TIBCO Spotfire® Analyst Release Notes

Software Release 12.5.0

TIBCO®

Contents

New Features

The following new features have been added in version 12.5 of TIBCO Spotfire® Analyst.

For details about new Spotfire features, see What's New in TIBCO Spotfire in the TIBCO Community.

Key	Version	Summary
SPOT-1791	12.5.0	**Faster Python data functions** The Python data function execution speed has been significantly improved, leading to more efficient workflows and better productivity. Beyond generic improvements, run-length encoding (RLE) compression is now available also for Python data functions, which reduces the size of data and therefore reduces network latency. In the cases where RLE compression is not desired, an administrator can disable this feature via a group preference (`PythonServiceUseRunLengthEncoding`), using the Administration Manager.
SPOT-1842	12.5.0	**Improved usability for data view parameters in external actions** During configuration of a data view parameter, you will now see information about any existing row limits directly in the *Configure action* flyout. When triggering an action, you will be prevented from running it if the number of rows are not within the specified row limit range. Additionally, an action that works on marked data can be made inactive until some data is marked.
SPOT-2161	12.5.0	**New Markings panel for better overview and management of markings** The new *Markings* panel enables adding, editing, and removing markings both in the installed client and the web client. In the *Markings* panel, you can quickly view the number of visualizations that are using or are limited by a specific marking. You can also jump directly to a visualization from the panel. Markings in Spotfire are visual representations of user-selected data in visualizations, providing a powerful way to interact with, and explore, data. Markings can be used to perform a variety of operations in Spotfire, such as highlighting selected data points, filtering data, and linking multiple visualizations together. To open the *Markings* panel, select *View > Markings* on the menu bar.
SPOT-3078	12.5.0	**Save items as favorites in the library** You can now mark individual items (for example, files, folders, information links, data connections, etc.) as favorites in the Spotfire library. • You can add and remove an item as a favorite by clicking the "star" icon next to the item, in the *Files and data* flyout or the web view of the library. • You can quickly access your favorite items by clicking *Favorites* in the *Files and data* flyout. • The favorite item list is private, only visible to the person that created it. • The favorites counter, next to the favorites icon, shows the number of users that currently have that item as a favorite. • The favorites counter is visible to all users that have access to the *View favorite counter* license feature. **Note:** The Spotfire Server administrator can switch off the favorites feature for the entire Spotfire environment, or hide the favorites counter from all users except for library administrators (or another group) using the *View favorite counter* license feature (under the TIBCO Spotfire Consumer license).

Key	Version	Summary
SPOT-3098	12.5.0	**Data tables overview in data canvas** If you have an analyst or business author role, and you have access to the *Manage Data Tables* license feature, you can now view and manage data tables, data tables properties, and column properties from the data canvas, both in the installed client and the web client. You reach the new overview by opening the data canvas sidebar and clicking on the *Data tables* header. Click the various tabs in the overview to go to the corresponding section. The data table properties and the column properties views let you view and create new properties, and you can edit default values where applicable.
SPOT-3123	12.5.0	**Connector for TIBCO Data Virtualization supports BOOLEAN** You can now access BOOLEAN type data with the connector for TIBCO Data Virtualization.
TS-72317	12.5.0	**Prompt for username and password in Information Services data sources** In Information Designer, you can now create data sources where end users must log in with their credentials both to access data, and to create a new information link. To achieve this, select the *User authentication* check box for the data source, and do not input the username and password.
TSDC-7136	12.5.0	**Control metadata loading for Google BigQuery data connections** In the Administration Manager, there is a new preference setting, `Connectors > Google BigQuery > ListAllProjects`. With this preference, you can control if you can see and select data from all your projects, or only the selected billing project, when you create or edit a Google BigQuery data connection. By setting `ListAllProjects` to `False`, you might be able to reduce the time it takes to load metadata when you open the **Views in Connection** dialog, especially if you have access to data in many projects.
TSDC-7179	12.5.0	**Command timeout for SAP HANA connections** When you create or edit an SAP HANA data connection, you can now adjust the *Command timeout*.

Changes in Functionality

The following are important changes in functionality in version 12.5 of TIBCO Spotfire® Analyst.

Key	Version	Summary
SPOT-2058	12.5.0	**Skia replaces System.Drawing as the default graphics backend** Spotfire now uses Skia as the default graphics backend. Skia is a modern graphics library that offers performance and cross-platform compatibility advantages over System.Drawing, facilitating consistent rendering across different devices and operating systems. The transition from System.Drawing to Skia affects only the rendering engine and therefore should not impact existing analyses, functionality, or user experience. However, it is still possible to switch back to System.Drawing, both for installed Spotfire clients and for web clients, if you encounter any issues with Skia. Note that if you use TIBCO Spotfire Qualification, the compare tool will not report any differences between the gold standard and the comparison exports, however, you might notice slight visual differences between the analyses in Spotfire and the exports.
TS-67487	12.5.0	**Changes to default logging** Logging is now enabled at WARN level by default. When it is changed (under Help > Support diagnostics and logging > Logging) to INFO or DEBUG, a useful set of performance counters will be logged to `PerformanceCounterLog.txt` in the `Log` folder. The logging configuration will always be persisted to `Spotfire.Dxp.Gen.log4net.config.DO.NOT.EDIT` in the `Settings` folder.

Deprecated and Removed Features

Deprecated features

No features are deprecated as of this release of TIBCO Spotfire® Analyst.

Removed features

No features have been removed in this release of TIBCO Spotfire® Analyst.

Third Party Software Updates

The following third party software (TPS) components have been added or updated in version 12.5 of TIBCO Spotfire® Analyst.

Key	Version	Summary
TS-72522	12.5.0	Bouncy Castle updated to 2.2.1
TS-72299	12.5.0	Chromium Embedded Framework updated to 112.2.7
TS-72314	12.5.0	Magick.NET-Q16-AnyCPU updated to 13.0.1
TS-72311	12.5.0	Microsoft.AspNetCore.Authentication.Certificate updated to 6.0.16
TS-72312	12.5.0	Microsoft.AspNetCore.JsonPatch updated to 6.0.16
TS-72313	12.5.0	Microsoft.AspNetCore.Mvc.NewtonsoftJson updated to 6.0.16
TS-72337	12.5.0	Newtonsoft.Json updated to 13.0.3
TS-72325	12.5.0	System.ServiceModel.Http updated to 4.10.2
TS-72326	12.5.0	System.ServiceModel.Primitives updated to 4.10.2
TSDC-7180	12.5.0	TIBCO Data Virtualization ADO.NET Driver updated to 8.7.0
TS-72638	12.5.0	The TIBCO Enterprise Runtime for R bundled engine is updated to 6.0.3.
TS-72338	12.5.0	jQuery updated to 3.6.4
TS-72323	12.5.0	preact updated to 10.13.2
TS-72324	12.5.0	system.management updated to 6.0.1
TS-72356	12.5.0	system.private.servicemodel updated to 4.10.2
TS-72753	12.5.0	- Updated the bundled Python interpreter to version 3.10.11. - Updated the following Python packages: - NumPy updated to 1.24.3 - Pandas updated to 2.0.1 - pip updated to 23.1.2 - pytz and tzdata updated to 2023.3 - setuptools updated to 67.7.2 - spotfire updated to 2.0.1 - wheel updated to 0.40.0

Closed Issues

The table lists important closed issues in version 12.5 of TIBCO Spotfire® Analyst.

Key	Version	Summary
TS-72058	12.5.0	When the Japanese keyboard is used, the Input Method Editor (IME) pop-up menu is sometimes opened at the top left corner of the screen and not where the cursor is.
TS-72140	12.5.0	In some situations, the map projection is not correctly loaded when an analysis containing map chart visualizations is opened.
TS-72177	12.5.0	When two input parameters in a data function have the same name but use different casing, the wrong preview value is sometimes shown in the configuration flyout when you are adding or editing the data function.
TS-72178	12.5.0	Some drop-down lists do not close if scrolling is done outside the drop-down list.
TS-72238	12.5.0	If you save an analysis that contains an information link with unsaved changes, you might not be able to open the analysis as a user without the license to create information links.
TS-72271	12.5.0	Connecting to Data Streams using the setting "No authentication" does not work and results in a `NullReferenceException`.
TS-72372	12.5.0	The `Add` method of `VisualizationFilteringCollection` allows using the API to add the same instance of a filter or marking multiple times. This might cause Spotfire to close unexpectedly when too many instances are added.
TS-72379	12.5.0	Spotfire closes unexpectedly if a text area is edited when it contains an `img` element but no `src` attribute.
TS-72400	12.5.0	Tabs for hidden pages are sometimes not visible when an analysis is opened from the library.
TS-72485	12.5.0	The tooltip on the *Hide columns that are not valid for Replace Value* check box is misleading.
TS-72517	12.5.0	If an analysis file is saved containing a text area with a calculated value or an icon, the analysis cannot be opened in an earlier version of Spotfire.
TS-72676	12.5.0	Web-based custom visualizations can steal keyboard focus from the *Filters* panel.
TS-72736	12.5.0	When *Ratio settings* other than 1:1 are used in map charts, labels are missing in feature layers.
TS-72777	12.5.0	When changing the formatting for multiple columns at the same time (using multi-select) in the *Column properties* dialog, multiple events are emitted.
TSDC-7101	12.5.0	When you access data with the data connector for Amazon Redshift, you cannot see columns for external data tables (such as Redshift Spectrum tables) in the Views in Connection dialog.

Key	Version	Summary
TSDC-7165	12.5.0	When you access data with the connector for Microsoft SharePoint Online, it is not possible to import a calculated `Date` column, where the date has a custom format that does not match the expected format in Spotfire.
TSDC-7166	12.5.0	It is not possible to join or compare data from a `Date` column imported from a Microsoft SharePoint Online data connection, with a `Date` column from any other data source, because `Date` columns in Microsoft SharePoint Online have a time part.

Known Issues

The following are known issues in version 12.5 of TIBCO Spotfire® Analyst.

Key	Version	Summary
TS-62137	12.5.0	**Package installation precedence rules** Python packages that are installed by the Administrator (through an SPK) take precedence over packages installed using the **Python Tools** from the **Spotfire Analyst Tools** menu. If users attempt to update a package previously installed by an SPK, then the package update is installed, but the update is ignored.
TS-67478	12.5.0	**Data connections created with Amazon Redshift in Spotfire 11.5.0 incompatible with earlier versions** Data connections created in Spotfire versions 11.5.0 and later using the TIBCO Spotfire Connector for Amazon Redshift cannot be opened in versions earlier than 11.5.0. **Workaround:** Refresh the schema and perform a table repair for the Data Connection view.
TS-67656	12.5.0	**"Unable to write data" error message** Error message `"Unable to write data to the transport connection: An established connection was aborted by the software in your host machine."` If you see this error, then the data being uploaded to the service is too large. When a Spotfire data function is run, it sends the relevant data from Spotfire to the service for processing. The service has a file size upload limit, the default of which is 100 MB. When a data function is run with data that exceeds this limit, the service returns the error. An administrator can change this upload limit if needed by creating a custom configuration. For more information, see the topic "File size upload limit" in the service *Installation and Administration* guide. If users see this error message, the administrator can consider creating a custom configuration that increases the limits for both of the following properties: • `spring.servlet.multipart.max-file-size`: The total file size for upload cannot exceed the value for this setting. • `spring.servlet.multipart.max-request-size`: The total request size for a multipart file upload cannot exceed the value for this setting. **Note:** At a certain point, the Java Heap size fails to handle very large files. The threshold for this behavior is dependent on the amount of RAM the service node has. When the Java Heap Size is exceeded, the following error message is displayed. `Error from Remote Service: Internal Server Error (500) - java.lang.OutOfMemoryError: Java heap space`

Key	Version	Summary
TS-69770	12.5.0	**Empty String columns in exported SBDF causes an error**

If you export an SBDF from Python (for example, as outputs for a data function), and your output contains an empty column, then you can encounter the following error:

```
spotfire.sbdf.SBDFError: cannot determine type for column 'EmptyString'
; all values are missing
```

This error occurs because the Spotfire data function environment cannot determine the proper Spotfire type to export the data as if all values in the column are missing (in other words, Python's `None`, NumPy's `nan`, or Panda's `NA` or `NaT` values). {{}}

Workaround:

To resolve this issue, edit your data function to use the helper function `set_spotfire_types`.

Example

```
import pandas as pd
import spotfire
df = pd.DataFrame(inp)
spotfire.set_spotfire_types(df, {'EmptyString': 'String'})
```

Key	Version	Summary
TSDC-7190	12.5.0	**Google Analytics connector does not support Google Analytics 4**

During 2023, Google will retire the legacy version of Google Analytics, called Universal Analytics. Instead, the newer version, Google Analytics 4 (GA4), is going to be the only option.

To learn more, see the official communication from Google.

The Spotfire data connector for Google Analytics currently only supports accessing data from Universal Analytics, and not from GA4. This means that when you migrate from Universal Analytics to GA4 in Google Analytics, you can no longer use the Google Analytics connector to access your data in Spotfire.

Workaround: Access Google Analytics 4 data via Google BigQuery

If you have access to Google BigQuery, you can export your GA4 data to Google BigQuery. Then you can access your GA4 data in Spotfire by using the connector for Google BigQuery.

To learn how to export your GA4 data, see BigQuery Export.

Tip: Google Analytics data contains repeated columns. When you access Google Analytics data with the Google BigQuery connector, make sure you select *Enable repeated columns* when you create the connection, to be able to view all columns.

Installation

The following are instructions on how to install version 12.5 of TIBCO Spotfire® Analyst.

The TIBCO Spotfire® Analyst client is delivered as two different installers. The installer labelled "single_user" is the default one. Use this if you do not know which version to select. The installer labelled "single_user" installs the product for the logged in user only. The other users on the same machine will not be able to use the client. The installer labelled "shared_computer" installs the product for all users on the machine. This installer requires administrative privileges on the machine.

Installation of Release 12.5

1. First install/upgrade the TIBCO Spotfire® Server to version 12.5.

2. Deploy the TIBCO Spotfire® 12.5 distribution on the TIBCO Spotfire® Server 12.5.

3. Finally, install TIBCO Spotfire® Analyst 12.5 on all client computers.

Installation Notes

- If the .NET 4.8 framework is not installed, it will be downloaded and installed when launching the "shared_computer" TIBCO Spotfire® Analyst client installer. The "single_user" installer will not download the .NET framework, because it does not have system changing privileges. However, it will complain if the .NET framework is missing.

- If the product localization is defined as a user group preference, a client restart is required after the initial login to the server for the changes to be fully applied. Note that clients are not informed that such a restart is required. It is also important that the appropriate localization packages are deployed to the TIBCO Spotfire® Server prior to setting the user group preference.

  Note that the correct language pack and the matching server preference must be set on the very first server that the user connects to. Changing the settings on the Server will not have any effect. If the localization group preference does not have any effect, it can be enforced on clients using **Tools** > **Options**.

Migration and Compatibility

The following are instructions on how to migrate from a previous release to version 12.5 of TIBCO Spotfire® Analyst.

Upgrading from Previous Version without Installing

1. First install/upgrade the TIBCO Spotfire® Server to version 12.5.

2. Deploy the TIBCO Spotfire® 12.5 distribution on the TIBCO Spotfire® Server 12.5.

3. Start the old version of TIBCO Spotfire® Analyst, log on to the TIBCO Spotfire® Server 12.5 and accept the update.

With Spotfire 10.3, a trust mechanism for data functions was introduced. Also, the trust stamp was changed to be calculated with SHA-512. Therefore, when updating from an older version to 10.3 or later, the trust stamps in all Spotfire analysis files in the library that include IronPython scripts, JavaScripts, data connection custom queries or data functions must be updated. New server CLI commands called "find-analysis-scripts" and "trust" can be used to find and update or automatically trust old scripts and data functions in your library. For more information, see the TIBCO Community article: https://community.tibco.com/s/article/Script-and-Data-function-trust-in-Spotfire-10-3-and-later.

Compatibility Versions

You can use TIBCO Spotfire 12.5 to open .dxp analysis files that were created and saved in any older version of Spotfire that is still in support.

The compatibility versions of TIBCO Spotfire 12.5 are updated to versions 12.4 and 12.0 LTS. This means that .dxp analysis files that you create and save in Spotfire 12.5 can be opened in versions 12.4 and 12.0 LTS of Spotfire.

When you use an older version of Spotfire to open an analysis file that was created in a newer version of Spotfire, features from the newer version might not be available, and the analysis might look and behave differently compared to the version in which it was created.

Version	Compatibility versions
12.5	12.4, 12.0 LTS
12.4	12.3, 12.0 LTS
12.3	12.2, 12.0 LTS
12.2	12.1, 12.0 LTS
12.1	12.0 LTS, 11.4 LTS
12.0 LTS	11.8, 11.4 LTS
11.8	11.7, 11.4 LTS
11.7	11.6, 11.4 LTS
11.6	11.5, 11.4 LTS

11.5	11.4 LTS, 10.10 LTS
11.4 LTS	11.3, 10.10 LTS
10.10 LTS	10.9, 10.3 LTS

File compatibility example

For example, when you create a `.dxp` analysis file in Spotfire 12.3, the file is saved with compatibility versions for 12.2 and 12.0 LTS. You can open the `.dxp` file in any older Spotfire version that either *is* one of those versions, or has 12.2 or 12.0 LTS as compatibility versions.

That means you can open the `.dxp` analysis file that you saved in Spotfire 12.3 in the following older versions: 12.2, 12.1, and 12.0 LTS.

Newer and older versions of Spotfire Analyst client can be used to connect to the current version of Spotfire Server in order to upgrade or downgrade the client packages. However, it is recommended to always run the same version of client and server in production environments. See System Requirements.

TIBCO Documentation and Support Services

For information about the Spotfire products, you can read the documentation, contact TIBCO Support, and join the 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 website is updated frequently and is more current than any other documentation included with the product.

TIBCO Spotfire Documentation

The documentation for all Spotfire products is available on the TIBCO Spotfire® Documentation page. This page takes you directly to the latest version of each document.

To see documents for a specific Spotfire product or version, click the link of the product under 'Other versions', and on the product page, choose your version from the top right selector.

Release Version Support

Some release versions of TIBCO Spotfire products are designated as long-term support (LTS) versions. LTS versions are typically supported for up to 36 months from release. Defect corrections will typically be delivered in a new release version and as hotfixes or service packs to one or more LTS versions. See also https://docs.tibco.com/pub/spotfire/general/LTS/spotfire_LTS_releases.htm.

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 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.

System Requirements for Spotfire Products

For information about the system requirements for Spotfire products, visit http://spotfi.re/sr.

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.

For quick access to TIBCO Spotfire content, see https://community.tibco.com/products/spotfire.

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