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Technical Paper

Session Attribution in SAS® Web Analytics

The online analytics data model has been expanded to include session attribution and origination information. You can use this information to understand visitor behavior and customize classification rules.

This paper describes site origination information and outlines the process for creating custom origination classification rules.

Table of Contents

| | |
|---|----------|
| Introduction | 1 |
| What Is Session Attribution? | 1 |
| Online Analytics Data Model | 1 |
| Classifying Originators | 2 |
| Default Classification Rules..... | 3 |
| Referrer Groups | 4 |
| Customizing the Origination Classification Rules..... | 5 |

Introduction

In SAS Web Analytics 5.4, the data model is extended to include tables for session attribution and origination information. This paper describes session origination types and how you can customize origination classification rules.

What Is Session Attribution?

Session attribution is the method by which a visitor either enters or re-enters a Web site during a visit. A visit starts or resumes when a visitor initiates one of the following actions:

- selects a bookmark link
- enters the Web site domain in the address line of the browser
- enters a URI from a print or TV ad in the address line of the browser
- clicks a link within another site
- clicks a link within an e-mail
- clicks a link on the results page of a search site

These actions are considered the origination points for a set of actions by the visitor to the Web site. These actions can then be used to attribute the pages viewed and other actions on the Web site back to an origination group or event.

Online Analytics Data Model

For SAS Web Analytics 5.4, the SAS Web Analytics data model was expanded into the Online Analytics data model and two new tables were added to contain session attribution and origination information:

- Session_Attribution
- Origination_Dim

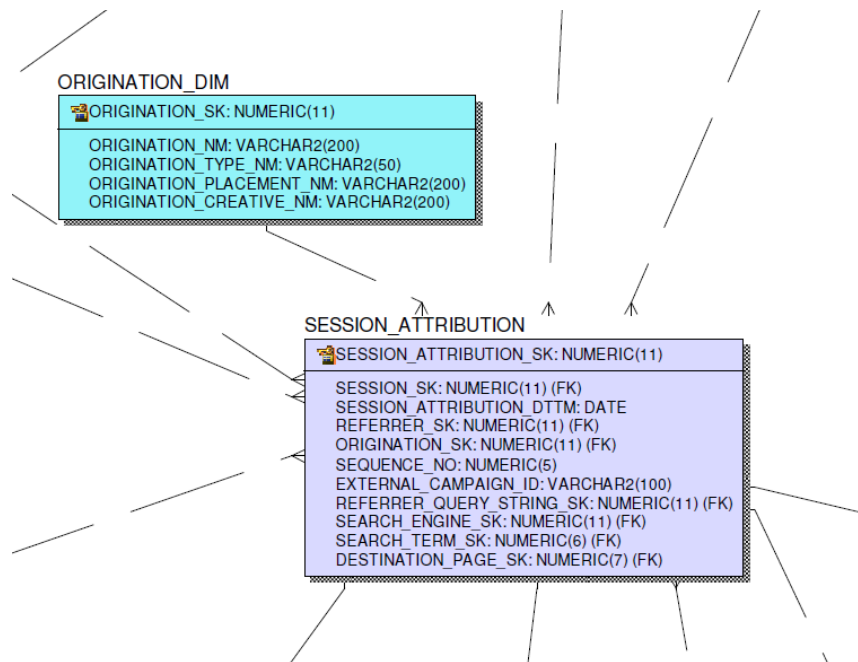


Figure 1 *Origination_Dim and Session_Attribution Tables*

For more information, see Appendix 1, “SAS Web Analytics Web Mart Aggregates” in the *SAS Web Analytics 5.4: Administrator’s Guide*.

The Session_Attribution table contains information about external entries into the Web site during a visit. Each visit contains at least one record that represents the start of the visit and additional records that represent re-entries to the Web site during the visit. For example, a visitor might enter the Web site through a link within an e-mail. The visitor might view one or more pages, and then exit the Web site to perform a Google search. The visitor might next re-enter the Web site through a link on a Google search results page. This activity would result in two records in the Session_Attribution table: session start and re-entry.

In addition, in the Session_Attribution table each record is classified by the type of origination action. In the previous example, the origination actions are clicking an e-mail link and clicking a Google search results link.

Classifying Originators

In the Online Analytics data model, origination actions are grouped within the Origination_Dim table by type of referrer and marketing campaign that “drove” the visitor to the site. Origination information for each type of referrer is shown in the following table.

Table 1 Origination Definitions

| Referrer Group | Description | Origination Name | Origination Type | Origination Placement | Origination Treatment |
|-------------------------------|--|--|-------------------|--|---|
| Brand Aware | Visit in which the first page is a home page and there is no referrer. | Brand Aware | Organic | | |
| Bookmark or Unlisted Campaign | Visit in which the first page is not a home page and there is no referrer. | Bookmark or Unlisted Campaign | Organic | | |
| Unlisted Campaign | Visitor comes to site from another site; that is, there is an external referrer. | Unlisted Campaign | Organic | | |
| E-mail | Visitor selects a page link (destination page) within an e-mail. The destination page does not have a referrer within either the Weblog or page tag log. | Email | Custom | Custom | Custom |
| Organic Search | Visitor to a search site selects a non-paid link within a search results page. | Search Site name | Organic Search | Search Domain | Other Search |
| Paid Search | Visitor to a search site selects a paid link within a search site results page. | Entry_Action_ID. If Entry_Action_ID is blank, then the search site name is used. | Paid Search | Entry_Placement. If Entry_Placement is blank, then the value is Search Domain. | Entry_Creative. If Entry_Creative is blank, then the value is Keyword Search. |
| Affiliate | Visit in which the first page is a home page and there is a referrer. | Unlisted Affiliate | Affiliate | | |
| User-Defined | Used to classify or override the default referrer classification. Customize the Clickstream job to add and populate the following fields: EntryActionID EntrySource EntryPlacement EntryCreative | EntryActionID value | EntrySource value | EntryPlacement value | EntryCreative value |

Default Classification Rules

The Origination_Dim table fields are defined within the Web_a_1200 job by using the Web_a_Session_Orig_Definition uncompiled macro.

Referrer Groups

The referrer groups are handled within the `Weba_Session_Orig_Definition` macro as follows:

Brand Aware

requires custom code to populate the **Origination_Nm** and **Origination_Type_Nm** fields in the `Origination_Dim` table. It is recommended that custom rules be added to the Clickstream job to populate the `EntrySource` and `EntryActionID` variables with the appropriate values.

Bookmark or Unlisted Campaign

is the default group if the referrer is blank. In this case, the `Origination_Dim` fields are populated as defined in the table.

Unlisted Campaign

is the default group if the referrer is not blank. In this case, the `Origination_Dim` fields are populated as defined in the table.

E-mail

requires custom code to populate the `Origination_Dim` table fields if the e-mail is not from a SAS Marketing Automation campaign that uses SAS Digital Marketing. If the e-mail is from a SAS Marketing Automation campaign that uses SAS Digital Marketing, then the following Clickstream output Detail data set variables are used to populate the `Origination_Dim` table fields:

`Origination_Type_Cd` = `SDM`

`Origination_Nm` = `EntryActionID`

`Origination_Placement` = `EntryPlacement`

`Origination_Creative` = `EntryCreative`

Paid or Organic Search

is used to determine whether a referrer is a paid or organic search. For information about how the flag is set, see “`Paid_Search_Flg` Field” in Chapter 2 of the *SAS Web Analytics 5.4: Administrator’s Guide*.

Affiliate

requires custom code to populate the `Origination_Dim` table fields.

User-Defined

requires custom code to populate the `Origination_Dim` table fields.

For information about how the `EntryActionId`, `EntryPlacement`, and `EntryCreative` columns are populated within the Clickstream job, see “Processing Campaign Data” in the *SAS Data Surveyor for Clickstream Data 2.2: User’s Guide*.

Customizing the Origination Classification Rules

To create custom origination classification rules:

1. Make necessary modifications to links on external sites so the originator can be identified from the destination page link. Here are suggested methods for identifying originators:
 - ❑ Insert query string parameters in the destination page URI that identify the origination type, name, placement, and creative advertisement.
 - ❑ Create a destination page that can be reached only through a single originating link. For example, each link in an e-mail would go to a different page. That page is not reused in any other e-mail or marketing campaign.
2. Update the Clickstream job to parse query string parameters that identify the origination type, name, placement, and creative advertisement.
3. Edit the `Weba_Session_Orig_Definition` uncompiled macro to add custom rules. You can find the macro in the following locations:

Windows `!sasroot\SASFoundation\9.2\webma\ucmacros`

UNIX `!sasroot/SASFoundation/9.2/ucmacros/webma`

Note: The code is used within the `Create_Session_Fact` node of the `Weba_1200_Create_Staging_Tables` job. This node uses the `WaWork.Detail_Fact` data set to create the `WaWork.Origination_Dim` and `WaWork.Session_Attribution` tables. Make sure you add any necessary variables to the `WaWork.Detail_Fact` data set. For more information, see “Extending the Web Data Mart” in the *SAS Web Analytics 5.4: Administrator’s Guide*.

4. Test the `Weba_1200_Create_Staging_Tables` job. Verify that the `WaWork.Origination_Dim` and `WaWork.Session_Attribution` have been populated appropriately.

