



# **TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Patterns**

## **Palette Reference**

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# Contents

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<b>Contents</b>	<b>2</b>
<b>Patterns Palette</b>	<b>4</b>
TIBCO Patterns Palette Activities	4
Activities Connection	4
Patterns Shared Resources	4
Patterns Connection	5
TIBCO Patterns Palette Error Codes	6
<b>Table Palette Activities</b>	<b>9</b>
Table Level Activities	9
Table Create	9
Table Load	14
Table Delete	17
Table Info	18
Table Checkpoint	19
Table Restore	20
Table Rename	21
Record Level Activities	22
Record Bulk Load	23
Record Update	25
Record Get	28
<b>Search Palette Activities</b>	<b>30</b>
Base Querylet Activities	30
Simple Querylet	30
Cognate Querylet	33
Date Querylet	34

Predicate Querylet .....	36
Variable-Attribute Querylet .....	37
Combiner Activities .....	38
And Combiner .....	39
Or Combiner .....	40
RLink Combiner .....	41
Match-Case Combiner .....	42
Query Activities .....	44
Query .....	44
Join Query .....	53
<b>Loading Data Files .....</b>	<b>56</b>
<b>Samples .....</b>	<b>57</b>
<b>Advanced Palette Activities .....</b>	<b>58</b>
Character Map Create .....	58
Character Map Info .....	59
Thesaurus Create .....	61
Thesaurus Load .....	62
TIBCO PatternsThesaurus Delete .....	64
Thesaurus Info .....	65
Model Load .....	66
Model Delete .....	68
Model Info .....	69
Checkpoint .....	70
Restore .....	73
<b>TIBCO Documentation and Support Services .....</b>	<b>76</b>
<b>Legal and Third-Party Notices .....</b>	<b>78</b>

# Patterns Palette

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The TIBCO® Patterns palettes contain activities and a shared resource to integrate with TIBCO Patterns. The palettes provide the capability to perform operations on tables within the TIBCO Patterns server such as create, replace, and delete, as well as define and execute search queries against these tables.


## TIBCO Patterns Palette Activities

TIBCO Patterns activities are divided into three palettes: *Tables*, *Search*, and *Advanced*.

- The *Tables* palette has activities to perform table-level and record-level operations: add, modify, list, delete, rename, checkpoint, and restore tables and records.
- The *Search* palette has activities to perform queries against data in a Patterns Server.
- The *Advanced* palette has activities to add, list, and delete TIBCO Patterns models, character maps, thesauri, checkpoint, and restore.

## Activities Connection

Most activities in the plug-in require a connection to an TIBCO Patterns server. To create a new connection, right-click **Resources** from the **BW Project Properties** options. Select **New > patternsConnection**. See, [Patterns Shared Resources](#).

Click  icon to select a connection. If no matching connections are found, click **Create Shared Resource** to create one.

## Patterns Shared Resources

The plug-in has one shared resource which is used to make a connection to an TIBCO Patterns server.

## Patterns Connection

The TIBCO Patterns connection is a shared resource that contains all necessary parameters to connect to a TIBCO Patterns server. The TIBCO Patterns connection must be specified when running any of the activities that connect to a TIBCO Patterns server. You can configure the connection to a TIBCO Patterns server using the host and the port number. The Patterns Connection shared resource must be configured first. Most of the other TIBCO Patterns activities can override the shared connection information at run time.

### General

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

*Patterns Connection Editor General Fields*

Field	Module Property?	Description
Package	No	This is auto-populated as per the project you have selected in the TIBCO ActiveMatrix BusinessWorks application.
Name	No	The name appears as the label of the resource.
Description	No	A short description of the shared resource.

### Patterns Connection Configuration

The **Patterns Connection Configuration** tab has the following fields:

*Patterns Connection Editor Configuration Fields*

Field	Global Var?	Description	Default Value
Host	Yes	The IP address or DNS name of where the TIBCO Patterns server is running	localhost
Port	Yes	The TCP port number the server is listening	5051

Field	Global Var?	Description	Default Value
		on	
Protocols	Yes	Controls the TCP protocols used to connect to the TIBCO Patterns server.	Default
SSL	Yes	Controls use of encryption when communicating with the specified TIBCO Patterns server.  Note: The server must have encryption enabled.	Off

## Test Connection Button

The **Test Connection** button allows you to test the Patterns Connection configuration by sending a message to the TIBCO Patterns server at the specified host and port. The test results are displayed in a popup dialog box.

## TIBCO Patterns Palette Error Codes

Any of the Patterns Palette's activities can throw the following errors:

### TIBCO Patterns Palette Error Codes

Exception	Thrown when ...
PatternsPluginException	Unable to connect to the TIBCO Patterns server or an exception associated with the activity.
PatternsSRException	Thrown when a shared resource cannot be constructed.

### TIBCO Patterns Plug-in Exception Fields

Exception	Description
msg	A general description of the error.
msgCode	A value from PatternsPluginException General Error Codes.
faultMsg	May provide additional information for certain errors (such as FILE_FORMAT_ERROR).
faultCode	(future use)
serverMsg	A message qualifying the error. It is populated if the error originated on the TIBCO Patterns server. A list of these errors can be found in the <i>TIBCO Patterns Programmer's Guide</i> or <i>TIBCO Patterns Java API Reference Guide</i> .
serverCode	A code qualifying the error. It is populated if the error originated on the TIBCO Patterns server. A list of these errors can be found in the <i>TIBCO Patterns Programmer's Guide</i> or <i>TIBCO Patterns Java API Reference Guide</i> .
serverErrorDetails	If the error originated on the TIBCO Patterns server, this may be populated with additional information.
line	(future use)
charpos	(future use)

#### TIBCO Patterns Plug-in Exception General Error Codes

Error	Code	Description
RESULT_RETRIEVAL_ERROR	TIBCO-BW-SR-PATTERNS-500002	The TIBCO Patterns server returned an unrecognized response.
RESOLVE_SHARED_RESOURCE_ERROR	TIBCO-BW-SR-PATTERNS-500004	The shared resource could not be resolved.
PATTERNS_IO_	TIBCO-BW-SR-	An error occurred while accessing the TIBCO

Error	Code	Description
ERROR	PATTERNS-500005	Patterns server.
PATTERNS_SERVER_ERROR	TIBCO-BW-SR-PATTERNS-500006	The TIBCO Patterns server returned an error.
PATTERNS_ACTIVITY_INPUT_ERROR	TIBCO-BW-SR-PATTERNS-500008	The activity has an invalid input.
PATTERNS_PLUGIN_INTERNAL_ERROR	TIBCO-BW-SR-PATTERNS-500009	An internal TIBCO Patterns Plug-in error occurred.
FILE_FORMAT_ERROR	TIBCO-BW-SR-PATTERNS-500010	There is invalid file content.

For more information on the PatternsSRException fields, see the “Shared Resource Framework Error Codes” topic in the *TIBCO ActiveMatrix BusinessWorks Error Codes* reference.



# Table Palette Activities

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The Tables Palette contains activities related to creating, populating, and deleting tables and records on TIBCO Patterns servers for tables and records.

## Table Level Activities

The Tables Palette contains activities related to creating, populating, and deleting tables on TIBCO Patterns servers for tables and records.

The following are the table level activities:

- [Table Create](#)
- [Table Load](#)
- [Table Delete](#)
- [Table Info](#)
- [Table Checkpoint](#)
- [Table Restore](#)

See [TIBCO Patterns Palette Error Codes](#) for the errors thrown by any of these activities.

## Table Create

The Table Create activity creates an empty table on a TIBCO Patterns server. The table's meta-data (for example, field names) is created, but no rows are added to the table.

### General

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

*Table Create Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>table_create</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

**Description**

Provide a short description for the Table Create activity.

**Input**

The **Input** tab has the following fields:

*Table Create Input Fields*

Input Item	Description
Name	The table name.
Type	The table type. This can be <code>Standard</code> , <code>Parent</code> , or <code>Child</code> . The default value is <code>Standard</code> .
Description	An optional note to attach to the table.
ParentTableName	The parent table name. This is required if the table type is <code>Child</code> .
Prefilter	The kind of prefilter used to index the table. This can be <code>GIP</code> , <code>SORT</code> , or <code>PSI</code> . The default value is the default for the TIBCO Patterns server.
GpuIndexing	Set to <code>true()</code> to enable GPU harnessing on the

Input Item	Description
	table.
FieldDefinition	Defines a field that exists in the table. This is required and can be repeated.
FieldDefinition/Name	The field name. This is required.
FieldDefinition/Type	The field type. This can be SearchableText, NonSearchableText, Date, SearchableDate, DateTime, Integer, Float, or Attributes. The default type is SearchableText.
FieldDefinition/CharacterMapName	Name of the applicable character map. This is optional. The default value is =STD=.

## Output

A tableinfo element output has the following fields:

### *Table Create Output Fields*

Output Item	Description
Name	The table name.
Type	The table type. This is Standard, Parent, or Child.
Field	One per field in the table.
Field/Name	The field name.
Field/Type	The field type. This is SearchableText, NonSearchableText, Date, SearchableDate, DateTime, Integer, Float, or Attributes.
Field/CharacterMapName	The name of the character map that applies to the field.

Output Item	Description
Field/DataKB	The memory used by the field, across all records in the table, in kilo-bytes.
Field/CharactersK	The number of characters in the text fields, across all records, in thousands.
Description	An optional note attached to the table.
CheckpointStatus	<p>A description of the checkpoint status of the table. The following are the possible values:</p> <ul style="list-style-type: none"> <li>• Last Checkpoint: <i>yyyy/mm/dd-HH:MM:SS</i> if the table was checkpointed</li> <li>• Never Checkpointed if the table is not checkpointed</li> <li>• Checkpoints Disabled if check-pointing is not enabled on this server</li> <li>• No Checkpoint Info if there was an error.</li> </ul>
RecordCount	The number of records in a table.
KeyTreeKB	Memory used by the table's key index in kilo-bytes.
FieldStructureKB	Memory used by the table's field structure meta-data in kilo-bytes.
HeaderKB	Memory used by the table's header information, in kilo-bytes.
IndexKB	Memory used by the table's pre-filter index in kilo-bytes.
TotalKB	Total memory used by the table in kilo-bytes.
GIP_Filtered	<code>true()</code> if the table has a GIP prefilter index. It is <code>false()</code> otherwise.
SORT_Filtered	<code>true()</code> if the table has a SORT prefilter index. It is <code>false()</code> otherwise.

Output Item	Description
	otherwise.
PSI_Filtered	true() if the table has a PSI prefilter index. It is false() otherwise.
ParentTableName	Populated if the table is a child table.
GpuIndexed	true() if the table GPU harnessing is enabled.

## Common Info Properties

The output of all “Info”-type activities includes the following common fields:

*Table Common Information Properties*

Property	Exception
TransactionID	The full ID of the transaction that owns or claims the item. If the item has not been modified or held by an open transaction, this is 0.
Dirty	true() if the item has been added, updated, replaced, or deleted by an open transaction.
Held	true() if the item is held by an open transaction because an update on another item is dependent on this item.
Updated	true() if the contents of the item were modified by an open transaction.

## Error Output

The **Error Output** tab lists the possible exceptions that can be thrown by this activity. See *TIBCO ActiveMatrix BusinessWorks Error Codes* for more information about error codes and the corrective action to take.

# Table Load

The Table Load activity creates a table on the TIBCO Patterns server using the information in a file. The file contains table meta-data (for example, field names) or rows to load into the table.

## General

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

*Table Load Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is table_load.
Patterns Connection	Yes	The path to the shared configuration resource contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Table Load activity.

## Input

The **Input** tab has the following fields:

*Table Create Input Fields*

Input Item	Description
Name	The table name.
Type	The table type. This can be Standard, Parent, or Child.

Input Item	Description
Description	An optional note to attach to the table.
ParentTableName	The parent table name. This is required if the table type is <code>Child</code> .
Prefilter	The kind of prefilter used to index the table. This can be <code>GIP</code> , <code>SORT</code> , or <code>PSI</code> .
GpuIndexing	Set to <code>true()</code> to enable GPU harnessing on the table.
FileName	Name of the file that contains the table data. This should be the full path name in the correct format for the system it is on.
FileReadBy	<p>The file system that contains the file. The following are the possible systems:</p> <ul style="list-style-type: none"> <li>• <code>PatternsServer</code> - if the file is on the ibi Patterns - Search server system. The file must be inside the server's loadable-data-directory. For more information, see <a href="#">Loading Data Files</a>.</li> <li>• <code>BWClient</code> - if the file is on the TIBCO BusinessWorks system. The file must be readable by the plug-in at run time. If BWCE is targeted, the file must be available to the container.</li> </ul>
FileEncoding	Currently supported encodings are <code>LATIN1</code> and <code>UTF-8</code> . This is optional.
HasFieldNames	Set to <code>true()</code> if the data file has a header line with the table's field names.
HasFieldTypes	Set to <code>true()</code> if the data file has a header line with the table's field types.
KeyFieldName	Name of the file field that contains record keys. Optional.

Input Item	Description
KeyFieldIndex	<p>Index of the file field that contains record keys. Optional.</p> <p>At most one of KeyFieldName and KeyFieldIndex can be specified. (If neither is specified, records are assigned ascending numerical keys, but this is strongly discouraged.)</p>
ParentKeyFieldName	<p>Name of the file field that contains parent-record keys. Optional.</p>
ParentKeyFieldIndex	<p>Index of the file field that contains parent-record keys. This is optional.</p> <p>For child tables, exactly one of these two must be specified.</p>
InitialKey	<p>If neither KeyFieldName or KeyFieldIndex are specified, this can be used to set the starting point of the ascending generated keys. This is optional.</p>
DoMaxWork	<p>Set to <code>true()</code> if invalid records in the data file should be ignored.</p>
FieldDefinitionOverride	<p>Overrides the table meta-data present in the file. The number of overrides must match the number of fields in the file (excluding key fields, if any). This is optional.</p>
FieldDefinitionOverride/ Name	<p>Define the field names for the table. The complete list of field names must be given. It is not supported to override some names and not others. This is optional. Do not provide if HasFieldNames is <code>true()</code> and FileReadBy is <code>PatternsServer</code>.</p>
FieldDefinitionOverride/ Type	<p>Define the field types for the table. The complete list of field types must be given. It is not supported to override some field types and not others. This is optional. The default is <code>SearchableText</code>. Do not provide if HasFieldTypes is <code>true()</code> and FileReadBy is <code>PatternsServer</code>.</p>
FieldDefinitionOverride/ CharacterMapName	<p>Name of the character map that applies to the field. This is optional. The default is <code>=STD=</code>. It is ignored for fields types other than <code>SearchableText</code> or <code>Attributes</code>.</p>



## Output

The information on the table after the activity completes. See the [Table Create Output Fields](#) for details.

# Table Delete

The Table Delete activity removes a table from a TIBCO Patterns server.

## General

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

*Table Delete Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is table_delete.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Table Delete activity.

## Input

The **Input** tab has the following fields:

*Table Delete Input Fields*

Input Item	Description
Name	The name of the table to remove.
IgnoreMissing	If <code>false()</code> , a missing table causes a fault. This item is required.

## Table Info

The Table Info activity obtains information about the tables that exist on a TIBCO Patterns server.

### General

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

*Table Info Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>table_info</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

### Description

Provide a short description for the Table Info activity.

### Input

The **Input** tab has the following fields:

*Table Info Input Fields*

Input Item	Description
Name	The name of the tables to obtain information on. If no names are given, information on all tables are returned. This is optional and can be repeated.

**Output**

The output is a sequence of TableInfo elements. See [Table Create Output Fields](#) for details on the TableInfo element.

## Table Checkpoint

The Table Checkpoint activity persists a snapshot of selected tables on a TIBCO Patterns server. These snapshots sustain a restart of the TIBCO Patterns server and can be restored via the Table Restore activity.

The Table Checkpoint activity in the Table Palette is deprecated in favor of the Checkpoint activity in the Advanced Palette.

**General**

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

*Table Checkpoint Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is table_checkpoint.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Table Checkpoint activity.

## Input

The **Input** tab has the following fields:

*Table Checkpoint Input Fields*

Input Item	Description
Name	The name of the table to the checkpoint. If no names are given, all tables are checkpointed. If a member of a join-set is requested, all tables in that join-set are checkpointed. This is optional and can be repeated.

## Table Restore

The Table Restore activity loads a snapshot of tables that were persisted via the [Table Checkpoint](#) activity.

The Table Restore activity in the Table Palette is deprecated in favor of the Restore activity in the Advanced Palette.

## General

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

*Table Restore Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is table_restore.
Patterns	Yes	The path to the shared configuration resource which

Field	Module Property?	Description
Connection		contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Table Restore activity.

## Input

The **Input** tab has the following fields:

### *Table Restore Input Fields*

Input Item	Description
Name	The name of the table to restore. If no names are given, all tables that have checkpoints are restored. If a member of a join-set is requested, all tables in that join-set are restored. This is optional and can be repeated.

# Table Rename

The Table Rename activity changes the name of a table on the TIBCO Patterns server.

## General

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

*Table Rename Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>table_rename</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Table Rename activity.

## Input

The **Input** tab has the following fields:

*Table Rename Input Fields*

Input Item	Description
From	The name of the table to rename.
To	The new name for the table.

# Record Level Activities

The record activities are related to populating, updating, and retrieving records in tables on a TIBCO Patterns server.

The following are record level activities:

- [Record Bulk Load](#)
- [Record Update](#)
- [Record Get](#)

See [TIBCO Patterns Palette Error Codes](#) for the errors thrown by any of these activities.

## Record Bulk Load

The Record Bulk Load activity populates records into a TIBCO Patterns table from a CSV file.

### General

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

#### *Record Bulk Load Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>bulk_load</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

### Description

Provide a short description for the Record Bulk Load activity.

### Input

The **Input** tab has the following fields:

#### *Record Bulk Load Input Fields*

Input Item	Description
TableName	The name of the table to load records into.

Input Item	Description
Operation	<p>The record operation to perform. The following are the possible operations:</p> <ul style="list-style-type: none"> <li>• <i>Insert</i>: Records are inserted. Records keys that already exist in the table cause a fault.</li> <li>• <i>Update</i>: Records are updated. Records keys that do not exist in the table cause a fault.</li> <li>• <i>Upsert</i>: New records are inserted and existing records are updated.</li> </ul>
FileName	Name of the file that contains the table data. This should be the full path name in the correct format for the system it is on.
FileReadBy	<p>The file system that contains the file. The following are the possible systems:</p> <ul style="list-style-type: none"> <li>• PatternsServer - if the file is on the TIBCO Patterns server system. The file must be inside the server's loadable-data-directory. For more information, see <a href="#">Loading Data Files</a>.</li> <li>• BWClient - if the file is on the TIBCO BusinessWorks system. The file must be readable by the plug-in at run time. If BWCE is targeted, the file must be available to the container.</li> </ul>
FileEncoding	Supported encodings are LATIN1 and UTF-8. This is optional. The default is LATIN1 (same as the default for the TIBCO Patterns server or TIBCO Patterns Java API).
HasFieldNames	Set to <code>true()</code> if the data file has a header line with the table's field names.
HasFieldTypes	Set to <code>true()</code> if the data file has a header line with the table's field types.
KeyFieldName	Name of the file field that contains record keys. This is optional.



Input Item	Description
KeyFieldIndex	Index of the file field that contains record keys. This is optional.  At most, either KeyFieldName and KeyFieldIndex can be specified. If neither is specified, records are assigned ascending numerical keys, but this is strongly discouraged.
ParentKeyFieldName	Name of the file field that contains parent-record keys. This is optional.
ParentKeyFieldIndex	Index of the file field that contains parent-record keys. This is optional.  For child tables, one of these two must be specified.
InitialKey	If neither KeyFieldName or KeyFieldIndex are specified, this can be used to set the starting point of the ascending generated keys. This is optional.
DoMaxWork	Set to <code>true()</code> if invalid records in the data file should be ignored.

## Output

The output contains the information on the table after the activity completes. See [Table Create Output Fields](#) for details.

# Record Update

The Record Update activity is used to add, modify, and delete records in a TIBCO Patterns table.

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

*Record Update Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is record_update.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .
Batch Size	No	Modifications via the Record-Update activity are batched. This parameter controls the batch size. The batch size impacts performance and availability.

**Description**

Provide a short description for the Record Update activity.

**Input**

The **Input** tab has the following fields:

*Record Update Input Fields*

Input Item	Description
TableName	The name of the table to update.
DoMaxWork	Set to true() to quietly ignore empty records, records with invalid formats, records with transaction conflicts, and key errors such as deletes or updates of non-existent records or adds of existing records.
Operation	<p>The record operation to perform. The following are the possible operations:</p> <ul style="list-style-type: none"> <li>• <i>Insert</i>: Records are inserted. Records keys that already exist in the table cause a fault.</li> </ul>

Input Item	Description
	<ul style="list-style-type: none"> <li>• <i>Update</i>: Records are updated. Records keys that do not exist in the table cause a fault.</li> <li>• <i>Upsert</i>: New records are inserted and existing records are updated.</li> <li>• <i>Delete</i>: Records are deleted.</li> </ul> <p>This is optional, but if it is not specified, an operation must be specified on each record.</p>
Record	The record to modify. This is optional and can be repeated.
Record/Key	The record key. This is required. For Delete operations, the key is the only required record element.
Record/ParentKey	Key of the record's parent. On child tables, if this is not populated, the parent key is assumed to be null.
Record/FieldValue	One per field in the table. This is optional and can be repeated.
Record/Attribute	One per variable-attribute in the record. This is optional and can be repeated.
Record/Attribute/Name	Name of the attribute.
Record/Attribute/Value	Value of the attribute.

## Output

The output contains the information on the table after the activity completes. See [Table Create Output Fields](#) for details.

# Record Get

The **Record Get** activity retrieves records from a TIBCO Patterns Table.

## General

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

### *Record Get Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is Record_Get.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Record Get activity.

## Input

The **Input** tab has the following fields:

### *Record Get Input Fields*

Input Item	Description
TableName	The name of the table with the record to retrieve.
Key	The keys to one or more records to retrieve. This item can be repeated.

Input Item	Description
ParentKey	When obtaining records from a Standard or Parent table, ParentKey must be omitted. When obtaining records from a Child table, ParentKey must have the same number of entries as Key. Key and ParentKey are parallel arrays.

## Output

The **Output** tab has the following fields:

### *Record Get output Fields*

Input Item	Description
Record	The record(s) requested. This item can be repeated.
Record/Key	The record's key.
Record/ParentKey	The key of the record's parent record.
Record/FieldValue	Values of the record's fields. This item can be repeated.
Record/Attribute	One per variable-attribute in the record. This is optional and can be repeated.
Record/Attribute/Name	Name of the attribute
Record/Attribute/Value	Value of the attribute.

# Search Palette Activities

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The Search Palette contains activities related to querying TIBCO Patterns tables.

## Base Querylet Activities

Base Querylet activities do not connect to the TIBCO Patterns server. They serve as a container for the information needed to perform a simple querylet. The output is plugged into one or more Combiner Querylet, Query, or Join Query activities by dragging it onto the AnyQueryletOutput input element. All of these querylet activities are for use as input to any Query or Join-Query activity. For information on the query types described here, see the "Designing Queries for Patterns" section in the *TIBCO Patterns Concepts Guide*.

## Simple Querylet

The Simple Querylet activity defines a simple querylet for use in a Query or Join-Query activity.

### General

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

#### *Simple Querylet Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>simple</code> .

### Description

Provide a short description for the Simple Querylet activity.

## Input

The **Input** tab has the following fields:

### *Simple Querylet Input Fields*

Input Item	Description
QueryString	The text to be searched for.
Field	The table fields to be searched. If no fields are specified, all fields are searched. This is optional and can be repeated.
Field/Name	Name of the table field.
Field/Weight	The weight of the field. The default is 1.0.
EmptyScore	The score to use if there is no data to compare. Either querystring or field-value is empty
InvalidScore	The score assigned if invalid data is encountered. As text data is never invalid, this value has no effect for a Simple querylet.
MatchEmpty	If set to true(), empty values in both the record and the query produces a 1.0 querylet score.
ScoreType	The type of score to perform. The following are the possible types: Normal, Symmetric, Reverse, Max, or Min. The default is Normal. This is optional.
ThesaurusName	Name of an existing thesaurus to apply. This is optional.
ThesaurusWeight	Weight of the thesaurus. The default is 1.0. This is optional.

Input Item	Description
TemporaryThesaurus	A temporary thesaurus to apply. At most, specify one of the temporary and named thesauruses. This is optional.
TemporaryThesaurus/Name	Ignored.
TemporaryThesaurus/Type	The thesaurus type. The following are the possible types: <i>Substitution</i> , <i>WeightedTerm</i> , or <i>Combined</i> .
TemporaryThesaurus/CharacterMapName	The character map applied to thesaurus terms and lookup values. This is optional.
TemporaryThesaurus/ExactMode	Set to <code>true()</code> if this thesaurus matches terms exactly. This is optional.
TemporaryThesaurus/Equivalence	Each equivalence is a set of two or more interchangeable terms. This can be repeated.
TemporaryThesaurus/Equivalence/Term	The equivalence term.
TemporaryThesaurus/Equivalence/Weight	This only applies to <i>WeightedTerm</i> and <i>Combined</i> thesauri. The default is <code>1.0</code> .
TemporaryThesaurus/Equivalence/Penalty	This only applies to <i>Combined</i> thesauri. The default is <code>1.0</code> .
ExpertParameter	Only use this under the direction of TIBCO Support.

## Output

The output of a simple querylet must be used as a unit by dragging it to the *AnyQueryOutlet* element of a Query Activity input or Combiner Querylet input.



# Cognate Querylet

The Cognate Querylet activity defines a cognate querylet for use in a Query or Join-Query activity.

## General

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

### *Cognate Querylet Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is cognate.

## Description

Provide a short description for the Cognate Querylet activity.

## Input

The **Input** tab has the following fields:

### *Cognate Querylet Input Fields*

Input Item	Description
CrossFieldWeight	The weight applied to data that matches between fields. The default is 1.0.
EmptyFieldPenalty	The penalty applied for unmatched data that can be applied to an empty field. The default is 1.0.
Field	The table fields to be searched. At least two fields must be specified.

Input Item	Description
Field/QueryString	The text to be searched for in this field.
Field/Name	Name of the table field.
Field/Weight	The weight of the field. The default is 1.0
EmptyScore	The score to use if there is no data to compare. Either querystring or field-value is empty.
InvalidScore	The score assigned if invalid data is encountered. As text data is never invalid, this value has no effect for a Cognate querylet.
MatchEmpty	If set to true(), empty values in both the record and the query produces a 1.0 querylet score.
ScoreType	The type of score to perform. The following are the possible scores: Normal, Symmetric, Reverse, Max, or Min. The default is Normal. This is optional.
ThesaurusName	Name of an existing thesaurus to apply. This is optional.
ThesaurusWeight	Weight of the thesaurus. The default is 1.0. This is optional.
TemporaryThesaurus	See <a href="#">Simple Querylet Input Fields</a> .
ExpertParameter	Only use this under the direction of TIBCO Support.

## Output

The output of a Cognate querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

## Date Querylet

The Date Querylet activity defines a date querylet for use in a Query or Join-Query activity.

## General

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

### *Date Querylet Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is date.

## Description

Provide a short description for the Date Querylet activity.

## Input

The **Input** tab has the following fields:

### *Date Querylet Input Fields*

Input Item	Description
FieldName	The name of a table field of type Date to be searched.
QueryString	The date to search for.
EmptyScore	The score to use if there is no data to compare. Either querystring or field-value is empty.
InvalidScore	The score to use if the record has invalid data.
MatchEmpty	If set to true(), empty values in both the record and the query produces a 1.0 querylet score.

## Output

The output of a Date querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

# Predicate Querylet

The Predicate Querylet activity defines a predicate querylet for use in a Query or Join-Query activity.

## General

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

### *Predicate Querylet Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is predicate.

## Description

Provide a short description for the Predicate Querylet activity.

## Input

The **Input** tab has the following fields:

### *Predicate Querylet Input Fields*

Input Item	Description
Expression	A predicate expression. See the <i>TIBCO Patterns Programmer's Guide</i> for information on writing predicate expressions.
EmptyScore	The score to use if there is no data to compare. Either querystring or field-value is empty.
InvalidScore	The score to use if the record has invalid data.

## Output

The output of a Predicate querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

# Variable-Attribute Querylet

The Variable-Attribute Querylet activity defines a variable-attribute querylet for use in a Query or Join-Query activity.

## General

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

### *Variable-Attribute Querylet Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>var_attr</code> .

## Description

Provide a short description for the Variable-Attribute Querylet activity.

## Input

The **Input** tab has the following fields:

### *Variable-Attribute Querylet Input Fields*

Input Item	Description
Attribute	The attribute to search for. This can be repeated.
Attribute/Name	Name of the attribute to search.

Input Item	Description
Attribute/QueryString	Text to search for in the attribute.
Attribute/Weight	Relative weight of the attribute. The default is 1.0.
EmptyScore	The score to use if there is no data to compare. Either querystring or field-value is empty.
InvalidScore	The score to use if the record has invalid data.
MatchEmpty	If set to true(), empty values in both the record and the query produces a 1.0 queylet score.
ScoreType	The type of score to perform. The following are the possible types: Normal, Symmetric, Reverse, Max, or Min. The default is Normal. This is optional.
ThesaurusName	Name of an existing thesaurus to apply. This is optional.
ThesaurusWeight	Weight of the thesaurus. The default is 1.0. This is optional.
TemporaryThesaurus	See <a href="#">Simple Querylet Input Fields</a> .
ExpertParameter	Only use this under the direction of TIBCO Support.

## Output

The output of a Variable-Attributes querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

## Combiner Activities

Combiner activities combine the output of one or more base or combiner activities.

# And Combiner

The And Combiner activity defines an and-querylet for use in a Query or Join-Query activity.

## General

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

### *And Combiner Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is and.

## Description

Provide a short description for the And Combiner activity.

## Input

The **Input** tab has the following fields:

### *And Combiner Input Fields*

Input Item	Description
Querylet	The querylet used for the And Combiner activity. This can be repeated.
Querylet/AnyQueryLetOutput	The output of any querylet activity.
Querylet/Weight	The relative weight of this querylet. The default is 1.0.
Querylet/IgnoreScore	Querylets below this score are ignored. The default value is -2.0 (the querylet is never ignored or rejected).

Input Item	Description
	This is optional.
Querylet/RejectScore	Querylets below this score rejects the entire record. The default value is -2.0 (the querylet is never ignored or rejected). This is optional.

## Output

The output of an And querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

# Or Combiner

The Or Combiner activity defines an or-querylet for use in a Query or Join-Query activity.

## General

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

### *Or Combiner Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is or.

## Description

Provide a short description for the Or Combiner activity.

## Input

The **Input** tab has the following fields:



*Or Combiner Input Fields*

Input Item	Description
Querylet	The querylet used for the Or Combiner activity. This can be repeated.
Querylet/AnyQueryletOutput	The output of any querylet activity.
Querylet/Weight	The relative weight of this querylet. The default is 1.0.

**Output**

The output of an Or querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

## RLink Combiner

The RLink Combiner activity defines a Record Linkage (RLINK) querylet for use in a Query or Join Query activity.

**General**

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

*RLink Combiner Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>rlink</code> .

**Description**

Provide a short description for the RLink Combiner activity.

## Input

The **Input** tab has the following fields:

### *RLink Combiner Input Fields*

Input Item	Description
ModelName	The name of the model.
UseModelThreshold	Indicates the search uses the threshold encoded in the RLINK model. This is optional. Set to <code>true()</code> to use the RLINK model threshold value as an absolute cutoff. If set to <code>false()</code> or if not given, the RLINK model threshold value is not used.
AnyQueryletOutput	The output of any querylet activity. This can be repeated.

## Output

The output of the RLINK querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

## Match-Case Combiner

The Match Case Combiner activity defines a match-case querylet for use in a Query or Join Query activity.

For more information, see the "Match-Case Score Combiner" topic in the TIBCO Patterns *Concepts* guide.

## General

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

*Match-Case Combiner Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>match_case</code> .

**Description**

Provide a short description for the Match-Case Combiner activity.

**Input**

The **Input** tab has the following fields:

*Match-Case Combiner Input Fields*

Input Item	Description
CoreStrength	The match score returned if all core querylets are perfect matches with no supporting or refuting querylets.
Core	A core querylet. This item can be repeated, but at least one Core item is required.
Core/AnyQueryOutput	The output of any querylet activity.
Core/MinScore	the minimum score for the querylet to count as a match. If the score of the associated querylet is below this minimum, the MatchCase querylet scores 0.0.
Core/Weight	The relative weighting of this querylet, verse other core querylets. A 0.0 - 1.0 weighting factor is used.
Supporting	A supporting querylet. This is optional and can be repeated.

Input Item	Description
Supporting/AnyQueryOutput	The output of any querylet activity.
Supporting/Threshold	The score that forms the boundary between being a match, and thus supporting the core querylets, or being a non-match, and thus refuting the core querylets. If the score of the associated querylet is below this value, a penalty is applied; if it is above this score, a reward is applied.
Supporting/RewardWeight	The strength of the reward provided by this querylet when it is a match. A value between 0.0 and 1.0 is used.
Supporting/PenaltyWeight	The strength of the penalty provided by this querylet when it is not a match. A value between 0.0 and 1.0 is used. Defaults to the reward weight.

## Output

The output of the Match-Case querylet must be used as a unit by dragging it to the *AnyQueryletOutput* element of a Query Activity input or Combiner Querylet input.

# Query Activities

Query activities submit the output of a base or combiner querylet activity to a TIBCO Patterns server.

## Query

The Query activity submits a query to a table on a TIBCO Patterns server to retrieve a record set.

## General

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

*Query Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is query.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .
Show Tables	No	The <b>Show Tables</b> button displays information on existing tables, thesauri, character maps, and learn models that might be useful during query design.

## Description

Provide a short description for the Query activity.

## Input

The **Input** tab has the following fields:

*Query Input Fields*

Input Item	Description
TableName	Name of the table to search.
AnyQueryOutput	The output of any querylet activity.
MatchesRequested	The number of match results desired. The default is 25.
StartingMatch	The rank of the first result to be returned. The default is 1.
FilteringPredicate	A predicate to restrict search results. This is

Input Item	Description
	optional.
FilteringPredicate/Expression	A predicate expression.
FilteringPredicate/FallEmpty	If set to <code>true()</code> , the query faults if an empty value is encountered. The default is set to <code>true()</code> .
FilteringPredicate/FallInvalid	If set to <code>true()</code> , the query faults if an invalid value is encountered. The default is set to <code>true()</code> .
Cutoff	Defines a rule for cutting off the returned output. Cutoff is an optional group (contains Type and Value).
Cutoff/Type	<p>The type of cutoff processing to perform. The following are the possible types:</p> <ul style="list-style-type: none"> <li>• <i>Absolute</i>: Sets a hard lower limit on the match score.</li> <li>• <i>ExactPlusScore</i>: Only exact matches, and the specified number of inexact matches are returned.</li> <li>• <i>PercentOfTop</i>: Results below the specified percentage of the top score are not be returned.</li> <li>• <i>SimpleGap</i>: Results are cut off if the specified gap in scores occurs.</li> </ul> <p>This is required if Cutoff is given.</p>
Cutoff/Value	The value to apply for the cutoff. This is required if Cutoff is given.
HtmlVisualization	Sets HTML visualization formatting options. This is optional.

Input Item	Description
HtmlVisualization/BaseColor	The color used to indicate a weak match. This is optional.
HtmlVisualization/MatchColor	The color used to indicate a strong match. This is optional.
HtmlVisualization/BaseBackgroundColor	The background color used to indicate a weak match. This is optional.
HtmlVisualization/MatchBackgroundColor	The background color used to indicate a strong match. This is optional.
HtmlVisualization/MaxFontSize	The HTML font size to use for strong matches. This ranges from 0 to 3. This is optional.
HtmlVisualization/ItalicsThreshold	Set the threshold for italicizing visualization data. This is optional.
HtmlVisualization/BoldThreshold	Set the threshold for bolding visualization data. This is optional.
HtmlVisualization/UnderlineThreshold	Set the threshold for underlining visualization data. This is optional.
CustomTieBreak	Control how records are ordered in the event that multiple records receive the same score. This item is optional and can be repeated.
CustomTieBreak/ID	Identifies the tiebreak rule. 2 - Record ID, 3 - Alignment, 4 - scoretype, 5 - field value.
CustomTieBreak/Parameter	Parameter for tie break rule. Value depends on rule.

The following inputs provide defaults for all querylets under the query as appropriate for the query type.

*Query Input Fields for Querylets*

Field	Description
EmptyScore	The score to use if there is no data to compare.
InvalidScore	The score to use if the record has invalid data.
MatchEmpty	If set to true(), empty values in both the record and the query produces a 1.0 querylet score.
ScoreType	The type of score to perform. The following are the possible types: Normal, Symmetric, Reverse, Max, or Min. The default is Normal. This is optional.
ThesaurusName	Name of an existing thesaurus to apply. This is optional.
ThesaurusWeight	Weight of thesaurus. The default is 1.0. This is optional.
TemporaryThesaurus	See <a href="#">Simple Querylet Input Fields</a> .
ExpertParameter	Only use this under the direction of TIBCO Support.

The following inputs are advanced tuning parameters and only used under the direction of TIBCO Support.

*Query Advanced Inputs*

Parameter	Description
FetchSize	Tuning parameter, only use on the advice of your TIBCO representative.
PCSize	Tuning parameter, only use on the advice of your TIBCO representative.
QCSize	Tuning parameter, only use on the advice of your TIBCO representative.
GpuIndexing	Set to true() to enable GPU harnessing on the table.



Parameter	Description
GpuCallParallelism	The number of GPU channels to use when processing the query. The Patterns Server calculates a default value; setting this may improve performance in some situations, but usually degrades performance.
TableBlocksPerGpuCall	The number of memory blocks to use per GPU unit. The Patterns Server calculates a default value; setting this may improve performance in some situations, but usually degrades performance.

## Output

### *Query Output*

Parameter	Description
FilterTime	Performance statistic: cpu usage of search filters.
FilterTime/Name	Name of the filter.
FilterTime/Time	Time used by filter.
FilterOutput	Output sizes, by filter.
FilterOutput/Name	Name of the filter.
FilterOutput/Size	Number of records output by the filter.
ResultConfidence	The overall confidence measure for the result set. The result confidence is the minimum confidence of any record in the returned result set.

Parameter	Description
MinConfidence	The minimum confidence value seen at any point during the processing of this query. This value can be used to determine if a Learn Model is processing poorly trained situations even if the records involved were not returned in the final return set.
QueryResult	One per result returned by the search. This is optional and can be repeated.
QueryResult/MatchScore	The final match strength of the record in the search.
QueryResult/MatchRank	The rank of the record in the search.
QueryResult/MatchRecord	Details of the record that matched the query.
QueryResult/MatchRecord/Field	A field of the matched record. This can be repeated.
QueryResult/MatchRecord/Field/Name	Name of the matched field.
QueryResult/MatchRecord/Field/Value	Value of the matched field.
QueryResult/MatchRecord/Field/Type	Type of the matched field.
QueryResult/MatchRecord/Field/Visualization	Populated only if HTML visualization is requested.
QueryResult/MatchRecord/Attribute	A variable-attribute of the matched record.

Parameter	Description
QueryResult/MatchRecord/Attribute/Name	Name of the attribute.
QueryResult/MatchRecord/Attribute/Value	Value of the attribute.
QueryResult/Dirty	This is <code>true()</code> if the record is in a dirty state. A dirty record is one that has been modified by a transaction that is still open.
QueryResult/SourceTable	The name of the table from which the record came from.
QueryResult/SourceTableInfo	The table info field for the table from which the record came from.
QueryResult/Scores	The match strengths of the record in the search.
QueryResult/Scores/Normal	The <i>Normal</i> match strength of the record in the search.
QueryResult/Scores/Symmetric	The <i>Symmetric</i> match strength of the record in the search.
QueryResult/Scores/Reverse	The <i>Reverse</i> match strength of the record in the search.
QueryResult/Scores/Min	The <i>Min</i> match strength of the record in the search.
QueryResult/Scores/Max	The <i>Max</i> match strength of the record in the search.
QueryResult/QueryletScores	There is one score per top-level querylet. This can be repeated.
QueryResult/QueryletScores/Normal	The <i>Normal</i> match strength of the

Parameter	Description
	querylet in the search.
QueryResult/QueryletScores/Symmetric	The <i>Symmetric</i> match strength of the querylet in the search.
QueryResult/QueryletScores/Reverse	The <i>Reverse</i> match strength of the querylet in the search.
QueryResult/QueryletScores/Min	The <i>Min</i> match strength of the querylet in the search.
QueryResult/QueryletScores/Max	The <i>Max</i> match strength of the querylet in the search.
QueryResult/RLinkConfidence	If the top querylet is an RLINK query, this parameter holds an estimate of how confident the Model is in the prediction it made.
QueryResult/RLinkSignificance	If the top querylet is an RLINK query and the returned match score is above 0.5, this parameter shows the significances of the model features. This can be repeated.
QueryResult/NamedQueryletResult	If named querylets were used, this parameter holds information on each named querylet.
QueryResult/NamedQueryletResult/QueryletName	The Querylet name.
QueryResult/NamedQueryletResult/Score	Match score of the querylet.
QueryResult/NamedQueryletResult/Confidence	Confidence of the querylet.

# Join Query

The query activity submits a join query to a join set on a TIBCO Patterns server to retrieve a record set.

## General

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

### *Join Query Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is join_query.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .
Show Tables	No	The Show Tables button displays information on existing tables, thesauri, character maps, and learn models that may be useful during query design.

## Description

Provide a short description for the Join Query activity.

## Input

The **Input** tab has the following fields:

### *Join Query Input Fields*

Input Item	Description
ParentTableName	Name of the parent table to join.

Input Item	Description
ChildTable	One per child in the join.
ChildTable/Name	Name of the child table.
ChildTable/Alias	Alias of the child table. Child table aliases are all-or-nothing. Aliases are required if a child table is used more than once. If present, child aliases must be unique.
SingleParentMode	Set to <code>true()</code> if a parent record can have at most one match result.  Set to <code>false()</code> if the parent record can have multiple match results.
AllowOrphans	Set to <code>true()</code> to allow match results with missing parent records.
AllowPartials	Set to <code>true()</code> to allow match results with missing child records.
GpuIndexing	Set to <code>false()</code> to disable GPU harnessing for the query even if the table was created with GPU support. Set to <code>true()</code> to attempt to use GPU harnessing for the query; this fails if the table was not created with GPU harnessing.
GpuCallParallelism	The number of GPU channels to use when processing the query. The Patterns Server calculates a default value; setting this may improve performance in some situations, but usually degrades performance.
TableBlocksPerGpuCall	The number of memory blocks to use per GPU unit. The Patterns Server calculates a default value; setting this may improve performance in some situations, but usually degrades performance.

For information on other inputs, see [Query Input Fields](#).

## Output

See [Query Output](#).

# Loading Data Files

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Several activities in the ActiveMatrix BusinessWorks™ Plug-in for TIBCO Patterns allow loading a data-file. These files may be from either the system running TIBCO BusinessWorks or from the system running TIBCO Patterns Server.

Loading from the system running TIBCO® BusinessWorks is called client-side load. An activity is using client-side load when the FileReadBy property is *BWClient*.

Loading from the system running TIBCO Patterns Server is called server-side load. An activity is using server-side load when the FileReadBy property is *PatternsServer*.

The activities which allow loading a data-file are Table Load, Record Bulk Load, Thesaurus Load, and Model Load.



**Warning:** File locations for server-side load are restricted. The Patterns-Search Server restricts loads to the files that reside within its loadable-data directory. Requests to load files outside this directory are rejected. For more information on the loadable-data directory, see the *Installation Guide of TIBCO Patterns*.



# Samples

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The TIBCO Patterns plug-in samples illustrate the usage of each of the three Patterns Palettes.

Each sample is a project that can be imported into the TIBCO Studio for Designers™.

Complete the following tasks in TIBCO Studio for Designers:

1. Launch `TIBCOBusinessStudio.exe`.
2. Navigate to **File > Import ... > General > Existing Studio Projects into Workspace**.
3. Browse to `$TIBCO_HOME/bw/palettes/patterns/6.1.2/samples`.
4. Select the samples to import and click **Finish**.
5. In the *Advanced.bwp*, *Search.bwp*, and *Tables.bwp* sample processes, set the `SAMPLES_HOME` process variable to the directory in step 3.
6. If the TIBCO Patterns server has the sample data available in the *Server-side-load.bwp* sample process, set the `SubfolderOfServerLoadableDataDirectory` process variable.

# Advanced Palette Activities

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The Tables Palette contains activities related to creating and deleting thesauri, character maps, RLINK models, and checkpoint and restore objects on TIBCO Patterns servers.

## Character Map Create

The Character Map Create activity creates a character map on a TIBCO Patterns server.

### General

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

#### *Character Map Create Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is charmap_create.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

### Description

Provide a short description for the Character Map Create activity.

### Input

The **Input** tab has the following fields:

*Character Map Create Input Fields*

Input Item	Description
CharacterMapName	Name of the character map.
FoldCase	Set to <code>true()</code> to map characters to lower case. This is optional. The default is <code>false()</code> .
FoldDiacritics	Set to <code>true()</code> to strip diacritics from characters. This is optional. The default is <code>false()</code> .
MapPunctuationTo	If set, punctuation characters (hyphen, slash, period, and so on) are mapped to the given character. This is optional. By default, the punctuation is not mapped.
MapWhitespaceTo	<p>If set, all whitespace characters (space, tab, new-line, and so on) are mapped to this character. This is optional. The default is the space (Unicode code point 0x20) character.</p> <p><b>Warning:</b> Setting this to anything other than the space character (“ ”) significantly alters the score. This should not be used without consulting with TIBCO.</p>
CharacterMapping	Indicates a specific mapping of one character to another. This is optional and can be repeated.
CharacterMapping/from	The character to be mapped.
CharacterMapping/to	The character to be converted to.

## Character Map Info

The Character Map Info activity obtains information about character maps that exist on a TIBCO Patterns server.

### General

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

*Character Map Info Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is charmap_info.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

**Description**

Provide a short description for the Character Map Info activity.

**Input**

The **Input** tab has the following fields:

*Character Map Info Input Fields*

Input Item	Description
Name	Names of character maps to obtain information on. If no names are supplied, information on all character maps are returned. This is optional and can be repeated.

**Output**

A sequence of *CharacterMapInfo* elements has the following fields:

*Character Map Info Output Fields*

Input Item	Description
Name	The name of the character map.

Each *CharacterMapInfo* element also contains the [Table Common Information Properties](#).

# Thesaurus Create

The Thesaurus Create activity creates a thesaurus on a TIBCO Patterns server.

## General

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

### *Thesaurus Create Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>thes_create</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Thesaurus Create activity.

## Input

The **Input** tab has the following fields:

### *Thesaurus Create Input Fields*

Input Item	Description
Name	The thesaurus name.
Type	The thesaurus type. The following are the possible types: Substitution, WeightedTerm, or Combined.
CharacterMapName	The character map applied to thesaurus terms and lookup

Input Item	Description
	values. This is optional.
ExactMode	Set to <code>true()</code> if this thesaurus only matches terms exactly.
Equivalence	Each equivalence is a set of one or more thesaurus terms that are considered equivalent. For Substitution thesauri there must be at least two terms. For WeightedTerm and Combined, there must be at least one term.
Equivalence/Term	The substitutable terms of the equivalence class. A group of one or more words that are to be considered equivalent to all other terms in this equivalence set. This is required. For substitution thesauri, at least two terms are required.
Equivalence/Weight	Only applies to <i>WeightedTerm</i> and <i>Combined</i> thesauri. The default is 1.0.
Equivalence/Penalty	Only applies to <i>Combined</i> thesauri. The default is 1.0.

## Thesaurus Load

The Thesaurus Load From File activity creates a thesaurus character map on a TIBCO Patterns server and obtains the thesaurus classes from a specified file.

### General

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

#### *Thesaurus Load From File Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>thes_load</code> .

Field	Module Property?	Description
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Thesaurus Load activity.

## Input

The **Input** tab has the following fields:

### *Thesaurus Load From File Input Fields*

Input Item	Description
Name	The thesaurus name.
Type	The thesaurus type. The following are the possible types: Substitution, WeightedTerm, or Combined.
FileName	Name of the file that contains the table data.
FileEncoding	Supported encoding are LATIN1 and UTF-8. This is optional. The default value is LATIN1.
FileReadBy	<p>The file system that contains the file. The following are the possible systems:</p> <ul style="list-style-type: none"> <li>PatternsServer: If the file is on the TIBCO Patterns server system. The file must be inside the server's loadable-data-directory. For more information, see <a href="#">Loading Data Files</a>.</li> <li>BWClient: If the file is on the TIBCO BusinessWorks system. The file must be readable by the plug-in at run time. If BWCE is targeted, the file must be available in the container.</li> </ul>

Input Item	Description
CharacterMapName	Name of the applicable character map. This is optional. The default value is =STD=.
ExactMode	Set to <code>true()</code> if this thesaurus must match terms exactly. This is optional.

## TIBCO PatternsThesaurus Delete

The Thesaurus Delete activity removes one or more thesauri from a TIBCO Patterns server. TIBCO Patterns server and obtains the thesaurus classes from a specified file.

### General

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

#### *Thesaurus Delete Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>thes_delete</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

### Description

Provide a short description for the Thesaurus Delete activity.

### Input

The **Input** tab has the following fields:



*Thesaurus Delete Input Fields*

Input Item	Description
Name	The name of the thesaurus to delete. If no names are given, all thesauri are deleted. This is optional and can be repeated.

## Thesaurus Info

The Thesaurus Info activity obtains information about thesauri that exist on a TIBCO Patterns server.

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

*Thesaurus Info Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>thes_info</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Thesaurus Info activity.

## Input

The **Input** tab has the following fields:

*Thesaurus Info Input Fields*

Input Item	Description
Name	The name of the thesaurus to obtain information on. If no names are given, all thesauri are returned. This is optional and can be repeated.

**Output**

A sequence of ThesaurusInfo elements have the following fields:

*Thesaurus Info Input Fields*

Input Item	Description
Name	The thesaurus name.
Type	The thesaurus type. The following are the possible types: Substitution, WeightedTerm, or Combined.
TokenCount	The number of tokens in the thesaurus.

Each ThesaurusInfo element contains the properties in the [Table Common Information Properties](#).

## Model Load

The Model Load activity loads an RLINK model to a TIBCO Patterns server. It replaces any existing model loaded with the same name.

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

*Model Load Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>model_load</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

**Description**

Provide a short description for the Model Load activity.

**Input**

The **Input** tab has the following fields:

*Model Load Input Fields*

Input Item	Description
Name	The model name.
FileName	The full path name of the model file that contains the table data in the format used by the system the file is on.
FileReadBy	<p>The file system that contains the file. The following are the possible systems:</p> <ul style="list-style-type: none"> <li>• <b>PatternsServer</b> - if the file is on the TIBCO Patterns server system. The file must be inside the server's <i>loadable-data-directory</i>. For more information, see <a href="#">Loading Data Files</a>.</li> <li>• <b>BWClient</b> - if the file is on the TIBCO BusinessWorks system. The file must be readable by the plug-in at run time. If BWCE is targeted, the file must be available to the container.</li> </ul>

Input Item	Description
AllowLargeGatewayMemory	This applies only when the FileLocation is BWFileSystem and the server is a gateway to a federated environment. This is optional. The possible values are true() or false (). For more information, see the "rlcreate_l function" section in the <i>Java API</i> documentation.

## Model Delete

The Model Delete activity deletes an RLINK model on a TIBCO Patterns server.

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

### *Model Delete Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is model_delete.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Model Delete activity.

## Input

The **Input** tab has the following fields:

*Model Delete Input Fields*

Input Item	Description
Name	The model name to remove. If no names are given, all models are deleted. This is optional and can be repeated.

## Model Info

The Model Info activity obtains information about RLINK models that exist on a TIBCO Patterns server.

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

*Model Info Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is <code>model_info</code> .
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

## Description

Provide a short description for the Model Info activity.

## Input

The **Input** tab has the following fields:

*Model Info Input Fields*

Input Item	Description
Name	The model name to obtain information from. If no names are given, information for all the models are returned. This is optional and can be repeated.

## Output

The output is a sequence of *ModelInfo* elements with the following fields:

*Model Info Input Fields*

Input Item	Description
Name	The model name.
Description	An optional note attached to the model.
FeatureCount	The number of features in the model.

Each *ModelInfo* element contains the properties in the [Table Common Information Properties](#).

## Checkpoint

The Checkpoint activity persists tables, character maps, thesauri, and learn models on a TIBCO Patterns server. An object that is checkpointed using the Checkpoint activity can be restored after a restart of the TIBCO Patterns server using the [Restore](#) activity.

## General

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

*Checkpoint Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is checkpoint.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

**Description**

Provide a short description for the Checkpoint activity.

**Input**

The **Input** tab has the following fields:

*Checkpoint Input Fields*

Input Item	Description
TableNames	The names of the tables to checkpoint. This element is optional. If it is omitted, all tables are checkpointed. If it is present but no names are added, no tables are checkpointed.
TableNames/Name	The name of the table to checkpoint. TableNames/Name is repeatable. Duplicate name values are ignored.
ThesaurusNames	The names of the thesauri to checkpoint. This element is optional. If it is omitted, all thesauri are checkpointed. If it is present but no names are added, no thesauri are checkpointed.
ThesaurusNames/Name	The name of the thesaurus to checkpoint. ThesaurusNames/Name is repeatable. Duplicate name values

Input Item	Description
	are ignored.
CharacterMapNames	The names of the character maps to checkpoint. This element is optional. If it is omitted, all character maps are checkpointed. If it is present but no names are added, no character maps are checkpointed.
CharacterMapNames/Name	The name of the character map to checkpoint. CharacterMapNames/Name is repeatable. Duplicate name values are ignored.
ModelNames	The names of the models to checkpoint. This element is optional. If it is omitted, all models are checkpointed. If it is present but no names are added, no models are checkpointed.
ModelNames/Name	The name of the model to checkpoint. ModelNames/Name is repeatable. Duplicate name values are ignored.

## Output

The **Output** tab has the following fields:

### Checkpoint Output Fields

Input Item	Description
TableNames	The names of the checkpointed tables.
TableNames/Name	The name of the checkpointed table. TableNames/Name is repeatable.
ThesaurusNames	The names of the checkpointed thesauri.
ThesaurusNames/Name	The name of the checkpointed thesaurus. ThesaurusNames/Name is repeatable.



Input Item	Description
CharacterMapNames	The names of the checkpointed character maps.
CharacterMapNames/Name	The name of the checkpointed character map. CharacterMapNames/Name is repeatable.
ModelNames	The names of the checkpointed models.
ModelNames/Name	The name of the checkpointed model. ModelNames/Name is repeatable.

## Restore

The Restore activity loads the copies of tables, character maps, thesauri, and models that were persisted through the [Checkpoint](#) activity.

### General

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

#### *Restore Configuration Fields*

Field	Module Property?	Description
Name	No	The name of the activity within the process. The default value is restore.
Patterns Connection	Yes	The path to the shared configuration resource which contains the Patterns Connection information. See <a href="#">Activities Connection</a> .

### Description

Provide a short description for the Restore activity.

## Input

The **Input** tab has the following fields:

### Restore Input Fields

Input Item	Description
TableNames	The names of the tables to restore. This element is optional. If it is omitted, all tables are restored. If it is present but no names are added, no tables are restored.
TableNames/Name	The name of the table to restore. TableNames/Name is repeatable. Duplicate name values are ignored.
ThesaurusNames	The names of the thesauri to restore. This element is optional. If it is omitted, all thesauri are restored. If it is present but no names are added, no thesauri are restored.
ThesaurusNames/Name	The name of the thesaurus to restore. ThesaurusNames/Name is repeatable. Duplicate name values are ignored.
CharacterMapNames	The names of the character maps to restore. This element is optional. If it is omitted, all character maps are restored. If it is present but no names are added, no character maps are restored.
CharacterMapNames/Name	The name of the character map to restore. CharacterMapNames/Name is repeatable. Duplicate name values are ignored.
ModelNames	The names of the models to restore. This element is optional. If it is omitted, all models are restored. If it is present but no names are added, no models are restored.
ModelNames/Name	The name of the model to restore. ModelNames/Name is repeatable. Duplicate name values are restored.

## Output

The **Output** tab has the following fields:

### Restore Output Fields

Input Item	Description
TableNames	The names of the restored tables.
TableNames/Name	The name of the restored table. TableNames/Name is repeatable.
ThesaurusNames	The names of the restored thesauri.
ThesaurusNames/Name	The name of the restored thesaurus. ThesaurusNames/Name is repeatable.
CharacterMapNames	The names of the restored character maps.
CharacterMapNames/Name	The name of the restored character map. CharacterMapNames/Name is repeatable.
ModelNames	The names of the restored models.
ModelNames/Name	The name of the restored model. ModelNames/Name is repeatable.

# TIBCO Documentation and Support Services

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

## How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [Product Documentation website](#), mainly in HTML and PDF formats.

The [Product Documentation website](#) is updated frequently and is more current than any other documentation included with the product.

## Product-Specific Documentation

The documentation for this product is available on the [TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Patterns Product Documentation](#) page.

## Other TIBCO Product Documentation

When working with TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Patterns, you may find it useful to read the documentation of the following TIBCO products:

- TIBCO ActiveMatrix BusinessWorks™ Container Edition
- TIBCO® Patterns

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