

TIBCO BusinessEvents®

Data Modeling

Release Notes

*Software Release 5.5.0
February 2018*

Two-Second Advantage®



Important Information

SOME TIBCO SOFTWARE EMBEDS OR BUNDLES OTHER TIBCO SOFTWARE. USE OF SUCH EMBEDDED OR BUNDLED TIBCO SOFTWARE IS SOLELY TO ENABLE THE FUNCTIONALITY (OR PROVIDE LIMITED ADD-ON FUNCTIONALITY) OF THE LICENSED TIBCO SOFTWARE. THE EMBEDDED OR BUNDLED SOFTWARE IS NOT LICENSED TO BE USED OR ACCESSED BY ANY OTHER TIBCO SOFTWARE OR FOR ANY OTHER PURPOSE.

USE OF TIBCO SOFTWARE AND THIS DOCUMENT IS SUBJECT TO THE TERMS AND CONDITIONS OF A LICENSE AGREEMENT FOUND IN EITHER A SEPARATELY EXECUTED SOFTWARE LICENSE AGREEMENT, OR, IF THERE IS NO SUCH SEPARATE AGREEMENT, THE CLICKWRAP END USER LICENSE AGREEMENT WHICH IS DISPLAYED DURING DOWNLOAD OR INSTALLATION OF THE SOFTWARE (AND WHICH IS DUPLICATED IN THE LICENSE FILE) OR IF THERE IS NO SUCH SOFTWARE LICENSE AGREEMENT OR CLICKWRAP END USER LICENSE AGREEMENT, THE LICENSE(S) LOCATED IN THE "LICENSE" FILE(S) OF THE SOFTWARE. USE OF THIS DOCUMENT IS SUBJECT TO THOSE TERMS AND CONDITIONS, AND YOUR USE HEREOF SHALL CONSTITUTE ACCEPTANCE OF AND AN AGREEMENT TO BE BOUND BY THE SAME.

ANY SOFTWARE ITEM IDENTIFIED AS THIRD PARTY LIBRARY IS AVAILABLE UNDER SEPARATE SOFTWARE LICENSE TERMS AND IS NOT PART OF A TIBCO PRODUCT. AS SUCH, THESE SOFTWARE ITEMS ARE NOT COVERED BY THE TERMS OF YOUR AGREEMENT WITH TIBCO, INCLUDING ANY TERMS CONCERNING SUPPORT, MAINTENANCE, WARRANTIES, AND INDEMNITIES. DOWNLOAD AND USE THESE ITEMS IS SOLELY AT YOUR OWN DISCRETION AND SUBJECT TO THE LICENSE TERMS APPLICABLE TO THEM. BY PROCEEDING TO DOWNLOAD, INSTALL OR USE ANY OF THESE ITEMS, YOU ACKNOWLEDGE THE FOREGOING DISTINCTIONS BETWEEN THESE ITEMS AND TIBCO PRODUCTS.

This document contains confidential information that is subject to U.S. and international copyright laws and treaties. No part of this document may be reproduced in any form without the written authorization of TIBCO Software Inc.

TIBCO, The Power of Now, TIBCO ActiveMatrix, TIBCO ActiveMatrix BusinessWorks, TIBCO Administrator, TIBCO ActiveSpaces, TIBCO BusinessEvents, TIBCO Designer, TIBCO Enterprise Message Service, TIBCO Enterprise Administrator, TIBCO Hawk, TIBCO Runtime Agent, TIBCO Rendezvous, TIBCO Enterprise Runtime for R, TIBCO FTL, TIBCO StreamBase, TIBCO Live Datamart, are either registered trademarks or trademarks of TIBCO Software Inc. in the United States and/or other countries.

Enterprise Java Beans (EJB), Java Platform Enterprise Edition (Java EE), Java 2 Platform Enterprise Edition (J2EE), and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle Corporation in the U.S. and other countries.

All other product and company names and marks mentioned in this document are the property of their respective owners and are mentioned for identification purposes only.

THIS SOFTWARE MAY BE AVAILABLE ON MULTIPLE OPERATING SYSTEMS. HOWEVER, NOT ALL OPERATING SYSTEM PLATFORMS FOR A SPECIFIC SOFTWARE VERSION ARE RELEASED AT THE SAME TIME. SEE THE README FILE FOR THE AVAILABILITY OF THIS SOFTWARE VERSION ON A SPECIFIC OPERATING SYSTEM PLATFORM.

THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

THIS DOCUMENT COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE PERIODICALLY ADDED TO THE INFORMATION HEREIN; THESE CHANGES WILL BE INCORPORATED IN NEW EDITIONS OF THIS DOCUMENT. TIBCO SOFTWARE INC. MAY MAKE IMPROVEMENTS AND/OR CHANGES IN THE PRODUCT(S) AND/OR THE PROGRAM(S) DESCRIBED IN THIS DOCUMENT AT ANY TIME.

THE CONTENTS OF THIS DOCUMENT MAY BE MODIFIED AND/OR QUALIFIED, DIRECTLY OR INDIRECTLY, BY OTHER DOCUMENTATION WHICH ACCOMPANIES THIS SOFTWARE, INCLUDING BUT NOT LIMITED TO ANY RELEASE NOTES AND "READ ME" FILES.

Copyright © 2004-2018 TIBCO Software Inc. ALL RIGHTS RESERVED.

TIBCO Software Inc. Confidential Information

Contents

| | |
|---|------------|
| Preface | vii |
| Typographical Conventions | viii |
| Connecting with TIBCO Resources | xi |
| How to Join TIBCO Community | xi |
| How to Access TIBCO Documentation | xi |
| How to Contact TIBCO Support | xi |
| Release Notes | 1 |
| New Features | 2 |
| Release 5.5.0 | 2 |
| Release 5.4.1 | 2 |
| Release 5.4.0 | 2 |
| Release 5.3.0 | 2 |
| Release 5.2.2 | 2 |
| Release 5.2.1 | 2 |
| Release 5.2.0 | 2 |
| Release 5.1.4 | 3 |
| Release 5.1.3 | 3 |
| Release 5.1.2 | 3 |
| Release 5.1.1 | 3 |
| Release 5.1 | 3 |
| Release 5.0.1 | 3 |
| Release 5.0 | 4 |
| Changes in Functionality | 5 |
| Release 5.5.0 | 5 |
| Release 5.4.1 | 5 |
| Release 5.4.0 | 5 |
| Release 5.3.0 | 5 |
| Release 5.2.2 | 5 |
| Release 5.2.1 | 5 |
| Release 5.2.0 | 5 |
| Release 5.1.4 | 6 |
| Release 5.1.3 | 6 |
| Release 5.1.2 | 6 |
| Release 5.1.1 | 6 |
| Release 5.1 | 6 |
| Release 5.0.1 | 6 |

| | |
|---------------------------------------|----|
| Release 5.0 | 6 |
| Deprecated and Removed Features | 7 |
| Deprecated Features | 7 |
| Removed Features | 8 |
| Migration and Compatibility | 10 |
| Release 5.5.0 | 10 |
| Release 5.4.1 | 10 |
| Release 5.4.0 | 10 |
| Release 5.3.0 | 10 |
| Release 5.2.2 | 10 |
| Release 5.2.1 | 10 |
| Release 5.2.0 | 10 |
| Release 5.1.4 | 11 |
| Release 5.1.3 | 11 |
| Release 5.1.2 | 11 |
| Release 5.1.1 | 11 |
| Release 5.1 | 11 |
| Release 5.0.1 | 11 |
| Release 5.0 | 11 |
| Closed Issues | 12 |
| Known Issues | 20 |

Preface

TIBCO BusinessEvents[®] Data Modeling software is an add-on to TIBCO BusinessEvents[®]. It provides database concepts that help you to import database tables and views in TIBCO BusinessEvents as concepts, and state modeler features that enable you to model the lifecycle of concepts.

TIBCO BusinessEvents
The Power to Predict[®]

Topics

- [Typographical Conventions, page viii](#)
- [Connecting with TIBCO Resources, page xi](#)

Typographical Conventions

The following typographical conventions are used in this manual.

Table 1 General Typographical Conventions

| Convention | Use |
|--|---|
| <i>ENV_NAME</i> <i>TIBCO_HOME</i> <i>BE_HOME</i> | <p>TIBCO products are installed into an installation environment. A product installed into an installation environment does not access components in other installation environments. Incompatible products and multiple instances of the same product must be installed into different installation environments.</p> <p>An installation environment consists of the following properties:</p> <ul style="list-style-type: none"> • Name Identifies the installation environment. This name is referenced in documentation as <i>ENV_NAME</i>. On Microsoft Windows, the name is appended to the name of Windows services created by the installer and is a component of the path to the product shortcut in the Windows Start > All Programs menu. • Path The folder into which the product is installed. This folder is referenced in documentation as <i>TIBCO_HOME</i>. <p>TIBCO BusinessEvents installs into a directory within a <i>TIBCO_HOME</i>. This directory is referenced in documentation as <i>BE_HOME</i>. The default value of <i>BE_HOME</i> depends on the operating system. For example on Windows systems, the default value is C:\tibco\be\5.4.</p> |
| code font | <p>Code font identifies commands, code examples, filenames, pathnames, and output displayed in a command window. For example:</p> <p>Use MyCommand to start the foo process.</p> |
| bold code font | <p>Bold code font is used in the following ways:</p> <ul style="list-style-type: none"> • In procedures, to indicate what a user types. For example: Type admin. • In large code samples, to indicate the parts of the sample that are of particular interest. • In command syntax, to indicate the default parameter for a command. For example, if no parameter is specified, MyCommand is enabled: MyCommand [enable disable] |

Table 1 General Typographical Conventions (Cont'd)

| Convention | Use |
|---|--|
| <i>italic font</i> | <p>Italic font is used in the following ways:</p> <ul style="list-style-type: none"> To indicate a document title. For example: See <i>TIBCO ActiveMatrixBusinessWorks Concepts</i>. To introduce new terms. For example: A portal page may contain several <i>portlets</i>. Portlets are mini-applications that run in a portal. To indicate a variable in a command or code syntax that you must replace. For example: <code>MyCommand <i>PathName</i></code> |
| Key combinations | <p>Key name separated by a plus sign indicate keys pressed simultaneously. For example: <code>Ctrl+C</code>.</p> <p>Key names separated by a comma and space indicate keys pressed one after the other. For example: <code>Esc, Ctrl+Q</code>.</p> |
|  | The note icon indicates information that is of special interest or importance, for example, an additional action required only in certain circumstances. |
|  | The tip icon indicates an idea that could be useful, for example, a way to apply the information provided in the current section to achieve a specific result. |
|  | The warning icon indicates the potential for a damaging situation, for example, data loss or corruption if certain steps are taken or not taken. |

Table 2 Syntax Typographical Conventions

| Convention | Use |
|------------|---|
| [] | <p>An optional item in a command or code syntax.</p> <p>For example:</p> <pre>MyCommand [optional_parameter] required_parameter</pre> |
| | <p>A logical OR that separates multiple items of which only one may be chosen.</p> <p>For example, you can select only one of the following parameters:</p> <pre>MyCommand param1 param2 param3</pre> |

Table 2 *Syntax Typographical Conventions*

| Convention | Use |
|------------|---|
| { } | <p>A logical group of items in a command. Other syntax notations may appear within each logical group.</p> <p>For example, the following command requires two parameters, which can be either the pair <code>param1</code> and <code>param2</code>, or the pair <code>param3</code> and <code>param4</code>.</p> <pre>MyCommand {param1 param2} {param3 param4}</pre> <p>In the next example, the command requires two parameters. The first parameter can be either <code>param1</code> or <code>param2</code> and the second can be either <code>param3</code> or <code>param4</code>:</p> <pre>MyCommand {param1 param2} {param3 param4}</pre> <p>In the next example, the command can accept either two or three parameters. The first parameter must be <code>param1</code>. You can optionally include <code>param2</code> as the second parameter. And the last parameter is either <code>param3</code> or <code>param4</code>.</p> <pre>MyCommand param1 [param2] {param3 param4}</pre> |

Connecting with TIBCO Resources

This section provides links to helpful TIBCO resources.

How to Join TIBCO Community

TIBCO Community is an online destination for TIBCO customers, partners, and resident experts. It is a place to share and access the collective experience of the TIBCO community. TIBCO Community offers forums, blogs, and access to a variety of resources. To register, go to the following web address:

<http://www.community.tibco.com>

How to Access TIBCO Documentation

You can access TIBCO documentation here:

<http://docs.tibco.com>

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, contact TIBCO Support as follows:

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:
<http://www.tibco.com/services/support>
- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

Release Notes

Check the TIBCO Product Support web site at <https://support.tibco.com> for product information that was not available at release time. Entry to this site requires a username and password. If you do not have a username, you can request one. You must have a valid maintenance or support contract to use this site.

As is standard in a major release, this edition of the release notes has been purged of all content pertaining to prior releases. To see information pertaining to a prior release, see the release notes provided with that release.

Topics

- [New Features, page 2](#)
- [Changes in Functionality, page 5](#)
- [Deprecated and Removed Features, page 7](#)
- [Migration and Compatibility, page 10](#)
- [Closed Issues, page 12](#)
- [Known Issues, page 20](#)

New Features

This section lists features added since the last major (x.0.0) release of this product.

Release 5.5.0

There are no new features in this release.

Release 5.4.1

There are no new features in this release.

Release 5.4.0

Added `be.dbconcepts.templates.jdbc.resultset.maxRows` property to limit the maximum number of records (result set) that can be returned by an SQL query of database concepts.

Release 5.3.0

There are no new features in this release.

Release 5.2.2

Added a new property `be.dbconcepts.connections.checkall` to configure whether to check all connection in the database connection pool for validity. See *TIBCO BusinessEvents Data Modeling Developer's Guide*.

Release 5.2.1

There are no new features in this release.

Release 5.2.0

TIBCO Software, Platforms, and Third Party Software

- Oracle database 12c for SharedAll persistence and DB Concepts
- IBM DB2 10.5 for SharedAll persistence and DB Concepts

Catalog Functions

Added the following catalog functions in this release:

- Database.sp.*: supports the database-stored procedure. These functions are enabled by default now.

Release 5.1.4

There are no new features in this release.

Release 5.1.3

There are no new features in this release.

Release 5.1.2

Third Party Software

Support for following product is added in this release:

- MySQL database.

Release 5.1.1

There are no new features in this release.

Release 5.1

There are no new features in this release.

Release 5.0.1

No new features are included in this release.

Release 5.0

For database concepts, a new metadata property, `EXTID_PROPS` is now available. This property enables you to specify the `extId` attribute for cases where the value of `PRIMARY_KEY_PROPS` can't be used. If none of the columns imported for a database concept are primary keys (`PRIMARY_KEY_PROPS` has no value), or if you want to override the value of `PRIMARY_KEY_PROPS`, use the `EXTID_PROPS` metadata property to define an `extId` value. The value of these property names at runtime should uniquely identify a database concept instance.

Changes in Functionality

This section lists changes in functionality since the last major (x.0.0) release of this product.

Release 5.5.0

There are no changes in functionality in this release.

Release 5.4.1

There are no changes in functionality in this release.

Release 5.4.0

There are no changes in functionality in this release.

Release 5.3.0

There are no changes in functionality in this release.

Release 5.2.2

There are no changes in functionality in this release.

Release 5.2.1

There are no changes in functionality in this release.

Release 5.2.0

Documentation

The documentation of TIBCO BusinessEvents Data Modeling is no longer bundled with the installer. The documentation is available on <https://docs.tibco.com>.

To access the product documentation directly from the docsite, double-click the `TIB_businessevents-datamodeling_5.2.0_docinfo.html` file.

Release 5.1.4

There are no changes in functionality in this release.

Release 5.1.3

There are no changes in functionality in this release.

Release 5.1.2

There are no changes in functionality in this release.

Release 5.1.1

There are no changes in functionality in this release.

Release 5.1

There are no changes in functionality in this release.

Release 5.0.1

There are no changes in functionality in this release.

Release 5.0

There are no changes in functionality in this release.

Deprecated and Removed Features

This section describes deprecated features (if any), and lists features, if relevant, that may be useful alternatives to the deprecated features. Any use of a deprecated feature should be discontinued as it may be removed in a future release. You should avoid becoming dependent on deprecated features and become familiar with the suggested alternative features.

This section also lists features that are removed (if any).

Deprecated Features

Release 5.5.0

No features are deprecated in this release.

Release 5.4.1

No features are deprecated in this release.

Release 5.4.0

No features are deprecated in this release.

Release 5.3.0

No features are deprecated in this release.

Release 5.2.2

No features are deprecated in this release.

Release 5.2.1

No features are deprecated in this release.

Release 5.2.0

No features are deprecated in this release.

Release 5.1.4

No features are deprecated in this release.

Release 5.1.3

No features are deprecated in this release.

Release 5.1.2

No features are deprecated in this release.

Release 5.1.1

No features are deprecated in this release.

Release 5.1

No features are deprecated in this release.

Release 5.0.1

No features are deprecated in this release.

Release 5.0

No features are deprecated in this release.

Removed Features

Release 5.5.0

No features are removed in this release.

Release 5.4.1

No features are removed in this release.

Release 5.4.0

No features are removed in this release.

Release 5.3.0

No features are removed in this release.

Release 5.2.2

No features are removed in this release.

Release 5.2.1

No features are removed in this release.

Release 5.2.0

No features are removed in this release.

Release 5.1.4

No features are removed in this release.

Release 5.1.3

No features are removed in this release.

Release 5.1.2

No features are removed in this release.

Release 5.1.1

No features are removed in this release.

Release 5.1

No features are removed in this release.

Release 5.0.1

No features are removed in this release.

Release 5.0

No features are removed in this release.

Migration and Compatibility

This section explains how to migrate from a previous release to this release.

Release 5.5.0

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.4.1

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.4.0

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.3.0

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.2.2

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.2.1

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.2.0

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.1.4

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.1.3

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.1.2

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.1.1

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.1

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.0.1

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Release 5.0

See *TIBCO BusinessEvents Release Notes* for full details. No special action is required for this add-on.

Closed Issues

The table in this section lists issues that were closed in the named releases.

| Closed in Release | Key | Summary |
|-------------------|----------|---|
| 5.4.0 | BE-24278 | The database query was returning null for nvarchar values from the database table in Microsoft SQL server. |
| 5.4.0 | BE-24256 | Database transactions were committed when Database.closeQuery() function was executed and the Database.rollback function was not working. This was fixed by adding a new CDD property <code>be.dbconcepts.cursor.closeQuery.closeConnection</code> . Set this property to "false" to prevent autocommit. |
| 5.4.0 | BE-18990 | In TIBCO BusinessEvent Studio, if you copied a state model and renamed it by using a refactor tool, not all references to the old state model were updated. |
| 5.3.0 | BE-23716 | Resource leaks were causing problems in BusinessEvents. |
| 5.3.0 | BE-23442 | An error was thrown while copying code from one state to another state, or from one transition to another transition in the state machine editor. |
| 5.3.0 | BE-23437 | The DB Import wizard stopped responding while importing from a large table space. |
| 5.3.0 | BE-23240 | Transition could not be added between states in the state machine editor. |
| 5.3.0 | BE-19822 | In BusinessEvents Studio, space between tables imported from the database import utility was very large. |
| 5.2.2 | BE-22266 | In DBConcepts, BusinessEvents did not check all connections in the connection for validity. |
| 5.2.1 | BE-22604 | In Mac OS X, BusinessEvents Studio became unresponsive after the restart while restoring the State Machine editor. |
| 5.2.1 | BE-22540 | While executing queries on DB2, an exception was encountered. This was happening because DB2 was running out of resources due to unclosed prepared statements. |

| Closed in Release | Key | Summary |
|-------------------|----------|--|
| 5.2.0 | BE-21005 | Importing the DBConcepts projects with events gave a few errors regarding the owner path. |
| 5.2.0 | BE-20614 | TIBCO BusinessEvents throws NullPointerException in function Database.createQuery() when resultTypeURI is set to Null and the query has no result. |
| 5.2.0 | BE-20595 | The Database.* catalog functions should not log any exceptions in the log file. Exceptions are handled by the calling Rule/RuleFunction. |
| 5.2.0 | BE-20558 | Added missing information related to the statetimeout concepts in <i>TIBCO BusinessEvents Data Modeling Developers guide</i> > State Modeler > State Model Timeouts and State Timeouts > Locking (and Loading) in Timeouts. |
| 5.2.0 | BE-20206 | Using database concepts with Cache Only mode, inconsistency between Entity Cache and Object Table was observed if the database concept instances were evicted from the entity cache. To avoid a performance problem, new options are provided to configure the retry count or turn-off and retry interval. |
| 5.2.0 | BE-19560 | On the Solaris platform, the studio-tools utility failed to build an EAR file and threw an exception if the TIBCO BusinessEvents project contained database concepts. |
| 5.2.0 | BE-19539 | Transition rules were not fired in state machines when the property 'be.engine.cluster.as.tuple.explicit' was set to true in multiple inference agents scenario. Ensure that all the cache servers in the cluster are upgraded before upgrading the inference agents. |
| 5.2.0 | BE-19438 | An exception was thrown when the API Database.getNextPage() was used to query for a database sequence value that had a very large number. |

| Closed in Release | Key | Summary |
|-------------------|----------|---|
| 5.2.0 | BE-19382 | <p>TIBCO BusinessEvents did not provide data type support for the execution of prepared statements. As a result, the number of parsed versions and execution time increased when type insensitive null values were set in a prepared statement.</p> <p>This has been fixed by adding the following catalog functions that provide data type support for prepared statements:</p> <ul style="list-style-type: none"> Database.queryUsingPreparedStmtByParamList Database.executePreparedStmtByParamList <p>NOTE: Currently, the data types int, string, and double are supported by the functions. These catalog functions accept an object ArrayList, where ArrayList is a regular (array) list of the parameters for the prepared statement. The ArrayList can be populated using the following utility methods:</p> <ul style="list-style-type: none"> Database.Util.addIntParam Database.Util.addStringParam Database.Util.addDoubleParam Database.Util.addParam |
| 5.2.0 | BE-19344 | <p>An exception was thrown when a stored procedure returned data of type CLOB that had huge content. This has been fixed to return a stream instead of a string, enabling the caller to read any amount of CLOB data from the stream.</p> <p>A new catalog function 'Database.sp.readClobContent(clob)' has been added to read data from a CLOB.</p> |
| 5.2.0 | BE-19171 | State machine rule dependencies were incorrect and have been fixed. |
| 5.2.0 | BE-18391 | Foreign key was empty for database concepts when the key was created by a sequence. |
| 5.2.0 | BE-18298 | The statemachine timeout caused duplicateExtIdException. |
| 5.2.0 | BE-18296 | If a state machine's parent concept was deleted while a state timeout was waiting to be processed for that state machine, the next time the same inference engine tried to create a concept with the same extId as the deleted concept an error "Attempt to assert duplicate extIds ..." was thrown. |

| Closed in Release | Key | Summary |
|-------------------|--------------------|--|
| 5.2.0 | BE-18225 | Selecting a simple state in the state machine did not render the Properties window. |
| 5.2.0 | BE-16951 | The database import did not work for the Oracle datatype <code>Number(n, n)</code> . If you specified precision as the second argument in the database field definition, the DBImport tool created an <code>int</code> datatype instead of a <code>double</code> . |
| 5.2.0 | BE-15178 | The <code>Database.Templates.templateQuery</code> method did not provide any timeout parameter. You can now specify the system property <code>be.dbconcepts.templates.query.sqltimeout</code> in seconds to timeout the query. |
| 5.2.0 | BE-9789 | BusinessEvents did not support calling PL/SQL functions. |
| 5.2.0 | BE-9708 | The <i>TIBCO BusinessEvents Data Modeling Developer's Guide</i> did not have information about the usage of Oracle and RDBMS functions. |
| 5.2.0 | BE-9319 | The documentation did not include information on a few new database cursor functions. |
| 5.2.0 | BE-7970 BE-3240 | The self transition rule got into an infinite loop and kept firing even when there were no changes to the concept. |
| 5.2.0 | BE-7914 | When using IBM DB2 database for database concepts, archive generation failed if the database concepts had BLOB or CLOB datatypes. |
| 5.2.0 | BE-7456 | When events arrived at a very high rate, a StateMachine transition rule sometimes threw a <code>NullPointerException</code> . |
| 5.1.4 | BE-20319 | The <i>TIBCO BusinessEvents Data Modeling Developer's Guide</i> had incorrect spacing in the entire guide. |
| 5.1.3 | BE-20696 | It was difficult to access Content data and Indicator data properties of the state machines dashboard charts. This was fixed. |
| 5.1.3 | BE-20310 | TIBCO BusinessEvents throws <code>NullpointerException</code> in function <code>Database.createQuery()</code> when <code>resultTypeURI</code> is set to <code>Null</code> and the query has no result. This has been fixed. |

| Closed in Release | Key | Summary |
|-------------------|----------|--|
| 5.1.3 | BE-20052 | The Database.* catalog functions should not log any exceptions in the log file. Exceptions are handled by the calling Rule/RuleFunction. This was fixed. |
| 5.1.2 | BE-19904 | If a state machine's parent concept was deleted while a state timeout was waiting to be processed for that state machine, the next time the same inference engine tried to create a concept with the same extId as the deleted concept an error "Attempt to assert duplicate extIds ..." was thrown. |
| 5.1.2 | BE-19805 | Transition rules were not fired in state machines when the property 'be.engine.cluster.as.tuple.explicit' was set to true in multiple inference agents scenario. This has been fixed. Ensure that all the cache servers in the cluster are upgraded before upgrading the inference agents. |
| 5.1.2 | BE-19676 | When doing repeated inserts into MySQL database, the following exception was thrown during transactions: <code>com.mysql.jdbc.exceptions.jdbc4.MySQLNonTransientConnectionException during transaction.</code> |
| 5.1.2 | BE-19587 | An exception was thrown when the API Database.getNextPage() was used to query for a database sequence value that had a very large number. |
| 5.1.2 | BE-19575 | An exception was thrown when a stored procedure returned data of type CLOB that had huge content. This has been fixed to return a stream instead of a string, enabling the caller to read any amount of CLOB data from the stream. A new catalog function <code>Database.sp.readClobContent(clob)</code> has been added to read data from a CLOB. |
| 5.1.2 | BE-19538 | Transition rules were not fired in state machines in a multi-inference scenario. |
| 5.1.2 | BE-19474 | The database import did not work for Oracle data type number (n,n). When precision was specified as second argument in database field definition, the database import tool created an integer data type instead of double. |

| Closed in Release | Key | Summary |
|-------------------|----------|--|
| 5.1.2 | BE-19432 | The TIBCO BusinessEvents engine went into an infinite loop when the event was not consumed explicitly and the concept state was self transitioned. |
| 5.1.2 | BE-19208 | <p>TIBCO BusinessEvents did not provide data type support for the execution of prepared statements. As a result, the number of parsed versions and execution time increased when type insensitive null values were set in a prepared statement.</p> <p>This has been fixed by adding the following two catalog functions that provide data type support for prepared statements:</p> <ul style="list-style-type: none"> • <code>Database.queryUsingPreparedStmtByParamList</code> • <code>Database.executePreparedStmtByParamList</code> <p>NOTE Currently, the data types <code>int</code>, <code>string</code>, and <code>double</code> are supported by the functions.</p> <p>These catalog functions accept an object <code>ArrayList</code>, where <code>ArrayList</code> is a regular (array) list of the parameters for the prepared statement. The <code>ArrayList</code> can be populated using the following utility methods:</p> <ul style="list-style-type: none"> • <code>Database.Util.addIntParam</code> • <code>Database.Util.addStringParam</code> • <code>Database.Util.addDoubleParam</code> • <code>Database.Util.addParam</code> |
| 5.1.2 | BE-19171 | State machine rule dependencies were incorrect and have been fixed. |
| 5.1.2 | BE-18225 | Selecting a simple state in the state machine did not render the Properties window. |
| 5.1.2 | BE-18157 | Foreign key was empty for database concepts when the key was created by a sequence. |
| 5.1.2 | BE-18109 | State timeouts and scheduled events would stop firing after a random amount of time, and more likely under load. |
| 5.1.2 | BE-17997 | State timeouts and scheduled events would stop firing after a random amount of time, and more likely under load. |

| Closed in Release | Key | Summary |
|-------------------|----------|---|
| 5.1.1 | BE-17803 | <p>When you override the cache mode of a concept to a different value from the default, the following were observed:</p> <ul style="list-style-type: none"> The script generation of the state machine still used the default value. At runtime, the backing store property of the state machine was still the default value. |
| 5.1.1 | BE-17444 | When a project containing a state machine was copied and pasted in the same workspace with a different name, the relationship between the state machine and the concept was broken. |
| 5.1.1 | BE-15099 | When Run Layout on Changes was enabled, deleting a state and then re-linking the remaining states caused a <code>NullPointerException</code> . |
| 5.1.0 | BE-16952 | The debug log now shows when concepts are deleted and entries are removed from the workitems table. |
| 5.1.0 | BE-12911 | Silent installation of the Decision Manager and Data Modelling add-ons failed with a dependency check error. |
| 5.1.0 | BE-12903 | State machine timeout callback rule functions are registered using the <code>Cluster.registerStateMachineTimeoutCallback()</code> catalog function. The callback rule function was not called when the default domain object setting was <code>Memory Only</code> . |
| 5.1.0 | BE-12878 | With cache mode, an error was thrown when starting a state machine in a preprocessor. |
| 5.0.1 | BE-14495 | State machines did not work correctly in multi-engine environments. |
| 5.0.1 | BE-13654 | If two or more database concept URIs were specified for a project, and the first one failed to initialize, then all failed to initialize and the application threw a Java runtime error. |
| 5.0.1 | BE-12903 | State machine timeout callback rule functions are registered using the <code>Cluster.registerStateMachineTimeoutCallback()</code> catalog function. The callback rule function was not called when the default domain object setting (default or override) was <code>Memory Only</code> . |
| 5.0.1 | BE-12878 | With cache mode, an error was thrown when starting a state machine in a preprocessor. |

| Closed in Release | Key | Summary |
|-------------------|---------|--|
| 5.0.0 | BE-8502 | <p>For database concepts, it was not possible to update an Oracle Database table column of datatype XMLType with a string value greater than 4,000 characters.</p> <p>As part of this fix, you must add the following Oracle JAR files to <i>BE_HOME/lib/ext</i>:</p> <p><i>ORACLE_HOME/rdbms/jlib/xdb.jar</i> <i>ORACLE_HOME/lib/xmlparserv2.jar</i></p> |
| 5.0.0 | BE-9610 | The start of a state model transition could not be moved to a state model Start state. |
| 5.0.0 | BE-8432 | When building the enterprise archive for a TIBCO BusinessEvents Studio project that contains Database Concepts using the command-line tool (<i>buildear</i>), a <i>RuntimeException</i> is thrown and the archive does not get generated |
| 5.0.0 | BE-7089 | When importing database concepts, the project folders for them had to exist already. Now you can create a new folder during the import. |
| 5.0.0 | BE-6983 | When a sub-statemachine was retracted, it triggered multiple <i>info</i> level messages when the <i>debugRole</i> was turned on. |
| 5.0.0 | BE-1684 | In a state model, it was not possible to specify a timeout state for a composite state. |

Known Issues

There are no known issues to report in this release of TIBCO BusinessEvents Data Modeling.