Organic Search Word Effectiveness Report

Field	Description
Search Term Txt	specifies the term for which you want to search in the specified date range for the report.
Search Visits	specifies the number of visits where visitors entered the site by means of a search term from an external referrer.
Search Goal Visits	specifies the number of visits where visitors entered the site by means of a search term from an external referrer, and where a goal page was viewed for a particular day.
Conversion Rate	specifies the ratio of converted searches to total searches.
Success Factor	determines how successful a keyword is at converting visitors to high-value goal pages in relation to other search terms.
Effective Conversion	demonstrates how effective a search term is at converting users to high-value Web pages.
Effective Score	represents a measure of what goal pages the site drives visitors to.

Metrics and Statistics

The following metrics and statistics are used in calculating values for the Organic Search Word Effectiveness report:

- Converted Searches = ΣCSi

  A converted search is one in which a specific goal page (defined in the Search Term Goal Management page) was used.

- Total Searches = ΣSi

  Total searches is the number of external engine searches for a given search term.

- Conversion Rate = (ΣCSi/ΣSi)*100

  The conversion rate is the ratio of converted searches to total searches.

- Success Factor = (Σ(CSi*GVi)/ΣCSi*ΣGVi)*100

  The success factor determines how successful a keyword is at converting visitors to high-value goal pages in relation to other search terms.

- Effective Conversion = (Σ(CSi*GVi)/ΣSi*ΣGVi)*100

The effective conversion rate demonstrates how effective a search term is at converting users to high-value Web pages.

- Effective Score = Σ(CSi*GVi)/ΣCSi

  The effective score represents a measure of what goal pages the site is driving visitors to.

- Goal Metric specifies any page that you identify as having a payoff. Whenever a goal page is accessed, the goal value is accumulated.

  In these examples, the input data is as follows:

```
Aug2 S 2 CS 1 GV 600
Aug12 S 1 CS 1 GV 600
Aug14 S 2 CS 1 GV 200
Aug17 S 4 CS 1 GV 200
```

  S specifies the number of external search engine search visits for a given search term. CS specifies the number of visits where visitors entered the site from a search term of an external referrer, and where a goal page was viewed for a particular day. GV specifies the value that a Web analyst attributes to a goal page. This value is called goal value, and is the number at the time the event took place. The value i in the following examples is an index for all goal pages:

  Example of Success Factor Calculation: The denominator is ΣCSi*ΣGVi (in this case, it is 4*800). Only the unique goal values of 600 and 200 are counted. Therefore, 600/3200+600/3200+200/3200+200/3200 gives a total of 1600/3200*100, which is 50.

  Example of Effective Conversion Denominator: The effective conversion denominator is ΣSi*ΣGVi (in this case, it is 9*800). The GVi counts only the unique goal values of 600 and 200. Therefore, 600/7200+600/7200+200/7200+200/7200 gives a total of 1600/7200*100, which is 22.22.

Design an Organic Search Word Effectiveness Report

For information about designing an Organic Search Word Effectiveness report, see the *SAS Web Report Studio User's Guide*.

Organic Search Word Overview Report

About the Organic Search Word Overview Report

The Organic Search Word Overview report displays a table that shows all goal pages and search terms that are associated with them. The Organic Search Word Overview report generates information from unpaid searches.

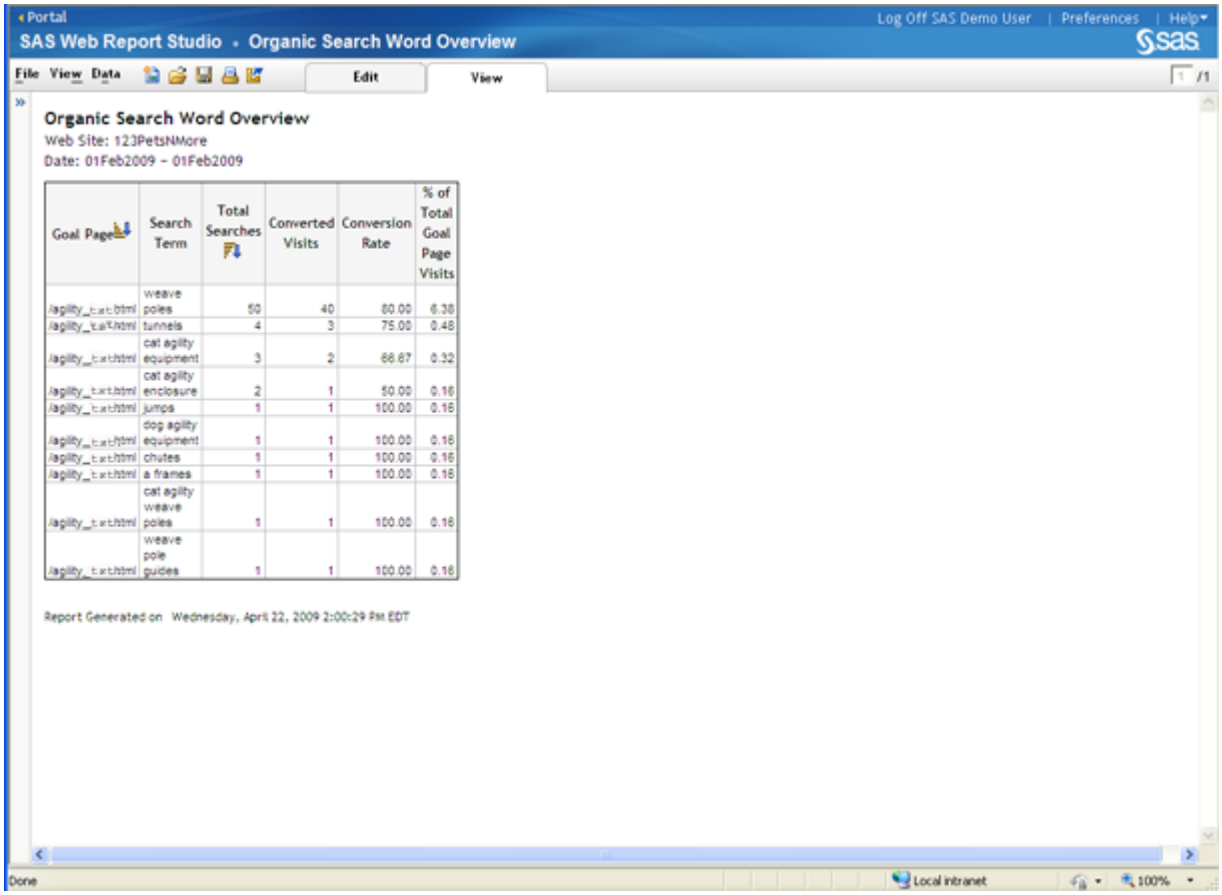
Input Requirements for the Organic Search Word Overview Report

Before you view your report, you must enter data for the fields that display when you select a report. For the Organic Search Word Overview report, the following fields display:

Field	Description
Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Site	enables you to select a collection of related Web pages or the data that is stored with the Web site's data mart, which contains Web log information.

Example of the Organic Search Word Overview Report

Display 14.3 *Organic Search Word Overview Report*



The **Goal Page** and **Total Searches** columns contain down arrows. Right-click an arrow and select an option from the menu. You can sort the column, move the column to the right or left, align the column, or hide the column.

Description of the Fields in the Organic Search Word Overview Report

Field	Description
Goal Page	specifies the page that you want your visitors to go to. It specifies any page that you designate that results in a payoff.
Search Term	specifies the term that you are searching for in the specified date range.
Total Searches	specifies the total number of searches per session.
Converted Visits	specifies the number of visits in which a visitor views a goal page.
Conversion Rate	demonstrates how effective a search term is at converting visitors to high-value Web pages.
% of Total Goal Page Visits	is computed in the following way: % of Total Goal Page Visits=(Converted Visits / Total Visits)*100.

Design an Organic Search Word Overview Report

For information about designing an Organic Search Word Overview report, see the *SAS Web Report Studio User's Guide*.

Internal Search Terms Report

About the Internal Search Terms Report

The Internal Search Terms Report provides an analysis of the internal searches that a visitor performs while visiting the specified Web mart. You can use this report to help determine whether visitors are finding the information they are searching for with your internal search engine.

Input Requirements for the Internal Search Terms Report

Before you view your report, you must enter data for the fields that are displayed when you select an Internal Search Terms report:

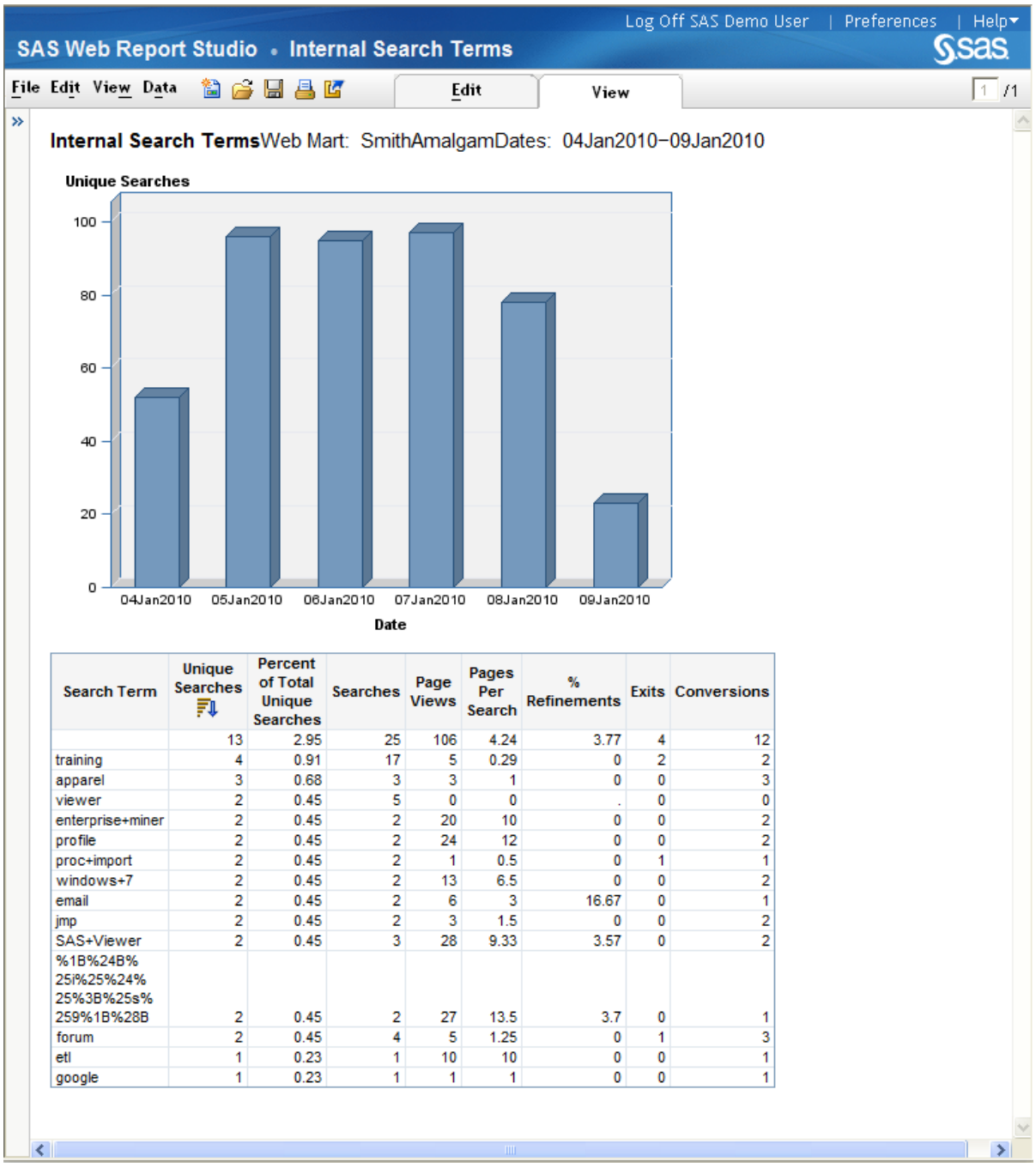
Starting Date	specifies the start date of your report.
End Date	specifies the end date of your report.

Web Mart Name	specifies the Web mart that is analyzed in the report.
Number of Search Terms to display per date	specifies the number of search terms to display for each date. The search terms are sorted so that the terms with the highest number of searches are displayed first.
Graph Interval	specifies the interval of time that you want to use in the graph. The available options are day, week, month, quarter, and year.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Web Mart Name** field to select a Web mart. To reset the fields to their default values, click **Reset to Default**.

Example of the Internal Search Terms Report

Display 14.4 *Internal Search Terms Report*



Search Term	Unique Searches	Percent of Total Unique Searches	Searches	Page Views	Pages Per Search	% Refinements	Exits	Conversions
	13	2.95	25	106	4.24	3.77	4	12
training	4	0.91	17	5	0.29	0	2	2
apparel	3	0.68	3	3	1	0	0	3
viewer	2	0.45	5	0	0	.	0	0
enterprise+miner	2	0.45	2	20	10	0	0	2
profile	2	0.45	2	24	12	0	0	2
proc+import	2	0.45	2	1	0.5	0	1	1
windows+7	2	0.45	2	13	6.5	0	0	2
email	2	0.45	2	6	3	16.67	0	1
jmp	2	0.45	2	3	1.5	0	0	2
SAS+Viewer	2	0.45	3	28	9.33	3.57	0	2
%1B%24B%25i%25%24%25%3B%25s%259%1B%28B	2	0.45	2	27	13.5	3.7	0	1
forum	2	0.45	4	5	1.25	0	1	3
etl	1	0.23	1	10	10	0	0	1
google	1	0.23	1	1	1	0	0	1

Description of the Fields in the Internal Search Terms Report

Search Term	specifies the search term that was used in the specified date range.

Unique Searches	specifies the number of visitors who searched for this term.
Percent of Total Unique Searches	specifies the percentage calculated as (Unique Searches / Total Unique Searches) * 100 for the specified date range.
Searches	specifies the total number of searches.
Page Views	specifies the total number of pages that are viewed by Web site visitors. A valid status code or file type defines a viewed page. The page count does not include objects on a Web page, such as audio files or file requests. The default valid page codes are 200–206 and 304.
Pages Per Search	specifies the total number of pages viewed for each search. This field is calculated as (Page Views / Total Searches).
% Refinements	specifies the percentage of page views that are the result of a refinement, or a search in which the visitor searches a second time after not viewing any results from the first search. This field is calculated as (Refinements / Page Views) * 100.
Exits	specifies the number of times a visitor leaves the Web mart without viewing any results.
Conversions	specifies the number of times a user selects a search result and views the page.

Design an Internal Search Terms Report

For information about designing an Internal Search Terms report, see the *SAS Web Report Studio User's Guide*.

External Search Terms Report

About the External Search Terms Report

The External Search Terms report displays a list of the top search terms that visitors searched on before entering your Web mart. You can use this report to analyze the key search terms that draw visitors to your Web mart. You can limit the results of the report by specifying a total number of search terms to return and selecting one or more search engines. You can also specify a part or all of a particular search term that you want to analyze.

Input Requirements for the External Search Terms Report

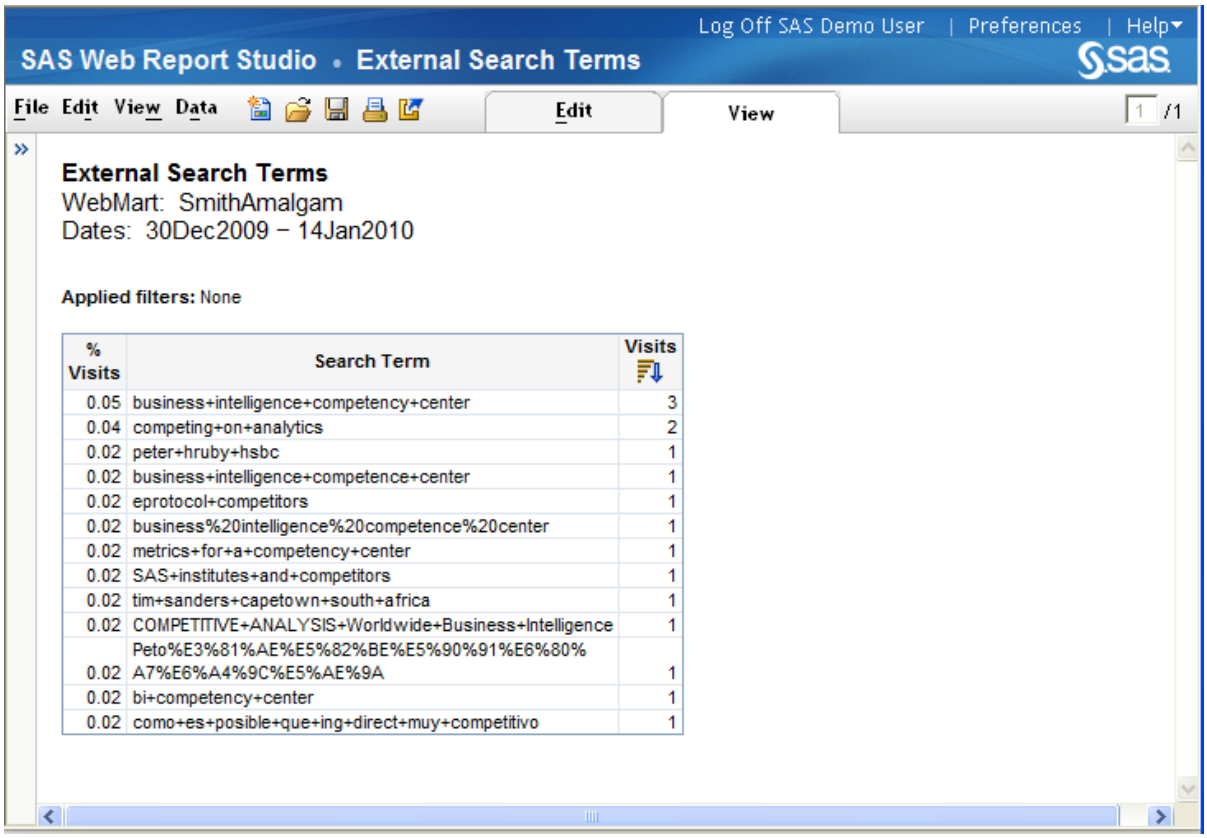
Before you view your report, you must enter data for the fields that are displayed when you select an External Search Terms report:

Starting Date	specifies the start date of your report.
Ending Date	specifies the end date of your report.
Select Web Mart	specifies the Web mart that is analyzed in the report.
Number of Search Terms to return	specifies the number of search terms to return for each date. The search terms are sorted so that the terms with the highest number of searches are returned first.
Limit results to search engines	enables you to limit the results to only the search engines that you select.
Select a search term or part of a search term to limit results	enables you to specify part or all of a search term to include in the report. Any search term that contains the term will be selected.

Use the calendar icon or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Mart** field to select a Web mart. To reset the fields to their default values, click **Reset to Default**.

Example of the External Search Terms Report

Display 14.5 *External Search Terms Report*



% Visits	Search Term	Visits
0.05	business+intelligence+competency+center	3
0.04	competing+on+analytics	2
0.02	peter+hruby+hsbc	1
0.02	business+intelligence+competence+center	1
0.02	eprotocol+competitors	1
0.02	business%20intelligence%20competence%20center	1
0.02	metrics+for+a+competency+center	1
0.02	SAS+institutes+and+competitors	1
0.02	tim+sanders+capetown+south+africa	1
0.02	COMPETITIVE+ANALYSIS+Worldwide+Business+Intelligence	1
0.02	Peto%E3%81%AE%E5%82%BE%E5%90%91%E6%80%A7%E6%A4%9C%E5%AE%9A	1
0.02	bi+competency+center	1
0.02	como+es+posible+que+ing+direct+muy+competitivo	1

Description of the Fields in the External Search Terms Report

% Visits	displays the percentage of visits that are associated with the search term and any specified search engines.
Search Term	displays the search term that was used in the specified date range.
Visits	displays the total number of visits that are associated with the search term and any specified search engines.

Design an External Search Terms Report

For information about designing an External Search Terms report, see the *SAS Web Report Studio User's Guide*.

Chapter 15

Use AdWords for Bid Campaigns

Search Engine Bid Campaigns Report

About the Search Engine Bid Campaigns Report

The Search Engine Bid Campaigns report displays the results of using AdWords that are located on Yahoo, Google, MSN, and other search engines. These AdWords follow a pay-per-click sponsor system where the placement of the sponsor is ranked by how much the sponsor is willing to pay for a keyword. Customers enter a bid and the budget they are willing to spend. The reporting, updating, maintenance, and alerting of the AdWord's bids, ROI, impressions, and cost is called Search Engine Bid Management.

Input Data Requirements for the Search Engine Bid Campaigns Report

Before you view your report, you must enter input data for the fields that display when you select a report. For the Search Engine Bid Campaigns report, the following fields display:

Field	Description
Select Campaign	specifies a collection of related Web pages that is used to contact potential customers. Campaigns can be internal or external. An internal campaign (internal referrers) guides visitors through the Web site. An external campaign references an outside entity, such as a PPC ad, that sent a visitor to a Web sight.
Select Starting Month	specifies the first month of your report.
Select Ending Month	specifies the last month of your report.

Use the calendar or the menu beside the date fields to enter the dates for which you want to create your report. Use the menu beside the **Select Web Site** field to select a Web site.

Description of the Fields in the Search Engine Bid Campaigns Report

Field	Description
Month	specifies the first day of the month.
Currency Cd	specifies the ISO currency code that is associated with a specific campaign.
Vendor Impressions	specifies the number of impressions that are displayed during a day. The number of impressions are retrieved from Google AdWords data.
Vendor Clicks	specifies the number of click-throughs that occur during a day.
Click Thru Rate	specifies the number of clicks divided by the number of impressions. The number of clicks are retrieved from Google AdWords data.
Vendor Conversions	specifies the type (purchase, sale, signup, page view, or lead) that is recorded in the generated code, enabling you to achieve greater specificity in your conversion statistics. The type is retrieved from Google AdWords data.
Vendor Cost	specifies the amount that was paid for the click-throughs on a given day in the currency specified by the currency code. The amount that was paid is retrieved from Google AdWords data.
Vendor CPM	specifies the cost per 1,000 impressions. The cost is retrieved from Google AdWords data.

Field	Description
Clicks % Total Visits	specifies the number of clicks (from Google AdWords data) divided by the number of visits (from Web site log data).
General Visits	specifies the total number of visits minus the number of clicks.
All Sites Visits	specifies the total number of visits to all Web sites for one month.

Campaign Analysis

In order to perform a campaign analysis, SAS Web Analytics tracks both internal and external campaigns. An internal campaign (internal referrers) guides visitors through the Web site. An external campaign references an outside entity that sent a visitor to the Web site. The following rules apply:

- Multiple campaigns can be attached to a single session.
- Each session has at most one referring (external) campaign.
- Each requested page within a session can have at most one internal campaign. A session can have multiple internal campaigns, provided that a visitor requested two or more pages.

Business Example of a Search Engine Bid Campaign

One example of Search Engine Bid Management involves using Google AdWords. You advertise on Google, choosing keywords or phrases that relate to your specific business. When a visitor searches for a keyword or phrase that you have identified, an advertisement for your business can appear next to the search results. You can track the success of your campaign by tracking the number of times that a visitor clicked on your advertisement. This service is called Pay Per Click (PPC). You pay a fee only when a visitor clicks on your advertisement.

Design a Search Engine Bid Campaigns Report

For information about designing a Search Engine Bid Campaigns report, see the *SAS Web Report Studio User's Guide*.

Search Engine Paid Keyword Performance Report

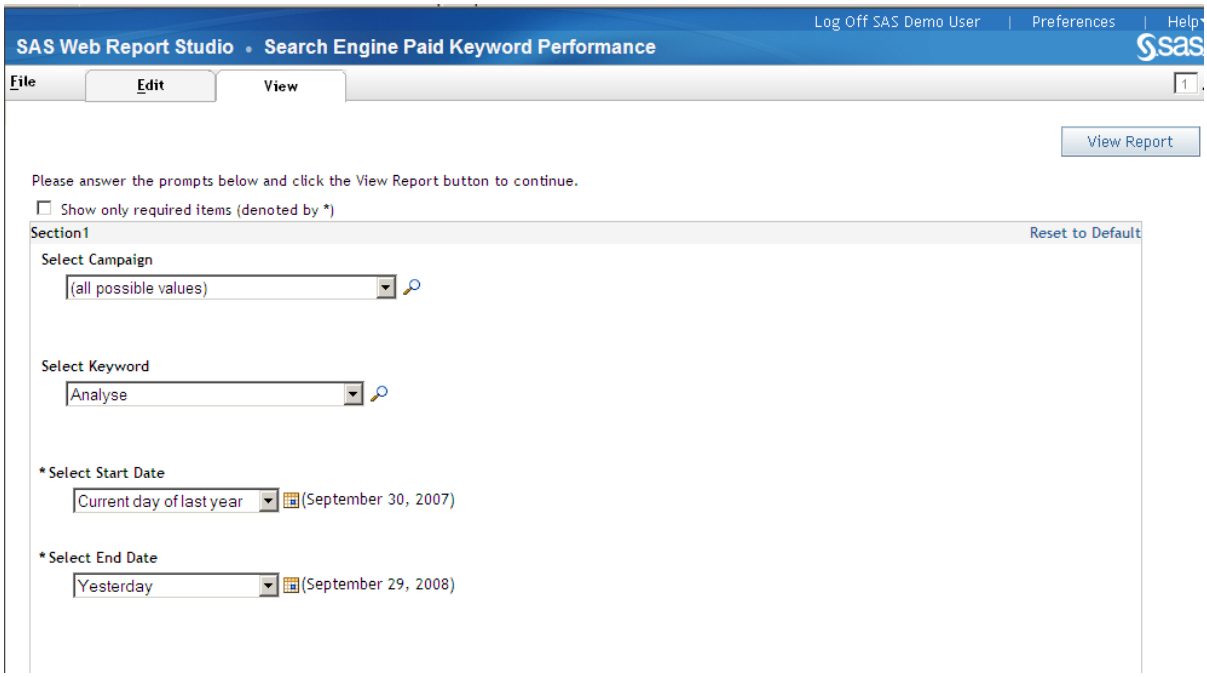
About the Search Engine Paid Keyword Performance Report

The Search Engine Paid Keyword Performance report contains metrics that are used to determine the effectiveness of a specific campaign and keyword.

Input Data Requirements for the Search Engine Paid Keyword Performance Report

Before you view your report, you must enter input data for the fields that display when you select a report. The following is an example of the input window for the Search Engine Paid Keyword Performance report:

Display 15.1 *Search Engine Paid Keyword Performance Report Input Window*



For the Search Engine Paid Keyword Performance report, the following input fields display:

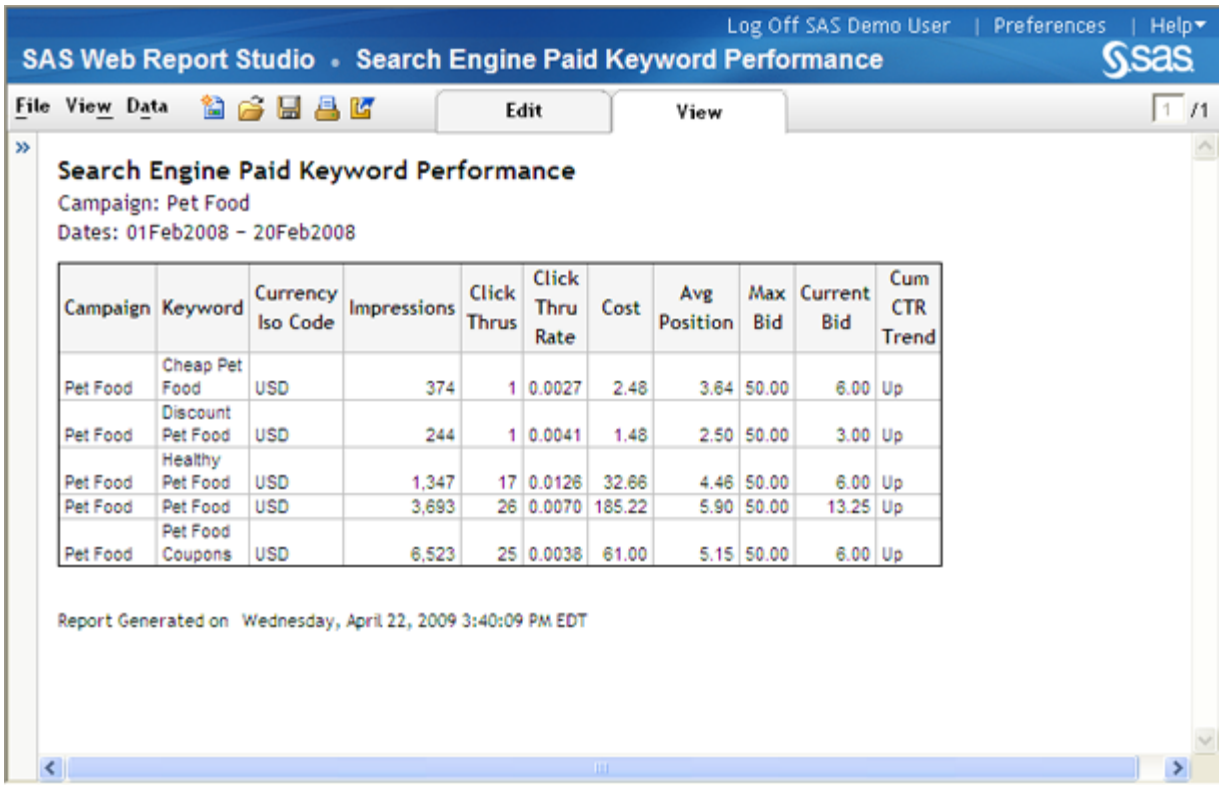
Field	Description
Select Campaign	specifies the name of the campaign for which you want to collect data.
Select Keyword	specifies words or phrases that are specific to your business, and for which you can successfully search.
Select Start Date	specifies the first date of your report.
Select End Date	specifies the last date of your report.

Click the down arrow in the **Select Campaign** and **Select Keyword** fields to select a campaign or keyword, or click the icon to search for a campaign or keyword. Use the calendar or the menu beside the date fields to enter the dates for which you want to create your report.

Example of the Search Engine Paid Keyword Performance Report

Here is an example of the Search Engine Paid Keyword Performance report:

Display 15.2 *Search Engine Paid Keyword Performance Report*



Description of the Fields in the Search Engine Paid Keyword Performance Report

The following table describes the variables in the report:

Field	Description
Campaign	specifies the name of the campaign for which you want to collect data.
Keyword	specifies words or phrases that are specific to your business, and for which you can successfully search.
Currency ISO Code	specifies the ISO currency code that is associated with a specific campaign.
Impressions	specifies the number of impressions that are displayed during a day.

Field	Description
Click Thrus	specifies the number of click-throughs that occur during a day.
Click Thru Rate	specifies the number of clicks divided by the number of impressions.
Cost	specifies the amount that was paid for the click-through on a given day in the currency that is specified in the currency code.
Avg Position	specifies the average position of all advertisements for a keyword and campaign combination for one day.
Max Bid	specifies the maximum bid for a keyword within a campaign on one day.
Current Bid	specifies the maximum amount that was bid for a keyword within a campaign on one day.
Cum CTR Trend	specifies the trend of a cumulative click-through rate. A cumulative click-through rate is equal to the number of cumulative clicks divided by the number of cumulative impressions.

Trend Analysis for the Search Engine Paid Keyword Performance Report

A trend analysis is performed on each campaign, keyword, and currency code combination using the cumulative click-through rate. A trend analysis will be generated if the following criteria are met:

- If the period of the report is less than 35 days, the trending data that is collected contains the end date –35.
- A campaign, keyword, and currency code combination has at least 12 days of impression activity.
- Total click activity during the trending period is >0.

If any of these criteria are not met, then the cumulative click-through rate trend is not changed.

Design a Search Engine Paid Keyword Performance Report

For information about designing a Search Engine Paid Keyword Performance report, see the *SAS Web Report Studio User's Guide*.

Glossary

AdWords
Google's pay-per-click (PPC) advertising product. AdWords advertisers create and budget campaigns that contain keywords that trigger their ads. The ads for relevant searches are displayed as Sponsored Links.

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.

clickstream analysis
the analysis and interpretation of the actions of Web site visitors. These actions are recorded in the Web log as a chain of time-ordered related events, such as a trail of mouse clicks that a visitor leaves. The purpose of clickstream analysis is to understand and predict the actions of visitors as well as the paths that visitors take through a site. This analysis typically involves data-mining techniques such as identifying sequences and associations.

click-through
the act of navigating to a Web page by selecting a link in an e-mail message. See also page-open.

content group
a collection of pages within a Web site that share similar content or provide similar services to visitors. This subset of the Web site can be considered as a separate Web site in order to enable Web analyses that are usually available only for an entire Web site.

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
a measurement that shows whether an organization is progressing toward its stated goals. Short form: KPI.

KPI
See Key Performance Indicator.

measure
a data item whose values are aggregated (unless otherwise specified) and which can be used in computations or analytical expressions.

metric
any standard of measurement that is used as a basis for evaluation or comparison. For example, ROI (return on investment) is a metric that is commonly used by businesses as a basis for making decisions, and bytes per second throughput is a common performance metric.

organic search result
the method by which a user enters a Web site. The user accesses the Web site through a link within a search engine result page that is not a paid keyword link.

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 and 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 and hit.

portlet
a Web component that is managed by a Web application and that is aggregated with other portlets to form a page within the application. A portlet processes requests from the user and generates dynamic content.

portlet
a Web component that is managed by a Web application and that is aggregated with other portlets to form a page within the application. Portlets can process requests from the user and generate dynamic content.

referrer
a Web page that provides a link to another page. See also referring domain.

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 and hit.

Search Engine Bid Management
the analytics used to optimize the keywords that are selected within search engine marketing campaigns.

search engine bid optimization
the process of refining the keywords used within search engine marketing campaigns to optimize the number of keyword auction wins within a marketing budget. Increasing the number of auction wins increases the number of times campaign ads are displayed for search engine users, and therefore reduces the overall marketing cost of the campaign.

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, and 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 who uses a Web browser to access a Web site.

visitor
an inferred individual (derived by measuring browsers filtered for spiders and robots), within a designated reporting time frame, with activity that consists of one or more interactions with a site.

Web funnel
a report that analyzes a visitor's progression through a specified sequence of pages. Visitor inflow and outflow is shown for each step in the sequence.

Web mart
a shortened form of the term Web data mart, which refers to a data mart that contains information about a Web site’s visits and related customer intelligence.

Web page overlay
a report that displays selected Web metrics overlaid on a Web page.

Web path
a sequence of page views that visitors traverse on a Web site.

Web path report
a report that analyzes the sequence of page views that visitors take on a Web site.

Web performance insight
a report that analyzes and determines the statistically significant metrics that drive a target metric while showing the forecast and historical predictions for the metrics. It is used for decision support and "what-if" analysis.

Web performance monitor
a report that analyzes and monitors the performance of metrics, and shows forecasts, trends, and performance metrics against a goal. It is used for decision support, spotting business trends, and tracking business objectives.

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Your Turn

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