TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Clarity User's Guide

Software Release 6.0
January 2018

Two-Second Advantage®

TIBCO®

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TIBCO Documentation and Support Services

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.

Product-Specific Documentation

Documentation for TIBCO products is not bundled with the software. Instead, it is available on the TIBCO Documentation site at https://docs.tibco.com/products/tibco-activematrix-businessworks-plug-in-for-clarity. To directly access documentation for this product, double-click the following file:

TIBCO_HOME/release_notes/TIB_bwpluginClarity_*version*_number_docinfo.html

where *TIBCO_HOME* is the top-level directory in which TIBCO products are installed. On Windows, the default *TIBCO_HOME* is `C:\Program Files\tibco`. On UNIX systems, the default *TIBCO_HOME* is `/opt/tibco`.

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

- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity Installation*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity User's Guide*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity Release Notes*

How to Contact TIBCO Support

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- 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.

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Plug-in Overview

TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Clarity is a bridge between TIBCO ActiveMatrix BusinessWorks™ and TIBCO Clarity®.

TIBCO ActiveMatrix BusinessWorks is a leading integration platform that can integrate a wide variety of technologies and systems within enterprise and on cloud. TIBCO ActiveMatrix BusinessWorks includes an Eclipse-based graphical user interface (GUI) provided by TIBCO Business Studio™ for design, testing, and deployment. If you are not familiar with TIBCO ActiveMatrix BusinessWorks before using the plug-in, see the TIBCO ActiveMatrix BusinessWorks documentation for more details.

TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity integrates into TIBCO ActiveMatrix BusinessWorks, adds a Clarity Palette and a Clarity Shared Resource to TIBCO Business Studio.

You can use the Clarity connection shared resource to do the following:

- Set up connections to a Clarity server
- Add Clarity activities to a BusinessWorks process to interact with the Clarity server

TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity performs the following functions:

- Get API key for REST calls
- Reload, add, or remove a source file in one dataset
- Start and query batch job for projects
- Download a batch job result

Getting Started

A typical workflow for using the plug-in to achieve different goals includes creating a process, testing it in the debugger, and deploying the application.

This section is designed for beginners who want to use TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity in TIBCO Business Studio.

All the operations are performed in TIBCO Business Studio. See TIBCO Business Studio Overview to familiarize yourself with TIBCO Business Studio.

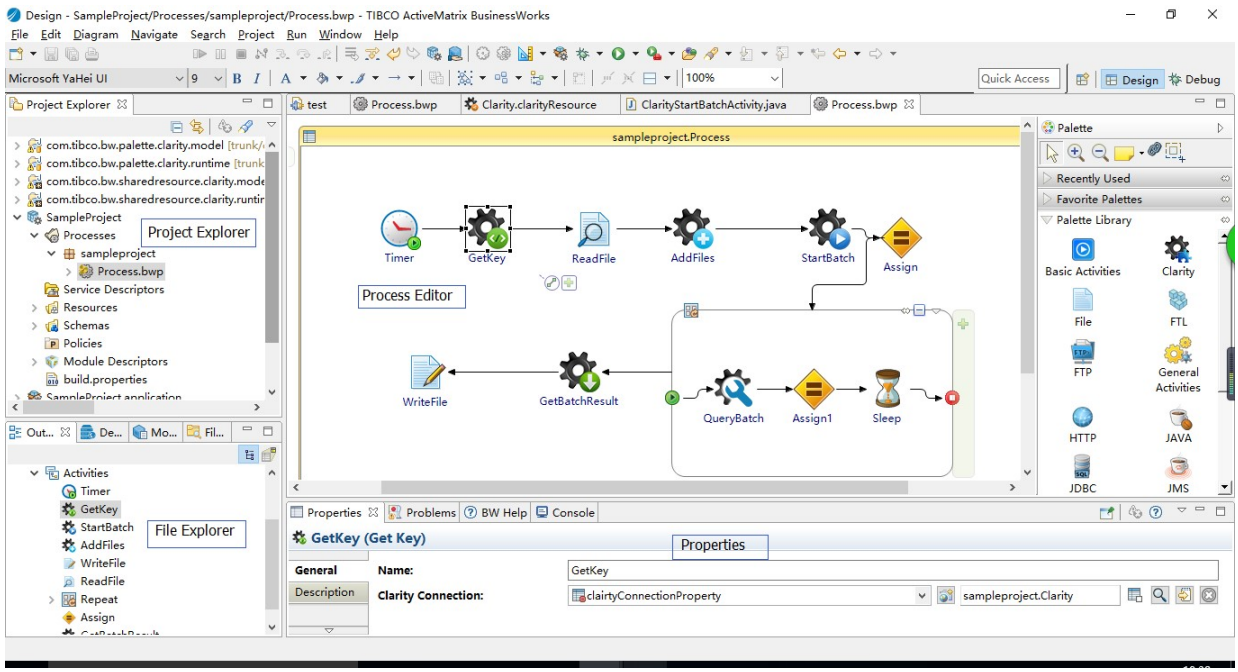
A basic procedure of using TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity includes:

1. Creating a Project
2. Creating a Clarity Shared Resource
3. Configuring a Process
4. Debugging and Running a Process
5. Deploying an Application

TIBCO Business Studio Overview

TIBCO Business Studio is an Eclipse-based integration development environment that is used to design, develop, and test TIBCO ActiveMatrix BusinessWorks applications.

TIBCO Business Studio provides a workbench in which you can create, manage, and navigate resources in your workspace. A *workspace* is the central location on your machine where all data files are stored.



The workbench consists of:

- **Menu**: Contains menu items such as File, Edit, Diagram, Navigate, Search, Project, Run, Window, and Help.
- **Toolbar**: Contains buttons for frequently used commands such as New, Save, Enable/ Disable Business Studio Capabilities, Create a new BusinessWorks Application Module, Create a new BusinessWorks Shared Module, Debug, and Run.

- **Perspective**: Contains an initial set and layout of views that are required to perform a certain task. TIBCO Business Studio launches the Modeling perspective by default. You can change the perspective from the menu **Window > Open Perspective >** *Perspective_Name*.
- **View**: Displays resources. For example, the Project Explorer view displays the ActiveMatrix BusinessWorks applications, modules, and other resources in your workspace, and the Properties view displays the properties for the selected resource. You can open a view from the menu **Window > Show View >** *View_Name*.

  Editor: Provides a canvas to configure, edit, or browse a resource. Double-click on a resource in a view to open the appropriate editor for the selected resource. For example, double-click on an ActiveMatrix BusinessWorks process (`MortgageAppConsumer.bwp`) in the Project Explorer view to open the process in the editor.
- **Palette**: Contains a set of widgets and a palette library. A *palette* groups activities that perform similar tasks and provides quick access to activities when configuring a process.

Creating a Project

Projects are BusinessWorks application modules that are created in TIBCO Business Studio. A project contains various resources.

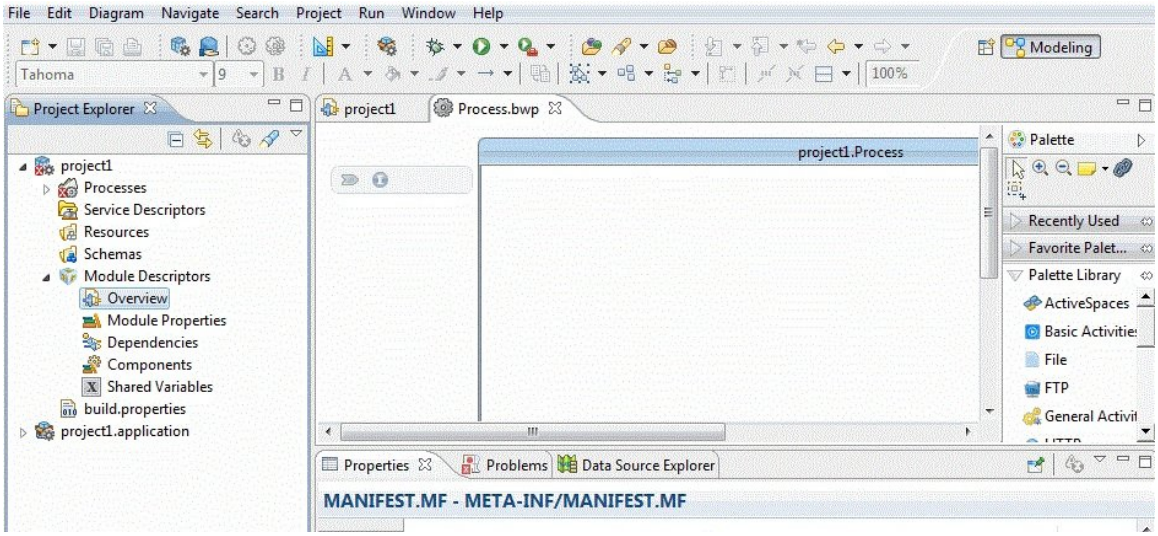
Procedure

1. Start TIBCO Business Studio using one of the following ways:
   - Microsoft Windows: Click **Start** > **All Programs** > **TIBCO** > *TIBCO_HOME* > **TIBCO Business Studio** *version_number* > **Studio for Designers**.
   - Mac OS and Linux: Run the TIBCO Business Studio executable file located in the `TIBCO_HOME/studio/version_number/eclipse` directory.
2. Click **File** > **New** > **BusinessWorks Resources**.
3. Click **BusinessWorks Application Module** in the BusinessWorks Resource window. Click **Next**.

   There are several ways to open the New BusinessWorks Application Module window and create a new project in TIBCO Business Studio. See the TIBCO ActiveMatrix BusinessWorks documentation for more information.
4. Type a name for the project that you are creating in the **Project name** field.
5. Do one of the following:
   - Keep the **Use default location** check box to use the default location.
   - Clear the **Use default location** check box and click **Browse** to select a new location.
6. Do one of the following:
   - Use the default version of the application moduel.
   - Enter a new version in the **Version** field.
7. Keep the **Create Empty Process**, and **Create Application** check boxes selected to create an empty process and an application.
8. (Optional) Select the **Use Java Configuration** check box, if you want to create a Java module.
9. Click **Finish**.
   The project is created.

Result

A project and an application are created and displayed in the Project Explorer view. The Process editor opens automatically.



Creating a Clarity Shared Resource

To use the activities in TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity, you need to create a Clarity Shared Resource. The Clarity Shared Resource describes the connection between the plug-in and the Clarity system.

Procedure

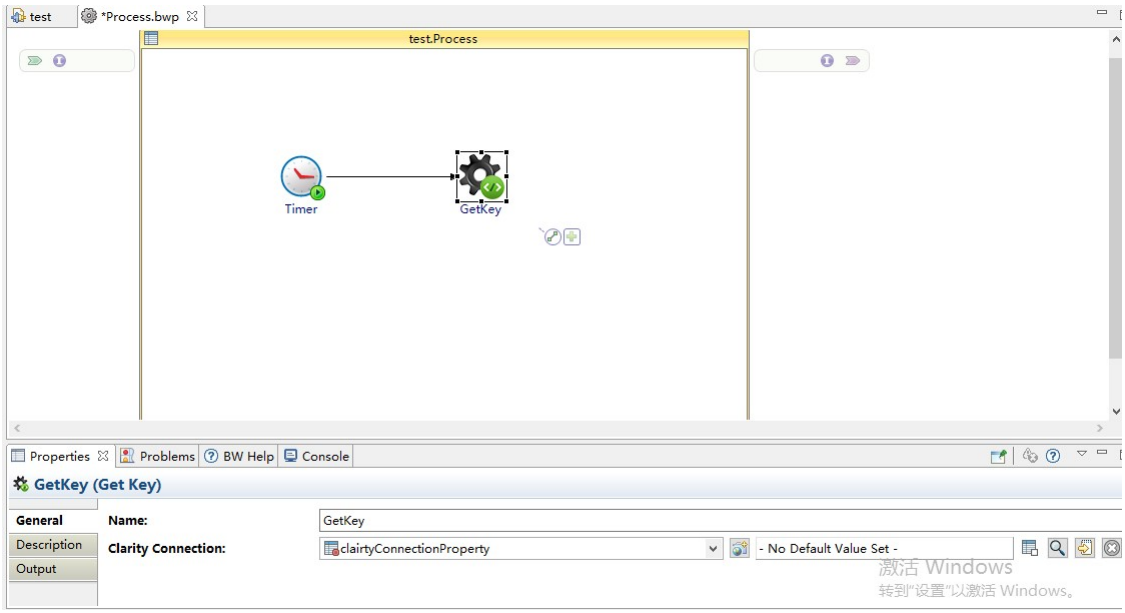
1. Expand the created project in the Project Explorer view.
2. Right-click the **Resources** folder and select **New** > **Clarity**.
3. Type a name in the **Resource Name** field in the Clarity Connection dialog. Click **Finish**.
4. Configure the Clarity Shared Resource in the displayed editor, as described in Clarity Shared Resource.

Configuring a Process

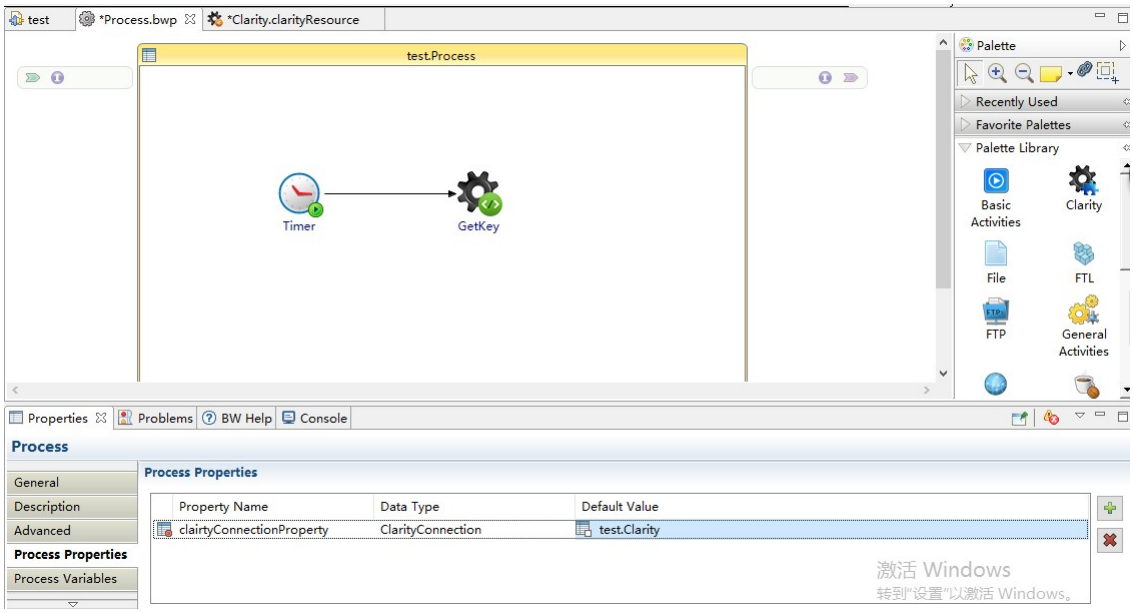
Processes define the business logic. Once a project is created, you need to configure the process by adding activities, conditions, and services.

Procedure

1. Select an activity from the Palette view and drop it in the Process editor.
   For example, select and drop the Timer activity from the General Activities palette and the GetKey activity from the Clarity palette.



2. Drag to create transitions between the activities and configure the condition types.
3. Select the default value for the Clarity connection in the **Process Properties** tab.



4. Configure the added activities, as described in Clarity Palette.

> A Clarity Shared Resource is required when configuring the activities. See Creating a Clarity Shared Resource to create the Clarity Shared Resource.

5. Click **File** > **Save** to save the project.

Debugging and Running a Process

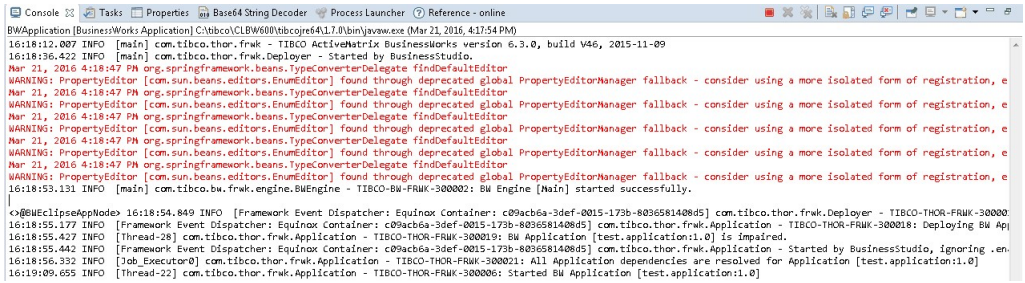
Debug the application you have configured to ensure that the application configuration is correct.

Procedure

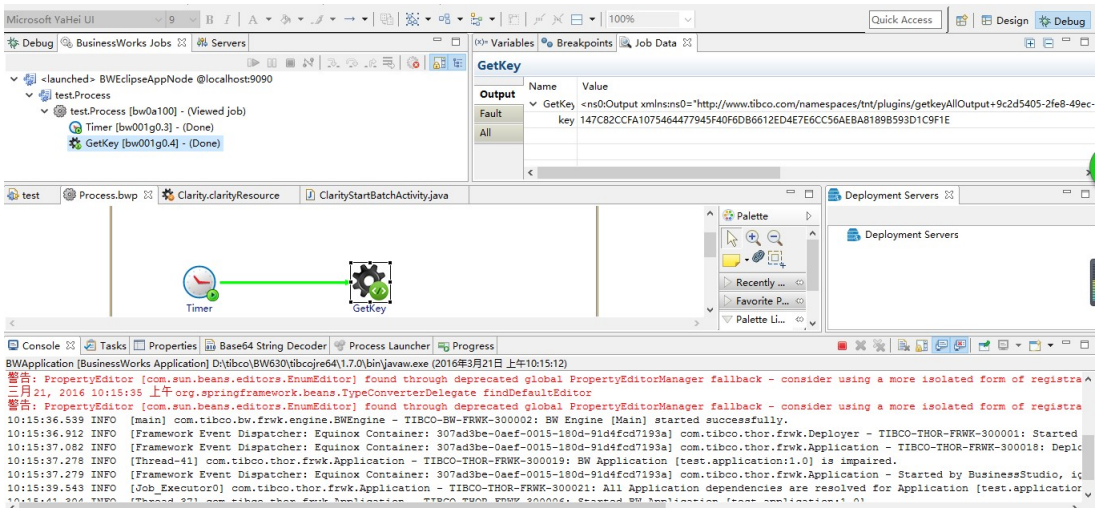
1. Click on the toolbar and then **Debug** > **Debug Configurations.**

2. Click **BusinessWorks Application > BWApplication**.
3. Select the application and the process you want to debug from the **Applications** tab in the right panel.
4. Click the **Advanced** tab and click **Browse** to locate the `logback` file.

   By default, the log files are located in the *`TIBCO_HOME`*`\bw\`*`version`*`\config\design\logback` directory and error logs are captured. See Managing Logs for more details.
5. Click **Debug**.
   TIBCO Business Studio displays the debug information in the Console view.



6. In the **Debug** tab, click an activity.
7. Click the **Job Data** tab and then click the **Output** tab to check the activity.



Deploying Applications

After deploying BusinessWorks applications, you can manage them by using TIBCO Enterprise Administrator.

Prerequisites

The following tasks are required before deploying applications:

- Creating a Project.
- Generating an EAR File.

A typical workflow of deployment includes:

1. Uploading an EAR file.
2. Deploying an application.
3. Configuring an application.

4. Starting an application.

You can deploy an application EAR file by using the command-line mode with the **bwadmin** utility. See *TIBCO ActiveMatrix BusinessWorks Administration* for more details about how to deploy an application.

Generating an EAR File

Application archives are enterprise archive (EAR) files that are created in TIBCO Business Studio. An EAR file is required when deploying an application.

Prerequisites

An application project has already been created, as described in Creating a Project.

There are many ways to generate an EAR file, the following is one method. See *TIBCO ActiveMatrix BusinessWorks Administration* for more information.

Procedure

1. Go to the File Explorer view and click the **Open Directory to Browse** icon.
2. Select the folder where you want to generate the EAR file and click **OK**.
   The new folder is displayed in the File Explorer view.
3. Drag the application from the Project Explorer view to the new folder in the File Explorer view.

   The EAR file is generated with the name `<name>.<application>_<version>.ear`.

Clarity Shared Resource

Use the Clarity Shared Resource to create a connection with a Clarity system.

General

The **General** panel shows the package that stores the Clarity Shared Resource and the shared resource name. You can also provide a description for the shared resource in this panel.

The following table describes the fields in the General panel of the Clarity Shared Resource:

Field	Module Property?	Description
Package	No	The package that stores the Clarity Connection Shared Resource.
Name	No	The name to be displayed as the label for the Clarity Connection Resource in the process.
Description	No	(Optional) Enter a short description for the shared resource.

Connection Configuration

In the **Connection Configuration** panel, you can provide the information that the plug-in connects to. The following table describes the fields in the Clarity Connection Configuration of the Clarity Shared Resource:

Field	Module Property?	Description
Server URL	Yes	Specifies the URL used by a Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information.
User Name	Yes	Specifies the user name. The default value is *clarity*. See *TIBCO Clarity Developer's Guide* for detailed information.
Password	Yes	Specifies the password.

Clarity Palette

The Clarity palette contains activities that you can add to your business processes.

The palette contains the following activities:

- StartBatch
- QueryBatch
- GetBatchResult
- AddFiles
- ReloadFile
- RemoveFiles
- GetKey

StartBatch

The StartBatch activity is used to start a batch job for a project.

General

In the **General** tab, you can specify the activity name and a space connection.

The following table describes the fields in the **General** tab of the StartBatch activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the StartBatch activity.

Input

In the **Input** tab, you can specify both datasetID and projectID to start a new batch:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.

Input Item	Data Type	Description
projectID Name	String	Specifies a project ID string. A project ID is a unique string, which represents the project in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a project ID.

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the StartBatch activity:

Output Item	Data Type	Description
message	String	Return the response message of this batch job.
batchStatus	String	Returns the status of this batch job.
status	String	Returns the status of this activity.
batchprocessID	String	Returns the ID for the new batch job.

Fault

In the **Fault** tab, you can find the error code and error message of the StartBatch activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the StartBatch activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

QueryBatch

The QueryBatch activity is used to query the status of a batch job or all batch jobs in one dataset.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the QueryBatch activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the QueryBatch activity.

Input

In the **Input** tab, you can specify the datasetID and batchProcessID to check the status of batch jobs:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.
batchProcessID	String	(Optional) Specifies a batch job ID string. If this field is empty, then all batch jobs in this dataset will be returned. Otherwise, only the specified batch job will be returned.

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the QueryBatch activity:

Output Item	Data Type	Description
message	String	Return the response message of this batch job.
Batch		Each result contains the following items: • *batchProcessId*: the id of the specified batch job • *batchStatus*: the status of one specified batch job • percent: the percentage completion of a specified batch job

Fault

In the **Fault** tab, you can find the error code and error message of the QueryBatch activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the QueryBatch activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

GetBatchResult

The GetBatchResult activity is used to download the batch result on completion of a batch job.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the GetBatchResult activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the GetBatchResult activity.

Input

In the **Input** tab, you can specify the datasetID and batchProcessID to get the batch result file:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.
batchProcessID	String	Specifies a batch job ID string. A batchProcessId is the return value from the StartBatch activity.

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the GetBatchResult activity:

Output Item	Data Type	Description
message	String	Return the response message of this batch job.
File		Each result contains the following items: • *fileContent*: the file content of the batch result • *fileName*: the file name of the batch result • percent: the percentage completion of a specified batch job

Fault

In the **Fault** tab, you can find the error code and error message of the GetBatchResult activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the GetBatchResult activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

AddFiles

The AddFiles activity is used to add new source files to a dataset before starting a new batch job.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the AddFiles activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the AddFiles activity.

Input

In the **Input** tab, you must specify the datasetID, SourceName, and File to add new source files to a dataset:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.
SourceName	String	Specifies the old source file name, which is already in the dataset. The new added source file should have the same schema as the old source file.
File		The new source files, which have the same schema as the old source file in the dataset. Each file contains the following items: • *fileContent*: the content of new source file • *fileName*: the file name of the new source file

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the AddFiles activity:

Output Item	Data Type	Description
message	String	Return the detailed information of this activity.
status	String	Returns the status of this activity.

Fault

In the **Fault** tab, you can find the error code and error message of the AddFiles activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the AddFiles activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

ReloadFile

The ReloadFile activity is used to reload an old source file with a new one.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the ReloadFile activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the ReloadFile activity.

Input

In the **Input** tab, you must specify the datasetID, SourceName, and File to reload a source files to a dataset:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.
SourceName	String	Specifies the old source file name, which is already in the dataset. The new added source file should have the same schema as the old source file.
File		The new source file, which has the same schema as the old source file in the dataset. Each file contains the following items: • *fileContent*: the content of new source file • *fileName*: the file name of the new source file

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the ReloadFile activity:

Output Item	Data Type	Description
message	String	Return the detailed information of this activity.
status	String	Returns the status of this activity.

Fault

In the **Fault** tab, you can find the error code and error message of the ReloadFile activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the ReloadFile activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

RemoveFiles

The RemoveFiles activity is used to remove a source file from a dataset.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the RemoveFiles activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the RemoveFiles activity.

Input

In the **Input** tab, you must specify the datasetID and SourceName to remove a source file from a dataset:

Input Item	Data Type	Description
datasetID	String	Specifies a dataset ID string. A dataset ID is a unique string, which represents the dataset in the Clarity server. See *TIBCO Clarity Developer's Guide* for detailed information on how to get a dataset ID.
SourceName	String	Specifies the source file name, which you want to remove from the dataset.

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the RemoveFiles activity:

Output Item	Data Type	Description
message	String	Return the detailed information of this activity.
status	String	Returns the status of this activity.

Fault

In the **Fault** tab, you can find the error code and error message of the RemoveFiles activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the RemoveFiles activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

GetKey

The GetKey activity is used to get the key for the REST APIs.

General

In the **General** tab, you can specify the activity name and a clarity connection.

The following table describes the fields in the **General** tab of the GetKey activity:

Field	Module Property?	Description
Name	No	Specifies the name to be displayed as the label for the activity in the process.

Field	Module Property?	Description
Clarity Connection	Yes	Click to select a Clarity Shared Resource. If no matching Clarity connections are found, click **Create Shared Resource** to create one. See Creating a Clarity Shared Rescource for details.

Description

In the **Description** tab, you can enter a short description for the GetKey activity.

Input

There is no **Input** tab for GetKey activity.

Output

In the **Output** tab, you can find the operation results.

The following table describes the fields in the **Output** tab of the GetKey activity:

Output Item	Data Type	Description
key	String	Return the API key for the REST APIs.

Fault

In the **Fault** tab, you can find the error code and error message of the GetKey activity. See Error Codes for more detailed explanation of the errors.

The following table describes the errors in the **Fault** tab of the GetKey activity:

Error Schema Element	Data Type	Description
msg	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error message.
msgCode	String	The TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity error code.

Working with Sample Projects

An introduction to the sample projects.

The plug-in packages sample project with the installer. The sample projects show how TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Clarity works.

The sample project is located in the `TIBCO_HOME/bw/palettes/clarity/version_number/samples` directory.

Importing Sample Projects

Before running the project, you must import the sample projects to TIBCO Business Studio.

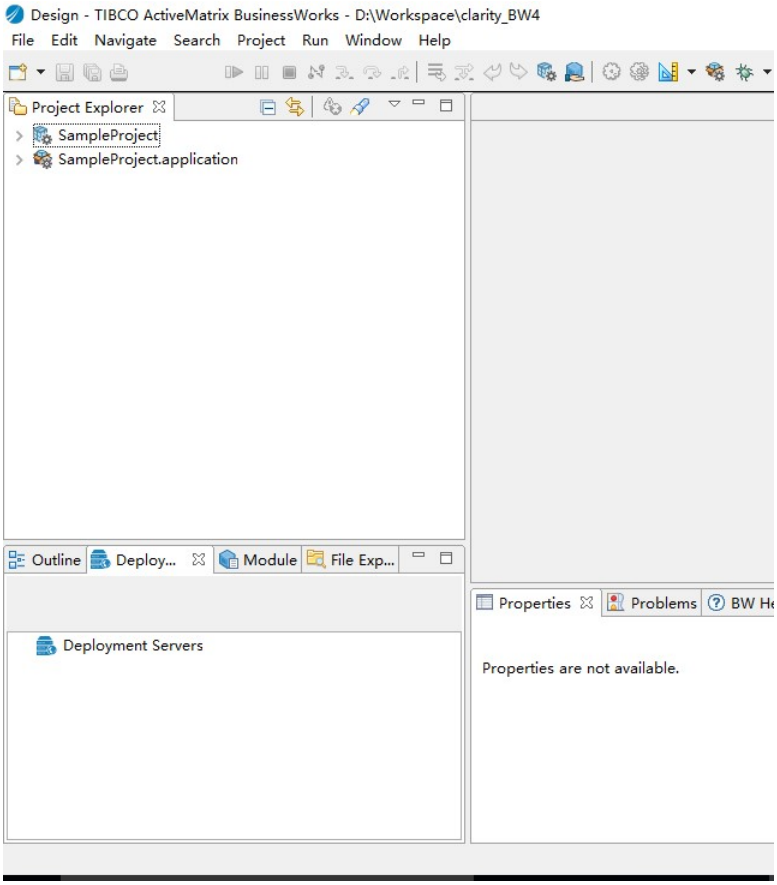
Procedure

1. Start TIBCO Business Studio using one of the following ways:
   - Microsoft Windows: Click **Start** > **All Programs** > **TIBCO** > **TIBCO_HOME** > **TIBCO Business Studio** ***version_number*** > **Studio for Designers**.
   - Mac OS and Linux: Run the TIBCO Business Studio executable file located in the `TIBCO_HOME/studio/version_number/eclipse` directory.
2. Click **File** > **Import**.
3. In the Import dialog, expand the **General** folder and select the **Existing Studio Projects into Workspace** item. Click **Next.**
4. Click **Browse** next to the **Select root directory** field to locate the samples. Click **Finish.**

   The sample project is located in the *`TIBCO_HOME`*`\bw\palettes\clarity\`*`version_number`*`\samples` directory.

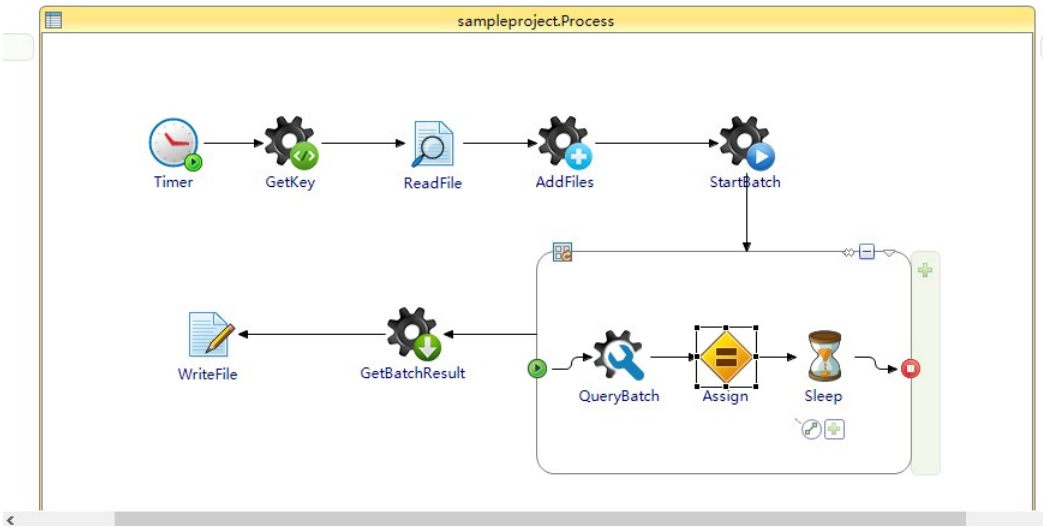
Result

The sample project is imported to TIBCO Business Studio.



The sample project contains a process that adds a new source file to a clarity dataset, starts a new batch, and then downloads the result of the newly created batch job after it is done.

The process is designed with the following activities:



The following table describes the activities in this process.

Activity	Description
Timer	Starts the process

GetKey	Returns the Rest API key
ReadFile	Reads a file from the local drive and receive as input to AddFiles activity
StartBatch	Starts a new batch in the dataset
Repeat	Repeats to query the batch status until the batch job is finished
QueryBatch	Queries the batch status
Assign	Controls cycle condition
Sleep	Waits a few milliseconds to keep the batch running
GetBatchResult	Downloads the batch result file
WriteFile	Writes the file to a local drive

Running a Sample Project

You can run the process in the sample project to see how to perform a batch of operations.

Procedure

1. In the Project Explorer view, expand the Sample project.
2. Click **Processes** > **sampleproject** > **Process.bwp**.
3. Click**Run > Run Configurations**.
4. Expand **BusinessWorks Application** and click **BWApplication**.
5. Click **Deselect All** and select the check box next to **SampleProject.application** and then click **Apply**.
6. Click **Run**.

Result

A new source file is added into the dataset and the result of the newly created batch job is downloaded.

Click to stop the process.

Error Codes

The following tables list error codes, description of each error, and where applicable, ways to solve those errors.

Error Codes for Shared Resources

Error Code and Error Message	Role	Category	Description	Resolution
BW-Clarity-50001 `Could not connect to the server.`	errorRole	BW-Plug-in	The server is not running.	Specify the correct server URL in the Configuration tab.
BW-Clarity-50002 `Username or password is not correct.`	errorRole	BW-Plug-in	Incorrect user name or password.	Specify the correct user name and password in the Configuration tab.

Error Codes for Activities

Error Code and Error Message	Role	Category	Description	Resolution
BW-Clarity-50000 `Clarity connection runtime error.`	errorRole	BW-Plug-in	The server may not be running or the user name or password may be incorrect.	Check the Clarity server connection and the network connectivity.
BW-Clarity-50001 `Clarity connection response code error.`	errorRole	BW-Plug-in	The server returns wrong HTTP status codes.	Restart the server.
BW-Clarity-50002 `The Clarity activity input parameter is invalid.`	errorRole	BW-Plug-in	The server returns an error message.	Check the input parameters.