# DATAFUSION TECHNICAL SPEC SHEET
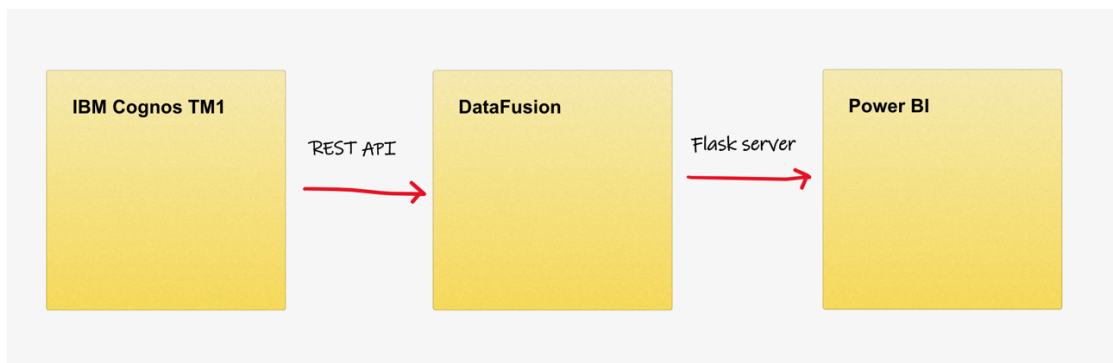
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octanesolutions.com.au

Octane

IBM

DataFusion connects to IBM Cognos TM1 via REST API enabling integration between IBM Cognos TM1 and various Analytics & Business Intelligence platforms like Microsoft Power BI, Qlik and Tableau. Using a flask server, we can access the data and sent data back to the visualization tool.



**IBM® Cognos® TM1®**

TM1 (or as it is now known Planning Analytics with Watson) integrates business planning, performance measurement, and operational data to enable companies to optimize 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 stabilize operational fluctuations and take advantage of new opportunities.

To find documentation on the web, including all translated documentation, access IBM Knowledge Center http://www.ibm.com/support/knowledgecenter

**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, which allows clients to query and update data sources that are hosted by the IBM Cognos TM1 Server.

Whilst this document describes the semantics of the TM1 REST API, it won't demonstrate how to use the TM1 REST API rather how the results returned from the querying of it enables the functionality of the software.

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

## Installation requirements

Represent broad concept that could speak to any necessary function, attribute, capability, characteristic, or quality of a system for it to have value and utility to a customer, organization, internal user, or other stakeholders. Requirements can come with different levels of specificity; for example, the minimum requirements would be to have the following available. To understand this section of the document, you should be familiar with:

- Installation concepts
- Security issues
- Basic Windows or UNIX administration skills

- The existing server environment and security infrastructure in your organization

- Your TM1 / Planning Analytics system and network requirements

**Operating System**

The software requires the Microsoft® Windows® group of graphical operating system families, all of which are developed, marketed, and sold by Microsoft. In the case of DataFusion the requirement is that the Windows 8, 10 and 11 operating system to run the executable.

**Internet Browser**

DataFusion is designed to work on the platform and web browser combinations described in this section, using default browser settings. Each release is tested for compatibility with the latest publicly available browser versions.

**IBM® Cognos® TM1® software**

Given you are looking to connect this software to DataFusion it is almost given you already meet the requirements however the following will assist in the determinacy of fit.

The below link has been provided to an IBM tech note which will assist to determine the version of the IBM Cognos TM1 installation you currently have. The requirement is that Tm1 version 10.2.2 and above is installed.

**IBM Cognos TM1 model**

A TM1 model must also be used for interconnectivity. TM1 model http port number which configure in the tm1s.cfg file on the TM1 server. How to check your http port number for the TM1 model:

https://www.ibm.com/support/knowledgecenter/en/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_inst.2.0.0.doc/c_httpportnumber.html

By default, TM1 uses the following TCP ports: 5495 - TM1 Admin Host

DataFusion does not include specific browser version numbers in the system requirements.

    a) Google Chrome®

    b) Microsoft® Internet Explorer 11®

    c) Mozilla® Firefox ® (requires hardware acceleration, not supported in virtual environments)

    d) Microsoft® Edge

**DataFusion**

A stand-alone exe that requires no libraries be installed on the computer to run and requires no registry entries or other components. Where other installed file(s) can be a stand-alone in an installer package but is generally dependent on a variety of components and libraries installed alongside it. DataFusion is already prepackaged to with the libraries it requires thus removing the need to install this software. All you need to do is double click to execute it.

**Flask**

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

Used by the "Admin Server" on this machine to listen for client requests.

5498 - TM1 SSL server

All TM1® components communicate with the TM1 Admin Server using SSL.

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

12345 - TM1 Server

This port number establishes a secondary port for progress messages to use when a lengthy operation is waiting to be cancelled.

49152 -> 65535 - TM1 Architect and Perspectives

This port range is required to establish a connection to the TM1 Server.

In addition, if the customer uses Cognos Analysis for Excel (CAFE) then: 9510 - Cognos Analysis for Excel (CAFE)

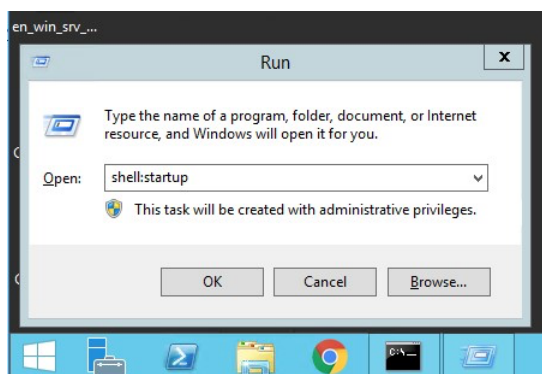This port number is used by the CAFE Excel add-in to connect to the TM1 host service.

## Installation

Given the nature of the product it should be deployed on any system from which the link and communication between the systems is required directly. If end users will be generating their own links and reports then it should be deployed on that system.

If there needs to be a link between the servers to refresh reports then the link should be generated on that system to facilitate connections between those systems.

For server installations we recommend that the application is opened automatically on start up. Steps are as below.

    a)   Add to Start up

    b)   Right Click on the start menu and choose run type "shell:startup" and



    c)   Click ok.

    d)   Then the startup folder will appear, and you can drop shortcuts or applications into it.

e) To find the common start up folder for all users Right click on the start menu and choose run Type "shell:common startup" and click ok.