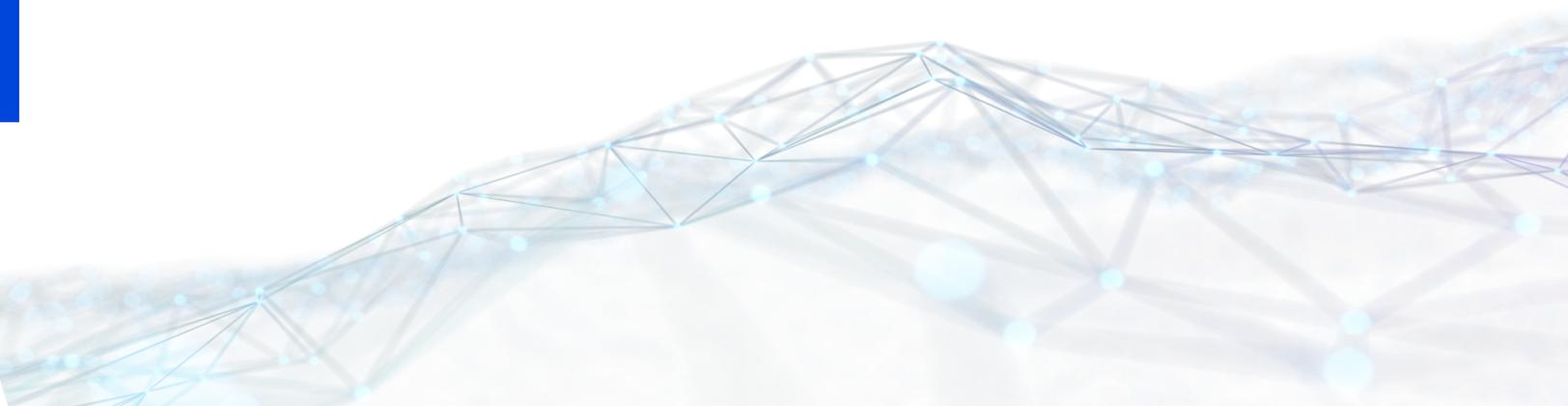




TIBCO ActiveMatrix BusinessWorks™

Migration

Version 6.10.0 | November 2023



Contents

| | |
|--|-----------|
| Contents | 2 |
| Changing Help Preferences | 5 |
| Introduction | 7 |
| Type Column Legends | 9 |
| Standard Constructs | 11 |
| TIBCO ActiveMatrix BusinessWorks™ Core Constructs | 12 |
| Groups | 15 |
| Transitions | 16 |
| Timer | 18 |
| Mapper | 23 |
| BusinessWorks Palettes | 25 |
| General Activities Shared Resources | 27 |
| General Activities Palette | 30 |
| ActiveEnterprise Palette | 34 |
| Adapter Resources Palette | 35 |
| BPEL Extension Palette | 38 |
| File Palette | 40 |
| FTP Palette | 41 |
| HTTP Palette | 43 |
| JAVA Palette | 46 |
| JDBC Palette | 48 |

| | |
|--|-----------|
| JMS Palette | 49 |
| Mail Palette | 51 |
| Parse Palette | 52 |
| Policy Palette | 53 |
| Process Palette | 53 |
| Rendezvous Palette | 56 |
| REST and JSON Plug-in | 57 |
| RMI Palette | 60 |
| Service Palette | 61 |
| SOAP Palette | 63 |
| TCP Palette | 65 |
| Transaction Palette | 66 |
| XML Palette | 67 |
| Migration Scenario | 68 |
| Migrating ActiveMatrix BusinessWorks 5.x Projects to ActiveMatrix BusinessWorks 6.x | 71 |
| Migrating Projects Using TIBCO Business Studio for BusinessWorks | 71 |
| Migrating Projects Using the Command Line | 77 |
| Command line Configuration File Template | 79 |
| Post-Migration Manual Tasks | 81 |
| Fix Type-Casting Errors | 82 |
| HTTP Basic Sample | 82 |
| Custom XPath Migration | 83 |
| Custom XPath Migration Using the Command Line | 84 |
| Migrating Design Time Libraries (DTL) as Shared Modules | 85 |
| Limitations | 86 |
| Migrating Application Modules | 86 |
| Migrating Design Time Libraries Using Command line | 88 |
| Mapping a Design Time Library to a Shared Module | 88 |
| Using the Quick Fix Option to Resolve XSLT out of Sync Errors | 89 |

| | |
|---|------------|
| Migration Process Outline | 91 |
| Frequently Asked Questions | 94 |
| TIBCO Documentation and Support Services | 98 |
| Legal and Third-Party Notices | 100 |

Changing Help Preferences

By default, documentation access from TIBCO Business Studio™ for BusinessWorks™ is online, through the [TIBCO Product Documentation](#) website that contains the latest version of the documentation. Check the website frequently for updates. To access the product documentation offline, download the documentation to a local directory or an internal web server and then change the help preferences in TIBCO Business Studio for BusinessWorks.

Before you begin

Before changing the help preferences to access documentation locally or from an internal web server, download the documentation.

1. Go to <https://docs.tibco.com/>
2. In the **Search** field, enter TIBCO ActiveMatrix BusinessWorks™ and press **Enter**.
3. Select the TIBCO ActiveMatrix BusinessWorks™ product from the list. This opens the product documentation page for the latest version.
4. Click **Download All**.
5. A compressed .zip file containing the latest documentation is downloaded to your web browser's default download location.
6. Copy the .zip file to a local directory or to an internal web server and unzip the file.

To point to a custom location:

Procedure

1. Perform one of the following steps in TIBCO Business Studio for BusinessWorks based on your operating system:
 - On Windows OS: Click **Window > Preferences**
 - On macOS: Click **TIBCO Business Studio > Preferences**.
2. In the Preferences dialog, click **BusinessWorks > Help**.
3. Click **Custom Location**, and then browse to the `html` directory in the folder where you extracted the documentation or provide the URL to the `html` directory on your

internal web server.

4. Click **Apply**, and then click **OK**.

Introduction

TIBCO ActiveMatrix BusinessWorks™ 6.x architecture provides a migration path for ActiveMatrix BusinessWork™ 5.x projects with a few exceptions. This document explains how to migrate from ActiveMatrix BusinessWorks 5.x to ActiveMatrix BusinessWorks™ 6.x, and lists differences between the two. There are many new features in ActiveMatrix BusinessWorks 6.x that advance integration, but are not covered in this document.

| Migration Queries | Resolution |
|---|---|
| <p>ActiveMatrix BusinessWorks 5.x constructs migrating to equivalent ActiveMatrix BusinessWorks 6.x constructs.</p> | <p>The value Supported is mentioned in the "Migration Support" for this category.</p> <div data-bbox="894 905 1414 1010" style="background-color: #f0f0f0; padding: 5px;"> <p>Note: Supported does not mean defect free.</p> </div> |
| <p>ActiveMatrix BusinessWorks 5.x constructs are not migrating to ActiveMatrix BusinessWorks 6.x, because corresponding ActiveMatrix BusinessWorks 6.x construct is available with corresponding migration support, with corner case limitations.</p> | <p>The value Supported with limitations is mentioned in the "Migration Support" for this category.</p> |
| <p>The corresponding ActiveMatrix BusinessWorks 6.x constructs are not currently available.</p> | <ol style="list-style-type: none"> 1. This implies a feature parity gap for ActiveMatrix BusinessWorks 6.x compared with ActiveMatrix BusinessWorks 5.x. 2. The value Currently not supported is mentioned in the "Migration Support" for this category. <div data-bbox="894 1650 1414 1797" style="background-color: #f0f0f0; padding: 5px;"> <p>Note: Contact Product Management for details on features that are currently not supported.</p> </div> |

| Migration Queries | Resolution |
|--|--|
| <p>The corresponding ActiveMatrix BusinessWorks 6.x construct is available, but ActiveMatrix BusinessWorks 5.x to ActiveMatrix BusinessWorks 6.x migration extension is currently not available.</p> | <ol style="list-style-type: none"><li data-bbox="932 296 1411 527">1. This means a user can create such a construct using TIBCO Business Studio for BusinessWorks, but automated migration from ActiveMatrix BusinessWorks 5.x is not yet supported.<li data-bbox="932 554 1411 705">2. After migration, re-factor and re-create the construct using TIBCO Business Studio for BusinessWorks.<li data-bbox="932 732 1411 877">3. The value BW6 migration not supported is mentioned in the "Migration Support" for this category. |
| <p>Fundamental design improvements in ActiveMatrix BusinessWorks 6.x renders automated migration.</p> | <ol style="list-style-type: none"><li data-bbox="932 926 1411 1199">1. You can achieve better results in ActiveMatrix BusinessWorks 6.x compared to ActiveMatrix BusinessWorks 5.x, but only when the construct is created in TIBCO Business Studio for BusinessWorks.<li data-bbox="932 1226 1411 1377">2. After migration, re-factor and re-create the construct using TIBCO Business Studio for BusinessWorks.<li data-bbox="932 1404 1411 1514">3. The value Refactor and recreate is mentioned in the "Migration Support" for this category. |

Type Column Legends

The following values are used in the "Type" columns.

| Values used in Type columns | Description |
|------------------------------------|--|
| <i>.<resource extension></i> | The file extension used to describe its type. For example, .xml, .xsd, and .wsdl resources. |
| Adapter Specific Resource | Special resources used only for configuration of Adapters. |
| Shared Configuration | Resource configuration with an associated a transport state that can be lifecycled. |
| Shared Resource | Re-usable configuration without a transport state that can be lifecycled. |
| Process Starter Activity | <ol style="list-style-type: none"> 1. One of the three activity types supported by ActiveMatrix BusinessWorks 5.x and ActiveMatrix BusinessWorks 6.x. 2. This type of activity starts a new job from external messages or internal events. |
| Regular Activity | <ol style="list-style-type: none"> 1. One of the three activity types supported by ActiveMatrix BusinessWorks 5.x and ActiveMatrix BusinessWorks 6.x. 2. This type of activity processes its input in-memory. |
| Signal-in Activity | <ol style="list-style-type: none"> 1. One of the three activity types supported by ActiveMatrix BusinessWorks 5.x and ActiveMatrix BusinessWorks 6.x. 2. This type of activity suspends the job and waits for an external event. When BusinessWorks runtime receives an external event, it correlates the event base on a prescribed key. The ActiveMatrix BusinessWorks runtime joins the external event to the waiting job only when the prescribed key matches. |

| Values used in Type columns | Description |
|------------------------------------|--|
| Built-in | <ol style="list-style-type: none">1. An intrinsic built-in feature of ActiveMatrix BusinessWorks process editor.2. A built-in feature can be from an eclipse or part of the editor feature (for example, ActiveMatrix BusinessWorks 6.x Process Design Editor). |
| Palette | <ol style="list-style-type: none">1. In ActiveMatrix BusinessWorks 5.x, a palette is a TIBCO Designer™ concept for the grouping of resources or activities.2. For the purpose of this documentation, a palette is for describing a group of activities that are offered as part of core ActiveMatrix BusinessWorks. |
| Plug-in | <ol style="list-style-type: none">1. In ActiveMatrix BusinessWorks 5.x, a ActiveMatrix BusinessWorks Plug-in is an add-on extension that contains both design-time and runtime extensions of ActiveMatrix BusinessWorks activities.2. In ActiveMatrix BusinessWorks 5.x, a ActiveMatrix BusinessWorks Plug-in is offered as an add-on product to ActiveMatrix BusinessWorks.3. For the purpose of this documentation, a plug-in is for describing a ActiveMatrix BusinessWorks add-on product. |
| Binding | <ol style="list-style-type: none">1. In ActiveMatrix BusinessWorks 6.x, binding type is offered as a first class concept as part of activities.2. SOAP binding and REST binding are offered as a part of ActiveMatrix BusinessWorks 6.x core features. |

Standard Constructs

The following table lists supported standard constructs.

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------|-------------|----------|-------------|-------------------|--|
| DTD | .dtd | XSD | .xsd | Supported | <ul style="list-style-type: none"> ActiveMatrix BusinessWorks 6.x currently does not support DTD natively. ActiveMatrix BusinessWorks 6.x Migration tool converts DTD resource to XSD. |
| Instance | .xml | Instance | .xml | Supported | Migrates as is. |
| Schema | .xsd | Schema | .xsd | Supported | Migrates as is. |
| XSLT | .xslt | XSLT | .xslt | Supported | Migrates as is. |
| WSDL | .wsdl | WSDL | .wsdl | Supported | Migrates as is. |

TIBCO ActiveMatrix BusinessWorks™ Core Constructs

The following table displays supported core constructs.

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------|-------------|-------------------------------------|-------------------------------------|-------------------|---|
| Design-time Library | | Application Module | Application Module | Supported | |
| Start | | Start | Start | Supported | Applies to a Sub Process. If the Sub Process refers to an inline schema it is externalized. |
| Process Starter | | Process Starter Activity or Service | Process Starter Activity or Service | Supported | If the ActiveMatrix BusinessWorks 5.x activity is a SOAP Event Source or a Service Binding then the Service is created. For all other Process Starters, it creates the Process Starters only. |
| End | | End | End | Supported | Applies to a Sub Process. If the Sub Process refers to an inline schema it is externalized. |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------|-------------|---|-------------|-------------------|---|
| Global Variable | .substvar | Process Property Module Property Application Property | .substvar | Supported | <p>As ActiveMatrix BusinessWorks 6.x Runtime supports multiple applications, it is recommended that Global Variable is not used to describe application configurable properties.</p> <p>Instead, there are following three levels of properties:</p> <ul style="list-style-type: none"> • Process Properties • Module Properties • Application Properties <p>These three levels of properties are hierarchical: Application Properties are in the outer most scope, followed by Module Properties, followed by Process Properties.</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|-------------|--------|-------------|-------------------|--|
| | | | | | <p>You can define and source value from its parent scope. For example:</p> |
| | | | | | <ol style="list-style-type: none"> <li data-bbox="1203 527 1409 989">1. Process Property values can be defined by Literal Values or source its value from its parent scope Module Property. <li data-bbox="1203 1020 1409 1524">2. By the same token, Module Property value can be defined by Literal Values or source from its parent scope Application Property. |

Groups

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support |
|------------------------------------|--------------------|---------------------------|--------------------|--------------------------|
| Group | Built-In | Scope | Built-In | Supported |
| Group : If | Built-In | - | - | Currently not supported |
| Group : Iterate | Built-In | Group : Iterate | Built-In | Supported |
| Group : Repeat Until True | Built-In | Group : Repeat | Built-In | Supported |
| Group : Repeat On Error Until True | Built-In | Group : Repeat On Error | Built-In | Supported |
| Group : Transaction | Built-In | Group : Local Transaction | Built-In | Supported |
| Group : Critical Section | Built-In | Group : Critical Section | Built-In | Supported |
| Group : Pick First | Built-In | - | - | Currently not supported |
| Group : While True | Built-In | Group : While | Built-In | Supported |

Transitions

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---|------------------|---|--------------------|-------------------|---|
| Process Definition | .process | Process | .bwp | Supported | ActiveMatrix BusinessWorks 5.x .process files are migrated as .bwp files. |
| Project | Designer Project | Application Module | Application Module | Supported | |
| Transition : Condition Type : Success | Built-In | Transition : Condition Type : Success | Built-In | Supported | |
| Transition : Condition Type : Success with condition | Built-In | Transition : Condition Type : Success with condition | Built-In | Supported | |
| Transition : Condition Type : Success with no matching | Built-In | Transition : Condition Type : Success with no matching condition | Built-In | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------------|--------------------|------------------------|--------------------|--------------------------|-----------------|
| | | | | | condition |
| Transition : | Built-In | Transition : | Built-In | Supported | |
| Condition Type : | | Condition Type : Error | | | |
| Error | | | | | |

Timer

Timer is a process starter activity that starts the process at a specific time. You can also specify the processes to be started periodically.

General

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

| Field | Literal Value/Module Property/Process Property | Description |
|------------|--|--|
| Name | None | The name to be displayed as the label for the activity in the process. |
| Start Time | Yes | <p>The day and time to start the process. To run the process periodically, the start time indicates the first time to run the process.</p> <p>The local machine's time zone is used to determine the process start. If the project is running on machines in different time zones, the time zone of the machine where the project was saved, is used. Use a process property in this field to provide start times relative to the time zone where the project is deployed. If you provide a process property for this field, the format of the specified time must be: <code>yyyy MMM dd HH:mm:ss z</code></p> |
| Run Once | None | <p>Indicates this process should be run only once on the day and time indicated by the Start Time field.</p> <p>If you do not select this check box, the Time Interval and Interval Unit fields are displayed that you can use to specify the frequency of the process.</p> |

| Field | Literal Value/Module Property/Process Property | Description |
|---------------|--|--|
| Time Interval | Yes | <p>The integer indicating the number of units specified in the Interval Unit field. For example, if a value of 1 is specified and the Interval Unit field is specified as Hour, a new process is started every hour beginning at the time specified in the Start Time field.</p> <ul style="list-style-type: none"> • If a value of 2 is specified and the Interval Unit field is specified as Month, a process is started every other month, beginning at the time specified in the Start Time field. • If the value specified is less than one second (1000 milliseconds), the timer ignores the specified interval and is triggered once every second. <div data-bbox="678 947 1414 1125" style="background-color: #f0f0f0; padding: 5px;"> <p>Note: Using Literal Value, Module Property, and Process Property in this field, specifies the time interval in milliseconds and the Interval Unit field is not displayed.</p> </div> |
| Interval Unit | None | <p>The unit of time to use with the Time Interval field to determine how often to start a new process. The units can be: Millisecond, Second, Minute, Hour, Day, Week, Month, and Year.</p> |
| End After | None | <p>Specify the number of occurrences or the end time here. Select from the following available options:</p> <ul style="list-style-type: none"> • Never: Click the Never radio button if you want to continuously execute the process instance. For example, if the Time Interval value specified is 5 and the Interval Unit specified is Second, the process instance executes every 5 seconds. • Occurrences: Clicking the Occurrences radio button displays the Occurrences field. Specify the |

| Field | Literal Value/Module Property/Process Property | Description |
|-------|--|--|
| | | <p>number of occurrences of the process instance execution. This field can be configured with Literal Value, Module Property, and Process Property.</p> <ul style="list-style-type: none"> • End Time: Clicking the End Time radio button displays the End Time field. Specify the end time and date when you want the process to end. This field can be configured with Literal Value, Module Property, and Process Property. |

Description

Provide a short description of the activity.

Advanced

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

| Field | Description |
|----------------|---|
| Sequencing Key | This field contains an XPath expression that specifies which processes should run in sequence. Process instances with sequencing keys evaluating to the same value, are executed sequentially in the sequence the process instance was created. |
| Custom Job Id | This field contains an XPath expression that specifies a custom job ID for every job in the process instance. |

Conversations

You can initiate the conversation here. Click the **Add New Conversation**  button to initiate multiple conversations.

For more information about conversations, see *TIBCO ActiveMatrix BusinessWorks™ Application Development*.

Output

The following is the output of the activity.

| Output Item | Description |
|-------------------|---|
| TimerOutputSchema | <p>The time the process instance started.</p> <p>The time is represented by several items in the output schema indicating:</p> <ul style="list-style-type: none"> • Now • Hour • Minute • Second • Week • Month • Year • Date • Time • DayOfMonth <p>Each of these items uses the appropriate datatype.</p> |

Threading Policy Details

The following are the details about the **Timer** activity threading policy.

| Activity Type | Multi-Threaded? | Default Thread Count | Thread Count Configuration |
|----------------|-----------------|----------------------|--|
| ProcessStarter | No | 1 | <p>Not applicable.</p> <p>The Timer process starter does not generate multiple events concurrently. You cannot</p> |

| Activity Type | Multi-Threaded? | Default Thread Count | Thread Count Configuration |
|---------------|-----------------|----------------------|---|
| | | | alter the default thread count for this activity. |

Mapper

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|--------------------------|--------|-------------------------|-------------------|---|
| XPATH | XPATH in Designer Mapper | XPATH | XPATH in Eclipse Mapper | Supported | <p>XPATH support in ActiveMatrix BusinessWorks 5.x is limited to XPATH 1.0.</p> <p>ActiveMatrix BusinessWorks 6.x supports XPATH 1.0. For example, all literal values used in XPATH 1.0 must have a corresponding constructor function around the literal value.</p> |
| XSLT | XSLT in Designer Mapper | XSLT | XSLT in Eclipse Mapper | Supported | <p>XSLT support in ActiveMatrix BusinessWorks 5.x is limited to XSLT 1.0.</p> <p>ActiveMatrix BusinessWorks 6.x also supports XSLT 1.0.</p> <p>When a repeating element is mapped to a string using a filter, and the <code>xsl:value-of</code> instruction parameter has no separator attribute, and the value of the select expression is a sequence of more than one item, then under XSLT 2.0 all</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------|------------------------|---------------|------------------------|------------------------------|--|
| | | | | | the items in the output sequence are space separated, whereas for XSLT 1.0, all items after the first element are discarded. |

BusinessWorks Palettes

General Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------------------|----------------------|---|-------------------------|-------------------|---|
| Alias Library | Shared Configuration | Application Module with Java Nature or Eclipse Java Plug-In Project | Eclipse Plug-in Project | Not Supported | |
| Enterprise Archive Resource | Shared Configuration | ActiveMatrix BusinessWorks 6.x Application | Eclipse Plug-in Project | Not Supported | |
| Folder | Generic Resource | Folder | Eclipse Folder | Supported | |
| Generic Image Resource | Generic Resource | | Generic Resource | | |
| Identity | Shared Configuration | Identity | Shared Configuration | Supported | |
| Library Builder | .projlib | Shared Module | Eclipse Plug-in Project | Not Supported | In this version of ActiveMatrix BusinessWorks 6.x Migration Framework, ActiveMatrix BusinessWorks 5.x Design- |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------|-------------|-----------|-------------|-------------------------|--|
| | | | | | <p>time Libraries are migrated inline, as part of regular resources in Application Module.</p> <p>If an ActiveMatrix BusinessWorks 6.x developer wants to reuse the contents of the DT Library, the migrated resource can be manually re-factored into Shared Module.</p> <p>Workaround: To support Design-time libraries after migration configure the libraries and save them to the disk before migrating.</p> |
| Task List | .taskList | Task List | .taskList | Currently not supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------|-------------|---------------|-------------|-------------------|----------|
| Text Document | .txt | Text Document | .txt | Supported | |

General Activities Shared Resources

ActiveMatrix BusinessWorks 5.x: General Activities Shared Resources

Type: Palette

ActiveMatrix BusinessWorks 6.x: Shared Resources Wizards

Type: Shared Resources

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------|----------------------|------------------------------|----------------------|-------------------------|--|
| Custom Activity | Shared Configuration | Custom Activity | Shared Configuration | Currently not supported | |
| JNDI Configuration | Shared Configuration | JNDI Configuration | Shared Configuration | Supported | |
| Job Shared Variable | Shared Configuration | Module : Job Shared Variable | Shared Configuration | Supported | |
| Lock Object | Shared Configuration | Module : Job Shared Variable | Shared Configuration | Supported | In ActiveMatrix BusinessWorks 5.x, Lock |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|----------------|----------------------|--|
| | | | | | <p>Object is used with the Critical Section group. This construct is also supported for cross engines critical section.</p> <p>In ActiveMatrix BusinessWorks 6.x, the Critical Section group is configured with Module Shared Variable.</p> <p>In TIBCO Business Studio for BusinessWorks, module shared variables are configured through Module</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|----------------|----------------------|---|
| | | | | | <p>Descriptors > Shared Variables editor. This construct is also supported for AppSpaces with multiple AppNodes in ActiveMatrix BusinessWorks 6.x, if the AppSpace is configured with Engine Group active/active configuration.</p> <p>Migration Tool migrates ActiveMatrix BusinessWorks 5.x Lock Object as a Module Shared Variable and the Critical Section group.</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------|----------------------|---|----------------------|-------------------|--|
| Notify Configuration | Shared Configuration | Process : WSDL/Interface/Operation | Shared Configuration | Supported | |
| Shared Variable | Shared Resource | Module : Module Shared Variable Type: Shared Resource | Shared Resource | Supported | ActiveMatrix BusinessWorks 5.x shared variable with multi-engine option is now a Module Shared Variable with Persistent option. |

General Activities Palette

ActiveMatrix BusinessWorks 5.x: General Activities Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: General Activities Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------------|------------------|----------------|------------------|-------------------|----------|
| Assign | Regular Activity | Basic : Assign | Regular Activity | Supported | |
| Call Process | Regular | Call Process | Regular | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------|--------------------|------------------------|-------------------------|--------------------------|------------------------------------|
| | Activity | Activity | Activity + Binding Type | | |
| Catch | Regular Activity | Scope with Catch Block | Built-in | Supported | |
| Checkpoint | Regular Activity | Checkpoint | Regular Activity | | |
| Confirm | Regular Activity | Confirm | Regular Activity | Supported | |
| Engine Command | Regular Activity | Engine Command | Regular Activity | Supported | |
| External Command | Regular Activity | External Command | Regular Activity | Supported | |
| Generate Error | Regular Activity | Basic : Throw | Regular Activity | Supported | |
| Get Shared Variable | Regular Activity | Get Shared Variable | Regular Activity | Supported | |
| Inspector | Regular Activity | Inspector | Regular Activity | Supported | |
| Label | Diagram Notation | Note | Diagram Notation | Supported | |
| Mapper | Regular Activity | Mapper | Regular Activity | Supported | |
| Notify | Regular Activity | Invoke Process | Regular Activity | Supported | In ActiveMatrix BusinessWorks 5.x, |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------|--------------------------|---------------|------------------|-------------------------|---|
| | | | | | <p>Notify, and Wait activities are used for inter-process communication.</p> <p>In ActiveMatrix BusinessWorks 6.x, a process now supports interface with multiple operations. These operations can be used for inter-process communication.</p> <p>When the Notify and Wait activities are used for multiple processes waiting to receive notification, you can use a JMS transport with topic to achieve the same publish/subscribe pattern.</p> |
| Null | Regular Activity | Basic : Empty | Regular Activity | Supported | |
| On Error Type: | Process Starter Activity | | | Currently not supported | |
| On Event | Process | | | Currently | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------------------|--------------------------|-------------------|-------------|-------------------|---|
| Timeout | Starter Activity | | | not supported | |
| On Notification Timeout | Process Starter Activity | | | Supported | |
| On Shutdown | Process Starter Activity | Activator Process | Process | Supported | <p>Process with a special ActiveMatrix BusinessWorks 6.x defined service that supports an operation for onShutdown functionality. This process can be configured per application.</p> <p>Close, re-open, and clean the migrated project to resolve unresolved schema references.</p> |
| On Startup | Process Starter Activity | Activator Process | Process | Supported | <p>Process with a special ActiveMatrix BusinessWorks 6.x defined service that supports an operation for onStartup an be configured per application.</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------|--------------------------|---------------------|--------------------------|-------------------|---|
| | | | | | Close, re-open, and clean the migrated project to resolve unresolved schema references. |
| Receive Notification | Process Starter Activity | Basic : Receive | Process Starter Activity | Supported | |
| Rethrow | Regular Activity | Basic : Rethrow | Regular Activity | Supported | |
| Set Shared Variable | Regular Activity | Set Shared Variable | Regular Activity | Supported | |
| Sleep | Regular Activity | Sleep | Regular Activity | Supported | |
| Timer | Regular Activity | Timer | Regular Activity | Supported | |
| Wait | Signal-In Activity | Receive | Process Starter | Supported | |
| Write To Log | Regular Activity | Log | Regular Activity | Supported | |

ActiveEnterprise Palette

ActiveMatrix BusinessWorks 5.x: ActiveEnterprise Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: ActiveEnterprise Plug-in

Type: Plug-in

i Note: In TIBCO BusinessWorks Container Edition, the ActiveEnterprise palette is not bundled out-of-the-box. You must install the Adapter Framework Pack as an add-on Plug-in.

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support |
|--|--------------------------|--|--------------------------|-------------------|
| Adapter Request-Response Server | Process Starter Activity | Adapter Request-Response Server | Process Starter Activity | Supported |
| Adapter Subscriber | Process Starter Activity | Adapter Subscriber | Process Starter Activity | Supported |
| Invoke an Adapter Request response Service | Request/Reply Activity | Invoke an Adapter Request response Service | Request/Reply Activity | Supported |
| Publish to Adapter | Regular Activity | Publish to Adapter | Regular Activity | Supported |
| Respond to Adapter Request | Regular Activity | Respond to Adapter Request | Regular Activity | Supported |
| Send Exception to Adapter Request | Regular Activity | Send Exception to Adapter Request | Regular Activity | Supported |
| Wait for Adapter Message | Signal-In Activity | Wait for Adapter Message | Signal-In Activity | Supported |
| Wait for Adapter Request | Signal-In Activity | Wait for Adapter Request | Signal-In Activity | Supported |

Adapter Resources Palette

ActiveMatrix BusinessWorks 5.x: Adapter Resources Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Adapter Resources Plug-in

Type: Plug-in

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------------------|---------------------------|----------------------------------|---------------------------|--------------------------|-----------------|
| Generic Adapter Configuration | Shared Configuration | Generic Adapter Configuration | Shared Configuration | Supported | |
| Message Filter | Adapter Specific Resource | Message Filter | Adapter Specific Resource | Supported | |
| Adapter Archive | Adapter Specific Resource | Adapter Archive | Adapter Specific Resource | Supported | |
| Advisory | Adapter Specific Resource | Advisory | Adapter Specific Resource | Supported | |
| Client | Adapter Specific Resource | Client | Adapter Specific Resource | Supported | |
| Generic Log Sink | Adapter Specific Resource | Generic Log Sink | Adapter Specific Resource | Supported | |
| Generic Transaction Control Pool | Adapter Specific Resource | Generic Transaction Control Pool | Adapter Specific Resource | Supported | |
| Generic Session | Adapter Specific Resource | Generic Session | Adapter Specific Resource | Supported | |
| Load URL | Adapter | Load URL | Adapter | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------------------------------|---------------------------|-------------------------------------|---------------------------|--------------------------|-----------------|
| | Specific Resource | | Specific Resource | | |
| Log Sink Role | Adapter Specific Resource | Log Sink Role | Adapter Specific Resource | Supported | |
| Publication Service | Adapter Specific Resource | Publication Service | Adapter Specific Resource | Supported | |
| Publisher | Adapter Specific Resource | Publisher | Adapter Specific Resource | Supported | |
| Request-Response Invocation Service | Adapter Specific Resource | Request-Response Invocation Service | Adapter Specific Resource | Supported | |
| Request-Response Service | Adapter Specific Resource | Request-Response Service | Adapter Specific Resource | Supported | |
| Server | Adapter Specific Resource | Server | Adapter Specific Resource | Supported | |
| Subscriber | Adapter Specific Resource | Subscriber | Adapter Specific Resource | Supported | |
| Subscription Service | Adapter Specific Resource | Subscription Service | Adapter Specific Resource | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|---------------------------|--------|---------------------------|-------------------|----------|
| Timer | Adapter Specific Resource | Timer | Adapter Specific Resource | Supported | |

BPEL Extension Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------------|------------------|--------------------------------|------------------|-------------------|--|
| Orchestration Process | .orchestration | Built-In : Process | .bwp | Supported | The .orchestration resource is available in the BPEL Palette. ActiveMatrix BusinessWorks Process is natively based on BPEL. |
| Assign | Regular Activity | Basic: Assign | Regular Activity | Supported | |
| Catch | Regular Activity | Scope with Catch Block | Built-In | Supported | |
| Checkpoint | Regular Activity | General Activities: Checkpoint | Regular Activity | Supported | |
| Exit | Regular | Basic: Exit | Regular | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------|--------------------------|---|--------------------------|--------------------------|-----------------|
| | Activity | | Activity | | |
| Invoke | Regular Activity | Basic: Invoke | Regular Activity | Supported | |
| Invoke Process | Regular Activity | General Activities : Invoke Process + Reference Binding | Regular Activity | Supported | |
| Null | Regular Activity | Basic: Empty | Regular Activity | Supported | |
| On Alarm | Process Starter Activity | Built-In: Alarm Handler | Built-In | Currently not supported | |
| On Event | Process Starter Activity | Built-In: Event Handler | Built-In | Supported | |
| Receive Starter | Process Starter Activity | Basic: Receive (Create Instance = true) Type: Process Starter Activity | Process Starter Activity | Supported | |
| Receive | Signal-In Activity | Basic: Receive | Signal-In Activity | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------------|------------------|-------------------------------------|------------------|-------------------|----------|
| | | (Create Instance = false) | | | |
| Reply with Fault | Regular Activity | Basic : Reply with Fault configured | Regular Activity | Supported | |
| Reply | Regular Activity | Basic: Reply | Regular Activity | Supported | |
| Rethrow | Regular Activity | Basic: Rethrow | Regular Activity | Supported | |
| Sleep | Regular Activity | General Activities: Sleep | Regular Activity | Supported | |
| Throw | Regular Activity | Basic: Throw | Regular Activity | Supported | |
| Write To Log | Regular Activity | General Activities: Log | Regular Activity | Supported | |

File Palette

ActiveMatrix BusinessWorks 5.x: File Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: File Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------|--------------------------|----------------------|--------------------------|--------------------------|-----------------|
| Copy File | Regular Activity | Copy File | Regular Activity | Supported | |
| Create File | Regular Activity | Create File | Regular Activity | Supported | |
| File Poller | Process Starter Activity | File Poller | Process Starter Activity | Supported | |
| List Files | Regular Activity | List Files | Regular Activity | Supported | |
| Read File | Regular Activity | Read File | Regular Activity | Supported | |
| Remove File | Regular Activity | Remove File | Regular Activity | Supported | |
| Rename File | Regular Activity | Rename File | Regular Activity | Supported | |
| Wait for File Change | Signal-In Activity | Wait for File Change | Signal-In Activity | Supported | |
| Write File | Regular Activity | Write File | Regular Activity | Supported | |

FTP Palette

ActiveMatrix BusinessWorks 5.x: FTP

Type: Palette

ActiveMatrix BusinessWorks 6.x: FTP Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------------------------------|------------------------|---|------------------------|------------------------------|-----------------|
| FTP Connection | Shared Resource | FTP Connection Type: Shared Resource | Shared Resource | Supported | |
| FTP Change Default Directory | Regular Activity | FTP Change Default Directory | Regular Activity | Supported | |
| FTP Delete File | Regular Activity | FTP Delete File Type: Regular Activity | Regular Activity | Supported | |
| FTP Dir | Regular Activity | FTP Dir | Regular Activity | Supported | |
| FTP Get Default Directory | Regular Activity | FTP Get Default Directory | Regular Activity | Supported | |
| FTP Get | Regular Activity | FTP Get | Regular Activity | Supported | |
| FTP Make Remote Directory | Regular Activity | FTP Make Remote Directory | Regular Activity | Supported | |
| FTP Put | Regular Activity | FTP Put | Regular Activity | Supported | |
| FTP Quote | Regular Activity | FTP Quote | Regular Activity | Supported | |
| FTP Remove Remote Directory | Regular Activity | FTP Remove Remote Directory | Regular Activity | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------|------------------|-----------------|------------------|-------------------|----------|
| FTP Rename File | Regular Activity | FTP Rename File | Regular Activity | Supported | |
| FTP Sys Type | Regular Activity | FTP Sys Type | Regular Activity | Supported | |

HTTP Palette

ActiveMatrix BusinessWorks 5.x: HTTP

Type: Palette

ActiveMatrix BusinessWorks 6.x: HTTP Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------|-----------------|----------------|-----------------|-------------------|---|
| HTTP Connection | Shared Resource | HTTP Connector | Shared Resource | Supported | <p>HTTP Connection shared resource is migrated to ActiveMatrix BusinessWorks 6.x as an HTTP Connector shared resource. This is for the HTTP Service.</p> <p>ActiveMatrix BusinessWorks uses Jetty Server and does not support Tomcat</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------|------------------|---------------------|------------------|-------------------|---|
| | | | | | and HttpComponent implementation from ActiveMatrix BusinessWorks 5.x. |
| Proxy Configuration | Shared Resource | Proxy Configuration | Shared Resource | Supported | |
| HTTP Receiver | Process Starter | HTTP Receiver | Process Starter | Supported | |
| Send HTTP Request | Regular Activity | Send HTTP Request | Regular Activity | Supported | <p>ActiveMatrix BusinessWorks 6.x has also introduced a new shared resource for this client side invoke, HTTP Client shared resource. You can use this shared resource to configure and tune a number of optimization parameters such as Maximum Total Connection and Maximum Total Connection Per Host.</p> <p>This new HTTP Client shared</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|----------------|----------------------|---|
| | | | | | <p>resource also allows the users to configure a Thread Pool shared resource (new in ActiveMatrix BusinessWorks 6.x). Using the Thread Pool shared resource you can configure Minimum Pool Size, Maximum Pool Size and a number of other tuning parameters.</p> <div data-bbox="1179 1066 1417 1749" style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>Note: After Axis2 upgrade, Apache Commons client library is no longer used in HTTP. The projects migrated from ActiveMatrix BusinessWorks 5.x shall now show Apache Components as the client library instead of Apache Commons.</p> </div> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------------|--------------------|-----------------------|--------------------|-------------------|----------|
| Send HTTP Response | Regular Activity | Send HTTP Response | Regular Activity | Supported | |
| Wait For HTTP Request | Signal-In Activity | Wait For HTTP Request | Signal-In Activity | Supported | |

JAVA Palette

ActiveMatrix BusinessWorks 5.x: JAVA

Type: Palette

ActiveMatrix BusinessWorks 6.x: JAVA Palette

Type: Palette

i Note: If the ActiveMatrix BusinessWorks 5.x project has an activity from the Java palette, the ActiveMatrix BusinessWorks application module gets converted to a Java project. The additional **src** and **lib** folders are seen in the project. The **src** folder contains the Java source files. The **lib** folder contains the Java libraries (JAR Files). Java Nature is also added to the project.

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------|----------------------|-----------------------|----------------------|-------------------|----------|
| Java Custom Function | Shared Configuration | Custom XPATH Function | Shared Configuration | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------|--------------------------|----------------------|--------------------------|--------------------------|--|
| Java Global Instance | Shared Resource | Java Global Instance | Shared Resource | Supported | |
| Java Schema | Shared Configuration | XSD Schema | .xsd | Supported | In ActiveMatrix BusinessWorks 6.x the Java To XML and XML To Java activities do not use Java Schema. After migration the corresponding Schema equivalent to the Java Schema is generated and associated with the activity. |
| Java Code | Regular Activity | Java Invoke | Regular Activity | Supported | The source code for the Java Code activity which was in-lined in the ActiveMatrix BusinessWorks 5.x now gets created externally in the src folder of the AppModule and then it is referred by the Java Invoke activity with MultiOutput check box selected. |
| Java Event Source | Process Starter Activity | Java Process Starter | Process Starter Activity | Supported | <p>The Source code for Java Event Source activity which was in-lined in the ActiveMatrix BusinessWorks 5.x now gets created externally in the src folder of the AppModule and then Java Process Starter activity refers to it.</p> <p>The Java class implementing the Java Event Source now extends <code>com.tibco.bw.palette.shared.java.JavaProcessStarter</code> class instead of <code>com.tibco.plugin.java.JavaProcessStarter</code>.</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------|------------------|-------------|------------------|-------------------|---|
| | | | | | Java Event Source in ActiveMatrix BusinessWorks 5.x referring to an external class needs to change this. |
| Java Method | Regular Activity | Java Invoke | Regular Activity | Supported | |
| Java To XML | Regular Activity | Java To XML | Regular Activity | Supported | |
| XML To Java | Regular Activity | XML To Java | Regular Activity | Supported | |

JDBC Palette

Starting from ActiveMatrix BusinessWorks 6.10.0 release, the JDBC Progress DataDirect Drivers are not supported directly. For more information, see "Migrating existing JDBC applications configured with Progress DataDirect Drivers " in the *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palette Reference*.

ActiveMatrix BusinessWorks 5.x: JDBC

Type: Palette

ActiveMatrix BusinessWorks 6.x: JDBC Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------|------------------|---------------------|------------------|-------------------------|----------|
| JDBC Connection | Shared Resource | JDBC Connection | Shared Resource | Supported | |
| JDBC Call Procedure | Regular Activity | JDBC Call Procedure | Regular Activity | Supported | |
| JDBC Get Connection | Regular Activity | JDBC Get Connection | Regular Activity | Currently not supported | |
| JDBC Query | Regular Activity | JDBC Query | Regular Activity | Supported | |
| JDBC Update | Regular Activity | JDBC Update | Regular Activity | Supported | |
| SQL Direct | Regular Activity | SQL Direct | Regular Activity | Supported | |

JMS Palette

ActiveMatrix BusinessWorks 5.x: JMS Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: JMS Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------------|----------------------|------------|-------------|-------------------|--|
| JMS Application Properties | Shared Configuration | XSD Schema | .xsd | Supported | JMS Application Properties is migrated as |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------------------|--------------------------|---------------------------|--------------------------|-------------------|--|
| | | | | | XML Schema (XSD File) in ActiveMatrix BusinessWorks 6.x. |
| JMS Connection | Shared Resource | JMS Connection | Shared Resource | Supported | |
| Get JMS Queue Message | Regular Activity | Get JMS Queue Message | Regular Activity | Supported | |
| JMS Queue Receiver | Process Starter Activity | JMS Receive Message | Process Starter Activity | Supported | |
| JMS Queue Requester | Regular Activity | JMS Request Reply | Regular Activity | Supported | |
| JMS Queue Sender | Regular Activity | JMS Send Message | Regular Activity | Supported | |
| JMS Topic Publisher | Regular Activity | JMS Send Message | Regular Activity | Supported | |
| Type: Regular Activity | | Type: Regular Activity | | | |
| JMS Topic Requestor | Regular Activity | JMS Request Reply | Regular Activity | Supported | |
| Type: Regular Activity | | Type: Regular Activity | | | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------------|--------------------------|---------------------------|--------------------------|--------------------------|-----------------|
| JMS Topic Subscriber | Process Starter Activity | JMS Receive Message | Process Starter Activity | Supported | |
| Reply to JMS Message | Regular Activity | Reply to JMS Message | Regular Activity | Supported | |
| Type: Regular Activity | | Type: Regular Activity | | | |
| Wait for JMS Queue Message | Signal-In Activity | Wait for JMS Message | Signal-In Activity | Supported | |
| Wait for JMS Topic Message | Signal-In Activity | Wait for JMS Message | Signal-In Activity | Supported | |

Mail Palette

ActiveMatrix BusinessWorks 5.x: Mail Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Mail Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------|--------------------------|---------------|--------------------------|--------------------------|-----------------|
| Receive Mail | Process Starter Activity | Receive Mail | Process Starter Activity | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------|------------------|-----------|------------------|-------------------|--|
| Send Mail | Regular Activity | Send Mail | Regular Activity | Supported | ActiveMatrix BusinessWorks 6.x introduces a new SMTP shared resource. ActiveMatrix BusinessWorks 5.x Send Mail activity configuration migrates to both Send Mail activity and SMTP shared resource. |

Parse Palette

ActiveMatrix BusinessWorks 5.x: Parse Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Parse Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------|----------------------|-------------|----------------------|-------------------|----------|
| Data Format | Shared Configuration | Data Format | Shared Configuration | Supported | |
| Parse Data | Regular Activity | Parse Data | Regular Activity | Supported | |
| Render Data | Regular Activity | Render Data | Regular Activity | Supported | |

Policy Palette

ActiveMatrix BusinessWorks 5.x: Policy Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------------------|----------------------|-----------------------------|----------------------|-------------------------|----------|
| Security Policy Association | Shared Configuration | Security Policy Association | Shared Configuration | Currently not supported | |
| Security Policy | Shared Configuration | Security Policy | Shared Configuration | Currently not supported | |

Process Palette

ActiveMatrix BusinessWorks 5.x: Process Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Built-In

Type: Built-In

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------------------|----------------------|---------------------|--------------|-----------------------|---|
| Process Definition | .process | Process | .bwp | Supported | |
| Process Archive | Shared Configuration | Application Project | .application | Refactor and recreate | In ActiveMatrix BusinessWorks 5.x, Process Archive is |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|-------------|----------------------|---|
| | | | | | <p>configured within the Enterprise Archive Resource. This specifies which processes in the ActiveMatrix BusinessWorks 5.x project are packaged to form an .EAR file for deployment.</p> <p>In ActiveMatrix BusinessWorks 6.x, the Enterprise Archive Resource and Process Archive configuration are no longer supported and their functionality are replaced by Application and Application Module, respectively. Any project artifacts that can be re-used by multiple Applications and multiple Application Modules are created in Shared Modules.</p> <p>In the current version of Migration Tool, an ActiveMatrix BusinessWorks 5.x project is migrated as an application module with a corresponding application project. If the content of the</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|-------------|----------------------|--|
| | | | | | <p>ActiveMatrix BusinessWorks 5.x project is meant for creating multiple applications, then do the following:</p> <ol style="list-style-type: none"> 1. Convert the Application Module to Shared Module. 2. Create an Application Module and a corresponding application project. <ol style="list-style-type: none"> a. In the Application Module > Module Descriptors > Components editor, define the component to refer to process implementation in the Shared Module. b. Repeat 2.a |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|----------------|--------|-------------|----------------------|--|
| | | | | | <p>step for each process that is required to be a part of this Application Module. In ActiveMatrix BusinessWorks 6.x, a Process (say, Process A) in a Shared Module is not activated unless a Component is defined and is configured with Process A .</p> <p>3. Repeat Step 2 for the number of applications required.</p> |

Rendezvous Palette

ActiveMatrix BusinessWorks 5.x: Rendezvous Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Rendezvous Palette

Type: Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|-----------------|
| Rendezvous Transport | Shared Resource | Rendezvous Transport | Shared Resource | Supported | |
| Publish Rendezvous Message | Regular Activity | Rendezvous Publisher | Regular Activity | Supported | |
| Rendezvous Subscriber | Process Starter Activity | Rendezvous Subscriber | Process Starter Activity | Supported | |
| Reply To Rendezvous Request | Regular Activity | Rendezvous Reply To Request | Regular Activity | Supported | |
| Send Rendezvous Request | Regular Activity | Rendezvous Request Reply | Regular Activity | Supported | |
| Wait for Rendezvous Message | Signal-In Activity | Wait for Rendezvous Message | Signal-In Activity | Supported | |

REST and JSON Plug-in

ActiveMatrix BusinessWorks 5.x: REST/JSON Plug-in

Type: Plug-in

ActiveMatrix BusinessWorks 6.x: REST and JSON Palette

Type: Palette

Migration: Supported

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--|------------------|-----------------|------------------|----------------------------|--|
| Invoke REST API | Regular Activity | Invoke REST API | Regular Activity | Supported with limitations | <p>ActiveMatrix BusinessWorks 6.x does not support the following:</p> <ul style="list-style-type: none"> • WADL protocols • Responses returned in binary format • Rich output • Authentication OAuth1.0 and OAuth2.0 |
| <p>Note: The Circuit Breaker pattern is not supported by the Invoke REST API activity. If you want to use Circuit Breaker pattern, you need to configure the REST Reference Binding. For more information, see Using the Wizard to Create a REST Reference in TIBCO ActiveMatrix BusinessWorks™ REST Reference.</p> | | | | | |
| Parse JSON | Regular Activity | Parse JSON | Regular Activity | Supported with limitations | ActiveMatrix BusinessWorks 6.x does not support the schema type Java Classes. |
| Render JSON | Regular Activity | Render JSON | Regular Activity | Supported with limitations | The Remove Root check box is not supported in ActiveMatrix BusinessWorks 6.x. Root elements in TIBCO BusinessWorks Container Edition are skipped by default. You must modify the input JSON if it contains root |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------------------|------------------|----------------------|-----------------|----------------------------|---|
| | | | | | <p>element.</p> <p>The schema type Java Classes is not supported in ActiveMatrix BusinessWorks 6.x.</p> |
| REST Dispatch and Reply | Regular Activity | REST Service Binding | Service Binding | Supported with limitations | <p>The ActiveMatrix BusinessWorks 5.x Dispatch and Reply REST activity is migrated to REST Service Binding of ActiveMatrix BusinessWorks 6.x.</p> <p>REST Service of ActiveMatrix BusinessWorks 6.x uses XSD as the resource for building REST Service. The XSD must be external to the WSDL. That is, direct reference to inline schema in WSDL is not supported for REST binding.</p> <p>If the Dispatch and Reply activity is configured to route requests to ActiveMatrix BusinessWorks 5.x processes with inline schema for its input, output and fault, then the ActiveMatrix</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|-------------|--------|-------------|-------------------|---|
| | | | | | <p>BusinessWorks 6.x Migration Tool currently does not externalize the inline schema before configuring the REST binding. You can manually externalize the inline schema and re-create the REST binding.</p> <p>ActiveMatrix BusinessWorks 6.x also does not support the following:</p> <ul style="list-style-type: none"> • Enable WADL Reference • Enable OAuth • Parameter styles-Template and Header |

i Note: For more information about additional restrictions, see "Restrictions on XML Schema" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

RMI Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------|------------------|------------|------------------|-------------------------|----------|
| RMI Lookup | Regular Activity | RMI Lookup | Regular Activity | Currently not supported | None |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------|-----------------|------------|-----------------|-------------------------|----------|
| RMI Server | Process Starter | RMI Server | Process Starter | Currently not supported | None |

Service Palette

ActiveMatrix BusinessWorks 5.x: Service Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Built-In

Type: Built-In

Migration: Supported

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------------------|------------------|---------------------|------------------|-------------------|---|
| Context Resource | .contextResource | | Built-In | Supported | Migrated as Job Shared Variable |
| Partner Link Configuration | .sharedpartner | Process : Reference | Built-In | Supported | |
| Service | .serviceagent | Process : Service | Built-In | Supported | |
| Get Context | Regular Activity | Basic : Get Context | Regular Activity | Supported | Post migration, two sets of Get Context and Set Context activities are displayed in a service |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|------------------------------|--------------------------|------------------------------|--------------------------|-------------------|--|
| | | | | | process. The sets retrieve the context information and pass the information to the subprocesses, and vice versa. |
| Invoke Partner | Regular Activity | Basic : Invoke Service | Regular Activity | Supported | SOAP Request Reply activity is migrated as a process with reference and SOAP reference binding is added for the same. The binding is added under Module Descriptors > Components > Binding . |
| Receive Partner Notification | Process Starter Activity | Basic : Receive | Process Starter Activity | Supported | |
| Set Context | Regular Activity | Basic : Set Context | Regular Activity | Supported | Post migration, two sets of Get Context and Set Context |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------|-------------|--------|-------------|-------------------|--|
| | | | | | activities are displayed in a service process. The sets retrieve the context information and pass the information to the subprocesses, and vice versa. |

SOAP Palette

ActiveMatrix BusinessWorks 5.x: SOAP Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: Basic Palette + SOAP Binding

Type: Binding

Migration: Supported

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------------------|------------------|-----------------------|-------------------------|-------------------------|--|
| MIME Parser | Regular Activity | Parse : MIME Parser | Regular Activity | Currently not supported | |
| Retrieve Resources | Regular Activity | Generate WSDL Service | Regular Activity + SOAP | Currently not supported | The WSDL in ActiveMatrix BusinessWorks 6.x has to be generated in TIBCO Business |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--------------------|--------------------------|---|---|-----------------------------|--|
| | | | Binding | | Studio for BusinessWorks on the Component Binding. |
| SOAP Event Source | Process Starter Activity | Basic : Receive + SOAP Service Binding | Process Starter Activity + SOAP Binding | Supported with limitations. | <p>The SOAP Event Source is migrated as a Process with Service and a SOAP Service Binding is added for the same. The Binding is added under Module Descriptors, Components, or Binding.</p> <p>Currently only Copy-Of binding is supported for headers in the Binding section. Manually, set/map the Input tab of the Set Context activity to use the SOAP Event Source activity header migration functionality.</p> |
| SOAP Request Reply | Regular Activity | Basic : Invoke Service + SOAP Reference Binding | Regular Activity + SOAP Binding | Supported with limitations. | <p>The SOAP Request Reply is migrated as a Process with Reference and a SOAP Reference Binding is added for the same. The Binding is added under Module Descriptors/Components/Binding.</p> <p>Currently only Copy-Of binding is supported for headers in the Binding section. Manually, set/map the Input tab of the Set Context activity to use the SOAP Request Reply activity header migration functionality.</p> |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-----------------|------------------|---|---------------------------------|-------------------|----------|
| SOAP Send Fault | Regular Activity | Basic : Reply with Fault + SOAP Reference Binding | Regular Activity + SOAP Binding | Supported | |
| SOAP Send Reply | Regular Activity | Basic Activities: Reply + SOAP Reference Binding | Regular Activity + SOAP Binding | Supported | |

TCP Palette

ActiveMatrix BusinessWorks 5.x: TCP Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: TCP Palette

Type: Palette

Migration: Supported

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|----------------|------------------|----------------|------------------|-------------------|----------|
| TCP Connection | Shared Resource | TCP Connection | Shared Resource | Supported | |
| Read TCP Data | Regular Activity | Read TCP Data | Regular Activity | Supported | |

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|-------------------------|--------------------------------|-------------------------|--------------------------------|------------------------------|-----------------|
| TCP Close Connection | Regular Activity | TCP Close Connection | Regular Activity | Supported | |
| TCP Open Connection | Regular Activity | TCP Open Connection | Regular Activity | Supported | |
| TCP Receiver | Process Starter Activity | TCP Receiver | Process Starter Activity | Supported | |
| Wait for TCP Request | Signal-In Activity | Wait for TCP Request | Signal-In Activity | Supported | |
| Write TCP Data | Regular Activity | Write TCP Data | Regular Activity | Supported | |

Transaction Palette

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|--|------------------------|--|------------------------|-------------------------------|-----------------|
| JTA User Transaction Configuration | Shared Resource | JTA User Transaction Configuration | Shared Resource | Currently not supported | |
| XA Transaction Manager Configuration | Shared Resource | XA Transaction Manager Configuration | Shared Resource | Currently not supported | |
| Transaction State | Regular Activity | Transaction State | Regular Activity | Currently not supported | |

XML Palette

ActiveMatrix BusinessWorks 5.x: XML Palette

Type: Palette

ActiveMatrix BusinessWorks 6.x: XML Palette

Type: Palette

Migration: Supported

| BW 5.x | BW 5.x Type | BW 6.x | BW 6.x Type | Migration Support | Comments |
|---------------|----------------------|---------------|----------------------|--------------------------|-----------------|
| XSLT File | Shared Configuration | XSLT File | Shared Configuration | Supported | |
| Parse XML | Regular Activity | Parse XML | Regular Activity | Supported | |
| Render XML | Regular Activity | Render XML | Regular Activity | Supported | |
| Transform XML | Regular Activity | Transform XML | Regular Activity | Supported | |

Migration Scenario

The migration scenarios show the core construct migration of ActiveMatrix BusinessWorks 5.x projects. After migration, these projects are converted to their equivalent in ActiveMatrix BusinessWorks 6.x. The ActiveMatrix BusinessWorks 6.x **Call Process**, **Signal-in**, **Start**, and **End** activities are notably different from the activities in ActiveMatrix BusinessWorks 5.x.

Call Process Activity Migration

The following table provides information about the **Call Process** activity migration from ActiveMatrix BusinessWorks 5.x to ActiveMatrix BusinessWorks 6.x.

| ActiveMatrix BusinessWorks 5.x | ActiveMatrix BusinessWorks 6.x |
|---|--|
| <p>Call Process is literal. It calls a process with process pipeline data mapped into it and generates an output that is in essence the output of the called process.</p> | <p>Call Process mechanism is based on the standard Invoke activity. It abstracts out the actual Call Process configuration to the reference that the Invoke activity is calling.</p> <p>After Migration: Call Process activity is migrated as a Direct Call Process.</p> |

Signal-in Activity Migration

The following table provides information about the **Signal-in** activity migration from ActiveMatrix BusinessWorks 5.x to ActiveMatrix BusinessWorks 6.x.

| ActiveMatrix BusinessWorks 5.x | ActiveMatrix BusinessWorks 6.x |
|--|--|
| <p>Signal-In activities join an existing job by comparing the key generated by mapping process pipeline data to the key field of the signal-in activity. The</p> | <p>Conversations is introduced to join an existing process instance, which is based on a correlation mechanism. It applies to all the activities receiving a message after the process instance is created.</p> |

| ActiveMatrix BusinessWorks 5.x | ActiveMatrix BusinessWorks 6.x |
|--|--|
| <p>value is matched with the value generated for the candidate event key field of the signal-in activity by mapping the signal-in output data.</p> | <p>A process instance can initialize a conversation using an activity by initializing a conversation key with the values mapped from the process pipeline data. If the join activity generates a conversation key value by evaluating the expression against the message data, which matches the value of the initialized conversation key, a message can join the conversation.</p> <ul style="list-style-type: none"> • Input key mapping migrates as Conversation Initiate • Candidate Event Key migrates as Conversation Join. <p>After Migration: Signal-in activity is migrated to an ActiveMatrix BusinessWorks 6.x equivalent Signal-in activity with a dummy conversation with Initiate and Join as "true". This mechanism initiates the conversation based on the process data mapped to a key and matches it with a value that is generated by mapping the activity output data.</p> |

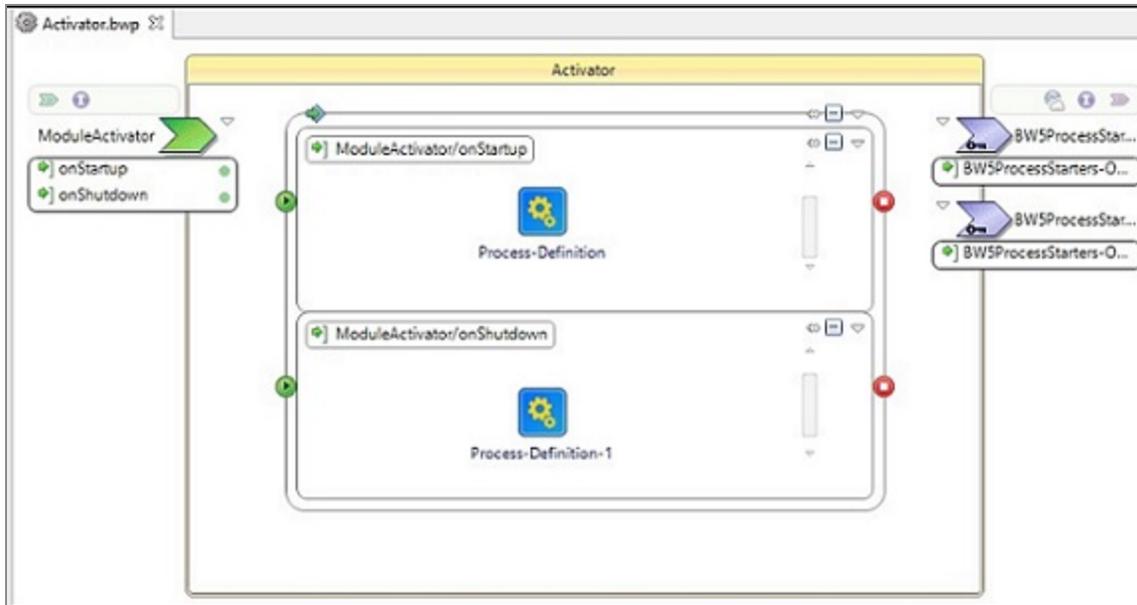
Start and End Activity Migration

The following table provides information about the **Start** and **End** activities migration from ActiveMatrix BusinessWorks 5.x to ActiveMatrix BusinessWorks 6.x.

| ActiveMatrix BusinessWorks 5.x | ActiveMatrix BusinessWorks 6.x |
|--|---|
| <p>The Start activity is a receiver that starts a process on receiving a message that may be empty. The End activity sends a reply.</p> <p>The Start activity is the first activity in a process definition (process starters replace the Start activity when used in a process definition).</p> <p>The End activity is the last activity in a process definition.</p> | <p>The Start activity and End activity are now supported.</p> |

Activator

In ActiveMatrix BusinessWorks 6.x, each application module has one Activator process that has two service operations, **On StartUp** and **On ShutDown**. Any TIBCO Designer process linked with the **On Start** and **On ShutDown** activity in ActiveMatrix BusinessWorks 5.x after migration is simultaneously changed to a **StartUp Operation** activity and **On ShutDown Operation** activity. The activator calls the `start()` and `stop()` methods to start or stop the process.



Service and References

Service and References are defined at a process level.

| ActiveMatrix BusinessWorks 5.x | ActiveMatrix BusinessWorks 6.x |
|---|--|
| SOAP services are used for exchanging information in the implementation of web services relying on XML message format sent over HTTP and JMS. | Includes REST compliant services along with HTTP and JMS, where the purpose of the service is to manipulate XML representations of web resources using a uniform set of stateless operations. When using a stateless operation, the state is managed by the job itself instead of by the engine. |

Migrating ActiveMatrix BusinessWorks 5.x Projects to ActiveMatrix BusinessWorks 6.x

Use the following options to migrate ActiveMatrix BusinessWorks 5.x projects to ActiveMatrix BusinessWorks 6.x

- **Project > Migrate BW Projects** option in TIBCO Business Studio for BusinessWorks
- A command-line option

Migrating Projects Using TIBCO Business Studio for BusinessWorks

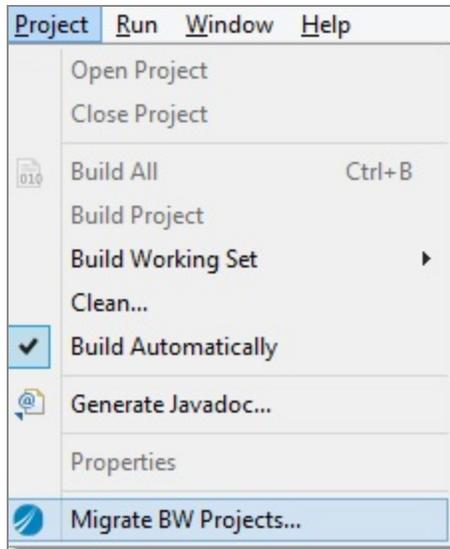
This section describes how to use the **Migrate BW Projects** menu option in TIBCO Business Studio for BusinessWorks.

Before you begin

- Perform validation and ensure that ActiveMatrix BusinessWorks 5.x project does not have errors.
- Optionally, schemas without namespaces should be refactored before migration.
- Remove spaces in the namespace.
- Remove or update any retrieve WSDL processes.
- It is recommended to add missing namespaces for the schemas.
- Ensure that there are no spaces or special characters in folder names.
- Global variables with integer values and a String data type must be updated to data type as Integer. Examples include timeouts, message size, and so on.
- Ensure that no two resources, such as schemas, WSDLs, and DTDs have the same name when they have a common hierarchical structure or layout.

Procedure

1. In TIBCO Business Studio for BusinessWorks, choose **Project > Migrate BW Projects**.



The screenshot shows the 'Project Migration Wizard' dialog box in the 'Configure' step. The title bar reads 'Project Migration Wizard' with standard window controls. The main heading is 'Configure' with the instruction 'Select the Migration Configuration'. The dialog is divided into several sections:

- Migration Project Type:** Contains two radio buttons: 'Migrate Single BusinessWorks 5.x Project' (selected) and 'Migrate Multiple BusinessWorks 5.x Projects'. Below these are two checkboxes: 'Migrate as Shared Module' and 'Select Processes for Migration'.
- Select Project Location:** Features two text input fields. The first is 'Select Project(s) to be migrated:' with an empty field and a 'Browse' button. The second is 'Select Migrated Project Location:' with the text 'D:\TestBuild-1' and a 'Browse' button.
- XPATH language for transitions:** Contains two radio buttons: 'XPATH 1.0' (selected) and 'XPATH 2.0'.
- XPATH Function Group Configuration:** Includes a text input field for 'Select Third Party JARs folder:' with a 'Browse' button, and a checked checkbox for 'Single XPATH Function Group Project'.
- Project Libraries (DTL) Configuration:** Includes a text input field for 'Select ProjectLibs (DTLs) used by Project:' with a 'Browse' button, and an unchecked checkbox for 'Link DTL to Shared Module:'.
- Java Libraries Configuration:** Includes a text input field for 'Select Java Libraries used by Project:' with a 'Browse' button.

At the bottom, there is a row of buttons: a help icon (?), 'Import', 'Export', '< Back', 'Migrate Project', 'Finish', and 'Cancel'.

- In the Project Migration Wizard dialog box, to migrate a single ActiveMatrix BusinessWorks 5.x project, click **Migrate Single BusinessWorks 5x Project**.
To migrate multiple projects, click **Migrate Multiple BusinessWorks 5.x Project**.
When migrating a single ActiveMatrix BusinessWorks 5.x project, you can also migrate

selective processes or subprocesses. Select the **Select Processes for Migration** check box, and provide the required information as explained in Step 7, below.

After the required information is provided, the **Select Processes** button is displayed.

i Note: The **Select Processes for Migration** check box is disabled when you select the **Migrate Multiple BusinessWorks 5.x Projects** option. Use this check box only to migrate single projects.

The list of processes in the selected TIBCO ActiveMatrix BusinessWorks™ 5.x project are displayed in the Project Migration Wizard dialog box. The processes can be viewed in the **Flat Hierarchy** or in the **Tree Hierarchy** structures.

3. To select all the subprocesses under the main process, click **Select Linked Processes**. Clear the check box for the process you do not want to migrate.

To view the static and dynamic processes that are selected for migration, click **Show Linked Process Hierarchy**.

4. While migrating selective processes, to select or clear the already migrated existing processes, on the **Select Processes** page of the Project Migration Wizard dialog box, select the **Re-Select Process** check box.

i Note: During the re-migration process, the module properties are not changed.

5. Click **Migrate Project**.

6. Specify the relevant information in the following fields.

- a. Click **Browse** in the **Select Project(s) to be migrated** field and provide the location of the ActiveMatrix BusinessWorks 5.x project to migrate.

i Note: Select CTRL+ Spacebar to retrieve the history of the last five migrated project paths.

- b. The **Select Migrated Project Location** field displays the location of the current open workspace where the project is migrated. To provide a different workspace, click **Browse**.
- c. While migrating any project from version 6.6.1 of TIBCO ActiveMatrix

BusinessWorks™ onwards, the default XPATH language for transitions is pre-set to **XPATH 1.0**. Select **XPATH 2.0** to set the XPATH language for transitions to XPATH 2.0. The transitions are migrated by default to XPATH 2.0 for versions prior to 6.6.1 of TIBCO ActiveMatrix BusinessWorks™.

i **Note:** The XPATH language for transition is introduced to get rid of invalid comparison or conversion issues on transitions or groups while migrating ActiveMatrix BusinessWorks 5.x projects.

- d. To browse for third party jars required for your project, click the **Select Third Party JAR's folder** field.
- e. The **Single XPath Function Group Project** check box is selected by default, to create all custom XPaths as a single plugin project and under a single custom XPath.

After migration, the custom XPath function group plugin project is included in the application project. The classes folder is located in the customXPathFunction.jar file, and is no longer available in the plug-in project. This jar file is also added to the project class path.
- f. In the **Select ProjectLibs (DTLs) used by Project** field, click **Browse** to select the project libraries to be used for the project.
- g. In the **Select Java Libraries used by Project** field, click **Browse** and provide the location of the JAR files on disk if the ActiveMatrix BusinessWorks 5.x project is using external JAR files in context with Java activities.

i **Important:** TIBCO recommends that you place the external JAR files in a single location.

These JAR files can then be in-lined in the migrated ActiveMatrix BusinessWorks 6.x project.

- h. To generate the dot (.) properties file which is used for performing command-line migration, click **Export**. For more information about the (.) properties file, see [Command line Configuration File Template](#).
- i. To browse the (.) properties file which populates the referred 5.x project path for migration, click **Import**.

7. Click **Migrate Project**.

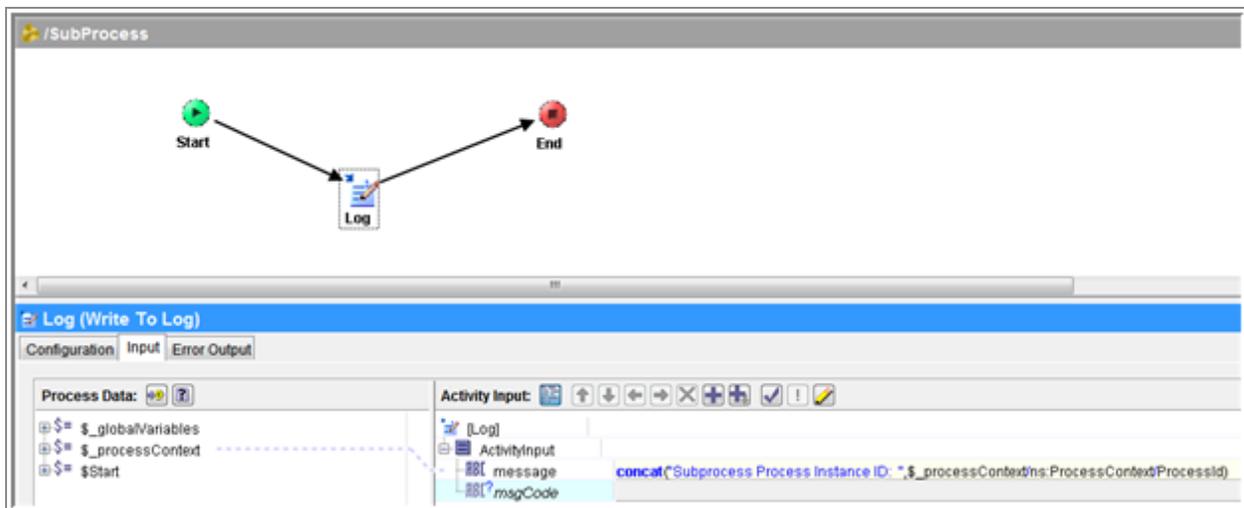
- The process count displayed on the **Migrate** page of the **Project Migration Wizard** is inclusive of migration service agents.
- The tooltip available for the Migration progress bar displays the general information about migration process.
- The Project Migration Wizard dialog box displays the migration status in blue and green colors, where blue and green colors indicate the start and the completion of the migration process respectively.
- To cancel the migration process anytime, in the **Project Migration Wizard**, click **Cancel**.

8. Click **Finish** after the migration is complete.

Project with Subprocess after Migration

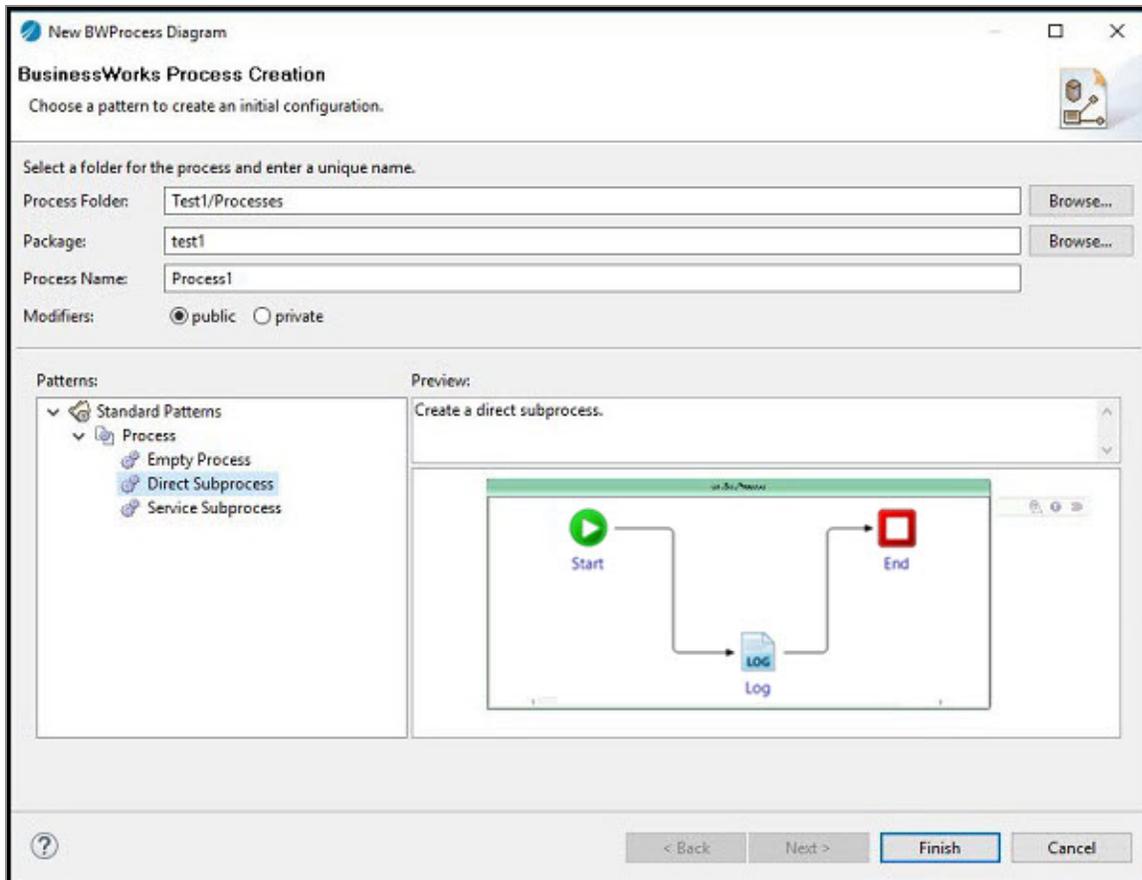
Subprocesses in ActiveMatrix BusinessWorks 6.x use a standardized concept of receiving messages and replying to messages through a service.

Before Migration



After Migration

The Call Process is migrated as a Direct Call Process.



Migrating Projects Using the Command Line

This section describes how to migrate the projects using the command line.

Usage: `bwmigrator [-options] BW5Project...`

where options include the following:

| Option | Description |
|----------------------------|---|
| <code>-projectDir</code> | Location where ActiveMatrix BusinessWorks 6.x projects are generated. |
| <code>BW5Project...</code> | Location\locations of ActiveMatrix BusinessWorks 5.x projects. |
| <code>-propFile</code> | The <code>bw6migration.properties</code> file. The syntax for passing the <code>bw6migration</code> properties file is <code>bwmigrator.exe [-data <User_</code> |

| Option | Description |
|--------|--|
| | <p>Workspace>] -projectDir <BusinessWorks 6.x Target directory> <BusinessWorks 5.x Project location> -propFile <bw6migration.properties location>.</p> <p>The template is at, <TIBCO_HOME>\bw\6.x\config\bw6migration_ template.properties.</p> |

Examples

- `bwmigrator -projectDir <BW6_PROJECTS_HOME>\projects <TIBCO_HOME>\5.9\examples\activities\file\File` (Migrates single ActiveMatrix BusinessWorks 5.x project.)
- `bwmigrator -projectDir <BW6_PROJECTS_HOME>\projects <TIBCO_HOME>\5.9\examples\activities\file\File <TIBCO_HOME>\5.9\examples\activities\ftp\ftp` (Migrates File and FTP ActiveMatrix BusinessWorks 5.x projects.)
- `bwmigrator -projectDir <BW6_PROJECTS_HOME>\projects <TIBCO_HOME>\5.9\examples\activities` (Migrates all ActiveMatrix BusinessWorks 5.x projects in activities directory.)
- `bwmigrator -projectDir <BW6_PROJECTS_HOME>\projects <TIBCO_HOME>\5.9\examples\file <TIBCO_HOME>\5.9\examples\ftp` (Migrates all ActiveMatrix BusinessWorks 5.x Projects in File and FTP directories.)

Procedure

1. For Java migration enter the following command:

```
bwmigrator.exe -projectDir c:/temp -classpath <Jar Location Path> <BW 5.x Project Path>
```

2. For non-Java migration enter the following command:

```
bwmigrator.exe -projectDir c:/temp <BW 5.x Project Path>
```

3. For the Eclipse environment, run the `bwmigrator` tool as described in step 2, but use a temporary directory (not the Eclipse workspace directory) as a target.

In addition, to make the project visible in the current workspace, open the Eclipse UI, select **File > Import Existing Studio Project into Workspace**, and specify the temporary directory as the source.

Command line Configuration File Template

The ActiveMatrix BusinessWorks 6.x migration configuration file, `.properties` file is a template file that contains configurable properties to migrate design time libraries, custom XPath functions, selected processes and projects using the command line.

To migrate projects using the command line migration option, open the `.properties` file and paste the command from the `.properties` file into the command prompt, and execute the command using the following format:

```
bwmigrator.exe [-data <User_Workspace>] -projectDir <BusinessWorks 6.x Target
directory> <BusinessWorks 5.x Project location> -propFile <.properties
location>
```

Note: Optionally, you can also modify the `User_Workspace` path. If the `User_Workspace` path has been modified, make sure that the same path is provided for the BW6 Target directory.

The properties to be configured to migrate design time libraries, custom XPath functions, and selected processes are explained in the tables below.

Selective Migration

| Property | Description |
|----------------------------------|--|
| <code>selectProcess</code> | The default value <code>false</code> will migrate all the processes. Set the property to <code>true</code> to migrate only the specified processes. |
| <code>selectLinkedProcess</code> | The default value <code>false</code> migrates the specified main process. For example, <code>.process=<process1>,<process2>...</code> Set the property to <code>true</code> to migrate all the dependent processes, of the specified main process. For example, <code>.process=<folder1/process1>,</process2>,,</code> Specifying the main process path will migrate all the processes that are dependent on the main process. |
| <code>.process</code> | Provide comma separated processes with relative process paths with respect to the ActiveMatrix BusinessWorks 5.x project root folder as |

| Property | Description |
|----------|---|
| | <p>explained in the following example.</p> <pre>.process=Service/ZipInfo- service1.serviceagent,TestService/getCityInfoTest.process, Service/getCityInfoService.process,TestService/getCityDistance TestJMS.process, Service/getCityDistanceService.process,TestService/getCityInfo TestJMS.process, TestService/getCityDistanceTest.process,</pre> |

Design Time Library Migration (DTL)

| Property | Description |
|--------------|--|
| sharedModule | <p>The default value of this property is <code>false</code>, and will migrate the DTL as an application module. Set the property to <code>true</code> to create an ActiveMatrix BusinessWorks 6.x shared module.</p> |

Mapping DTLs to Shared Modules

| Property | Description |
|------------------|--|
| dtlDir | <p>Provide the project <code>lib</code> folder location here.</p> <p>For example:</p> <pre>C:/Users/workspace1/folder/BW5DTLLib.projlib.</pre> |
| sharedModuleDirs | <p>Provide multiple directory locations using comma separated values.</p> <p>For example:</p> <pre>C:/CLIWorkspace,C:/CLIWorkspace/SharedModuleProject1,....</pre> |

Custom XPath Migration

| Property | Description |
|-----------------------|--|
| singleCXFGroupProject | <p>By default, the property is set to <code>true</code>, to migrate all the custom XPath functions under a single custom XPath function group.</p> |

| Property | Description |
|----------------------------------|--|
| | Set the property to <code>false</code> to migrate each custom XPath function and create custom XPath function groups for each individual XPath function. |
| <code>thirdPartyCXFJarDir</code> | Provide the location of the third party JAR files that are referred by the custom XPath function. |

Post-Migration Manual Tasks

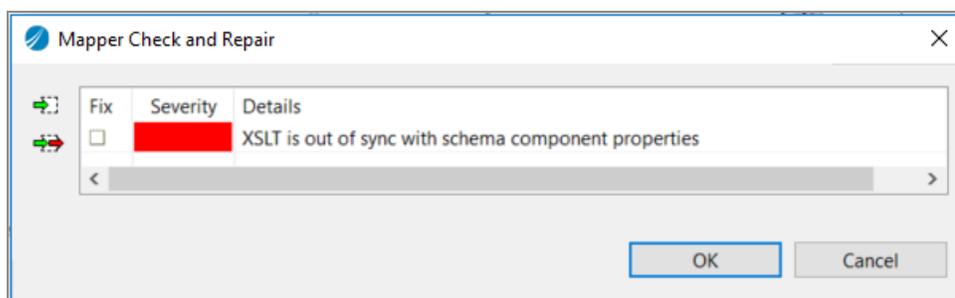
If you encounter problem markers that are related to activity input mapping, use the **Show Check and Repair** and the **Fix Type-Casting Errors** functions to resolve the errors.

Show Check and Repair

Procedure

1. To clear the problem markers in the migrated project, click `project.bwp`.
2. Click the activity in your project, then click the **Input** tab.
3. Click the **Show Check and Repair** icon .

The Mapper Check and Repair window is displayed.



4. Click **OK** and run the project.

Fix Type-Casting Errors

To fix the construct functions errors, click the **Fix Type-Casting Errors** icon .

i Note: If the **Project > Clean** option does not work to resolve problem markers, close and reopen the project.

HTTP Basic Sample

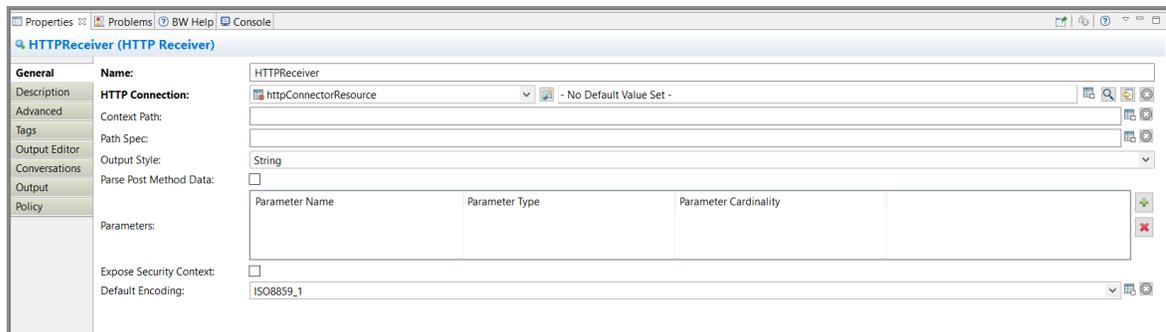
This section describes how to migrate an HTTP Basic sample.

Before you begin

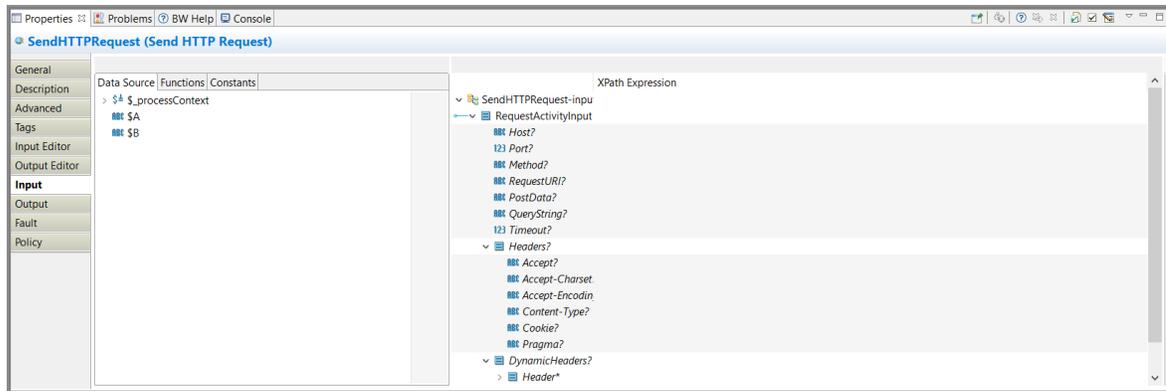
Migrate the ActiveMatrix BusinessWorks 5.x project.

Procedure

1. Click the **Incoming-HTTP-request (HTTP Receiver)** activity.
2. Click the **General** tab.
3. In the **Parameter** table, change the **Parameter Cardinality** from **Required** to **Optional**.

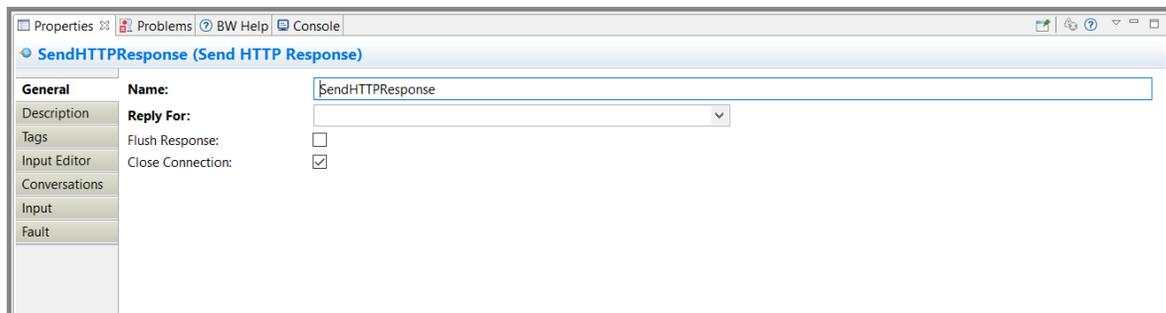


4. Click the **Send-Request-to-Wiki-News (Send HTTP Request)** activity and specify the following three values on the **Input** tab.



| Input Type | Values |
|-----------------|--|
| RequestURI | "/wiki/Main_Page" |
| Accept-Encoding | "text/*, text/html, text/html;level=1" |
| Content-Type | "text/html;charset=UTF-8" |

5. Click the **Send-Response-from-Wiki-News (Send HTTP Response)** activity and specify the value for **Content-Type** on the **Input** tab.



Custom XPath Migration

Some manual tasks need to be performed after custom XPath migration. These tasks impact Design-time.

Design Time

This section describes how to provision migrated custom XPath functions into ActiveMatrix BusinessWorks 6.x.

Procedure

1. Export the custom XPath function plug-ins into the **Host** repository. To do this, right-click on the XPath Function Plug-in, and select **Plug-in Development/Deployable Plug-ins and fragments**.
2. Select **Install into .host Repository** and, click **Finish**.
3. Restart and refresh your workspace.

This results in the validation errors related to XPath functions not visible.

Custom XPath Migration Using the Command Line

Set the following properties to migrate custom XPath functions using the `bw6migration.properties` file.

| Property | Description |
|------------------------------------|--|
| <code>singleCXFGroupProject</code> | By default, the property is set to <code>true</code> , and migrates all the custom XPath functions under a single custom XPath function group. Set the property to <code>false</code> to migrate each custom XPath function and create custom XPath function groups for each individual XPath function. |
| <code>thirdPartyCXFJarDir</code> | Provide the location of the third party JAR files that are referred by the custom XPath function. |

Migrating Design Time Libraries (DTL) as Shared Modules

ActiveMatrix BusinessWorks 5.x design time library source projects are migrated as ActiveMatrix BusinessWorks 6.x shared modules.

Migrating Design Time Libraries Using TIBCO Business Studio for BusinessWorks

Use the ActiveMatrix BusinessWorks 6.x framework to migrate ActiveMatrix BusinessWorks 5.x projects where the business process uses design time libraries to define processes, resources, and subprocesses.

You can migrate the design time libraries using the following options:

- **Project > Migrate BW Projects** option in TIBCO Business Studio for BusinessWorks
- The command-line option

Procedure

1. In the Project Migration Wizard dialog box, click **Migrate Single BusinessWorks 5.x Project** and select the **Migrate as Shared Module** check box.
2. Provide the **Project Location** details and the **XPATH Function Group Configuration** details if a custom XPath is used in the project.
3. To browse for third party jars only if your project contains a custom XPath, click the **Select Third Party JARs folder** field .
4. Click **Migrate Project**.

Result

After migration, view the folder structure of the resources, including the resource, schema, wsdl, and so on that are available in the shared module under the **Module Descriptors > Provides** tab.

After migration, do not perform refactoring operations on any of the resources, such as the schema, ActiveMatrix BusinessWorks 6.x shared resources, and service definitions. The resource properties, and naming conventions must be retained as they are. Mapping issues, if any, can be corrected, and resource specific properties of the shared resources can be

changed.

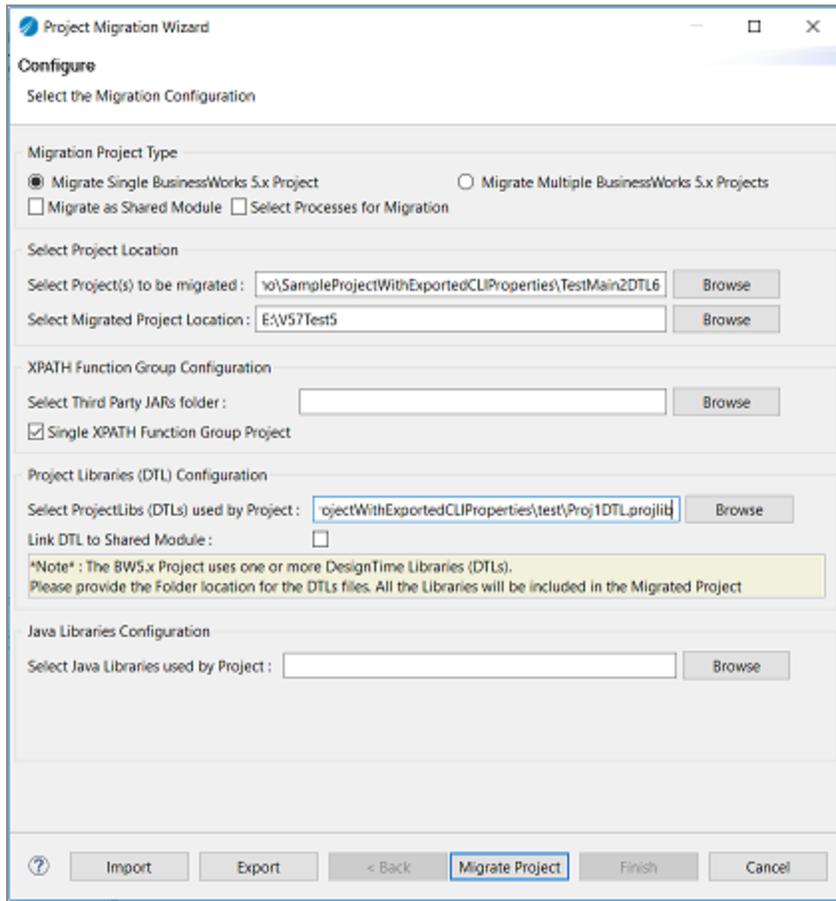
Limitations

- Shared module migration does not support ActiveMatrix BusinessWorks 5.x AE schemas. AE Schemas are migrated as part of the application module.
- Custom XPath function project duplication should be managed manually by deleting the duplicate source projects.
- DTL migration does not support the Process Name Dynamic Override feature of the **Call Process** activity. Instead, add the process name manually.

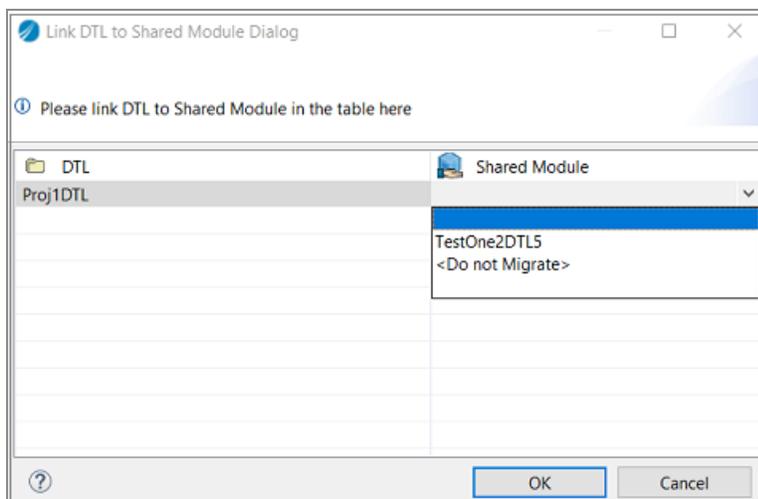
Migrating Application Modules

ActiveMatrix BusinessWorks 5.x projects using design time libraries can be migrated as application modules by linking the corresponding shared modules to the DTL libraries.

Select the **Link DTL to Shared Module** check box.



Select the required DTL project, and click **OK**.



Mapping the DTL to the **<Do Not Migrate>** option does not link the DTL to the shared module.

i Note: Multiple DTL libraries can be linked to one shared module. After migration all the DTL libraries refer to the same shared module to resolve resource references.

Migrating Design Time Libraries Using Command line

Design time library source projects can be migrated as shared modules using the command line.

Set the following properties to migrate DTL projects as a shared module using the `bw6migration.properties` file.

| Property | Description |
|---------------------------|---|
| <code>sharedModule</code> | Set the property to <code>true</code> to create an ActiveMatrix BusinessWorks 6.x shared module. Set the property to <code>false</code> to migrate the DTL as an application module. |

i Note: The shared module and the application module must be maintained in the same workspace while performing migration using the command line.

Mapping a Design Time Library to a Shared Module

Set the following properties to link a DTL library to the shared module.

| Property | Description |
|---------------------|---|
| <code>dtlDir</code> | Provide the project lib folder location. For example, |

| Property | Description |
|------------------|---|
| | C:/Users/workspace1/folder/BW5DTLLib.projlib. |
| sharedModuleDirs | Provide the shared module location. You can provide multiple directory locations using comma separated values. For example, C:/CLIWorkspace,C:/CLIWorkspace/SharedModuleProject1,.... |

Using the Quick Fix Option to Resolve XSLT out of Sync Errors

After migrating a project, use the **Quick Fix** option to resolve XSLT out of Sync errors in the project.

Before you begin

Set the minimum JVM heap size to either 4GB, 6GB or 8GB, keeping in mind the size of the project. For additional instructions, see *Specifying JVM Heap Size in TIBCO ActiveMatrix BusinessWorks™ Performance Benchmarking and Tuning*.

After migrating a project, follow these steps:

Procedure

1. Turn off the Auto Build, which is enabled by default, by selecting **Project > Build Automatically**.
2. From the **Problems** tab, click the downward arrow  icon, and select **Configure Contents**.
The Configure Contents window is displayed.
3. Clear the **Use item limits** check box and select **OK**.
This causes all of the errors in the project to display.
4. From the **Problems** tab, right-click on an XSLT out of Sync error, and select **Quick Fix**.
5. Click **Select All**.

6. Click **Finish**.
7. Clean the project to fix broken mappings that might have occurred.
8. To fix broken mappings, select **Project > Clean**.

Result

The number of XSLT out of Sync errors in the migrated project are either reduced or fully resolved. If there are a few XSLT out of Sync errors still lingering, use the **Quick Fix** option to resolve these problems. Make sure the **Auto Build** is turned off during this process.

Migration Process Outline

The migration mechanism takes ActiveMatrix BusinessWorks 5.x projects and converts them to their equivalent in ActiveMatrix BusinessWorks 6.x.

The process flow in the project is migrated as is for the following:

- The activities and their associated mappings
- The transitions and their associated conditions
- Groups

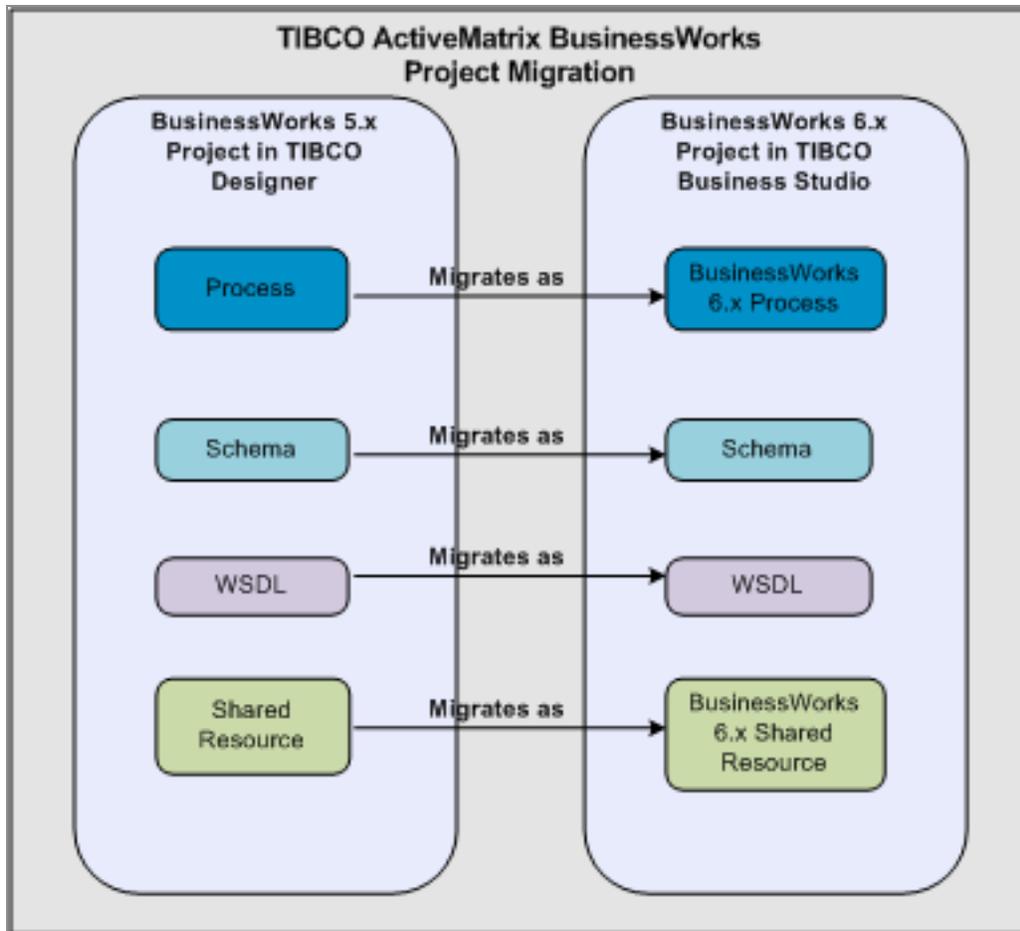
ActiveMatrix BusinessWorks Project Migration

| 5.x Project in TIBCO Designer | 6.x Project in TIBCO Business Studio for BusinessWorks |
|-------------------------------|--|
| Process | ActiveMatrix BusinessWorks 6.x Process |
| Schema | Schema |
| WSDL | WSDL |
| Shared Resource | ActiveMatrix BusinessWorks 6.x Shared Resource |

i Note: While migrating projects, if a project rests in a multiple folder hierarchy structure and contains WSDLs, or schemas, or both, the folder names must be unique. If the folder names are not unique the project can run into design time issues due to incorrect namespaces and imports.

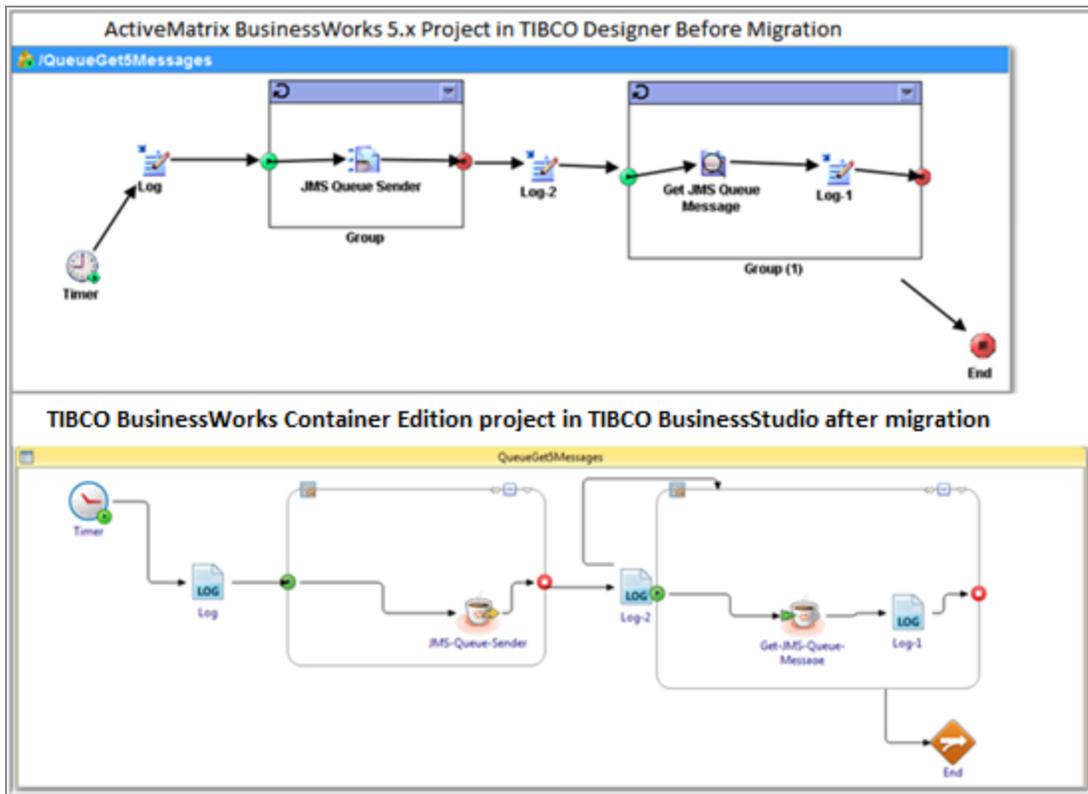
i Note: For ActiveMatrix BusinessWorks 6.x, spaces are not allowed in the namespace.

Project Migration Diagram



The following image shows the project process flow after the migration. Activities, transitions, and their associated mappings visible in ActiveMatrix BusinessWorks 5.x project in TIBCO Designer are displayed in ActiveMatrix BusinessWorks 6.x project in TIBCO Business Studio for BusinessWorks.

Migrated Project - Before and After



Frequently Asked Questions

| What do I do... | Answer |
|---|---|
| When migrated process shows mapping errors? | <ol style="list-style-type: none"> 1. Go to Menu > Project > Clean and click Clean All Projects. 2. Go to the Activity Input with the Mapping Error. Click Show Check and Repair and fix existing errors. 3. Click Fix Type Casting Errors. 4. If the error still persists, check the expression and do the necessary corrections. |
| When processes have unresolved WSDL references? | <ol style="list-style-type: none"> 1. Close and reopen the project. 2. If this does not fix the references, check the WSDL Interface value on the General tab of the Process Service. |
| When Java Invoke activities show Input Configuration Error after migration? | <ol style="list-style-type: none"> 1. Go to the General tab of the Java Invoke activity and check whether the Class Name is available in the workspace. If available, re-select the Java class. 2. If the class is not available, check whether the JAR file packaging the Java class is available. Otherwise, copy the JAR file to the "lib" folder and reselect the Java class. |
| When activities in the Catch block show Mapping errors? | <p>The Catch Block activities does not have the visibility to the output of the activities from the main process.</p> <p>Re-map the activity input accordingly. This is similar to the Java try or catch constructs.</p> |
| When Variable not defined error | <ol style="list-style-type: none"> 1. In ActiveMatrix BusinessWorks 6.x the Iterate |

| What do I do... | Answer |
|--|---|
| for Iterate Group Index variable is used outside the Iterate scope? | <p>Group Index Variable does not have visibility outside the Iterate scope.</p> <ol style="list-style-type: none"> 2. Define a process variable of type integer, map it to the Iterate Group Index variable, and use the variable in the process scope. |
| When a ActiveMatrix BusinessWorks 5.x activity migrates as Empty or Rescue activity in ActiveMatrix BusinessWorks 6.x? | <p>The ActiveMatrix BusinessWorks 5.x activity migrates as Rescue activity, if the migration framework fails to migrate.</p> <ol style="list-style-type: none"> 1. Check the ActiveMatrix BusinessWorks 5.x project 2. Add the corresponding activity in the ActiveMatrix BusinessWorks 6.x project 3. Redo the mappings. |
| After migrating a project using the <code>tib:concat-sequence-format()</code> , the output returns errors. | <p>The function <code>tib:concat-sequence-format()</code> does not accept a string as its return value for node set.</p> <p>After migration, replace the <code>tib:concat-sequence-format()</code> with the <code>string-join()</code> function.</p> |
| When a group is around the activities and the XPath condition over the group is not satisfied after migration, the Expected Non Repeating got repeating error is displayed. | <ol style="list-style-type: none"> 1. Verify the XPath condition and resolve the group issues (for example, iterator, for-each...) 2. Re-map the same from the group. |
| When the Variable not defined error is displayed post migration for multiple variables created in the input of any activity and each variable is created with the condition on another variable. | <ol style="list-style-type: none"> 1. Remove all the variables 2. Recreate the variables 3. Add the mappings again. In this case the back-end references are also removed. 4. Delete the XPath on the variables one by one and re-correct them. This also resolves the issue sometimes. |

| What do I do... | Answer |
|---|---|
| When the Unresolved reference schema error is displayed. | Reconfigure the broken module variables. Redo all the mappings as they break due to reconfiguration. |
| When the Catch-All End error is not configured. | When a Catch All fault handler is used in a ActiveMatrix BusinessWorks5.x project, on migration the fault handler is converted as expected but an End activity is created in place of a Catch All activity. An End activity without any input is created. Delete the end activity and to resolve the issue. |
| Schema references issues post migration | References of schemas that are imported in another schema are not found. Delete the import and add it again. The references are updated with the correct namespace and the namespace issues are resolved. |
| When you map an integer value, for example 1, to a decimal field, expecting the output in the decimal field to be 1, but, instead, the decimal field result is 1.0. | <p>Create a new Mapper activity using the same naming and mappings from the existing mapper activity.</p> <p>Once all the inwards and outwards mappings are done, delete the old Mapper activity, which is already migrated, and point the transitions to the newly created mapper activity.</p> |
| There is no tokenize-allow-empty () function in ActiveMatrix BusinessWorks 6.x. | After migration to ActiveMatrix BusinessWorks 6.x, the tokenize() function can yield the same results as the tib:tokenize-allow-empty() and tib:tokenize() functions of ActiveMatrix BusinessWorks 5.x. |
| When a mapper activity that has a tokenize function inside a for-each expression, throws a Null Input at runtime? | <p>Post migration, convert the XSLT version in the activity from 1.0 to 2.0, since in version 1.0 the for-each expression requires things to be evaluated to a node-set.</p> <p>The Tokenize function creates a sequence of string atoms, which is not node-set.</p> <p>In 2.0, the for-each expression must be evaluated to sequence, which covers the sequence of atoms and</p> |

| What do I do... | Answer |
|--|--|
| After migration, when a boolean always evaluates to false with XSLT 1.0 and validation off. | <p>node scenario.</p> <ol style="list-style-type: none">1. Navigate to Windows > Preferences > Mapper.2. Select the Assume all inputs untyped check box.3. Click Apply, and then OK.4. Clean the project. After the errors related to untyped input are displayed, use the Quick Fix option to resolve them.5. Execute the project. |
| After migration, when there is a invalid comparison, or conversion error in a transition or a group. | <ol style="list-style-type: none">1. Navigate to Windows > Preferences > Mapper.2. Select the Enable Quick fix to change Xpath version from 2.0 to 1.0 check box.3. Click Apply, and then OK.4. Clean the project.5. On the Problems tab, right-click and select the Quick Fix option for the XPath Version 2.0. |

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- *TIBCO ActiveMatrix BusinessWorks™ Application Development*
- *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*
- *TIBCO ActiveMatrix BusinessWorks™ Concepts*
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