TIBCO BusinessEvents® Enterprise Edition

Release Notes

Version 6.3.0
July 2023

Contents

New Features

The following features have been added in this release of TIBCO BusinessEvents® Enterprise Edition.

- **Apache Pulsar® Channel**

  You can now use Apache Pulsar® channel to send and receive messages from a Pulsar broker. The Pulsar channel converts the incoming Pulsar messages to BusinessEvents events and transforms BusinessEvents events as outgoing Pulsar messages.

  For more information, see "Apache Pulsar Channel" in *TIBCO BusinessEvents® Enterprise Edition Developer Guide*.

- **Support for Apache Avro™**

  A new serializer KafkaAvroSerializer serializer (`com.tibco.cep.driver.kafka.serializer.KafkaAvroSerializer`) has been added to support Apache Avro™ schemas.

  TIBCO BusinessEvents® Enterprise Edition now supports validation of Apache Kafka® messages by using Schema Registry. Schema Registry ensures data consistency and increases data quality. In this release, Confluent Schema Registry and TIBCO Schema Registry are supported.

  For more information, see "Using the Apache Kafka® Schema Registry" in *TIBCO BusinessEvents® Enterprise Edition Developer Guide.*

- **Using Apache Cassandra™ as a Channel**

  You can use DataStax CDC for Apache Cassandra® to read Change Data Capture (CDC) changes and publish messages to pulsar topics. Then Pulsar channel processes messages published on the pulsar topic and ingest events into TIBCO BusinessEvents® Enterprise Edition application.

  Apache Cassandra™ Store Catalog functions available in the TIBCO BusinessEvents Contribution repository in GitHub allows you to connect to external Cassandra and perform different operations.

  To use these features, see TIBCO BusinessEvents Contribution repository in GitHub.

- **Store based locking implementation**

  Earlier locking was implemented as part of the cluster provider: FTL, Ignite, or Legacy ActiveSpaces. Now you can implement locking on the underlying store. Store-based locking provides a single consistent way of locking irrespective of cluster and store provider combination.

  For more information, see "Implementation of Locking by Using a Backing Store" in *TIBCO BusinessEvents® Enterprise Edition Configuration Guide.*

- **System Metrics Enhancements**

  You can now monitor the following system metrics by using any configured metric store:

  - RTC Transaction Manager Report

  - Individual Agent Performance Attributes

  - Cache Performance Attributes

  - Overall Inference Agent Statistics

  You can now configure whether the application metrics of an entity need to be published or not.

  For more information, see "Application Metrics Configurations" in *TIBCO BusinessEvents® Enterprise Edition Configuration Guide*.

- **Support for data center replication by using GridGain**

  TIBCO BusinessEvents® Enterprise Edition now supports Data Center replication feature by using GridGain. By replicating data across multiple data centers, you can prevent downtime during any of the data center failures. By using GridGain, you can replicate cache data between clusters.

  For more information, see "Configuring Apache Ignite as a Cache Provider" in *TIBCO BusinessEvents® Enterprise Edition Configuration Guide*.

TIBCO Software, Platforms, and Third-Party Software

For the updated list of supported TIBCO Software, platforms, and third-party software, see the `readme.txt` file provided with TIBCO BusinessEvents® Enterprise Edition.

Changes in Functionality

The following functionality has been changed in this release of TIBCO BusinessEvents®
Enterprise Edition:

- The following features are moved to GitHub. These features are no longer bundled
  with TIBCO BusinessEvents Enterprise Edition. To use these features, see TIBCO
  BusinessEvents Contribution Repository in GitHub:

  - Kinesis Channel

  - Kafka Streams Channel

  - MQTT Channel

  - StreamBase Channel

  - TIBCO LiveView Metric Store

  - Analytics Catalog Functions

- TIBCO® Enterprise Administrator JARs are removed from the `BE_`
  `HOME/teagent/lib/teasdk` folder. The `TEA_HOME` environment variable is added in the
  `be-teagent.tra` file. When running the TIBCO BusinessEvents Enterprise
  Administrator agent, you must set the `TEA_HOME` in the `be-teagent.tra` file.

- When running the hot deploy phase of BusinessEvents application, you can skip the
  earlier phases by using the `disablePhases` property. You can add this property in the
  `pom.xml` project file inside the `beProjectDetails` tag. After adding this property all
  earlier phases: `compile`, `test`, `package`, and `install` are skipped.

- Datadirect SQL Server JDBC driver JARs are no longer bundled with TIBCO BusinessEvents Enterprise Edition. In the Linux environment, this driver allows you to connect to SQL Server by using Windows authentication. To use Datadirect SQL Server JDBC driver, use the following steps:

    1. Download Datadirect SQL Server JDBC driver JARs and copy into `<TIBCO_HOME>/lib/ext/tibco`.

    2. Edit the project JDBC resource to specify driver name and Database URL as global variables. In the global variable, use driver name as `com.ddtek.jdbc.sqlserver.SQLServerDriver.` Ensure to have `AuthenticationMethod=ntlmjava` in the Database URL.

  For more information, see "JDBC Connection Reference" topic in *TIBCO BusinessEvents® Developer Guide*.

Deprecated Features

The following features have been deprecated in this release of TIBCO BusinessEvents®
Enterprise Edition.

Affected Component	Description	Deprecated in Version
Legacy ActiveSpaces	Using Legacy ActiveSpaces as a cluster and cache provider is deprecated. Legacy ActiveSpaces channel, catalog functions and shared resource are deprecated.	6.3.0
XPath 1.0	Using XPath 1.0 is deprecated. It is a best practice to switch from XPath 1.0 to XPath 2.0.	6.3.0
Decision Tree	Decision Tree in TIBCO BusinessEvents Studio is deprecated.	6.3.0
Site Topology	Site Topology in TIBCO BusinessEvents Studio is deprecated.	6.3.0
Legacy Id	Starting with TIBCO BusinessEvents® Enterprise Edition 6.3.0, the legacy ID lookup strategy is deprecated. It is a best practice to use new id.	6.3.0

Removed Features

The following features have been removed as of this release of TIBCO BusinessEvents® Enterprise Edition.

- TIBCO Rendezvous channel is now removed from TIBCO BusinessEvents® Enterprise Edition.

- Rendezvous Transport shared resource is removed.

- TIBCO FTL and TCP catalog functions are removed from TIBCO BusinessEvents Studio.

- TIBCO BusinessEvents Process Orchestration add-on is now removed.

TIBCO Software, Platforms, and Third-Party Software

For the updated list of supported TIBCO Software, platforms, and third-party software, see the `readme.txt` file provided with TIBCO BusinessEvents® Enterprise Edition.

Migration and Compatibility

The following information provides migration processes for this release of TIBCO BusinessEvents® Enterprise Edition.

Migrating Data from Old TIBCO BusinessEvents® Enterprise Edition Projects to Version 6.3.0

You can migrate projects from previous versions to TIBCO BusinessEvents® Enterprise Edition 6.3.0 irrespective of the store or persistence mode. When migrating project data, you can evaluate the object management approach for your project requirements such as In-Memory (Unclustered) or Cache (Clustered) depending on the TIBCO BusinessEvents® Enterprise Edition version 6.x supported options.

The data migration process depends on the persistence option and the entity lookup strategy (new ID or legacy ID) implemented in the project. By default, the TIBCO BusinessEvents® Enterprise Edition projects are migrated to the new ID implementation. You might continue to use the legacy ID in the migrated projects with some configurations in the project. However, using the legacy ID lookup strategy is discouraged.

> **Note:** For the channels which are moved to GitHub, any existing shared resources are not supported in TIBCO BusinessEvents® Enterprise Edition 6.3.0. For example, MQTT and StreamBase shared resources. TIBCO BusinessEvents Studio project migrator checks for any channels referencing these shared resources. If any such channels are found, those channels are migrated from a resource-based configuration to a properties-based configuration. The values from the referenced shared resources files are moved into the Properties section of the channel itself.

For details, see *TIBCO BusinessEvents Migration Guide*.

Closed Issues

The following issues have been fixed in this release of TIBCO BusinessEvents® Enterprise Edition.

Key	Summary
BE-32041	When the project has a large number of entities with Cache enabled, CPU memory usage is higher with Apache Ignite as compared to TIBCO ActiveSpaces 2.x.
	This issue is fixed now. Support is added for cache grouping by using the system property `be.ignite.cache.grouping.enable.` Set this property to true to enable cache grouping. Default value is false. When enabled caches get grouped into one or more groups. This property works if the cache is not limited. Limited caches cannot be grouped.
BE-31694	The following third-party libraries are updated to fix security vulnerabilities. The list of third-party libraries with the updated version is:
	• Apache POI 5.2.1
	• OpenTelemetry 1.26.0
	• SnakeYAML 2.0
	• Jackson 2.15.0
	• Apache xalan 2.7.3
	• Tomcat 9.0.75
BE-31660	When using an external Apache Ignite table, a primary index with more than one field cannot be configured by using the catalog function `Store.Container.Ignite.setContainerKeyField().`

Key	Summary
BE-31636	In the key-based ID lookup implementation when a concept is created in a preprocessor, then deleted and re-created using the same extID in another rule, then the concept does not get recreated.
BE-31604	By using TIBCO BusinessEvents Studio utility tools, obfuscation of the passphrase `be.tea.agent.ssh.privatekey.passphrase` in the `be-teagent.properties` file is now supported.
BE-31498	In TIBCO BusinessEvents® Enterprise Edition, Apache Tomcat is upgraded to the version 9.0.75 to address the Apache Tomcat CVE-2023-24998 vulnerability.
BE-31468	JSON serialization for large concepts takes a longer time.
BE-31425	In a usecase where Cache is enabled, and Several FTL channels (same resource) are configured with different input destinations, Events are not published to an outbound destination when unused FTL channels are disabled.
BE-31371	After upgrading from TIBCO BusinessEvents® Enterprise Edition 4.x to TIBCO BusinessEvents® Enterprise Edition 6.x.x, NullPointerExceptions occur when loading concepts from the cache.
BE-31284	In the key-based ID lookup implementation, xinode conversion fails when loading the concept with an empty reference.
BE-31282	Header values are not added in HTTP requests when the HTTP operation is set to "Delete" and the requests are sent with the catalog function HTTP.sendRequest().
BE-31256	Jetty version is upgraded from 9.4.31 to 9.4.49 to address security vulnerabilities.

Key	Summary
BE-31180	In TIBCO BusinessEvents® Enterprise Edition, the Java version is upgraded to 11.0.19.
BE-31173	Slow performance is recorded in TIBCO BusinessEvents® Enterprise Edition with Apache Ignite locking implementation.
BE-31170	Explicit acknowledgment in the FTL channel is now supported. Set `be.channel.ftl{destURL ()}.com.tibco.ftl.client.subscriber.explicitack` property to true for explicit acknowledgment.
BE-31169	OpenTelemetry tracing with TIBCO BusinessEvents® Enterprise Edition and TIBCO FTL® is supported. To use the same OpenTelemetry transaction when using OpenTelemetry tracing with TIBCO BusinessEvents® Enterprise Edition and TIBCO FTL®, include the `_traceparent` field in the data format. You can either set this field in the `tibrealm.json` file before starting the FTL server or configure it through the FTL server by using its UI.
BE-31168	When connecting TIBCO BusinessEvents® Enterprise Edition to Apache Kafka® broker, the system property `sasl.jaas.config` does not get applied for Apache Kafka® client.
BE-30982	Data replication does not work when host-aware replication is enabled and different hostnames are set in the Cluster area ("Hostaware Hostnames").
BE-30744	In the key-based ID lookup implementation, when a concept is deleted and then recreated in a rule by using the same extID. In this case, the rule does not trigger correctly because the recreated concept is not identified as a new instance.
BE-31126	To secure the TIBCO BusinessEvents default installation directories from the privilege escalation vulnerability, the `tibaclfix.yml` file has been added in the TIBCO

Key	Summary
	BusinessEvents installer at the `<installer_path>/resources/` folder.
BE-31110	In WebStudio, the search rules filter is not fetching results for specified filter text.
BE-31083	In TIBCO® Operational Intelligence Hawk® RedTail, some TIBCO Hawk microagent methods exposed by TIBCO BusinessEvents® Enterprise Edition fail when there is no data returned by methods. Exceptions in logs or a message on the UI are reported. The methods return zero as a return value for null values.
BE-31076	When payload validation is enabled, TIBCO BusinessEvents® Enterprise Edition reports the SAXParseException while deserializing incoming events with a JSON payload. This is because TIBCO BusinessEvents® Enterprise Edition does not support payload validation for JSON payloads.
BE-31074	In a cluster mode, the telemetry data is not correlated when a different threading model than a Caller's Thread model is used.
BE-31071	The TIBCO BusinessEvents® Enterprise Edition project health check fails while sending metric data to InfluxDB by using Telegraf. To publish metrics to InfluxDB by using Telegraf, in the project CDD file, configure the following properties: Set property `com.tibco.be.metric.influxdb.readycheck` to false Set property `com.tibco.be.metric.influxdb.healthcheck` to true Set property `be.health.influxdb.url` to the InfluxDB URL to check health
BE-31070	With legacy ID and disabled object table, loading parent and

Key	Summary
	it is contained child concepts reports null pointer exception as the contained concept typeId mismatches with the classregistry table typeId.
BE-31052	TIBCO BusinessEvents® Enterprise Edition does not support the synchronized session for JMS receiver thread.
	This issue is fixed now. To enable session synchronization for the JMS receiver thread, you can add the `be.channel.jms.session.lock.enable` property and set its value to true in the project CDD file. The default value of the property is false.
BE-31048	When a global variable value is updated by using the TIBCO BusinessEvents Enterprise Administrator UI, it is also updated in the deployed instance of the application at run time.
	Now, the global variable values precedence is restored to the original sequence, and hence the values that are overridden from TIBCO BusinessEvents Enterprise Administrator UI take highest precedence.
BE-31022	The retry mechanism for cluster locks fails to handle lock calls when timeout is set to -1 (forever) and thus blocking the inference agent.
BE-31018	Instance assertion for duplicate check in the working memory is running slow for a large data set when the `be.engine.id.useLegacy` property is set to false.
BE-31017	When creating concepts from the event payload, extId in the child element is not used and incorrect extIds are set for parent and child elements.
BE-31008	When a project is running for a long time with a continuous query containing aggregate functions, the memory consumption keeps growing.

Key	Summary
	To fix this, a new property `be.engine.query.optimize.aggregate` has been added. Set its value to true to enable the optimization of aggregate functions. The default value of the property is false.
BE-31001	After migrating the schema from legacy ID to the new key-based ID lookup, the TIBCO BusinessEvents® Enterprise Edition application does not work when there are unreferenced records in the database.
	For migrating applications with unreferenced records, set the `be.engine.id.migrated.allowAdjust` to true in your project CDD or `be-engine.tra` file.
BE-30994	An external JDBC client can connect to TIBCO BusinessEvents® Enterprise Edition Apache Ignite cluster without any SSL connectivity or user authentication.
	Now, you can add the "enable-authentication" property and set its value to true in the `store.xml` file to enable the user authentication for Apache Ignite.
BE-30782	TIBCO BusinessEvents Enterprise Administrator Agent fails to connect to TIBCO Enterprise Administrator Server by using python scripts.
BE-30691	In the WebStudio, leading zeroes in the StringProperty are trimmed though its a String field. This issue occurs when using rule template.
BE-30658	In the WebStudio HTTP channel, global variable reference is corrected for the **Connection Timeout** field.
BE-30560	When using the sample provided in the `BE_HOME/examples/standard/ActiveSpaces` directory, the following issues occur: • When running a query, the query is not closed.

Key	Summary
	• Row of the result set is not destroyed.
BE-27637	The maven phases `build-project-lib` and `install-project-lib` fails with the following error:

```
Failed to execute goal
com.tibco.be.maven.plugin:be-maven-
plugin:5.6.1:beBuildProjectLib (default-
beBuildProjectLib) on project BEUnitTest: Error
while building Project Library
```

Known Issues

The following issues exist in this release of TIBCO BusinessEvents® Enterprise Edition.

Key	Summary
BE-32149	**Summary:** When reading and writing null fields in ActiveSpaces tuples by using ActiveSpaces channels for BLOB data type, the following exception occurs: `com.tibco.as.space.impl.data.ASString cannot be casted to ASBlob` **Workaround:** Set the property `com.tibco.datamodel.xml` to `true` in the CDD file.
BE-32120	**Summary:** The following exception occurs for `SOAPHelper.getEnvelope` catalog function: `java.lang.RuntimeException: Event payload is not an XiNode` **Workaround:** Set the property `com.tibco.datamodel.xml` to `true` in the CDD file.
BE-31786	**Summary:** On the Telemetry Configuration page in the CDD file, if you remove the default set value "/" in the **Enabled Tracing Resource List** field and try to add a resource then the newly added resource is not visible in the field. **Workaround:** Close and reopen the CDD file**.**
BE-31693	**Summary:** On Windows platform, when starting cache and inference engines, `java.nio.file.AccessDeniedException` occurs in Apache Ignite logs **Workaround:** None
BE-31387	**Summary:** After importing the third-party specification that consists `oneOf` section references, the `NullPointerException` is observed.

Key	Summary
	Workaround: None
BE-30954	**Summary:** Bundled examples are not running if you uninstall multiple TIBCO BusinessEvents® Enterprise Edition versions simultaneously by using the custom uninstall option by selecting all the BE_HOME checkboxes.
	Workaround: Uninstall each TIBCO BusinessEvents® Enterprise Edition version individually if using the custom uninstall option.
BE-30937	**Summary:** Data migration from legacy ID to new ID implementations is not supported for IBM Db2 database.
	Workaround: None
BE-30876	**Summary:** When migrating TIBCO BusinessEvents® Enterprise Edition projects (with SharedAll persistence or Store persistence) from Legacy ID to new ID implementations, the migration script cannot migrate referenced IDs in the payload blob in a database to the new ID format.
	Workaround: None
BE-30817	**Summary:** Due to the changes in shutdown steps in TIBCO ActiveSpaces® 2.4.2, the TIBCO BusinessEvents engine might take time to shutdown.
	Workaround: None for cache engines. You can make inference engines as remote clients for faster shutdown of inferences.
BE-30713	**Summary:** Use of limited cache is not supported with Apache Ignite cache provider.
	Workaround: None
BE-30514	**Summary:** Consider a use case where an event has a complex element with a name other than "root". In this case, issues are observed during runtime for applications created after consuming the generated OpenAPI or AsyncAPI specifications.
	Workaround: Ensure that the parent tag name of the complex element is "root".

Key	Summary
BE-29399	**Summary:** The `java.lang.UnsatisfiedLinkError` exception occurs during the ActiveSpaces store schema generation or migration when all of the following conditions are true: • `ACTIVESPACES_HOME/lib`, `ACTIVESPACES_HOME/bin`, `FTL_HOME/lib` and `FTL_HOME/bin` are not added to the system environment PATH variable. • The `tibco.env.FTL_HOME` and `tibco.env.ACTIVESPACES_HOME` variables are set in `be-engine.tra` (or `be-storedeploy.tra`) and `studio.tra` files. **Workaround:** Set `FTL_HOME` and `ACTIVESPACES_HOME` in the user system path variable.
BE-29833	**Summary:** Multiple issues occur when running Rule Management Server with Apache Cassandra as a Store. Using Rule Management Server with Apache Cassandra as a Store is not supported. **Workaround:** None
BE-28918	**Summary:** The Persistence Policy field for the Shared Nothing persistence cannot be updated, but it is still displayed in the CDD. **Workaround:** None
BE-28707	**Summary:** TIBCO BusinessEvents® Enterprise Edition Studio does not validate logger implementation during project import. **Workaround:** None
BE-28322	**Summary:** In TIBCO BusinessEvents® Enterprise Edition project, the data is always stored in non-persistent TIBCO FTL stores that are managed by FTL persistence service, regardless of the storage type configured through the CDD editor (such as Store, None, and Shared Nothing). **Workaround:** None
BE-27591	**Summary:** Display Model is not supported in TIBCO BusinessEvents® Enterprise Edition WebStudio.

Key	Summary
	Workaround: None
BE-27368	**Summary:** On the RedHat 8 platform, in TIBCO BusinessEvents Studio, the existing and newly added extended properties of state machine nodes cannot be edited.
	Workaround: To edit the properties, add a group of the properties and save the artifact.
BE-27321	**Summary:** The TIBCO BusinessEvents engine log contains the following warnings from the Javassist library:

```
WARNING: An illegal reflective access operation
has occurred

WARNING: Illegal reflective access by

javassist.ClassPool (file:<BE_
HOME>/lib/ext/tpcl/javassist.jar) to method

java.lang.ClassLoader.defineClass

(java.lang.String,byte

[],int,int,java.security.ProtectionDomain)

WARNING: Please consider reporting this to the
maintainers of javassist.ClassPool

WARNING: Use --illegal-access=warn to enable
warnings of further illegal reflective access
operations

WARNING: All illegal access operations will be
denied in a future release
```

This is a known issue of the Javassist library.

Workaround: None

Key	Summary
BE-25784	**Summary:** The default or custom prefetch size is not displayed in the logger line.

Key	Summary
	Workaround: None
BE-25783	**Summary:** The Delete operation does not throw an exception when you try to delete a deleted item.
	Workaround: None
BE-25121	**Summary:** Multiple TIBCO BusinessEvents engines cannot be started when the TIBCO BusinessEvents® Enterprise Edition unit test runs in the non-API mode.
	Workaround: None
BE-24697	**Summary:** Multilingual characters are garbled in exported WSDL files.
	Workaround: You can manually replace garbled characters with multilingual characters encoded in UTF-8.
BE-24556	**Summary:** In the Oracle database, multibyte characters are not allowed in the table name.
	Workaround: Use ASCII characters for the table name.
BE-24538	**Summary:** In TIBCO BusinessEvents Enterprise Administration agent, application instances do not start when they have multibyte characters in their name.
	Workaround: Use ASCII characters for instance names.
BE-24349	**Summary:** The TIBCO BusinessEvents® Enterprise Edition cache engine does not start when the name of a concept or name of concept properties contains non-ASCII characters.
	Workaround: Use ASCII characters for concept property names.
BE-23635	**Summary:** Arabic characters are displayed in incorrect order in TIBCO BusinessEvents® Enterprise Edition rule file.
	Workaround: None

Key	Summary
BE-23632	**Summary:** The concept properties with Arabic characters are displayed in the wrong format in a decision table. **Workaround:** None

BE-21471	**Summary:** The `as-convert` utility might give errors when converting shared nothing files from one format to another. The `as-convert` utility gives errors when converting a shared nothing file that has the view count as zero.
	
	Workaround: When the error occurs, run the `as-dump` utility on the file to check if the view count is zero. When the view count is zero, the `as-dump` utility output is similar to the following output:
	
	<pre><Exception>
	
	FileProcessor.cpp: 69: initFile: file_header_
	invalid - file_
	name=/Users/Work/tibco/data/ms/dist-unlimited-
	bsreadOnly-meta1--be_gen_Events_
	GetInfo/cache6/cache-6_store_1412048660, load
	view number is zero
	
	</Exception></pre>
	When the view count is zero, you can ignore the error (which must be a warning instead).

BE-20818	**Summary:** When a cache server is started with CSH shell in AIX, the engine becomes unresponsive with the core dump. **Workaround:** Use the BASH shell instead.

TIBCO Documentation and Support Services

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 TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The following documentation for this product is available on the TIBCO BusinessEvents® Enterprise Edition Product Documentation page:

- *TIBCO BusinessEvents® Release Notes*
- *TIBCO BusinessEvents® Installation*
- *TIBCO BusinessEvents® Getting Started*
- *TIBCO BusinessEvents® Architect Guide*
- *TIBCO BusinessEvents® Administration*
- *TIBCO BusinessEvents® Developer Guide*
- *TIBCO BusinessEvents® Configuration Guide*
- *TIBCO BusinessEvents® Migration Guide*
- *TIBCO BusinessEvents® Data Modeling Developer Guide*
- *TIBCO BusinessEvents® Decision Manager User Guide*
- *TIBCO BusinessEvents® WebStudio User Guide*
- TIBCO BusinessEvents® Event Stream Processing Pattern Matcher Developer Guide
- *TIBCO BusinessEvents® Event Stream Processing Query Developer Guide*

- *TIBCO BusinessEvents® Security Guide*
- Online References:
    - *TIBCO BusinessEvents® Java API Reference*
    - *TIBCO BusinessEvents® Functions Reference*

To directly access documentation for this product, double-click the file at the following location:

TIBCO_HOME`/release_notes/TIB_businessevents-enterprise_6.3.0_docinfo.html`

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

Other TIBCO Product Documentation

When working with TIBCO BusinessEvents Enterprise Edition, you may find it useful to read the documentation of the following TIBCO products:

- TIBCO ActiveSpaces®: It is used as the cluster, cache, or store provider for the TIBCO BusinessEvents Enterprise Edition project.
- TIBCO FTL®: It is used as the cluster provider for the TIBCO BusinessEvents Enterprise Edition project.

How to Access Related Third-Party Documentation

When working with TIBCO BusinessEvents® Enterprise Edition, you may find it useful to read the documentation of the following third-party products:

- Apache Ignite
- Apache Kafka
- Confluent Kafka Schema Registry
- TIBCO Messaging - Schema Repository for Apache Kafka
- Apache Pulsar
- GridGain

- Apache Cassandra

- Grafana

- InfluxDB

- OpenTelemetry

How to Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.

- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to TIBCO Support website. If you do not have a user name, you can request one by clicking **Register** on the website.

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