



# **TIBCO® Data Virtualization**

## **Impala Adapter Guide**

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# Contents

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# TDV Impala Adapter

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## Introduction

This section explains the various connection and configuration options of the datasource Impala as well as the capabilities:

[Obtain and Install Drivers for Impala](#)

[Datasource Configuration](#)

[Data Type Mappings](#)

[Impala Function Support](#)

[References](#)

## Obtain and Install Drivers for Impala

### To obtain JDBC drivers for Impala

1. From the web, locate the Impala zip files.

Choose your version from the following download locations:

- <https://archive.apache.org/dist/impala>
- <https://www.cloudera.com/downloads/connectors/impala/jdbc>
- <http://maven.tpcn.com/nexus/content/repositories/public/com/cloudera/ImpalaJDBC41/2.6.3/>
- <https://mvnrepository.com/artifact/org.apache.hadoop>

For example:

- Do a web search and download `apache-impala-<version number>.tar.gz` .

Or query and follow instructions retrieved at:

<https://docs.cloudera.com/documentation/other/connectors/impala-jdbc/2-5-5/Cloudera-JDBC-Driver-for-Impala-Install-Guide-2-5-5.pdf>

Refer to the TDV Installation guide for more details about the supported versions.

2. Unpack the zip file.
3. Copy the following JAR files for your version

Version	JAR Files
Impala 2.0 with Kerberos	<code>commons-collections-3.2.1.jar</code>
	<code>commons-configuration-1.6.jar</code>
	<code>commons-logging-1.1.3.jar</code>
	<code>Core-Site.jar</code> (core-site.jar file is required for the TRUSTED_DELEGATION case when the “default_realm” is not the login realm.)
	<code>guava-11.0.2.jar</code>
	<code>hadoop-auth-2.5.0-cdh5.3.0.jar</code>
	<code>hadoop-common-2.5.2.jar</code>
	<code>hadoop-mapreduce-client-core-2.5.0-cdh5.3.0.jar</code>
	<code>hive-exec-1.0.0.jar</code>
	<code>hive-jdbc-1.0.0.jar</code>
	<code>hive-service-1.0.0.jar</code>

Version	JAR Files
	httpclient-4.2.5.jar
	httpcore-4.2.5.jar
	libfb303-0.9.0.jar
	libthrift-0.9.0.jar
	log4j-1.2.16.jar
	slf4j-api-1.7.5.jar
	slf4j-log4j12-1.7.5.jar
Impala 2.0	hadoop-core-1.2.1.jar
	commons-logging-1.1.3.jar
	hive-exec-0.13.1-cdh5.3.0.jar
	hive-jdbc-0.13.1-cdh5.3.0.jar
	hive-metastore-0.13.1-cdh5.3.0.jar
	hive-service-0.13.1-cdh5.3.0.jar
	httpclient-4.2.5.jar

Version	JAR Files
	httpcore-4.2.5.jar
	libfb303-0.9.0.jar
	libthrift-0.9.0.jar
	log4j-1.2.17.jar
	slf4j-api-1.7.5.jar
	slf4j-log4j12-1.7.5.jar
Apache Impala 2.x	slf4j-log4j12-1.7.5.jar
	slf4j-api-1.7.5.jar
	log4j-1.2.16.jar
	libthrift-0.9.0.jar
	libfb303-0.9.0.jar
	httpcore-4.2.5.jar
	httpClient-4.2.5.jar
	hive-service-1.0.0.jar

Version	JAR Files
	hive-jdbc-1.0.0.jar
	hive-exec-1.0.0.jar
	hadoop-common-2.5.2.jar
	commons-logging-1.1.3.jar
Cloudera Impala 2.7	commons-codec-1.3.jar
	commons-logging-1.1.1.jar
	hive_metastore.jar
	hive_service.jar
	httpclient-4.1.3.jar
	httpcore-4.1.3.jar
	ImpalaJDBC41-2.6.3.jar
	libfb303-0.9.0.jar
	libthrift-0.9.0.jar
	log4j-1.2.14.jar

Version	JAR Files
	ql.jar
	slf4j-api-1.5.11.jar
	slf4j-log4j12-1.5.11.jar
	TCLIServiceClient.jar
	zookeeper-3.4.6.jar

## To install the JDBC drivers for Impala

Make sure to add the JAR files to all of your TDV clients and servers.  
Paste the necessary driver JAR files into one or more of the following TDV installation directories:

```
<TDV_install_dir>\conf\adapters\system\impala_2_0
```

```
<TDV_install_dir>\conf\adapters\system\impala_2_2
```

4. Restart the TDV Server.

## To enable Kerberos authentication:

Configure the following JDBC connection URL to authenticate the connecting user with Kerberos:

```
jdbc:impala://localhost:21050;AuthMech=1;KrbRealm=EXAMPLE.COM;KrbHostFQDN=impala.example.com;KrbServiceName=impala
```



# Datasource Configuration

This section explains the connection properties that are defined while setting up a datasource.

## Basic Tab

The following table and the sections below lists and explains the connection properties that are in the Basic Tab of the New Data Source Window.

Datasource Name	The name of the Datasource.
Host	Name of the host machine or the host machine's IP address.
Port	Port number for the data source to connect with the host.  The Port number for Impala is 21050.
Database Name	Name or alias of the underlying data source. TDV Server uses this name to find and connect to the data source.
Login/User, Password	User name and password required to access the data source.
Pass-through Login	Flag to indicate whether pass-through login is enabled or not.
Authentication Type	The type of Authentication used by the datasource.
Keytab File	Use it to enable Kerberos security through Keytab files. Type the full path to the Keytab file.
Keytab Principal Name	The name of the Keytab principal.

## Datasource Name

The name of the data source.

## Data Type

string

## Default Value

""

## Host

Name of the host machine or the host machine's IP address.

## Data Type

string

## Default Value

""

## Port

The Port number

## Data Type

string

## Default Value

""

## Database Name

Name or alias of the underlying data source. TDV Server uses this name to find and connect to the data source.

## Data Type

string

## Default Value

""

## Login/User, Password

User name and password required to access the data source.

## Data Type

string

## Default Value

""

## Remarks

When the data source is used as a target for cache tables or data ship, the user must also have permission to create tables, execute DDL, and perform other required tasks. Refer to the individual data source descriptions for details.

## Pass-through Login

Flag to indicate whether pass-through login is enabled or not.

## Data Type

string

## Default Value

""

## Remarks

Disabled (default)—This allows automated provisioning of a connection pool. Open connection threads can be used by authorized users after the validation query verifies connection status. If pass-through login is disabled, the Save Password check box is not available.

Enabled—A new connection to the data source uses the credentials supplied by the client when data is requested from that data source for the first time. Subsequent requests by the same user reuse the existing connection. When another user attempts to connect to a data source, a new connection is created.

See “Managing Security for TDV Resources” in the TDV Administration Guide for details.

## Authentication Type

Indicates the type of authentication used by the data source.

## Data Type

String

## Default Value

BASIC

## Remarks

Select BASIC or Kerberos authentication method, where offered.

See the *TDV Administration Guide* for more information about Kerberos authentication.

## Keytab File

Use it to enable Kerberos security through Keytab files. Type the full path to the Keytab file.

## Data Type

String

## Default Value

""

## Remarks

This field is available only if you choose Kerberos authentication.

## Keytab Principal Name

The name of the Keytab principal.

## Data Type

String

## Default Value

""

## Remarks

This field is available only if you choose Kerberos authentication.

# Advanced Tab

The following table and the sections below lists and explains the connection properties that are in the Advanced Tab of the New Data Source Window.

<a href="#">Connection URL Pattern</a>	A template for generating a URL to connect to the physical data source.
<a href="#">Connection URL String</a>	The URL string generated from the connection URL pattern with the connection information you provide.
<a href="#">JDBC Connection Properties</a>	Lets you specify property-value pairs to pass to the JDBC

	data source.
Connection Pool Maximum Size	Maximum number of connections (both active and idle) allowed for the data source. When the maximum is reached, new requests must wait until a connection is available.
Connection Pool Minimum Size	Minimum number of connections in the pool even when the pool is inactive.
Connection Pool Idle Timeout	Number of seconds that a connection can remain idle without being dropped from the pool when there are more than the minimum number of connections.
Maximum Connection Lifetime	The number of minutes that a connection that was returned to the pool persists if there are more open connections than the minimum pool size.
Connection Validation Query	A data-source-specific query that the TDV query engine sends to see if the data source connection is valid. This query is executed every time a connection is checked out from the pool. Enter a query that returns quickly.
Execution Timeout	The number of seconds an execution query on the data source can run before being canceled.
Execute SELECTs Independently	Lets a SELECT statement be executed using a new connection from the connection pool, and committed immediately after completion. INSERT, UPDATE, and DELETE statements are executed using the same connection as part of the transaction.
Connection Check-out Procedure	A procedure that returns a valid SQL statement that can be used to initialize the connection.
Supports Star Schema	Check only if this data source supports very large predicates and very large cardinalities for star schema semijoins.

<a href="#">Max Source Side Cardinality for Semi Join</a>	See the documentation for semijoins and the TDV Administration Guide for more information.
<a href="#">Min Target to Source Ratio for Semi Join</a>	Sets the minimum target-to-source ratio of cardinality for semijoins. Refer to the TDV Administration Guide for more information.
<a href="#">Max Source Side of Semi Join To Use OR Syntax</a>	See the documentation for semijoins and the TDV Administration Guide for more information.
<a href="#">Enable Native Data Loading</a>	Let the data source use its proprietary functionality to optimize performance.
<a href="#">Collation Sensitive</a>	TDV does not use the SORT MERGE join algorithm if any data source involved in the join is marked Collation Sensitive.
<a href="#">Concurrent Request Limit</a>	Works with the Massively Parallel Processing engine configuration parameters to control the amount of parallelization for the queries for a particular data source.
<a href="#">HDFS Service Principal Name</a>	The name of the Hadoop file system service principal.

## Connection URL Pattern

A template for generating a URL to connect to the physical data source.

## Data Type

string

## Default Value

jdbc:<DATA SOURCE>//<HOST>:<PORT>/<DATABASE\_NAME>

## Remarks

TDV does not validate modifications at the time of configuration. The data source adapter might not validate changes.

## Connection URL String

The URL string generated from the connection URL pattern with the connection information you provide.

## Data Type

string

## Default Value

“”

## Remarks

This string is used by the JDBC adapter to connect to the physical data source. This field cannot be edited. For details, see the section “Connecting through JDBC Adapters” in the TDV Administration Guide.

## JDBC Connection Properties

Lets you specify property-value pairs to pass to the JDBC data source.

## Data Type

string

## Default Value

“”



## Remarks

Click to add custom connection properties for any JDBC data source. Commonly used properties are populated with default values. Use the Add Argument button to specify other properties and values.

TDV does not validate property names. Some data source adapters ignore invalid property names or values; others return an error.

The driver properties specify connection timeout settings required by specific drivers. To avoid leaving connections open indefinitely, specify properties explicitly for your data source.

## Connection Pool Maximum Size

Maximum number of connections (both active and idle) allowed for the data source. When the maximum is reached, new requests must wait until a connection is available.

## Data Type

Numeric

## Default Value

100

## Remarks

If the maximum number of connections is in use when a request comes in (even with pass-through authentication), the new request is blocked and queued until a connection is available or the Connection Pool Idle Timeout is reached.

If no connection was made available within the specified timeout, a check is made for an available connection by the same user. If none is available, the least recently used connection for another user is dropped and a new connection is opened.

Studio reuses pooled connections if they continue to be valid after changes (such as connection name), but JDBC requests are forced to use new connections if any part of the data source connection configuration has changed.

## Connection Pool Minimum Size

Minimum number of connections in the pool even when the pool is inactive.

### Data Type

Numeric

### Default Value

0

### Remarks

When a connection has been idle, a validation query is used to verify whether an open connection is still valid just prior to submission of a request. If the connection is invalid, the connection is discarded and another is used.

## Connection Pool Idle Timeout

Number of seconds that a connection can remain idle without being dropped from the pool when there are more than the minimum number of connections.

### Data Type

Numeric

### Default Value

30

## Maximum Connection Lifetime

The number of minutes that a connection that was returned to the pool persists if there are more open connections than the minimum pool size.

### Data Type

Numeric

## Default Value

30

## Remarks

The duration is calculated from connection creation. Default value is 60 minutes. Set a smaller value if the pool is likely to run out of connections. Be sure to add a validation query. Set a larger value if you want the connections to be held for a longer period. Set a value of 0 to keep connections alive indefinitely.

## Connection Validation Query

A data-source-specific query that the TDV query engine sends to see if the data source connection is valid. This query is executed every time a connection is checked out from the pool. Enter a query that returns quickly.

## Data Type

string

## Default Value

""

## Remarks

If this query returns a non-error result, the data source connection is considered valid. If this query fails, the connection is discarded and a new connection is checked out from the available pool.

No one SELECT statement works with all data sources. To verify that TDV is running and that it can connect to the data source, devise a query against a published table from that data source.

## Enable Native Data Loading

Let the data source use its proprietary functionality to optimize performance.

## Data Type

Bool

## Default Value

True

## Remarks

See the User Guide, Chapter About Data Source Native Load Performance Options” for more details,.

## Collation Sensitive

TDV does not use the SORT MERGE join algorithm if any data source involved in the join is marked Collation Sensitive.

## Data Type

Bool

## Default Value

False

## Remarks

None

## Concurrent Request Limit

Works with the Massively Parallel Processing engine configuration parameters to control the amount of parallelization for the queries for a particular data source.

## Data Type

Numeric

## Default Value

0

## Remarks

None

## Execution Timeout

The number of seconds an execution query on the data source can run before being canceled.

## Data Type

Numeric

## Default Value

0

## Remarks

None

## Execute SELECTs Independently

Lets a SELECT statement be executed using a new connection from the connection pool, and committed immediately after completion. INSERT and UPDATE statements are executed using the same connection as part of the transaction.

## Data Type

Bool

## Default Value

True

## Remarks

None

## Connection Check-out Procedure

A procedure that returns a valid SQL statement that can be used to initialize the connection.

## Data Type

string

## Default Value

""

## Remarks

The signature of the initialization procedure should be:

```
(IN ds_name VARCHAR, OUT sqlText VARCHAR)
```

Give the full path to the procedure in the Connection Check-out Procedure box.

## Max Source Side Cardinality for Semi Join

See the documentation for semijoins and the TDV Administration Guide for more information.

## Data Type

Numeric

## Default Value

""

## Remarks

None

## Max Source Side of Semi Join To Use OR Syntax

See the documentation for semijoins and the TDV Administration Guide for more information.

## Data Type

Numeric

## Default Value

2147483647

## Remarks

None

## Min Target to Source Ratio for Semi Join

Sets a minimum ratio to trigger use of semi join optimization.

## Data Type

Numeric

## Default Value

""

## Remarks

None

## Supports Star Schema

Check only if this data source supports very large predicates and very large cardinalities for star schema semijoins.

## Data Type

Bool

## Default Value

False

## Remarks

Refer to the section Star Schema Semijoin in the User Guide, for more information.

## HDFS Service Principal Name

The name of the Hadoop file system service principal.

## Data Type

String

## Default Value

""

## Remarks

This field is available only if you choose BASIC authentication.



# Data Type Mappings

## Apache Impala to TDV Data Types

The following limits apply to Apache Impala data type mapping:

- The maximum length for VARCHAR is 65355.
- The maximum precision for CAST function is 38.
- The maximum scale for CAST function is 38.

The following table shows the mapping from Apache Impala data types to TDV data types.

Apache Impala 2.0 Data Type	TDV Data Type
DATE	TIMESTAMP
DECIMAL	DECIMAL
NUMERIC	DECIMAL
FLOAT	FLOAT
CHAR	CHAR
VARCHAR	VARCHAR

## Cloudera Impala to TDV Data Types

The following limits apply to Cloudera Impala data type mapping:

- The maximum length for VARCHAR is 65355.
- The maximum precision of the CAST function is 38.
- The maximum scale of the CAST function is 38.

The following table shows the mapping from Cloudera Impala data types to TDV data types.

Cloudera Impala Data Type	TDV Data Type
DATE	TIMESTAMP
DECIMAL	DECIMAL
NUMERIC	DECIMAL
FLOAT	FLOAT
CHAR	CHAR
VARCHAR	VARCHAR

## Impala Function Support

### Apache Impala Function Support

TDV supports the following types of functions for Apache Impala:

- [Apache Impala Numeric Function Support](#)
- [Apache Impala Aggregate Function Support](#)
- [Apache Impala Conversion Function Support](#)
- [Apache Impala Date Function Support](#)
- [Apache Impala Conditional Function Support](#)
- [Apache Impala Character Function Support](#)
- [Apache Impala Analytic Function Support](#)

### Apache Impala Numeric Function Support

Apache Impala Numeric Function	Notes
ABS	
ACOS	
ASIN	
ATAN	
ATAN2	
COS	
COSH	
EXP	
FLOOR	
GREATEST	
TO_HEX	
LEAST	
LN	
LOG	
LOG10	
POW	
RAND	
RANDOM	

Apache Impala Numeric Function	Notes
ROUND	
SIGN	
SIN	
SINH	
SQRT	
TAN	
TANH	
TRUNC	

TDV supports the numeric functions listed in the table below for Apache Impala.

## Apache Impala Aggregate Function Support

Apache Impala Aggregate Function	Notes
VARIANCE_SAMP	
EXTRACT	

TDV supports the aggregate functions listed in the table below for Apache Impala.

## Apache Impala Conversion Function Support

Apache Impala Conversion Function	Notes
CAST	

TDV supports the conversion function listed in the table below for Apache Impala.

## Apache Impala Date Function Support

Apache Impala Date Function	Notes
ADD_MONTHS	
DATEDIFF	
DAY	
DAYNAME	
DAYOFWEEK	
DAYOFYEAR	
HOUR	
MONTH	
SECOND	
TO_DATE	
TRUNC	
EXTRACT	
YEAR	

TDV supports the date function listed in the table below for Apache Impala.

## Apache Impala Conditional Function Support

Apache Impala Conditional Function	Notes
COALESCE	
CASE	
IFNULL	
ISNULL	
NULLIF	
NVL	

TDV supports the conditional functions listed in the table below for Apache Impala.

## Apache Impala Character Function Support

Apache Impala Conditional Function	Notes
CONCAT	
INITCAP	
INSTR	
LOCATE	
REGEXP_LIKE	

Apache Impala Conditional Function	Notes
REPEAT	
REVERSE	
SPLIT_PART	
TRANSLATE	

TDV supports the character functions listed in the table below for Apache Impala.

## Apache Impala Analytic Function Support

Apache Impala Analytic Function	Notes
DENSE_RANK	
FIRST_VALUE	
LAG	
LAST_VALUE	
LEAD	
RANK	
ROW_NUMBER	

TDV supports the analytic functions listed in the table below for Apache Impala.

# Cloudera Impala Function Support

TDV supports the following types of functions for Cloudera Impala:

- [Cloudera Impala Numeric Function Support](#)
- [Cloudera Impala Aggregate Function Support](#)
- [Cloudera Impala Date Function Support](#)
- [Cloudera Impala Conditional Function Support](#)
- [Cloudera Impala Character Function Support](#)
- [Cloudera Impala Analytic Function Support](#)

## Cloudera Impala Numeric Function Support

Cloudera Impala Numeric Function	Notes
ABS	
ACOS	
ASIN	
ATAN	
ATAN2	
COS	
COSH	
COT	
EXP	



Cloudera Impala Numeric Function	Notes
FACTORIAL	
FLOOR	
MOD	
GREATEST	
TO_HEX	
LEAST	
LN	
LOG	
LOG10	
POW	
RAND	
RANDOM	
ROUND	
SIGN	
SIN	
SINH	
SQRT	
TAN	

Cloudera Impala Numeric Function	Notes
TANH	
TRUNC	

TDV supports the numeric functions listed in the table below for Cloudera Impala.

## Cloudera Impala Aggregate Function Support

Cloudera Impala Aggregate Function	Notes
VARIANCE_SAMP	
VARIANCE_POP	
VARIANCE	
STDDEV	
STDDEV_SAMP	
STDDEV_POP	
EXTRACT	
CAST	

TDV supports the aggregate functions listed in the table below for Cloudera Impala.

## Cloudera Impala Date Function Support

Cloudera Impala Date Function	Notes
ADD_MONTHS	
DATEDIFF	
DAY	
DAYNAME	
DAYOFWEEK	
DAYOFYEAR	
HOUR	
MONTHS_BETWEEN	
SECOND	
TO_DATE	
TRUNC	
EXTRACT	
YEAR	

TDV supports the date function listed in the table below for Cloudera Impala.

## Cloudera Impala Conditional Function Support

Cloudera Impala Conditional Function	Notes
COALESCE	

Cloudera Impala Conditional Function	Notes
CASE	
DECODE	
IFNULL	
ISNULL	
NULLIF	
NVL	

TDV supports the conditional functions listed in the table below for Cloudera Impala.

## Cloudera Impala Character Function Support

Cloudera Impala Character Function	Notes
BTRIM	
CHR	
CONCAT	
INITCAP	
INSTR	
LOCATE	
REGEXP_LIKE	

Cloudera Impala Character Function	Notes
REVERSE	
SPLIT_PART	
TRANSLATE	

TDV supports the character functions listed in the table below for Cloudera Impala.

## Cloudera Impala Analytic Function Support

Cloudera Impala Analytic Function	Notes
CUME_DIST	
DENSE_RANK	
FIRST_VALUE	
LAG	
LAST_VALUE	
LEAD	
NTILE	
PERCENT_RANK	
RANK	
ROW_NUMBER	

TDV supports the aggregate functions listed in the table below for Cloudera Impala.

# References

Refer to the following Guides for further details about the capabilities of the data source:

Capabilities	Section
Query Engine	User Guide, Chapter <b><i>TDV Query Engine Optimizations</i></b>
Data ship	User Guide, Chapter <b><i>Data Ship Performance Optimization</i></b>
Caching	User Guide, Chapter <b><i>TDV Caching</i></b>
Performance Optimization	User Guide, Chapter <b><i>Performance Tuning</i></b>
TDV Massively Parallel Processing Engine	User Guide, Chapter <b><i>Configuring the TDV MPP Engine</i></b>
Kerberos	Administration Guide Chapter <b><i>Configuring Kerberos</i></b>

# TIBCO Product Documentation and Support Services

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For information about this product, you can read the documentation, contact TIBCO Support, and join the TIBCO Community.

## 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.

## Product-Specific Documentation

The following documentation for this product is available on the [TIBCO® Data Virtualization](#) page.

- **Users**
  - TDV Getting Started Guide
  - TDV User Guide
  - TDV Web UI User Guide
  - TDV Client Interfaces Guide
  - TDV Tutorial Guide
  - TDV Northbay Example
- **Administration**
  - TDV Installation and Upgrade Guide
  - TDV Administration Guide
  - TDV Active Cluster Guide
  - TDV Security Features Guide
- **Data Sources**

TDV Adapter Guides

TDV Data Source Toolkit Guide (Formerly Extensibility Guide)

- **References**

TDV Reference Guide

TDV Application Programming Interface Guide

- **Other**

TDV Business Directory Guide

TDV Discovery Guide

- *TIBCO TDV and Business Directory Release Notes* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release.

## How to Contact TIBCO Support

Get an overview of [TIBCO Support](#). You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the [TIBCO Support](#) website.
- 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 [TIBCO Support](#) website. If you do not have a user name, you can request one by clicking **Register** on the website.

## Release Version Support

TDV 8.5 is designated as a Long Term Support (LTS) version. Some release versions of TIBCO® Data Virtualization products are selected to be long-term support (LTS) versions. Defect corrections will typically be delivered in a new release version and as hotfixes or service packs to one or more LTS versions. See also

[https://docs.tibco.com/pub/tdv/general/LTS/tdv\\_LTS\\_releases.htm](https://docs.tibco.com/pub/tdv/general/LTS/tdv_LTS_releases.htm).



## 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](#). For a free registration, visit [TIBCO Community](#).

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