

# **TIBCO Flogo® Connector for Apache Solr User's Guide**

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# TIBCO Documentation and Support Services

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## How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit <https://docs.tibco.com>.

Documentation for TIBCO Flogo<sup>®</sup> Connector for Apache Solr is available on the TIBCO Flogo<sup>®</sup> Connector for Apache Solr Product Documentation page.

## Product-Specific Documentation

The following documents for this product can be found on the TIBCO Documentation site:

- *TIBCO Flogo<sup>®</sup> Connector for Apache Solr Installation*
- *TIBCO Flogo<sup>®</sup> Connector for Apache Solr User's Guide*
- *TIBCO Flogo<sup>®</sup> Connector for Apache Solr Release Notes*

## How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit <http://www.tibco.com/services/support>.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at <https://support.tibco.com>.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to <https://support.tibco.com>. If you do not have a user name, you can request one by clicking Register on the website.

## How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the [TIBCO Ideas Portal](https://community.tibco.com). For a free registration, go to <https://community.tibco.com>.

# Overview

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Apache Solr is an Enterprise Search Platform built on Apache Lucene. Use the TIBCO Flogo<sup>®</sup> Connector for Apache Solr tiles in your flows to query your Apache Solr server instance. TIBCO Flogo<sup>®</sup> Connector for Apache Solr provides powerful document search and querying capabilities from Apache Solr powered backend server systems through Solr queries.

# Creating a TIBCO Flogo® Connector for Apache Solr Connection

You must create a connection to Apache Solr server from this connector before you can use the TIBCO Flogo® Connector for Apache Solr connector. The Apache Solr connection contains all the parameters required to connect to Apache Solr server instance. The Apache Solr connection is used by all the activities in the Apache Solr category.



Before you create an Apache Solr connection, be sure that you have an active Apache Solr SSL enabled server instance.

To create an Apache Solr connection, click the **Connections** tab on the Flogo Enterprise page.

If this is the first connection you are adding, do the following:

1. Click the **TIBCO Flogo® Connector for Apache Solr** tile.
2. Enter the values for the fields in the **TIBCO Flogo® Connector for Apache Solr** connection dialog. See [TIBCO Flogo® Connector for Apache Solr Connection Details](#) topic for a description of the fields.
3. Click **Save**.

If you already have an existing connection for any connector in Flogo Enterprise, the connections will be displayed on the **Connections** page.

1. Click **Add Connection**.
2. Click the **TIBCO Flogo® Connector for Apache Solr** tile.
3. Enter the values for the fields in the **TIBCO Flogo® Connector for Apache Solr** dialog. See [TIBCO Flogo® Connector for Apache Solr Connection Details](#) topic for a description of the fields.
4. Click **Save** to save the connection details offline without validating them. The validation to check whether the server is accessible, the user credentials are valid, and the user exists on the Apache Solr server will *not* be performed. You can use this option in situations where your Apache Solr server is not publicly accessible from the Flogo Enterprise instance.

Alternatively, click **Validate** to validate the connection to the Apache Solr instance before saving it. The connection details get validated against the entered information before the connection is saved. If the server is not accessible, or if the user credentials entered are incorrect, an error message is shown at the bottom of the connection dialog.

## TIBCO Flogo® Connector for Apache Solr Connection Details

Provide the information of the Apache Solr server connection to be created.

The **TIBCO Flogo® Connector for Apache Solr** connection dialog contains the following fields:

Field	Description
Connection Name	Name for the Apache Solr connection you are creating
Description	A short string of text describing this connection.
Host Name	Name or IP address of the machine which hosts the Apache Solr server

Field	Description
Port	The port on which the Apache Solr server is running and has exposed its querying capability. By default, this is set to 443, the port for HTTPS. If you change the port from the default 443 to another port number, make sure that the port is secured using HTTPS. The Apache Solr server should be running with a certificate that is approved from a publicly trusted root CA (Certificate Authority). Establishing connections with Apache Solr servers that are running with self-signed certificates is not supported.
User	User name on the Apache Solr server
Password	Password for the above user. If the Authentication is enabled on the Apache Solr server, the credentials you enter in username and password fields will be validated against the server user database.
Core Name	Name of the collection on the Apache Solr server. The Apache Solr server is running in Cloud mode, or the name of the Core, in case the server is running in standalone mode. For more details on Apache Solr Cores and Collections concept, refer to Apache Solr documentation.



# ApacheSolrQueryActivity

Use this activity to query the documents and data on your Apache Solr server.

## Configuration

The **Configuration** tab has the following fields.

Field	Description
Connection	Name of the Apache Solr server connection that you want to use in this activity.

## Input Settings

Enter your Apache Solr queries in the **Input Settings** tab. Queries could be parameterized queries. Parameters which become input fields in the **Input** tab are marked by the prefix "?". Input fields are available in the **Input** tab for mapping into values from the previous activities of the flow.

Field	Description
Query	<p>The Apache Solr search SQL query to query the documents and data on Apache Solr server. Only Apache Solr standard query syntax is supported. Parameterized queries can be entered. For example:</p> <pre>q=cat:electronics;</pre> <p>The above example, queries the Apache Solr server on the specified core to find documents that belong to the specified <code>cat</code> or <code>category</code> (as defined in the schema). In this example the <code>cat</code> is <code>electronics</code>.</p> <p>The following are examples or parameterized queries</p> <pre>q=cat:?cat;</pre> <p>Note that the <code>?cat</code> literal is the parameterized argument in the example query above. <code>cat</code> will be available in the <b>Input</b> tab where it can be mapped to the fields from the previous activities.</p> <p>Other examples of parameterized queries are as follows:</p> <pre>select?facet.field=author&amp;facet=on&amp;fl=facet_fields&amp;q=*:*; q=*:*&amp;facet.field=?facetfield&amp;facet.mincount=?facetcount&amp;facet=on&amp;rows=0;</pre>

## Input

The **Input** tab displays the fields parsed from query which you entered in **Input Setting** tab. You can input the values for each element by hard coding the value or mapping the value to an element from the output schema of a previous activity in the flow. See the section on "Using the Mapper" in the *TIBCO Flogo® Enterprise User's Guide* for details on how to map elements.

## Output Settings

This tab is used for defining the response schema for the query output data.

Field	Description
Response Schema	<p>The format for the response sent by the Apache Solr server to the query you entered in <b>Input Settings</b> tab. The JSON response that you enter in the <b>Output Settings</b> tab is parsed by this activity and an output JSON schema constructed from it. The constructed schema is assigned to the <code>doc[]</code> array element of the response schema document.</p> <p>The response format must be a valid JSON object. Do the following to obtain a JSON object from the query response:</p> <ol style="list-style-type: none"> <li>1. Run your query on the Apache Solr server using the Apache Solr admin.</li> <li>2. Copy the JSON response for one response element.</li> <li>3. Paste the JSON data of the element into the <b>Response Schema</b> field.</li> <li>4. Make sure that the element you paste is a valid JSON object.</li> </ol> <p>Following is an example of an element in JSON:</p> <pre> https://solr.wasp.tibco.com/solr/techproducts/select?q=cat:electronics&amp;rows=1  {   "responseHeader":{     "zkConnected":true,     "status":0,     "QTime":15,     "params":{       "q":"cat:electronics",       "rows":"1",       "_":"1519355401049"}},   "response":{"numFound":12,"start":0,"maxScore":0.9614112,"docs":[     {       "id":"SP2514N",       "name":"Samsung SpinPoint P120 SP2514N - hard drive - 250 GB - ATA-133",       "manu":"Samsung Electronics Co. Ltd.",       "manu_id_s":"samsung",       "cat":["electronics",         "hard drive"],       "features":["7200RPM, 8MB cache, IDE Ultra ATA-133",         "NoiseGuard, SilentSeek technology, Fluid Dynamic Bearing (FDB) motor"],       "price":92.0,       "price_c":"92.0,USD",       "popularity":6,       "inStock":true,       "manufacturedate_dt":"2006-02-13T15:26:37Z",       "store":"35.0752,-97.032",       "_version_":1591539318021685248,       "price_c___l_ns":9200}     ]}   } } </pre>

## Output

The Output tab displays the **Response Schema** elements in a tree format.