

# **TIBCO® Data Virtualization and Business Directory**

## **Release Notes**

*Version 8.0*

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<b>Preface</b>	<b>5</b>
Product-Specific Documentation	5
How to Access TIBCO Documentation	6
How to Contact TIBCO Support	6
How to Join TIBCO Community	6
<b>New in 8.0</b>	<b>7</b>
Performance / Scalability	7
Server Updates	8
Client Updates	8
Studio / Developer Updates	8
Data source Updates	8
Other Updates	9
Deprecations	9
<b>8.0 Fixed and Known Issues</b>	<b>11</b>
TDV and Business Directory 8.0 Fixed Issues	11
TDV and Business Directory 8.0 Known Issues	14
8.0 Known Issues	14
8.0 Installation Guide Known Issues	16
MPP Engine - Known Issues	16



# Preface

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Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit:

- <https://docs.tibco.com>

## Product-Specific Documentation

The following documents form the TIBCO® Data Virtualization(TDV) documentation set:

- *TIBCO TDV and Business Directory Release Notes* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release.
- TDV Installation and Upgrade Guide
- TDV Administration Guide
- TDV Reference Guide
- TDV User Guide
- TDV Security Features Guide
- Business Directory Guide
- TDV Application Programming Interface Guide
- TDV Tutorial Guide
- TDV Extensibility Guide
- TDV Getting Started Guide
- TDV Client Interfaces Guide
- TDV Adapter Guide
- TDV Discovery Guide
- TDV Active Cluster Guide
- TDV Monitor Guide
- TDV Northbay Example

## How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website mainly in the 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 Data Virtualization is available on <https://docs.tibco.com/products/tibco-data-virtualization-server>.

## How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit <https://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](https://community.tibco.com). For a free registration, go to <https://community.tibco.com>.

# New in 8.0

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The TIBCO® Data Virtualization (TDV) 8.0 release is being distributed as an installable product. For information on the products and components included in TDV, see the *TDV Installation and Upgrade Guide*. For information on the products and components included in Business Directory, see the *Business Directory Guide*.

TDV 8.0 includes features and enhancements in the following areas:

[Performance / Scalability, page 7](#)

[Server Updates, page 8](#)

[Client Updates, page 8](#)

[Studio / Developer Updates, page 8](#)

[Data source Updates, page 8](#)

[Other Updates, page 9](#)

[Deprecations, page 10](#)

## Performance / Scalability

### New Massively Parallel Processing Engine

A new massively parallel processing engine (MPPE) has been added to optimize large federated queries that access data sets from multiple data sources. The new engine will balance processing across available processors across the entire cluster rather than routing requests to specific cluster nodes. This will allow customers to scale their DV environment to handle much larger data volumes (100s of millions of rows and above).

### Granular Workload Management

New granular workload management policies allow admins to set up limits for memory usage, request time limits and row limits either at the user or group level or published object level to limit problematic requests and maximize service level agreements.

## Server Updates

### New JSON Formatting Functions

New functions have been introduced to allow developers to produce customized JSON from SQL views or procedures. JSON arrays and objects and aggregations of each are supported to allow complete customization of the JSON outputted from a data set.

### New Encryption

Enhanced AES encryption has been added for server level and data source passwords.

## Client Updates

### Power BI Direct Query Support

TDV now ships with a new PowerBI Driver that supports direct query mode in PowerBI Desktop. The PowerBI adapter is located in <INSTALL\_DIR>/apps/PowerBI.

## Studio / Developer Updates

### Code Editor Improvements

The Studio code editors have been updated to include line numbers and auto complete for function name and path lookups.

## Data source Updates

New adapters have been added for the following data sources:

- Apache Spark SQL
- Elasticsearch
- JDBC-ODBC
- CDH Hive and CDH Impala
- Google Calendar
- Google Contacts
- Google Drive



The following adapters have been updated with newer versions and updated SQL capabilities:

- Apache Hive
- Apache Impala
- Excel Services 2010

## Other Updates

- For published web services, there is now the ability to add or rewrite HTTP response headers
- Reading and write HTTP Header into client property for SOAP data sources is now supported so that cookies with a session ID can be sent in subsequent requests
- There is now support for Subject Alternative Name when configuring security certificates
- The server will now push UNION to SQL Server even if there is an NLS data type mismatch between columns
- Introspection of Impala data sources now identifies the partitioned columns
- When using the DROP IF EXISTS DDL statement via JDBC/ODBC, there server now drops all objects at all 3 layers (published, TDV data source and database)
- With the SAP BW BEx adapter there is support for multiple structures on the columns axis
- The DECFLOAT data type is now supported for DB2 LUW
- There is now the ability to set custom encryption keys during the server installation
- There is now the ability to change the repository and cache database port numbers after installation
- The ADO.net driver now supports Visual Studio 2012 and 2015
- Internet Explorer 11 is now supported as a client browser

## Deprecations

- Internet Explorer 10 is no longer supported for all web clients
- Solaris ODBC drivers are no longer supported
- Windows Server 2003 x64 is no longer supported as a server OS
- CentOS 5.X x64 is no longer supported as a server OS
- Solaris platform is no longer supported as a server OS
- HPUNIX ODBC drivers are no longer supported
- JDBC driver support for JRE 1.6 clients are no longer supported

## 8.0 Fixed and Known Issues

This section contains:

- [TDV and Business Directory 8.0 Fixed Issues, page 11](#)
- [TDV and Business Directory 8.0 Known Issues, page 14](#)

### TDV and Business Directory 8.0 Fixed Issues

This section lists issues fixed in this release

8.0 Fixed Issues	Description
CIS-72163	REST data sources are Breaking with request payload
CIS-71805	ADO.net driver is not working with NTLM authentication in Spotfire
CIS-71741	If a client logs in to TDV as 'admin', TDV does not utilize setDataSourceCredentials()
CIS-71638	"DM" privilege is not available at group level
CIS-71635	Queries failing during execution in MS SQL Server 2008
CIS-71508	Security vulnerabilities on port 9403 - JDBC SSL, ODBC SSL, and ADO.NET SSL
CIS-71411	Case Statement not working with a row_number function
CIS-71361	Documentation updates for Licensing Information.
CIS-71264	Documentation updates for SNMP V3.
CIS-71005	Studio "Web Service" type session is not closed if studio closed using "close" button (without logout)
CIS-70543	SQL Server 2016 with kerberos authentication cannot be dataship target.
CIS-69721	REWRITE_IN_SUBQUERIES_AS_JOINS causes query to not push
CIS-69515	Published Database Tree Requires Refresh of Every Node to See Child Objects

8.0 Fixed Issues	Description
CIS-69407	Oracle Date columns are now introspected as Date rather than Timestamp.
CIS-68922	Unable to query from Google BigQuery
CIS-68831	File Cache is not advisable for use other than demo purposes or lightweight caching of a few hundred rows.
CIS-68768	DatabaseMetadata.getCatalogs(), getSchemas(), getTables() not handling case sensitive data source name
CIS-68209	For nested declared (virtual columns), TDV returns 'Value not specified for virtual column'
CIS-68200	REST Adapter Design by Example fails when XML contains namespaces.
CIS-67948	Config Panel Loses Settings - Change one setting at a time on the configuration panel
CIS-67864	Remove BD system tables under "CIS System Table"
CIS-67763	start/stop repo service could not send out SNMP traps
CIS-67697	We need to document syntax for CREATE/DROP/ALTER in our reference guide for the DDL interface
CIS-67577	TZCONVERTOR function documentation needs to be corrected
CIS-67260	JDBC: Need to update jackcess jar version (2.1.8 or greater)
CIS-67250	Publishing XML transformation as JSON does not return any results
CIS-67092	Invalid sql pushed to Oracle 11g (correlated subquery aliasing issue)
CIS-67076	Config item "Cleartext Enabled" needs better UI.
CIS-66911	Using "Disable HTTP" configuration, VCS menu items are getting disabled, previously configured VCS settings are getting deleted, and Studio displays continuous annoying popups
CIS-66738	Kerberos support is different for different browsers.
CIS-66704	A change in maxSqlLength in 7.0 causes semi-join partitioning to create IN clauses with too many values, resulting in 'ORA-00913: too many values'
CIS-66633	Add instruction to "Updating the ADO.NET Driver" to restart application

8.0 Fixed Issues	Description
CIS-66481	Missing Capabilities with base adapters in TDV 7.0.5
CIS-66401	Example for creating/defining SAP Hana multidimensional/calculation/graphical view in CIS.
CIS-66373	Selectable var_impact_type.id is not present in left side or right side of a join
CIS-66246	Document the purpose of the 'maxmemory' field in the metrics_requests table
CIS-66185	Web security issues in web manager for Annotation field when adding a connector is vulnerable to reflected XSS
CIS-66141	The TDV TOP command syntax is not correct.
CIS-66077	REST Web service Operation URL Fails in TDV 705
CIS-65847	SELECT count(*) on a review no longer returns incorrect results for SAP HANA.
CIS-65722	Documentation on DM Resource Mapping not sufficient
CIS-65414	Not inserting India rupee currency symbol ? value from CIS
CIS-65210	Documentation does not state RHEL 6.7 is a supported OS.
CIS-64923	VCS GIT adapter doesn't set accept and set user.email.
CIS-64264	Error creating WSDL datasource
CIS-62046	Deployment Manager - In-line SQL being used to send requests to databases
CIS-62035	Hard-Coded Cryptographic Secrets
CIS-58595	Map ISNULL() function to NVL for Oracle
CIS-58091	Studio Installer asks for a port number
CIS-56786	Left Outer Join on VARCHAR and NVARCHAR no longer generates incorrect result in SQL Server 2012.
CIS-52534	Manager Supports Retrieval Of Current Password
CIS-52533	Manager Susceptible To Stored Cross Site Scripting (XSS)
CIS-52434	Add MAX(~date) to Impala capabilities

8.0 Fixed Issues	Description
CIS-47403	Unable to push SUBSTR function when acting against a NVARCHAR column.
BD-4899	Business Directory is showing Extraneous Databases
BD-4810	Customer Property in BD are gone(assignment) after site refresh
BD-4785	BD - Unable to configure LDAPS due to invalid login
BD-4775	Unable to add site due to HTTP 500 and HTTP 404 error
BD-4774	LDAP password annotation for Business Directory is not working.
CIS-69632	APPROX_COUNT_DISTINCT(expression) is now a recognized function for Google BigQuery.
CIS-72430	A query with an alias is now working against Excel Services 2010 adapter.

## TDV and Business Directory 8.0 Known Issues

### 8.0 Known Issues

The following are known issues in the release:

8.0 Known Issues	Description
CIS-71393	Web manager session needs to be refreshed when a user is added/removed/modified.
CIS-68789	"include cache policies" option will cover not only "cache policy" but also other kind of policies.
CIS-72111	Floating point values in TDV runtime are always represented as DOUBLES (not FLOATs). Hence when division is executed in TDV, it is done using DOUBLE precision.  In contrast, MPPE supports FLOAT. So, division is executed using single precision.

8.0 Known Issues	Description
CIS-67318	slf4j jar in server/common interfering with datasource jars.  Work around: Removing slf4j packages from the datasource driver jar or keeping the same version as that of TDV server bundled slf4j classes in the datasource package will resolve the issues/clashes.
CIS-68931	If "Design By Example" has already been run on a stored procedure prior to this fix, then the user may need to delete the stored procedure, then add it back using "Add/Remove" resources in Studio.
CIS-68878	If "Design By Example" has already been run on a stored procedure prior to this fix, then the user may need to delete the stored procedure, then add it back using "Add/Remove" resources in Studio.
CIS-72361	When push is disabled and evaluated in TDV datediff, date_sub, from_unixtime, unix_timestamp can result in incorrect results.
CIS-72307	Impala 2.x CONCAT function with NULL operand returns different results
CIS-71922	DrillAdapter - drill handles varchar in different way from TDV. Collation setting per data source affects how sorting of varchar is done.
CIS-72116	substring(\$1, \$2) - the result is different between disable_push and push when the \$2 argument is minus
CIS-71663	Unable to use Hive with Kerberos.
CIS-67977	Add support for INTERVALs in ON clause of query to DB2
CIS-67149	Resource privilege issue when using TDV VCS Compare functionality
CIS-66841	Incorrect Decimal Precision on SAP BW BEX
CIS-68835	Kerberos - Cannot connect to HBase in <hostname>.<port>.
CIS-66513	Unable to access a Kerberos-protected CIS web service using a browser - The client credential cannot be delegated.
CIS-52145	Oracle introspector won't detect synonyms that point to another schema.
CIS-71664	Edge browser may not work due to Flash phase-out.
CIS-72435	When running northbay.bat on Windows, need to change the classpath reference from jul-to-slf4j-1.7.14.jar to jul-to-slf4j-1.7.25.jar.

8.0 Known Issues	Description
CIS-66635	<p>For TIMESTAMP data type of JDBC-ODBC Bridge, the expected mapping for SQL Server is TIMESTAMP - VARBINARY, but the default mapping is TIMESTAMP - TIMESTAMP. User can override the mapping capability at the data source level before running introspection.</p> <p>If not, will throw the error “Failed to convert class B to class java.sql.Timestamp”.</p>

## 8.0 Installation Guide Known Issues

The following are known issues in the Installation Guide 8.0.

8.0 Installation guide Issues	Description
CIS-72450	The support for these need to be removed from the documentation. TDV is no longer supported on the following operating systems: Windows Server 2003, SUSE linux 10 and below, CentOS/RHEL/Oracle Enterprise Linux 5 and below.
CIS-72451	Support for older Hive version (i.e. 0.xx) and Impala has been removed and Hive 1.1.0, Hive 2.x and Impala 2.0 are now supported. See the data source list in Studio for reference.
CIS-72453	TDV Server only supports JRE v1.7 (csjdbc7.jar) and JRE v1.8 (csjdbc.jar) DV JDBC drivers now. Support for the JRE v1.6 driver has been removed.

## MPP Engine - Known Issues

The following are known issues in the MPP Engine for 8.0.

8.0 MPP Engine known issues	Description
CIS-71001	Queries sent to MPPE only supports precision up to 3 digits of milliseconds.
CIS-71483	Queries which includes EXISTS and INNER JOIN may return incorrect results when pushed to the MPPE.
CIS-71286	Using MPPE, expressions involving constants and numeric types will need to have explicit casts to ensure that the types are handled correctly.



8.0 MPP Engine known issues	Description
CIS-67466	It is recommended to have a minimum of 16 GB of memory available for MPPE.
CIS-62845	OR clauses in join conditions will not process in MPPE.
CIS-60134	Correlated subquery with group by and count(<column>) may throw unclear error messages.
CIS-72398	For MPP cluster, using an explicit regroup with a different timekeeper might result in existing queries to break down.
CIS-72193	Passing in invalid values to acos() and asin() will fail silently and return 0 instead of throwing an exception.
CIS-71731, CIS-71049	Differences due to precision differences should be handled in the query explicitly.
CIS-72320	Any dates prior to start of Gregorian calendar is likely to give back wrong results.
CIS-67920	Cross joins are not supported in MPPE.
CIS-67921	Nested aggregate functions are not supported in MPPE.
CIS-67471	<p>When a node is shutdown, queries submitted during node going down (not fully down) would fall back to classic engine. New Queries would run in PARALLEL mode as per new cluster size. Queries in wait queue when run would eventually run in PARALLEL mode.</p> <p>With an addition of a node, running queries would continue to run in PARALLEL mode. Queries in waiting queue during addition of node would fall back to classic engine. Queries submitted during addition of node would fall back to classic engine. Queries submitted after addition of node would run in PARALLEL mode</p>

