DataFusion technical spec sheet

Prepared by Anthony Coundouris and reviewed by Sameer Syed

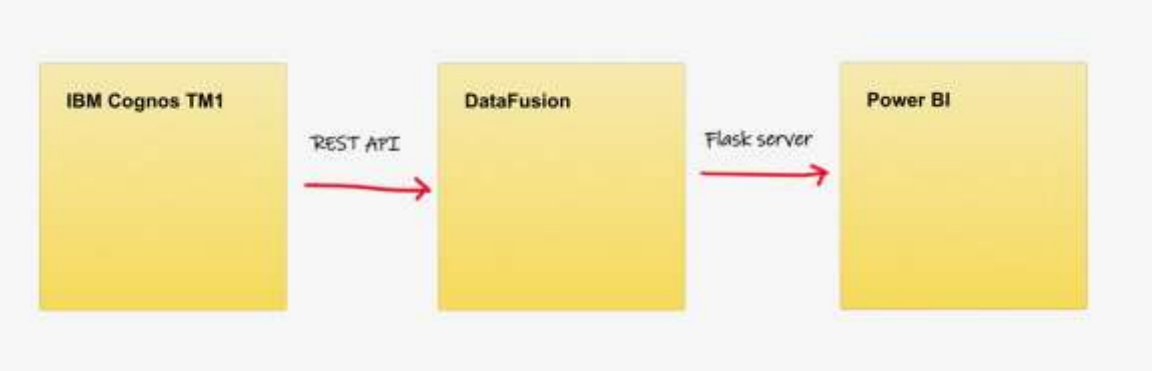
2026

octane IBM

connecting TM1 to the BI tools you already use

Overview

DataFusion connects to IBM Cognos TM1 via REST API, enabling integration between IBM Cognos TM1 and Analytics & Business Intelligence platforms such as Microsoft Power BI, Qlik and Tableau. A Flask server is used to access TM1 data and send data back to the visualisation tool.



IBM® Cognos® TM1®

TM1, now known as Planning Analytics with Watson, integrates business planning, performance measurement and operational data to help companies optimise business effectiveness and customer interaction.

Planning Analytics provides immediate visibility into data, accountability within a collaborative process, and a consistent view of information, allowing managers to quickly stabilise operational fluctuations and take advantage of new opportunities.

For documentation on the web, including all translated documentation, access the IBM Knowledge Center

IBM Cognos TM1 REST API

The IBM Cognos TM1 REST API provides an Open Data Protocol (OData) Version 4 compliant interface to an IBM Cognos TM1 server, allowing clients to query and update data sources hosted by the TM1 server.

This document describes how the results returned by querying the TM1 REST API enable DataFusion's functionality, rather than how to use the REST API itself.

The software requires minimal configuration of TM1. The TM1 REST API gives developers a standards-based approach to writing applications that query and update TM1 models, with the Entity Data Model (EDM) defining the TM1 data model so OData clients can understand and manipulate it.

Installation requirements

Minimum requirements to run DataFusion. To understand this section, you should be familiar with installation concepts, security issues, and basic Windows or UNIX administration skills, as well as:

1. The existing server environment and security infrastructure in your organisation.
2. Your TM1 / Planning Analytics system and network requirements.

Operating system

DataFusion requires the Microsoft Windows graphical operating system family. The executable runs on Windows 8, 10 and 11.

Internet browser

DataFusion is designed to work on the platform and web browser combinations below, using default browser settings. Each release is tested for compatibility with the latest publicly available browser versions. DataFusion does not specify exact browser version numbers in its system requirements.

- Google Chrome®
- Microsoft® Internet Explorer 11®
- Mozilla® Firefox® (requires hardware acceleration – not supported in virtual environments)
- Microsoft® Edge

IBM Cognos TM1 software

If you're looking to connect this software to DataFusion, it's almost certain you already meet the requirements – the minimum is TM1 version 10.2.2 and above. Use the IBM tech note below to check the version of your IBM Cognos TM1 installation.

IBM Cognos TM1 model

A TM1 model must also be used for interconnectivity. The TM1 model's HTTP port number is configured in the tm1s.cfg file on the TM1 server.

To check your HTTP port number for the TM1 model, see this IBM tech note

Port	Purpose
5495	TM1 Admin Host (default)

DataFusion

DataFusion is a stand-alone .exe that requires no libraries to be installed on the computer to run, and requires no registry entries or other components. Unlike installed software that typically depends on a variety of components and libraries installed alongside it, DataFusion is prepackaged with everything it needs – simply double-click to execute it.

Flask

DataFusion uses the reserved port number 5000 on localhost while running. This is the default Flask port used to display the HTML page that establishes the link needed to communicate between the systems.

Port	Purpose
5000	Flask (DataFusion) – default local port used to display the HTML link between systems
5498	TM1 SSL server – used by the Admin Server to listen for client requests. All TM1® components communicate with the TM1 Admin Server using SSL
12345	TM1 Server – secondary port for progress messages while a lengthy operation is waiting to be cancelled
49152–65535	TM1 Architect and Perspectives – port range required to establish a connection to the TM1 Server

9510	Cognos Analysis for Excel (CAFE) – used by the CAFE Excel add-in to connect to the TM1 host service, if the customer uses CAFE

The Admin Server also supports older TM1 clients that cannot use SSL, by listening on two ports: one secured, the other unsecured.

Installation

DataFusion should be deployed on any system from which the link and communication between systems is required directly. If end users will generate their own links and reports, install it on that system. If a link between servers is needed to refresh reports, generate that link on the system that facilitates the connection between those systems.

For server installations, we recommend the application opens automatically on start-up:

1. Add DataFusion to Start-up.
2. Right-click the Start menu, choose Run, and type shell:startup.
3. Click OK.
4. The Startup folder will appear – drop shortcuts or applications into it.
5. To find the common Startup folder for all users, right-click the Start menu, choose Run, type shell:common startup, and click OK.