

# Oracle9iAS Clickstream Intelligence

User's Guide

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**Oracle9iAS Clickstream Intelligence User's Guide, Release 2 (9.0.2.2)**

**Part No. A90888-02**

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# Preface

Welcome to Oracle9iAS Clickstream Intelligence, a comprehensive analytical tool that enables you to identify and analyze the behavior of Web site visitors.

This preface contains the following topics:

- **Intended Audience**
- **Documentation Accessibility**
- **Structure**
- **Related Documents**
- **Conventions**

## Intended Audience

The Oracle9iAS Clickstream Intelligence User's Guide is intended for end-users of Oracle9iAS Clickstream Intelligence Analytics (Clickstream Analytics) who perform the following tasks:

- Internet development
- Electronic marketing
- Content creation
- Analysis of business intelligence data

To use this document, you must understand the type of audience your company tries to attract. It is also helpful to have a solid understanding of the scope of your company's Web site. Additionally you should have a working knowledge of the Internet and how to use an Internet browser.

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## Structure

This Guide contains the following chapters:

### **Chapter 1, "Introduction"**

This chapter provides a high-level overview of Oracle9iAS Clickstream Intelligence and its architecture.

### **Chapter 2, "Getting Started"**

This chapter explains the Oracle9i Application Server components used to view Clickstream Analytics. It further explains log on procedures, the user interfaces of those components, and how to set up viewing preferences.

### **Chapter 3, "Working with Workbooks and Worksheets"**

This chapter explains the form and function of the workbooks and worksheets in Clickstream Analytics. Information about modifying the look and feel of worksheet data is also provided.

### **Chapter 4, "Understanding Worksheet Data"**

This chapter provides information about the potential uses for the workbooks and worksheets in Clickstream Analytics.

### **Appendix A, "Column Descriptions"**

This appendix provides definitions for every data column available within the worksheets of Clickstream Analytics.

### **"Glossary"**

Defines concepts and terminology used in this manual.

## **Related Documents**

For more information, see the following documentation:

- *Oracle9iAS Clickstream Intelligence Administrator's Guide*
- *Oracle9iAS Clickstream Intelligence Data Model Reference*
- *Oracle9i Application Server Installation Guide*
- *Oracle9i Discoverer Plus User's Guide*

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<http://technet.oracle.com/docs/index.htm>

## Conventions

This section describes the conventions used in the text and code examples of the this documentation set. It describes

### Conventions in Text

We use various conventions in this text to help you quickly identify special terms. The following list describes those conventions, as applicable to the *Oracle9iAS Clickstream Intelligence User's Guide*.

Convention	Meaning
<b>Bold</b>	Bold typeface indicates terms that are defined in the text or in the glossary. Boldface type also denotes links and buttons that appear as User Interface components, and may be used for emphasis in lists or text.
<i>Italics</i>	Italic typeface indicates book titles or emphasis.
UPPERCASE monospace (fixed-width font)	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, usernames, and roles.
lowercase monospace (fixed-width font)	Lowercase monospace typeface indicates executables, filenames, directory names, and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, usernames and roles, program units, and parameter values.
	<b>Note:</b> Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.

Convention	Meaning
<i>lowercase</i> <i>monospace</i> ( <i>fixed-width font</i> ) <i>italic</i>	Lowercase monospace italic font represents placeholders or variables.

## Conventions in Code Examples

Code examples illustrate SQL, PL/SQL, SQL\*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[ ]	Brackets enclose one or more optional items. Do not enter the brackets.	DECIMAL ( <i>digits</i> [ , <i>precision</i> ])
{ }	Braces enclose two or more items, one of which is required. Do not enter the braces.	{ENABLE   DISABLE}
	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	{ENABLE   DISABLE} [COMPRESS   NOCOMPRESS]
...	Horizontal ellipsis points indicate either: <ul style="list-style-type: none"> <li>That we have omitted parts of the code that are not directly related to the example</li> <li>That you can repeat a portion of the code</li> </ul>	CREATE TABLE ... AS <i>subquery</i> ;  SELECT <i>col1</i> , <i>col2</i> , ... , <i>coln</i> FROM employees;
.	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	
<i>Italics</i>	Italicized text indicates placeholders or variables for which you must supply particular values.	CONNECT SYSTEM/ <i>system_password</i> DB_NAME = <i>database_name</i>

Convention	Meaning	Example
UPPERCASE	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	<pre>SELECT last_name, employee_id FROM employees;  SELECT * FROM USER_TABLES;  DROP TABLE hr.employees;</pre>
lowercase	<p>Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.</p> <p><b>Note:</b> Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.</p>	<pre>SELECT last_name, employee_id FROM employees;  sqlplus hr/hr  CREATE USER mjones IDENTIFIED BY ty3MU9;</pre>

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# Introduction

This chapter provides an overview of Oracle9iAS Clickstream Intelligence, briefly outlines its architecture, and describes the contents of this User's Guide.

It contains the following sections:

- [Introduction to Oracle9iAS Clickstream Intelligence](#)
- [Oracle9iAS Clickstream Intelligence Architecture](#)
- [Contents of This User's Guide](#)

## Introduction to Oracle9iAS Clickstream Intelligence

Welcome to Oracle9iAS Clickstream Intelligence!

Clickstream Intelligence is a Web-based, comprehensive analytical tool that enables you to acquire, analyze, and report on Web interactions with customers, suppliers, and employees. It is one of the key Business Intelligence components of Oracle9i Application Server (Oracle9iAS), a comprehensive and integrated application server that manages the technical complexity of assembling a complete middle-tier Internet infrastructure that can scale with your business. Clickstream Intelligence leverages the business intelligence tools in Oracle9iAS and Oracle9iDS -- Oracle9i Warehouse Builder, Oracle9iAS Discoverer, and Oracle9i database -- to provide an integrated and extensible solution for measuring Web traffic and improving Web site effectiveness.

The Runtime Administrator simplifies the setup, management, and deployment of clickstream data sources. This Web-based tool enables you to define how Clickstream Intelligence interprets Web log file data, determine which types of data you want to track, and configure and populate the database for optimal storage of clickstream data. The *Oracle9iAS Clickstream Intelligence Administrator's Guide* describes in detail how to use the Runtime Administrator.

Oracle9iAS Clickstream Intelligence Analytics (Clickstream Analytics) provides more than 150 pre-configured reports that display data acquired from your Web sites. Clickstream Analytics reports, called worksheets, are grouped with other reports of a similar nature to form workbooks that can be accessed and viewed with Oracle9iAS Discoverer. You can use Oracle9iAS Discoverer Viewer as well as Oracle9iAS Discoverer Plus to view and analyze data related to Web site traffic. This guide describes Clickstream Analytics.

Oracle9iAS Clickstream Intelligence can be installed into the Oracle9i database included in Oracle9i Application Server, or may be installed into a standalone Oracle9i Enterprise Edition database. For more information about installing a dedicated Clickstream database, please reference Appendix B, "Installing a Dedicated Clickstream Database," located in *Oracle9iAS Clickstream Intelligence Administrator's Guide*.

The Oracle9iAS Clickstream Intelligence database model is built via Oracle9i Warehouse Builder, a tool for designing and deploying databases, and from which it also derives its extensible platform. For further information about the Clickstream Intelligence data model, see the *Oracle9i Clickstream Intelligence Data Model Reference*.

## Oracle9iAS Clickstream Intelligence Architecture

A graphical representation of Oracle9iAS Clickstream Intelligence architecture is displayed in the figure that follows. The **blue arrows (1)** represent overall data flow from the Oracle9iAS environment (Oracle HTTP servers) to the Clickstream Intelligence environment. Log files containing Web data are produced by Oracle9i Application Server. The Clickstream Collector Agent, which resides on the server machine, breaks the log files into data packets. The packets are compressed to facilitate transfer to the Collector Server, which subsequently uncompresses the log file data. The Clickstream Loader then parses, transforms, and filters the raw log files as they are loaded into the database.

---

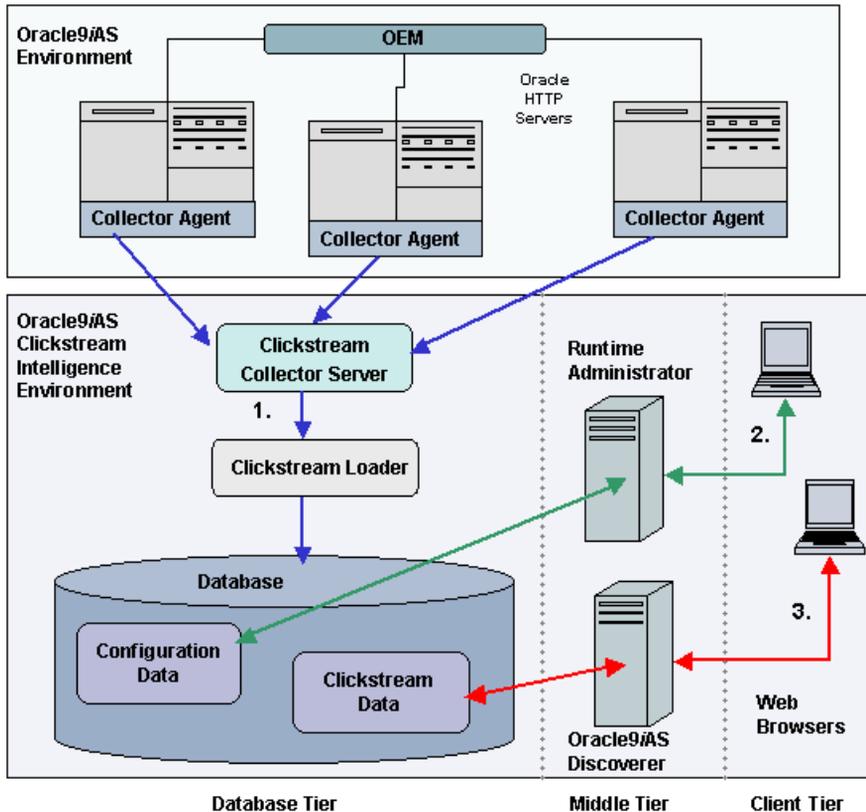
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**Note:** You can use Oracle Enterprise Manager (OEM) for administering the Clickstream Intelligence Collector Agent. OEM provides a Web-based tool that enables you to configure individual Collector Agents, and view certain details related to Collector Agent activity. For more information, see *Oracle9i Application Server Administrator's Guide*.

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Figure 1–1 Oracle9iAS Clickstream Intelligence Architecture



The **green arrows (2)** illustrate the flow of information during Clickstream Intelligence configuration and management. The Runtime Administrator's Web-based interface enables your company's System Administrator to manage and configure parameters that handle the collection and processing of data for your Clickstream sites. This configuration data is stored in the database. Your Clickstream Administrator can access and modify all stored configuration data with a Web browser.

The **red arrows (3)** represent data flow between your Web browser, Oracle9iAS Discoverer, and clickstream data stored in the database each time you run Clickstream Analytics. Both Oracle9iAS Discoverer Plus and Oracle9iAS Discoverer Viewer enable you to view analytical reports based on data from your Web sites.

When using Oracle9iAS Discoverer Plus, your client machine must run a Java-enabled Web browser (such as Microsoft Internet Explorer or Netscape Navigator with Oracle JInitiator). In the case of Oracle9iAS Discoverer Viewer, the only requirement for the client machine is that it can run HTML through a Web browser. For more information about the capabilities and functionality of Oracle9iAS Discoverer, please reference the *Oracle9iAS Discoverer Configuration Guide* and the *Oracle9iAS Discoverer Plus User's Guide*.

## Contents of This User's Guide

The *Oracle9iAS Clickstream Intelligence User's Guide* describes how to use Oracle9iAS Clickstream Intelligence Analytics. Specifically, you'll learn how to:

- Launch and log in to Clickstream Analytics. ([Chapter 2, "Getting Started"](#))
- Navigate and understand the User Interface (UI) of the Oracle9iAS Discoverer tools used to view Clickstream Analytics. ([Chapter 2, "Getting Started"](#))
- Find the information you need in the workbooks and worksheets that comprise Clickstream Analytics. ([Chapter 3, "Working with Workbooks and Worksheets"](#))
- Understand the purpose of each report available in Clickstream Analytics. ([Chapter 4, "Understanding Worksheet Data"](#))
- Understand the information displayed in the column headings that appear in Clickstream Analytics worksheets. ([Chapter A, "Column Descriptions"](#))
- Understand the concepts and terminology used in the Clickstream Intelligence documentation set. ([Glossary](#))

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# Getting Started

## Getting Started

This chapter introduces Oracle9iAS Clickstream Intelligence Analytics (Clickstream Analytics). It contains the following sections:

- [Oracle9iAS Clickstream Intelligence Analytics](#)
- [Discoverer Viewer Interface](#)
- [Discoverer Plus Interface](#)

## Oracle9iAS Clickstream Intelligence Analytics

As a marketing expert, corporate IT specialist or other business professional, you rely on up-to-date information about your company's performance. Analysis of Web site traffic can be used to effectively assess company growth and performance within your industry sector, and may support business decisions that influence the future direction and success of current company-wide initiatives and project plans. Detailed analysis of clickstream data from your company's Web site may provide answers to critical questions related to customer satisfaction and product popularity. Have site visits increased this month? Were campaigns for the summer product line successful? How many error messages were generated by your Web servers last month, and how has this affected customer retention? Clickstream Analytics provides you with the data used to identify and solve many of your industry's most important questions - without having to know anything about a database.

As an integrated business intelligence component of Oracle9i Application Server, Clickstream Analytics leverages the powerful data analysis tools of Oracle9iAS Discoverer to display both pre-defined and customized analytical reports (worksheets). You can take advantage of the functionality in both Oracle9iAS

Discoverer Viewer (Discoverer Viewer) and Oracle9iAS Discoverer Plus (Discoverer Plus) to produce strategic business reports that graphically illustrate Web site usage, trends, effectiveness, and more. To determine whether Discoverer Viewer or Discoverer Plus is best suited to your analytical reporting needs, consult with your company's System Administrator, or administrator for Clickstream Analytics (also referred to as your Clickstream Administrator).

## Discoverer Viewer Overview

Discoverer Viewer is an application that runs within your Internet browser. It enables users to view and rearrange data displayed in Clickstream Analytics worksheets. It is best utilized by business professionals who want to review clickstream data stored in the database, but do not want to define new reports. If your reporting needs include spontaneous data analysis, creation of new Clickstream Analytics worksheets, or modification of existing worksheets, Discoverer Plus (see next section) should be used instead of Discoverer Viewer. To learn more about Discoverer Viewer, access the Discoverer Viewer online help through your Internet browser.

## Discoverer Plus Overview

Discoverer Plus is a robust Java-based application that enables power users, data analysts, marketing specialists, and report-builders to:

- Create ad-hoc queries, reports, and graphs
- Assign specific user privileges to newly-created workbooks and worksheets
- Modify the parameters that define existing workbooks and worksheets
- Modify the appearance of worksheets
- Sort and reorganize worksheet data to enable viewing from several different analytical perspectives

As with Discoverer Viewer, Discoverer Plus also enables users to view pre-defined workbooks and worksheets via Internet browser. To learn more about the capabilities and functionality of Discoverer Plus, please reference the *Oracle9iAS Discoverer Plus User's Guide*, or access the Discoverer Plus online help.

## Launching Oracle9iAS Clickstream Intelligence Analytics

To launch and access Clickstream Analytics, open a standard Internet browser (such as Netscape Navigator or Microsoft Internet Explorer) and enter the URL provided to you by your System Administrator.

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**Note:** Your User Name, your Password and URL will be provided by your System Administrator. The URL will follow this format

`http://HOST:PORT/click/`

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## Logging In/Logging Out

When you want to access or log in to Discover Viewer/Plus for the first time, you may be transported directly to the connection page of the application you selected on the Clickstream Intelligence Components page, or you may be prompted to log in with your Oracle Single Sign-On ID.

Once on the **Connect to Discoverer Viewer/Plus** page, you can select a public connection from those that appear in the Connections table, or you can create a private connection. Public connections are created by your Oracle9iAS Clickstream Intelligence or Oracle9iAS Discoverer Administrator and can be accessed by any particular user.

Private connections are created by individual users and are specific to the browser and computer on which they were created. For example, if you access Discoverer Viewer or Discoverer Plus with another type of browser (such as Netscape), your private connection will not be displayed. Similarly, your private connection is not be accessible from a computer that is different from the one on which the connection was created. For more information on creating private Oracle9iAS Discoverer connections, see the *Oracle9iAS Discoverer User's Guide*.

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**Note:** You can have access to several public and private connections. Each connection operates independently.

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## Logging in to Oracle9iAS Clickstream Intelligence Analytics

1. Launch a Web browser and enter the Clickstream Analytics URL.

2. Enter your Oracle Single Sign-On user name and password in the fields provided and click the **Login** button. (If you have already logged in, Clickstream Analytics skips this step.)
3. Select the Oracle9iAS Discoverer tool with which you want to view Clickstream Analytics.
4. Select a public or private connection from the list of available connections.

## Logging out of Oracle9iAS Clickstream Intelligence Analytics

### Logging Out with Discoverer Viewer

To log out of Discoverer Viewer, click the **Exit** button. You can also close your browser window.

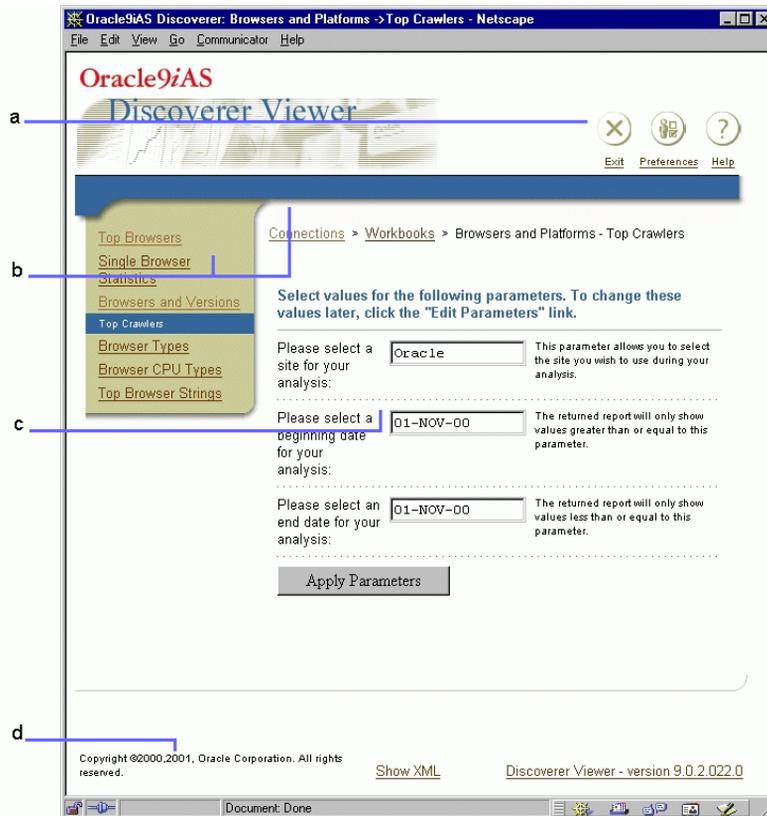
### Logging Out with Discoverer Plus

To log out of Discoverer Plus, select **File | Exit**. If you have any unsaved work, a dialog box will prompt you to save your data or simply exit the application. Due to the risk of losing unsaved data, it is not recommended that you log out of Discoverer Plus by closing your browser window.

## Discoverer Viewer Interface

The Discoverer Viewer user interface (UI) is divided into four areas: the Global Buttons area; the Navigation area; the Content area; and the Footer area. The location of these areas are displayed in the figure below. Information about each interface area is provided in the sections that follow.

Figure 2–1 Discoverer Viewer Interface



Key to figure:

- a. **Global Buttons Area**
- b. **Navigation Area**
- c. **Content Area**
- d. **Page Footer**

## Global Buttons Area

The **Global Buttons** area is located in the top right corner of the Discoverer Viewer user interface. It contains buttons for accessing content or functional areas global to the application. The following buttons appear:

### Exit Button

Click the **Exit** button to close the browser window and log out of Discoverer Viewer.

### Preferences Button

Click the **Preferences** button to configure the way in which Discoverer Viewer queries the data gathered and stored by Oracle9iAS Clickstream Intelligence. The following options are available:

- [Query Governor](#)
- [Worksheets/Sheet Format](#)
- [Summary Data](#)
- [Fan Trap Detection/Advanced](#)
- [End User Layer Access/EUL](#)
- [Locale Selection](#)

Detailed explanations of these options appear in [Options for Modifying Database Queries](#) in Chapter 3.

### Help Button

Click the **Help** button to access an online help system that documents the Discoverer Viewer user interface.

## Navigation Area

The **Navigation** area is located beneath the Global Buttons area. The Navigation area includes a [Side Navigation Menu](#) that is located on the left side of the interface. The **Navigation** area always contains a horizontal blue bar that stretches across the Discoverer Viewer user interface. The links on the **Side Navigation** menu appear and disappear as appropriate.

## Side Navigation Menu

The **Side Navigation** menu is vertically attached to the left side of the UI, located below the Oracle9iAS Discoverer logo. When you open a workbook, this menu displays the worksheets contained within the workbook. If no links are available, the menu does not appear.

## Content Area

The **Content** area of the UI is the largest part of the interface, located beneath the Oracle9iAS Discoverer logo and above the Page Footer. You'll do most of your work in this interface region. Specifics about the form and function of the **Content** area appear in the following sections:

### Main Page Content

This section describes what you'll see in the **Content** area after you log in to Clickstream Analytics and the work you can do.

### Workbook Content

This section describes what you'll see in the **Content** area after you open a workbook.

### Worksheet Content

This section describes what you'll see in the **Content** area after you select a worksheet from the workbook you opened.

## Main Page Content

After you log in, the main **Discoverer Viewer** page displays. Two elements appear in the **Content** area. These elements are described below:

- **Workbook Search Area**
- **List of Workbooks**

### Workbook Search Area

The **Workbook Search** area enables you to search the workbooks available in Oracle9iAS Clickstream Analytics and display your search results.

To search, select a workbook type from the drop-down list (for example, database workbooks or scheduled workbooks). Then, enter the search term in the text field and click **Go**. By default, the workbook list is unfiltered. It contains all the

workbooks available for the workbook type you selected. The name and a description of each workbook matching the search criteria are stored in the **List of Workbooks** table. To access the worksheets within a particular workbook, click the title of the workbook. The results in the **Workbook Search** area are session-dependent. Each time you start a new session, an unfiltered list of workbooks appears.

### List of Workbooks

The List of Workbooks table contains two columns. The first column contains the workbook's name. The second column contains the workbook's description.

### Workbook Content

When you open a workbook, the **Content** area displays a parameter selection screen. In addition, a Horizontal Navigation bar appears with links to all the worksheets contained in the workbook. The parameters that appear in the **Content** area are associated with whichever worksheet link is highlighted on the Side Navigation bar. A complete description of how to apply parameters to a worksheet appears in "[Getting the Data You Want from Worksheets](#)" in Chapter 3.

### Worksheet Content

The worksheet **Content** area exists in two distinct states: pre-query and post-query. As you query the database, the **Content** area displays the parameters associated with whichever worksheet link is highlighted on the Side Navigation bar. After the query completes, the query report, which normally contains text and graphics, appears in the **Content** area.

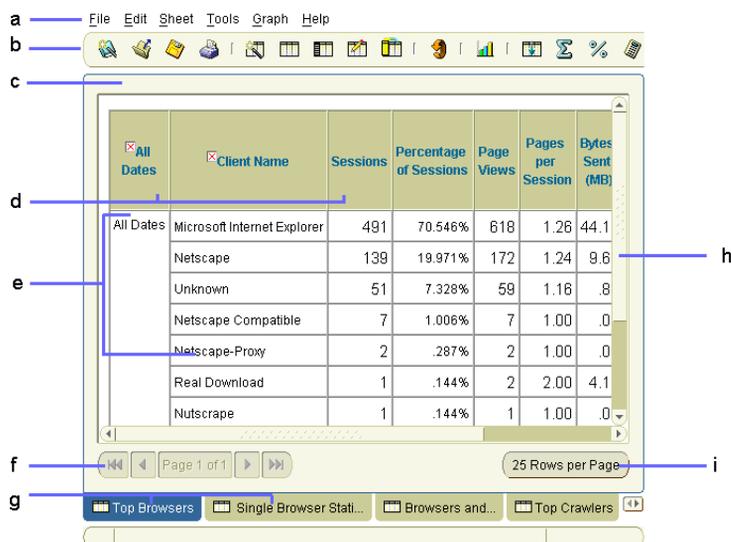
## Page Footer

The **Page Footer** appears at the bottom of the Discoverer Viewer UI. Specifically, it is located below the gold-colored bar at the bottom of the Content area. The Footer area always contains a link to Oracle copyright information, a link to the XML code used to create the content contained in the Content area, and the version number associated with your copy of Discoverer Viewer. When worksheet data appears in the Content area, a button for printing data is displayed in the **Page Footer**.

## Discoverer Plus Interface

The Discoverer Plus UI is described below. For a complete discussion of the functionality of Discoverer Plus, see the *Oracle9iAS Discoverer User's Guide*.

**Figure 2–2 Discoverer Plus Interface**



Key to figure:

- a. **Menu Bar**
- b. **Toolbar**
- c. **Work Area**
- d. **Top Axis**
- e. **Data Points**
- f. **Worksheet Navigation Buttons**
- g. **Worksheet Tabs**
- h. **Scroll Bar**
- i. **Sheet Format Button**

## Menu Bar

The Menu bar appears at the top of the interface. It contains links to drop-down lists that contain all Discoverer Plus functions. To access a specific Discoverer Plus function, click the appropriate link.

## Toolbar

The Toolbar appears beneath the Menu bar. It provides icons that enable you to quickly access the most popular Discoverer Plus menu items (for example, Save, Open, Print, Filter, and so on).

## Work Area

The Work area appears beneath the Menu bar and Tool bar and above the Worksheet Navigation buttons. All data generated by a database query appears here.

## Top Axis

The Top axis in a Discoverer Plus worksheet contains the names of the columns that appear in that worksheet.

## Data Points

Data points appear within a worksheet and are the item values generated by an Clickstream Analytics query.

## Worksheet Navigation Buttons

The Worksheet Navigation buttons appear at the bottom left of the interface above the Worksheet tabs. They enable you to navigate through worksheets that contain multiple pages of data.

## Worksheet Tabs

The Worksheet tabs appear beneath the Work area. The Worksheet tabs provide access to the worksheets available in the workbook that is currently open. To open a worksheet, click its tab.

## Scroll Bar

Use the Scroll bar to scroll through worksheet data.

## Sheet Format Button

The Sheet Format button appears at the bottom right of the interface above the Worksheet tabs. Use this button to set the number of data rows displayed by a worksheet.



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## Working with Workbooks and Worksheets

To get the most out of Oracle9iAS Clickstream Intelligence Analytics (Clickstream Analytics) you should understand the form and function of workbooks and worksheets. In this chapter, you will learn about the following topics:

- **What is a Workbook?:** Explains the role of workbooks in Clickstream Analytics, and describes how to access workbooks using Oracle9iAS Discoverer Viewer (Discoverer Viewer) and Oracle9iAS Discoverer Plus (Discoverer Plus). This section also provides links to the detailed workbook explanations available in chapter four.
- **What is a Worksheet?:** Explains the role of worksheets in Clickstream Analytics, and describes how to select the appropriate worksheet for your data analysis needs using Discoverer Viewer and Discoverer Plus.
- **Getting the Data You Want from Worksheets:** Explains how to customize worksheet query parameters to return useful data from the Oracle9iAS Clickstream Intelligence database.

### What is a Workbook?

A workbook is a collection of worksheets available in Clickstream Analytics. These workbooks are accessed with either Discoverer Viewer or Discoverer Plus. A workbook is similar to a folder in a filing cabinet. The only purpose it serves is to store files (worksheets) that contain related information. Each workbook name provides a description of the worksheets it contains.

Unlike a file cabinet folder, however, workbooks can only be opened one at a time. Opening a new workbook in Discoverer Viewer automatically closes the current workbook.

### Viewing a Workbook with Discoverer Viewer

To view Oracle9iAS Clickstream Intelligence workbooks, select a workbook from the **List of Workbooks** page.

### Viewing a Workbook with Discoverer Plus

1. Choose **File | Open** to display the "Open Workbook" dialog.
2. Select the **Database** radio button to display the "Open Workbook from Database" dialog.
3. Select the workbook that you want to analyze from the list of workbooks.
4. Click **Open** to display the workbook.

## Workbooks Available in Oracle9iAS Clickstream Intelligence

Descriptions of the following workbooks are available in **Chapter 4, "Understanding Worksheet Data"**:

- **Activity Workbook**
- **Activity for New and Returning Users Workbook**
- **Activity for New and Returning Visitors Workbook**
- **Browsers and Platforms Workbook**
- **Connecting Machines Workbook**
- **Dimensional Analysis Workbook**
- **Path Analysis Workbook**
- **Referring URLs Workbook**
- **Referring URLs by Connecting Machines Workbook**
- **Referring URLs by Users Workbook**
- **Search Analysis Workbook**
- **Site Content Workbook**
- **Site Status Workbook**
- **Users Workbook**
- **User by Connecting Machines Workbook**
- **User by Pages Workbook**

- **Visitors Workbook**

## What is a Worksheet?

Worksheets enable you to answer specific questions about the Web log data you want to analyze. Each worksheet represents a unique query. Every time you open a worksheet in Discoverer Viewer or Discoverer Plus, it queries the database and retrieves the most current data. Worksheets are organized by topic in workbooks. For example, all worksheets relating to how users and visitors navigate through your site are contained in the Path Analysis workbook.

## Selecting the Correct Worksheet

### Viewing a Worksheet with Discoverer Viewer

To view a worksheet, select the workbook that contains the desired worksheet from the **List of Workbooks** page. Once the workbook opens, select the worksheet that contains the business intelligence data you need from the **Side Navigation** bar.

### Viewing a Worksheet with Discoverer Plus

1. Choose **File | Open** to display the "Open Workbook from Database" dialog.
2. Select the **Open existing workbook** button to display the **Database** dialog.
3. Select the **Database** button to display the "Open Workbook from Database" dialog.
4. Select the workbook that you want to analyze from the list of workbooks.
5. Click **Open** to display the workbook.
6. Select a worksheet from the **Worksheet** tabs at the bottom of the interface.

## Getting the Data You Want from Worksheets

To get the data you want from a worksheet, you must set parameters to control the scope of the query sent to the database. There are two ways to attach parameters to your database queries.

- Set overall parameters for every database query
- Modify the default query parameters attached to every available worksheet.

This section contains the following information on query parameters:

- [Options for Modifying Database Queries](#)
- [Modifying Query Parameters for Individual Worksheets](#)

## Options for Modifying Database Queries

The overall database query is controlled by the settings you enforce through the **Preferences** page in Discoverer Viewer and through the **Options** dialog in Discoverer Plus. Option names on the **Preferences** page in Discoverer Viewer are usually replicated as tabs within the Discoverer Plus **Options** dialog. In cases where these names differ, both names (Discoverer Viewer/Discoverer Plus) are included in the section headings below.

- To access the Preferences page in Discoverer Viewer, click the **Preferences** button. It is located in the Global Buttons area at the top right of the interface.
- To access the Discoverer Plus Options dialog, Choose **Tools** | **Options**.

The parameters described in the following sections are ordered by their placement on the **Preferences** page in Discoverer Viewer. For more information on the parameters below, see the *Oracle9iAS Discoverer Plus User's Guide*.

### Query Governor

Use this setting to limit query run times, data retrieval times, and the amount of data returned by a query. [Table 3-1, "Query Governor Settings"](#) describes the available options.

**Table 3-1 Query Governor Settings**

Parameter	Description
<b>Warn me if predicted query time exceeds:</b>	Enter the number of seconds a query can run before the system warns you of the query's estimated time to complete. The default is 15 seconds.  To enable this parameter, select the associated check box.
<b>Prevent queries from running longer than:</b>	Enter the number of seconds a query can run before you want the system to warn you that the query cannot run because it will take too long to return data from the database. The default is 1800 seconds.  To enable this parameter, select the associated check box.

**Table 3–1 Query Governor Settings**

Parameter	Description
<b>Limit retrieved query data to:</b>	Enter the maximum number of rows a database query can return to you in its report. The default is 10000 rows.  To enable this parameter, select the associated check box.
<b>Retrieve data incrementally in groups of:</b>	Enter the maximum number of rows of data per group returned by a query of the database. The default is 500 rows.
<b>Cancel list-of-values retrieval after:</b>	Enter the length of time it can take for a list of values to be returned from the database before the request is cancelled. The default is 60 seconds.
<b>Run query automatically:</b>	This option enables Discoverer Viewer worksheet queries to run automatically after specific worksheet query parameters are set by the user. This is the default setting. In Discoverer Plus, this setting is found on the <b>General</b> tab of the <b>Options</b> dialog box.  To enable this parameter, select the associated radio button.
<b>Ask for confirmation:</b>	This option enables the system to return a page to the user that asks if the database query is necessary. In Discoverer Plus, this setting is found on the <b>General</b> tab of the <b>Options</b> dialog box.  To enable this parameter, select the associated radio button.
<b>Don't run query:</b>	This option suspends all database queries. In Discoverer Plus, this setting is found on the <b>General</b> tab of the <b>Options</b> dialog box.  To enable this parameter, select the associated radio button.

### Worksheets/Sheet Format

Use this setting to configure the way in which a worksheet query operates.

**Table 3–2, "Worksheet Settings"** describes the available options.

**Table 3–2 Worksheet Settings**

Parameter	Description
<b>Number of rows per page:</b>	Enter the maximum number of rows of data, per worksheet page, a database query should display. The default is 25 rows.
<b>Show null values as:</b>	Enter the value the database should return when NULL appears in the data requested by a user. The default is NULL.

**Table 3–2 Worksheet Settings**

Parameter	Description
<b>Show values that cannot be aggregated as:</b>	Enter the value that the database should return when values that cannot be aggregated exist in the data requested by a user. There is no default.

### Summary Data

Use this option to set how worksheet queries get data from available summary tables within the database. Choose an option by selecting its radio button. In Discoverer Plus, this setting is found on the **Query Governor** tab of the **Options** dialog box. The three available settings are listed below:

- **Always, when available.** This option makes sure that all queries first access the summary tables available within the database
- **Only when summary data is not out of date (stale).** This option makes sure that all queries first access the summary tables when data within those tables are current. If a summary table contains non-current data, that table is not queried.
- **Never.** This option makes sure that all queries ignores available summary tables and access data directly from the database.

### Fan Trap Detection/Advanced

Use this option to enable or disable fan trap detection. A fan trap is a database error. Fan traps occur when data items in two folders have an indirect relationship based on their connections to data items in a third folder and a query of the data items produces unintentional results. Fan trap detection is selected by default. It enables Oracle9iAS Discoverer to detect and resolve queries that return ambiguous results. If a fan trap error cannot be resolved by Oracle9iAS Discoverer, the worksheet query does not complete and an error message displays. Do not disable this feature without first discussing it with the Oracle9iAS Discoverer administrator.

### End User Layer Access/EUL

Use this option to select a default End User Layer (EUL) for Oracle9iAS Clickstream Intelligence to use each time you connect to the database that stores your Web log data. An EUL is a collection of tables in the database that controls your ability to use workbooks. Your ability to view EULs is controlled by the Oracle9iAS Clickstream Intelligence Database Administrator (DBA) or System Administrator. Select an EUL from those available in the drop-down list. For more information on EULs, see the

*Oracle9iAS Discoverer User's Guide* or the *Oracle9i Discoverer Administrator Administration Guide*.

### Locale Selection

Use this option to set the language type used within the Discoverer Viewer interface. The default is set to the official, or accepted, language of your country. To change the language type, select a locale from the drop-down list. Twenty-eight locales are available.

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**Note:** The Locale Selection tab is not available in the Discoverer Plus **Options** dialog.

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## Modifying Query Parameters for Individual Worksheets

Each worksheet has a specific set of parameters you can modify.

- In Discoverer Viewer, these parameters appear in the **Content** area after you select a worksheet from the **Side Navigation** bar.
- In Discoverer Plus, these parameters appear in the **Edit Parameter Values** dialog box after you select a workbook from the **Open Workbook from Database** dialog box.

The type of data returned from the database depends entirely on the query parameters you set. For more information, see the *Oracle9iAS Discoverer Plus User's Guide*.

### Setting Worksheet Query Parameters with Discoverer Viewer

1. Select a site to analyze from the **Site** drop-down list. These sites are created by your DBA with the Oracle9iAS Clickstream Intelligence Runtime Administrator.
2. Select a start date and an end date for your analysis in the **Date** text fields by clicking the flashlight icon and then selecting the appropriate dates from the searchable pop-up list. Certain worksheets require a start date only. In these cases, the end date field is not displayed.
3. Click **Apply Parameters**. The **Query Progress** page displays until data is returned from the database.

### Setting Worksheet Query Parameters with Discoverer Plus

1. Select a site to analyze from the Site drop-down list in the **Edit Parameter Values** dialog box. These sites are created by your DBA with the Oracle9iAS Clickstream Intelligence Runtime Administrator. If you do not know the site name, select the downward arrow button to the right of the text field to display a pop-up list of all available sites.
2. Select a start date and an end date for your analysis from the **Date** text fields in the **Edit Parameter Values** dialog box. Use the format DD-MON-YY. In certain cases, a single **Date** text field displays. If you do not know what dates to enter, select the downward arrow button to the right of the text field to display a searchable pop-up list of all available dates.
3. Click **OK**. A progress bar displays until data is returned from the database.

### To Edit an Existing Worksheet Query Parameter with Discoverer Viewer

1. Click the **Edit Parameters** link at the bottom of the parameters section of the worksheet report.
2. Select a site to analyze from the **Site** drop-down list.
3. Select a start date and an end date for your analysis in the **Date** text fields by clicking the flashlight icon and then selecting the appropriate dates from the searchable pop-up list. Certain worksheets require a start date only. In these cases, the end date field is not displayed.
4. Click **Apply Parameters**. The **Query Progress** page displays until data is returned from the database.

### To Edit an Existing Worksheet Query Parameter with Discoverer Plus

1. Select **Edit Parameter Values** from the **Sheet** menu.
2. Select a site to analyze from the Site drop-down list in the **Edit Parameter Values** dialog box. If you do not know the site name, select the downward arrow button to the right of the text field to display a pop-up list of all available sites.
3. Select a start date and an end date for your analysis from the **Date** text fields in the **Edit Parameter Values** dialog box. Use the format DD-MON-YY. In certain cases, a single **Date** text field displays. If you do not know what dates to enter, select the downward arrow button to the right of the text field to display a searchable pop-up list of all available dates.
4. Click **OK**. A progress bar displays until data is returned from the database.

## Making a Worksheet Look The Way You Want

After your query completes, the worksheet appears in the **Content** area in Discoverer Viewer or the **Work** area in Discoverer Plus.

- **In Discoverer Viewer:** The layout of data in worksheets can be modified through two sets of formatting links. The first set appears above the report data. These links redirect you to pages that enable you to control how data is formatted before it displays on your browser. The second set of formatting links appears to the left of each report element. These links determine if a report element is displayed or hidden from view.
- **In Discoverer Plus:** The layout of worksheet data is configured through dialogs and Wizards that control specific formatting options. For example, the **Export** dialog enables you to export worksheet data in the file type you specify. You can access all formatting dialogs from the **Menu** bar. The following formatting options for both Discoverer Viewer and Discoverer Plus are available:
  - **Table Layout**
  - **Presentation Options:** Available only in Discoverer Viewer.
  - **Printing Worksheet Data**
  - **Exporting Worksheet Data**

For a complete description of how to modify and format worksheet data in Discoverer Viewer and Discoverer Plus, see the *Oracle9iAS Discoverer Plus User's Guide*.

### Table Layout

Use a worksheet's Table Layout option to modify the way in which data returned by a database query is displayed.

#### How to Modify Table Layout in Discoverer Viewer

1. Select the **Table Layout** link. The **Table Layout** page appears.
2. Order the report elements in the **Page Items** drop-down list as you want them to appear in the report.
3. Select an axis point from the **Top Axis** drop-down list. This step is optional. If you do not want an axis point, leave the field blank.
4. Click **Apply**. A confirmation message appears.

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**Note:** The color setting for the rows and columns within a table conforms to Oracle standards and cannot be modified.

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### How to Modify Table Layout in Discoverer Plus

1. Select **Sheet | Table Layout**
2. Click the column you want to move and drag it to its destination within the worksheet.
3. Click **OK**.

### Presentation Options

The Presentation Options settings in Discoverer Viewer control the items that appear in the user interface. These items are not workbook or worksheet specific. If you make a change using the **Presentation Options** page, that change will be reflected throughout Discoverer Viewer.

### To Modify the Presentation of the Discoverer Viewer Interface

1. Click the **Presentation Options** link. The **Presentation Options** page appears.
2. Select the page elements you want to appear on the page by clicking the check box associated with those items.
3. Select the report elements you want to appear or disappear by selecting the appropriate radio button.
4. Click **Apply**. The browser returns the last worksheet you selected.

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**Note:** Discoverer Plus does not have a Presentation Settings page. Interface formatting is set through several tabs in the **Options** dialog box and other dialog boxes.

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### Printing Worksheet Data

The **Printable Page** button in Discoverer Viewer and the **Print Wizard** in Discoverer Plus enables you to create a printer-friendly version of the data returned by a database query.

**To Print Worksheet Data in Discoverer Viewer**

1. Click the **Printable Page** button located at the bottom of the Web page. A printer-friendly version of the table you wish to print appears in a new browser window.
2. Click your Internet browser's **Print** button or select **File | Print**.

**To Print Worksheet Data in Discoverer Plus**

1. Select **File | Print** to launch the **Print Wizard**, or click the printer icon in the toolbar to launch your computer's **Print** dialog box.
2. Follow the steps in the **Print Wizard** or **Print** dialog box to format and print your worksheet(s).

**Exporting Worksheet Data**

The **Exporting Worksheet Data** link in Discoverer Viewer and the **Export Wizard** in Discoverer Plus enable you to export the data returned from your database query and save it as a file. The following file types are available:

- Microsoft Excel Worksheet (.xls)
- Text - tab delimited (.txt)
- Hypertext Markup Language document (.htm)
- CSV - comma delimited (.csv)
- Formatted Text (.prn)
- Express Format (.dcs)
- Data Interchange Format (.dif)
- Symbolic Link (.slk)
- Lotus 1-2-3 (.wks)
- XML (.xml) - XML is available only with Discoverer Plus

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**Note:** Some formats may not be supported by your environment. If this is the case, an error message may appear indicating that your file format is not supported by your current environment.

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### To Export Worksheet Data from Discoverer Viewer

1. Click the **Export Worksheet Data** link. The **Export Format** page appears.
2. Select the file format appropriate to your needs from the drop-down list. One of the following may occur:
  - the worksheet opens in an application embedded in the browser
  - the worksheet opens in an application
  - a dialog displays that enables you to save the worksheet in the exported format
3. Select **File | Save As** to save the data.
4. Enter a name for the file in the text field of the **Save As** window.
5. Click **Save**. The **Download Complete** window appears.
6. Click **Open**, **Open Folder**, or **Close**. The **Download Complete** window disappears.

### To Export Worksheet Data from Discoverer Plus

1. Select **File | Export**. The **Export Wizard** appears.
2. Follow the steps in the **Export Wizard** to create and save a new file from the selected worksheet(s).

## Drilling into Worksheet Data

Both Discoverer Plus and Discoverer Viewer provide a way to look at Clickstream Analytics worksheet data in greater or lesser detail. All worksheet columns that contain multiple levels of data in Discoverer Plus are marked with a right arrow icon. When you select the drill icon a pop-up list displays all levels of data available in the column as well as the current level of data displayed. In Discoverer Viewer, all worksheet columns that contain multiple levels of data are marked with a plus sign (+) in a right arrow or a minus sign (-) in a downward arrow. When you click the drill icon a pop-up list displays the levels of data available in the column and highlights the current level.

There are two types of drilling - drilling down, and drilling up. Drilling down displays data in more detail. For example, in the Top Browsers worksheet, you can drill down into the All Browsers column to see information about the type of operating system used to run the browsers that accessed your Web site, or information about the specific types of browsers that accessed your Web site. Drilling up collapses the information displayed in a column to the level of data you

select. For example, you can collapse the Client Name column of the Top Browsers worksheet to either Client Type or All Browsers. Each of these columns contains less specific data than the Client Name column.

### **To Drill Into Columns Containing Multiple Data Levels**

1. Click the drill icon in Discoverer Viewer or the right arrow icon in Discoverer Plus to display the data available within the hierarchy.
  - For example, clicking the drill icon or right arrow icon in the All Statuses column displays a pop-up list containing Description, Status Name, Status Type, and Status Code.
2. Select the text link or radio button of the level of detail you want to display.



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## Understanding Worksheet Data

The worksheets in Oracle9iAS Clickstream Intelligence Analytics (Clickstream Analytics) enable you to gather critical business intelligence from the information stored in the log files generated by your Web site's Web servers. With more than 150 pre-defined worksheets, Clickstream Analytics enables you to analyze Web site activity from several perspectives. Use these worksheets to analyze, troubleshoot, and improve your Web site's effectiveness.

This chapter describes the specific information provided by each pre-defined worksheet in Clickstream Analytics. All worksheets are organized by workbook, as listed below:

- [Activity Workbook](#)
- [Activity for New and Returning Users Workbook](#)
- [Activity for New and Returning Visitors Workbook](#)
- [Browsers and Platforms Workbook](#)
- [Connecting Machines Workbook](#)
- [Dimensional Analysis Workbook](#)
- [Path Analysis Workbook](#)
- [Referring URLs Workbook](#)
- [Referring URLs by Connecting Machines Workbook](#)
- [Referring URLs by Users Workbook](#)
- [Search Analysis Workbook](#)
- [Site Content Workbook](#)
- [Site Status Workbook](#)

- [Users Workbook](#)
- [User by Connecting Machines Workbook](#)
- [User by Pages Workbook](#)
- [Visitors Workbook](#)

## Activity Workbook

Use this workbook to see general activity on your site. The worksheets available give an accurate count of users, visitors, referrers, clients, sessions, searches, pages, bytes sent, session duration, and time to serve.

The following worksheets are available:

- [Users by Date](#)
- [Users by Hour](#)
- [Visitors by Date](#)
- [Visitors by Hour](#)
- [Referrers by Date](#)
- [Referrers by Hour](#)
- [Connecting Machines by Date](#)
- [Connecting Machines by Hour](#)
- [Sessions by Date](#)
- [Sessions by Hour](#)
- [Page Views by Date](#)
- [Page Views by Hour](#)
- [Bytes Transferred by Date](#)
- [Bytes Transferred by Hour](#)
- [Session Duration by Date](#)
- [Session Duration by Hour](#)
- [Referring Searches by Date](#)
- [Referring Searches by Hour](#)

- [Page Time to Serve by Date](#)
- [Page Time to Serve by Hour](#)

## Users by Date

This worksheet displays the number of unique registered users that accessed the site on a daily basis. It enables you to track changes in the frequency of user visits.

## Users by Hour

This worksheet displays the number of unique registered users that accessed the site on an hourly basis. It enables you to track changes in the frequency of user visits.

## Visitors by Date

This worksheet displays the number of unique unregistered users that accessed the site on a daily basis. It enables you to track changes in the frequency of unauthenticated user visits.

## Visitors by Hour

This worksheet displays the number of unique unregistered users that accessed the site on an hourly basis. It enables you to track changes in the frequency of unauthenticated user visits.

## Referrers by Date

This worksheet displays the number of unique referrers that directed users and visitors to the site on a daily basis. This worksheet can help you examine the Web site(s) that directed customers to your site, and may indicate changes in the frequency of referrals from external Web sites.

## Referrers by Hour

This worksheet displays the number of unique referrers that directed users and visitors to the site on an hourly basis. This worksheet can help you examine the Web site(s) that directed customers to your site, and may indicate changes in the frequency of referrals from external Web sites.

## Connecting Machines by Date

This worksheet displays the daily number of client machines, or proxy servers, that accessed the site, and may indicate if there was a change in frequency of client connections to the site.

## Connecting Machines by Hour

This worksheet displays the number of client machines, or proxy servers, that accessed this site on an hourly basis, and may indicate if there was a change in frequency of client connections to the site.

## Sessions by Date

This worksheet displays the daily number of sessions by users and visitors of your site, and may indicate changes in Web site activity.

## Sessions by Hour

This worksheet displays, on an hourly basis, the number of sessions by users and visitors of your site, and may indicate changes in the Web site activity.

## Page Views by Date

This worksheet displays the daily number of pages served by the site, and may indicate changes in the frequency of site usage.

## Page Views by Hour

This worksheet displays, on an hourly basis, the number of pages served by the site, and may indicate changes in the frequency of site usage.

## Bytes Transferred by Date

This worksheet displays the daily amount of data, in bytes, transferred to and from the site. This worksheet may indicate fluctuations in site usage, since greater data flow typically results from increased use of your site's content.

## Bytes Transferred by Hour

This worksheet displays, on an hourly basis, the amount of data, in bytes, transferred to and from the site. This worksheet may indicate fluctuations in site

usage, since greater data flow typically results from increased use of your site's content.

### **Session Duration by Date**

This worksheet displays the average length of all sessions that occurred on a particular day, and may indicate if there was a change in the length of customer visits to your Web site over consecutive days. Large changes in session duration over time (either increases or decreases in session length) for example, may be used to determine the popularity of your site.

### **Session Duration by Hour**

This worksheet displays, on an hourly basis, the average length of all sessions that occurred on a particular day, and may indicate if there was a change in the length of customer visits to your Web site. Large changes in session duration over time (either increases or decreases in session length) for example, may be used to determine the popularity of your site.

### **Referring Searches by Date**

This worksheet displays the daily number of unique searches performed by referring search engines, and indicates the frequency of searches performed on the site.

### **Referring Searches by Hour**

This worksheet displays, on an hourly basis, the number of unique searches performed by referring search engines. This worksheet indicates the frequency of searches performed on the site.

### **Page Time to Serve by Date**

This worksheet displays, on a daily basis the average amount of time required for the site to serve a page request. This data may indicate changes in site traffic volume since it may take the server longer to respond to a request when many individuals want to view site content simultaneously.

## Page Time to Serve by Hour

This worksheet displays, on an hourly basis, the average amount of time required for the site to serve a page request during the date range you selected. Unlike other hourly reports in this workbook, hourly data in this worksheet is aggregated across the range of dates selected. This worksheet may indicate changes in site traffic volume, since it may take the server longer to respond to a request when many individuals want to view site content simultaneously.

## Activity for New and Returning Users Workbook

Use this workbook to see the trends and volume of new and returning activity on your site for users. Users are defined as individuals who have registered with a Web site and been authenticated. Users are also defined as individuals who, upon logging in to a Web site, are granted access.

The following worksheets are available:

- [New vs. Returning Users Trend - Day](#)
- [New vs. Returning Users - Day](#)
- [New vs. Returning Users Trend - Month](#)
- [New vs. Returning Users - Month](#)
- [New vs. Returning Users Trend - Quarter](#)
- [New vs. Returning Users - Quarter](#)
- [New vs. Returning Users Trend - Year](#)
- [New vs. Returning Users - Year](#)

## New vs. Returning Users Trend - Day

This worksheet displays the trends that appear in daily site usage by comparing first-time site users with registered users. This information may enable you to assess if new users respond to your campaigns. You can also infer the level of customer retention, since a high level of returning users typically indicates satisfaction with site usability, products, or content.

## New vs. Returning Users - Day

This worksheet compares the daily levels of first-time site users with the number of users that have previously accessed the site. You can use this information to

determine the level of customer retention (wherein most users are returning users) or to determine the rate of influx of new customers that register on your site.

### **New vs. Returning Users Trend - Month**

This worksheet displays a monthly trend for site usage among first-time and registered users. This information enables you to assess the efficacy of monthly marketing efforts, and determine the impact on site "stickiness." You can also infer the level of customer retention and observe changes in sign-up rates for new users.

### **New vs. Returning Users - Month**

This worksheet compares the monthly levels of first-time site users with the number of users that have previously accessed the site. You can use this information to determine the level of customer retention or to determine the monthly change in the number of new customers that register on your site.

### **New vs. Returning Users Trend - Quarter**

This worksheet displays a quarterly site usage trend among first-time and registered users. This information may enable you to assess the efficacy of marketing efforts over a series of quarters and determine if new users respond to your campaigns. You can also infer your level of customer retention and compare that with results from previous quarters.

### **New vs. Returning Users - Quarter**

This worksheet compares the quarterly levels of first-time site users with the number of users that have previously accessed the site. You can use this information to assess customer retention for the site or to compare the change in new user registration on a quarterly basis.

### **New vs. Returning Users Trend - Year**

This worksheet displays a yearly trend for site usage among first-time and registered users. This information may indicate annual fluctuations in new user sign-up and long-term trends in customer loyalty.

## **New vs. Returning Users - Year**

This worksheet compares the yearly levels of first-time site users with the number of users that have previously accessed the site. You can use this information to determine the level of customer retention over one or more years or to determine the annual influx of new site registrants.

## Activity for New and Returning Visitors Workbook

Use this workbook to see the trends and volume of new and returning activity on your site for visitors. New visitors are defined as a person or agent that visits the site for the first time but has neither registered any personal information nor accepted a tracking device. Returning visitors are visitors who have not registered with the site, but have accepted a cookie or are identified by some other tracking device.

The following worksheets are available:

- [New vs. Returning Visitors Trend - Day](#)
- [New vs. Returning Visitors - Day](#)
- [New vs. Returning Visitors Trend - Month](#)
- [New vs. Returning Visitors - Month](#)
- [New vs. Returning Visitors Trend - Quarter](#)
- [New vs. Returning Visitors - Quarter](#)
- [New vs. Returning Visitors Trend - Year](#)
- [New vs. Returning Visitors - Year](#)

### New vs. Returning Visitors Trend - Day

This worksheet displays a trend for daily site usage by comparing first-time site visitors with visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. This information may enable you to assess the efficacy of marketing efforts over a specific number of days and determine if new visitors respond to your campaigns. You can also infer the level of visitor retention, since a high level of returning visitors typically indicates satisfaction with site design, products, or content.

### New vs. Returning Visitors - Day

This worksheet compares the daily levels of first-time site visitors with the number of visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. You can use this information to assess site "stickiness" or to determine the rate of influx of new visitors to your site.

## **New vs. Returning Visitors Trend - Month**

This worksheet displays a monthly trend for site usage by comparing first-time site visitors with visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. This information enables you to assess the efficacy of monthly marketing efforts, and determine the impact on site "stickiness" among those who have not registered on your site.

## **New vs. Returning Visitors - Month**

This worksheet compares the monthly number of first-time site visitors with the number of visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. You can use this information to determine the level of visitor retention or to determine the monthly change in the number of new visitors that access your site.

## **New vs. Returning Visitors Trend - Quarter**

This worksheet displays a quarterly trend for site usage by comparing first-time site visitors with visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. This information may enable you to assess the efficacy of marketing efforts over a series of quarters and determine if new visitors respond to your campaigns. You can also infer current levels of visitor traffic and compare that with trends from previous quarters.

## **New vs. Returning Visitors - Quarter**

This worksheet compares the quarterly levels of first-time site visitors with the number of visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. You can use this information to assess site "stickiness" or to compare the change in new visitor traffic on a quarterly basis.

## **New vs. Returning Visitors Trend - Year**

This worksheet displays a yearly trend for site usage by comparing first-time site visitors with visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. This information may indicate annual fluctuations in new visitor traffic and long-term trends in visitor return rates.

## **New vs. Returning Visitors - Year**

This worksheet compares the annual levels of first-time site visitors with the number of visitors that have previously accessed your site and accepted a cookie or are identified by a different tracking device. You can use this information to determine the long-term patterns among returning unauthenticated site users or to determine the annual influx of new visitor traffic.

## Browsers and Platforms Workbook

Use this workbook to see information relating to the different types of browsers and platforms that people use to visit your site.

The following worksheets are available:

- [Top Browsers](#)
- [Single Browser Statistics](#)
- [Browsers and Versions](#)
- [Top Crawlers](#)
- [Browser Types](#)
- [Browser CPU Types](#)
- [Top Browser Strings](#)

### Top Browsers

This worksheet shows statistics and session information about the Internet browsing applications used most frequently to access the site. This worksheet enables you to infer the Internet browser preference of your audience so that you can optimize site content for one or more specific browsers.

### Single Browser Statistics

This worksheet displays statistical data related to the activity of a particular browser type, and enables you to observe how people use that browser type to navigate your site.

### Browsers and Versions

This worksheet displays the version numbers of all Internet browsers used to access the site as well as the specific browser versions that your customers use most. If your site is primarily viewed with older browsers you may want to limit the appearance of certain site content that can only be viewed with newer browser versions.

### Top Crawlers

This worksheet displays the Web crawler (also referred to as an intelligent agent, spider, or "bot") that is used most frequently to index the site. You can use this

worksheet to determine which crawlers are indexing your site and whether you are attracting the appropriate type of search engine spider or other crawler.

## Browser Types

This worksheet displays the types of Internet agents (such as text browsers, graphical browsers, or spiders) that access the site most frequently. You can use this worksheet to determine the Internet browser preference of your audience, so that site content can be optimized for that browser type. If your site is accessed frequently by text browsers, for example, you may want to design the site to be compatible with that type of browser.

## Browser CPU Types

This worksheet displays the types of processors in the computers that power the browsers which accessed your site. This information may enable you to design your site so that content is compatible with the types of processors used by most of your customers. If browsers powered by computers with x486 processors frequently visit your site, for example, you may want to limit the use of complex animation or other items that require powerful processors.

## Top Browser Strings

This worksheet displays the complete User-Agent string associated with the browser types used most frequently to access the site. You can use this worksheet to determine the Internet browser preference of your audience, so that site content can be optimized for that browser. For more information on User-Agents see Appendix A in the *Oracle9iAS Clickstream Intelligence Administrator's Guide*.

## Connecting Machines Workbook

Use this workbook to see demographics and count information that relates to the computer used by a user or visitor to access your site.

The following worksheets are available:

- [Top Connecting Machines](#)
- [Connecting Machines by Domain](#)
- [Connecting Machines by Domain Type](#)
- [Connecting Machines by Region](#)
- [Connecting Machines by Country](#)
- [Single Connecting Machine Statistics](#)

### Top Connecting Machines

This worksheet displays the IP address or resolved name of the computers that accessed your site most frequently. The IP address or name displayed may belong to an actual user or to their proxy server. This information can be combined with information from other site traffic or user origin worksheets to characterize the type of audience that accesses your site.

### Connecting Machines by Domain

This worksheet displays the names of the domains from which users and visitors accessed your site. The information in this worksheet enables you to distinguish competitors, internal divisions of your company, and the general public.

### Connecting Machines by Domain Type

This worksheet displays the domain types of the computers used to access your site. This worksheet may indicate the category of domains from which site traffic originates, such as educational institutions (.edu) or government organizations (.gov).

### Connecting Machines by Region

This worksheet displays the location of the computers used to access your site. This worksheet may indicate the region of the world from which most of your site's traffic originates.

## Connecting Machines by Country

This worksheet displays, by country, the location of the computers used to access your site. This worksheet enables you to determine the country from which most of your site's traffic originates, and may indicate the scope of the site's appeal within a specific country.

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**Note:** The *Connecting Machines by Domain*, *Connecting Machines by Domain Type*, *Connecting Machines by Region*, and *Connecting Machines by Country* worksheets rely on resolved domain name data. These worksheets only provide domain information if reverse DNS lookup has been performed on the IP addresses of the clients that accessed your site.

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## Single Connecting Machine Statistics

This worksheet displays all known data about a connecting machine associated with a particular IP address or resolved name, and may enable you to assess the usage habits of people that connect to your site from a particular computer or proxy server.

## Dimensional Analysis Workbook

Use this workbook to cross reference the database using metrics that you control.

The following worksheets are available:

- [Referrer Dimensional Analysis](#)
- [User Dimensional Analysis](#)
- [Page Dimensional Analysis](#)
- [Browser Dimensional Analysis](#)
- [Connecting Machine Dimensional Analysis](#)

### Referrer Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to the Referrer dimension. This worksheet enables you to view and analyze relationships among data in all hierarchies within the Referrer dimension, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

### User Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to the User dimension. This worksheet enables you to view and analyze relationships among data in all hierarchies within the User dimension, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

### Page Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to the Page dimension. This worksheet enables you to view and analyze relationships among data in all hierarchies within the Page dimension, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

### Browser Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to the Browser dimension. This worksheet enables you to view and analyze relationships among data in all hierarchies within the Browser dimension, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

## Connecting Machine Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to the Connecting Machine dimension. This worksheet enables you to view and analyze relationships among data in all hierarchies within the Connecting Machine dimension, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

## Path Analysis Workbook

Use this workbook to see information relating to the paths that people followed through your site.

The following worksheets are available:

- [Top Paths Through the Site of Length 2](#)
- [Top Paths Through the Site of Length 5](#)
- [Top Paths from Starting Point](#)
- [Top Paths to Destination](#)
- [Referrer Path Analysis](#)
- [Referring Host Path Analysis](#)
- [Referring Site Path Analysis](#)
- [Agent Path Analysis](#)
- [Connecting Machine Path Analysis](#)
- [User Path Analysis](#)
- [Visitor Path Analysis](#)

### Top Paths Through the Site of Length 2

This worksheet displays the most popular two-page combinations viewed within your site, and may indicate key pages upon which advertising banners can be strategically placed for maximum customer visibility.

### Top Paths Through the Site of Length 5

This worksheet displays the most popular five-page combinations viewed within your site. This information enables you to track the most common sequence of clicks through your site, and may indicate high-visibility pages for the strategic placement of advertising banners.

### Top Paths from Starting Point

This worksheet displays the sequence of pages viewed most frequently by site users and visitors from a given starting point. This information may indicate common page sequences or navigational pathways, and may also enable you to determine

the entry pages associated with the pathways that result in desired behaviors (such as making a purchase).

## Top Paths to Destination

This worksheet displays the sequence by which users and visitors traveled through the site to a specific destination page. This information may enable you to determine the most common pathways that lead customers to advertising banners or other key areas of your site.

## Referrer Path Analysis

This worksheet displays the navigational paths followed by customers that were directed to your site by a particular referrer. If you want to analyze the differences (or similarities) in the interests of customers directed to your site by several different referrers, simply provide a new referrer name each time you run this report.

## Referring Host Path Analysis

This worksheet displays the navigational paths followed by customers that were directed to your site by a particular referring host. If you want to analyze the differences (or similarities) in the interests of customers directed to your site from several different referring hosts, simply provide a new host name each time you run this report.

## Referring Site Path Analysis

This worksheet displays, for a particular referring site, the navigational paths followed by customers that were directed to your site. If you want to analyze the differences (or similarities) in the interests of customers directed to your site from several different referring sites, simply provide a new site name each time you run this report.

## Agent Path Analysis

This worksheet displays the navigational paths followed by people who used a particular browser to access your site. If you want to analyze the influence, if any, that browser selection has upon the sequence of pages viewed by site users and visitors, simply provide a new agent name each time you run this report.

## Connecting Machine Path Analysis

This worksheet displays the navigational paths followed by people who used a particular computer or proxy server name to access your site. If you want to analyze the differences (or similarities) in the interests of customers that access your site from different domains or IP addresses, simply provide new connecting machine information each time you run this report.

## User Path Analysis

This worksheet displays a specific user's navigational path through your site. If you want to analyze the differences (or similarities) in the browsing habits of several users, simply provide a new user name each time you run the report. This type of comparative information may enable you to determine typical pathways that result in specific customer behavior, such as making a purchase or downloading content, and may enable you to formulate ways of more effectively directing users to certain areas of your site.

## Visitor Path Analysis

This worksheet displays a specific visitor's navigational path through your site. If you want to analyze the differences (or similarities) in the browsing habits of several different visitors, simply provide a new visitor name each time you run the report. This type of comparative information may enable you to determine typical navigation pathways, such as making a purchase or downloading content, and may lend insight into the use of your site by visitors.

## Referring URLs Workbook

Use this workbook to see demographics and information relating to the origin of a person who is visiting your site.

The following worksheets are available:

- [Top Referrers](#)
- [Top External Referrers](#)
- [Top Internal Referrers](#)
- [Referring URLs](#)
- [Referring Domains](#)
- [Referrers by Category](#)
- [Referrers by Region](#)
- [Referrers by Country](#)
- [Referrers by Domain Type](#)
- [Single Referrer Statistics](#)

### Top Referrers

This worksheet displays, by rank, the referrers (both internal and external) that directed visitors to your site most often. This information may enable you to determine the type of audience that is most frequently referred to your site, and may enable you to assess the effectiveness of current strategic partnerships with referring Web sites.

### Top External Referrers

This worksheet displays the Web sites outside your realm that referred customers to your site most frequently. This information may enable you to assess the effectiveness of current strategic partnerships, and can help to characterize the type of audience that is most often directed to your site.

### Top Internal Referrers

This worksheet displays the internal Web sites that most frequently referred customers to specific places within your site, and may enable you to assess the effectiveness of current internal promotions and marketing campaigns. Internal

sites may reside within the realm of your own site, or may be sites classified as "internal" by your System Administrator for reporting and business purposes.

## Referring URLs

This worksheet displays URLs for the Web sites (internal and external) that referred customers to your site, which typically indicates the sites from which most of your site's traffic originates. This information may enable you to determine where your audience is coming from, and may help you to assess the effectiveness of current strategic partnerships with referring sites.

## Referring Domains

This worksheet displays domains that referred customers to your site, and may indicate the category of site from which most of your site's traffic originated, such as educational institutions (.edu) or corporate sites (.com). This information may help you to assess the effectiveness of current strategic partnerships with referring sites from particular domains.

## Referrers by Category

This worksheet displays the Web sites from a particular category that referred customers to your site. Categories are typically defined by your System Administrator and provide a means of grouping referrers by specific criteria related to your business or type of Web site. This information may indicate the type of audience that is most frequently referred to your site, and may enable you to assess the effectiveness of strategic partnerships with specific types of referrers.

## Referrers by Region

This worksheet displays the regions in which there are Web sites that directed customers to your site. This worksheet enables you to determine key regional areas from which site traffic originates, so that advertising campaigns and site content can be targeted for the audience that is most frequently directed to your site.

## Referrers by Country

This worksheet displays the countries in which there are Web sites that directed customers to your site. This worksheet may enable you to determine the countries from which site traffic originates, so that advertising campaigns and site content can be targeted for the audience that is most frequently referred to your site.

## Referrers by Domain Type

This worksheet displays the types of domains that directed people to your site, such as educational institutions (.edu), commercial enterprises (.com), non-commercial organizations (.org), and so on, as well as the number of sessions generated by each referring type. This information may enable you to determine the type of audience that is typically referred to your site, so that advertising campaigns and site content can be targeted for the customers your site attracts.

## Single Referrer Statistics

This worksheet displays detailed information related to a specific Web site that referred traffic to your site. This statistical data may form the basis of further referrer analyses when combined with other Clickstream Analytics reports.

## Referring URLs by Connecting Machines Workbook

Use this workbook to see reports that combine information about the URLs that refer visitors to your site and the computers used by people to access your site.

The following worksheets are available:

- [Referrers vs. Connecting Machines Dimensional Analysis](#)
- [Domain by Connecting Machines](#)
- [Referring Categories by Connecting Machines](#)

### Referrers vs. Connecting Machines Dimensional Analysis

This worksheet displays all Web log data in the session fact table of the database that is related to both the Referrer and Connecting Machine dimensions of the database. This worksheet enables you to analyze relationships and interactions between the data in all hierarchies of these two dimensions and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

### Domain by Connecting Machines

This worksheet displays information about the domains from which users and visitors accessed your Web site and the types of computers they used to connect to the Internet. Because these users and visitors were referred to your site, the worksheet provides the names of the domains from which they were referred in the Domain Name column. The Country Name column tracks the physical location of the computers (known as connecting machines) they used to access your Web site.

### Referring Categories by Connecting Machines

Initially displays the intersection of data from two dimension levels - the Category level of the Referrer dimension and the Country level of the Connecting Machines dimension. This worksheet enables you to examine and establish relationships between data in any of the levels in the Referrer and Connecting Machine dimensions.

## Referring URLs by Users Workbook

Use this workbook to see reports that combine information about the URLs that refer people to your site and information about registered site users.

The following worksheets are available:

- [Referrer by User Dimensional Analysis](#)
- [Domain by User Age Group](#)
- [Domain by User Gender](#)
- [Domain by User Marital Status](#)
- [Domain by User Subscription Level](#)
- [Referring Category by User Age Group](#)
- [Referring Category by User Gender](#)
- [Referring Category by Marital Status](#)
- [Referring Category by User Subscription Level](#)

### Referrer by User Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to both the Referrer and User dimensions. This worksheet enables you to analyze relationships and interactions between the data in all hierarchies of two dimensions, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

### Domain by User Age Group

This worksheet categorizes, by age group, the domains from which your site is accessed. Age information is typically provided by users upon registration with your site; the range of ages for each group is defined by your System Administrator. You may find, for example, that users from educational institutions (.edu) fall into a younger age group than individuals that access your site from corporate domains (.com).

### Domain by User Gender

This worksheet categorizes, by gender, the domains from which your site is accessed. The data returned by this worksheet may enable you to infer the domains

from which mostly male or female users originate. Information about a user's gender, when specified, is usually provided upon registration with your site.

## **Domain by User Marital Status**

This worksheet categorizes, by marital status, the domains from which your site is accessed, and may enable you to infer the domains from which the largest number of married, single, or divorced users originate. Information about marital status, when specified, is usually provided by the user upon registration with your site.

## **Domain by User Subscription Level**

This worksheet displays, by level of service, the domains from which your site is accessed, and may enable you to infer the domains from which users with the highest (or lowest) subscription level originate. You may find, for example, that users from educational institutions (.edu) usually subscribe to the basic level of service from your site, while individuals that subscribe to premium services generally access your site from corporate domains (.com). User subscription levels are typically defined by your System Administrator.

## **Referring Category by User Age Group**

This worksheet displays, by age group, the categories of referrers that directed customers to your site, and may enable you to determine the age range of the users that are sent to your site by particular types of referring Web sites. Age information is typically provided by users upon registration with your site; both age groups and referrer categories are defined by your System Administrator.

## **Referring Category by User Gender**

This worksheet displays, by gender, the categories of referrers that directed customers to your site, and may enable you to infer the types of referring Web sites from which mostly male or female users originate. Information about a user's gender, when specified, is usually provided upon registration with your site; referrer categories are defined by your System Administrator.

## **Referring Category by Marital Status**

This worksheet displays, by marital status, the categories of referrers that directed customers to your site. Information about marital status, when specified, is usually

provided by the user upon registration with your site; referrer categories are defined by your System Administrator.

## **Referring Category by User Subscription Level**

This worksheet displays, by level of service, the categories of referrers that directed customers to your site. This worksheet may enable you to determine the types of referrers from which users with the highest (or lowest) subscription level originate. Both user subscription levels and referrer categories are defined by your System Administrator.

## Search Analysis Workbook

Use this workbook to find the most popular search keywords, the most popular search phrases, and the most popular search engines on your site.

The following worksheets are available:

- [Top Search Engines](#)
- [Top Referring Searches](#)
- [Top Local Searches](#)
- [Top Searches by Search Engine](#)

### Top Search Engines

This worksheet displays the search engines that are used most frequently by site users and visitors to access information on the site. This information can help you determine the relative popularity of your site on those search engines.

### Top Referring Searches

This worksheet displays the most common words or phrases that were entered into the external search engines that referred users and visitors to the site. This worksheet may indicate specific site content that interests and attracts customers, and enables you to determine the keywords that prompt search engines to send visitors to your site.

### Top Local Searches

This worksheet displays the most common phrases or keywords entered into search engines that exist on your site, and may indicate site content that is most appealing or interesting to customers that perform internal searches.

### Top Searches by Search Engine

This worksheet displays the search engines used most frequently by site users and visitors. Additionally, this worksheet indicates the keywords used to produce successful search results. This information enables you to determine the phrases or topics within your site that people are searching for.

## Site Content Workbook

Use this workbook to see the most frequently requested items and content on your site.

The following worksheets are available:

- [Top Pages](#)
- [Least Requested Pages](#)
- [Top Entry Pages](#)
- [Top Exit Pages](#)
- [Top Clickthroughs](#)
- [Top Page Refreshes](#)
- [Top Bookmarked Pages](#)
- [Top Virtual Directories](#)
- [Top Downloads](#)
- [Pages by Category](#)
- [Single Page Statistics](#)

### Top Pages

This worksheet displays the pages within your site that are viewed most frequently. These are the most popular areas of your site. This worksheet also enables you to determine the visibility of particular advertisements or marketing campaigns.

### Least Requested Pages

This worksheet displays the requested pages within your site that are seldom viewed. Use this information to determine which sections of your site aren't getting the appropriate amount of attention from users and visitors. Pages within your site that have not been viewed do not appear in this worksheet.

### Top Entry Pages

This worksheet displays the pages within your site that are used most frequently as an entry point (such as the site homepage or other bookmarked page). Use this information to determine how users and visitors gain access to the site.

## Top Exit Pages

This worksheet displays the pages within your site that are most frequently viewed immediately before a session is ended. This information may indicate areas of the site that are difficult to use, causing users and visitors to lose interest in the site or its content.

## Top Clickthroughs

This worksheet enables you to determine the top pages used to enter different sections of your site. Use this data to determine how people navigate within the site. Pages within the site that cause people to link to external sites are not considered in this count.

## Top Page Refreshes

This worksheet enables you to determine which pages within your site cause people click the **Refresh** button on their browsers to reload the content. This data may reflect a technical error that causes your users and visitors to constantly refresh the page.

## Top Bookmarked Pages

This worksheet enables you to determine the top pages used to enter your site. This report defines a bookmarked page as follows: The page URL is entered by the user directly into the browser, or the person selects the page from his or her list of bookmarks. Use this data to determine what pages are most popular within your site and place advertising or other important content there.

## Top Virtual Directories

This worksheet enables you to determine which virtual directories within your site are most frequently accessed by users and visitors. A virtual directory is the path to a folder on the Web server used to provide site content. In a URL virtual directory information follows immediately after the domain information (.com, .org, .edu, and so on). Use this data to determine if you need to address potential performance problems.

## Top Downloads

This worksheet enables you to determine which files within your site are most frequently downloaded. Use this data to determine which file types are most popular with site users and visitors.

## Pages by Category

This worksheet gives you categorized views of which pages within your site are viewed most frequently. Use this data to determine what category types are most popular at your site. Page categories are set by your System Administrator. If your System Administrator has not defined categories, Oracle9iAS Clickstream Intelligence will create them by parsing the directory structure of your site.

## Single Page Statistics

This report enables you to track the activities on a specific page within your site. All known data about the page is shown in this report. Use this data to determine whether the page is useful within the context of the site.

## Site Status Workbook

Use this workbook to see server load information for your site. This workbook will also show error and status counts for the various resources on your site.

The following worksheets are available:

- [Server Load by Server](#)
- [Server Statuses](#)
- [Top Error Status Codes by Server](#)
- [Top Error Status Codes by Time](#)
- [Top Error Pages](#)
- [Top Error Files](#)
- [Status for Selected Pages](#)
- [Pages for Selected Server Status Codes](#)
- [Top Client Errors by Page](#)
- [Top Server Errors by Page](#)

- [Top Invalid Requests](#)
- [Top Client Timeouts by Page](#)
- [Top Redirects by Page](#)
- [Status Type by Page Category](#)
- [Status Type by Page Type](#)
- [Status by Page Category](#)
- [Status by Page Type](#)

## Server Load by Server

This worksheet enables you to determine which Web servers within your site are most frequently responding service requests. Use this data to determine a maintenance schedule for your Web servers. You can also use this data to determine if your servers are sharing the workload equally. If not you may want to make changes to balance the load on all your servers.

## Server Statuses

This worksheet enables you to determine how frequently servers within your site generate error status messages. This report includes all status codes returned by a server and the number of times each code occurred. Use this information for to determine which Web servers within your site may have performance issues that must be resolved.

## Top Error Status Codes by Server

This worksheet enables you to determine which servers within your site generate the most errors. Use this information to identify and address performance issues.

## Top Error Status Codes by Time

This worksheet enables you to determine the day in which the most server and client errors occurred. Use this information to create a server maintenance schedule.

## Top Error Pages

This worksheet enables you to determine which pages within your site generate the most error status codes. Use this information to improve the usability of your site.

## Top Error Files

This worksheet enables you to determine which files within your site generate the most client errors. Use this information to improve the usability of your site.

## Status for Selected Pages

This worksheet enables you to review the status codes generated by your site's servers for selected pages within your site. Use this information to determine the types of status messages generated by select pages, troubleshoot your site, and improve site usability.

## Pages for Selected Server Status Codes

This worksheet enables you to determine which pages within your site generated a specific status code during this time period. Use this information to determine if similar pages within the site generate the same types of status codes.

## Top Client Errors by Page

This worksheet enables you to determine which pages within your site are causing the most client errors. Use this information to correct or delete those pages and improve site usability.

## Top Server Errors by Page

This worksheet enables you to determine which pages within your site are causing the most server errors. Use this information to correct or delete those pages and improve site usability.

## Top Invalid Requests

This worksheet enables you to determine which user and visitor requests generated the most error messages. Use this information to determine what types of errors occurred.

## Top Client Timeouts by Page

This worksheet enables you to determine which pages within your site cause the client machine to end a session. Use this information to create content on these pages that may be of more interest to site users and visitors.

## Top Redirects by Page

This worksheet enables you to determine which pages in your site automatically redirect the most users and visitors to other areas within your site. Use this information to determine if the code responsible for redirection is sending people to the correct area within the site.

## Status Type by Page Category

This worksheet enables you to determine which page categories (which are defined by your System Administrator or IT department) within your site generate the most status messages of a certain type (for example, "200: Successful" messages). Use this information to determine what pages within your category structure generate the most error status messages.

## Status Type by Page Type

This worksheet enables you to determine the page types within your site that generate the most status messages of a certain type (for example, "200: Successful" messages). Page types are defined by your System Administrator or IT department. Use this information to determine what page types generate the most error status messages.

## Status by Page Category

This worksheet enables you to determine which page categories within your site generate the most status messages. Page categories are defined by your System Administrator or IT department. If page categories have not been defined, Oracle9iAS Clickstream Intelligence creates categories by parsing the directory structure of your site. Use this information to determine the amount of status messages generated by different categories.

## Status by Page Type

This worksheet enables you to determine which page types within your site generate the most status messages. Page types are defined by your System Administrator or IT department. Use this information to determine amount of status messages generated by different page types.

## Users Workbook

Use this workbook to gather demographic information about site users. A user is defined as a person who has provided personal information to a Web site or has created an identity on the site.

The following worksheets are available:

- [Top Users](#)
- [Users by Age Group](#)
- [Users by City](#)
- [Users by Company](#)
- [Users by Company Type](#)
- [Users by Country](#)
- [Users by Gender](#)
- [Users by Industry](#)
- [Users by Job Role](#)
- [Users by Marital Status](#)
- [Users by Region](#)
- [Users by Registration Date](#)
- [Users by State](#)
- [Users by Subscription Level](#)
- [Depth of Visits](#)
- [Length of Visits](#)
- [Single User Statistics](#)

### Top Users

This worksheet enables you to determine identified users who visit your site most often. Use this information to determine whether or not your site has a loyal user base.

## Users by Age Group

This worksheet enables you to view the age ranges of registered users who visit your site. This report will return demographic data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to target the type of audience that visits your site. You can also use this demographic information to make assumptions about the purchasing power of the types of the age groups who access your site.

## Users by City

This worksheet enables you to determine the location of the registered users who visit your site. This report will return demographic data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine where your site is the most popular.

## Users by Company

This worksheet enables you to determine which companies the registered users who visit your site work for. This report will return company data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to explore possible relationships/synergies or competitive situations.

## Users by Company Type

This worksheet enables you to determine the types of companies the registered users who visit your site work for. This report will return company data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine what types of companies your traffic is coming from.

## Users by Country

This worksheet enables you to determine the location of the registered users who visited your site during this period. This report will return location data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine in which countries your site is the most popular.

## Users by Gender

This worksheet enables you to determine the gender of the registered users who visited your site. This report will return gender data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine if one gender visits your site more frequently than another gender does.

## Users by Industry

This worksheet enables you to determine which users of your site come from specific industries. This report will return industry data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine the types of industries your site attracts.

## Users by Job Role

This worksheet enables you to determine the types of jobs the registered users who visit your site have. This report will return employment data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine what types of people visit your site (managers, clerks, technicians, and so on).

## Users by Marital Status

This worksheet enables you to determine whether the majority of the registered users who visit your site are married or not. This report will return relationship data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine if the content you provide is in step with the marital status of people visiting your site.

## Users by Region

This worksheet enables you to determine the world location (For example, Europe, Oceania, North America, and so forth) of the registered users who visited your site during this period. This report will return location data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine in which part of the world your site is the most popular.

## Users by Registration Date

This worksheet enables you to determine who visited your site according to when they created a login account. This information is derived from the clickstream log file or from data loaded by your system administrator. Use this information to look for relationships or patterns related to registration dates and behavior.

## Users by State

This worksheet enables you to determine the location of the registered users who visited your site. This report will return location data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine in which part of the country your site is most popular.

## Users by Subscription Level

This worksheet enables you to determine the various types of subscription levels held by your members and how frequently members with certain subscription levels visit your site. This report will return subscription data only if the registered user has supplied this information, and the information has been loaded into the Clickstream database by the System Administrator. Use this information to determine site usage by your premium registered users.

## Depth of Visits

This worksheet enables you to determine how many visits to your site resulted in sessions consisting of multiple page requests. Oracle9iAS Clickstream Intelligence categorizes visits in one page increments and then determines how many visits fell into that range. A single user can have multiple visits. Visits with 25 or more page requests are not differentiated. A visit with 26 page requests is considered the same as a visit with 226 page requests. Use this information to determine the stickiness level of your site.

## Length of Visits

This worksheet enables you to determine the length of user sessions. Oracle9iAS Clickstream Intelligence categorizes sessions in one minute increments. Use this information to determine the amount of time spent per visit to your site. Long site visits may indicate a high level of user interest in your site.

## Single User Statistics

This worksheet enables you to track the activities of a specific site user. All known data about the user is shown in this report. Use this information to gain insight into the use of your site by an individual.

## User by Connecting Machines Workbook

Use this workbook to gather information about the data stored in the Connecting Machine dimension of the database and how it relates to other dimensions. These reports are very powerful. They enable you to sift through the stored Web log data at a very fine level of granularity.

The following worksheets are available:

- [Connecting Machine by User Dimensional Analysis](#)
- [Connecting Machine by User Age Group](#)
- [Connecting Machine by User Gender](#)
- [Connecting Machine by User Marital Status](#)
- [Connecting Machine by User Subscription Level](#)

## Connecting Machine by User Dimensional Analysis

This worksheet initially displays the intersection of data from two dimension levels - the Connecting Machine dimension and the User dimension. This worksheet enables you to analyze relationships and interactions between the data in all hierarchies of two dimensions, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

## Connecting Machine by User Age Group

This worksheet initially displays data at the Client Host level of the Client Host dimension as it relates to the Age Group level of the User dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports

## Connecting Machine by User Gender

This worksheet initially displays data at the Client Host level of the Client Host dimension as it relates to the Gender level of the User dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Connecting Machine by User Marital Status

This worksheet initially displays data at the Client Host level of the Client Host dimension as it relates to the Marital Status attribute contained in the User level of the User dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Connecting Machine by User Subscription Level

This worksheet initially displays data at the Client Host level of the Client Host dimension as it relates to the Subscription Level attribute contained in the User level of the User dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## User by Pages Workbook

Use this workbook to see reports that combine user information in the database with page information.

The following worksheets are available:

- [User vs. Page Dimensional Analysis](#)
- [Age Group by Page Category](#)
- [Gender by Page Category](#)
- [Marital Status by Page Category](#)
- [Subscription Level by Page Category](#)

## User vs. Page Dimensional Analysis

This worksheet displays all Web log data in the session fact table that is related to both the User and Page dimensions. This worksheet enables you to analyze relationships and interactions between the data in all hierarchies of two dimensions, and may form the basis of further data analyses when combined with other Clickstream Analytics reports.

## Age Group by Page Category

This worksheet initially displays data at the Age Group level of the User dimension as it relates to the Page Category level of the Page dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Gender by Page Category

This worksheet initially displays data at the Gender level of the User dimension as it relates to the Page Category level of the Page dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Marital Status by Page Category

This worksheet initially displays the data contained in the Marital Status attribute (which resides in the User level of the User dimension) as it relates to the Page Category level of the Page dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Subscription Level by Page Category

This worksheet initially displays the data contained in the Subscription Level attribute (which resides in the User level of the User dimension) as it relates to the Page Category level of the Page dimension. As you drill into either of the dimensions you will see how the data contained in one dimension affects the data in the other dimension. Use this information to determine patterns that are not covered in other pre-formatted reports.

## Visitors Workbook

Use this workbook to see information relating to the people that have not logged in to your site. Identified visitors is defined as people who have not registered with the site but who are tracked via cookie or query string data. Unidentified visitors are defined as people who have not registered with the site, and have not been tracked using query string or cookie data.

The following worksheets are available:

- [Top Visitors](#)
- [Top Identified Visitors](#)
- [Top Unidentified Visitors](#)
- [Unidentified vs. Identified Visitors](#)
- [Unidentified vs. Identified Visitors Trend](#)
- [Depth of Visits](#)
- [Length of Visits](#)
- [Single Visitor Statistics](#)

### Top Visitors

This worksheet provides a full count of all the visits to your site and enables you to determine which people visited your site most often. Use this information to determine which visitors access your site most frequently.

### Top Identified Visitors

This worksheet enables you to determine which identified visitors accessed your site most often. Use this information to determine who visits your site most frequently.

### Top Unidentified Visitors

This worksheet enables you to determine which unidentified visitors accessed your site most often during this period. Use this information to determine how many visitors to your site wish to remain completely anonymous.

## Unidentified vs. Identified Visitors

This worksheet enables you to determine which type of visitor accessed your site most frequently. Use this information to determine who visited your site more often: unidentified visitors or identified visitors.

## Unidentified vs. Identified Visitors Trend

This worksheet enables you to determine if there is a trend to which type of visitor accessed your site most frequently. Use this information to determine if the level of visits by either unidentified visitors or identified visitors increased or decreased.

## Depth of Visits

This worksheet enables you to determine how many visits to your site resulted in sessions consisting of multiple page requests. Oracle9iAS Clickstream Intelligence categorizes visits in one page increments and then determines how many visits fell into that range. A single visitor can have multiple visits. Visits with 25 or more page requests are not differentiated. A visit with 26 page requests is considered the same as a visit with 226 page requests. Use this information to determine the stickiness level of your site.

## Length of Visits

This worksheet enables you to determine the length of visitor sessions. Oracle9iAS Clickstream Intelligence categorizes sessions in one minute increments. Use this information to determine the amount of time spent per visit to your site. Long site visits may indicate a high level of user interest in your site.

## Single Visitor Statistics

This worksheet enables you to track the activities of a specific site visitor. All known data about the visitor is shown in this report. Use this information to gain insight into the use of your site by an individual.



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## Column Descriptions

This appendix provides definitions for all columns available in the worksheets that comprise Clickstream Analytics.

**Age Group** - The name or number associated with the age group to which a user belongs. This name or number, entered by the user when they register, is imported into Clickstream Intelligence from the user database.

**Agent Full String** - An alphanumeric string that contains the name of the agent with all major and minor release numbers. The user agent string from the clickstream log may also include the computer platform and architecture.

**All Browsers** - The aggregate of all values in the Agent dimension.

**All Connecting Machines** - The aggregate of all values in the Connecting Machine dimension.

**All Dates** - The aggregate of all values in the Date dimension.

**All Pages** - The aggregate of all values in the Page dimension.

**All Referrers** - The aggregate of all values in the Referrer dimension.

**All Searches** - The aggregate of all values in the Search dimension.

**All Servers** - The aggregate of all values in the Server dimension.

**All Session Types** - The aggregate of all values in the Session Type dimension.

**All Sites** - The aggregate of all values in the Site dimension.

**All Statuses** - The aggregate of all values in the Server Status dimension.

**All Times** - The aggregate of all values in the Time of Day dimension.

**All Users** - The aggregate of all values in the User dimension.

**All Visitors** - The aggregate of all values in the Visitor dimension.

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**Architecture** - The server architecture.

**Authentication Group** - A group that distinguishes verified users that belong to one or more sites within Clickstream Intelligence.

**Authentication Name** - The unique login or user name that is used to identify registered users.

**Average Time to Serve (Sec)** - The average number of seconds needed to serve requests at your site.

**Average Dwell Time (Min)** - The average number of minutes spent at your site.

**Average Time Spent (Min)** - The number of minutes spent at the site (Total Dwell Time) plus the number of minutes needed to serve requests (Total Time to Serve).

**Average Time Spent (Sec)** - The number of seconds spent at the site (Total Dwell Time) plus the number of seconds needed to serve requests (Total Time to Serve).

**Bytes Sent (GB)** - The number of gigabytes sent from your servers to clients and other connecting machines.

**Bytes Sent (KB)** - The number of kilobytes sent from your servers to clients and other connecting machines.

**Bytes Sent (MB)** - The number of megabytes sent from your servers to clients and other connecting machines.

**Cache Memory Size** - The amount of first-level cache memory installed on the server.

**Cache Size** - The amount of first-level cache memory installed on the server.

**Campaign** - The name of the campaign that provided a referral to your site.

**Campaign Description** - The description of the campaign that provided a referral to your site.

**Campaign Name** - The name of the campaign that provided a referral to your site.

**City** - A user's city of residence.

**Clickthroughs** - The number of times a particular page was used to reach another destination in your site.

**Client** - The name of the browser software used to access your site, such as Netscape Navigator.

**Client Errors** - The code number that identifies the error made most frequently by site visitors.

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**Client Host Name** - The DNS hostname or IP address of the client host computer.

**Client Host Resolved Name** - The user-friendly name that corresponds to the IP address of the client host machine. If one is unavailable, then the IP address of the client host machine is displayed.

**Client Name** - The name of the browser software used to access your site, such as Netscape Navigator.

**Client Timeouts** - The name of the client whose session ended due to a timeout error.

**Client Type** - The browser type that was used to access your site, such as a graphical, email, or text browser.

**Client Type is Crawler** - Indicates when a particular client type is a Web crawler (spider). ('Y' = Crawler, 'N' = Not a crawler).

**Client Version Full Name** - The full name and version number of the browser software used to access your site, such as Netscape Navigator 4.76.

**Client Version Major Number** - The major version number of the browser used to access your site. The major version number in Netscape 4.76, for example, is 4.

**Client Version Name** - The name of the client browser that accessed your site.

**Client Version Number** - The complete version number of the browser that accessed your site. For example, in Netscape 4.76, 4 and 76 are the major and minor version numbers, respectively.

**Code** - The numeric code that identifies a particular server message, such as 404 for the error "Page Not Found."

**Company Name** - The name of the company for which the user works.

**Company Type** - A user-defined description of the type of company for which the user works.

**Country Code** - The two-letter ISO code for a country, such as US for the United States.

**Country Name** - The name of the country from which a request originated.

**CPU Count** - The number of processors installed on the server.

**CPU Speed** - The clock speed of the processor(s) installed on the server.

**CPU Type** - The type of processor used by the computer that connected to your site.

**CPU Vendor** - The manufacturer of the processor(s) on the server, such as Intel.

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**Date** - The full date, written in the format January 26, 1969.

**Day** - The full name of the day, such as Monday or Saturday.

**Description** - A description of the status code returned by the server, such as "Page Not Found" for code 404.

**Description** - A user-defined description of the site.

**Directory Hits** - The number of times a particular Web server directory was accessed.

**Domain** - The hostname and suffix that identify a particular domain, or group of computers, such as oracle.com.

**Domain Name** - The name of the internet site that provided a referral to your site.

**Domain Name** - The hostname and suffix that identify a particular domain, or group of computers, such as oracle.com.

**Domain Type Name** - The name of the domain type that provided a referral to your site.

**Domain Type Name** - The type of domain, such as .com, .org, or .gov.

**Downloads** - The number of times a resource (such as a file, graphic, or non-content item) was downloaded from the site.

**Dwell Time per Page (Min)** - The average number of minutes spent per page.

**Email Address** - The user's email address.

**Error Count** - The number of errors that occurred.

**First Name** - The user's first name.

**First Page In Path** - The first page in a particular navigational path.

**First Visit Date** - The date of the first visit to your site by a person who is either unknown, unidentified, or identified but unregistered.

**Fiscal Month Name** - The full name of the fiscal month. January, for example.

**Fiscal Quarter Name** - The name of this fiscal quarter.

**Fiscal Year Number** - The four-digit number associated with this fiscal year.

**Fourth Page In Path** - The fourth page in a particular path

**Gender** - The user's gender.

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**Home Phone** - The user's home telephone number.

**Hostname** - The hostname of the server, such as www.oracle.com.

**Hour** - The hour number in 24-hour form, such as 18 in 18:00 (six o'clock).

**Hour Range** - The descriptive name for an hourly range, such as 10am-11am.

**Identified Visitors** - The percentage of identified visitors, equal to the number of identified visitors who accessed your site divided by the total number of people who accessed your site.

**Industry** - The name of the industry sector in which the user works, such as Automotive or Construction.

**Internet Service Provider** - The name of the Internet service provider used to access the site.

**Invalid Requests** - The number of requests made to the server that were not valid.

**Job Role** - A description of the user's job.

**Last Name** - The user's surname.

**Listener Port** - The port on which the HTTP server listens.

**Listener Software** - The name of the software application the server uses to listen for requests.

**Main Memory Size** - The amount of RAM installed on the host computer.

**Marital Status** - The user's marital status.

**Memory Size** - The amount of RAM installed on the host computer.

**Middle Name** - The user's middle name or initial, if one was provided.

**Minute** - The number of minutes that have passed since midnight.

**Minute of Hour** - The number of a particular minute in an hour.

**Mobile Phone** - The user's mobile or cell phone number.

**Month** - The full name of the calendar month.

**New Users** - The number of people who registered at your site for the first time.

**New Users** - The percentage of identified users, equal to the number of first-time registrants divided by the total number of people who accessed your site.

**Operating System** - The operating system installed on the server, such as UNIX or Linux.

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**Operating System Name** - The name of the operating system that powered the browser that accessed your site.

**Operating System Version** - The version number of the operating system on which the server runs, such as 2.7 in Sun Solaris 2.7.

**Page Description** - A user-defined description of the page.

**Page Query String** - The portion of the page's URL that contains query parameters sent by the browser to the server. If no value appears in this column, it has been disabled by your system Administrator.

**Page Stem** - The portion of the URI that is not part of the query string and identifies the resource corresponding to this page. For example, in "http://www.oracle.com/clickstream/index.jsp?init=dms" the stem is "/clickstream/index.jsp".

**Page Time to Serve (Sec)** - The number of seconds required for the server to return user and visitor page requests.

**Page Time To Serve (Min)** - The number of minutes required for the server to return user and visitor page requests.

**Page Title** - The name of the page, if it has one.

**Page Type** - A user-defined description of the page type.

**Page Views** - The number of requests for any file classified as a page.

**Pages per Session** - The total number of pages requested by users and visitors, divided by the total number of sessions.

**Percentage of Errors** - The number of sessions in which an error occurred, divided by the total number of sessions.

**Percentage of Page Views** - The percentage of page requests that occurred in a particular time period.

**Percentage of Sessions** - The percentage of sessions that occurred.

**Platform** - The name of the software platform that powers the browser that accessed this site. For example, Windows, Macintosh, or UNIX.

**Platform Name** - The name of the software platform that powers the browser that accessed this site. For example, Windows, Macintosh, or UNIX.

**Port** - The number of the port, or logical channel, to which the HTTP server is connected.

**Postal Code** - The ZIP code from the user's postal address.

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**Primary Phone** - The primary telephone number of the user, including extension if applicable.

**Product** - The name of the browser type used to access the site, such as Mozilla in Mozilla/4.0.

**Product Version** - The version number of the browser used to access this site, such as 4.0 in Mozilla/4.0.

**Quarter** - The symbol for the calendar quarter, such as Q1 or Q3.

**Raid Level** - The level of performance and fault tolerance for the primary device that stores your Web data.

**Redirects** - The number of times the site redirected a user, visitor, or electronic agent to another page within the site.

**Referrers** - The location of the external site and page that was viewed immediately before your site. Typically, a referring page provides a link to your site.

**Referring Searches** - The number of times a search engine referred a visitor to your site.

**Referring Site DNS Alias** - The full DNS alias for the IP address of the site that provided a referral to your site. For example, www.oracle.com.

**Referring Site Name** - The name of the site from which a user or visitor came immediately before accessing this site.

**Referring URL Host and Port** - The Host:Port string taken from the referrer URL in the clickstream log. For example, in "www.oracle.com:604," www.oracle.com is the host and 604 is the port.

**Referring URL Results Page** - Indicates when the URL that referred a visitor to your site is a search engines results page.

**Referring URL Search Param** - The search criteria entered into a search engine page that referred a visitor to this site.

**Referring URL Stem** - The search criteria, or query string, entered into a search engine that referred a visitor to this site.

**Region** - The name of the region in which a country is located, such as North America or South America.

**Region Name** - The name of the region in which a country is located, such as North America or South America.

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**Registration Date** - The date on which a visitor registered to become an authenticated user of this site.

**Registration Method** - The method by which the user registered at your site. For example, email.

**Resource Delivery Method** - The method used to deliver a resource to the client, such as 'dynamic' for a CGI script.

**Resource Description** - A user-defined description of the resource, such as a description of what a script does in a CGI program.

**Resource File Directory** - The full directory path to an image, or file, or other type of site resource, minus the file name. For example, "http:\\dwsun02\documents\pdfs\.

**Resource File Extension** - The type of this resource, minus the period (.) that precedes it. If no extension exists, only the period (.) appears. For example, htm.

**Resource File Name** - The filename portion of the URL stem. For example, in "http://www.oracle.com/clickstream/index.html" the resource file name is "index.html".

**Resource Mime Type** - The Multipurpose Internet Mail Extension type of a resource, such as .GIF or .JPG for a picture file.

**Resource Results Page** - Indicates if the resource that enabled access to your site is a search engine results page.

**Resource Search Param** - The search expression entered into the search engine that was used to find your site.

**Resource Stem** - The portion of the URI that identifies a resource and immediately precedes the query string. For example, in "http://www.oracle.com/clickstream/index.jsp?init=dms" the stem is "/clickstream/index.jsp".

**Resource Type Name** - The type of file or other object served by the site.

**Returning Users** - The number of registered site users whose current visit is not their first visit.

**Returning Users Ratio** - The percentage of returning users, equal to the number of previously-registered users divided by the total number of people who visited your site during a specific time period.

**Search Expression** - The search parameters entered into a search engine that comprise the query string of a URL.

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**Searches** - The search criteria entered into a search engine that comprise the query string of a URL.

**Second** - The number of seconds that have elapsed since midnight.

**Second of Minute** - The number of a second in a given minute, such as 57 in 12:02:57.

**Second Page In Path** - The second page in a particular path

**Server Errors** - The number of errors that occurred on the servers that store site content.

**Server Farm Name** - The name of the server farm, or group of servers, to which the server belongs.

**Server Name** - A user-friendly name assigned to the HTTP server.

**Session Type Map** - An internal code used to represent session types.

**Sessions** - A count of the number of sessions that occurred.

**Site Description** - A user-defined description of the site.

**Site DNS Alias** - The domain name of the site, such as www.oracle.com.

**Site Name** - A user-friendly name for the site, such as oracle.com instead of 148.87.9.44 (the IP address).

**Site User Group** - A default registered user group that is set by your site Administrator.

**Site Visitor Group** - A default visitor group that is set by your site Administrator.

**Start Page** - The initial page from which a path started.

**State Code** - The identifying code for a state within a country, such as CA for the state of California.

**State Name** - The name of the state or province in a country.

**Status Code** - The status code returned from the Web server.

**Status Name** - The name given to the status code returned by the server, such as "OK" for status code 200.

**Status Type** - The classification of a status code. For example, codes in the range of 400 to 499 are classified as client errors.

**Storage Capacity** - The capacity of a site's primary storage device.

**Storage Raid Level** - The level of fault tolerance for a site's primary storage device.

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**Storage Vendor** - The manufacturer of the site's primary storage device.

**Subscription Level** - The level of service to which a user is subscribed.

**Third Page In Path** - The third page in a particular path

**Time Spent per Page (Min)** - The average number of minutes spent per Web site page.

**Time Spent per Search (Min)** - The number of minutes spent on a search.

**Times Path Was Followed** - The number of times a particular path was followed.

**Time Spent per Session (Min)** - The total number of minutes spent at the site, divided by the total number of sessions.

**Total Dwell Time (Hrs)** - The total number of hours spent at the site.

**Total Time Spent (Hrs)** - The total number of hours spent at the site, equal to the number of hours users and visitors spent at the site (Total Dwell Time) plus the number of hours needed to respond to service requests (Total Time to Serve).

**Total Time Spent (Mins)** - The total number of minutes spent at the site, equal to the number of minutes users and visitors spent at the site (Total Dwell Time) plus the number of minutes needed to respond to service requests (Total Time to Serve).

**Unidentified Visitors** - The percentage of unidentified visitors, calculated by dividing the number of visitors who accessed your site anonymously by the total number of people who visited your site.

**User Defined Page Category 1 Code/Description** - A user-defined description of a particular page category.

**User Defined Page Category 2 Code/Description** - A user-defined description of a particular page category.

**User Defined Page Category 3 Code/Description** - A user-defined description of a particular page category.

**User Defined Page Category 4 Code/Description** - A user-defined description of a particular page category.

**User Defined Page Category 5 Code/Description** - A user-defined description of a particular page category.

**User Defined Page Category 6 Code/Description** - A user-defined description of a particular page category.

**User Defined Referrer Category 1 Code/Description** - A user-defined description of a referrer or referrer category.

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**User Defined Referrer Category 2 Code/Description** - A user-defined description of a referrer or referrer category.

**User Defined Referrer Category 3 Code/Description** - A user-defined description of a referrer or referrer category.

**User Type** - The type of user that registered on your site, if user types were defined by your System Administrator.

**Users** - A unique count of users

**User Name** - The full user name (if defined); otherwise, the authentication name in the clickstream log file.

**Virtual Directory** - The first directory contained in the host directory. In a URL, this is the term that immediately follows the top-level domain.

**Visitor** - The identifying string for a visitor.

**Visitor Group** - The visitor group to which a unique visitor belongs.

**Visitor Type** - One of three possible values associated with a particular visitor: Unknown, Identified, or Unidentified.

**Visitor Type Name** - One of three possible values associated with the name of a visitor type: Unknown, Identified, or Unidentified.

**Website URL** - The Internet address for a user's homepage.

**Week** - The full week name, such as May 01-May 07.

**Whole Name** - The user's full name or pseudonym.

**Work Phone** - The work telephone number of the user, including extension if available.

**Year** - The four-digit number of the calendar year.



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# Glossary

This glossary defines terms and concepts used in the *Oracle9iAS Clickstream Intelligence User's Guide*.

## **agent**

The browser or other application that makes a request (typically to a Web server).

In a log file entry, the identification string and number that identifies each Web browser request. The *agent* string typically identifies the browser, its version number, and the operating system upon which it is running.

## **authentication**

The process of verifying the identity of a registered user, often as a prerequisite for allowing access to system resources. A visitor to a Web site, for example, may be required to supply a valid username and password as part of the *authentication* process.

See also: [user](#).

## **business intelligence**

Corporate information that can indicate the historical performance, current status, and possible forecast for a company. *Business intelligence* may be used to increase a company's competitive advantage, develop innovative business solutions, or create solutions that focus company efforts on projects with the highest return on investment.

## **clickstream**

The series of clicks, or page transitions, that mark an individual's navigational path through the Internet or a particular Web site.

### **Clickstream Analytics**

The analytical reports created from data that Clickstream Intelligence acquires from your Web site(s). The reports (called [worksheets](#)) that comprise Clickstream Analytics can be viewed with Oracle9iAS Discoverer.

### **Clickstream Loader**

The component of Clickstream Intelligence that parses, filters, and transforms Web server log files before loading them in to Oracle9i database. The *Clickstream Loader* resides on the same machine as the [Collector Server](#), the component from which raw (uncompressed) Web log files are obtained.

### **Clickstream site**

A Web site for which Clickstream Intelligence provides analytics. For each *Clickstream site*, you define the parameters that control the way clickstream data is acquired and processed.

### **client**

A user, software application (such as a browser), or computer that requests and relies upon the services, data, or processing of another application or computer (the server). The *client* is usually the machine that runs your Internet browser.

In a client-server architecture, the *client* is the front-end portion that sends a request to the back-end, or server, portion. The server processes the request and sends a response to the client.

See also: [server](#).

### **Collector Agent**

The component of Clickstream Intelligence that gathers and compresses Web server log files into units of manageable size, called [data packets](#). The *Collector Agent* is installed on the Web server machine.

See also: [Collector Server](#).

### **Collector Server**

The component of Clickstream Intelligence that retrieves data packets from the Web server and uncompresses the log files for subsequent transfer to the [Clickstream Loader](#). The *Collector Server* resides on the same machine as the Clickstream Loader.

**cookie**

The text string stored onto the client browser by the server that contains data pertaining to online requests. *Cookies* enable applications, such as Web browsers, to store and retrieve information about a client, such as the domain, path, and other variables. When a browser is requested to send cookie information to the server, individual Web site users can be recognized again by the unique *cookie* that was originally assigned to them.

**crawler**

See [spider](#).

**database**

A collection of data that is treated as a unit. The purpose of a database is to store and retrieve related information.

**data filter**

A conditional or rule-based routine for restricting data; a method of selecting or qualifying data, typically from a larger data set. A Clickstream *data filter* enables you to exclude specific Web log records from those which are loaded into the database. All filtered records appear as "Lines Discarded" on the **Data Packets Details** page.

**data format**

The structure of the fields and field names in a Web log. Apache, W3C Extended, and Microsoft IIS Extended are standard *data formats* supported by Clickstream Intelligence.

**data packet**

A grouping of Web server log files. The Clickstream Collector Agent compresses log files into *data packets* to facilitate transfer from the Web server to the Collector Server. The data packets are then uncompressed by the Collector Server.

See also: [Collector Agent](#), [Collector Server](#).

**data source**

A database, file, or repository that provides information to the database. The *data source* specified for a Clickstream site, for example, indicates the location of log files that are loaded into the Clickstream database.

**data type**

A category of data, such as a character, string, integer, or date. In a relational database, data has only one data type assigned to it.

**database**

A relational database that is designed for query and analysis. This central repository typically contains historical (static) data, and may contain data from diverse sources. Storage of data in a *database* enables you to consolidate and integrate data from disparate sources, and analyze trends or changes in data over time.

**delimiter**

A separator in a sequence of values in a Web log file.

See also: [enclosure](#), [terminator](#).

**dimension**

A structure, often composed of one or more hierarchies, that categorizes data in a database. *Dimension* data (described by dimensional attributes) is typically collected at the lowest level of detail and then aggregated, or "rolled up," into higher levels that comprise hierarchies.

See also: [hierarchy](#).

**DNS**

See: [domain name system \(DNS\)](#).

**DNS alias**

The numeric [IP address](#) that directly corresponds to a Web site's [domain name](#).

**DNS lookup**

Domain Name Server lookup. The process by which a domain name is translated into the form of an IP address, or DNS alias.

A *DNS lookup* performed on the domain name [www.oracle.com](#), for example, reveals [148.87.9.44](#) as the corresponding the IP address.

See also: [reverse DNS lookup](#).

**domain name**

A unique name that identifies a location, or site, on the Internet. It is comprised of a suffix (such as [.com](#) or [.gov](#)), attached to a [hostname](#).

A *domain name* is the resolved, or user-friendly, version of an [IP address](#).

### **domain name system (DNS)**

The mechanism that divides the Internet into separate hierarchical groups, called domains, that are identified by unique alphanumeric names, such as [us.oracle.com](#). *DNS* identifies each computer within a domain by a unique [hostname](#). For example, a computer named "dms" in the us.oracle.com domain would be uniquely identified on the Internet as [dms.us.oracle.com](#).

### **dwelt time**

The amount of time (in seconds) that a user or visitor remains on a Web page during a given session.

### **e-business**

Also called "electronic business." A company that integrates Web technology with company dealings, such as the distribution of goods and services to clients, or collaboration with business partners.

### **e-business management tools**

A set of applications (such as Oracle e-Business Management Tools) that enable centralized management of a complete e-business infrastructure, including the client, middle-tier HTTP servers, and database.

### **enclosure**

Characters that enclose a field in a Web log file. An *enclosure* is a specific type of delimiter.

See also: [delimiter](#).

### **facts**

Alphanumeric data items obtained from a Web log or computed from Web log data. Facts, stored in fact tables, are the products of measures and dimensions - every column in a fact table is either a numeric measure or a foreign key to a dimension. Dimensions, therefore, describe and establish a context for the facts.

Also called a *measure*. Data, usually numeric and additive, that is described by several database [dimensions](#). Values for *facts* are usually not known *a priori*- they are observed and stored.

Certain *facts*, such as averages, totals, or percentages, are generated from existing data through a mathematical operation or data transformation. Examples of *facts* include Sales, Cost, and Profit.

**fact table**

A table in a star schema that contains two types of columns: those that contain measures (**facts**) and those that are **foreign keys** to **dimension** tables. The **primary key** of a *fact table* is usually a composite key that is made up of all of its foreign keys.

A *fact table* might contain either detail-level facts or facts that have been aggregated (fact tables that contain aggregated facts are often called summary tables). A fact table usually contains facts with the same level of aggregation.

See also: **facts**, **foreign key**, **primary key**.

**foreign key**

An integrity constraint that requires each value in a column or set of columns (such as a fact table) to match a value in a related table's *primary key*.

See also: **fact table**, **primary key**.

**guest user**

An individual that is not an anonymous user, yet does not have a specific user entry to a Web site.

**hierarchy**

A logical structure that uses ordered **levels** as a means of organizing data and which may be used to define data aggregation. A *hierarchy* can also be used to define a navigational drill path, regardless of whether the levels in the hierarchy represent aggregated totals.

For example: In the Time dimension, a hierarchy might be used to aggregate data from the Month level to the Quarter level to the Year level.

See also: **dimension**, **level**.

**hit**

A single file that is requested from the Web server and transferred to the Web browser. Each item on a page (such as inline images), as well as the page itself, counts as a *hit*.

**hostname**

The character string that identifies a computer within the DNS domain; the name or IP address of the computer making a request.

The **DNS lookup** and *hostname*, taken together, comprise a unique **IP address** for any host on the Internet.

**impression**

A single page view.

See also: [session](#).

**internal domain**

A specific domain that belongs to a company or organization.

**internal site**

A site that typically belongs to or pertains to your company or organization.

**IP address**

A unique numeric code that identifies hosts and networks; a numeric identifier that represents the location of a computer on the Internet. Each computer on a network is assigned one unique *IP address*.

An *IP address* is written as four numbers separated by periods. The IP address 148.87.9.44, for example, corresponds to the oracle.com Web site. The numerical IP address can be translated into a user-friendly domain name via a [reverse DNS lookup](#).

**level**

A position in a hierarchy. For example, a Time [dimension](#) might contain a [hierarchy](#) that represents data at the Month, Week, and Day *levels*.

**log file**

A file that lists certain actions or events that have taken place. For example, a *log file* on a Web server may contain information about all requests that have been made to the server .

**materialized view**

Summarized data from a fact table in your Clickstream warehouse. A *materialized view* provides access to table data by storing the results of a query in a separate schema object.

**metadata**

Information (data) that describes data and other structures in a database, such as objects, business rules, and processes.

*Metadata* may indicate how the data is formatted, how a specific set of data was collected, or when the data was acquired. A [repository](#) may contain metadata.

**natural key**

A unique identifier for an interface table or level table; a group of columns in an interface or level table that uniquely identifies rows in that table.

*Natural keys* can be conceptualized as "user-defined" primary keys among dimension interface tables.

**object**

A thing of significance within which information is stored. In a relational database, Tables and Views are the two of the most common *objects*.

**Oracle9i Application Server**

A comprehensive, integrated application server that provides all of the infrastructure and functionality needed to assemble and run a successful e-business.

**Oracle9i Warehouse Builder**

The Oracle product used to build and manage a database.

See also: [database](#).

**Oracle architecture**

Memory and process structures used by an Oracle server to manage a database.

**Oracle Enterprise Manager**

A separate Oracle product that combines a graphical console, agents, common services, and tools to provide an integrated and comprehensive systems management platform for managing Oracle products.

**packet**

A block of information sent over the network each time a connection or data transfer is requested. The information contained in *packets* depends on their type-Clickstream data packets, for example, contain Web log data.

See also: [data packet](#).

**platform**

The specific underlying computer hardware or software for a system. A *platform* may refer to the combination of computer hardware (such as a specific processor) with a particular operating system.

**port**

An endpoint to a logical (as opposed to physical) connection; a logical channel by which a client program specifies a particular server program on a computer in a network. Several ports may exist on the same computer.

On the Internet, the type of *port* is often identified by a port number -- the number in a URL that appears after the colon (:), written in the format **hostname:port**. HTTP protocol, for example, uses port 80 by default.

See also: [hostname](#), [protocol](#).

**primary key**

The column or set of columns included in the definition of a table's *primary key constraint*, which disallows duplicate values and nulls in a column or set of columns.

*Primary key* values uniquely identify the rows in a table; therefore, only one primary key can be defined for each table.

**process**

A sequence or series of jobs/actions performed on a database. Clickstream *processes* include loading the warehouse, loading dimensions, refreshing summaries, resolving IP addresses, and restoring the warehouse to a previous version.

**process definition**

Specifies and characterizes the parameters and values for a [process](#).

See also: [process](#).

**protocol**

The "language" or set of formal rules used by computers or other devices to send data across a network. Use of *protocols* ensures communication between different programs or computers on a network.

**query**

The question or specific criteria sent to a database for the purpose of retrieving information. When you *query* the Clickstream warehouse, data is retrieved that fits the specific set of conditions that you submitted.

**query string**

The dynamic portion of a URL that passes state information or user input from the browser to the server. Typically, the *query string* portion of a URL immediately follows the question mark (?) symbol.

**RAID**

Redundant Array of **Independent Disks**. A particular category of disk drives typically used on servers for fault tolerance and performance.

**referrer**

A Web server or Web page that directs users or visitors to a specific place within a Web site. *Referrers* may be internal or external.

**repository**

A central location where aggregated data is stored and maintained in an organized fashion. The Clickstream *repository* for Web data is part of your database.

See also: [metadata](#).

**resource**

A file object hosted by the Web [server](#). Examples of *resources* include static HTML files, CGI programs, and image files.

**resource type**

The type of physical or logical component that is generated by a [resource](#). *Resource types* may include HTML (files) or GIF (images).

**reverse DNS lookup**

The process by which an [IP address](#) is resolved into its associated user-friendly hostname.

See also: [DNS lookup](#).

**roll back**

To undo any changes to data that have been performed since a given point in time. Clickstream Intelligence enables you to *roll back* to a previous version of data stored in your warehouse by clicking the **Undo** button if a process has an error or has been temporarily stopped.

**schema**

A structure or set of rules that defines the organization of a database. In a relational database, objects - such as the tables, the fields within each table, and their relationship to each other - are defined by a *schema*.

See also: [object](#).

**server**

In a client/server architecture, the computer that receives, stores, and processes requests that originate from client applications. A *server* handles the functions required for concurrent, shared data access over a network through the use of a specific [protocol](#).

See also: [client](#).

**server farm**

Several interconnected Web servers used to port content to the Internet.

**session**

The length of time that measures a single user's activity during a particular visit to a Web site. A collection of impressions; the sequence of requests made by one user to a Web site.

A *session* lasts from the time the user connects until the time the user disconnects or exits the Web site.

See also: [session threshold](#), [session timeout](#).

**session threshold**

The period of time after which a given session expires.

**session timeout**

The point at which a session is terminated due to inactivity for a given period of time.

**spider**

Also called a *crawler* or "*bot*" (robot). A program that automatically fetches some or all of the Web pages that are referenced from a Web site. Spiders are often used by search engines.

For example, when you register your Web site's URL with a particular search engine, one or more *spiders* automatically index page keywords, as well as all links

to pages both within and external to your Web site. When the search engine displays the URL for your site in its query results page, it may also list many of the sites referenced from your Web page if they are relevant to the search criteria.

**source**

A database, application, file, or other storage facility from which the data in your Clickstream warehouse is derived.

**SQL**

The acronym for Structured Query Language, the standard query language that is used to update and request information from a database.

**staging area**

An intermediate database component in which incoming clickstream data is cleaned and prepared for loading into the fact tables.

**table**

A database object that contains and stores data. Tables are comprised of many columns, each with an associated data type.

**terminator**

A character that separates fields in a Web log file. A *terminator* is a specific type of [delimiter](#).

**URI**

Universal Resource Indicator.

See also: [URL](#).

**URI Stem**

The portion of a URL that appears after the host and port, but precedes the query string. The *URI stem* typically refers to a directory that is accessed, relative to the Web server's root directory.

For example, in the URL <http://www.oracle.com/test.jsp?hello=y> the URI stem is **/test.jsp**

**URL**

Uniform Resource Locator. The global addressing standard that is used to locate pages on the World Wide Web.

*URLs* are used by browsers to navigate the World Wide Web and consist of a protocol prefix, port number, domain name, (sub)directory name, and file name.

For example- <http://technet.oracle.com:80/tech/xml/index.htm> specifies the location and path a browser will travel to find Oracle Technology Network's XML site on the World Wide Web.

### **user**

An individual who has registered with and been authenticated by a Web site. An individual who successfully logs on and is granted access to a Web site.

### **user agent**

Software to access Web content, including desktop graphical browsers, text browsers, voice browsers, mobile phones, multimedia players, plug-ins, and some software assistive technologies used in conjunction with browsers such as screen readers, screen magnifiers, and voice recognition software.

### **user Interface (UI)**

The combination of menus, screens, keyboard commands, mouse clicks, and command language that defines how a user interacts with a software application.

The means with which a user interacts and uses a computer or computer program.

For example: Upon logging into Clickstream Reports, a user may utilize buttons, links, drop-down menus and other UI components to produce reports, set up a site, or access other functionality provided by Clickstream Intelligence.

### **view**

A customized presentation of data from one or more tables. A *view* can be conceptualized as a "stored query." Views do not actually contain or store data; they derive their data from the tables on which they are based.

Like tables, views can be queried, updated, inserted into, and deleted from - with some restrictions. All operations performed on a view affect the base tables of the view.

### **visitor**

An unauthenticated user. *Visitors* are often first-time users of a Web site.

See also: [authentication](#).

**workbook**

A collection of worksheets in Oracle9iAS Discoverer. A *workbook* contains related data that is organized to show different perspectives. Each organized subdivision of data, or perspective, is represented by a [worksheet](#).

**worksheet**

A *worksheet* contains specific data that you'd like to analyze or share. Each worksheet is created by its own query - each time you query the Clickstream warehouse, a worksheet is created that contains query results. Whenever you open the worksheet, the original query is sent to the warehouse and the most current data is displayed.

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