

TIBCO® Graph Database Release Notes

*Software Release 1.1.0
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TIBCO Documentation and Support Services

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit <https://docs.tibco.com>.

Documentation for TIBCO Graph Database is available on the [TIBCO Graph Database Product Documentation Page](#).

Product-Specific Documentation

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

- *TIBCO Graph Database Getting Started Guide*
- *TIBCO Graph Database Administration Guide*
- *TIBCO Graph Database Release Notes*

How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit <http://www.tibco.com/services/support>.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at <https://support.tibco.com>.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to <https://support.tibco.com>. If you do not have a user name, you can request one by clicking Register on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the [TIBCO Ideas Portal](#). For a free registration, go to <https://community.tibco.com>.

New Features

The following is the list of new features added to the corresponding version of TIBCO Graph Database:

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Edge Type as First Class Relational Object

An instance of an edge between two nodes of Type T. You can define the edge type in the `initdb.conf` file or the Admin console. You can also query on the edge type.

Traversal Queries

Queries are enhanced to support conditions on edges so that the queries can traverse the graph till an end condition is reached.

Import and Export

You can export the data from the database to the CSV files and import the data from the CSV files in to the database.

New Example

New examples, import openflights data set and perform traversal queries, have been added to find out the routes between two airports.

Simplified Packaging

Simplified packaging as reusable shared libraries.

New Administrative Commands

The following new administration commands have been added:

- `checkpoint server`- Forces flush data to persist in the medium.
- `dump server stack trace`- Shows the current execution point of all the server threads, which is useful for debugging and monitoring deadlock situations.
- `describe metadata`- Shows the detailed information on the nodetype, edgetype, index, and the attribute descriptor.
- `export` and `import`- Exports data from the database or imports data in to the database.
- `create edgetype`- Defines the edgetype.

Docker Support

The Linux distribution provides scripts to build the Docker image.

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Client/Server Architecture

SEDA-based client/server architecture. C99-based server.

Dynamic Schema Management

Static and dynamic addition of attribute descriptors.

Property Bag Models

Property bag models for nodes and edges.

ACID Behavior

Transactional Semantic (ACID) behavior.

Client API

Open-source Java and NodeJS-based client API.

Large Database

Supports large database with the large file segment.

Page Cache Management

Supports large and efficient page cache management (maximum of 4 TB).

Admin Console

Admin console for schema and user management.

Closed Issues

The table lists the issues closed in version 1.1.0 of TIBCO Graph Database:

Closed Issues

| Key | Summary |
|----------|---|
| TGDB-187 | Querying with <code>preFetchSize=0</code> was resulting in the crash of the server. |
| TGDB-186 | Querying the <code>@nodetype</code> condition, by itself, was crashing the server. |
| TGDB-185 | For the time data type, the 24-hour clock was getting stored as a 12-hour clock. |
| TGDB-183 | If the primary key was not set during the commit, the Server crashed. The issue has been fixed. The client now gets a <code>TGTransactionUniqueIndexKeyAttributeNullError</code> . |
| TGDB-182 | <code>getEntity()</code> fails if the edge has a Date attribute. |
| TGDB-178 | The connection pool was not getting disconnected properly. |
| TGDB-176 | <code>getEntity()</code> threw <code>ClassCastException</code> if any edge attribute was set to null. |
| TGDB-174 | The Admin console was platform sensitive to the EOL character in script files. The issue has been fixed. The saved script, if saved on a Windows system, can run on a Linux system, and vice versa. |
| TGDB-173 | SEVERE error statements were sometimes seen during connection or disconnection. |
| TGDB-172 | Even if <code>initDB</code> failed due to insufficient memory in the machine, a message was displayed saying that the operation had completed successfully. |
| TGDB-170 | Admin console hung when processing a lot of commands. |
| TGDB-166 | An intermittent server crash was observed when committing a transaction. |
| TGDB-162 | The <code>Entity.getAttributes()</code> was returning the internal <code>@name</code> attribute. |
| TGDB-157 | When creating a node, if attributes were assigned in a certain order, it resulted in different results. |
| TGDB-148 | Null Pointer Exception was getting displayed if the <code>insertEntity()</code> was committed followed by the <code>getEntity()</code> |
| TGDB-146 | <code>edge.getAttribute("attrname")</code> returned the value null for the edges that were directed towards the node, and were retrieved using <code>getEntity()</code> . |
| TGDB-145 | <code>TGNode.getEdges(directionType)</code> always used to return an empty collection. |

| Key | Summary |
|----------|---|
| TGDB-119 | The previous release had a limitation of the String data type and its limit was less than 255 characters. It did not give any warning, but issues were seen in the Index Page splits. |

Known Issues

The table lists known issues in the 1.1.0 release of TIBCO Graph Database:

Known Issues

| Key | Summary |
|----------|---|
| TGDB-323 | <p>Summary: Documentation is not updated for the 1.1.0 release and will be updated in the next release.</p> <p>Workaround: None</p> |
| TGDB-322 | <p>Summary: Currently, for the input format, data types like date, datetime, and time have no representation in the CSV files.</p> <p>Workaround: Use null for such data types in the CSV files. After the import is successful, update the entities with the client API.</p> |
| TGDB-318 | <p>Summary: Non-unique indices are not supported.</p> <p>Workaround: When defining indices in the Admin console, or in the <code>initdb.conf</code> file, ensure you choose a unique option.</p> |
| TGDB-297 | <p>Summary: Import from the Admin console with parameters <code>loadopts=insert</code> and <code>erroropts=ignore</code> does not work as the new entries are not getting inserted in to the database.</p> <p>Workaround: Insert the new entries with the client API.</p> |
| TGDB-195 | <p>Summary: Connected clients hang when server shuts down.</p> <p>Workaround: Terminate the connection to the clients manually.</p> |
| TGDB-167 | <p>Summary: The attributes of type Date, Time, and Timestamp does not support Timezone.</p> <p>Workaround: None.</p> |
| TGDB-163 | <p>Summary: Indices work only for the following attribute types: char, short, int, long, float, double, and string. The remaining attribute types are not supported as index in the 1.0.0 release of TIBCO Graph Database.</p> <p>Workaround: None.</p> |
| TGDB-159 | <p>Summary: ClientID property is not set by the server. Example String url = <code>tcp://scott@localhost:8228/{clientId=myClient1}</code>. Server will not set the ClientID.</p> <p>Workaround: None.</p> |
| TGDB-158 | <p>Summary: Java API does not have <code>getAsNumber()</code>, <code>getAsDate()</code>, <code>getAsTime()</code>, and <code>getAsTimestamp()</code> methods for attributes.</p> <p>Workaround: Use <code>attribute.getValue()</code> and cast it.</p> |

| Key | Summary |
|----------|--|
| TGDB-131 | <p>Summary: You cannot delete and re-insert a node within the same transaction.</p> <p>Workaround: Do the delete and re-insert sequence in two different transactions instead. For example, perform the sequence delete node - commit - re-insert node - commit.</p> |
| TGDB-120 | <p>Summary: The current system does not support attribute changes to Index keys.</p> <p>Workaround: Delete the index key and insert it again.</p> |