



ABBYY® Timeline

Connector for DBMS Guide

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About the ABBYY Timeline Connector for DBMS

The Timeline Connector for DBMS is intended for integrating DBMS and ABBYY Timeline. The connector allows you to submit data from DBMS to ABBYY Timeline.

System requirements

The ABBYY Timeline Connector for DBMS works with:

- ABBYY Timeline 4.11 and later

The following external component is required:

- Java Runtime Environment 8 and later

Usage scenario

The ABBYY Timeline Connector for DBMS can typically be used in the following scenario:

1. Create or open a repository in ABBYY Timeline where data received from DBMS is processed. For detailed instructions on configuring DBMS as data source, see [Configuring ABBYY Timeline repository](#) below.
2. Run the ABBYY Timeline Connector for DBMS in command-line mode with the specified parameters. For detailed instructions see [Running ABBYY Timeline Connector for DBMS](#) below.
3. The connector sends the data to the ABBYY Timeline repository.
4. After the data uploaded into the ABBYY Timeline repository, the application processes data according to the to-do list if specified, or a user can apply various operations to the uploaded data.

Installation

To install the ABBYY Timeline Connector for DBMS:

1. Download the newest version of the ABBYY Timeline Connector for DBMS. Please contact your ABBYY representative or ABBYY Timeline support at support@abbyy.com and obtain the link to download the newest version of the ABBYY Timeline Connector for DBMS.
2. Extract the ZIP archive with the connector files into a folder on your local disk. For example, C:\ABBYY\TimelineConnectorDBMS.

Configuring ABBYY Timeline repository

To enable ABBYY Timeline to receive and process data from DBMS:

1. Open a ABBYY Timeline repository (click **View > Repository**)
2. Go to **Details > Data sources** tab and select **Upload from database**.
3. Click **Add configuration**
4. In the configuration form, fill in the following fields:
 - a. **Connection string**
This is a string that passed to a JDBC driver in order to initiate the connection with DBMS.
Example:
 - Hortonworks Data Platform 2.6.5
Format:
jdbc:hive2://<host>:<port>/<dbName>;<sessionConfs>?<hiveConfs>#<hiveVars>

Example:

`jdbc:hive2://localhost:2181/;serviceDiscoveryMode=zooKeeper;zooKeeperNamespace=hiveserver2`

Driver can be downloaded [here](#).

- Apache Hive

Format: `jdbc:hive2://<host>:<port>/<dbName>;<additionalparameters>`

Example: `jdbc:hive2://localhost:10001/Testdb;transportMode=http;httpPath=cliservice`

Driver can be downloaded [here](#).

- Microsoft SQL Server

Format:

`jdbc:sqlserver://[serverName[instanceName][:port]][:property=value[:property=value]]`

Example: `jdbc:sqlserver://localhost\SQLEXPRESS:1433;databaseName=Testdb`

Connector includes this driver.

- PostgreSQL

Format: `jdbc:postgresql://server-name:server-port/database-name`

Example: `jdbc:postgresql://localhost:5432/Testdb`

Connector includes this driver.

b. **Username**

Enter username for your DBMS account.

c. **Password**

Enter password for your DBMS account.

d. **Query**

Enter a string of query to the DBMS to get data.

e. **Repository table name**

Enter a name for table in the ABBYY Timeline repository.

Note: You may provide a new table name. During uploading, the data in a table is fully updated. Provide a new table name if you need to keep the data in an existing table.

f. **To-do lists**

You may specify an existing to-do list.

To-do lists are lists of tasks that need to be performed after the data is filled into the table.

For detailed instructions on configuring to-do list, see '[How to Create To-do List](#)' below.

5. Save new configuration and you will be able to see token on the top of that form.

GENERAL
SHARING
DATA SOURCES
HISTORY

☒ Manual file upload
☐ Scheduled file upload
☒ Upload from database

Token
cmVwb3NpdG9yeTp2X01F...dE1HVnpyZ0U0MGpydw==

Connection string
jdbc:hive2://10.21.8.12:10001/DemoDatabase;transportMode=http;httpPath=cliservice

Username
hadoop

Password

Query
select * from DemoTable

Repository table name
DemoTable

To-do lists
demo todo list

+

Hide details

03.09.2020 14:17:02
denis.yachmenev@abbyy.com

Delete
Save

Add configuration

How to Create To-do List

To create a to-do list in the existing table of the repository:

1. Open **Tables** and select table for configuring to-do list. In the top panel, click to **Add operation**.

No operation running at the moment

Operations: 0
Open to-do list
Save as to-do list

+
Add operation

Repository

DemoTable 2 500 denis.yachmenev@abbyy.com 02.10.2020 12:25 Tags: 0

Date	TimelineID	Event	Manager	Location	Departm
String	String	String	String	String	Stri
06/01/2016 01:05	1001	Hired	Harold Kaur	Albuquerque (NM)	IT
02/28/2017 08:52	1001	Performance Review	Harold Kaur	Albuquerque (NM)	IT
03/01/2017 11:30	1001	Bonus	Harold Kaur	Albuquerque (NM)	IT
04/29/2017 20:51	1001	Salary Change	Harold Kaur	Albuquerque (NM)	IT
05/15/2017 02:00	1001	Job Change	Harold Kaur	Albuquerque (NM)	IT
05/27/2017 20:00	1002	Hired	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/02/2019 04:35	1002	Performance Review	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/30/2019 16:59	1002	Bonus	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/30/2019 22:40	1002	Salary Change	Yasmeen Pruitt	Hospitalet de Llobregat	Production
10/04/2019 17:09	1002	Job Change	Yasmeen Pruitt	Hospitalet de Llobregat	Production
04/27/2017 09:42	1003	Hired	Kristina Booth	Taiyuan	Marketing
10/07/2017 10:50	1003	Performance Review	Kristina Booth	Taiyuan	Marketing
06/03/2018 10:25	1003	Bonus	Kristina Booth	Taiyuan	Marketing
09/05/2018 05:48	1003	Salary Change	Kristina Booth	Taiyuan	Marketing
09/19/2018 14:40	1003	Job Change	Kristina Booth	Taiyuan	Marketing

2. Select any operation you need to perform on the uploaded data.
If you need your data to be loaded both into the ABBYY Timeline repository and project to use

the analysis tools, select the **Load to Project** operation. Select the project to load data and map ABBYY Timeline fields to table columns in the **Edit Operation** form.

Note: Make sure that the names of the table columns obtained as a result of the SQL query match with the mapped columns in the table. Otherwise, the data cannot be loaded into the project.

3. Save operation and in the top panel, click to **Save as to-do list**.

The screenshot shows the ABBYY Timeline Connector interface. The top panel displays 'Operations: 1' with a list of actions: 'Open to-do list', 'Save as to-do list' (highlighted with a red box), and 'Delete all'. A tooltip for '1. Load into project' explains that it loads timelines to a new or existing project using the LOAD function. The 'Add operation' button is also visible.

The bottom panel shows the 'Repository' section with a table named 'DemoTable' containing 2,500 records. The table has columns: Date, TimelineID, Event, Manager, Location, and Department. The 'To-do list' option in the left sidebar is also highlighted with a red box.

Date	TimelineID	Event	Manager	Location	Department
06/01/2016 01:05	1001	Hired	Harold Kaur	Albuquerque (NM)	IT
02/28/2017 08:52	1001	Performance Review	Harold Kaur	Albuquerque (NM)	IT
03/01/2017 11:30	1001	Bonus	Harold Kaur	Albuquerque (NM)	IT
04/29/2017 20:51	1001	Salary Change	Harold Kaur	Albuquerque (NM)	IT
05/15/2017 02:00	1001	Job Change	Harold Kaur	Albuquerque (NM)	IT
05/27/2017 20:00	1002	Hired	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/02/2019 04:35	1002	Performance Review	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/30/2019 16:59	1002	Bonus	Yasmeen Pruitt	Hospitalet de Llobregat	Production
09/30/2019 22:40	1002	Salary Change	Yasmeen Pruitt	Hospitalet de Llobregat	Production
10/04/2019 17:09	1002	Job Change	Yasmeen Pruitt	Hospitalet de Llobregat	Production
04/27/2017 09:42	1003	Hired	Kristina Booth	Taiyuan	Marketing
10/07/2017 10:50	1003	Performance Review	Kristina Booth	Taiyuan	Marketing
06/05/2018 10:25	1003	Bonus	Kristina Booth	Taiyuan	Marketing
09/05/2018 05:48	1003	Salary Change	Kristina Booth	Taiyuan	Marketing
09/18/2018 16:40	1003	Job Change	Kristina Booth	Taiyuan	Marketing
04/08/2020 22:40	1004	Hired	Alison Hodgson	Taiyuan	IT
05/13/2020 12:49	1004	Performance Review	Alison Hodgson	Taiyuan	IT

Running ABBYY Timeline connector for DBMS

To start the connector, run the **abbyy.timeline.dbms.client.jar** file in the **<Installation folder>** using the command line parameters described below.

Where **<Installation folder>** is the folder where the ZIP archive with the connector files had been extracted.

- For connecting to the Microsoft SQL Server or PostgreSQL execute:
`java -jar abbyy.timeline.dbms.client.jar --ServerUrl <Server Url> --Token <Token> --AcceptEula`
- For connecting to the Apache Hive execute:
`java -cp "*" abbyy.timeline.dbms.client.Program --ServerUrl <Server Url> --Token <Token> --DriverClassName <ClassName> --AcceptEula`

Note. JDBC driver must be in the folder next to the connector.

Where:

- **Server URL** - URL to the ABBYY Timeline server.
- **Token** - Token from configuration page you obtained in step 5 "[Configuring ABBYY Timeline repository](#)" section.
- **DriverClassName** - Class name for external JDBC driver. That parameter is required for example for Hortonworks Data Platform 2.6.5.
- **AcceptEula** - The End-User License Agreement (EULA) must be accepted before the connector starts. You can find the EULA in the connector's folder: `./EULA.pdf`.

Note. When loading large tables, the connector sends data to ABBYY Timeline in parts of 10,000 rows each. After all the parts are fully uploaded, the data is displayed in the ABBYY Timeline repository table.

Example command to run the connector to upload data from
Hortonworks Data Platform 2.6.5:

```
java -cp "*" abby.timeline.dbms.client.Program -s http://192.168.137.103 -t  
cmVwb3NpdG9yeTo2bWw2YVVzSTRnNkI2NkU2NGxzb3Y2WndrMlhSTTJ0YzhPR2RRektpa1MzMHNkWD  
dLQ2ZSODBZaE5zWV92eDk5Qm1DMF9YV3hLQ0pyRnlxN2Q2RUJvdw== -d  
org.apache.hive.jdbc.HiveDriver -AcceptEula
```