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Preface

This documentation describes how to develop and use WebFOCUS Social Media Integration solutions. It is intended for users who are developing a social media solution that can collect data directly from a social media provider (such as Facebook® and Twitter®) and leverage it with WebFOCUS business intelligence functionality for reporting and analysis.

How This Manual Is Organized

This manual includes the following chapters:

<table>
<thead>
<tr>
<th>Chapter/Appendix</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introducing WebFOCUS Social Media Integration</td>
<td>Provides an introduction to WebFOCUS Social Media Integration and describes key components and facilities.</td>
</tr>
<tr>
<td>2 Facebook Adapter</td>
<td>Describes how to configure the Facebook Adapter.</td>
</tr>
<tr>
<td>3 Twitter Adapter</td>
<td>Describes how to configure the Twitter Adapter.</td>
</tr>
<tr>
<td>4 LinkedIn Adapter</td>
<td>Describes how to configure the LinkedIn Adapter.</td>
</tr>
<tr>
<td>5 Using the Adapter for Google Analytics</td>
<td>Describes how to configure the Google Analytics Adapter.</td>
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<td>6 Words Analysis Adapter</td>
<td>Describes how to configure the Words Analysis Adapter.</td>
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<td>7 WAND Sentiment Analysis Adapter</td>
<td>Describes how to configure the WAND Sentiment Analysis Adapter.</td>
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<td>8 Alchemy Sentiment Analysis Adapter</td>
<td>Describes how to configure the Alchemy Sentiment Analysis Adapter.</td>
</tr>
<tr>
<td>A Glossary of Related Terms</td>
<td>Provides definitions of commonly used words relating to WebFOCUS Social Media Integration.</td>
</tr>
</tbody>
</table>
**Documentation Conventions**

The following table describes the documentation conventions that are used in this manual.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THIS TYPEFACE</strong></td>
<td>Denotes syntax that you must enter exactly as shown.</td>
</tr>
<tr>
<td>or this typeface</td>
<td></td>
</tr>
<tr>
<td><strong>this typeface</strong></td>
<td>Represents a placeholder (or variable) in syntax for a value that you or the system must supply.</td>
</tr>
<tr>
<td><strong>underscore</strong></td>
<td>Indicates a default setting.</td>
</tr>
<tr>
<td><strong>this typeface</strong></td>
<td>Represents a placeholder (or variable), a cross-reference, or an important term. It may also indicate a button, menu item, or dialog box option that you can click or select.</td>
</tr>
<tr>
<td>Key + Key</td>
<td>Indicates keys that you must press simultaneously.</td>
</tr>
<tr>
<td>{  }</td>
<td>Indicates two or three choices. Type one of them, not the braces.</td>
</tr>
<tr>
<td>[  ]</td>
<td>Indicates a group of optional parameters. None are required, but you may select one of them. Type only the parameter in the brackets, not the brackets.</td>
</tr>
<tr>
<td></td>
<td>Separates mutually exclusive choices in syntax. Type one of them, not the symbol.</td>
</tr>
<tr>
<td>...</td>
<td>Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis (...).</td>
</tr>
<tr>
<td>.</td>
<td>Indicates that there are (or could be) intervening or additional commands.</td>
</tr>
</tbody>
</table>

**Related Publications**

Visit our Technical Content Library at [http://documentation.informationbuilders.com](http://documentation.informationbuilders.com). You can also contact the Publications Order Department at (800) 969-4636.
Customer Support

Do you have questions about this product?

Join the Focal Point community. Focal Point is our online developer center and more than a message board. It is an interactive network of more than 3,000 developers from almost every profession and industry, collaborating on solutions and sharing tips and techniques. Access Focal Point at http://forums.informationbuilders.com/eve/forums.

You can also access support services electronically, 24 hours a day, with InfoResponse Online. InfoResponse Online is accessible through our website, http://www.informationbuilders.com. It connects you to the tracking system and known-problem database at the Information Builders support center. Registered users can open, update, and view the status of cases in the tracking system and read descriptions of reported software issues. New users can register immediately for this service. The technical support section of www.informationbuilders.com also provides usage techniques, diagnostic tips, and answers to frequently asked questions.

Call Information Builders Customer Support Services (CSS) at (800) 736-6130 or (212) 736-6130. Customer Support Consultants are available Monday through Friday between 8:00 a.m. and 8:00 p.m. EST to address all your questions. Information Builders consultants can also give you general guidance regarding product capabilities. Please be ready to provide your six-digit site code number (xxxx.xx) when you call.

To learn about the full range of available support services, ask your Information Builders representative about InfoResponse Online, or call (800) 969-INFO.

Information You Should Have

To help our consultants answer your questions effectively, be prepared to provide the following information when you call:

- Your six-digit site code (xxxx.xx).
- Your WebFOCUS configuration:
  - The front-end software you are using, including vendor and release.
  - The communications protocol (for example, TCP/IP or HLLAPI), including vendor and release.
  - The software release.
  - Your server version and release. You can find this information using the Version option in the Web Console.
  - The stored procedure (preferably with line numbers) or SQL statements being used in server access.
User Feedback

- The Master File and Access File.
- The exact nature of the problem:
  - Are the results or the format incorrect? Are the text or calculations missing or misplaced?
  - Provide the error message and return code, if applicable.
  - Is this related to any other problem?
- Has the procedure or query ever worked in its present form? Has it been changed recently? How often does the problem occur?
- What release of the operating system are you using? Has it, your security system, communications protocol, or front-end software changed?
- Is this problem reproducible? If so, how?
- Have you tried to reproduce your problem in the simplest form possible? For example, if you are having problems joining two data sources, have you tried executing a query containing just the code to access the data source?
- Do you have a trace file?
- How is the problem affecting your business? Is it halting development or production? Do you just have questions about functionality or documentation?

User Feedback

In an effort to produce effective documentation, the Technical Content Management staff welcomes your opinions regarding this document. You can contact us through our website http://documentation.informationbuilders.com/connections.asp.

Thank you, in advance, for your comments.

Information Builders Consulting and Training

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For information on course descriptions, locations, and dates, or to register for classes, visit our website (http://education.informationbuilders.com) or call (800) 969-INFO to speak to an Education Representative.
Introducing WebFOCUS Social Media Integration

This section provides an introduction to WebFOCUS Social Media Integration and describes key components and facilities.

**In this chapter:**
- Integrating With Social Media
- WebFOCUS Social Media Integration at a Glance
- Understanding the Architecture of WebFOCUS Social Media Integration

**Integrating With Social Media**

Every day, millions of people around the world use social media sites, such as Facebook and Twitter to express themselves. Their communications often include thoughts about good and bad business experiences, and opinions about products and companies they like and dislike. This presents a valuable opportunity to get to know your customers in ways never before possible.

Using a WebFOCUS Social Media Integration solution, you can collect data directly from Facebook®, Twitter®, LinkedIn®, and Google Analytics® and leverage it to positively influence sales and marketing, customer service, product development, and other important operations. Unlike expensive surveys, which deliver outdated intelligence, this solution offers real-time insight into how audiences perceive your company, your products and services, and your competitors.

**Social Media Integration**

Facebook, Twitter, and LinkedIn contain a wealth of vital information about consumer sentiment. For example, this valuable information can provide answers to key questions, such as:

- What image do you portray to your customers?
- Do they like your products and services?
- Are they satisfied with the support they receive?

The Facebook Adapter can be used to retrieve posts and comments for Company and User Facebook pages.

The Twitter Adapter can be used to search and retrieve Tweets based on a defined search criteria.
The LinkedIn Adapter can be used to retrieve posts and comments for LinkedIn Group Discussions and Company Event Status Updates.

All of this type of information can assist in making key business decisions. WebFOCUS reports can be created to either report directly against this information or a data warehouse created using DataMigrator. Metrics can then be shown graphically through the use of WebFOCUS dashboards with drill-down to specific tabular information.

**Sentiment Analytics**

A Sentiment Analytics solution allows you to gather and interpret consumer sentiment with the highest degree of accuracy, and helps you determine which comments require your immediate attention. Sophisticated algorithms precisely gauge the emotional intensity within large volumes of written text, including Facebook posts and comments, Twitter Tweets, LinkedIn posts and comments, and other sources such as email and electronic survey information. Each message is then assigned a sentiment score (displayed as a negative to positive range of numeric values) so it can be prioritized and passed to the appropriate stakeholder for follow up.

**Word Analytics**

Knowledge of the specific words used to describe your company and its offerings is crucial to your ability to effectively assess public opinion. The Words Analysis Adapter employs an advanced algorithm that breaks sentences into component parts, removes common words, and provides visualizations of the most meaningful words and the frequency of their use over time. You can also drill down to individual messages, so words can be understood in full context. Using this adapter, social media professionals, marketing analysts, compliance officers, and others can quickly and easily detect which words are gaining popularity, and which ones are positively or negatively impacting the business.

**Google Analytics**

The Google Analytics Adapter is used to report against the information residing in the Google Analytics environment. Metrics, such as Page Views and Users, can be analyzed by various dimensions (for example, Country and City).

You can configure the Google Analytics Adapter using the WebFOCUS Reporting Server Web Console. The adapter requires a connection, which stores the access token. A valid Google Analytics access token is required to issue Google Analytics API calls. This token is associated with a Google Analytics application and a specific Google Analytics user.
**WebFOCUS Social Media Integration at a Glance**

The following diagram illustrates the key components that are required in WebFOCUS Social Media Integration.

**Note:** Depending on the sentiment analysis strategy being used, WAND® or Alchemy integration can be implemented.

**Understanding the Architecture of WebFOCUS Social Media Integration**

Describes the key components that are used to develop a WebFOCUS Social Media Integration solution.
Facebook Adapter

The Facebook Adapter provides the ability to retrieve information directly from Facebook. The adapter can access any other textual information in accordance with user-granted permissions. Page administrators and application owners have access to Facebook Page metric information, such as Page Likes by Country and Page Likes by City.

The Facebook Adapter provides you with the following capabilities:

- Read Facebook Page posts and comments, including Poster, Commenter, and Likes.
- Read page information, including Description, Company Profile, and Likes.
- Read user information, including Name, Sex, City, Country, and Friends Count.

In addition, the Create Synonym functionality creates metadata, sample reports, and DataMigrator flows.

Twitter Adapter

The Twitter Adapter provides reporting capabilities from Twitter. Twitter is an online social networking and microblogging service that enables users to send and read text-based messages of up to 140 characters, called tweets. The Twitter Adapter provides the ability to read tweets for a specific Screen Name and perform searches on a number of different parameters based on words indexed by Twitter in tweets.

**Note:** The Twitter API only returns the last 3,200 tweets for a particular Screen Name.

LinkedIn Adapter

The LinkedIn Adapter provides reporting capabilities from LinkedIn. LinkedIn is a social networking website for people in professional occupations. LinkedIn members can store their professional history within the LinkedIn environment as well as perform job searches for available employment. Companies can store their corporate information within the LinkedIn environment as well as perform people searches for open position candidates.

The LinkedIn Adapter provides the following capabilities:

- Read Group Discussion posts, comments, and likes
- Read Company status updates including comments and likes
- Perform Job Search requests
- Perform People Search request
- Retrieve Basic Profile information for a LinkedIn member
- Retrieve Full Profile information for the authenticated user

**Note:** Job Search, Job Lookup, and People Search functionality require approval from LinkedIn to Vetted API Access where the application form can be accessed from: https://help.linkedin.com/app/api-dvr

### Words Analysis Adapter

The Words Analysis Adapter counts the occurrences of each word. It also uses a Stopwords file to populate and determine which words to exclude in the adapter. The results are displayed in a Tabular report or graph.

### WAND DataFacet Taxonomy Server for Sentiment Analysis

WAND® DataFacet® Taxonomy Server is third-party software provided by WAND Inc. that is resold by Information Builders. The Taxonomy Server evaluates content and returns a sentiment score based on a default Sentiment Taxonomy. The Sentiment Taxonomy can be customized with the use of the WAND Taxonomy Editor.

### WAND Sentiment Analysis Adapter

The WAND Sentiment Analysis Adapter creates a connection to the WAND Taxonomy Server. Textual information is passed to WAND from within WebFOCUS procedures for Sentiment Analysis evaluation. The adapter passes the textual information to the WAND Taxonomy Server thereby analyzing the text for negative or positive sentiment with scores ranging from -1 to 1.

### Alchemy Sentiment Analysis Adapter

Alchemy provides a service whereby textual information can be passed to its API, which would then return a sentiment score. Using algorithms, the score returned by the Alchemy API determines the sentiment as to a negative or positive feeling about a particular item. Textual information is passed to Alchemy from within WebFOCUS procedures for Sentiment Analysis evaluation. The Alchemy Sentiment Analysis Adapter passes the textual information to the Alchemy API whereby the text is analyzed for negative or positive sentiment with scores ranging from -1 to 1.
This section describes how to configure the Facebook Adapter.

**In this chapter:**

- Overview
- Creating a Facebook Application
- Configuring the Facebook Adapter
- Creating Metadata and Sample Reports for the Facebook Adapter
- Examples

**Overview**

The Facebook Adapter is used to report against information, resident in the Facebook environment. It can also be used by DataMigrator in the creation of datamarts to house Facebook information.

You can configure the Facebook Adapter using the Reporting Server Web Console. The adapter requires a connection, which stores the access token. A valid Facebook access token is needed to issue Facebook API calls. The token is associated with a Facebook application and a specific Facebook user. The access token is valid for 60 days after which a new access token would need to be obtained and configured.

The connection page shows permissions that will be granted to the Facebook application. You can uncheck permissions that should not be granted. The connection process will use only checked permissions. Authentication will take place even if no permissions are granted.

**Creating a Facebook Application**

A Facebook application needs to exist before configuring the Facebook Adapter. The Facebook application must be associated with the Domain where the WebFOCUS Reporting Server is installed.

**Procedure:  How to Create a Facebook Application**

1. From a browser, enter the following URL in a web browser:

   https://developers.facebook.com/apps
Creating a Facebook Application

A Facebook Login screen will appear if you are not already logged into Facebook, as shown in the following image.

2. Enter the Facebook credentials and click Log In.

   The following screen is displayed.

3. Click +Create New App.
The Create a New App screen is displayed, as shown in the following image.

4. In the Display Name field, enter a name for the new Facebook application, select a category for the application from the Category drop-down list, and then click **Create App**.

The Security Check screen is displayed, as shown in the following image.

5. In the Text in the box field, enter the letter/number combination that is displayed, and then click **Submit**.
The Dashboard screen is displayed and is branded based on the display name you specified, as shown in the following image.

![Dashboard Screen](image)

The Dashboard screen contains the App ID and App Secret values. The App Secret value is hidden by default. These values are required for configuring the Facebook Adapter.

6. To view the App Secret value, click **Show**.
   A prompt for the password of the Facebook user creating the application is displayed.

7. Enter the valid password and then click **Submit**.

8. Click **Settings** in the left pane.
   The Settings screen is displayed, as shown in the following image.

![Settings Screen](image)

9. In the App Domains field, enter the domain where the WebFOCUS Reporting Server is installed.
10. Click **+Add Platform**.
The Select Platform screen is displayed, as shown in the following image.

11. Click Website.
You are returned to the Settings screen, as shown in the following image.

12. Enter a Site URL or a Mobile Site URL with the domain matching where the WebFOCUS Reporting Server is installed.

13. Click Save Changes.

You are now ready to configure the Facebook Adapter.

**Configuring the Facebook Adapter**

This section describes how to configure the Facebook Adapter.

**Procedure: How to Configure the Facebook Adapter**

1. Clear the cookies from the web browser that will be used to start the WebFOCUS Reporting Server Web Console.
2. Access the WebFOCUS Reporting Server Web Console with a URL containing the domain where the WebFOCUS Reporting Server is installed. For more information, see Creating a Facebook Application on page 17.

   This domain should match the one configured with the Facebook application. For example:

   http://IBI-Computer.ibi.com:8121

3. From the WebFOCUS Reporting Server Web Console menu bar, click Adapters.

   The Adapters pane opens.

4. Expand the Available folder, if it is not already expanded.

5. Expand the Social Media folder.

6. Right-click the Facebook node and select Configure, as shown in the following image.
The Add Facebook to Configuration pane opens, as shown in the following image.

7. Enter the values for the Application ID and Application Secret as defined in the Facebook application you created.

   For more information, see Creating a Facebook Application on page 17.

8. Choose the options in the Allowed Permissions area that are to be granted to the Facebook application and then click the Get Access Token link.

   For more information on the Allowed Permissions, see Connection Attributes for Facebook on page 27.
A Facebook login dialog opens, as shown in the following image.

If the Facebook login dialog does not open, ensure that the Pop-up Blocker within the web browser is either disabled or configured to allow pop-up windows from the host where the WebFOCUS Reporting Server is installed.

9. Enter the Facebook login credentials and then click Log In.
A pop-up window is displayed asking you to confirm the permissions that are to be granted to the Facebook application, as shown in the following image.

10. Click Okay.
You are returned to the Add Facebook to Configuration pane where the Access Token Expiration and the Access Token fields are now populated, as shown in the following image.

![Add Facebook to Configuration](image)

11. Click **Configure**.

The configured Facebook Adapter is added to the Facebook node in the left pane.

**Note:** The Access Token expires after 60 days. To refresh the Access Token, click the **Get Access Token** link and then click **Configure**.

**Reference:** **Connection Attributes for Facebook**

The following list describes the connection attributes for the Facebook Adapter.

**Connection Name**

Logical name used to identify this particular set of connection attributes. The default is CON01.
**Facebook URL**

The URL of the Facebook Graph API request. The default value is:

https://graph.facebook.com/

For iSeries machines, the WebFOCUS Reporting Server must be configured for SSL as follows:

1. From the Web Console, click *Workspace*, select *Settings*, and then click *Miscellaneous Settings*, as shown in the following image.

![Miscellaneous Settings](image)

2. Enter values for *outbound_ssl_certificate_file*, *outbound_ssl_certificate_passphrase*, and *outbound_ssl_certificate_label*, and then click *Save*. For example:

```
outbound_ssl_certificate_file * /home/bigcfg/265/lbi/srv77/wfs/etc/iwayskr.kdb
outbound_ssl_certificate_passphrase * ************
outbound_ssl_certificate_label * iwaysrv
```

**Application ID**

The Facebook application ID as defined during the creation of the Facebook Application. For more information, see *Creating a Facebook Application* on page 17.

**Application Secret**

The Facebook application secret as defined in the Facebook application. For more information, see *Creating a Facebook Application* on page 17.
Access Token Expiration

The date and time that the Access Token will expire.

Access Token

Click the Get Access Token link to obtain this token. The credentials for a Facebook account are then entered. The value for the Access Token is returned by an authorized login.

Allowed Permissions

Grants the selected permissions to the Facebook application, which include:

- About
- Birthday
- Likes
- Location
- Hometown
- Relationships
- Interests
- Religion, Politics
- Status
- Education History
- Work History

Select profile

Select a profile from the drop-down list to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), select New Profile from the drop-down list and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

Creating Metadata and Sample Reports for the Facebook Adapter

Create Synonym for the Facebook Adapter creates the metadata used for WebFOCUS reporting and DataMigrator ETL flows. It also creates sample WebFOCUS reports and DataMigrator ETL flows.
Procedure: How to Create Metadata and Sample Reports

1. From the WebFOCUS Reporting Server Web Console, expand the Adapters folder, Configured folder, and then the Facebook folder.

2. Right-click the configured connection for the Facebook Adapter (for example, FB) and select Create Synonym from the context menu, as shown in the following image.
The Candidate(s) for Facebook Synonym(s) (at FB) pane opens, as shown in the following image.

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata, sample reports, and DataMigrator ETL flows are to be stored.

4. Click Create Synonym(s) and Examples.
The Create Synonym for Facebook Status pane opens and indicates that the synonym was created successfully.

Examples

This section describes the metadata and sample reports for the Facebook Adapter.

**Reference: Facebook Adapter Metadata**

The following table lists and describes the available metadata for the Facebook Adapter.

A metadata name with a "_o" suffix is used to retrieve an object of information from Facebook. This type of metadata should only be used as a secondary file in a JOIN.

A metadata name without a "_o" suffix is used to retrieve specific columns of information from Facebook.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application_o</td>
<td>Used to retrieve information about a Facebook application.</td>
</tr>
<tr>
<td>comment</td>
<td>Describes the Comment table. Used to retrieve specific information about a Facebook comment.</td>
</tr>
<tr>
<td>comment_o</td>
<td>Used to retrieve information about a Facebook comment.</td>
</tr>
<tr>
<td>fb_search</td>
<td>Used to search for a Facebook ID for an application, page, or user.</td>
</tr>
<tr>
<td>fb_search_posts</td>
<td>Used to search for all public posts containing a specified query string.</td>
</tr>
<tr>
<td>friend</td>
<td>Describes friend table. Used to retrieve the IDs for friends of a user.</td>
</tr>
<tr>
<td>insights</td>
<td>Describes the Insights table. Used to retrieve specific statistics about a particular Facebook application, page, or domain.</td>
</tr>
<tr>
<td>Metadata</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>like</td>
<td>Describes the Like table. Used to retrieve the IDs of users who like a given video, post, comment, link, photo, or album.</td>
</tr>
<tr>
<td>likes_o</td>
<td>Used to retrieve the IDs and names of users who like a given video, post, comment, link, photo, or album.</td>
</tr>
<tr>
<td>page</td>
<td>Describes the Page table. Used to retrieve information about a Facebook page.</td>
</tr>
<tr>
<td>profile</td>
<td>Describes the Profile table. Used to retrieve the name, user name/page alias, and type for a Facebook object. For example, user, group, page, event, application.</td>
</tr>
<tr>
<td>statuses_o</td>
<td>Used to retrieve posts, comments, and likes for a Facebook application or page.</td>
</tr>
<tr>
<td>stream</td>
<td>Describes the Stream table. Used to retrieve Post information.</td>
</tr>
<tr>
<td>user</td>
<td>Describes the User table. Used to retrieve information about a user.</td>
</tr>
<tr>
<td>fbsampl/app_statuses</td>
<td>Cluster Join used for reporting application posts and comments.</td>
</tr>
<tr>
<td></td>
<td>Joins:</td>
</tr>
<tr>
<td></td>
<td>from application_o to statuses_o</td>
</tr>
<tr>
<td>fbsampl/fb_comment_sentiment</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_sentiment_load DataMigrator flow. The table contains sentiment scores for Facebook comments. Used when the WAND Sentiment Analysis Adapter is configured.</td>
</tr>
<tr>
<td>fbsampl/fb_comments</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains Facebook comments.</td>
</tr>
<tr>
<td>Metadata</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>fbsampl/fb_comments_to_sentiment</td>
<td>Cluster Join from fb_comments to wandscore; wandscore metadata is created from the WAND Sentiment Analysis Adapter. Used by the fb_datamigrator_sentiment_load DataMigrator flow.</td>
</tr>
</tbody>
</table>
| fbsampl/fb_join_datamodel_excluding_sentiment | Cluster Join used for reporting post, posters, comments, commenters, replies, and repliers. Joins:  
- fb_posts to fb_profile  
- fb_posts to fb_page_info  
- fb_posts to fb_comments  
- fb_comments to fb_profile  
- fb_comments to fb_replies  
- fb_replies to fb_profile |
<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fbsampl/fb_join_datamodel_including_sentiment</td>
<td>Cluster Join used for reporting post, posters, comments, commenters, replies, repliers, post sentiment score, comment sentiment score, and reply sentiment score. Joints:</td>
</tr>
<tr>
<td></td>
<td>- fb_posts to fb_profile</td>
</tr>
<tr>
<td></td>
<td>- fb_posts to fb_page_info</td>
</tr>
<tr>
<td></td>
<td>- fb_posts to fb_comments</td>
</tr>
<tr>
<td></td>
<td>- fb_comments to fb_profile</td>
</tr>
<tr>
<td></td>
<td>- fb_comments to fb_replies</td>
</tr>
<tr>
<td></td>
<td>- fb_replies to fb_profile</td>
</tr>
<tr>
<td></td>
<td>- fb_posts to fb_post_sentiment</td>
</tr>
<tr>
<td></td>
<td>- fb_comments to fb_comment_sentiment</td>
</tr>
<tr>
<td></td>
<td>- fb_replies to fb_comment_sentiment</td>
</tr>
<tr>
<td></td>
<td>Used when the WAND Sentiment Analysis Adapter is configured.</td>
</tr>
<tr>
<td>fbsampl/fb_page_info</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains Facebook page information.</td>
</tr>
<tr>
<td>fbsampl/fb_post_sentiment</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_sentiment_load DataMigrator flow. The table contains sentiment scores for Facebook posts. Used when the WAND Sentiment Analysis Adapter is configured.</td>
</tr>
<tr>
<td>fbsampl/fb_posts</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains Facebook posts.</td>
</tr>
<tr>
<td>Metadata</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>fbsampl/fb_posts_to_sentiment</td>
<td>Cluster Join from fb_posts to wandscore; wandscore metadata is created from the WAND Sentiment Analysis Adapter. Used by the fb_datamigrator_sentiment_load DataMigrator flow.</td>
</tr>
<tr>
<td>fbsampl/fb_profile</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains name, user name/page alias, and type information for a Facebook object. For example, user, group, page, event, application.</td>
</tr>
<tr>
<td>fbsampl/fb_replies</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains Facebook replies.</td>
</tr>
<tr>
<td>fbsampl/fb_replies_to_sentiment</td>
<td>Cluster Join from fb_replies to wandscore; wandscore metadata is created from the WAND Sentiment Analysis Adapter. Used by the fb_datamigrator_sentiment_load DataMigrator flow.</td>
</tr>
<tr>
<td>fbsampl/fb_user</td>
<td>Describes a SQL Server table loaded by the fb_datamigrator_load DataMigrator flow. The table contains user information.</td>
</tr>
<tr>
<td>Metadata</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>fbsampl/full_model</td>
<td>Cluster Join used for reporting page posts, comments, post and comment likes, and post and comment user information.</td>
</tr>
<tr>
<td></td>
<td>Joins:</td>
</tr>
<tr>
<td></td>
<td>- page to stream</td>
</tr>
<tr>
<td></td>
<td>- stream to comment</td>
</tr>
<tr>
<td></td>
<td>- comment to like</td>
</tr>
<tr>
<td></td>
<td>- like to user</td>
</tr>
<tr>
<td></td>
<td>- comment to user</td>
</tr>
<tr>
<td></td>
<td>- stream to like</td>
</tr>
<tr>
<td></td>
<td>- stream to user</td>
</tr>
<tr>
<td>fbsampl/page_ids</td>
<td>Describes a FIX format file which contains the Facebook page IDs that are used to define which posts, comments, and replies of a Facebook page are to be loaded by the fb_datamigrator_load DataMigrator flow into the various SQL Server tables.</td>
</tr>
<tr>
<td>fbsampl/page_insights</td>
<td>Cluster Join used for reporting page and page statistics.</td>
</tr>
<tr>
<td></td>
<td>Joins:</td>
</tr>
<tr>
<td></td>
<td>- page to insights</td>
</tr>
<tr>
<td>fbsampl/page_posts_comments</td>
<td>Cluster Join used for reporting page posts and comments.</td>
</tr>
<tr>
<td></td>
<td>Joins:</td>
</tr>
<tr>
<td></td>
<td>- page to stream</td>
</tr>
<tr>
<td></td>
<td>- stream to comment</td>
</tr>
</tbody>
</table>
Cluster Join used by the fb_datamigrator_load DataMigrator flow.

Joins:

fbsampl/page_ids to fbsampl/page_posts_comments

Cluster Join used for reporting user posts and comments.

Joins:

stream to comment_o

---

**Reference: Facebook Adapter Sample Reports**

The following table lists and describes the sample reports for the Facebook Adapter.

<table>
<thead>
<tr>
<th>Sample Report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fbsampl/app_comments</td>
<td>Reports on posts and comments for a Facebook application.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/app_statuses</td>
</tr>
<tr>
<td>fbsampl/app_likes</td>
<td>Reports on likes for a Facebook application.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/app_statuses</td>
</tr>
<tr>
<td>fbsampl/fb_create_datamodel</td>
<td>Creates the SQL Server tables used for the Facebook data model loaded by the fb_datamigrator_load and fb_datamigrator_sentiment_load DataMigrator flows.</td>
</tr>
<tr>
<td></td>
<td>As a prerequisite, a SQL Server connection called socialmedia must be configured as well as the creation of a SQL Server database called Facebook.</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>fbsampl/fb_delete_datamodel</td>
<td>Deletes the SQL Server tables used for the data model.</td>
</tr>
<tr>
<td>fbsampl/fb_page_drill</td>
<td>Page information drill report.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/fb_page_info</td>
</tr>
<tr>
<td>fbsampl/fb_page_posts_comments_replies_report</td>
<td>Reports Facebook page posts with related comments and replies.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/fb_join_datamodel_excluding_sentiment</td>
</tr>
<tr>
<td>fbsampl/fb_page_posts_comments_replies_scored_report</td>
<td>Reports Facebook page posts with related comments and replies including sentiment scoring.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/fb_join_datamodel_including_sentiment</td>
</tr>
<tr>
<td>fbsampl/fb_search</td>
<td>Search for the ID and name for a page, application, or user.</td>
</tr>
<tr>
<td></td>
<td>Uses fb_search.</td>
</tr>
<tr>
<td>fbsampl/fb_search_posts</td>
<td>Search for all public posts containing a specified query string.</td>
</tr>
<tr>
<td></td>
<td>Uses: fb_search_posts</td>
</tr>
<tr>
<td>fbsampl/fb_tagcloud_drill_excluding_sentiment</td>
<td>Drill to posts, comments, and replies from the tag cloud. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/fb_join_datamodel_excluding_sentiment</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>fbsampl/fb_tagcloud_drill_including_sentiment</td>
<td>Drill to posts, comments, replies, and sentiment from the tag cloud. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td>fbsampl/fb_tagcloud_drill_post_excluding_sentiment</td>
<td>Reports on a specific post with related comments and replies. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td>fbsampl/fb_tagcloud_drill_post_including_sentiment</td>
<td>Reports on a specific post with related comments, replies, and sentiment. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td>fbsampl/fb_tagcloud_posts_comments_replies</td>
<td>Tag cloud graph for posts, comments, and replies. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>fbsampl/fb_user_drill</td>
<td>User information drill report.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td>fbsampl/insights</td>
<td>Reports metrics for a specific page or application.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>fbsampl/page_insights</td>
<td>Reports metrics for a specific page.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/page_insights</td>
</tr>
<tr>
<td>fbsampl/page_posts_comments</td>
<td>Reports Facebook page posts and related comments.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/page_posts_comments</td>
</tr>
<tr>
<td>fbsampl/page_posts_comments_replies</td>
<td>Reports Facebook page posts and related comments including replies.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/page_posts_comments_replies and comment</td>
</tr>
<tr>
<td>fbsampl/posts_comments</td>
<td>Reports Facebook user posts and related comments.</td>
</tr>
<tr>
<td></td>
<td>Uses: fbsampl/posts_comments</td>
</tr>
</tbody>
</table>
### Reference: Facebook Adapter DataMigrator Flows

The following table lists and describes the DataMigrator flows for the Facebook Adapter. The Facebook Data Model must first be created by running fbsamp/fb_create_datamodel.

<table>
<thead>
<tr>
<th>Flow</th>
<th>Description</th>
</tr>
</thead>
</table>
| fbsampl/fb_datamigrator_load | Process flow to run the following data flows:  
- fbsampl/fb_load_page  
- fbsampl/fb_load_posts  
- fbsampl/fb_load_comments  
- fbsampl/fb_load_replies  
- fbsampl/fb_load_profile_posters  
- fbsampl/fb_load_profile_commenters  
- fbsampl/fb_load_profile_repliers  
- fbsampl/fb_load_pages  
- fbsampl/fb_load_users |
| fbsampl/fb_datamigrator_sentiment_load | Process flow to run the following data flows:  
- fbsampl/fb_load_post_sentiment  
- fbsampl/fb_load_comment_sentiment  
- fbsampl/fb_load_reply_sentiment |
<p>| fbsampl/fb_load_comment_sentiment | Data flow to load sentiment scores for Facebook comments. |
| fbsampl/fb_load_comments | Data flow to load Facebook comments. |
| fbsampl/fb_load_page | Data flow to load Facebook page information for pages identified in the fbsampl/page_ids.ftm file. |
| fbsampl/fb_load_pages | Data flow to load Facebook page information for people that have either posted, commented, or replied from a Facebook page. |</p>
<table>
<thead>
<tr>
<th>Flow</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fbsampl(fb_load_post_sentiment)</td>
<td>Data flow to load sentiment scores for Facebook posts.</td>
</tr>
<tr>
<td>fbsampl(fb_load_posts)</td>
<td>Data flow to load Facebook posts.</td>
</tr>
<tr>
<td>fbsampl(fb_load_profile_commenters)</td>
<td>Data flow to load Facebook user and page profile information for commenters. For example, ID, name, and commenter type (page/user).</td>
</tr>
<tr>
<td>fbsampl(fb_load_profile_posters)</td>
<td>Data flow to load Facebook user and page profile information for posters. For example, ID, name, and poster type (page/user).</td>
</tr>
<tr>
<td>fbsampl(fb_load_profile_repliers)</td>
<td>Data flow to load Facebook user and page profile information for repliers. For example, ID, name, and replier type (page/user).</td>
</tr>
<tr>
<td>fbsampl(fb_load_replies)</td>
<td>Data flow to load Facebook replies.</td>
</tr>
<tr>
<td>fbsampl(fb_load_reply_sentiment)</td>
<td>Data flow to load sentiment scores for Facebook replies.</td>
</tr>
<tr>
<td>fbsampl(fb_load_users)</td>
<td>Data flow to load Facebook user information for people that have either posted, commented, or replied.</td>
</tr>
</tbody>
</table>
This section describes how to configure the Twitter Adapter.

In this chapter:
- Overview
- Creating a Twitter Application
- Configuring the Twitter Adapter
- Creating Metadata and Sample Reports for the Twitter Adapter
- Examples

Overview

You can configure the Twitter Adapter using the WebFOCUS Reporting Server Web Console. The adapter requires a connection, which stores the access token. A valid Twitter access token is required to issue Twitter API calls. The token is associated with a Twitter application and a Twitter Screen Name.

Creating a Twitter Application

A Twitter application needs to exist before configuring the Twitter adapter

Procedure: How to Create a Twitter Application

1. From a browser, enter the following URL in a web browser:

   https://apps.twitter.com
A Twitter Application Management screen will appear if you are not already logged into Twitter, as shown in the following image.

2. If you are not already signed in to Twitter, click the **Sign in** link located in the upper-right corner of the screen.

3. Click the **Create New App** button in the upper-right corner of the screen.

The Application details screen opens, as shown in the following image.
4. Perform the following steps:
   
   a. Enter a name without spaces for the new Twitter application in the Name field.
   
   b. Enter a description for the new Twitter application in the Description field.
   
   c. Enter website URL for the company hosting the new Twitter application in the Website field.

5. Scroll down to the Developer Rules of the Road and read the agreement, as shown in the following image.

If the agreement is acceptable, select Yes, I agree and then click Create your Twitter application.
The configuration page for the new Twitter application (for example, IBadapter) opens, as shown in the following image.

6. Click the **manage API keys** link in the API key row.
The Application settings page opens, as shown in the following image.

**Application settings**

Keep the "API secret" a secret. This key should never be human-readable in your application.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>API key</td>
<td>[obfuscated]</td>
</tr>
<tr>
<td>API secret</td>
<td>[obfuscated]</td>
</tr>
<tr>
<td>Access level</td>
<td>Read-only (modify app permissions)</td>
</tr>
<tr>
<td>Owner</td>
<td>EfremLiwan</td>
</tr>
<tr>
<td>Owner ID</td>
<td>732611713</td>
</tr>
</tbody>
</table>

**Application actions**

- Regenerate API keys
- Change App Permissions

**Your access token**

You haven't authorized this application for your own account yet.

By creating your access token here, you will have everything you need to make API calls right away. The access token generated will be assigned your application's current permission level.

**Token actions**

- Create my access token

**Note:** The API key and the API secret values will be required during the configuration of the Twitter adapter.

7. Click *Create my access token*.

A Status message may appear at the top of the page, as shown in the following image.

**Status**

Your application access token has been successfully generated. It may take a moment for changes you've made to reflect.

Refresh if your changes are not yet indicated.

8. Click the *Refresh* link within the status message.
9. Scroll down to the Your access token section of the page, as shown in the following image.

<table>
<thead>
<tr>
<th>Your access token</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access token</td>
</tr>
<tr>
<td>Access token secret</td>
</tr>
<tr>
<td>Access level</td>
</tr>
<tr>
<td>Owner</td>
</tr>
<tr>
<td>Owner ID</td>
</tr>
</tbody>
</table>

**Note:** The Access token and Access token secret values will be required during the configuration of the Twitter adapter.

**Configuring the Twitter Adapter**

This section describes how to configure the Twitter Adapter.

**Procedure:** How to Configure the Twitter Adapter

1. From the Web Console menu bar, click *Adapters*.
   
The Adapters folder opens.

2. From the WebFOCUS Reporting Server Web Console menu bar, click *Adapters*.
   
The Adapters pane opens.

3. Expand the *Available* folder, if it is not already expanded.

4. Expand the *Social Media* folder.

5. Right-click the *Twitter* node and select *Configure*, as shown in the following image.
The Add Twitter to Configuration pane opens, as shown in the following image.

6. Enter the values for the Consumer Key, Consumer Secret, Access Token, and Access Secret as defined in the Twitter application.

   For more information, see Creating a Twitter Application on page 45.

7. Click Configure.

   The Twitter adapter is added to the configured Adapters list in the navigation pane.

Reference:  **Connection Attributes for Twitter**

The following list describes the connection attributes for the Twitter adapter.

**Connection Name**

Logical name used to identify this particular set of connection attributes. The default is CON01.
**Twitter URL**

The URL of the Twitter API request. The default value is:

https://api.twitter.com/1.1/

For iSeries machines, the WebFOCUS Reporting Server must be configured for SSL as follows:

1. From the Web Console, click *Workspace*, select *Settings*, and then click *Miscellaneous Settings*, as shown in the following image.

2. Enter values for *outbound_ssl_certificate_file*, *outbound_ssl_certificate_passphrase*, and *outbound_ssl_certificate_label*, and then click Save. For example:

![Configuration settings](image)

**Consumer Key**

Also known as the API key, this application key is generated when creating a Twitter application. For more information, see *Creating a Twitter Application* on page 45.

This key is used along with the Consumer Secret for authentication purposes.
**Consumer Secret**

Used for authentication purposes, along with the Consumer Key, this value is generated when creating a Twitter application. For more information, see *Creating a Twitter Application* on page 45.

**Access Token**

Used for authentication purposes, along with the Access Secret, this key is generated when creating an Access Token from the Twitter application. For more information, see *Creating a Twitter Application* on page 45. It defines the user who is authenticating to Twitter.

**Access Secret**

Used for authentication purposes, along with the Access Token, this value is generated when creating an Access Token from the Twitter application. For more information, see *Creating a Twitter Application* on page 45.

**Select profile**

Select a profile from the drop-down list to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), choose New Profile from the drop-down menu and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

---

**Creating Metadata and Sample Reports for the Twitter Adapter**

Create Synonym for the Twitter Adapter creates the metadata used for WebFOCUS reporting and DataMigrator ETL flows. It also creates sample WebFOCUS reports and DataMigrator ETL flows.

**Procedure: How to Create Metadata and Sample Reports**

1. From the WebFOCUS Reporting Server Web Console, expand the *Adapters* folder, *Configured* folder, and then the *Twitter* folder.
2. Right-click the configured connection for the Twitter Adapter (for example, twitter) and select Create Synonym from the context menu, as shown in the following image.

The Candidate(s) for Twitter Synonym(s) (at twitter) pane opens, as shown in the following image.

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata, sample reports, and DataMigrator ETL flows are to be stored.
4. Click Create Synonym(s) and Examples.

The Create Synonym for Twitter Status pane opens and indicates that the synonym was created successfully.

Examples

This section describes the metadata and sample reports for the Twitter Adapter.

Reference: Twitter Adapter Metadata

The following table lists and describes the available metadata for the Twitter Adapter.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>account_settings</td>
<td>Used to retrieve the account settings for a Twitter user.</td>
</tr>
<tr>
<td>followers_list</td>
<td>Used to retrieve a list users following a specific user.</td>
</tr>
<tr>
<td>search_tweets</td>
<td>Used to search for tweets based on a query string.</td>
</tr>
<tr>
<td>statuses_retweets</td>
<td>Used to retrieve the first 100 retweets of a specific tweet.</td>
</tr>
<tr>
<td>statuses_user_timeline</td>
<td>Used to retrieve the most recent tweets for a Twitter Screen Name.</td>
</tr>
<tr>
<td>twtsampl/tw_tweet_sentiment</td>
<td>Describes a SQL Server table loaded by the tw_datamigrator_sentiment_load DataMigrator flow. The table contains Sentiment Scores for Twitter tweets. Used when the WAND Sentiment Analysis Adapter is configured.</td>
</tr>
<tr>
<td>twtsampl/tw_tweets</td>
<td>Describes a SQL Server table loaded by the tw_datamigrator_load DataMigrator flow. The table contains Twitter tweets.</td>
</tr>
<tr>
<td>twtsampl/tw_tweets_to_sentiment</td>
<td>Cluster Join from tw_tweets to wandscore; wandscore metadata is created from the WAND Sentiment Analysis Adapter. Used by the tw_datamigrator_sentiment_load DataMigrator flow.</td>
</tr>
</tbody>
</table>
**Reference:**  
**Twitter Adapter Sample Reports**

The following table lists and describes the sample reports for the Twitter Adapter.

<table>
<thead>
<tr>
<th>Sample Report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>twtsampl/account_settings</td>
<td>Retrieves the account settings for a Twitter user.</td>
</tr>
<tr>
<td></td>
<td>Uses: account_settings</td>
</tr>
<tr>
<td>twtsampl/followers_list</td>
<td>Displays a list of users who a follow a specific Twitter user.</td>
</tr>
<tr>
<td></td>
<td>Uses: followers_list</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>twtsampi/search_tweets</td>
<td>Search for all public posts containing a specified query string.</td>
</tr>
<tr>
<td></td>
<td>Query operators:</td>
</tr>
<tr>
<td></td>
<td>word1 word2</td>
</tr>
<tr>
<td></td>
<td>Containing both words. This is the default operator.</td>
</tr>
<tr>
<td></td>
<td>&quot;word1 word2&quot;</td>
</tr>
<tr>
<td></td>
<td>Containing the exact phrase.</td>
</tr>
<tr>
<td></td>
<td>word1 OR word2</td>
</tr>
<tr>
<td></td>
<td>Containing either word1 or word2.</td>
</tr>
<tr>
<td></td>
<td>word1 -word2</td>
</tr>
<tr>
<td></td>
<td>Containing word1 but not word2.</td>
</tr>
<tr>
<td></td>
<td>#word1</td>
</tr>
<tr>
<td></td>
<td>Containing hashtag word1.</td>
</tr>
<tr>
<td></td>
<td>from:ScreenName</td>
</tr>
<tr>
<td></td>
<td>Tweets sent from a specific Screen Name.</td>
</tr>
<tr>
<td></td>
<td>to:ScreenName</td>
</tr>
<tr>
<td></td>
<td>Tweets sent to a specific Screen Name.</td>
</tr>
<tr>
<td></td>
<td>@ScreenName</td>
</tr>
<tr>
<td></td>
<td>Referencing a specific Screen Name.</td>
</tr>
<tr>
<td></td>
<td>word1 since:YYYY-MM-DD</td>
</tr>
<tr>
<td></td>
<td>Containing word1 and sent starting at a specific date.</td>
</tr>
<tr>
<td></td>
<td>word1 until:YYYY-MM-DD</td>
</tr>
<tr>
<td></td>
<td>Containing word1 and sent before a specific date.</td>
</tr>
<tr>
<td></td>
<td>Uses search_tweets.</td>
</tr>
<tr>
<td>twtsampi/statuses_retweets</td>
<td>Reports on the first 100 retweets of a specific tweet.</td>
</tr>
<tr>
<td></td>
<td>Uses: statuses_retweets</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>twtsampl/statuses_user_timeline</td>
<td>Reports on the tweets for a specific Screen Name.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>statuses_user_timeline</td>
</tr>
<tr>
<td>twtsampl/tw_create_datamodel</td>
<td>Creates the SQL Server tables used for the Twitter Data Model loaded by the tw_datamigrator_load and tw_datamigrator_sentiment_load DataMigrator flows.</td>
</tr>
<tr>
<td></td>
<td>As a prerequisite, a SQL Server connection called socialmedia must be configured as well as the creation of a SQL Server database called Twitter.</td>
</tr>
<tr>
<td>twtsampl/tw_delete_datamodel</td>
<td>Deletes the SQL Server tables used for the Data Model.</td>
</tr>
<tr>
<td>twtsampl/tw_tagcloud_tweets</td>
<td>Tag cloud graph for tweets. The Words Analysis adapter must be configured.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_join_datamodel_excluding_sentiment</td>
</tr>
<tr>
<td></td>
<td>wan_document (Words Analysis metadata)</td>
</tr>
<tr>
<td>twtsampl/tw_tweet_report</td>
<td>Reports on Twitter tweets and user information.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_tweets</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_user_info</td>
</tr>
<tr>
<td>twtsampl/tw_tweet_scored_report</td>
<td>Reports on Twitter tweets and user information including sentiment.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_tweets</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_user_info</td>
</tr>
<tr>
<td></td>
<td>twtsampl/tw_tweet_sentiment</td>
</tr>
</tbody>
</table>
**Reference:** **Twitter Adapter DataMigrator Flows**

The following table lists and describes the DataMigrator flows for the Twitter Adapter. The Twitter Data Model must first be created by running twtsampl/tw_create_datamodel.

<table>
<thead>
<tr>
<th>Flow</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>twtsampl/tw_datamigrator_load</td>
<td>Data flow to load Twitter tweets and user information.</td>
</tr>
<tr>
<td>twtsampl/tw_datamigrator_sentiment_load</td>
<td>Data Flow to load Sentiment Scores for Twitter tweets.</td>
</tr>
</tbody>
</table>
This section describes how to configure the LinkedIn Adapter.

**In this chapter:**

- Overview
- Creating a LinkedIn Application
- Configuring the LinkedIn Adapter
- Creating Metadata and Sample Reports for the LinkedIn Adapter
- Examples

**Overview**

The LinkedIn Adapter is used to report against information resident in the LinkedIn environment. You can configure the LinkedIn Adapter using the Reporting Server Web Console. The adapter requires a connection, which stores the access token. A valid LinkedIn access token is needed to issue LinkedIn API calls. The token is associated with a LinkedIn application and a specific LinkedIn member. The access token is valid for 60 days after which a new access token would need to be obtained and configured.

The connection page shows permissions that will be granted to the LinkedIn application. You can uncheck permissions that should not be granted. The connection process will use only checked permissions. Authentication will take place even if no permissions are granted.

**Creating a LinkedIn Application**

A LinkedIn application needs to exist before configuring the LinkedIn adapter.

**Procedure:** How to Create a LinkedIn Application

1. From a browser, enter the following URL in a web browser:
   
   https://www.linkedin.com/secure/developer
A Sign in to LinkedIn screen opens, as shown in the following image.

2. Enter the LinkedIn Sign in credentials and click Sign In.
   The LinkedIn Developer Network screen opens, as shown in the following image.

3. Click the Add New Application link.
The Add New Application screen opens, as shown in the following image.

4. Perform the following steps:

a. Enter a company name hosting the new LinkedIn application in the Company Name field.

b. Enter a name without spaces for the new LinkedIn application in the Application Name field.

c. Enter a description for the new LinkedIn application in the Description field.

d. Enter a web site URL for the company hosting the new LinkedIn application in the Website URL field.

e. From the Application Use drop-down list, select a category which describes the use of the LinkedIn application.
5. Scroll down to the Contact Info section of the page, as shown in the following image.

<table>
<thead>
<tr>
<th><strong>Contact Info</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Developer Contact Email: <a href="mailto:myemail@informationbuilders.com">myemail@informationbuilders.com</a></td>
</tr>
<tr>
<td>* Phone: (212)736-4433</td>
</tr>
<tr>
<td>Business Contact Email:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>OAuth User Agreement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Default Scope:</strong></td>
</tr>
<tr>
<td>r_basicprofile</td>
</tr>
<tr>
<td>r_fullprofile</td>
</tr>
<tr>
<td>r_emailaddress</td>
</tr>
<tr>
<td>r_network</td>
</tr>
<tr>
<td>r_contactinfo</td>
</tr>
<tr>
<td>nv_nus</td>
</tr>
<tr>
<td>nv_groups</td>
</tr>
<tr>
<td>w_messages</td>
</tr>
<tr>
<td>nv_company_admin</td>
</tr>
</tbody>
</table>

Selecting both r_basicprofile and r_fullprofile is redundant. r_basicprofile will be selected if neither r_basicprofile nor r_fullprofile is checked.

<table>
<thead>
<tr>
<th><strong>OAuth 2.0 Redirect URLs:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://host.ibi.com:8121/oauth20.exe">http://host.ibi.com:8121/oauth20.exe</a></td>
</tr>
</tbody>
</table>

Comma separated list of absolute URLs allowed for OAuth 2.0 redirects. We strongly encourage using HTTPS.

<table>
<thead>
<tr>
<th><strong>OAuth 1.0 Accept Redirect URL:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>URL to return users to your app after they grant access. Only used if you do not pass in the oauth_callback parameter in the request!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>OAuth 1.0 Cancel Redirect URL:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>URL to return users to your app if they select Cancel from the OAuth dialog. If specified, this field will be used for the Cancel button redirect; otherwise the oauth_callback will be used and will include the parameter oauth_problem with the value user_rejected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>App Logo Secure URL:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>URL of an 80x80 logo for your app. SSL is required.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Agreement Language:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Agreement Language: English</td>
</tr>
<tr>
<td>Select the display language of the user agreement screen. Browser Locale Setting is recommended.</td>
</tr>
</tbody>
</table>

6. Perform the following steps:

   a. Enter an email address for the LinkedIn application administrator in the Developer Contact Email field.
   b. Enter the telephone number for the LinkedIn application administrator in the Phone field.
   c. In the Default Scope section, check the permissions granted to the LinkedIn application.
   d. Enter the host name and port used to access the WebFOCUS Reporting Server Web Console with oauth20.exe in the OAuth 2.0 Redirect URLs field.

For example:

http://host.ibi.com:8121/oauth20.exe

If there are multiple WebFOCUS Reporting Servers used to access the LinkedIn application, separate each one of the OAuth 2.0 Redirect URLs with using a comma character (,).
For example:

e. From the Agreement Language drop-down list, select the language to be used for the User Agreement screen.

7. Scroll down to the Other section of the page, as shown in the following image.

8. Click the LinkedIn API Terms of Use link.

   If you accept the agreement, select Agree and then click Add Application.
The Application Details screen opens, as shown in the following image.

![LinkedIn Application Details](image)

Note: The API Key and the Secret Key values will be required during the configuration of the LinkedIn adapter.

9. Click Done.

Configuring the LinkedIn Adapter

This section describes how to configure the LinkedIn Adapter.

Procedure: How to Configure the LinkedIn Adapter

1. Clear the cookies from the browser that will used to start the Reporting Server Web Console.
2. Access the WebFOCUS Reporting Server Web Console using the host name and port that you specified in the OAuth 2.0 Redirect URLs field of the LinkedIn application.
   For example:

   http://host.ibi.com:8121

   For more information on specifying values for the OAuth 2.0 Redirect URLs field, see How to Create a LinkedIn Application on page 61.

3. From the Web Console menu bar, click Adapters.
   The Adapters folder opens.

4. From the WebFOCUS Reporting Server Web Console menu bar, click Adapters.
   The Adapters pane opens.

5. Expand the Available folder, if it is not already expanded.

6. Expand the Social Media folder.

7. Right-click the LinkedIn node and select Configure, as shown in the following image.
The Add LinkedIn to Configuration pane opens, as shown in the following image.

8. Enter the values for the Application ID and Application Secret as defined by the API Key and Secret Key respectively in the LinkedIn application.

   For more information, see Creating a LinkedIn Application on page 61.

9. Choose the Permission Scope options to be granted to the LinkedIn application and click the Get Access Token link. For more information, see Connection Attributes for LinkedIn on page 70.
A LinkedIn Sign In page opens, as shown in the following image.

10. Enter the LinkedIn Sign In credentials and then click Allow Access.
You are returned to the Add LinkedIn to Configuration pane, where the Access Token field is now populated, as shown in the following image.

11. Click Configure.

The LinkedIn adapter is added to the configured Adapters list in the navigation pane.

**Note:** The Access Token expires after 60 days. To refresh the Access Token, click the Get Access Token link and then click Configure.

**Reference:** Connection Attributes for LinkedIn

The following list describes the connection attributes for the LinkedIn adapter.

**Connection Name**

Logical name used to identify this particular set of connection attributes. The default is CON01.
LinkedIn URL

The URL of the LinkedIn API request. The default value is:

https://api.linkedin.com/v1

For iSeries machines, the WebFOCUS Reporting Server must be configured for SSL as follows:

1. From the Web Console, click Workspace, select Settings, and then click Miscellaneous Settings, as shown in the following image.

![Work Console Settings](image)

2. Enter values for outbound_ssl_certificate_file, outbound_ssl_certificate_passphrase, and outbound_ssl_certificate_label, and then click Save. For example:

```
outbound_ssl_certificate_file * /home/bigcfg/265/li/srv77/wfs/etc/iwaysk.kdb
outbound_ssl_certificate_passphrase * ***********
outbound_ssl_certificate_label * iwaysrv
```

Application ID

The LinkedIn Application ID as defined in the LinkedIn application. For more information, see Creating a LinkedIn Application on page 61.

Application Secret

The LinkedIn Application Secret as defined in the LinkedIn application. For more information, see Creating a LinkedIn Application on page 61.
Access Token

Click the Get Access Token link to obtain this token. The credentials for a LinkedIn account are then entered. The value for the Access Token is returned by an authorized login.

Permission Scope

Grants the selected permissions to the LinkedIn application, which include:

- Profile Overview
- Full Profile
- Email Address
- Connections
- Contact Info
- Network Updates
- Company Page & Analytics
- Group Discussions
- Invitations and Messages

Select profile

Select a profile from the drop-down menu to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), choose New Profile from the drop-down menu and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

Creating Metadata and Sample Reports for the LinkedIn Adapter

Create Synonym for the LinkedIn Adapter creates the metadata used for WebFOCUS reporting. It also creates sample WebFOCUS reports.

Procedure: How to Create Metadata and Sample Reports

1. From the WebFOCUS Reporting Server Web Console, expand the Adapters folder, Configured folder, and then the LinkedIn folder.
2. Right-click the configured connection for the LinkedIn Adapter (for example, linkedin) and select Create Synonym from the context menu, as shown in the following image.

The Candidate(s) for Linked Synonym(s) (at linkedin) pane opens, as shown in the following image.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LI_PROFILE_BASIC</td>
<td>Basic Profile Information</td>
</tr>
<tr>
<td>LI_PEOPLESEARCH</td>
<td>People Search</td>
</tr>
<tr>
<td>LI_CONNECTIONS</td>
<td>Connections for a Member</td>
</tr>
<tr>
<td>LI_people_to_connections</td>
<td>Cluster join - People to connections</td>
</tr>
<tr>
<td>LI_GROUP_MEMBERSHIPS</td>
<td>Group Membership Information</td>
</tr>
<tr>
<td>LI_GROUP</td>
<td>Group Information</td>
</tr>
<tr>
<td>LI_GROUP_POSTS</td>
<td>Group Posts and Comments</td>
</tr>
<tr>
<td>LI_POST_COMMENTS</td>
<td>Comments for a Post</td>
</tr>
<tr>
<td>LI_PROFILE_FULL</td>
<td>Full Profile Information</td>
</tr>
<tr>
<td>LI_COMPANY_LOOKUP</td>
<td>Company Lookup Information</td>
</tr>
<tr>
<td>LI_COMPANY_EVENTS</td>
<td>Company Events Information</td>
</tr>
<tr>
<td>LI_COMPANY_EVENT_COMMENTS</td>
<td>Comments on Company Status Updates</td>
</tr>
<tr>
<td>LI_COMPANY_EVENTLIKES</td>
<td>Company Status Updates Likes</td>
</tr>
<tr>
<td>LI_UPDATES_COMMENTS_LIKES</td>
<td>Cluster join for Company Status Updates, Comments, and Likes</td>
</tr>
<tr>
<td>LI_COMPANYSEARCH</td>
<td>Company Search</td>
</tr>
<tr>
<td>LI_JOB_LOOKUP</td>
<td>Job Lookup Information</td>
</tr>
</tbody>
</table>
3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata and sample reports are to be stored.

4. Click *Create Synonym(s) and Examples*.

   The Create Synonym for LinkedIn Status pane opens and indicates that the synonym was created successfully.

**Examples**

This section describes the metadata and sample reports for the LinkedIn Adapter.

**Reference: LinkedIn Adapter Metadata**

The following table lists and describes the available metadata for the LinkedIn Adapter.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>li_company_event_comments</td>
<td>Used to retrieve company event status updates and comments.</td>
</tr>
<tr>
<td>li_company_event_likes</td>
<td>Used to retrieve company event status update likes.</td>
</tr>
<tr>
<td>li_company_events</td>
<td>Used to retrieve a company’s status updates and job postings.</td>
</tr>
<tr>
<td>li_company_lookup</td>
<td>Used to lookup a company profile.</td>
</tr>
<tr>
<td>li_companysearch</td>
<td>Used to search for companies based on keywords.</td>
</tr>
<tr>
<td>li_connections</td>
<td>Used to retrieve connections for a LinkedIn member.</td>
</tr>
<tr>
<td>li_group</td>
<td>Used to retrieve information about a specific group.</td>
</tr>
<tr>
<td>li_group_memhips</td>
<td>Used to retrieve a list of groups that a LinkedIn member has joined.</td>
</tr>
<tr>
<td>li_group_posts</td>
<td>Used to retrieve posts and comments for a specific group.</td>
</tr>
<tr>
<td>li_job_lookup</td>
<td>Used to lookup details for a specific job.</td>
</tr>
<tr>
<td>li_jobsearch</td>
<td>Used to search for jobs based on search criteria.</td>
</tr>
<tr>
<td><strong>Metadata</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>li_peoplesearch</td>
<td>Used to search for people based on search criteria.</td>
</tr>
<tr>
<td>li_post_comments</td>
<td>Used to retrieve comments for a specific group post.</td>
</tr>
<tr>
<td>li_profile_basic</td>
<td>Used to retrieve basic profile information for a LinkedIn member.</td>
</tr>
<tr>
<td>li_profile_full</td>
<td>Used to retrieve full profile information for the authenticated LinkedIn member.</td>
</tr>
<tr>
<td>lisampl/li_people_to_connections</td>
<td>Cluster Join from li_profile_basic to li_connections.</td>
</tr>
<tr>
<td>lisampl/li_updates_comments_likes</td>
<td>Cluster Join to report on company status updates, comments, and likes. Joins:</td>
</tr>
<tr>
<td></td>
<td>- li_company_events to li_company_event_comments</td>
</tr>
<tr>
<td></td>
<td>- li_company_events to li_company_event_likes</td>
</tr>
</tbody>
</table>

**Reference:** LinkedIn Adapter Sample Reports

The following table lists and describes the sample reports for the LinkedIn Adapter.

<table>
<thead>
<tr>
<th><strong>Sample Report</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>lisampl/li_company_event_comments</td>
<td>Reports on company events including comments. Uses: li_company_event_comments</td>
</tr>
<tr>
<td>lisampl/li_company_event_likes</td>
<td>Reports on the member likes for company status updates. Uses: li_company_event_likes</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_company_events</td>
<td>Reports on company status updates and job postings for a specific company.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_company_events</td>
</tr>
<tr>
<td>lisampl/li_company_lookup</td>
<td>Retrieve information about a specific company.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_company_lookup</td>
</tr>
<tr>
<td>lisampl/li_companysearch</td>
<td>Searches for companies based on keywords.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_companysearch</td>
</tr>
<tr>
<td>lisampl/li_connections</td>
<td>Lists the connections for a specific LinkedIn member.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_connections</td>
</tr>
<tr>
<td>lisampl/li_group</td>
<td>Displays the information about a specific group.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_group</td>
</tr>
<tr>
<td>lisampl/li_group_memberships</td>
<td>Lists the groups that a LinkedIn member has joined.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_group_memberships</td>
</tr>
<tr>
<td>lisampl/li_group_posts</td>
<td>Reports on posts including comments for a specific group.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_group_posts</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_job_lookup</td>
<td>Displays information about a specific job. Usage requires approval from LinkedIn to Vetted API Access where the application form can be accessed from:</td>
</tr>
<tr>
<td></td>
<td><a href="https://help.linkedin.com/app/api-dvr">https://help.linkedin.com/app/api-dvr</a></td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_job_lookup</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_jobsearch</td>
<td>Searches for jobs based on specific search criteria. Usage requires approval from LinkedIn to Vetted API Access where the application form can be accessed from:</td>
</tr>
<tr>
<td></td>
<td><a href="https://help.linkedin.com/app/api-dvr">https://help.linkedin.com/app/api-dvr</a></td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_jobsearch</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_people_to_connections</td>
<td>Lists the connections for a specific LinkedIn member. Includes name of the specific LinkedIn member.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>lisampl/li_people_to_connections</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_peoplesearch</td>
<td>Search for people based on specific search criteria. Usage requires approval from LinkedIn to Vetted API Access where the application form can be accessed from:</td>
</tr>
<tr>
<td></td>
<td><a href="https://help.linkedin.com/app/api-dvr">https://help.linkedin.com/app/api-dvr</a></td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_peoplesearch</td>
</tr>
<tr>
<td>Sample Report</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lisampl/li_peoplesearch_facet</td>
<td>Performs a facet search based on specific search criteria. For example, location and industry. Usage requires approval from LinkedIn to Vetted API Access where the application form can be accessed from: <a href="https://help.linkedin.com/app/api-dvr">https://help.linkedin.com/app/api-dvr</a></td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_peoplesearch_facet</td>
</tr>
<tr>
<td>lisampl/li_post_comments</td>
<td>Reports on comments for a specific group post.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_post_comments</td>
</tr>
<tr>
<td>lisampl/li_profile_basic</td>
<td>Displays the basic profile information for a specific LinkedIn member.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_profile_basic</td>
</tr>
<tr>
<td>lisampl/li_profile_full</td>
<td>Displays the full profile information for the authenticated LinkedIn member.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>li_profile_full</td>
</tr>
<tr>
<td>lisampl/li_updates_comments_likes</td>
<td>Displays the status updates, comments and likes for a specific company.</td>
</tr>
<tr>
<td></td>
<td>Uses:</td>
</tr>
<tr>
<td></td>
<td>lisampl/li_updates_comments_likes</td>
</tr>
</tbody>
</table>
Using the Adapter for Google Analytics

This section describes how to configure the Google Analytics Adapter.

In this chapter:

- Overview
- Creating a Google Project
- Obtaining the Web Profile ID
- Configuring the Google Analytics Adapter
- Creating Metadata for the Google Analytics Adapter

Overview

The Google Analytics Adapter is used to report against the information residing in the Google Analytics environment. Metrics, such as Page Views and Users, can be analyzed by various dimensions (for example, Country and City).

You can configure the Google Analytics Adapter using the WebFOCUS Reporting Server Web Console. The adapter requires a connection, which stores the access token. A valid Google Analytics access token is required to issue Google Analytics API calls. This token is associated with a Google Analytics application and a specific Google Analytics user.

Creating a Google Project

A Google project must be available before you can configure the Google Analytics Adapter.

Procedure: How to Create a Google Project

1. Enter the following URL in a web browser:
   
   `https://console.developers.google.com/project`
A Sign in dialog for the Google Developers Console opens, as shown in the following image.

2. Enter the Google sign in credentials using an account that has administrative rights to the Google Analytics environment, and then click Sign In.

The Google Developers Console screen opens, as shown in the following image.
3. Click **CREATE PROJECT**.

The New Project screen opens, as shown in the following image.

![New Project Screen](image)

4. Enter a project name and then click **Create**.
5. Click APIs & auth in the left pane. For the Analytics API parameter, toggle the STATUS button to ON.

6. Click Credentials in the left pane. The page to configure OAuth security opens, as shown in the following image.

7. Click CREATE NEW CLIENT ID.
The Create Client ID page opens, as shown in the following image.

8. Perform the following steps:
   a. Select Web application from the list of application types.
   b. Enter the host name and port used to access the WebFOCUS Reporting Server Web Console in the AUTHORIZED JAVASCRIPT ORIGINS field.

   For example:

   http://host.ibi.com:8121
If the WebFOCUS Reporting Server is installed as a standalone server, then
http://localhost should be specified as the value in the AUTHORIZED JAVASCRIPT ORIGINS
field.

c. Enter the host name and port used to access the WebFOCUS Reporting Server Web
Console with oauth20.exe in the AUTHORIZED REDIRECT URI field.

For example:

http://host.ibi.com:8121/oauth20.exe

If the WebFOCUS Reporting Server is installed as a standalone server, then
http://localhost/oauth20.exe should be specified as the value in the AUTHORIZED
REDIRECT URI field.

9. Click Create Client Id.

The Client ID for web application page opens, as shown in the following image.

![Google Developers Console](image)

The Client ID and Client secret values are required to configure the Google Analytics Adapter.

You are now ready to obtain the Web Profile ID for a website within the Google Analytics
environment.

### Obtaining the Web Profile ID

This section describes how to obtain the Web Profile ID for a website within the Google Analytics
environment. The Web Profile ID is required to configure the Google Analytics Adapter.
**Procedure: How to Obtain the Web Profile ID**

1. Enter the following URL in a web browser:

   https://www.google.com/analytics

   If you are already signed in to Google Analytics, then the Google Analytics Home page opens, as shown in the following image.

   ![Google Analytics Home Page](image)

   Note that the Access Google Analytics link is provided in the upper-right corner of the page.
If you are not already signed in to Google Analytics, then the Google Analytics Home page opens, as shown in the following image.

Note that the *Sign in or create an account* links are provided in the upper-right corner of the page.

2. If you are already signed in to Google Analytics, then click the *Access Google Analytics* link in the upper-right corner of the page.

The Google Analytics page, which lists the configured websites opens, as shown in the following image.

If you are not already signed in to Google Analytics, then click the *Sign in* link in the upper-right corner of the page.
A Sign in to Google Analytics page opens, as shown in the following image.

![Google Sign In Page](image)

Enter the Google sign in credentials using an account that has administrative rights to the Google Analytics environment, and then click *Sign In.*
The Google Analytics page, which lists the configured websites opens, as shown in the following image.

3. Click the link to the website that will be used during the configuration of the Google Analytics Adapter.

The Google Analytics Reporting page for the selected website opens, as shown in the following image.

4. Click the Admin link at the top of the page.
The Google Analytics Admin page for the selected website opens, as shown in the following image.

5. Click the **View Settings** link, which is located in the View column.

The Google Analytics Reporting View Settings page for the selected website opens, as shown in the following image.

The View ID value is required to configure the Google Analytics Adapter.
Configuring the Google Analytics Adapter

This section describes how to configure the Google Analytics Adapter.

Procedure: **How to Configure the Google Analytics Adapter**

1. Clear the cookies from the web browser that will be used to start the WebFOCUS Reporting Server Web Console.

2. Access the WebFOCUS Reporting Server Web Console using the host name and port that you specified in the AUTHORIZED JAVASCRIPT ORIGINS field of the Google project.

   For example:

   http://host.ibi.com:8121

   For more information, see *How to Create a Google Project* on page 79.

3. From the WebFOCUS Reporting Server Web Console menu bar, click Adapters.

   The Adapters pane opens.

4. Expand the Available folder, if it is not already expanded.

5. Expand the Social Media folder.

6. Right-click the Google Analytics node and select Configure, as shown in the following image.
The Add Connection for Google Analytics pane opens, as shown in the following image.

7. Enter the values for the Client ID and Client Secret as defined by the Client ID and Client secret respectively in the Google project.

For more information, see *How to Create a Google Project* on page 79.

8. Enter the value for the Web Profile ID as defined by the View ID in the Google Analytics Reporting View Settings for the selected website.

   This value is prefixed by *ga*. For example:

   \texttt{ga:87878787}

   For more information, see *How to Obtain the Web Profile ID* on page 85.

9. Click the Get Access Token link.
A Google Sign In page opens, as shown in the following image.

10. Enter the Google Sign In credentials and then click Sign in.

The Project Default Service Account page opens, as shown in the following image.

11. Click Allow access.
You are returned to the Add Connection for Google Analytics pane, where the Access Token field and Refresh Token field are now populated, as shown in the following image.

12. Click Configure.

The Google Analytics Adapter is added to the configured Adapters list in the navigation pane.

**Reference:**  **Connection Attributes for Google Analytics**

The following list describes the connection attributes for the Google Analytics Adapter.

**Connection Name**

Logical name used to identify this particular set of connection attributes. The default is CON01.

**Google Analytics URL**

The URL of the Google Analytics API request. The default value is:

https://www.googleapis.com/analytics/v3/data

**Client ID**

The value that identifies your application to Google Analytics.

Obtain this value using the following steps:

1. Go to:

   https://cloud.google.com/console/project
2. Click on the Project Name for the Google Analytics Adapter application that was previously created.

3. Click APIs & auth in the left pane.

4. Click Credentials in the left pane.

5. Use Client ID in the Client ID for web application section.

**Client Secret**

The value which identifies your application to Google Analytics. This value is used in conjunction with Client ID.

Obtain this value using the following steps:

1. Go to:
   
   https://cloud.google.com/console/project

2. Click on the Project Name for the Google Analytics Adapter application that was previously created.

3. Click APIs & auth in the left pane.

4. Click Credentials in the left pane.

5. Use Client secret in the Client ID for web application section.

**Web Profile ID**

The ID that identifies the view (profile) for a Google Analytics account.

Obtain this value using the following steps:

1. Go to:
   
   http://www.google.com/analytics

2. Sign in with Google credentials that have administrative rights to Google Analytics.

3. Click on the website that is to be analyzed (for example, www.informationbuilders).

4. Click Admin in the upper-right corner of the screen.

5. Click View Settings.


   This value is prefixed by ga. For example:

   ga:87878787
**Access Token**

The value that identifies the user your application is acting on behalf. Click the Get Access Token link to obtain this token and the Refresh Token.

In order for the Get Access Token to complete successfully, the host name used to access the WebFOCUS Reporting Server Web Console must match the host name specified for the Redirect URI in the Google Analytics application.

A Google sign-on screen opens if you are not already logged into a Google account.

A Consent screen opens. Click Allow Access.

If an issue arises when obtaining the Access and Refresh Tokens, clear your browser cache, including cookies.

**Refresh Token**

The Access Token has a very short lifespan. The Refresh Token is used to obtain a new Access Token during run time.

**Select profile**

Select a profile from the drop-down list to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), select New Profile from the drop-down list and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

**Creating Metadata for the Google Analytics Adapter**

Create Synonym for the Google Analytics Adapter creates the metadata used for WebFOCUS reporting.

**Procedure: How to Create Metadata**

1. From the WebFOCUS Reporting Server Web Console, expand the Adapters folder, Configured folder, and then the Google Analytics folder.
2. Right-click the configured connection for the Google Analytics Adapter (for example, GoogleAnalytics) and select Create Synonym from the context menu, as shown in the following image.

The Show Dimensions and Metrics for Google Analytics (GoogleAnalytics) pane opens, as shown in the following image.

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata is to be stored.

4. Enter a Synonym Name that will be used to store the metadata.

5. Expand the Dimensions tree and select the dimensions that will be used for analysis.
Note: Currently, Google Analytics only support 7 dimensions for a synonym. Google might increase this number sometime in the future.

Scroll down within the Select Dimensions and Metrics matrix and expand the Metric tree, as shown in the following image.

6. Select the metrics that will be used for analysis.

Note: Currently, Google Analytics only support 10 metrics for a synonym. Google might increase this number sometime in the future.

7. Click Create Synonym(s) and Examples.

The Create Synonym for Google Analytics Status pane opens and indicates that the synonym was created successfully.
Chapter 6

Words Analysis Adapter

This section describes how to configure the Words Analysis Adapter.

In this chapter:

- Overview
- Configuring the Words Analysis Adapter
- Creating Metadata and Sample Reports for the Words Analysis Adapter
- Examples

Overview

The Words Analysis Adapter counts the occurrences of each word within textual data. It includes a Stopwords file, which can be modified, to define the words to exclude from the analysis. The results can be displayed in a Tabular report or graph. A tag cloud graph is a popular choice for analyzing the occurrences of words within textual data.
Configuring the Words Analysis Adapter

This section describes how to configure the Words Analysis Adapter.

As a prerequisite for configuring the Words Analysis Adapter, the path for the Java JDK or Java Runtime must be set. The WebFOCUS Reporting Server searches for the following variable names:

- **JDK_HOME**: Used to define the path for the Java JDK.
- **JAVA_HOME**: Used to define the path for the Java Runtime.

The following image shows how to set the JAVA_HOME variable on a Windows platform using the System Properties dialog.

![System Properties Dialog](image)

**Procedure:** How to Configure the Words Analysis Adapter

1. From the Web Console menu bar, click **Adapters**.
2. Expand the **Available** folder, if it is not already expanded.
3. Expand the **Social Media** folder.

4. Right-click **Words Analysis** and select **Configure**, as shown in the following image.

![Configure Words Analysis](image1.png)

The configured Words Analysis Adapter is added in the left pane, as shown in the following image.

![Configured Adapters](image2.png)

### Creating Metadata and Sample Reports for the Words Analysis Adapter

Create Synonym for the Words Analysis Adapter creates the metadata used for WebFOCUS reporting. It also creates sample WebFOCUS reports.

**Procedure:** **How to Create Metadata and Sample Reports**

1. From the WebFOCUS Reporting Server Web Console, expand the **Adapters** folder, and then the **Configured** folder.
2. Right-click *Words Analysis* and select *Create Synonym* from the context menu, as shown in the following image.

![Create Synonym context menu](image)

The Candidate(s) for Words Analysis Synonym(s) pane opens, as shown in the following image.

![Candidate(s) for Words Analysis Synonym(s)](image)

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata and sample reports are to be stored.

4. Click *Create Synonym(s) and Examples*.

The Create Synonym for Words Analysis Status pane opens and indicates that the synonym was created successfully.

---

2. Right-click *Words Analysis* and select *Create Synonym* from the context menu, as shown in the following image.

![Create Synonym context menu](image)

The Candidate(s) for Words Analysis Synonym(s) pane opens, as shown in the following image.

![Candidate(s) for Words Analysis Synonym(s)](image)

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata and sample reports are to be stored.

4. Click *Create Synonym(s) and Examples*.

The Create Synonym for Words Analysis Status pane opens and indicates that the synonym was created successfully.
Examples

This section describes the metadata and sample reports for the Words Analysis Adapter.

Reference: Words Analysis Adapter Metadata

The following table lists and describes the available metadata for the Words Analysis Adapter.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wan_document</td>
<td>Used to pass textual data to the Words Analysis Adapter and return a count of occurrences for each word.</td>
</tr>
<tr>
<td></td>
<td>By default, special characters (such as #, %, $, @) are excluded from the analysis. To include individual special characters in the analysis, they must be passed to the SYMBOLS field in the form of a selection. For example:</td>
</tr>
<tr>
<td></td>
<td>WHERE SYMBOLS EQ '#@'</td>
</tr>
<tr>
<td></td>
<td>Words contained in the Stopwords file are excluded from the analysis.</td>
</tr>
<tr>
<td></td>
<td>The Access File (.acx) contains an attribute for the Stopwords file location:</td>
</tr>
<tr>
<td></td>
<td>STOPWORDS_FILENAME='wordsanalysis/ wan_stopwords_ibi.txt'</td>
</tr>
<tr>
<td></td>
<td>The wan_stopwords_ibi.txt file is the default Stopwords file that gets loaded as part of Create Synonym.</td>
</tr>
<tr>
<td>wansampl/wan_sample_cluster</td>
<td>Cluster Join between wansampl/wan_sample_fix and wan_document.</td>
</tr>
<tr>
<td>wansampl/wan_sample_fix</td>
<td>Metadata that defines the sample text file (wansampl/wan_sample.txt) used for the wan_sample_join, wan_sample_join_tagcloud, and wan_sample_cluster sample reports.</td>
</tr>
</tbody>
</table>
### Reference: Words Analysis Adapter Sample Reports

The following table lists and describes the sample reports for the Words Analysis Adapter.

<table>
<thead>
<tr>
<th>Sample Report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wansampl/wan_sample_cluster</td>
<td>Performs a count of the occurrences of words from the text passed in the wansampl/wan_sample.txt file using the Cluster Join master wansampl/wan_sample_cluster.</td>
</tr>
<tr>
<td>wansampl/wan_sample_join</td>
<td>Performs a count of the occurrences of words from the text passed in the wansampl/wan_sample.txt file. Joins wansampl/wan_sample_fix to wan_document.</td>
</tr>
<tr>
<td>wansampl/wan_sample_join_tagcloud</td>
<td>Performs a count of the occurrences of words from the text passed in the wansampl/wan_sample.txt file. The results are displayed in a tag cloud graph. Joins wansampl/wan_sample_fix to wan_document.</td>
</tr>
<tr>
<td>wansampl/wan_sample_where</td>
<td>Performs a count of the occurrences of words from the text passed in a WHERE statement. Also includes a WHERE statement defining the Stopword file(s) to be used in the request. It overrides the definition in the wan_document Access File (.acx). Uses: wan_document</td>
</tr>
</tbody>
</table>
This section describes how to configure the WAND Sentiment Analysis Adapter.

In this chapter:
- Overview
- Installing, Configuring, and Updating the WAND Taxonomy Server
- Installing and Using the WAND Taxonomy Editor
- Configuring the WAND Sentiment Analysis Adapter
- Creating Metadata and Sample Reports for the WAND Sentiment Analysis Adapter
- Examples

Overview

The WAND Sentiment Analysis Adapter is used to score structured and unstructured textual content by identifying positive, neutral, and negative sentiment found within emails, documents, and database records. Textual data from a data source can be passed to the adapter by:

- Joining the column containing the textual data from the data source to the column within the WAND Sentiment Analysis Adapter used to define the textual data to be scored.
- A report which uses Cluster Join metadata. The Cluster Join metadata already contains the join from the column containing the textual data from the data source to the column within the WAND Sentiment Analysis Adapter used to define the textual data to be scored.
- Using a WHERE/IF condition to pass textual data directly to the column within the WAND Sentiment Analysis Adapter used to define the textual data to be scored.

Understanding the Scoring System for WAND Sentiment Analysis

The score returned from the WAND Sentiment Analysis Adapter ranges from -1 to 1.

- A score of -1 identifies the sentiment of the textual data that was passed to the adapter as extremely negative.
- A score of 0 identifies the sentiment of the textual data that was passed to the adapter as neutral.
Installing, Configuring, and Updating the WAND Taxonomy Server

This section describes how to install, configure, and update the WAND Taxonomy Server.

Procedure: How to Install the WAND Taxonomy Server

The WAND Taxonomy Server requires a Microsoft Windows 2008 Server environment or higher.

1. If a previous version of the WAND Taxonomy Server exists, then perform the following steps to uninstall the software:
   a. Create a backup of the Sentiment Taxonomy file (Sentiment.artx), which is located in the following directory:

      C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\repository

      Save this backup copy to a different directory outside of the C:\Program Files (x86)\Applied Relevance directory structure (for example, C:\temp).

   b. Uninstall Document Annotator Service from the Control Panel, as shown in the following image.

   ![Uninstall Document Annotator Service](image)

   c. Delete the following directory:

      C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService
2. Obtain the WAND Taxonomy Server software.

3. If necessary, unzip the installation software to a temporary directory on your file system (for example, C:\Wand).

4. Search for the cmd.exe file from the Start menu and run it as an Administrator, as shown in the following image.

5. Navigate to the directory that contains the Wand Taxonomy Server installation software. Type the .msi file name for the Wand Taxonomy Server installation.

   For example:

   `AR.DocumentAnnotatorService_v2.1.1323.2.msi`

6. Press Enter.
The Document Annotator Service Setup dialog box opens, as shown in the following image.

7. Select *I accept the terms in the License Agreement* and then click *Install.*
The Setup Wizard installs the Document Annotator Service, as shown in the following image.
8. When the installation of the Document Annotator Service is complete, click Finish, as shown in the following image.

![Document Annotator Service Setup](image)

**Note:** If the version of the WAND Taxonomy Server software installed is an update to a previous version, then follow the instructions in *How to Update the WAND Sentiment Taxonomy* on page 112. You must update the installed Sentiment taxonomy with the Sentiment taxonomy that was backed up in Step 1.

**Procedure:** How to Configure the WAND Taxonomy Server

The WAND Taxonomy Server must be configured so that the host name for the Taxonomy Server installation is either the machine name or IP address.

1. Navigate to the following directory on your file system:

   ```
   C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\bin
   ```
2. Edit the `AR.DocumentAnnotator.exe.config` file using a text editor.

The following section in this configuration file contains the address for the WAND Taxonomy Server:

```xml
<host>
  <baseAddresses>
    <add baseAddress="http://localhost:4701" />
  </baseAddresses>
</host>
```

3. If required, modify the value in the `<baseAddress>` element so that the host name is the machine name or IP address where the WAND Taxonomy Server is installed.

For example:

```xml
<host>
  <baseAddresses>
    <add baseAddress="http://wandserver.ibi.com:4701" />
  </baseAddresses>
</host>
```

4. Save the changes made in the `AR.DocumentAnnotator.exe.config` file.
5. Open the Services utility on Windows through the Control Panel and restart the AR Document Annotator service, as shown in the following image.

**Procedure:** How to Update the WAND Sentiment Taxonomy

The Sentiment.artx file, which is located in the `C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\repository` directory contains the Sentiment Taxonomy used for scoring textual data. As a Sentiment Taxonomy update or a localized Sentiment Taxonomy in a different language is made available, the Sentiment.artx file must be replaced with the updated version.
1. Open the Services utility on Windows through the Control Panel and stop the AR Document Annotator service, as shown in the following image.

![Services utility screenshot](image)

2. Rename the Sentiment.artx file, which is located in the following directory:

```
C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\repository
```

3. Copy the new Sentiment Taxonomy to the following directory:

```
C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\repository
```

The following example shows the installation of a French Sentiment Taxonomy.
4. Rename the updated Sentiment Taxonomy so that the file name is Sentiment.artx, as shown in the following image.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries.artx</td>
<td>3/29/2012 10:36 PM</td>
<td>ARTX File</td>
<td>81 KB</td>
</tr>
<tr>
<td>DataFacet_GeneralBusiness_SKOS.xml</td>
<td>3/29/2012 10:36 PM</td>
<td>XML File</td>
<td>299 KB</td>
</tr>
<tr>
<td>Financial Crimes.artx</td>
<td>3/29/2012 10:36 PM</td>
<td>ARTX File</td>
<td>62 KB</td>
</tr>
<tr>
<td>Sentiment_EN.artx</td>
<td>3/29/2012 10:36 PM</td>
<td>ARTX File</td>
<td>321 KB</td>
</tr>
<tr>
<td>Sentiment.artx</td>
<td>2/27/2013 12:16 PM</td>
<td>ARTX File</td>
<td>2,696 KB</td>
</tr>
</tbody>
</table>

5. Open the Services utility on Windows through the Control Panel and start the AR Document Annotator service, as shown in the following image.

---

**Installing and Using the WAND Taxonomy Editor**

After the Taxonomy Server is installed and the Sentiment Taxonomy (Sentiment.artx file) within the C:\Program Files (x86)\Applied Relevance\DocumentAnnotatorService\repository directory is updated to the latest version, there might be a need to score words that are not present in the taxonomy. Therefore, these words would have to be added to the Sentiment Taxonomy and assigned to one of the following categories:

- Neutral
- Satisfied
- Very Satisfied
Very Dissatisfied

Dissatisfied

The WAND Taxonomy Editor is used to add and categorize words to the Sentiment Taxonomy.

**Procedure: How to Install the WAND Taxonomy Editor**

1. Obtain the WAND Taxonomy Editor software.
2. Ensure that Adobe Air is installed on your system.
   
   Adobe Air can be downloaded from:
   

3. Double-click the ARTaxonomyEditor_v2.1.1318.0.air file.
   
   The Application Install dialog box opens, as shown in the following image.

   ![Application Install Dialog Box](image)

4. Click *Install*.
The AR Taxonomy Editor installation pane is displayed, as shown in the following image.

5. Click *Continue*.

During the installation, a progress bar is displayed, as shown in the following image.
After the installation is complete, the AR Taxonomy Editor is displayed, as shown in the following image.
Procedure: How to Use the WAND Taxonomy Editor

1. In the AR Taxonomy Editor, click Sentiment from the Taxonomies List, as shown in the following image.
The Sentiment window of the AR Taxonomy Editor is displayed, as shown in the following image.

The Sentiment Taxonomy categories include Neutral, Satisfied, Very Satisfied, Very Dissatisfied, and Dissatisfied.

To categorize words, a node must be added under the category that will reflect the appropriate scoring.

2. Right-click on a category in the left pane (for example, Satisfied) and click Add Node from the context menu, as shown in the following image.
3. In the new field that is added in the left pane, enter a name for the new node (for example, B plus), as shown in the following image.

![Image showing a list of nodes including B plus]

4. In the right pane, enter a new term rule for the node in the Term Rule field, as shown in the following image.

![Image showing term rule input fields with text "B+" OR "B plus"

For example, entering "B+" OR "B plus" will be scored as Satisfied.

5. Click Save Changes to save the new addition to the Sentiment Taxonomy.
6. To apply the changes, open the Services utility on Windows through the Control Panel and restart the AR Document Annotator service, as shown in the following image.

Configuring the WAND Sentiment Analysis Adapter

The WAND Sentiment Analysis Adapter is a part of the Social Media group of adapters that are managed by the WebFOCUS Reporting Server.
**Procedure:** How to Configure the WAND Sentiment Analysis Adapter

1. From the WebFOCUS Reporting Server Web Console or the Data Management Console, expand the *Available* folder and then the *Social Media* folder, as shown in the following image.
2. Right-click the WAND node and select Configure, as shown in the following image.

The Add WAND to Configuration pane opens, as shown in the following image.

3. Enter a name to identify the connection (for example, WAND) in the Connection Name field. The format of the WAND Services End-Point URL is:

   http://host:4701/soap/scorer
where:

host

Is the machine name or IP address where the Taxonomy Server is installed. For example:

http://wandserver.ibi.com:4701/soap/scorer

4. Click Configure.

The Configure Adapters or Create Synonyms pane opens, as shown in the following image.

![Configure Adapters or Create Synonyms](image1)

5. Click Test to ensure that the WAND Sentiment Analysis Adapter is configured properly.

The Testing Wand connection pane opens and displays the test results, as shown in the following image.

![Testing Wand connection](image2)
**Reference:** Connection Attributes for WAND Sentiment Analysis

The following list describes the connection attributes for the WAND Sentiment Analysis Adapter.

**Connection Name**
Logical name used to identify this particular set of connection attributes. The default is CON01.

**WAND Services End-Point**
The URL that is used to connect to the WAND Sentiment Analysis environment. For example:

```
http://wand.ibi.com:4701/soap/scorer
```

**PROXY Server IP Address**
IP address of the proxy server. For example:

```
170.115.249.42
```

**PROXY Port**
Port number on which the proxy server listens. The default port number is 80.

**Select profile**
Select a profile from the drop-down list to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), choose New Profile from the drop-down menu and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

**Creating Metadata and Sample Reports for the WAND Sentiment Analysis Adapter**
Create Synonym for the WAND Adapter creates the metadata used by reports to perform Sentiment Analysis scoring as well as sample reports which utilize the metadata.

**Procedure:** How to Create Metadata and Sample Reports

1. From the WebFOCUS Reporting Server Web Console or the Data Management Console, expand the Adapters folder, Configured folder, and then the WAND folder.
2. Right-click the configured connection for the WAND Sentiment Analysis Adapter (for example, wand) and select Create Synonym from the context menu, as shown in the following image.

![Image of Properties menu with Create Synonym selected](image)

The Select candidate(s) for WAND Synonym(s) (at wand) pane opens, as shown in the following image.

![Image of Select candidate(s) for WAND Synonym(s) (at wand) pane](image)

Warning, existing identically named synonyms will be overwritten.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAND</td>
<td>Synonym for Wand Sentiment Analysis.</td>
</tr>
<tr>
<td>EXAMPLES</td>
<td>Wand Sentiment Analysis usage examples.</td>
</tr>
</tbody>
</table>

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata is to be stored.
The sample reports are stored within the `wandsamp` subdirectory of the application.

4. Click Create Synonym.
   The Create Synonym for WAND Status pane opens and indicates that the synonym was created successfully, as shown in the following image.

![Create Synonym for WAND Status](image)

**Examples**

This section describes the metadata and sample reports for the WAND Sentiment Analysis Adapter.
**Reference:**  WAND Sentiment Analysis Adapter Metadata

The following table lists and describes the available metadata for the WAND Sentiment Analysis Adapter.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
</table>
| wandscore                 | Metadata is used for interacting with the WAND web service for sentiment analysis scoring. The TEXT field would contain the textual data that is to be analyzed and scored by the WAND Taxonomy Server. Textual data can be joined from a column within a table to the TEXT field or set within a WHERE/IF condition. The following example uses a JOIN statement:  

```sql
JOIN DOCLINE IN 
wand/wandsampl/wand_sample_fix TO TEXT IN 
wand/wandscore
END
```

The following example uses a WHERE/IF condition:  

```sql
WHERE (TEXT CONTAINS 'The Facebook Adapter helps businesses')
```

A sentiment score between -1 and 1 is returned within the SCORERESULT field. |
| wandsampl/wand_sample_fix | Metadata that defines the sample text file (wandsampl/wand_sample.txt) used for the `wand_sample_join` and `wand_sample_cluster` sample reports. |
| wandsampl/wand_sample_cluster | Cluster join between `wandsampl/wand_sample_fix` and `wandscore`. |
Reference: WAND Sentiment Analysis Adapter Sample Reports

The following table lists and describes the sample reports for the WAND Sentiment Analysis Adapter.

<table>
<thead>
<tr>
<th>Sample Report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wandsampl/wand_sample_join</td>
<td>Scores the text passed from the wandsampl/wand_sample.txt file performed through a JOIN statement.</td>
</tr>
<tr>
<td>wandsampl/wand_sample_cluster</td>
<td>Scores the text passed from the wandsampl/wand_sample.txt file using the Cluster Join master wandsampl/wand_sample_cluster.</td>
</tr>
<tr>
<td>wandsampl/wand_sample_where</td>
<td>Scores the text passed within a WHERE statement.</td>
</tr>
</tbody>
</table>
Chapter 8

Alchemy Sentiment Analysis Adapter

This section describes how to configure the Alchemy Sentiment Analysis Adapter.

In this chapter:

- Overview
- Configuring the Alchemy Sentiment Analysis Adapter
- Creating Metadata and Sample Reports for the Alchemy Adapter
- Examples

Overview

The Alchemy Sentiment Analysis Adapter is used to score structured and unstructured textual content by identifying positive, neutral, and negative sentiment found within emails, documents, and database records. Textual data from a data source is passed to the adapter in one of three ways:

- Joining the column containing the textual data from the data source to the column within the Alchemy Sentiment Analysis Adapter used to define the textual data to be scored.

- A report which uses Cluster Join metadata. The Cluster Join metadata already contains the join from the column containing the textual data from the data source to the column within the Alchemy Sentiment Analysis Adapter used to define the textual data to be scored.

- Using a WHERE/IF condition to pass textual data directly to the column within the Alchemy Sentiment Analysis Adapter used to define the textual data to be scored.

The score returned from the Alchemy Sentiment Analysis Adapter ranges from -1 to 1.

- A score of -1 identifies the sentiment of the textual data that was passed to the adapter as extremely negative.

- A score of 0 identifies the sentiment of the textual data that was passed to the adapter as neutral.

- A score of 1 identifies the sentiment of the textual data that was passed to the adapter as tremendously positive.
Configuring the Alchemy Sentiment Analysis Adapter

The Alchemy Sentiment Analysis Adapter is part of the Social Media group of adapters within the WebFOCUS Reporting Server.

Procedure: How to Configure the Alchemy Sentiment Analysis Adapter

1. From either the WebFOCUS Reporting Server Web Console or the Data Management Console, click Adapters.
2. Expand the Available folder, if it is not already expanded.
3. Expand the Social Media folder.
4. Right-click ALCHEMY and select Configure, as shown in the following image.

The Add ALCHEMY to Configuration pane opens, as shown in the following image.

5. Enter the value for API Key supplied by Alchemy.
6. Click Configure.
The Configure Adapters or Create Synonyms pane opens, as shown in the following image.

![Configure Adapters or Create Synonyms](image)

7. Click **Test** to ensure that the Alchemy Sentiment Analysis Adapter is configured properly.

### Reference: Connection Attributes for Alchemy Sentiment Analysis

The following list describes the connection attributes for the Alchemy Sentiment Analysis Adapter.

**Connection Name**

Logical name used to identify this particular set of connection attributes. The default is **CON01**.

**Alchemy URL**

The URL that is used to connect to the Alchemy Sentiment Analysis service. The default value is:

```
http://access.alchemyapi.com/calls/text
```

**API KEY**

The API Key that is supplied by Alchemy to allow authorization to the Alchemy Sentiment Analysis scorer.

**PROXY Server IP Address**

IP address of the proxy server. For example:

```
170.115.249.42
```

**PROXY Port**

Port number on which the proxy server listens. The default port number is 80.
Select profile

Select a profile from the drop-down list to indicate the level of profile in which to store the connection attributes. The global profile, edasprof.prf, is the default.

If you wish to create a new profile, either a user profile (user.prf) or a group profile if available on your platform (using the appropriate naming convention), choose New Profile from the drop-down menu and enter a name in the Profile Name field (the extension is added automatically).

Store the connection attributes in the server profile (edasprof).

Creating Metadata and Sample Reports for the Alchemy Adapter

Create Synonym for the Alchemy Sentiment Analysis Adapter creates the metadata used by reports to perform Sentiment Analysis scoring as well as sample reports which utilize the metadata.

Procedure: How to Create Metadata and Sample Reports

1. From the WebFOCUS Reporting Server Web Console or the Data Management Console, expand the Adapters folder, Configured folder, and then the ALCHEMY folder.

2. Right-click the configured connection for the Alchemy Sentiment Analysis Adapter (for example, alchemy) and select Create Synonym from the context menu, as shown in the following image.
The Candidate(s) for ALCHEMY Analysis Synonym(s) (at alchemy) pane opens, as shown in the following image.

3. Enter a specific application in the Application field or click the ellipsis button to the right of the field to select an application where the metadata and sample reports are to be stored. The sample reports are stored within the `alchsamp` subdirectory of the application.

4. Click Create Synonym(s) and Examples.

The Create Synonym for ALCHEMY Status pane opens and indicates that the synonym was created successfully, as shown in the following image.
Examples

This section describes the metadata and sample reports for the Alchemy Sentiment Analysis Adapter.

Reference: Alchemy Sentiment Analysis Adapter Metadata

The following table lists and describes the available metadata for the Alchemy Sentiment Analysis Adapter.

<table>
<thead>
<tr>
<th>Metadata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>alchemy</td>
<td>Metadata is used for interacting with the Alchemy web service for sentiment analysis scoring. The DOC field would contain the textual data that is to be analyzed and scored by the Alchemy Sentiment scorer. Textual data can be joined from a column within a table to the DOC field or set within a WHERE/IF condition. The following example uses a JOIN statement: JOIN DOCLINE IN alchemy/alchsaml/alchemy_sample_fix TO DOC IN alchemy/alchemy END. The following example uses a WHERE/IF condition: WHERE (DOC CONTAINS 'The Facebook Adapter helps businesses') A sentiment score between -1 and 1 is returned within the SCORE field.</td>
</tr>
<tr>
<td>alchsaml/alchemy_sample_fix</td>
<td>Metadata that defines the sample text file (alchsaml/alchemy_sample.txt) used for the alchemy_sample_join and alchemy_sample_cluster sample reports.</td>
</tr>
<tr>
<td>alchsaml/alchemy_sample_cluster</td>
<td>Cluster join between alchsaml/alchemy_sample_fix and alchemy.</td>
</tr>
</tbody>
</table>
**Reference:** Alchemy Sentiment Analysis Adapter Sample Reports

The following table lists and describes the sample reports for the Alchemy Sentiment Analysis Adapter.

<table>
<thead>
<tr>
<th>Sample Report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>alchsampl/alchemy_sample_join</td>
<td>Scores the text passed from the alchsampl/alchemy_sample.txt file performed through a JOIN statement.</td>
</tr>
<tr>
<td>alchsampl/alchemy_sample_cluster</td>
<td>Scores the text passed from the alchsampl/alchemy_sample.txt file using the Cluster Join master.</td>
</tr>
<tr>
<td>alchsampl/alchemy_sample_where</td>
<td>Scores the text passed within a WHERE statement.</td>
</tr>
</tbody>
</table>
## Glossary

This glossary provides definitions of commonly used words relating to WebFOCUS Social Media Integration.

<table>
<thead>
<tr>
<th><strong>Access File</strong></th>
<th>Using a file extension of <code>.acx</code>, an Access File is a metadata file that describes the web services request to the server.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access Token</strong></td>
<td>A series of characters that is given to a credential on the application page, facilitating single user authentication. This value can be copied across screens for configuration purposes.</td>
</tr>
<tr>
<td><strong>Adapter</strong></td>
<td>An adapter is used by a web service to transform message formats. Adapters are needed on social media platforms for this reason,</td>
</tr>
<tr>
<td><strong>Alchemy</strong></td>
<td>A sentiment analysis tool that is used to extract and analyze data about people, facts, places, and other topics.</td>
</tr>
<tr>
<td><strong>Allowed Permissions</strong></td>
<td>Permissions that provide access to certain information (for example, birthdays and interests in the Facebook adapter). In order to allow these permissions, you must select them when configuring the adapter.</td>
</tr>
<tr>
<td><strong>API</strong></td>
<td>Commonly known as an Application Programming Interface, an API is a set of programming instructions and standards for accessing a web-based software application or web tool.</td>
</tr>
<tr>
<td><strong>Attributes</strong></td>
<td>The variables used to define a connection.</td>
</tr>
<tr>
<td><strong>Certificate</strong></td>
<td>A file that is used to authenticate the server to which the adapter is connecting.</td>
</tr>
</tbody>
</table>
**Chained Authentication**

In chained authentication, a Microsoft Internet Security and Acceleration (ISA) Server provides authentication when it routes requests to an upstream server. In some configuration scenarios, chained authentication supports the explicit and passthru (with PING capabilities) security models.

**Connection Attributes**

Attributes, for example Connection Name and Select Profile, that define a connection.

**Connection Name**

Logical name used to identify a particular set of connection attributes.

**Cookies**

These contain user credentials, which are in effect for the length of a TSCOM agent session (that is, between user connect and user disconnect).

**Data Management Console**

Provides a console through which you can configure the Adapter for Facebook.

**Data Profiling**

Provides the data characteristics for synonym columns (alphanumeric and numeric columns).

**Facebook**

An Internet-based social networking service.

**Identification Token**

Values that are returned by an authentication operation and are acceptable to associated execution operations.

**JDK**

Java Development Kit, which is a programming environment that supports the production of Java applets and applications. Platforms for development include Java SE, Java EE or Java ME.

**JSON**

JavaScript Object Notation. It is a publicly available, text-based open standard.
<table>
<thead>
<tr>
<th><strong>Master File</strong></th>
<th>A permanent file that serves as an authoritative source of data. It can be updated as needed. This file is also required and serves as the backbone of the underlying file structure.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metadata</strong></td>
<td>Metadata is data about other data. Its role is to summarize basic information about data, enabling more accurate searches. Metadata creates a structure within the data which leads to better results in accessing information and conducting a search.</td>
</tr>
<tr>
<td><strong>Proxy Port</strong></td>
<td>The port number on which the proxy server listens.</td>
</tr>
<tr>
<td><strong>REST</strong></td>
<td>REpresentational State Transfer</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td>Implements authentication protocols when connecting to a server. For example, when connecting to a web services provider, there are two methods by which a user can be authenticated (Explicit and Password Passthru). These are the security methods imposed on the web services provider.</td>
</tr>
<tr>
<td><strong>Sentiment Analysis</strong></td>
<td>Measures the attitudes of a consumer towards a brand or the sentiment that is expressed through social media tools. Involves the measurement of engagement with social media tools (for example, Facebook or Twitter).</td>
</tr>
<tr>
<td><strong>Synonym</strong></td>
<td>Defines a unique logical name (also known as an alias) for each web services operation. Synonyms are useful because they insulate client applications from changes to the location and identity of a request. You can move or rename a request without modifying the client applications that use it. You need make only one change, redefining the request synonym on the server. They provide support for the extended metadata features of the server, such as virtual fields and security mechanisms. Creating a synonym generates a Master File and an Access File.</td>
</tr>
<tr>
<td><strong>Taxonomy</strong></td>
<td>Categories and terms that are hierarchically organized using parent child relationships.</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Taxonomy Server</strong></td>
<td>A third-party product created by WAND, Inc., the WAND DataFacet Taxonomy Server evaluates content and returns a sentiment score based on a default Sentiment Taxonomy.</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td>Uniform Resource Locator. It is a string of charters that refer to information that is located on the Internet.</td>
</tr>
<tr>
<td><strong>WADL</strong></td>
<td>Web Application Description Language. This is a file format that is specific to XML.</td>
</tr>
<tr>
<td><strong>WAND</strong></td>
<td>A Colorado-based company that designs and develops the WAND DataFacet Taxonomy Server.</td>
</tr>
<tr>
<td><strong>Web Console</strong></td>
<td>A web-based user interface through which you can access an application.</td>
</tr>
<tr>
<td><strong>WSDL</strong></td>
<td>Web Services Description Language. It is a XML-based description language that is used to describe the functionality of a particular web service.</td>
</tr>
</tbody>
</table>
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