

Oracle9i Clickstream Intelligence

Data Model Reference

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Primary Author: Diane Smith

Co-author: Roger Bolsius

Contributors: Paul Mitchell, Kevin Malaney, Matthew Jakubiak.

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Oracle9i Clickstream Intelligence Data Model Reference, Release 2 (9.0.2)

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- FAX: 650-506-7409 Attn: Paul Mitchell, Oracle Clickstream Intelligence
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Oracle Corporation
Oracle Clickstream Intelligence Documentation
500 Oracle Parkway, MS 2op3
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Preface

This preface contains the following topics:

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

Intended Audience

The *Clickstream9i Data Model Reference* is intended for software developers, Database Administrators (DBAs), or other individuals who would like to extend the Oracle9i Clickstream Intelligence product.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at

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Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

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Structure

The *Oracle9i Clickstream Intelligence Data Model Reference* contains the following components:

Chapter 1, "Introduction"

Provides a general introduction to Oracle9i Clickstream Intelligence.

Chapter 2, "The Agent Dimension"

Contains information about the Agent dimension: all hierarchies, dimension levels, and level attributes.

Chapter 3, "The Client Host Dimension"

Contains information about the Client Host dimension: all hierarchies, dimension levels, and level attributes.

Chapter 4, "The Date Dimension"

Contains information about the Date dimension: all hierarchies, dimension levels, and level attributes.

Chapter 5, "The Event Type Dimension"

Contains information about the Event Type dimension: all hierarchies, dimension levels, and level attributes.

Chapter 6, "The Page Dimension"

Contains information about the Page dimension: all hierarchies, dimension levels, and level attributes.

Chapter 7, "The Referrer Dimension"

Contains information about the Referrer dimension: all hierarchies, dimension levels, and level attributes.

Chapter 8, "The Search Dimension"

Contains information about the Search dimension: all hierarchies, dimension levels, and level attributes.

Chapter 9, "The Server Dimension"

Contains information about the Server dimension: all hierarchies, dimension levels, and level attributes.

Chapter 10, "The Server Status Dimension"

Contains information about the Server Status dimension: all hierarchies, dimension levels, and level attributes.

Chapter 11, "The Session Type Dimension"

Contains information about the Session Type dimension: all hierarchies, dimension levels, and level attributes.

Chapter 12, "The Site Dimension"

Contains information about the Site dimension: all hierarchies, dimension levels, and level attributes.

Chapter 13, "The Time of Day Dimension"

Contains information about the Time of Day dimension: all hierarchies, dimension levels, and level attributes.

Chapter 14, "The User Dimension"

Contains information about the User dimension: all hierarchies, dimension levels, and level attributes.

Chapter 15, "The Visitor Dimension"

Contains information about the Visitor dimension: all hierarchies, dimension levels, and level attributes.

Chapter 16, "The Impression Fact"

Contains information about the Impression fact: all attributes, including measures and foreign keys to the dimensions.

Chapter 17, "The Session Fact"

Contains information about the Session fact: all attributes, including measures and foreign keys to the dimensions.

Related Documents

For more information, see the following documentation:

- *Oracle9i Clickstream Intelligence Administrator's Guide*
- *Oracle9i Clickstream Intelligence User's Guide*

In North America, printed documentation is available for sale in the Oracle Store at

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If you already have a username and password for OTN, then you can go directly to the documentation section of the OTN Web site at

<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 Administrator's Guide.

Convention	Meaning
Bold	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. Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.
<i>lowercase monospace (fixed-width font) 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"> That we have omitted parts of the code that are not directly related to the example That you can repeat a portion of the code 	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>
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.	SELECT last_name, employee_id FROM employees; SELECT * FROM USER_TABLES; DROP TABLE hr.employees;
lowercase	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files. Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	SELECT last_name, employee_id FROM employees; sqlplus hr/hr CREATE USER mjones IDENTIFIED BY ty3MU9;

Introduction

This chapter provides an introduction to the Oracle9i Clickstream Intelligence Builder.

It contains the following sections:

- [Introduction to Oracle9i Clickstream Intelligence Builder](#)
- [Using the Clickstream Intelligence Builder](#)

Introduction to Oracle9i Clickstream Intelligence Builder

Welcome to Oracle9iAS Clickstream Intelligence and the Oracle9i Clickstream Intelligence Builder!

Oracle9iAS Clickstream Intelligence is a Web-based analytical tool that enables you to acquire, process, and report on Web interactions with customers, suppliers, and employees. Oracle9i Clickstream Intelligence Builder enables you to customize Oracle9iAS Clickstream Intelligence. It one of the Business Intelligence tools provided by Oracle9i Developer Suite (Oracle9iDS), a comprehensive and integrated development environment for building and assembling e-business applications.

The *Oracle9i Clickstream Intelligence Data Model Reference* contains the data model for Oracle9i Clickstream Intelligence. This data model, comprised of 14 core dimensions and 2 fact tables, serves as the extensible framework for Clickstream Analytics. The generic dimensions included in the Clickstream database schema also facilitate customer extensions to the Clickstream Intelligence product.

Using the Clickstream Intelligence Builder

The Oracle9i Clickstream Intelligence Builder can be used to extend Clickstream Intelligence in two ways:

- **Extend the Clickstream data model** - Add dimensions, define new levels, and make other modifications to the Clickstream Intelligence schema.
- **Extend Clickstream Analytics** - Define new analytical reports that are customized to your business needs.

Extending the Data Model

Extending the Clickstream data model enables the integration of other data sources and data types that are not already characterized by the 14 pre-defined core dimensions. To utilize Clickstream's extensible platform, **Oracle Warehouse Builder (OWB)** must be installed on your computer. You must import the metadata loader (mdl) file that contains the Clickstream Project into an existing OWB repository. This file is located in the following directory:

- (UNIX) ORACLE_HOME/click/admin/repository/click.mdl
- (Windows) ORACLE_HOME\click\admin\repository\click.mdl

For further information about importing metadata into the OWB repository and using the OWB Client to access the repository containing Clickstream Intelligence, please reference the *Oracle Warehouse Builder User's Guide*.

Extending Clickstream Analytics

Extending Clickstream's reporting capabilities enables you to create unique analytical reports that are customized to your specific business needs. To do this, you must extend the pre-defined Clickstream End User Layer (EUL) that is installed in your dedicated Clickstream database. For detailed instructions about installing a database for use with Clickstream Intelligence, please reference Appendix B, "Installing a Dedicated Clickstream Database," in the *Oracle9iAS Clickstream Intelligence Administrator's Guide*. To learn more about creating and populating EULs, see the *Oracle9i Discoverer Administrator Administration Guide*. To learn about creating and viewing new reports with **Oracle9i Discoverer Plus**, see the *Oracle9iAS Discoverer Plus User's Guide*.

The chapters that follow describe the 14 core dimensions and 2 fact tables that comprise the Clickstream Intelligence data model. Each chapter describes a dimension, and lists all corresponding hierarchies, levels, and level attributes. The

last two chapters describe all attributes of the Impression and Session fact tables, respectively.

The Agent Dimension

The Agent dimension contains attributes that are derived from the "User Agent" string found in many Web server log files. User agents are typically Web browsers, but other agents such as Web spiders may also access sites.

This chapter contains the following topics:

- [Agent Dimension Hierarchies](#)
- [Agent Dimension Levels](#)

Agent Dimension Hierarchies

The Agent dimension contains the following hierarchies:

- [The Agent Client Software Hierarchy](#)
- [The Agent Operating System Hierarchy](#)

The sections that follow list all levels in each hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The Agent Client Software Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Agent Dimension Levels](#).

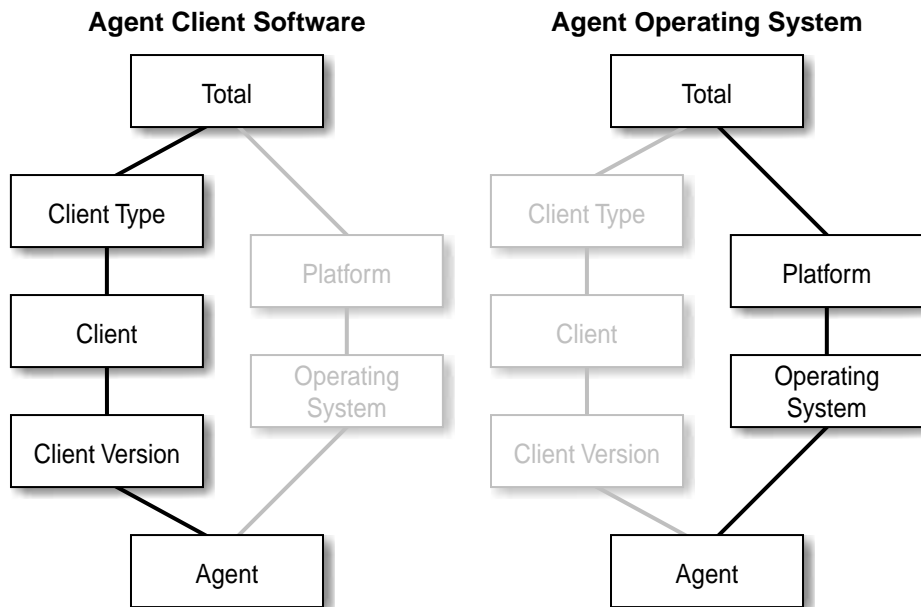
- Client Type
- Client
- Client Version
- Agent

The Agent Operating System Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Agent Dimension Levels](#).

- Platform
- Operating System
- Agent

Figure 2–1 *The Agent Client Software and Agent Operating System Level Hierarchies*



Agent Dimension Levels

The Agent dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

levels are presented in descending order. In addition to the pre-defined attributes, each level contains five "generic" attributes that can be defined by the user.

CLK_L_CLIENT_TYPE

- **Client_Type_Code:** Identifying code of the type of client software agent; natural key. (GRAPH_BROWSER, TEXT_BROWSER, CRAWLER, OTHER, UNKNOWN)
- **Client_Type_Name:** Name of the type of client software. (Graphical Browser, Text Browser, Web Crawler, Other, Unknown)
- **Client_Type_Is_Crawler:** Indicates if the given client type is a Web crawler (spider) or not, where Y =Crawler and N =Not a Crawler. (Y, N)
- **Client_Type_Attributes 1-5:** Client type level user-defined attributes.

CLK_L_CLIENT

- **Client_Code:** Identifying code of the client software agent; natural key. (IE, NETSCAPE, IE_CRAWLER, LYCOS_SPIDER)
- **Client_Name:** Name of the client software agent. (Internet Explorer, Netscape, Internet Explorer Crawler, Lycos Spider)
- **Client_Attributes 1-5:** Client level user-defined attributes.

CLK_L_CLIENT_VERSION

- **Client_Version_Code:** Identifying code of the name and version of the client software agent. (IE_4.0, NETSCAPE_4.X, LYCOS_SPIDER_3.0)
- **Client_Version_Full_Name:** Name and version of the client software agent. (Internet Explorer 4.0, Netscape 4.x, Lycos T-Rex Spider 3.0)
- **Client_Version_Name:** Name of the client software agent. (Internet Explorer, Netscape, Lycos T-Rex Spider)
- **Client_Version_Number_:** Major and minor version number of the client software agent. (3.0, 3.x, 4.0, 4.5, 4.6, 4.7, 4.x, 5.0)
- **Client_Version_Major_Num:** Major version number of the client software agent. (UNKNOWN, 0, 1, 2, 3, 4, 5)
- **Client_Version_Attributes 1-5:** Client version level user-defined attributes.

CLK_L_PLATFORM

- Platform_Code: Identifying code of the platform; natural key. (WIN, MAC, UNIX)
- Platform_Name: Name of the platform. (Windows, Macintosh, Unix)
- Platform_Attributes 1-5: Platform level user-defined attributes.

CLK_L_OPERATING_SYSTEM

- OS_Code: Identifying code of the operating system; natural key. (WIN, WIN16, WIN32, WIN95, WINNT, WIN2000, MACOS, SUNOS, SOLARIS, AIX, HPUX)
- OS_Name: Name of the operating system. (Windows, Windows (16-bit), Windows (32-bit), Windows 95, Windows NT, Windows 2000, MacOS, SunOS, AIX, HP-UX)
- OS_Attributes 1-5: Operating system level user-defined attributes.

CLK_L_AGENT

- Agent_Full_String: Agent string as it appears in the access logs; natural key. (Mozilla/4.04 [en] (X11; I; SunOS 5.6 sun4m))
- Agent_Product: Product token from the User-Agent string. (Mozilla, ...)
- Agent_Product_Version: Product-version token from the User-Agent string. (4.04, 2.0, 3.01Gold)
- Agent_CPU_Type: Type of CPU or machine architecture on which the agent is running. (ix86, i386, i586, PPC, 68K, Alpha)
- Agent_ISP: Internet service provider that distributes the software agent. (AOL, Juno, MSN, WebTV, UNKNOWN)
- Agent_Attributes 1-5: Agent level user-defined attributes.

The Client Host Dimension

The Client Host dimension contains attributes relating to the host that is making a request (typically to a server). Attributes stored in this dimension include the IP address of the client machine, the resolved DNS hostname, domain name, and country code.

This chapter contains the following topics:

- [Client Host Dimension Hierarchies](#)
- [Client Host Dimension Levels](#)

Client Host Dimension Hierarchies

The Client Host dimension contains the following hierarchies:

- [The Client Geography Hierarchy](#)
- [The Client Organization Hierarchy](#)

The sections that follow list all levels in each hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The Client Geography Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Client Host Dimension Levels](#).

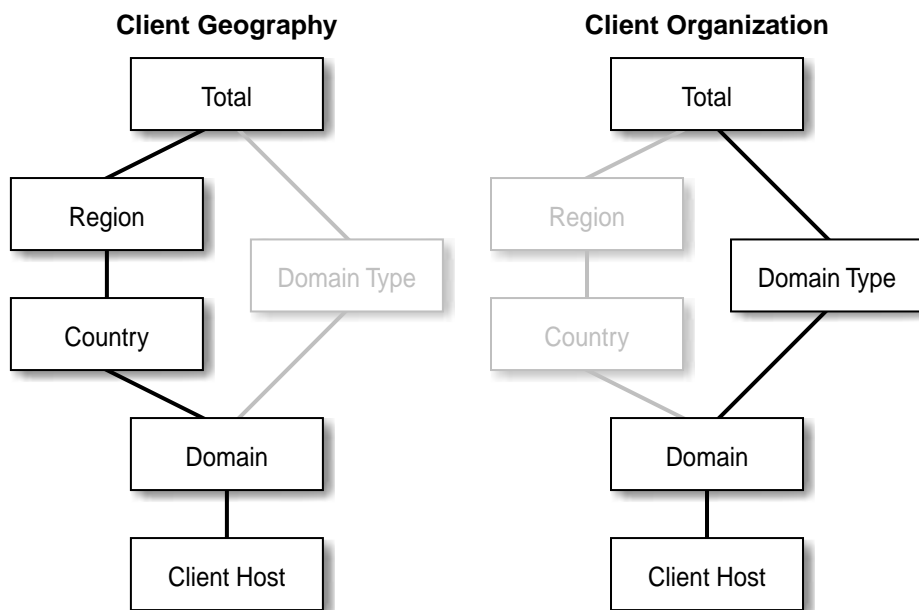
- Region
- Country
- Domain
- Client Host

The Client Organization Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Client Host Dimension Levels](#).

- Domain Type
- Domain
- Client Host

Figure 3–1 *The Client Geography and Client Organization Level Hierarchies*



Client Host Dimension Levels

The Client Host dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

levels are presented in descending order. In addition to the pre-defined attributes, each level contains five "generic" attributes that can be defined by the user.

CLK_L_REGION

- **Region_Code:** Identifying code of the world region; natural key. (EUROPE, MIDDLE_EAST, PACIFIC_ISLANDS)
- **Region_Name:** Name of the world region in which a country is located. (Europe, Middle East, Pacific Islands)
- **Region_Attributes 1-5:** Region level user-defined attributes.

CLK_L_COUNTRY

- **Country_Code:** Two-letter ISO code of the country; natural key. (fi, jp, uk, UNKNOWN)
- **Country_Name:** Name of the country. (Finland, Japan, United Kingdom, United States)
- **Country_Attributes 1-5:** Country level user-defined attributes.

CLK_L_DOMAIN_TYPE

- **Domain_Type_Code:** Abbreviated domain type suffix; natural key. (co, com, ed, edu, net, org)
- **Domain_Type_Name:** Name of the domain type. (Company, Education, Network, Organization)
- **Domain_Type_Attributes 1-5:** Domain type level user-defined attributes.

CLK_L_DOMAIN

- **Domain_Name:** Domain name; natural key. (dmsjwa.com)
- **Domain_Attributes 1-5:** Domain level user-defined attributes.

CLK_L_CLIENT_HOST

- **Client_Host_Name:** DNS hostname or IP address of the client as it appears in the access logs; natural key. (user29-dms.oracle.com)

- **Client_Host_Resolved_Name:** Resolved DNS hostname of the client host. (user29-dms.oracle.com)
- **Client_Host_Attributes 1-5:** Client host level user-defined attributes.

The Date Dimension

The Date dimension provides hierarchies for analyzing clickstream data for different dates or date ranges, such as over weeks, months, or individual days.

This chapter contains the following topics:

- [Date Dimension Hierarchies](#)
- [Date Dimension Levels](#)

Date Dimension Hierarchies

The Date dimension contains the following hierarchies:

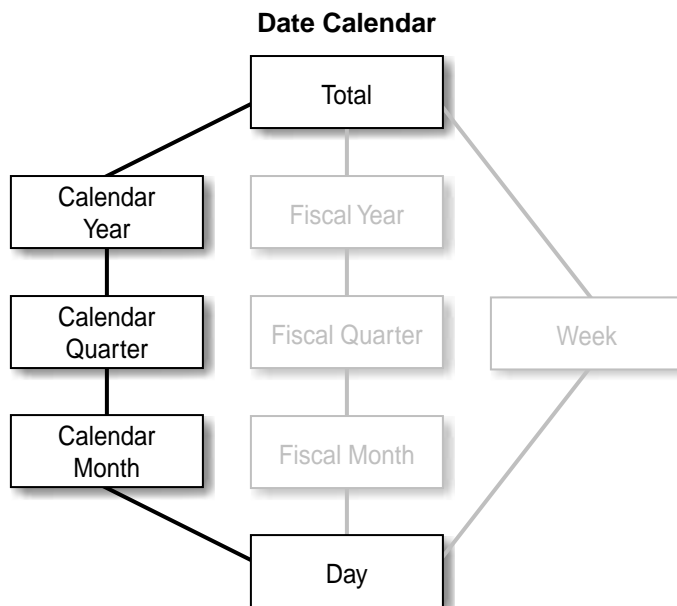
- [The Date Calendar Hierarchy](#)
- [The Date Fiscal Hierarchy](#)
- [The Date Week Hierarchy](#)

The sections that follow list all levels in each hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The Date Calendar Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Date Dimension Levels](#).

- Calendar Year
- Calendar Quarter
- Calendar Month
- Day

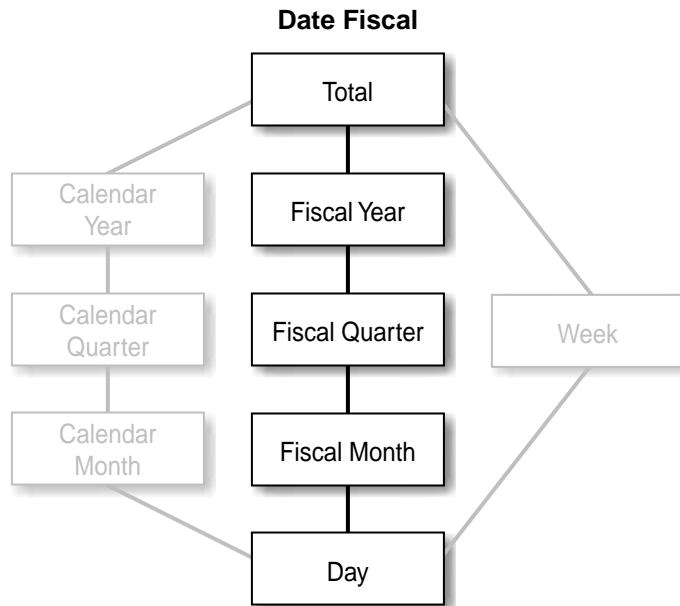
Figure 4–1 The Date Calendar Level Hierarchy

The Date Fiscal Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Date Dimension Levels](#).

- Fiscal Year
- Fiscal Quarter
- Fiscal Month
- Day

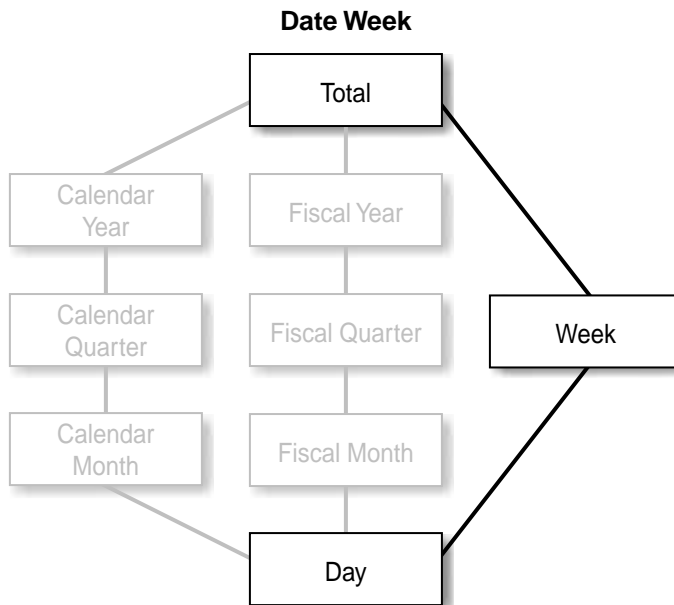
Figure 4-2 The Date Fiscal Level Hierarchy



The Date Week Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Date Dimension Levels](#).

- Week
- Day

Figure 4–3 The Date Week Level Hierarchy

Date Dimension Levels

The Date dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

levels are presented in descending order. In addition to the pre-defined attributes, each level contains five "generic" attributes that can be defined by the user.

CLK_L_CALENDAR_YEAR

- **Calendar_Year_Begin_Date:** First date in the calendar year; natural key. (01-JAN-1997)
- **Calendar_Year_End_Date:** Last date in the calendar year; time series attribute. (31-DEC-1997)

- **Calendar_Year_Time_Span:** Number of days in the calendar year; time series attribute. (365)
- **Calendar_Year_Number:** Full calendar year number. (1997, 2000, etc.)
- **Calendar_Year_Attributes 1-5:** Calendar year level user-defined attributes.

CLK_L_CALENDAR_QUARTER

- **Calendar_Qtr_Begin_Date:** First date in the calendar quarter; natural key . (01-APR-1997)S
- **Calendar_Qtr_End_Date:** Last date in the calendar quarter; time series attribute . (30-JUN-1997)
- **Calendar_Qtr_Time_Span:** Number of days in the calendar quarter; time series attribute. (91)
- **Calendar_Qtr_Name:** Calendar quarter name. (4Q1999, 1Q2000, etc.)
- **Calendar_Qtr_of_Year:** Calendar quarter number in this calendar year. (1, 2, 3, 4)
- **Calendar_Qtr_of_Epoch:** Calendar quarter serial number. (1, 2, 3, ...)
- **Calendar_Qtr_Attributes 1-5:** User-defined attributes.

CLK_L_CALENDAR_MONTH

- **Calendar_Month_Begin_Date:** First date in the calendar month; natural key. (01-JAN-1997)
- **Calendar_Month_End_Date:** Last date in the calendar month; time series attribute. (31-JAN-1997)
- **Calendar_Month_Time_Span:** Number of days in the calendar month; time series attribute. (28, 29, 30, 31)
- **Calendar_Month_Name:** Full name of the calendar month. (January, February, ..., December)
- **Calendar_Month_Short_Name:** Shortened name of the calendar month. (Jan, Feb, ..., Dec)
- **Calendar_Month_of_Quarter:** Calendar month number in this calendar quarter. (1, 2, ..., 3)

- **Calendar_Month_of_Year:** Calendar month number in this calendar year. (1, 2, ..., 12)
- **Calendar_Month_of_Epoch:** Calendar month serial number. (1, 2, 3, ...)
- **Calendar_Month_Attributes 1-5:** User-defined attributes.

CLK_L_FISCAL_YEAR

- **Fiscal_Year_Begin_Date:** First date in the fiscal year; natural key. (01-JAN-1997)
- **Fiscal_Year_End_Date:** Last date in the fiscal year; time series attribute. (31-DEC-1997)
- **Fiscal_Year_Time_Span:** Number of days in the fiscal year; time series attribute. (365)
- **Fiscal_Year_Number:** Fiscal year number.
- **Fiscal_Year_Attributes 1-5:** Fiscal year level user-defined attributes.

CLK_L_FISCAL_QUARTER

- **Fiscal_Qtr_Begin_Date:** First date in the fiscal quarter; natural key. (01-APR-1997)
- **Fiscal_Qtr_End_Date:** Last date in the fiscal quarter; time series attribute. (30-JUN-1997)
- **Fiscal_Qtr_Time_Span:** Number of days in the fiscal quarter; time series attribute. (91)
- **Fiscal_Qtr_Name:** Fiscal quarter name. (User-defined)
- **Fiscal_Qtr_of_Year:** Quarter number in this fiscal year. (1, 2, 3, 4)
- **Fiscal_Qtr_of_Epoch:** Fiscal quarter serial number. (1, 2, 3, ...)
- **Fiscal_Qtr_Attributes 1-5:** Fiscal quarter level user-defined attributes.

CLK_L_FISCAL_MONTH

- **Fiscal_Month_Begin_Date:** First date in the fiscal month; natural key. (01-JAN-1997)
- **Fiscal_Month_End_Date:** Last date in the fiscal month; time series attribute. (31-JAN-1997)

- **Fiscal_Month_Time_Span:** Number of days in the fiscal month; time series attribute. (28, 29, 30, 31)
- **Fiscal_Month_Name:** Full name of the fiscal month. (January, February, ..., December)
- **Fiscal_Month_Short_Name:** Shortened name of the fiscal month. (Jan, Feb, ..., Dec)
- **Fiscal_Month_of_Quarter:** Fiscal month number in this fiscal quarter. (1, 2, ..., 3)
- **Fiscal_Month_of_Year:** Fiscal month number in this fiscal year. (1, 2, ..., 12, 13)
- **Fiscal_Month_of_Epoch:** Fiscal month serial number. (1, 2, 3, ...)
- **Fiscal_Month_Attributes 1-5:** Fiscal month level user-defined attributes.

CLK_L_WEEK

- **Week_Begin_Date:** First date in the week; natural key. (01-APR-2001)
- **Week_End_Date:** Last date in the week; time series attribute. (07-APR-2001)
- **Week_Time_Span:** Number of days in the week; time series attribute. (always equals 7)
- **Week_Name:** Full name of the week. (April 1, 2001 - April 7, 2001)
- **Week_Short_Name:** Shortened name of the week. (4/1/01 - 4/7/01)
- **Week_of_Epoch:** Week serial number. (1, 2, 3, ...)
- **Week_Attributes 1-5:** Week level user-defined attributes.

CLK_L_DAY

- **Day_Begin_Date:** First date in the day; natural key. (01-JAN-1997)
- **Day_End_Date:** Last date in the day; time series attribute. (01-JAN-1997)
- **Day_Time_Span:** Number of days in the day; time series attribute. (always equal to 1)
- **Day_Name:** Full name of the day. (Sunday, Monday, ..., Saturday)
- **Day_Short_Name:** Shortened name of the day. (Sun, Mon, ..., Sat)
- **Day_Event:** Indicates special events such as disasters. (none, Stock Market Crash, etc.)

- Day_Fiscal_Period: Fiscal period in which this day falls.
- Day_Holiday: Name of holiday on which this day falls. (none, New Year's Day, Thanksgiving).
- Day_Season: Season in which this day falls. (Winter, Spring, Summer, Fall)
- Day_Weekday: Flag that indicates whether this day is a weekday. (Y, N)
- Day_Workday: Flag that indicates whether this day is a workday. (Y, N)
- Day_Last_of_Month: Flag that indicates whether this day is the last of the month. (Y, N)
- Day_of_Week: Day number in this week. (1, 2, ..., 7)
- Day_of_Calendar_Month: Day number in this calendar month. (1, 2, ..., 31)
- Day_of_Calendar_Quarter: Day number in this calendar quarter. (1, 2, ..., 366)
- Day_of_Calendar_Year: Day number in this calendar year. (1, 2, ..., 366)
- Day_of_Fiscal_Month: Day number in this fiscal month. (1, 2, ..., 31)
- Day_of_Fiscal_Quarter: Day number in this fiscal quarter. (1, 2, ..., 366)
- Day_of_Fiscal_Year: Day number in this fiscal year. (1, 2, ..., 366)
- Day_of_Epoch: Day serial number. (1, 2, 3, ...)
- Day_Attributes 1-5: User-defined attributes.

The Event Type Dimension

The Event Type dimension indicates whether a given impression is an entry page or an exit page, both, or neither. This dimension can also be extended to encompass other event types.

This chapter contains the following topics:

- [Event Type Dimension Hierarchies](#)
- [Event Type Dimension Levels](#)

Event Type Dimension Hierarchies

The Event Type dimension contains one hierarchy:

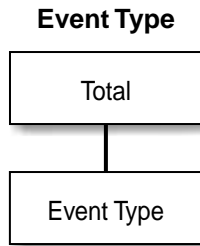
- [The Event Type Hierarchy](#)

The sections that follow list the level in this hierarchy, followed by a diagram that provides a graphical representation.

The Event Type Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Event Type Dimension Levels](#).

- Event Type

Figure 5–1 The Event Type Level Hierarchy

Event Type Dimension Levels

The Event Type dimension is comprised of the following level. For this level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the level contains five "generic" attributes that can be defined by the user.

CLK_L_EVENT_TYPE

- Event_Type_Map: Event type map; natural key (YYNNNNNNN, YNNNYNYN)
- Event_Type_Entry_Page: Entry page event type (Entry Page, Not Entry Page, Unkown)
- Event_Type_Entry_Page_Ind: Entry page event type indicator (Y, N, U)
- Event_Type_Exit_Page: Exit page event type (Exit Page, Not Exit Page, Unkown)
- Event_Type_Exit_Page_Ind: Exit page event type indicator (Y, N, U)
- Event_Type_Refresh: Page refresh event type (Refresh, Not Refresh, Unkown)
- Event_Type_Refresh_Ind: Page refresh event type indicator (Y, N, U)
- Event_Type_Attributes 1-5: Event type level user-defined attributes
- Event_Type_Attributes 1-5_Ind: vent type level user-defined attributes indicator (Y, N, U)

The Page Dimension

The Page dimension consists of a single record for each logical page hosted on a Web site. URI stems combined with a set of content identifying query string parameters identify an impressionable page.

This chapter contains the following topics:

- [Page Dimension Hierarchies](#)
- [Page Dimension Levels](#)

Page Dimension Hierarchies

The Page dimension contains the following hierarchies:

- [The Page Category Hierarchy](#)
- [The Page Resource Hierarchy](#)

The Page Category Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Page Dimension Levels](#).

- Page Category 6
- Page Category 5
- Page Category 4
- Page Category 3
- Page Category 2
- Page Category 1

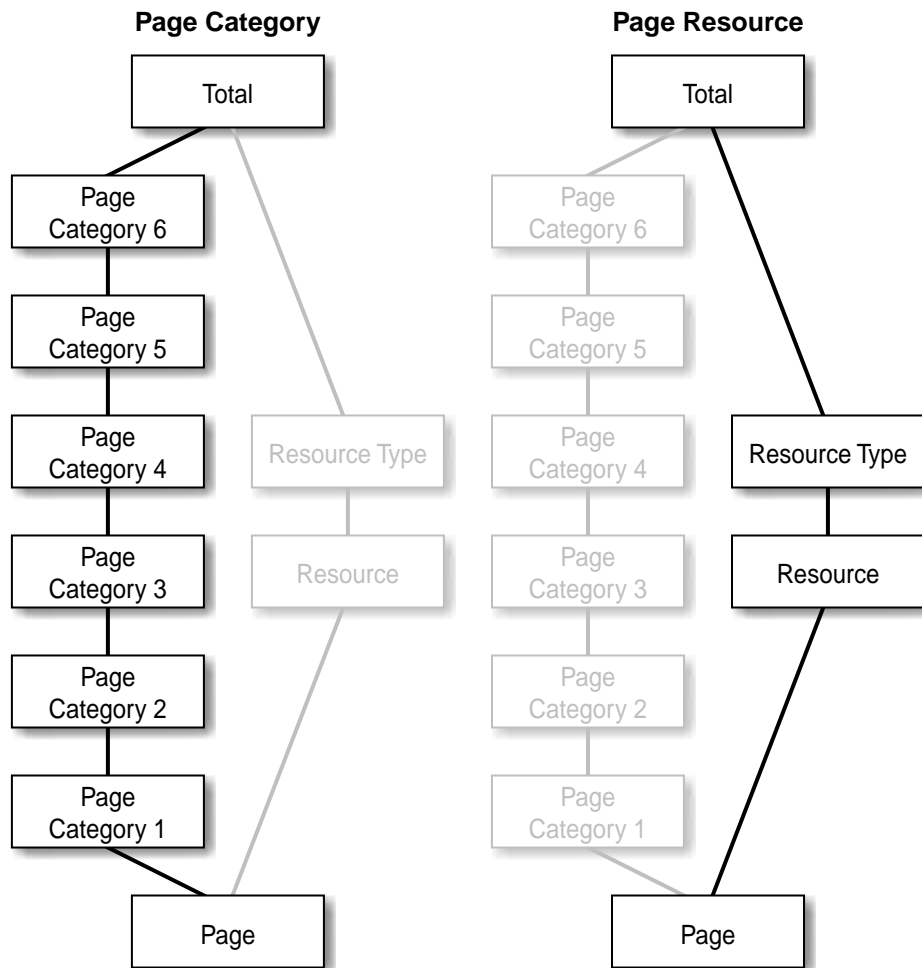
- Page

The Page Resource Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Page Dimension Levels](#).

- Resource Type
- Resource
- Page

Figure 6–1 The Page Category and Page Resource Level Hierarchies



Page Dimension Levels

The Page dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

levels are presented in descending order. In addition to the pre-defined attributes, each level contains five "generic" attributes that can be defined by the user.

CLK_L_PAGE_CAT6

- **Page_Cat6_Code:** Identifying code of the highest-level page content category; natural key. (User-defined)
- **Page_Cat6_Name:** Name of the highest-level page content category. (User-defined)
- **Page_Cat6_Description:** Description of the highest-level page content category. (User-defined)
- **Page_Cat6_Attributes 1-5:** Page content category level user-defined attributes.

CLK_L_PAGE_CAT5

- **Page_Cat5_Code:** Identifying code of the intermediate page content category; natural key. (User-defined)
- **Page_Cat5_Name:** Name of the intermediate page content category. (User-defined)
- **Page_Cat5_Description:** Description of the intermediate page content category. (User-defined)
- **Page_Cat5_Attributes 1-5:** Page content category level user-defined attributes.

CLK_L_PAGE_CAT4

- **Page_Cat4_Code:** Identifying code of the intermediate page content category; natural key. (User-defined)
- **Page_Cat4_Name:** Name of the intermediate page content category. (User-defined)
- **Page_Cat4_Description:** Description of the intermediate page content category. (User-defined)
- **Page_Cat4_Attributes 1-5:** Page content category level user-defined attributes.

CLK_L_PAGE_CAT3

- **Page_Cat3_Code:** Identifying code of the intermediate page content category; natural key. (User-defined)

- Page_Cat3_Name: Name of the intermediate page content category. (User-defined)
- Page_Cat3_Description: Description of the intermediate page content category. (User-defined)
- Page_Cat3_Attributes 1-5: Page content category level user-defined attributes.

CLK_L_PAGE_CAT2

- Page_Cat2_Code: Identifying code of the intermediate page content category; natural key. (User-defined)
- Page_Cat2_Name: Name of the intermediate page content category. (User-defined)
- Page_Cat2_Description: Description of the intermediate page content category. (User-defined)
- Page_Cat2_Attributes 1-5: Page content category level user-defined attributes.

CLK_L_PAGE_CAT1

- Page_Cat1_Code: Identifying code of the lowest-level page content category; natural key. (User-defined)
- Page_Cat1_Name: Name of the lowest-level page content category. (User-defined)
- Page_Cat1_Description: Description of the lowest-level page content category. (User-defined)
- Page_Cat1_Attributes 1-5: Page content category level user-defined attributes.

CLK_L_RESOURCE_TYPE

- Resource_Type_Code: Identifying code of the type of object served by a resource; natural key. Only CONTENT and DOWNLOAD types are included in the impression fact table. (AUDIO, CODE, CONTENT, DESIGN, DOWNLOAD, IMAGE, VIDEO, OTHER, UNKNOWN)
- Resource_Type_Name: Name of the type of object served by a resource. (Audio, Code, Content, Design, Download, Image, Video, Other, Unknown)
- Resource_Type_Attributes 1-5: Resource type level user-defined attributes.

CLK_L_RESOURCE

The resource level contains a single record for each physical object hosted on a Web site and could include non-page resources. A resource may represent a static server object such as an HTML document or an image. A resource could also be a CGI program. Resources are assumed to be uniquely identified by the path component of a URI- that is, the non-query portion of the URI. So, a given CGI program will have only one record in the resource level regardless of the number of distinct pages generated by the program.

- **Resource_Site_ID:** Site dimension foreign key for the site to which this resource belongs; natural key. (1, 2, 3, ...)
- **Resource_URI_Stem:** Portion of the URI that is not part of the query string and that identifies this resource. This means that any 'URL data' must not appear in this attribute; natural key. (/cgi/index.pl, /home.html, /images/navbar.gif)
- **Resource_Description:** User-defined description of the resource. (For example, a description of what a script does in the case of a CGI program.)
- **Resource_Indentifies_Page:** Indicates whether this resource is used to identify pages. (Y,N)
- **Resource_Results_Page:** Indicates if this resource is a search engine results page. (Y,N)
- **Resource_Search_Param:** When this resource is a search engine results page, this is the query string parameter containing the search expression. (s, search)
- **Resource_File_Directory:** Full directory path, excluding the file name. (/users/dms0)
- **Resource_File_Extension:** File extension minus the leading period character. If there is no extension, then this is simply a period (.) (html, pl, .)
- **Resource_File_Name:** File name portion of the URL stem. (Index.html, index.pl, index)
- **Resource_MIME_Type:** MIME type of this resource. (text/plain, text/html, text/xml)
- **Resource_Delivery_Method:** Delivery method used for this resource, such as 'dynamic', if this resource is a CGI script. (static, dynamic, unknown)
- **Resource_Attributes 1-5:** Resource level user-defined attributes.

CLK_L_PAGE

- **Page_Site_ID:** Site dimension foreign key for the site to which this page belongs; natural key. (1, 2, 3, ...)
- **Page_Code:** Portion of the URI that is not part of the query string and that identifies the resource corresponding to this page; natural key. (/cgi/index.pl, /home.html, /images/navbar.gif)
- **Page_URI_Query:** Normalized query string including the leading '?' and containing just content identifying parameters. Query parameters are sorted alphabetically. If there is no query parameters, then this should be '?' (?a=123&b=xyz,?)
- **Page_Description:** User-defined description of this page.
- **Page_Type:** User-defined type for this page. (Checkout, Homepage, Order Confirmation)
- **Page_Title:** The title of this page if it has one, such as the value of the <title> element in HTML documents.
- **Page_Analyze_Neighbors:** Whether this page is to be included when performing Paths previous and next page analysis. (Y, N)
- **Page_Analyze_Paths_From:** Whether this page is to be included as a source when performing Paths-From analysis. (Y, N)
- **Page_Analyze_Paths_To:** Whether this page is to be included as a destination when performing Paths-To analysis. (Y, N)
- **Page_Attributes 1-5:** Page level user-defined attributes.

The Referrer Dimension

The Referrer dimension allows analysis on multiple levels. Information obtained from the domain name of the referrer can be used in high-level country/domain type reports. If the referrer URL is recognized as belonging to a search engine, then the URL can be parsed to obtain the keywords used in the search. (**The Search Dimension** holds these search keywords, which can give insight into what users are looking for when they come to the site.)

This chapter contains the following topics:

- **Referrer Dimension Hierarchies**
- **Referrer Dimension Levels**

Referrer Dimension Hierarchies

The Referrer dimension contains the following hierarchies:

- **The Referrer Campaign Hierarchy**
- **The Referrer Category Hierarchy**
- **The Referrer Geography Hierarchy**
- **The Referrer Organization Hierarchy**

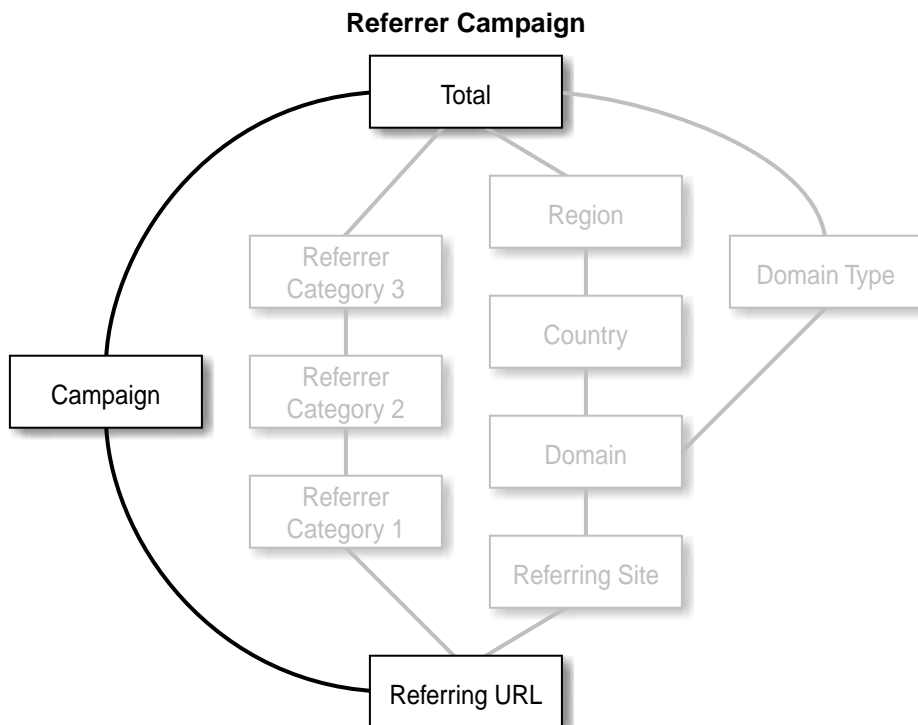
The sections that follow list all levels in each hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The Referrer Campaign Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see **Referrer Dimension Levels**.

- Campaign
- Referring URL

Figure 7–1 The Referrer Campaign Level Hierarchy

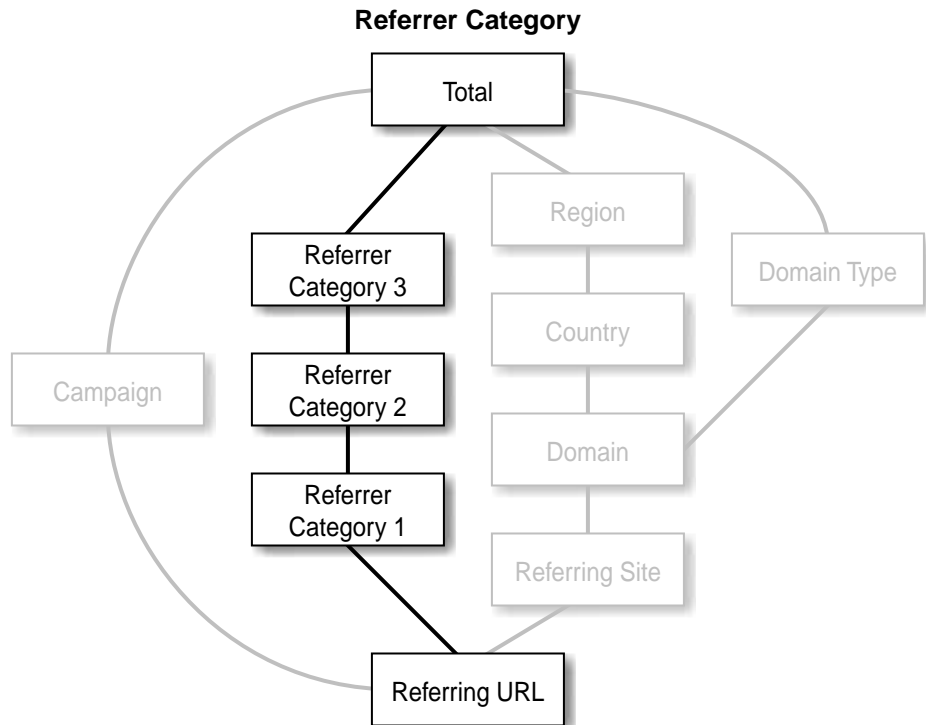


The Referrer Category Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Referrer Dimension Levels](#).

- Referrer Category 3
- Referrer Category 2
- Referrer Category 1
- Referring URL

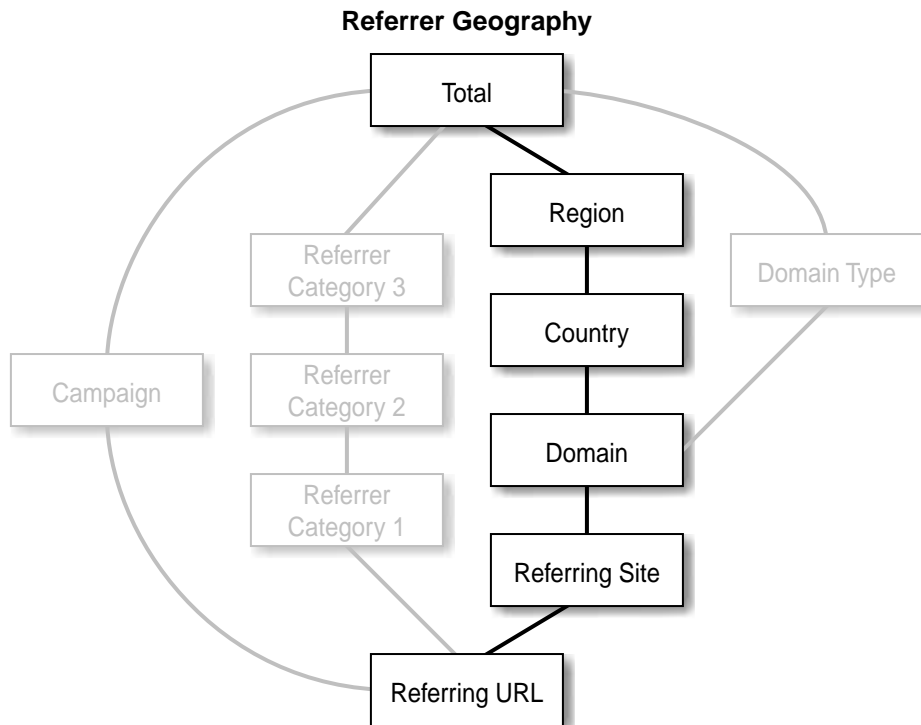
Figure 7–2 The Referrer Category Level Hierarchy



The Referrer Geography Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Referrer Dimension Levels](#).

- Region
- Country
- Domain
- Referring Site
- Referring URL

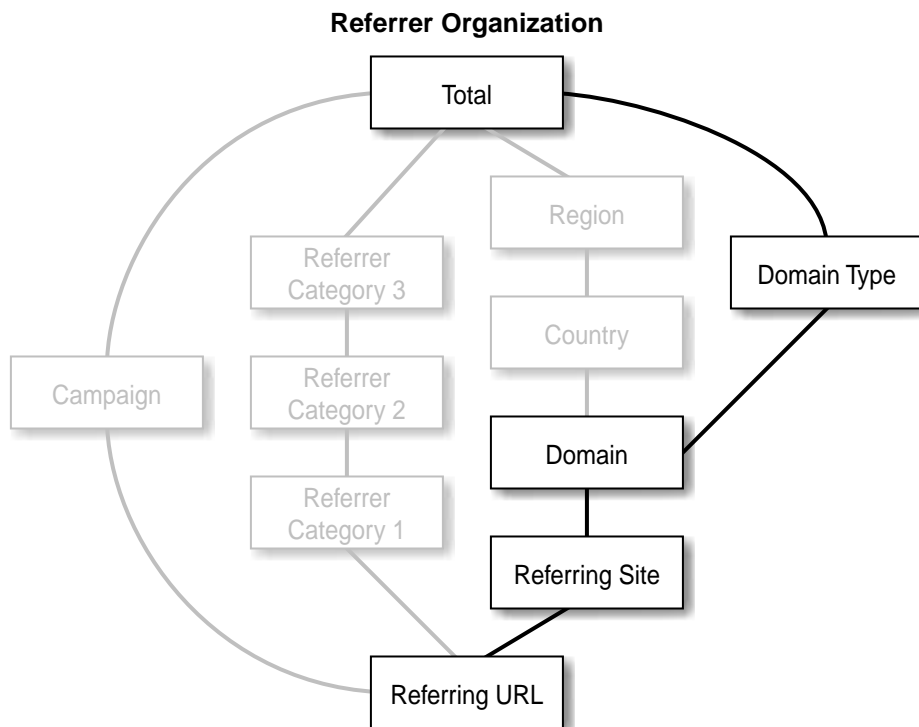
Figure 7-3 Referrer Geography Level Hierarchy

The Referrer Organization Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Referrer Dimension Levels](#).

- Domain Type
- Domain
- Referring Site
- Referring URL

Figure 7-4 Referrer Organization Level Hierarchy



Referrer Dimension Levels

The Referrer dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

levels are presented in descending order. In addition to the pre-defined attributes, each level contains five "generic" attributes that can be defined by the user.

CLK_L_CAMPAIGN

- Campaign_Code: Campaign identifier; natural key (User-defined)

- Campaign_Name: Name of the campaign (User-defined)
- Campaign_Description: Description of the campaign (User-defined)
- Campaign_Attributes 1-5: Campaign level user-defined attributes

CLK_L_REF_CAT3

- Ref_Cat3_Code: Identifying code of the highest-level referrer category; natural key (User-defined)
- Ref_Cat3_Name: Name of the highest-level referrer category (User-defined)
- Ref_Cat3_Description: Description of the highest-level referrer category (User-defined)
- Ref_Cat3_Attributes 1-5: Highest-level referrer category level user-defined attributes

CLK_L_REF_CAT2

- Ref_Cat2_Code: Identifying code of the intermediate level referrer category; natural key (User-defined)
- Ref_Cat2_Name: Name of the intermediate level referrer category (User-defined)
- Ref_Cat2_Description: Description of the intermediate level referrer category (User-defined)
- Ref_Cat2_Attributes 1-5: Intermediate level referrer category level user-defined attributes

CLK_L_REF_CAT1

- Ref_Cat1_Code: Identifying code of the lowest-level referrer category; natural key (User-defined)
- Ref_Cat1_Name: Name of the lowest-level referrer category (User-defined)
- Ref_Cat1_Description: Description of the lowest-level referrer category (User-defined)
- Ref_Cat1_Attributes 1-5: Lowest-level referrer category level user-defined attributes

CLK_L_REGION

- **Region_Code:** Identifying code of the world region; natural key (EUROPE, MIDDLE_EAST, PACIFIC_ISLANDS)
- **Region_Name:** Name of the world region in which a country is located (Europe, Middle East, Pacific Islands)
- **Region_Attributes 1-5:** Region level user-defined attributes

CLK_L_COUNTRY

- **Country_Code:** Two-letter ISO code of the country; natural key (fi, jp, uk, UNKNOWN)
- **Country_Name:** Name of the country (Finland, Japan, United Kingdom, United States)
- **Country_Attributes 1-5:** Country level user-defined attributes

CLK_L_DOMAIN_TYPE

- **Domain_Type_Code:** Abbreviated domain type suffix; natural key (co, com, ed, edu, net, org)
- **Domain_Type_Name:** Name of the domain type (Company, Education, Network, Organization)
- **Domain_Type_Attributes 1-5:** Domain type level user-defined attributes

CLK_L_DOMAIN

- **Domain_Name:** Domain name; natural key (dmsjwa.com)
- **Domain_Attributes 1-5:** Domain level user-defined attributes

CLK_L_REF_SITE

- **Ref_Site_DNS_Alias:** Full DNS alias of the referring site; natural key (www.oracle.com)
- **Ref_Site_Name:** Name of the referring site (OTN, Oracle.com)
- **Ref_Site_Attributes 1-5:** Referring site level user-defined attributes

CLK_L_REF_URL

- Ref_URL_Hostport: Host:Port string taken from the referrer URL; natural key (www.oracle.com,www.oracle.com:8080)
- Ref_URL_Stem: Path component of the referring URL (/cgi/index.pl)
- Ref_URL_Results_Page: Indicates if this referring URL is a search engine results page (Y,N)
- Ref_URL_Search_Param: When this referring URL is a search engine results page, this is the query string parameter containing the search expression (s, search)
- Ref_URL_Attributes 1-5: Referring URL level user-defined attributes

The Search Dimension

The Search dimension captures the phrases, keywords, or Boolean expressions that are part of a referral from an external search engine or part of a local search.

This chapter contains the following topics:

- [Search Dimension Hierarchies](#)
- [Search Dimension Levels](#)

Search Dimension Hierarchies

The Search dimension contains one hierarchy:

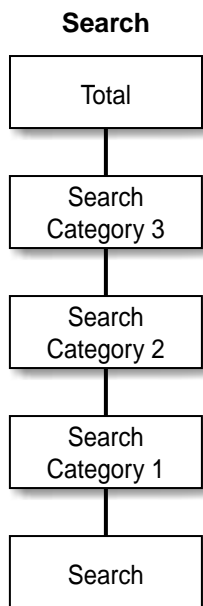
- [The Search Hierarchy](#)

The sections that follow list the level in this hierarchy, followed by a diagram that provides a graphical representation.

The Search Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Search Dimension Levels](#).

- Search Category 3
- Search Category 2
- Search Category 1
- Search

Figure 8–1 The Search Level Hierarchy

Search Dimension Levels

The Search dimension is comprised of the following level. For this level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the level contains five "generic" attributes that can be defined by the user.

CLK_L_SEARCH_CAT3

- Search_Cat3_Code: Identifying code of the highest-level search category; natural key (User-defined)
- Search_Cat3_Name: Name of the highest-level search category (User-defined)
- Search_Cat3_Description: Description of the highest-level search category (User-defined)

- Search_Cat3_Attributes 1-5: Highest-level search category user-defined attributes

CLK_L_SEARCH_CAT2

- Search_Cat2_Code: Identifying code of the intermediate level search category; natural key (User-defined)
- Search_Cat2_Name: Name of the intermediate level search category (User-defined)
- Search_Cat2_Description: Description of the intermediate level search category (User-defined)
- Search_Cat2_Attributes 1-5: Intermediate level search category user-defined attributes

CLK_L_SEARCH_CAT1

- Search_Cat1_Code: Identifying code of the lowest-level search category; natural key (User-defined)
- Search_Cat1_Name: Name of the lowest-level search category (User-defined)
- Search_Cat1_Description: Description of the lowest-level search category (User-defined)
- Search_Cat1_Attributes 1-5: Lowest-level search category user-defined attributes

CLK_L_SEARCH

- Search_Expression: Search expression parsed from the query string; natural key (music, vacations AND NOT holiday)
- Search_Attributes 1-5: Search level user-defined attributes

The Server Dimension

The Server dimension identifies the Web server that handled the request.

This chapter contains the following topics:

- [Server Dimension Hierarchies](#)
- [Server Dimension Levels](#)

Server Dimension Hierarchies

The Server dimension contains one hierarchy:

- [The Server Hierarchy](#)

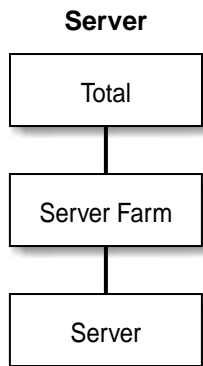
The sections that follow list the level in this hierarchy, followed by a diagram that provides a graphical representation.

The Server Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Server Dimension Levels](#).

- Server Farm
- Server

Figure 9–1 The Server Level Hierarchy



Server Dimension Levels

The Server dimension is comprised of the following level. For this level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the level contains five "generic" attributes that can be defined by the user.

CLK_L_SERVER_FARM

- **Server_Farm_Code:** Identifying code of the server farm to which the server belongs; natural key (WF1)
- **Server_Farm_Name:** Name of the server farm to which the server belongs (Web Farm 1)
- **Server_Farm_Attributes 1-5:** Server farm level user-defined attributes

CLK_L_SERVER

- **Server_Click_Code:** Server identifier taken from the clickstream (svr1, svr1.us.oracle.com)
- **Server_Name:** User friendly name assigned to the HTTP server/listener (Web Server 1)

- **Server_Hostname:** DNS hostname of the server (dms.joaz.com)
- **Server_Description:** Description of the server machine (User-defined)
- **Server_Listener_Port:** Port on which this HTTP server listens (80)
- **Server_Listener_Software:** Name of listener software, such as the brand of Web server (Apache)
- **Server_Architecture:** Computer architecture on which the server is running (i386, i586, sun4m, SunE10000)
- **Server_OS_Name:** Operating system on which the server software is running (Windows, Linux, SunOS, Solaris, HP/UX)
- **Server_OS_Version:** Operating system version (NT 4, 2.0.30, 5.6)
- **Server_CPU_Count:** Number of CPUs installed in the server (1,2,...)
- **Server_CPU_Speed:** Clock speed of the CPUs (300 MHz, 600 MHz)
- **Server_CPU_Vendor:** Manufacturer of the CPUs in the server (Sun)
- **Server_Main_Memory_Size:** Amount of RAM installed in the machine (4 GB)
- **Server_Cache_Memory_Size:** Amount of the first level cache memory installed in the server (2 MB)
- **Server_Storage_Capacity:** Capacity of the primary storage device
- **Server_Storage_Raid_Level:** RAID level of the primary storage device (0,1,3,5)
- **Server_Storage_Vendor:** Vendor of the primary storage device
- **Server_Attributes 1-5:** Server level user-defined attributes

The Server Status Dimension

The Server Status dimension describes and classifies the status codes returned by the server in response to a request.

This chapter contains the following topics:

- [Server Status Dimension Hierarchies](#)
- [Server Status Dimension Levels](#)

Server Status Dimension Hierarchies

The Server Status dimension contains one hierarchy:

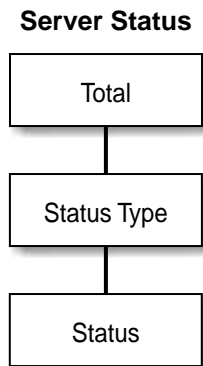
- [The Server Status Hierarchy](#)

The sections that follow list the levels in this hierarchy, followed by a diagram that provides a graphical representation.

The Server Status Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Server Status Dimension Levels](#).

- Server Status

Figure 10–1 The Server Status Level Hierarchy

Server Status Dimension Levels

The Server Status dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the levels contains five "generic" attributes that can be defined by the user.

CLK_L_STATUS_TYPE

- **Server_Status_Code:** Identifying code of the type of status; natural key. (SUCCESS, SERVER_ERROR, CLIENT_ERROR, UNKNOWN)
- **Server_Status_Name:** Name of the type of status code indicated by the server. Codes in the range of 400 to 499, for example, are usually considered client errors. (Success, Server Error, Client Error, Unknown)
- **Server_Status_Attributes 1-5:** Server status level user-defined attributes

CLK_L_STATUS

- **Status_Code:** Status code returned from the Web server; natural key. (200, 201, 302, 404)
- **Status_Name:** Name given to the status. (OK, Moved Temporarily)

- **Status_Description:** Description of the status.
- **Status_Attributes 1-5:** Server level user-defined attributes

The Session Type Dimension

The Session Type dimension will, in future releases, be used to characterize sessions according to user-defined rules.

This chapter contains the following topics:

- [Session Type Dimension Hierarchies](#)
- [Session Type Dimension Levels](#)

Session Type Dimension Hierarchies

The Session Type dimension contains one hierarchy:

- [The Session Type Hierarchy](#)

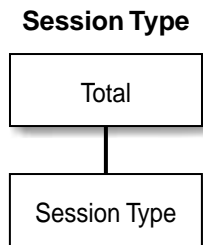
The sections that follow list the level in this hierarchy, followed by a diagram that provides a graphical representation.

The Session Type Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Session Type Dimension Levels](#).

- Session Type

Figure 11–1 The Session Type Level Hierarchy



Session Type Dimension Levels

The Session Type dimension is comprised of the following level. For this level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the level contains five "generic" attributes that can be defined by the user.

CLK_L_SESSION_TYPE

- Session_Type_Map: Session type map; natural key (NNNNN, YNYYN, YYNNN)
- Session_Type_Attributes 1-5: Session type level user-defined attributes (User-defined)
- Session_Type_Attributes 1-5_Ind: vent type level user-defined attributes indicator (Y, N)

The Site Dimension

The Site dimension enables you to analyze multiple, logical Websites within a single Clickstream database.

This chapter contains the following topics:

- [Site Dimension Hierarchies](#)
- [Site Dimension Levels](#)

Site Dimension Hierarchies

The Site dimension contains one hierarchy:

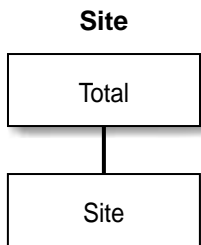
- [The Site Hierarchy](#)

The sections that follow list the level in this hierarchy, followed by a diagram that provides a graphical representation.

The Site Hierarchy

This hierarchy contains one level. For details about the attributes of this level, see [Site Dimension Levels](#).

- Site

Figure 12–1 The Site Level Hierarchy

Site Dimension Levels

The Site dimension is comprised of the following level. For this level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

Attributes cannot be customized by the user in the Site dimension level.

CLK_L_SITE

- **Site_Code:** Short identifier for this site; natural key. This attribute consists only of uppercase characters (A-Z), digits (0-9), and the underscore character (_). (SITE_A, SITE_B)
- **Site_Name:** User-friendly name of the site (Site A, Site B)
- **Site_DNS_Alias:** DNS alias or domain name of the site (www.oracle.com)
- **Site_Description:** Description of the site (User-defined)
- **Site_User_Group:** Default user authentication group of this site. This value is used for the User_Auth_Group attribute of the User dimension. (ORACLE_USERS)
- **Site_Visitor_Group:** Default visitor group of this site. This value is used for the Visitor_Group attribute of the Visitor dimension. (ORACLE_VISITORS)

The Time of Day Dimension

The Time of Day dimension provides granularity down to the second at which an event occurred.

This chapter contains the following topics:

- [Time of Day Dimension Hierarchies](#)
- [Time of Day Dimension Levels](#)

Time of Day Dimension Hierarchies

The Time of Day dimension contains one hierarchy:

- [The Time of Day Hierarchy](#)

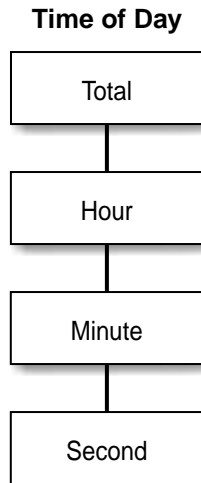
The sections that follow list the levels in this hierarchy, followed by a diagram that provides a graphical representation.

The Time of Day Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Time of Day Dimension Levels](#).

- Hour
- Minute
- Second

Figure 13–1 The Time of Day Level Hierarchy



Time of Day Dimension Levels

The Time of Day dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the levels contains five "generic" attributes that can be defined by the user.

CLK_L_HOUR

- Hour_Number: Hour number in 24-hour form; natural key. (0, 1, 2, ..., 23)
- Hour_Name: Descriptive name for the hour. (Midnight - 1am, 1am - 2am)
- Hour_Attributes 1-5: Hour level user-defined attributes.

CLK_L_MINUTE

- Minute_Number: Number of seconds since midnight; natural key. (0, 1, 2, ..., 86399)

- Minute_of_Hour: Minute number of the hour. (0, 1, 2, ..., 59)
- Minute_Attributes 1-5: Minute level user-defined attributes.

CLK_L_SECOND

- Second_Number: Status code returned from the Web server; natural key. (200, 201, 302, 404)
- Second_of_Minute: Second number of the minute. (0, 1, 2, ..., 59)
- Second_Attributes 1-5: Second level user-defined attributes.

The User Dimension

The User dimension tracks the authenticated users of a site. Users may be authenticated either through the authentication mechanisms provided by the Web server or through an application-specific authentication method.

This chapter contains the following topics:

- [User Dimension Hierarchies](#)
- [User Dimension Levels](#)

User Dimension Hierarchies

The User dimension contains the following hierarchies:

- [The User Age Gender Hierarchy](#)
- [The User Company Hierarchy](#)
- [The User Geography Hierarchy](#)

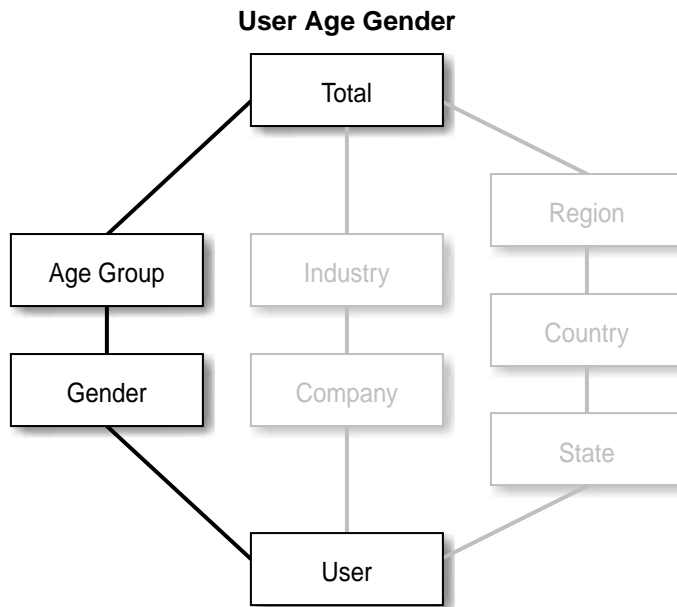
The sections that follow list all levels in each hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The User Age Gender Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [User Dimension Levels](#).

- Age Group
- Gender
- User

Figure 14–1 The User Age Gender Level Hierarchy

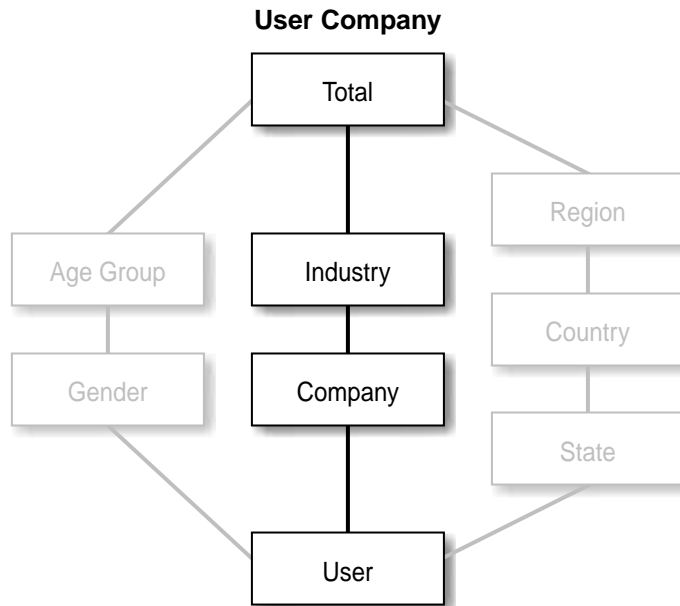


The User Company Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [User Dimension Levels](#).

- Industry
- Company
- User

Figure 14-2 The User Company Level Hierarchy

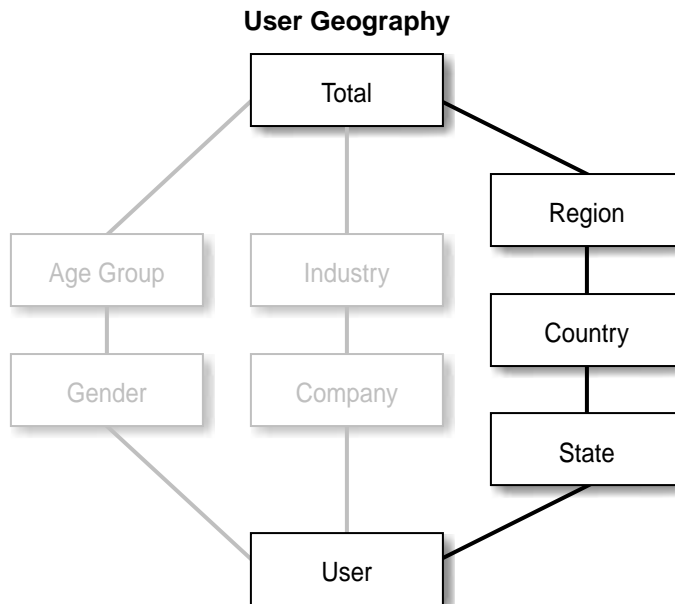


The User Geography Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [User Dimension Levels](#).

- Region
- Country
- State
- User

Figure 14–3 The User Geography Level Hierarchy



User Dimension Levels

The User dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the levels contains five "generic" attributes that can be defined by the user.

CLK_L_AGE_GROUP

- **Age_Group_Code:** Identifying code of the age group to which the user belongs; natural key. (20-29, 30-39, ...)
- **Age_Group_Name:** Name of the age group to which the user belongs. (Ages 20 to 29, Ages 30 to 39, ...)
- **Age_Group_Attributes 1-5:** Age group level user-defined attributes.

CLK_L_GENDER

- **Gender_Code:** Identifying code of the gender and age group of the user; natural key. (F30-39, M30-39)
- **Gender_Name:** Name of the gender and age group of the user. (Female aged 30 to 39, Male aged 30 to 39, ...)
- **Gender_Attributes 1-5:** Gender level user-defined attributes.

CLK_L_INDUSTRY

- **Industry_Code:** Identifying code of the industry sector in which the user works; natural key. (User-defined)
- **Industry_Name:** Name of the industry sector in which the user works. (User-defined)
- **Industry_Attributes 1-5:** Industry level user-defined attributes.

CLK_L_COMPANY

- **Company_Code:** Identifying code of the company for which the user works; natural key. (ORCL)
- **Company_Name:** Name of the company for which the user works. (Oracle Corp.)
- **Company_Type:** Type of company for which the user works. (User-defined)
- **Company_Attributes 1-5:** Company level user-defined attributes.

CLK_L_REGION

- **Region_Code:** Identifying code of the world region; natural key. (EUROPE, MIDDLE_EAST, PACIFIC_ISLANDS)
- **Region_Name:** Name of the world region in which a country is located. (Europe, Middle East, Pacific Islands)
- **Region_Attributes 1-5:** Region level user-defined attributes.

CLK_L_COUNTRY

- **Country_Code:** Two-letter ISO code of the country. (us, au, ch)
- **Country_Name:** Name of the country. (United States, Australia, China)

- Country_Attributes 1-5: Country level user-defined attributes.

CLK_L_STATE

- State_Code: Identifying code of the state; natural key. (NJ, AK)
- State_Name: Name of the state (or province). (New Jersey, Alaska)
- State_Attributes 1-5: State level user-defined attributes.

CLK_L_USER

- User_Auth_Group: The group (or realm) in which this user's authentication name is unique; natural key. (User-defined)
- User_Auth_Name: Unique user name for authentication purposes; natural key. (dianes, jazure, csws350)
- User_Customer_Code: User-defined external system customer key. (User-defined)
- User_EDW_Customer_Key: Enterprise Data Warehouse (EDW) trading partner key. (0, 1, 2, 3...)
- User_Type: The type of user; category into which the user is classified. (User-defined)
- User_Whole_Name: User's full name or pseudonym. (Camille W. Adams)
- User_First_Name: First name of the user. (Camille)
- User_Middle_Name: Middle name of the user. (W or Wayne)
- User_Last_Name: Last name of the user.. (Adams)
- User_Marital_Status: Marital status of the user. (Married, Single...)
- User_Job_Role: Status code returned from the Web server; natural key. (User-defined)
- User_City: City of the postal address (Costa Mesa)
- User_Postal_Code: Zip code of the postal address. (92626)
- User_Primary_Phone: Primary phone number of the user, including extension. (605-555-5555 5212)
- User_Home_Phone: Home phone number of the user, including extension. (605-555-5555 5212)

- **User_Mobile_Phone:** Mobile or cell phone number of the user, including extension. (605-555-5555 5212)
- **User_Work_Phone:** Work phone number of the user, including extension. (605-555-5555 5212)
- **User_Email_Address:** The user's email address. (dianes@oracle.com)
- **User_Website_URL:** The URL of the user's Web site (http://www.domain.com/~user)
- **User_Subscription_Level:** Level of service to which the user is subscribed. (free, OPP_Software, premium)
- **User_Reg_Date:** Date the user registered in Coordinated Universal Time (UTC) excluding any hour, minute, or second components (26-JAN-2002)
- **User_Reg_Method:** Method by which the user registered. (Web form, email, mail...)
- **User_Attributes 1-5:** User level user-defined attributes

The Visitor Dimension

The Visitor dimension tracks anonymous visitors using the specified method of visitor identification (with visitor cookies, for example).

This chapter contains the following topics:

- [Visitor Dimension Hierarchies](#)
- [Visitor Dimension Levels](#)

Visitor Dimension Hierarchies

The Visitor dimension contains the following hierarchy:

- [The Visitor Hierarchy](#)

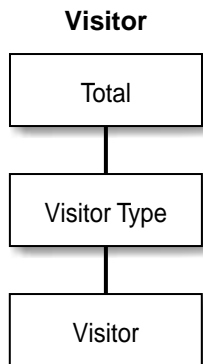
The section that follows lists all levels in the hierarchy, followed by a diagram that provides a graphical representation of the hierarchy.

The Visitor Hierarchy

This hierarchy contains the following levels, listed from top to bottom. For details about the attributes of each level, see [Visitor Dimension Levels](#).

- Visitor Type
- Visitor

Figure 15–1 The Visitor Level Hierarchy



Visitor Dimension Levels

The Visitor dimension is comprised of the following levels. For each level, information about each attribute (column name) is provided in the following format:

- **Attribute:** Description (example value)

In addition to the pre-defined attributes, the levels contains five "generic" attributes that can be defined by the user.

CLK_L_VISITOR_TYPE

- **Visitor_Type_Code:** Internal identifier of the visitor type. (IDENTIFIED, UNIDENTIFIED, UNKNOWN)
- **Visitor_Type_Name:** Name of the visitor type. (User-defined)
- **Visitor_Type_Attributes 1-5:** Visitor type level user-defined attributes.

CLK_L_VISITOR

- **Visitor_Group:** The visitor group in which this visitor is unique; natural key. (3159d99b8380,208.7.71.51:Mozilla/3.01 [compatible;])
- **Visitor_Type:** The type of visitor; natural key. (User-defined)

- **Visitor_Click_Code**: Identifying string for this visitor taken from the clickstream; natural key. (3159d99b8380,208.7.71.51:Mozilla/3.01 [compatible;])
- **Visitor_Code**: Internal identifier of the visitor type. (IDENTIFIED, UNIDENTIFIED, UNKNOWN)
- **Visitor_First_Visit_Date**: Date on which the visitor first visited the site in Coordinated Universal Time (UTC) excluding any hour, minute, or second components. (26-JAN-2002)
- **Visitor_Attributes 1-5**: Visitor level user-defined attributes.

The Impression Fact

Oracle9i Clickstream Intelligence provides the following facts to support routine traffic analysis:

- **Impression fact** - Contains facts that are aggregated into logical page views. Each fact in the Impression fact table corresponds to a single request for a page.
- **Session fact** - Contains facts that are aggregated into individual sessions.

The individual page **impression**, or page view, marks the granularity of the Impression fact. One record exists in the Impression fact for each logical page request that occurs during any given session.

Both the Impression dimension and the Session dimension ([Chapter 17](#)) are degenerate. These dimensions are used solely as a means of grouping events that belong to the same logical impression (Impression dimension) or logical session (Session dimension.) Since both dimension are degenerate, there are no associated dimension tables.

Impression Fact Attributes

Attributes for the Impression fact table consist of measures and foreign keys to the dimensions. For each attribute, information is provided in the appropriate format below:

- **Foreign Key:** Description (Dimension to which the foreign key refers, if any)
- **Measure:** Description

In addition to the pre-defined attributes, the Impression fact contains ten "generic" foreign keys and five "generic" measures that can be defined by the user.

Foreign Keys

- **Impression_ID:** Degenerate Impression dimension key that can be used to correlate specific page views with other events.
- **Site_ID:** Site dimension foreign key. (Site dimension)
- **Session_ID:** Degenerate Session dimension key that groups page views into logical sessions to support aggregation.
- **Impr_Date_ID:** Calendar day at the beginning of this page view, localized to the site time zone. (Date dimension)
- **Impr_Time_ID:** Time of day at the beginning of this page view, localized to the site time zone. (Time of Day dimension)
- **Sess_Date_ID:** Calendar day at the beginning of this session, localized to the site time zone. (Date dimension)
- **Sess_Time_ID:** Time of day at the beginning of this session, localized to the site time zone. (Time of Day dimension)
- **Agent_ID:** Agent dimension foreign key (Agent dimension)
- **First_Agent_ID:** First agent of this session (Agent dimension)
- **Client_Host_ID:** Client host dimension foreign key. (Client Host dimension)
- **First_Client_Host_ID:** First client host of this session. (Client Host dimension)
- **Server_ID:** Server dimension foreign key. (Server dimension)
- **Server_Status_ID:** Server status dimension foreign key. (Server Status dimension)
- **Page_ID:** Current requested page; the identifying page requested as part of this impression. While an impression may contain several resource requests, including the page resource itself, each impression contains only one requested page. (Page dimension)
- **First_Page_ID:** First page in this session. (Page dimension)
- **Last_Page_ID:** Last page in this session. (Page dimension)
- **Event_Type_ID:** Event type dimension foreign key. (Event Type dimension)
- **Session_Type_ID:** Session type dimension foreign key. (Session Type dimension)
- **Referrer_ID:** Immediate internal or external referrer for this particular impression. (Referrer dimension)

- **First_Referrer_ID:** First referrer of this session; the referrer that initiated the session. (Referrer dimension)
- **First_Ref_Search_ID:** If the session referrer is a search engine, then this is the search phrase that resulted in a reference to this page. (Search dimension)
- **Local_Search_ID:** If this page is a "search results" page, then this is the search expression that produced this particular results page. This particular use of the Search dimension is distinguished from Referrer_Search_ID by the fact that this is a local search. (Search dimension)
- **User_ID:** The actual User dimension foreign key taken directly from the server logs. (User dimension)
- **Session_User_ID:** User dimension foreign key inferred from the session. (User dimension)
- **Visitor_ID:** The actual Visitor dimension foreign key taken directly from the server logs. (Visitor dimension)
- **Session_Visitor_ID:** Visitor dimension foreign key inferred from the client host. (Visitor dimension)
- **(Prev_Page10_ID:** Tenth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page09_ID:** Ninth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page08_ID:** Eighth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page07_ID:** Seventh previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page06_ID:** Sixth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page05_ID:** Fifth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page04_ID:** Fourth previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page03_ID:** Third previous page in this session, relative to the current page. (Page dimension)
- **Prev_Page02_ID:** Second previous page in this session, relative to the current page. (Page dimension)

- **Prev_Page01_ID:** Immediate previous page in this session, relative to the current page. (Page dimension)
- **Next_Page01_ID:** Immediate next page in this session, relative to the current page. (Page dimension)
- **Next_Page02_ID:** Second next page in this session, relative to the current page. (Page dimension)
- **Next_Page03_ID:** Third next page in this session, relative to the current page. (Page dimension)
- **Next_Page04_ID:** Fourth next page in this session, relative to the current page. (Page dimension)
- **Next_Page05_ID:** Fifth next page in this session, relative to the current page. (Page dimension)
- **Next_Page06_ID:** Sixth next page in this session, relative to the current page. (Page dimension)
- **Next_Page07_ID:** Seventh next page in this session, relative to the current page. (Page dimension)
- **Next_Page08_ID:** Eighth next page in this session, relative to the current page. (Page dimension)
- **Next_Page09_ID:** Ninth next page in this session, relative to the current page. (Page dimension)
- **Next_Page10_ID:** Tenth next page in this session, relative to the current page. (Page dimension)
- **Dim01_ID:** Generic dimension 01 foreign key
- **Dim02_ID:** Generic dimension 02 foreign key
- **Dim03_ID:** Generic dimension 03 foreign key
- **Dim04_ID:** Generic dimension 04 foreign key
- **Dim05_ID:** Generic dimension 05 foreign key
- **Dim06_ID:** Generic dimension 06 foreign key
- **Dim07_ID:** Generic dimension 07 foreign key
- **Dim08_ID:** Generic dimension 08 foreign key
- **Dim09_ID:** Generic dimension 09 foreign key

- **Dim10_ID:** Generic dimension 10 foreign key

Measures

- **Bytes_From_Server:** Total number of bytes, excluding HTTP headers, transferred from the server to the client for this page view.
- **Bytes_From_Client:** Total number of bytes, excluding HTTP headers, transferred from the client to the server for this page view.
- **Impression_Duration:** Elapsed time for this page view, defined as the length of time from this impression until the next impression in the session.
- **Impression_Time_To_Serve:** Amount of time in seconds taken by the server to process and serve this page view.
- **Impression_Dwell_Time:** Equal to (Impression_Duration - Impression_Time_To_Serve)
- **Sequence_In_Session:** Sequence number that captures the temporal relationships between page views in the context of a particular session. The sequence indicated by this attribute is only valid in the context of a single session.
- **Measure01:** User-defined measure 01
- **Measure02:** User-defined measure 02
- **Measure03:** User-defined measure 03
- **Measure04:** User-defined measure 04
- **Measure05:** User-defined measure 05

The Session Fact

The Session fact aggregates data into logical sessions of related activity. The attributes of a session are the entry page, exit page, session duration, impression count, etc. The granularity of the session fact table is explicitly one record for each session of related activity by a visitor.

Session Fact Attributes

Attributes for the Session fact table consist of measures and foreign keys to the dimensions. For each attribute, information is provided in the appropriate format below:

- **Foreign Key:** Description (Dimension to which the foreign key refers, if any)
- **Measure:** Description

In addition to the pre-defined attributes, the Session fact contains ten "generic" foreign keys and five "generic" measures that can be defined by the user.

Foreign Keys

- **Session_ID:** Degenerate Session dimension key that can be used to correlate specific sessions with other events.
- **Site_ID:** Site dimension foreign key. (Site dimension)
- **Sess_Date_ID:** Calendar day at the beginning of this session, localized to the site time zone. (Date dimension)
- **Sess_Time_ID:** Time of day at the beginning of this session, localized to the site time zone. (Time of Day dimension)
- **First_Agent_ID:** First agent of this session. (Agent dimension)

- **First_Client_Host_ID:** First client host of this session. (Client Host dimension)
- **First_Page_ID:** First page viewed in this session. (Page dimension)
- **Session_Type_ID:** Session type dimension foreign key. (Session Type dimension)
- **First_Referrer_ID:** First referrer of this session. (Referrer dimension)
- **First_Ref_Search_ID:** If the session referrer is a search engine, then this is the search phrase that resulted in the first page impression of this session. (Search dimension)
- **Session_User_ID:** User dimension foreign key taken directly from the Session_User_ID of the Impression fact. (User dimension)
- **Session_Visitor_ID:** Visitor dimension foreign key inferred from the Session_Visitor_ID of the Impression fact. (Visitor dimension)
- **Dim01_ID:** Generic dimension 01 foreign key
- **Dim02_ID:** Generic dimension 02 foreign key
- **Dim03_ID:** Generic dimension 03 foreign key
- **Dim04_ID:** Generic dimension 04 foreign key
- **Dim05_ID:** Generic dimension 05 foreign key
- **Dim06_ID:** Generic dimension 06 foreign key
- **Dim07_ID:** Generic dimension 07 foreign key
- **Dim08_ID:** Generic dimension 08 foreign key
- **Dim09_ID:** Generic dimension 09 foreign key
- **Dim10_ID:** Generic dimension 10 foreign key

Measures

- **Bytes_From_Server:** Total number of bytes, excluding HTTP headers, transferred from the server to the client during this session.
- **Bytes_From_Client:** Total number of bytes, excluding HTTP headers, transferred from the client to the server during this session.
- **Session_Duration:** Total number of seconds elapsed during this session. A session is defined to begin at the instant of the first resource request, and ends at the termination of the last page impression of the session.

- **Session_Time_To_Serve:** Total amount of time in seconds taken by the server to process all page views in this session.
- **Session_Dwell_Time:** Total amount of dwell time for all page views in this session.
- **Pages_Visited:** The total number of impressions made during this session.
- **Measure01:** User-defined measure 01
- **Measure02:** User-defined measure 02
- **Measure03:** User-defined measure 03
- **Measure04:** User-defined measure 04
- **Measure05:** User-defined measure 05

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