



Informatica® PowerExchange for Google
Analytics

10.2 HotFix 1

User Guide for PowerCenter

Informatica PowerExchange for Google Analytics User Guide for PowerCenter
10.2 HotFix 1
October 2018

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Preface

The *Informatica PowerExchange for Google Analytics User Guide for PowerCenter* provides information about extracting data from Google Analytics. This guide is written for database administrators and developers who are responsible for developing mappings, sessions, and workflows that extract data from Google Analytics reports. This guide assumes you have knowledge of Google Analytics and PowerCenter.

Informatica Resources

Informatica Network

Informatica Network hosts Informatica Global Customer Support, the Informatica Knowledge Base, and other product resources. To access Informatica Network, visit <https://network.informatica.com>.

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base for product resources, including documentation, FAQs, and best practices.
- View product availability information.
- Review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

Use the Informatica Knowledge Base to search Informatica Network for product resources such as documentation, how-to articles, best practices, and PAMs.

To access the Knowledge Base, visit <https://kb.informatica.com>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at KB_Feedback@informatica.com.

Informatica Documentation

To get the latest documentation for your product, browse the Informatica Knowledge Base at https://kb.informatica.com/_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx.

If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at infa_documentation@informatica.com.

Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at

<https://network.informatica.com/community/informatica-network/product-availability-matrixes>.

Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions.

If you are an Informatica Network member, you can access Informatica Velocity resources at <http://velocity.informatica.com>.

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that augment, extend, or enhance your Informatica implementations. By leveraging any of the hundreds of solutions from Informatica developers and partners, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at <https://marketplace.informatica.com>.

Informatica Global Customer Support

You can contact a Global Support Center by telephone or through Online Support on Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:

<http://www.informatica.com/us/services-and-training/support-services/global-support-centers>.

If you are an Informatica Network member, you can use Online Support at <http://network.informatica.com>.

CHAPTER 1

Introduction to PowerExchange for Google Analytics

This chapter includes the following topics:

- [PowerExchange for Google Analytics Overview, 7](#)
- [Introduction to Google Analytics, 7](#)
- [Google Analytics Supported Reports, 8](#)

PowerExchange for Google Analytics Overview

You can use PowerExchange for Google Analytics for connectivity between PowerCenter and Google Analytics.

You can use PowerExchange for Google Analytics to extract data from a Google Analytics report. You can import Google Analytics reports as sources to create mappings, and run a session to extract data from Google Analytics. When you use Google Analytics objects in mappings, you must configure properties specific to Google Analytics.

Introduction to Google Analytics

Google Analytics is a premium web analytics service offered by Google that tracks and reports website traffic. Google Analytics helps you analyze visitor traffic and represent a complete picture of your audience

and their needs. It gives actionable insights into how visitors find and use your site and how you can optimize the website's performance.

Google Analytics Supported Reports

A Google Analytics report contains metrics and dimensions. Dimensions are attributes of the data collected from the website. Metrics are quantitative measurements.

The Google Analytics Core Reporting API v3 that PowerExchange for Google Analytics supports can only process reports that contain both metrics and dimensions or metrics only.

PowerExchange for Google Analytics supports the following Google Analytics reports:

- Adwords
- Adsense
- Ad Exchange
- App Tracking
- Audience
- Channel Grouping
- Content Experiments
- Content Grouping
- Custom Variables or Columns
- DoubleClick Bid Manager
- DoubleClick Campaign Manager
- DoubleClick for Publishers
- DoubleClick for Publishers Backfill
- DoubleClick Search
- Ecommerce
- Event Tracking
- Exceptions
- Geo Network
- Goal Conversion
- Internal Search
- Lifetime Value and Cohorts
- Page Tracking
- Platform or Device
- Related Products
- Session
- Site Speed
- Social Interactions
- Social Activities

- System
- Time
- Traffic Sources
- User
- User Timings

Note: AdSense, Ad Exchange, DoubleClick for Publishers, DoubleClick for Publishers Backfill, and Site Speed reports contain only metrics.

When you import a Google Analytics source define, you can select reports from the following datasets in the **Package Explorer**:

- ga
- infaCustom

The **infaCustom** dataset contains the **infaCustomGroup** report. The **infaCustomGroup** report contains dimensions and metrics from all the Google Analytics reports.

To retrieve data from multiple Google Analytics reports, you must select the **infaCustomGroup** report in the **infaCustom** dataset.

CHAPTER 2

PowerExchange for Google Analytics Installation and Configuration

This chapter includes the following topics:

- [PowerExchange for Google Analytics Installation and Configuration Overview, 10](#)
- [Installing and Configuring PowerExchange for Google Analytics, 10](#)
- [Prerequisites, 11](#)
- [Installing PowerExchange for Google Analytics, 12](#)
- [Registering the PowerExchange for Google Analytics Plug-in, 13](#)

PowerExchange for Google Analytics Installation and Configuration Overview

You can install PowerExchange for Google Analytics on a Windows 64-bit or Red Hat Enterprise Linux 64-bit machine.

Installing and Configuring PowerExchange for Google Analytics

To install and configure PowerExchange for Google Analytics, complete the following steps:

1. Complete the prerequisite tasks.
2. Install the PowerExchange for Google Analytics server and client components.
3. Register the PowerExchange for Google Analytics plug-in.

Prerequisites

Before you install PowerExchange for Google Analytics, complete the following tasks:

- Install or upgrade to Informatica services 10.2.0 HotFix 1.
- Verify that you have read and write permissions on the following directories on each machine that runs the PowerCenter Integration Service and PowerCenter Repository Service:

- <Informatica installation directory>\server\connectors\cci\plugins

- <Informatica installation directory>\server\bin\Plugin

- <Informatica installation directory>\connectors\thirdparty

The installer must be able to add and overwrite files in these directories.

- Verify that you have read and write permissions on the following directories on each machine where you installed the PowerCenter Client:

- <Informatica installation directory>\clients\PowerCenterClient

- <Informatica installation directory>\clients\PowerCenterClient\bin\Help\<language>

The installer must be able to add and overwrite files in these directories.

- Ensure that you have a Google service account to access Google Analytics.
- Ensure that you selected the **Furnish a new private key** and **JSON** as the **Key type** and saved the generated key as `client_secrets.json`.
- Ensure that you selected the **Enable G Suite Domain-wide Delegation** property.
- Ensure you have the `client_email` and `private_key` values for the service account. You will need to enter these details when you add a user to the Google Analytics account and also when you create a Google Analytics connection in Informatica Developer.
- Ensure that you have enabled the **Analytics API** for your service account. PowerExchange for Google Analytics uses the Google Analytics Core Reporting APIs to integrate with Google Analytics.
- Create an account, property, and view in Google Analytics.
- Verify that you have the following permissions for the Google Analytics account:
 - Edit
 - Collaborate
 - Read and Analyze
 - Manage Users
- Ensure you have a **View ID** that is generated for the view that you created. You will need to enter the View ID when you create mappings in PowerCenter.

For more information about product requirements and supported platforms, see the Product Availability Matrix on Informatica Network:

<https://network.informatica.com/community/informatica-network/product-availability-matrices>.

Installing PowerExchange for Google Analytics

When you install PowerExchange for Google Analytics, you install the following components that allow PowerCenter to access the Google Analytics reports:

- Client component. Allows you to import definitions, create mappings, and create connection objects with the PowerCenter Client.
- Server component. Allows the PowerCenter Repository Service to store and access the Google Analytics metadata in the repository and the PowerCenter Integration Service to run Google Analytics sessions.

Installing the Server Component

The PowerExchange for Google Analytics server component installs the PowerCenter Integration Service and PowerCenter Repository Service components.

When you install the PowerExchange for Google Analytics server component, you enable the PowerCenter Integration Service to read data from Google Analytics.

If the PowerCenter Integration Service or PowerCenter Repository Service is configured to run on primary and backup nodes, install the PowerExchange for Google Analytics server component on each node configured to run the PowerCenter Integration Service or PowerCenter Repository Service.

If the PowerCenter Integration Service is configured to run on a grid, install the PowerExchange for Google Analytics server component on each node configured to run on the grid. If you cannot install the PowerExchange for Google Analytics server component on each node in the grid, create a resource in the domain and assign it to each node where you installed the PowerExchange for Google Analytics server component. When you create a session, configure the session to use the resource.

For example, create a custom resource called Google Analytics. When you create a session, you can configure the session to use the Google Analytics resource. The Load Balancer dispatches the session to nodes that has the resource.

Installing the Server Component on Windows

Install the PowerExchange for Google Analytics server component on Windows when the PowerCenter Integration Service or PowerCenter Repository Service runs on Windows.

1. Run `install.bat` from the installation package.
2. Click **Next**.
3. Select the Informatica installation directory.

By default, the server components are installed in the following directory:

```
C:\<Informatica installation directory>\<version folder>
```

4. Click **Next**.
5. Click **Install** to begin the installation.
6. Click **Done** when the installation is complete.

Installing the Server Component on UNIX

Install the PowerExchange for Google Analytics server component on UNIX when the PowerCenter Integration Service or PowerCenter Repository Service runs on UNIX.

To install the PowerExchange for Google Analytics server component on UNIX platforms that support the graphical user interface, perform the same steps that you use to install the server components on Windows.

To install the PowerExchange for Google Analytics server component on UNIX platforms that use the command line interface, perform the following steps:

1. Enter `install.sh` at the prompt.
2. Enter the path to the Informatica installation directory.

By default, the server components are installed in the following directory:

```
<User Home Directory>/Informatica/<version folder>
```

Installing the Client Component

Install the Client component on each PowerCenter Client machine where you want to create or access the Google Analytics reports.

1. Run `install.bat` from the installation package.
2. Click **Next**.
3. Select the Informatica installation directory.

By default, the client is installed in the following location:

```
C:\Informatica\<version folder>
```

4. Click **Next**.
5. Click **Install** to begin the installation.
6. Click **Done** when the installation is complete.

The client component is installed.

Registering the PowerExchange for Google Analytics Plug-in

To register the plug-in, the repository must be running in exclusive mode. Use the Administrator tool or the `pmrep RegisterPlugin` command line program to register the plug-in. If you do not have the correct privileges to register the plug-in, contact the user who manages the PowerCenter Repository Service.

The plug-in file is an `.xml` file that defines the functionality of the adapter. When you install the server component, the installer copies the plug-in file to the following directory:

```
<Informatica installation directory>/server/bin/Plugin
```

The name of the plug-in file for PowerExchange for Google Analytics is `googleanalytics_Plugin.xml`.

Registering the PowerExchange for Google Analytics Plug-in from the Administrator Tool

Register a repository plug-in to add its functionality to the repository.

1. Run the PowerCenter Repository Service in exclusive mode.
2. In the **Navigator**, select the PowerCenter Repository Service to which you want to add the plug-in.
3. In the **Contents** panel, click the **Plug-ins** view.
4. In the **Actions** menu of the **Domain** tab, select **Register Plug-in**.
5. On the **Register Plug-in** page, click the **Browse** button to locate the plug-in file.

6. Enter your user name and password.
7. Click **OK**.

The PowerCenter Repository Service registers the plug-in with the repository. The results of the registration operation appear in the activity log.

8. Run the PowerCenter Repository Service in normal mode.

Registering the PowerExchange for Google Analytics Plug-in from the Command Line Program

You can use the `pmrep RegisterPlugin` command to register the plug-in from the command line program.

1. Run the PowerCenter Repository Service in exclusive mode.
2. Run the `pmrep Connect` command to connect to the Repository Service using a user account with Administrator Repository privilege.

The `RegisterPlugin` command uses the following syntax:

```
pmrep connect -r <repository name> -d <domain_name> -n <domain user name> -x  
<domain_password>
```

3. Find `googleanalytics_Plugin.xml` in the following directory:

```
<Informatica installation directory>\server\bin\Plugin
```

4. Run the `pmrep RegisterPlugin` command to update the repository.

The `RegisterPlugin` command uses the following syntax:

```
pmrep registerplugin -i <Informatica installation directory>\server\bin\Plugin  
\googleanalytics_Plugin.xml -e -N
```

CHAPTER 3

Google Analytics Sources

This chapter includes the following topics:

- [Google Analytics Sources Overview, 15](#)
- [Import Google Analytics Source Definitions, 15](#)

Google Analytics Sources Overview

You can create a mapping with a Google Analytics source to extract data from Google Analytics and load data to any target.

When the PowerCenter Integration Service extracts data from the source, it converts the data based on the data types associated with the source.

Import Google Analytics Source Definitions

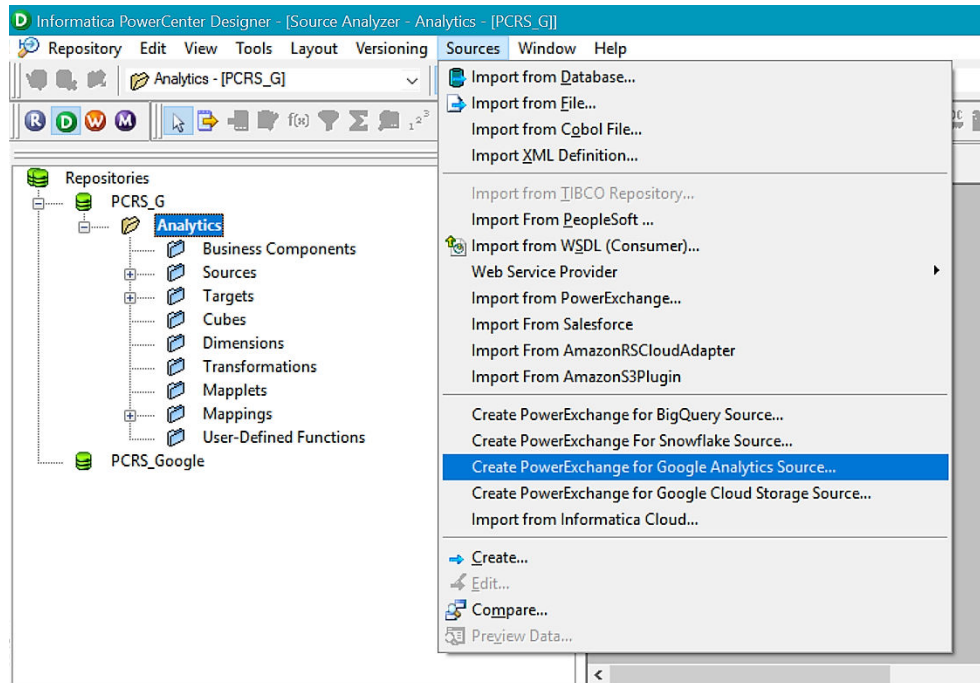
Use the **Create PowerExchange for Analytics Source** wizard to import Google Analytics source definitions into the PowerCenter repository.

You must import Google Analytics source objects before you create a mapping.

1. Start PowerCenter Designer, and connect to a PowerCenter repository configured with a Google Analytics instance.
2. Open a source folder.

3. Select **Source Analyzer**.

- In the Source Analyzer, click **Sources > Create PowerExchange for Analytics Source** as shown in the following image:



The **Google Analytics Connection** wizard appears.

4. Configure the following connection parameters:

Connection Parameter	Description
Service Account ID	Specifies the client_email value present in the JSON file that you download after you create a service account.
Service Account Key	Specifies the private_key value present in the JSON file that you download after you create a service account.
APIVersion	API that PowerExchange for Google Analytics uses to read from Google Analytics reports. Select Core Reporting API v3 . Note: PowerExchange for Google Analytics does not support Analytics Reporting API v4.

5. Click **Test** to test the connection.
6. Click **Finish** to add the connection.
The **Select Objects from** tab appears.
7. In the **Package Explorer**, select the **ga** or **infaCustom** dataset.
8. Select the check box next to the Google Analytics report you want to add and click **Import**.
To view the report metadata, select the report, and double-click the report name.

CHAPTER 4

Google Analytics Mappings

This chapter includes the following topics:

- [Google Analytics Mappings Overview, 17](#)
- [Source Filter, 17](#)

Google Analytics Mappings Overview

After you import a Google Analytics source definition into the PowerCenter repository, you can create a mapping to extract data from a Google Analytics source.

You can enter a filter condition to reduce the number of source rows the PowerCenter Integration Service returns from a Google Analytics report. You can enter a single filter condition or a series of conditions.

Note: You cannot preview data of a Google Analytics source definition.

Source Filter

You can enter a filter condition to read specific data from a Google Analytics report. You can enter a single filter condition or a series of conditions.

Use the source filter in the Application Source Qualifier to retrieve rows from an entity that meet a condition.

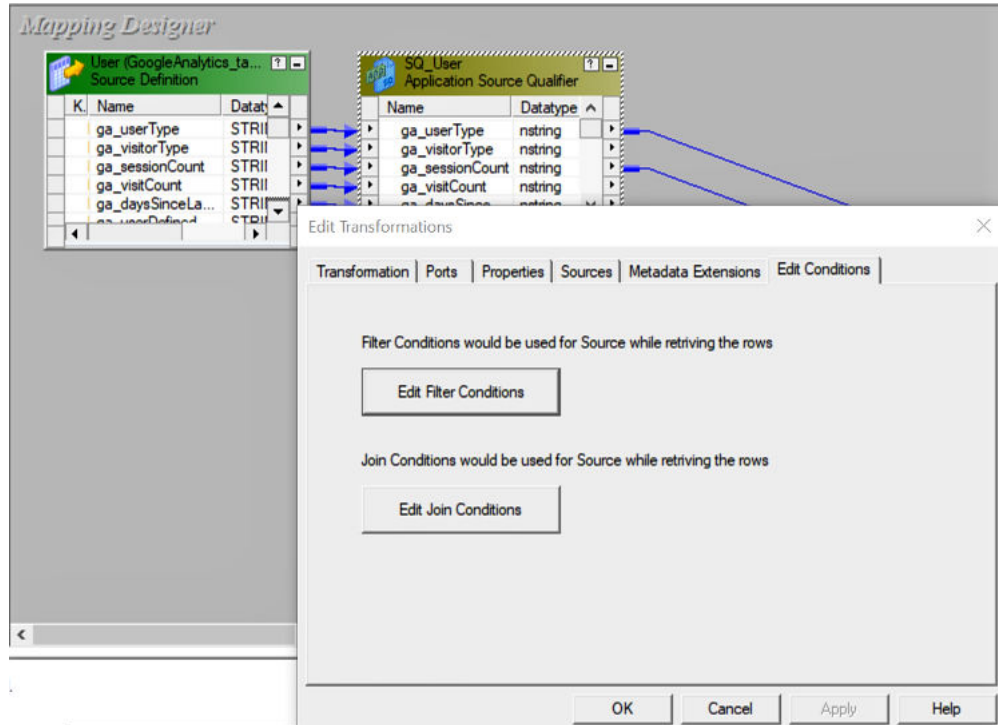
You can provide a source filter to improve the performance when you read data from Google Analytics.

Configuring a Source Filter

Configure a source filter in the Application Source Qualifier.

1. In the **Mapping Designer**, double-click the Application Source Qualifier.

The **Edit Transformations** dialog box appears as shown in the following image:



2. Click the **Edit Conditions** tab.

3. Click **Edit Filter Conditions**.

The **Add Filter Condition** dialog box appears.

4. Select **Platform Expression** or **Native Expression**.

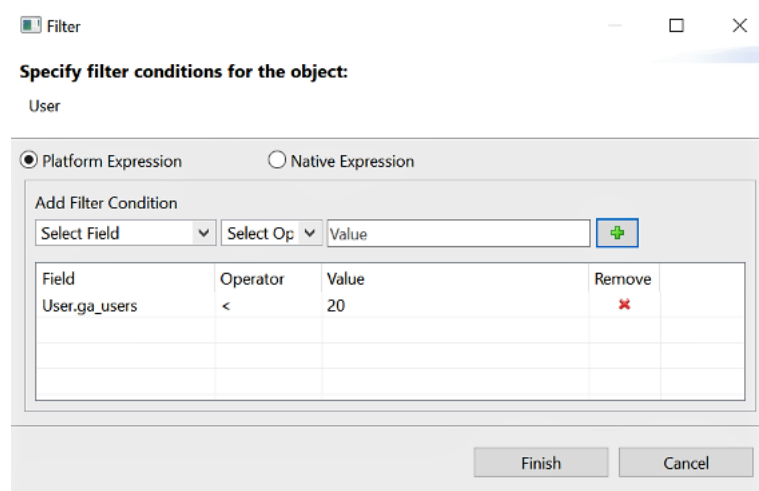
- If you configure a platform expression, select the filter field and operator that you want to specify in the condition, enter a value for the condition, and click **Add Condition**

The column names appear in the following format:

```
<reportName>.<datasetName_ColumnName>
```

For example, User.ga_newUsers

The following image shows a platform filter expression configured for a Google Analytics source:

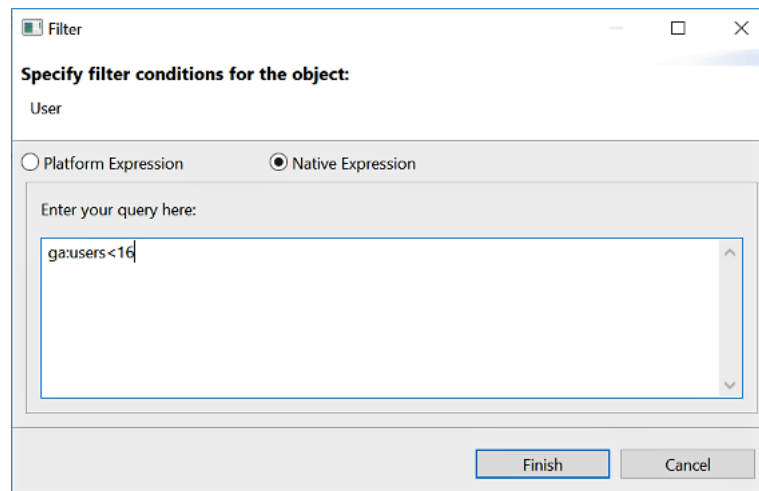


- If you configure a native expression, specify a filter expression in the following format:

`<datasetName:columnName><Operator><Value>`

You can use AND, OR, or nested conditions in the filter expression. The expression that you enter becomes the WHERE clause in the query used to retrieve records from the source.

The following image shows a native filter expression configured for a Google Analytics source:



5. Click **Finish** to add the filter condition.
6. Click **OK**.

CHAPTER 5

Google Analytics Sessions

This chapter includes the following topics:

- [Google Analytics Sessions Overview, 20](#)
- [Google Analytics Connections, 21](#)
- [Configure Google Analytics Source Session Properties, 22](#)
- [Parameterization, 22](#)
- [Rules and Guidelines for Google Analytics Sessions, 23](#)

Google Analytics Sessions Overview

After you create mappings, you can create a session to extract data.

You must configure a Google Analytics connection in the **Workflow Manager** to extract data from a Google Analytics report. You can define properties in a session to determine how the PowerCenter Integration Service must extract data from a Google Analytics report.

Google Analytics Connections

Google Analytics Connections Overview

Create a Google Analytics connection to read data from a Google Analytics source. You can use Google Analytics connections in mappings.

Google Analytics Connection Properties

When you configure a Google Analytics connection, you define the connection attributes that the PowerCenter Integration Service uses to connect to the Google Analytics.

The following table describes the Google Analytics connection properties:

Property	Description
Service Account ID	Specifies the client_email value present in the JSON file that you download after you create a service account.
Service Account Key	Specifies the private_key value present in the JSON file that you download after you create a service account.
APIVersion	API that PowerExchange for Google Analytics uses to read from Google Analytics reports. Select Core Reporting API v3 . Note: PowerExchange for Google Analytics does not support Analytics Reporting API v4.

Configuring a Google Analytics Connection

Configure a Google Analytics connection in the **Workflow Manager** to define the connection attributes that the PowerCenter Integration Service uses to connect to Google Analytics.

1. In the Workflow Manager, click **Connections > Application**.
The **Application Connection Browser** dialog box appears.
2. Click **New**.
The **Select Subtype** dialog box appears.
3. Select **Analytics** and click **OK**.
The **Application Connection Editor** dialog box appears.
4. Enter a name for the Google Analytics connection.
5. Enter the Google Analytics connection attributes.
6. Click **OK** to create a Google Analytics connection.

Configure Google Analytics Source Session Properties

You can configure the session properties for a Google Analytics source on the **Mapping** tab. Define the properties for the source instance in the session.

The following table describes the session properties that you can configure for a Google Analytics source session:

Property	Description
View ID	The Google Analytics View ID associated with the Google Analytics project.
StartDate	Start date from which PowerExchange for Google Analytics must read the data from a Google Analytics report. You can specify a specific date using the YYYY-MM-DD format. You can also specify relative terms such as today , yesterday , or NdaysAgo .
EndDate	End date till which PowerExchange for Google Analytics must read the data from a Google Analytics report. You can specify a specific date using the YYYY-MM-DD format. You can also specify relative terms such as today , yesterday , or NdaysAgo .
PageSize	Number of rows that PowerExchange for Google Analytics must read from a Google Analytics report.
Filter Override Type	The type of filter expression that you want to override in the source qualifier. You can select Native or Platform filter expression type to override. Default is None.
Filter Override	The filter condition that overrides the filter condition you specify in the source qualifier. If you select the Native filter override type, specify a filter expression in the following format: <code><datasetName:columnName><Operator><Value></code> If you select the Platform filter override type, specify a filter expression in the following format: <code><reportName>.<datasetName_ColumnName></code>

Parameterization

You can parameterize the Google Analytics session properties. You can create a configuration file with the session properties that you want to override at run time.

You can parameterize the following source session properties:

- View ID
- StartDate
- EndDate
- PageSize

Rules and Guidelines for Google Analytics Sessions

Use the following rules and guidelines when you create a session:

- You cannot configure a Lookup transformation to look up data in a Google Analytics source.
- You cannot configure key range partitioning to read data from a Google Analytics source.

APPENDIX A

Google Analytics Data Type Reference

This appendix includes the following topics:

- [Data Type Reference Overview, 24](#)
- [Google Analytics and Transformation Data Types, 24](#)

Data Type Reference Overview

PowerCenter uses the following data types in Google Analytics mappings:

- Google Analytics native data types. Google Analytics data types appear in Google Analytics definitions in a mapping.
- Transformation data types. Set of data types that appear in the transformations. They are internal data types based on ANSI SQL-92 generic data types, which the PowerCenter Integration Service uses to move data across platforms. They appear in all transformations in a mapping.

When the PowerCenter Integration Service reads source data, it converts the native data types to the comparable transformation data types before transforming the data.

Google Analytics and Transformation Data Types

The following table lists the Google Analytics data types that PowerCenter supports and the corresponding transformation data types:

Google Analytics Data Type	Transformation Data Type	Range and Description for the Transformation Data Type
CURRENCY	String	1 to 104,857,600 characters
FLOAT	Double	Precision 15
INTEGER	BigInteger	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 Precision 19, scale 0

Google Analytics Data Type	Transformation Data Type	Range and Description for the Transformation Data Type
PERCENT	Double	Precision 15
STRING	String	1 to 104,857,600 characters
TIME	Double	Precision 15

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