Search

Connect FME Workbench to FME Server

Learning Objectives

After completing this unit, you'll be able to:

- Connect to FME Server from Workbench.
- Publish a workspace to FME Server.
- Upload data files to FME Server.
- Register a workspace with the FME Server Job Submitter service.

FME Workspaces and FME Server

FME Server has a model-driven architecture because its processes are expressed as models. In FME, these models are better known as **workspaces**.

Workspaces are created – we call it "authored" – using FME Desktop. In particular, the **FME Workbench** application is used. FME Workbench is a client of FME Server, and so they form a client-server pair. However, both share the same core engine and process data in the same way.

Servers are applications that provide a resource or service.

Clients make requests of servers to access a resource or service.

Together, a **client-server pair** form a distributed application structure. Usually, the client and server exist on separate hardware and communicate over computer networks, but sometimes both the server and client exist on the same system.

Let's make sure you get the terminology right. FME Desktop is the desktop program that includes the FME Workbench, FME Data Inspector, and FME Quick Translator applications. Workspace authoring occurs in the application called FME “Workbench,” but the process defined in the canvas window of FME Workbench is called a “workspace.” The terms are so similar that they are easily confused.

Because FME Workbench is a client of FME Server, it may be used to transfer authored workspaces to and from FME Server. We call this transfer **publishing**.

FME Workbench has the ability to:

- Author a translation workspace.
- Publish a workspace (transfer it to FME Server).
- Republish a workspace (upload a previously published workspace).
- Download a workspace (retrieve it from FME Server).

The ability to transfer a workspace back to FME Workbench means workspaces can be downloaded for editing and maintenance, then published back to FME Server.

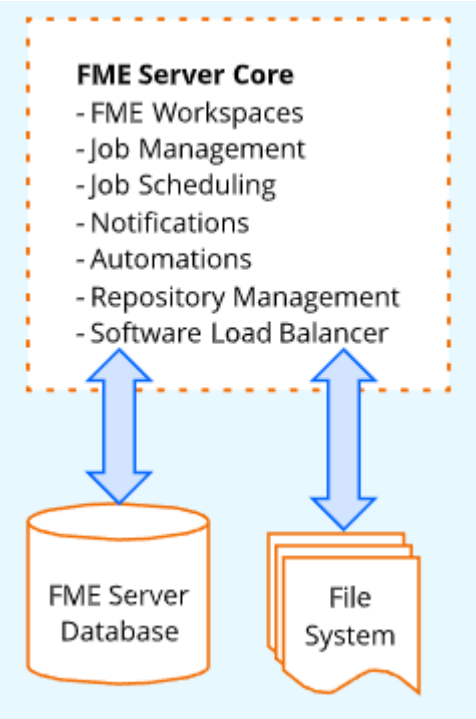
Repositories

Workspaces are stored on FME Server in devices called **repositories**. Each FME Server may have multiple repositories, but any workspace can only belong to one of them, without creating a duplicated workspace.

A repository consists of two parts:

1) The .fmw files from any workspaces that have been published to FME Server are stored in the file-based part of the repository.

2) Metadata related to the workspace is held separately in the FME Server Database. This metadata includes information about the contents of the workspace; for example, source and destination datasets, workspace feature types, and published parameters.



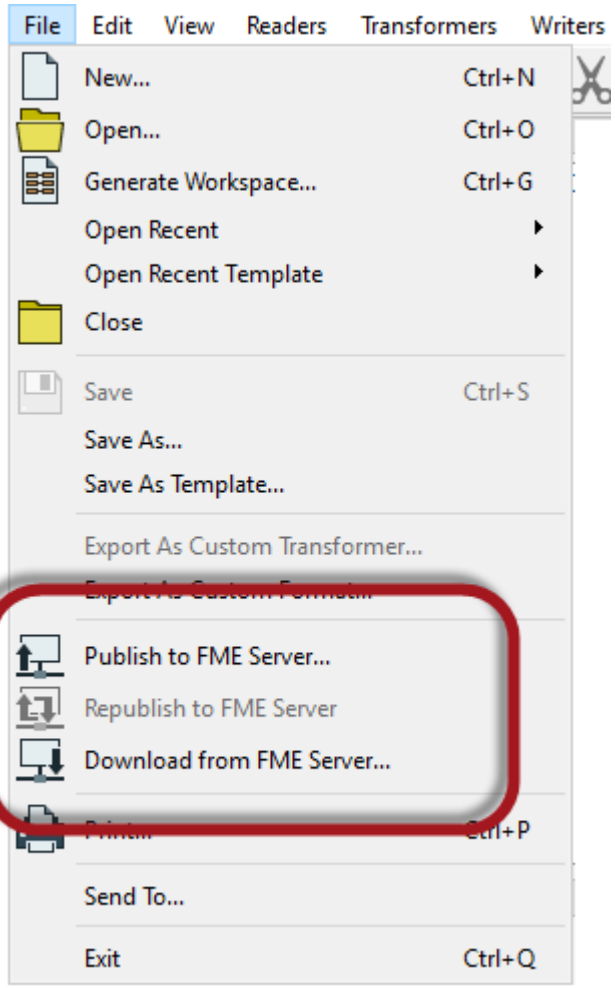
Repositories are managed by the FME Core. They can be accessed (by authors and administrators) through the FME Server Web Interface.

Security in FME Server is very important, and never more so than for repositories.

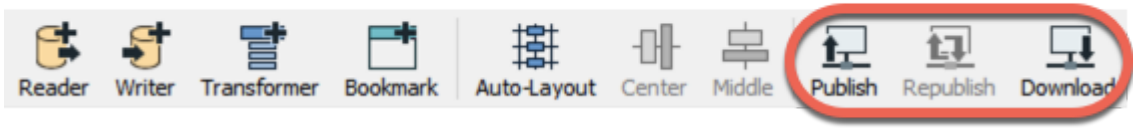
You can think of each repository as being like a folder on a file system, with the same ability to grant access rights to individuals and groups. So, for each repository you create, be sure to check the security permissions. If you don't, then end-users may not get access to the repository!

Transferring Workspaces

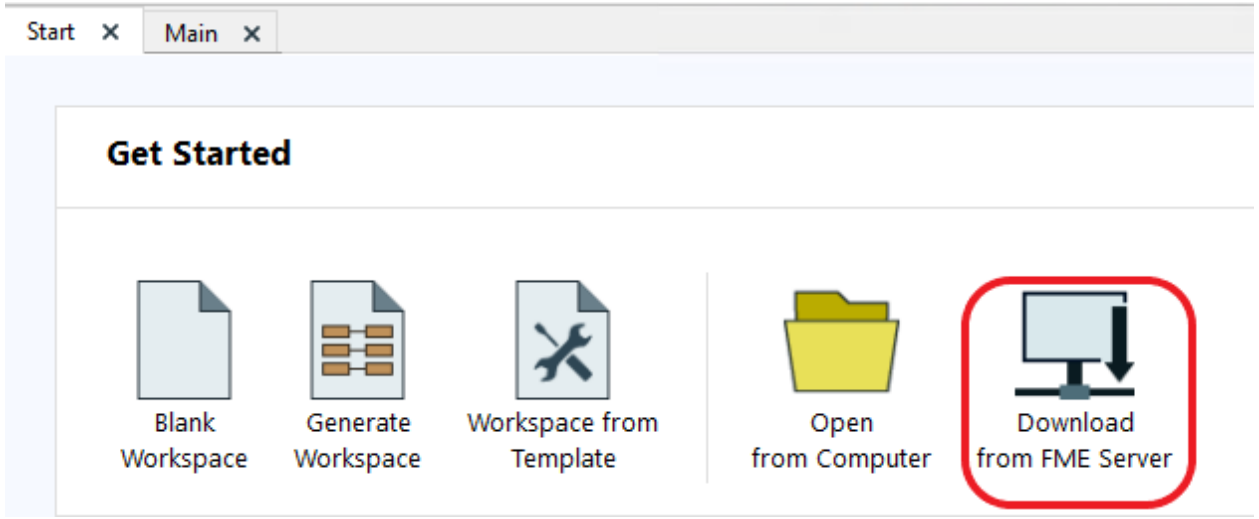
The functionality for publishing or downloading workspaces is accessed in FME Workbench either through the menubar:



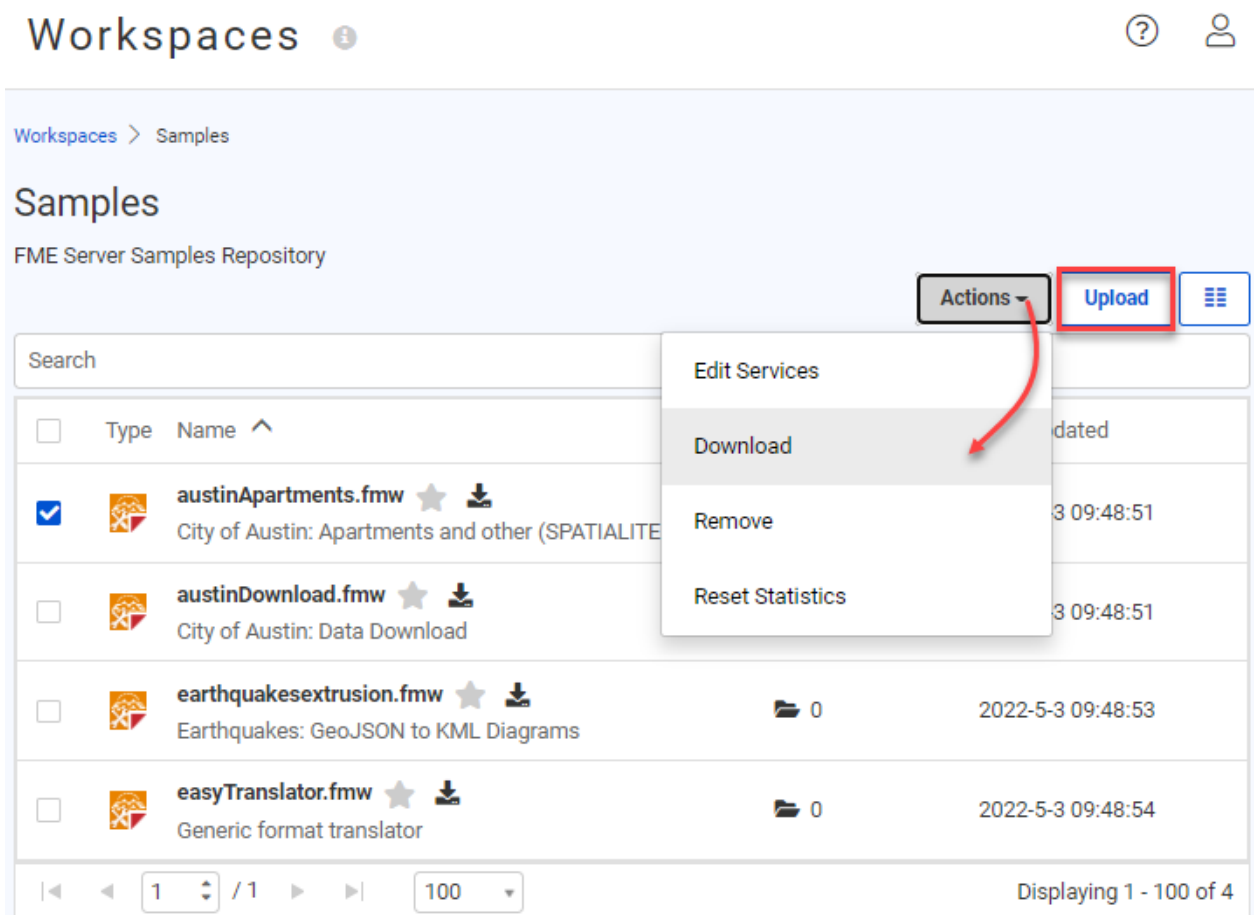
... the toolbar:



... or the Start Tab:

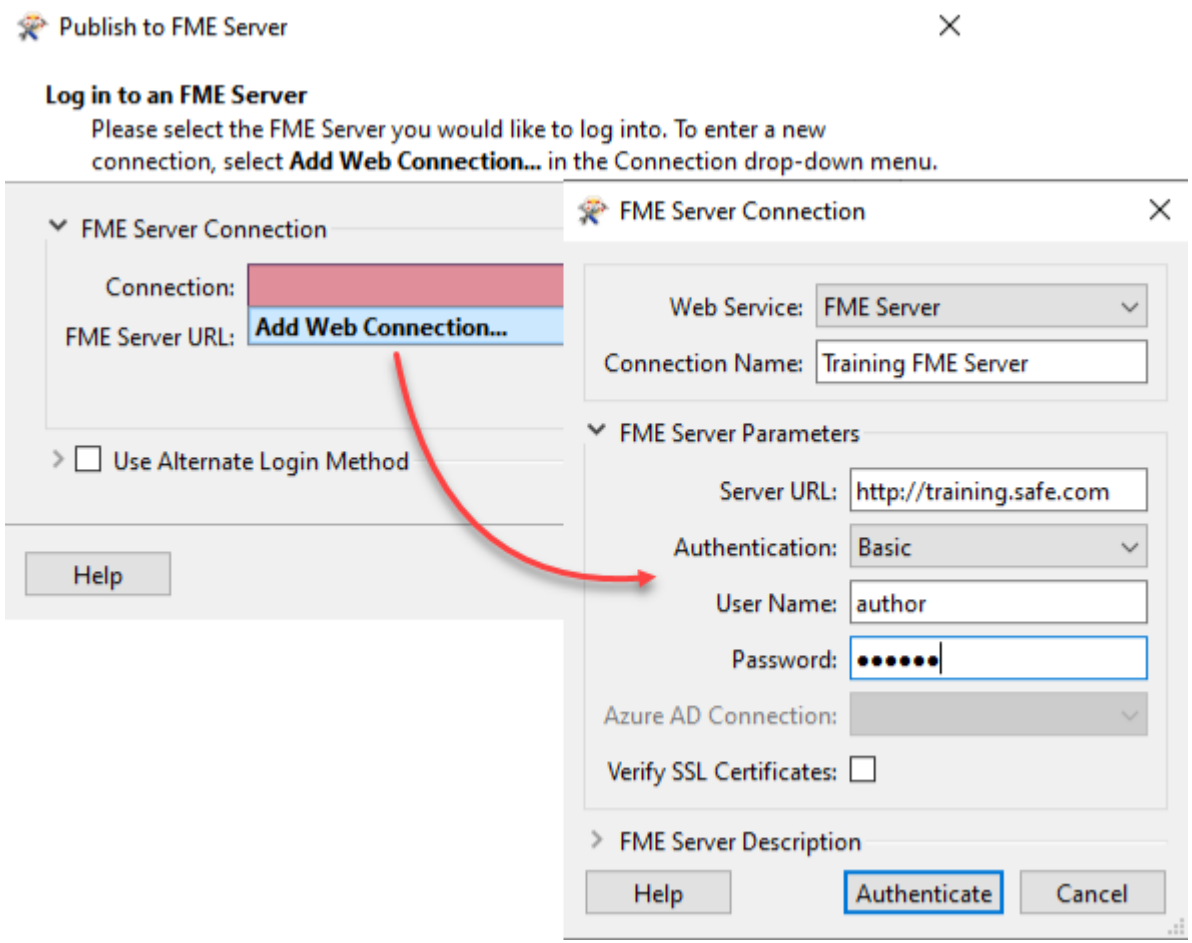


Workspaces can also be uploaded and downloaded directly through FME Server on the Workspaces page:

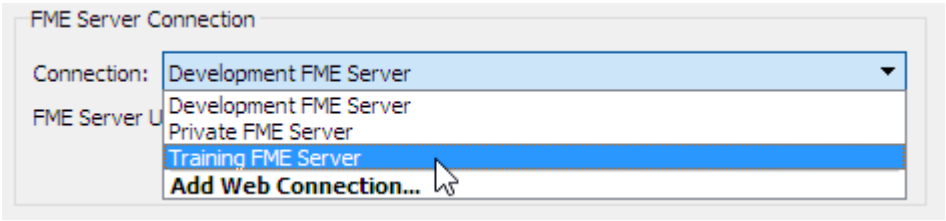


Connecting to FME Server

The Publish to FME Server tool in FME Workbench opens a simple wizard interface, the first dialog of which defines a connection to FME Server.

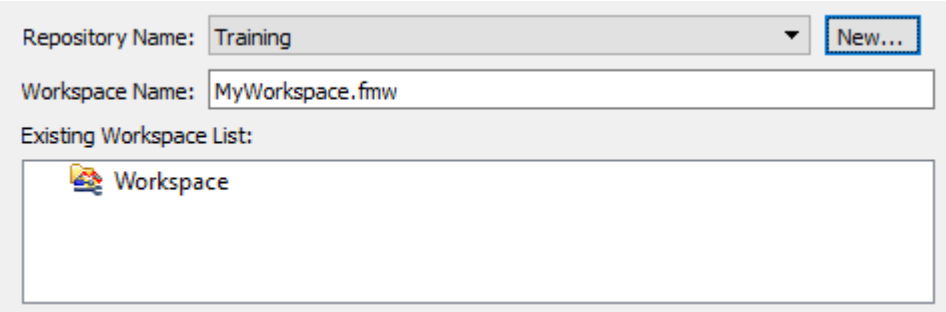


Adding a web connection opens a dialog with fields in which to define connection credentials. These connection details are saved so that they can be reused in the future simply by picking from the drop-down list:



Repository Selection

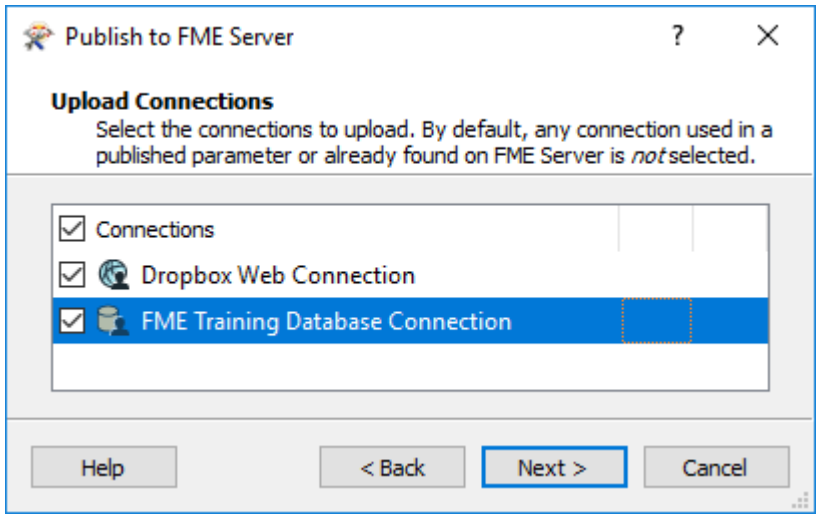
The next dialog defines the repository in which to store the workspace:



Either an existing repository can be used, or a new one created. The workspace name can also be edited, even making it different to what it is saved as locally.

Connections Upload

This dialog only appears when there are databases and/or web connections that need to be uploaded with the workspace.

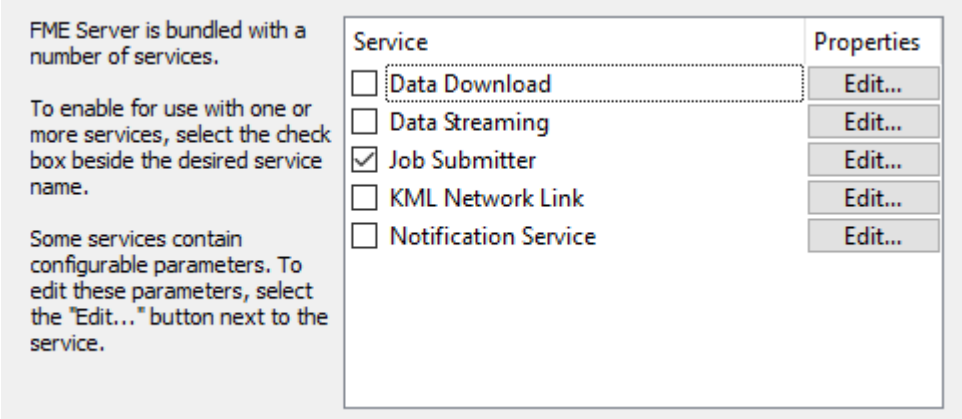


This workspace contains both a database connection and a web connection that need to be uploaded to function on FME Server. Note that the Dropbox *OAuth* web connection needs the service to be added to FME Server, and will also require additional authentication before FME Server will be able to use it.

The database connection requires no further authentication, but care must be taken not to accidentally overwrite an existing database connection with the same name that might already be defined on FME Server.

Workspace Registration

The final dialog defines which service(s) the workspace is to be registered against. A workspace may be registered for use with any number of these services.



The Job Submitter service allows FME Server to run a workspace as-is. This is the closest to running a workspace in FME Workbench. All inputs and outputs are defined in the workspace, so data is simply written out and not streamed or delivered in any other manner.

Job submission is ideal for testing workspaces, writing to databases, and for running large-scale and batch translations that make use of the server process queue.

You can learn about the other services in the Documentation or the **Methods for Running a Workflow module**.

Republishing a Workspace

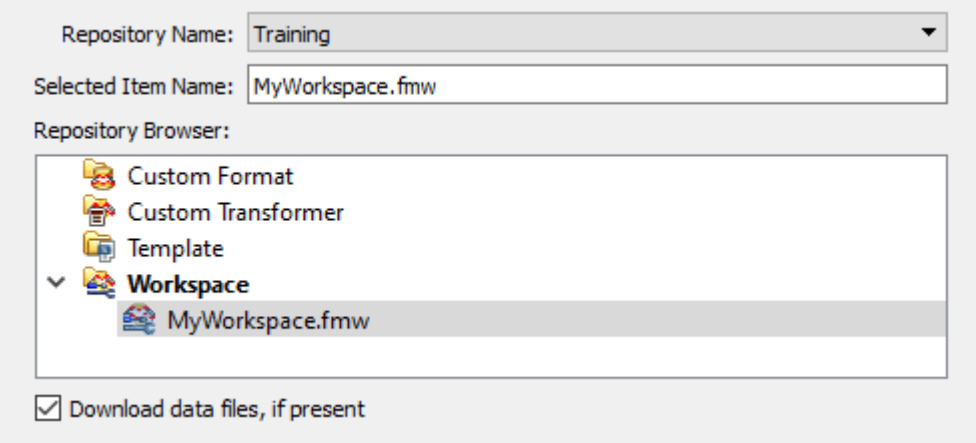
Once a workspace has been published, the republish tool becomes active. Further updates to the workspace (within the same FME Workbench session) can then be uploaded with a single click.

The same parameters are used as before. If changes need to be made to these parameters, then the full publishing wizard should be used.

Downloading a Workspace

Workbench can also download a workspace held in an FME Server repository. This is usually done in order to make edits to the workspace. Note that downloaded workspaces are copies of the original, which remains in the FME Server repository.

The downloading wizard begins with the same connection dialog as the publishing wizard. From there, the second – and final – dialog page is a repository and workspace selection tool:



The user is then prompted for a location to save the workspace. The default (on Windows) is <User>\Documents\FME\Workspaces. The workspace and any resources are then downloaded and saved to that location.

Once downloaded, the workspace is automatically opened within FME Workbench for editing.

Besides workspaces, it's also possible to publish/download FME custom transformers and custom formats to and from an FME Server repository.

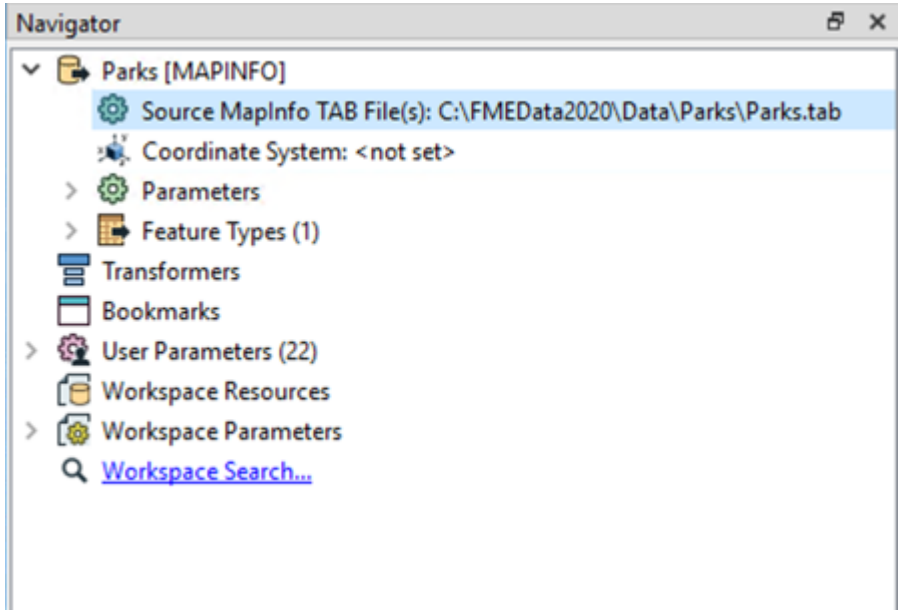
Publishing File Datasets to a Repository

When the source data for a translation is stored as files (rather than a feed or database), it is possible to publish data to an FME Server repository along with the workspace.

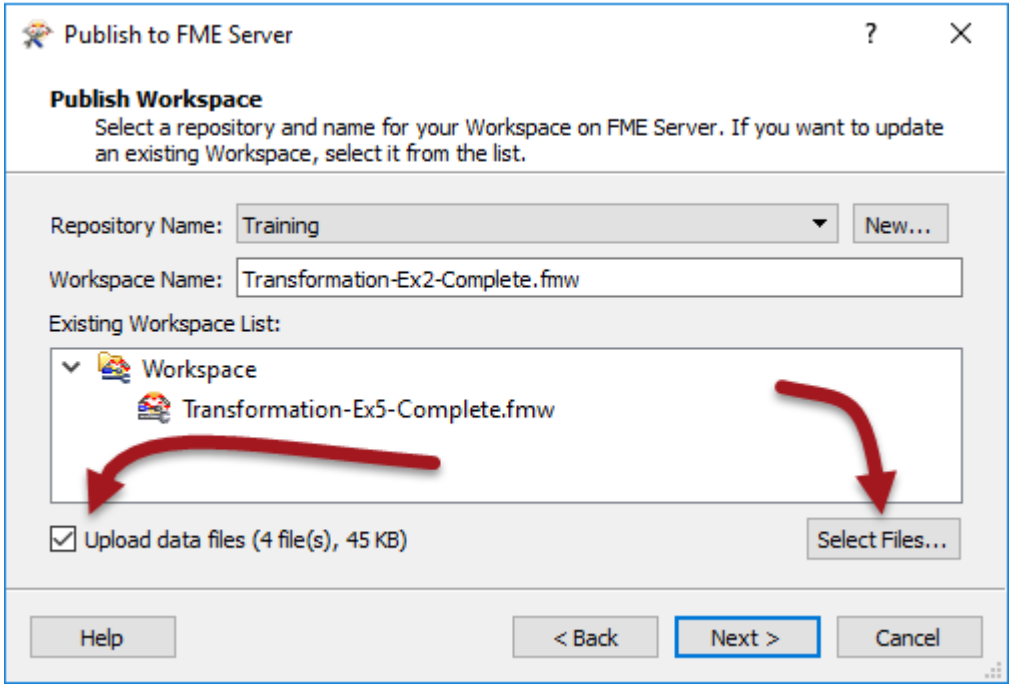
This data upload method is fast and simple but limits future access to the data. A better practice is to publish your data to the Resources folder separate from the workspace. Learn how to use the Resources folder in **the Connect Data to FME Server module.**

Publishing Source Data

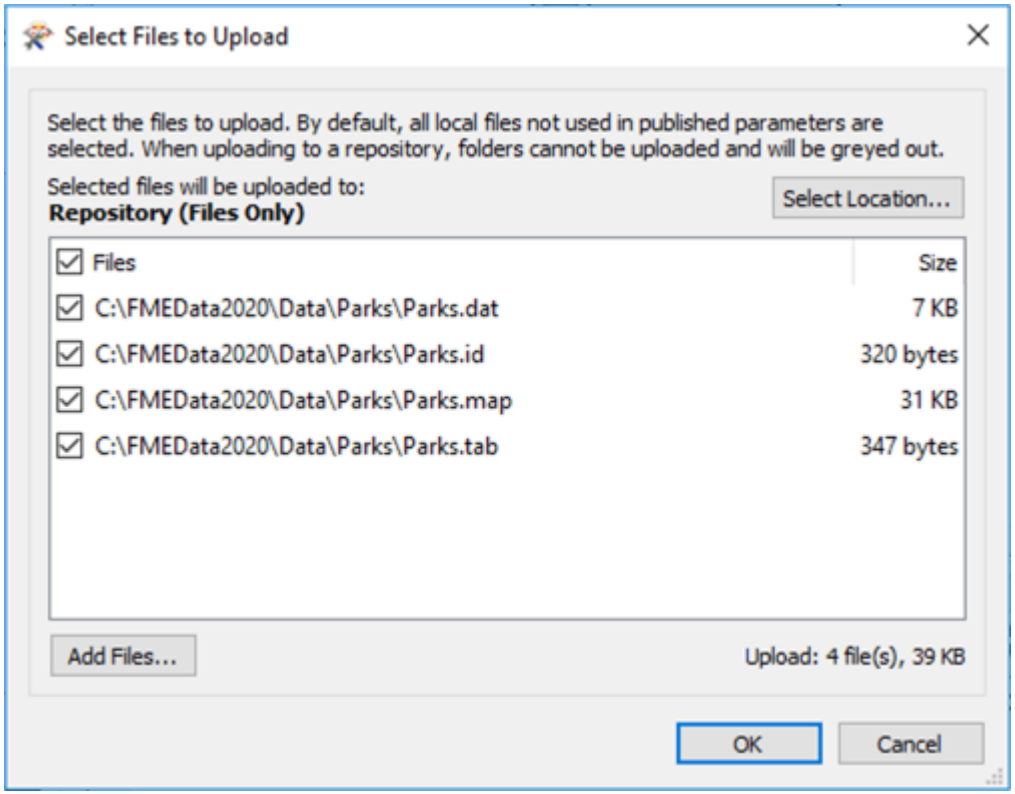
In this workspace the source dataset is MapInfo TAB:



A MapInfo TAB dataset is made up of a series of files (.tab, .dat, .id, .map). When this workspace is published the wizard allows us to publish the data files alongside it by simply checking the box labeled *Upload data files*.



FME automatically selects the files to upload based on what it thinks is necessary to run the translation. If there are other files you wish to upload, or files FME selected that you don't wish to upload, the Select Files button allows you to make changes:



This dialog also allows you to change *where* the files are published, but for now, we'll ignore that setting and go with the default of publishing to the repository.

Once the publishing wizard is complete, those files are uploaded to FME Server and tagged for use with this workspace.

Next Module: [Manage FME Server Data and Connections]