



**Intrex/M-Files Connector
User Manual**

Contents

- 1. Introduction3
- 2. Prerequisites3
 - 2.1. Intrexx3
 - 2.2. M-Files3
- 3. Integration Preparation4
 - 3.1. M-Files Vault Preparation4
- 4. Intrexx Integration Module Setup.....4
 - 4.1. General5
 - 4.2. Data Groups – Intrexx Interface.....5
 - 4.2.1. M-Files Value List Data Groups6
 - 4.2.1.1. Data Group Name6
 - 4.2.1.2. Data Group Adapter6
 - 4.2.1.3. M-Files Value List Fields7
 - 4.2.1.4. Data Group Settings8
 - 4.2.1.5. Optional data group settings8
 - 4.2.2. M-Files Documents and Objects Data Groups9
 - 4.2.2.1. Data Group Name9
 - 4.2.2.2. Data Group Adapter9
 - 4.2.2.3. M-Files Documents and Objects Fields9
 - 4.2.2.4. mfFiles Data Field Settings11
 - 4.2.2.5. Adding Your Own Data Fields12
 - 4.2.2.6. Data Group Settings13
 - 4.2.2.7. Optional data group settings13
 - 4.2.3. Authentication15
 - 4.2.4. Service Users.....15
 - 4.2.5. Expert Settings.....16
- 5. Data Groups – Editing the XML File16
 - 5.1.1. Creating New Data Groups17
 - 5.1.2. Multi-line Text Fields18
 - 5.1.3. File Fields.....18
- 6. Using the Connector Data Groups in Intrexx Applications18
 - 6.1. M-Files Vault Structure & Intrexx Data Groups18
 - 6.2. Adding Data Groups to the Application.....20
 - 6.2.1. General20
 - 6.2.1.1. Title20



- 6.2.1.2. Database connection20
- 6.2.1.3. Data handler20
- 6.2.1.4. Table / View21
- 6.2.2. Data Fields.....21
 - 6.2.2.1. File Field Settings22
- 6.2.3. References, Plugins and Handler22
- 6.2.4. Expert.....22
- 6.3. Data Group Edit Pages23
- 6.4. View Pages/Tables24
 - 6.4.1. Using Intrexx Filters24
 - 6.4.1.1. Filtering Default Fields25
- 7. Setup Checklist.....25
 - 7.1. Integration Setup.....25
 - 7.2. Application Setup25
- 8. Advice Notes25



1. Introduction

The Convergent Intrexx/M-Files connector enables an Intrexx portal to easily connect with any number of M-Files vaults via external data groups in Intrexx. It enables a live connection to all object types, documents, metadata, files and value lists with create, read, update and delete capability. This functionality has the option for a centralised user login to M-Files to enable generic, open access or user specific login to enforce M-Files based permissions and licencing as required.

2. Prerequisites

This manual only describes the setup and functions included within the Convergent connector. As such, prerequisites are as follows:

2.1. Intrexx

The Intrexx Portal Manager must be installed with an active portal running. The initial training must have been completed so that you are able to navigate and understand the Intrexx Portal Manager interface. Intrexx 19.03 patch level 13 is the minimum version supported by the connector.

Users must have a portal account with permissions to access/edit the required apps and Integration module of the portal manager.

2.2. M-Files

The connector accesses data in an M-Files vault via the M-Files REST API. Please refer to M-Files documentation for details on how to set this up.

Access to the vault structure, namely property definition properties, is required for setup. This is accessed via the M-Files Admin console.

3. Integration Preparation

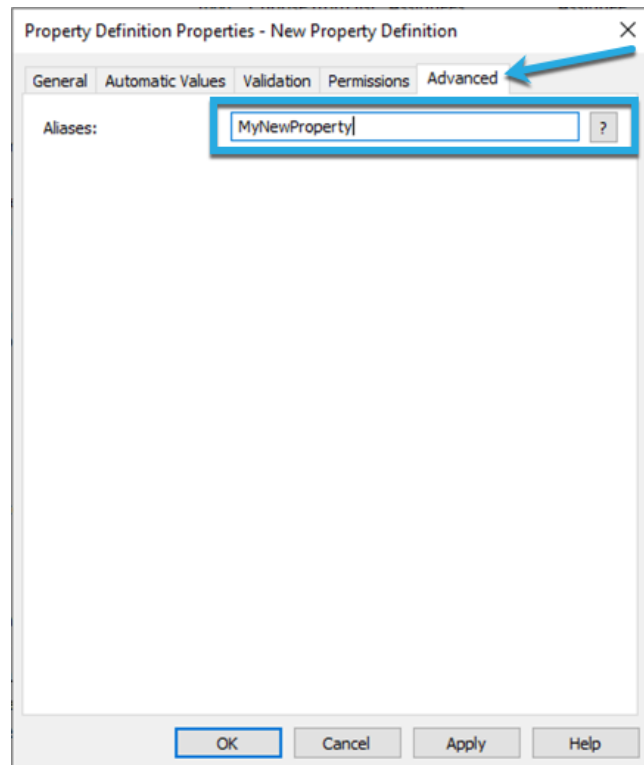
There are preparations to be made in both M-Files and Intrexx to complete the setup of the connector. You will need access to the M-Files Admin console and Intrexx Portal Manager to complete setup.

3.1. M-Files Vault Preparation

The connector utilises the semantic aliases of properties within the M-Files vault to make its connections to the properties. You must ensure that any M-Files properties that are to be used within Intrexx carry a unique semantic alias in M-Files.

This is entered on the Advanced tab of the property definition properties dialogue.

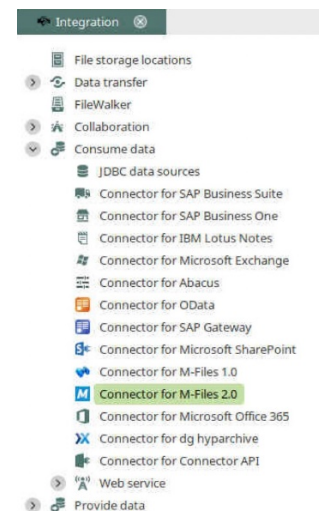
By default, M-Files version 20.4.8986.4 and above automatically creates a semantic alias with a set format and validates that aliases are unique.



4. Intrexx Integration Module Setup

To begin setup/preparation in Intrexx navigate to the Integration module in the Intrexx Portal Manager and open the 'Consume Data' section. From Intrexx 19.03 online update 18 onwards select 'Connector for M-Files 2.0' **IF ONLINE UPDATE 18 IS NOT, AND CANNOT BE INSTALLED, GO TO 'CONNECTOR FOR CONNECTOR API'** and add a new connection.

Complete each section as detailed below in the following sections.



4.1. General

Give the connection a name and description then select 'mfiles' from the Connector template dropdown and click Next.

The screenshot shows the 'New data source' dialog box with the following fields:

- Name:** MyFirstMFilesVaultConnection
- Id:** mfiles_MyFirstMFilesVaultConnection
- Description:** My first connection to an M-Files vault.
- Connector template:** mfiles
- CONNECTION TIMEOUT:** Timeout (input field), Minutes (dropdown), and Active (checkbox).

Buttons at the bottom: Next >, Cancel, Help.

If the connector template 'mfiles' is missing please download the .xml from [here](#) and then copy it into your portal directory i.e. "C:\ProgramData\intrexx\[portal name]\internal\cfg\odata\connector\template\"

4.2. Data Groups – Intrexx Interface

Two template data groups are loaded by default, one for documents/objects, the other for value lists. These provide a guide for setting up your own data groups and can be left for reference. When creating your own data groups the completed setup should be similar to these example data groups.

The screenshot shows the 'Data groups' section of the 'New data source' dialog box. It contains a table with the following data:

NAME ▲	FIELDS
[***object type name***]	[13] mfLinkWeb, mfObjectGUID, mfName, mf...
[***value list name***]	[4] mfOwnerID, mfParentID, mfName, mfID,

Buttons on the right side of the table: +, edit (pencil), and -.

M-Files Value List Data Groups

To access the value list data group, select the data group with the name [***value list name***] and click on the edit button (or double click on the data group). You will be presented with this dialogue (the blue numbers refer to the sub-sections of this manual and are not actually on the interface):

Data group settings

Data groups
Manage data groups for the Connector-API connector.

Data group name **4.2.1.1**
[***value list name***]

Data group adapter **4.2.1.2**
de.uplanet.lucy.connectorapi.mfiles.MFilesValueListAdapter

FIELDS 4.2.1.3

NAME	DATA TYPE
mfID	integer
mfName	string
mfOwnerID	integer
mfParentID	integer

DATA GROUP SETTINGS 4.2.1.4

ATTRIBUTE	VALUE
mfiles.valueList.id	[***value list id***]
mfiles.valueListOwner.id	[***value list owner id***]

Finish Cancel Help

4.2.1.1. Data Group Name

This is simply the name of the data group and should refer to the name of the value list in M-Files.

4.2.1.2. Data Group Adapter

This is the name of the value list adapter: *de.uplanet.lucy.connectorapi.mfiles.MFilesValueListAdapter*

4.2.1.3. M-Files Value List Fields

The value list adapter has four fields available for use, all fields are required.

Name	Datatype	Description
mfID	Integer	ID of the value list item - MUST BE SET AS PRIMARY KEY
mfName	String	Name of the M-Files value list item
mfOwnerID	Integer	Owner ID of the M-Files value list item
mfParentID	Integer	Parent ID of the M-Files value list item

When creating a new data group these fields will not be automatically added so you must click on the plus button in the Fields section to add them. Names must be exactly as listed in the above table, with no trailing spaces, and datatypes must match also.

mfID data field settings example – MUST BE SET AS PRIMARY KEY

The screenshot shows a 'Data group settings' dialog box. Under the 'Data field' section, the 'Field name' input contains 'mfID'. The 'Field type' dropdown is set to 'INTEGER'. The 'Primary key' checkbox is checked. At the bottom right, there are three buttons: 'Finish' (highlighted in yellow), 'Cancel', and 'Help'.

mfName data field settings example

The screenshot shows a 'Data group settings' dialog box. Under the 'Data field' section, the 'Field name' input contains 'mfName'. The 'Field type' dropdown is set to 'STRING'. The 'Primary key' checkbox is unchecked. At the bottom right, there are three buttons: 'Finish' (highlighted in yellow), 'Cancel', and 'Help'.

4.2.1.4. Data Group Settings

Attribute	Example Value	Description
mfiles.valueList.id	8	M-Files ID of the value list – REQUIRED

4.2.1.5. Optional data group settings

Attribute	Example Value	Description
mfiles.impersonation.guid	7312F993D0DA4CECCA9AE5A9D865BE142DE413EA	GUID of the Intrexx user to be used for authentication
mfiles.valueListOwner.id	7	The ID of the owner of the value list

Once the above settings are applied the data group can be saved by clicking Finish.

M-Files Documents and Objects Data Groups

To access the document/object data group, select the data group with the name [***object type name***] and click on the edit button (or double click on the data group). You will be presented with this dialogue (the blue numbers refer to the sub-sections of this manual and are not actually on the interface):

Data groups
Manage data groups for the Connector-API connector.

Data group name **4.2.2.1**
[***object type name***]

Data group adapter **4.2.2.2**
de.uplanet.lucy.connectorapi.mfiles.MFilesObjectAdapter

FIELDS 4.2.2.3

NAME	DATA TYPE
mfCreated 4.2.2.4	datetime
mfFiles	file
mfIsTemplate	boolean
mfLastMod	datetime
mfLinkDesktop	string
mfLinkWeb	string
mfName	string
mfObjectGUID	string
mfObjectID	integer
mfStateID	integer
mfStateName	string
mfWorkflowID	integer
mfWorkflowName	string

DATA GROUP SETTINGS 4.2.2.6

ATTRIBUTE	VALUE
mfiles.class.id	[***class id***]
mfiles.limit	[***return limit override***]
mfiles.objType.id	[***object type id***]

Finish Cancel Help

4.2.1.6. Data Group Name

This is simply the name of the data group and should refer to the name of the object type in M-Files. Documents can be further filtered by class ID in the data group settings so a name based on the class may be more relevant.

4.2.1.7. Data Group Adapter

This is the name of the value list adapter: *de.uplanet.lucy.connectorapi.mfiles.MFilesObjectAdapter*

4.2.1.8. M-Files Documents and Objects Fields

The object adapter has a number of default fields available for use, required fields are marked in the description.

Name	Datatype	Description
mfCreated	DATETIME	M-Files date created
mfFiles	FILE	This will require extra setup within the data group
mfIsTemplate	BOOLEAN	M-Files 'Is Template' property
mfLastMod	DATETIME	M-Files last modified date
mfLinkDesktop	STRING	Desktop link to the object – <i>Requires mfObjectGUID if used</i>
mfLinkWeb	STRING	Web link to the object – <i>Requires mfObjectGUID if used</i>
mfName	STRING	Default M-Files name property (ID: 0)
mfObjectGUID	STRING	M-Files object GUID – <i>Required by mfLinkDesktop & mfLinkWeb</i>
mfObjectID	INTEGER	M-Files internal object ID, must be set as Primary Key - REQUIRED
mfStateID	INTEGER	M-Files state ID of the object
mfStateName	STRING	M-Files state name of the object
mfWorkflowID	INTEGER	M-Files workflow ID of the object
mfWorkflowName	STRING	M-Files workflow name of the object

When creating a new data group these fields will not be automatically added so you must click on the plus button in the Fields section to add the ones you require. Names must be exactly as listed in the above table, with no trailing spaces and datatypes must match.

The screenshot shows a window titled "Data group settings" with a close button (X) in the top right corner. Below the title bar is a section labeled "Data field". Under this section, there are three input fields: "Field name" containing "mfObjectID", "Field type" set to "INTEGER" with a dropdown arrow, and a checked checkbox labeled "Primary key". At the bottom right of the window, there are three buttons: "Finish" (highlighted in yellow), "Cancel", and "Help".

mfObjectID data field settings example – MUST BE SET AS PRIMARY KEY

Data group settings

Data field

Field name
mfName

Field type
STRING

Primary key

Finish Cancel Help

mfName data field settings example

4.2.1.9. mfFiles Data Field Settings

The mfFiles field handles any files that are included in the object in M-Files including the Documents object and any other object type that can have files (as set in M-Files Admin console). Adding and deleting files is supported so please be aware of this when building applications to ensure that Intrexx users are not given the opportunity to delete files where it is not wanted. Multiple file adding/deleting is also supported.

This field requires an extra setting in the form of a File Adapter Class, when data type FILE is selected File Field Settings appear allowing the File adapter class to be set as:

de.uplanet.lucy.connectorapi.mfiles.MFilesFileAdapter

Data group settings

Data field

Field name
mfFiles

Field type
FILE

Primary key

FILE FIELD SETTINGS

File adapter class
de.uplanet.lucy.connectorapi.mfiles.MFilesFileAdapter

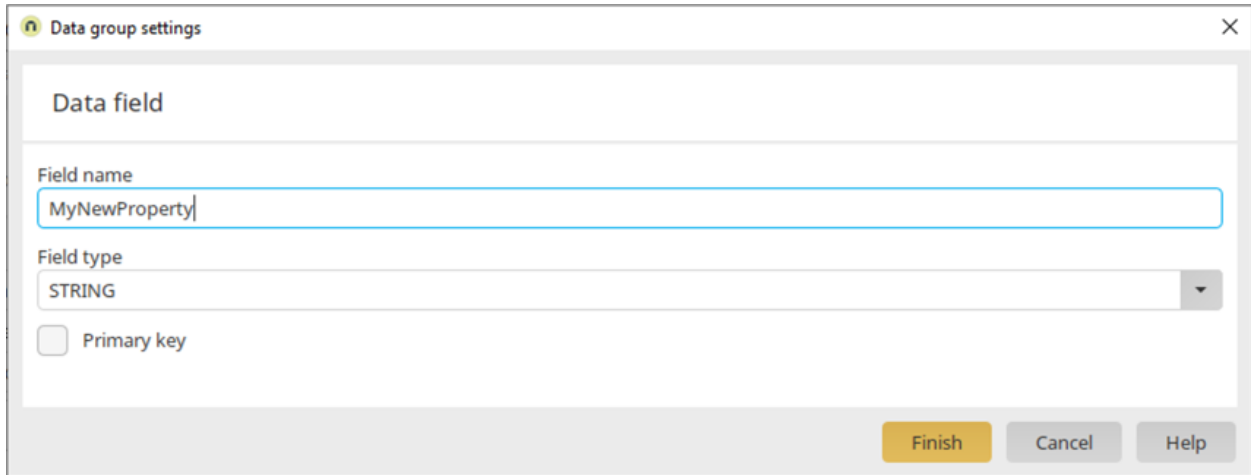
ATTRIBUTE	VALUE

Finish Cancel Help

No other settings are required in the File Field Settings section.

4.2.1.10. Adding Your Own Data Fields

Any other fields can be added by clicking on the plus button in the Data Fields section, ensuring that the name of the data field corresponds to an M-Files property semantic alias – again be careful of trailing spaces. The example below reflects the property displayed earlier in this manual.



The screenshot shows a dialog box titled "Data group settings" with a close button (X) in the top right corner. The main heading is "Data field". Below this, there are three input fields: "Field name" containing "MyNewProperty", "Field type" set to "STRING" with a dropdown arrow, and a "Primary key" checkbox which is unchecked. At the bottom right, there are three buttons: "Finish" (highlighted in yellow), "Cancel", and "Help".

The datatype must match the following:

M-Files Datatype	Intrexx Datatype	Comments
Text	STRING	
Text (multi-line)	TEXT	Currently this can only be added while editing the XML directly so initially set it as STRING and then amend it in the XML (See section 5. Data Groups - Editing the XML File for more details)
Choose from list	INTEGER or STRING	INTEGER will take the ID meaning that you can reference the related data group for additional properties and STRING will simply take the display value
Choose from list (multi-select)	STRING	**Full support for multi-select fields is available from 21.03 OU5**
Date	DATETIME	
Time	DATETIME	
Timestamp	DATETIME	
Number (integer)	INTEGER	
Number (real)	DOUBLE	
Boolean (yes/no)	BOOLEAN	

4.2.1.11. Data Group Settings

Attribute	Example Value	Description
mfiles.objType.id	101	ID of the object type in M-Files
mfiles.class.id	2	ID of the class in M-Files

4.2.1.12. Optional data group settings

Attribute	Example Value	Description
mfiles.view.name	V103/V120/V128	ID of the view when accessed via the web interface
mfiles.limit	600	Overrides the M-Files default of 500 per REST API call. LIMIT CANNOT EXCEED 1000

mfiles.impersonation.guid	7312F993D0DA4CECCA9AE5A9D865BE142DE413EA	GUID of the Intrexx user to be used for authentication
---------------------------	--	--

4.2.2. Authentication

Authentication must be set to HTTP_BASIC.

New data source

Authentication
Manage the authentication settings, for the connector API connector.

Authentication type

HTTP_BASIC

< Back Next > Cancel Help

4.2.3. Service Users

Adding a service user will allow for generic login. The user selected here will only be used if there is no impersonation user included in the data group settings. If you require user specific login then do not add impersonation settings to the data group or connection so that M-Files credentials are requested during runtime. To add a generic user, click on the plus button and complete the subsequent dialogue.

User selection

Assignment of an Intrexx user to an external login

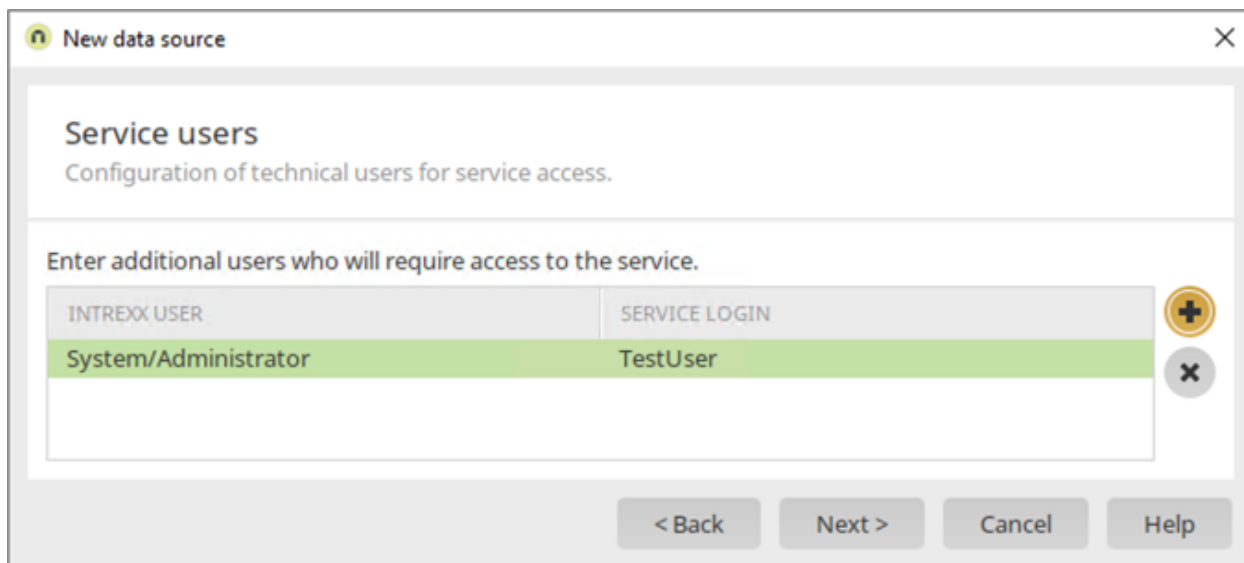
Intrexx user
System/Administrator

Client ID
TestUser

Client secret
TestUserPassword

Scope
mfiles

Finish Cancel Help



4.2.4. Expert Settings

Add the vault GUID and REST URL to the expert settings along with the impersonation GUID if applicable:

Attribute	Example Value	Description
mfiles.vault.guid	{00000000-0000-0000-0000-000000000000}	M-Files vault GUID
mfiles.rest.url	https://dnsalias.domain.com/REST	M-Files server REST URL
mfiles.impersonation.guid	7312F993D0DA4CECCA9AE5A9D865BE142DE413EA	GUID of the Intrexx user to be used for authentication

THE IMPERSONATION GUID IS ONLY REQUIRED IF GENERIC ACCESS IS REQUIRED RATHER THAN USER SPECIFIC LOGIN AT RUNTIME.

5. Data Groups – Editing the XML File

If you are comfortable with editing XML, then you can edit the file directly once you have performed the initial creation via the user interface. This allows for quick and easy copy and paste functions to quickly create multiple data groups.

The XML file is in the portal’s root folder which by default is usually `C:\ProgramData\intrexx\[portal_name]\internal\cfg\odata\connector\` although server/installation specific settings may affect the location. The file name in this example is `mfiles_myfirstmfilesvaultconnection.xml`. Open the file in your preferred editor application, for this manual we have used Notepad++.

ONLY EDIT THIS FILE IF YOU ARE COMFORTABLE WORKING IN XML AS IT IS VERY EASY TO ‘BREAK’ IT. ANY EDITS MADE IN THE XML DIRECTLY, REQUIRE THE PORTAL SERVICE TO BE RESTARTED FOR THEM TO SHOW IN THE PORTAL MANAGER INTERFACE.

5.1.1. Creating New Data Groups

The easiest approach here is to copy/paste an existing data group making sure to include the data group opening and closing tag as shown in the following images.

```

46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
<settings>
  <setting key "mfiles.objType.id" value "[**object type id**]" />
  <setting key "connector.dataGroup.adapter.class" value "de.uplanet.lucy.connectorapi.examples.mfiles.MFilesObjectAdapter" />
  <setting key "mfiles.class.id" value "[**class id**]" />
</settings>
</dataGroup>
<dataGroup name "[**value list name**]">
  <fields>
    <field name "mfOwnerId" typeName "integer" primaryKey "false" foreignKey "false">
      <settings />
    </field>
    <field name "mfParentID" typeName "integer" primaryKey "false" foreignKey "false">
      <settings />
    </field>
    <field name "mfName" typeName "string" primaryKey "false" foreignKey "false">
      <settings />
    </field>
    <field name "mfID" typeName "integer" primaryKey "true" foreignKey "false">
      <settings />
    </field>
  </fields>
  <settings>
    <setting key "mfiles.valueListID" value "[**value list id**]" />
    <setting key "connector.dataGroup.adapter.class" value "de.uplanet.lucy.connectorapi.examples.mfiles.MFilesValueListAdapter" />
  </settings>
</dataGroup>
</dataGroups>

```

```

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
<connector>
  <guid>3D5A227585AF16307C259B9A0ABAC7D1DBA35B7C</guid>
  <name>MyFirstMFilesVaultConnection</name>
  <description></description>
  <connectorId>mfiles</connectorId>
  <properties>
    <property name "serviceTimeout" value "0" description "" />
    <property name "connector.auth.type" value "HTTP_BASIC" description "" />
  </properties>
  <metaData>
    <dataGroups>
      <dataGroup name "[**object type name**]">
        <fields>
          <field name "mfLinkWeb" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfObjectGUID" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfName" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfLinkDesktop" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfWorkflowID" typeName "integer" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfObjectID" typeName "integer" primaryKey "true" foreignKey "false">
            <settings />
          </field>
          <field name "mfStateID" typeName "integer" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfWorkflowName" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfStateName" typeName "string" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          <field name "mfFiles" typeName "file" primaryKey "false" foreignKey "false">
            <settings />
          </field>
        </fields>
        <settings>
          <setting key "mfiles.objType.id" value "[**object type id**]" />
          <setting key "connector.dataGroup.adapter.class" value "de.uplanet.lucy.connectorapi.examples.mfiles.MFilesObjectAdapter" />
          <setting key "mfiles.class.id" value "[**class id**]" />
        </settings>
      </dataGroup>
      <dataGroup name "[**value list name**]">
        <fields>
          <field name "mfOwnerId" typeName "integer" primaryKey "false" foreignKey "false">
            <settings />
          </field>
          ...

```

Once you have copied the data group, you can rename it, amend the settings for IDs and add any other fields required. This method is particularly useful for applying the default fields to a new data group.



5.1.2. Multi-line Text Fields

To accommodate M-Files multi-line text fields you need to assign “text” to the typeName attribute of the relevant field.

5.1.3. File Fields

If a file field is added directly to the XML file then you must add the File Adapter Class in the normal interface as per the [mfFiles Data Field Settings](#) section of this manual.

6. Using the Connector Data Groups in Intrexx Applications

Once the above steps have been completed it is possible to begin using M-Files data in Intrexx applications. This chapter will demonstrate using multiple data groups, both objects and value lists, from M-Files to create a simple annual leave request application that shows existing requests for the user and allows creation of new requests that are immediately posted to M-Files.

6.1. M-Files Vault Structure & Intrexx Data Groups

To demonstrate the relationship between M-Files and Intrexx, the M-Files vault structure used along with the corresponding Intrexx integration data groups is detailed in the following images.

M-Files Vault Structure	Intrexx Data Group						
<ul style="list-style-type: none"> ▼ Leave Request <ul style="list-style-type: none"> ▼ Annual Leave Request <ul style="list-style-type: none"> ⇒ Leave Title ⇒ Employee ⇒ First Day of Leave ⇒ First Day Duration ⇒ Last Day of Leave ⇒ Last Day Duration ⇒ Total Days Requested ⇒ Supervisor ⇒ Comments ⇒ Intrexx User Name 	<p>DATA GROUP SETTINGS</p> <table border="1"> <thead> <tr> <th>ATTRIBUTE</th> <th>VALUE</th> </tr> </thead> <tbody> <tr> <td>mfiles.class.id</td> <td>9</td> </tr> <tr> <td>mfiles.objType.id</td> <td>108</td> </tr> </tbody> </table>	ATTRIBUTE	VALUE	mfiles.class.id	9	mfiles.objType.id	108
ATTRIBUTE	VALUE						
mfiles.class.id	9						
mfiles.objType.id	108						

Personnel

- > External Personnel
- > Personnel
 - ⇒ Full Name
 - ⇒ Personnel Type
 - ⇒ First Name
 - ⇒ Last Name
 - ⇒ Mobile (Home-private)
 - ⇒ Email (Home-private)
 - ⇒ Address 1 (private)
 - ⇒ Address 2 (private)
 - ⇒ Address 3 (private)
 - ⇒ Town (private)
 - ⇒ County (private)
 - ⇒ Country (private)
 - ⇒ Interview Date
 - ⇒ Interview Time
 - ⇒ Related Sensitive Data
 - ⇒ Email (Work)
 - ⇒ Mobile (Work)
 - ⇒ Sage ID
 - ⇒ Clock-In ID
 - ⇒ Position
 - ⇒ M-Files User Account
 - ⇒ Intrexx User Name

Data group settings

Data groups
Manage data groups for the Connector-API connector.

Data group name

Data group adapter

FIELDS	
NAME	DATA TYPE
EmailWork	string
FirstName	string
FullName	string
IntrexxUserName	string
LastName	string
m fName	string
m fObjectID	integer

DATA GROUP SETTINGS	
ATTRIBUTE	VALUE
mfiles.class.id	13
mfiles.objType.id	101
mfiles.view.name	V103/V120/V119

NOTE: ONLY FIELDS THAT ARE REQUIRED FOR USE IN INTREXX NEED TO BE ADDED AND THE MFILES.VIEW.NAME SETTING POINTS TO A VIEW OF PERSONNEL WHERE PERSONNEL TYPE = EMPLOYEE.

Leave Day Durations 129 Internal Yes

Value List Contents - Leave Day Durations

Name	ID	Permissions
All Day	1	Custom
AM Only	2	Custom
PM Only	3	Custom

Show deleted values

Data group settings

Data groups
Manage data groups for the Connector-API connector.

Data group name

Data group adapter

FIELDS	
NAME	DATA TYPE
m fID	integer
m fName	string
m fOwnerID	integer
m fParentID	integer

DATA GROUP SETTINGS	
ATTRIBUTE	VAL...
mfiles.valueListID	129

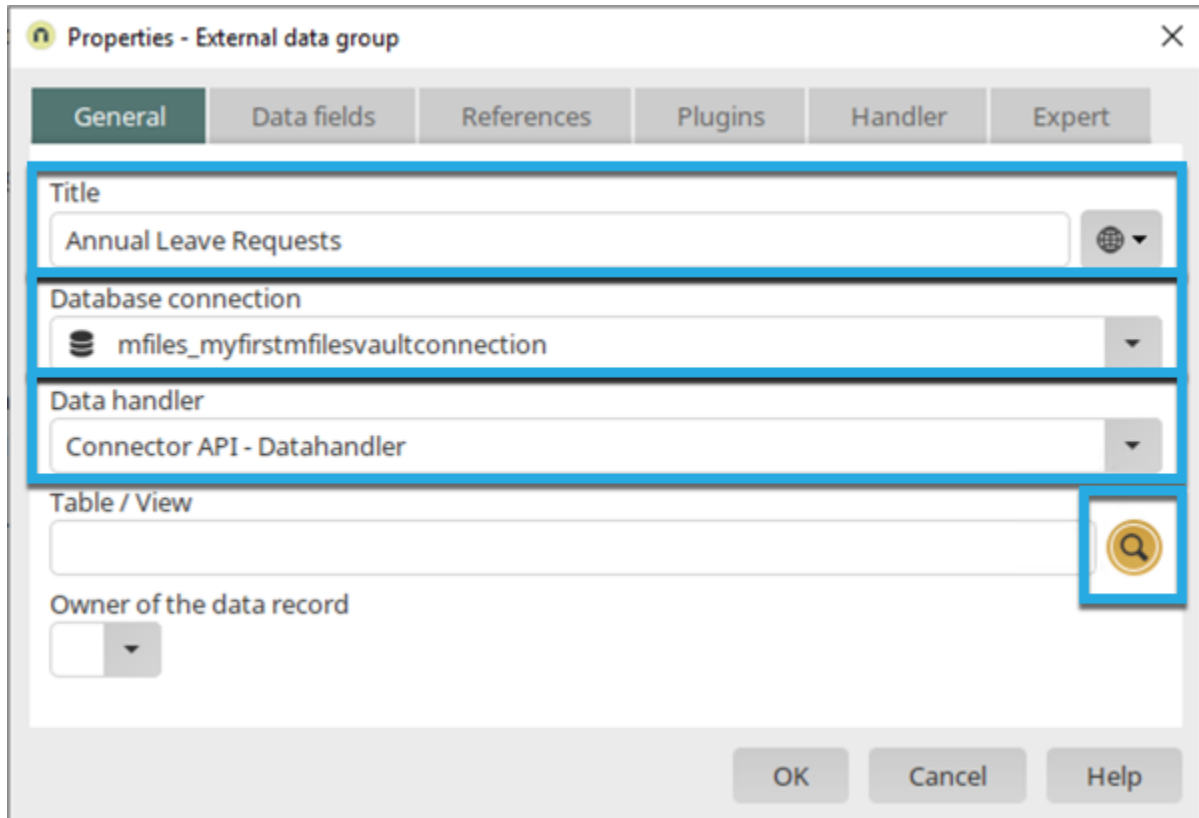
6.2. Adding Data Groups to the Application

To begin using the M-Files data in Intrexx first open/create an application.

FOR DEMONSTRATION PURPOSES THIS MANUAL FOLLOWS THE SETUP OF A NEW EMPTY APPLICATION WITH THE INITIAL INTERNAL DATA GROUP REMOVED.

Create a new External Data Group in the application.

6.2.1. General



The screenshot shows a dialog box titled "Properties - External data group" with a close button (X) in the top right corner. The dialog has six tabs: "General" (selected), "Data fields", "References", "Plugins", "Handler", and "Expert". The "General" tab contains the following fields:

- Title:** A text input field containing "Annual Leave Requests" and a globe icon with a dropdown arrow.
- Database connection:** A dropdown menu showing "mfiles_myfirstmfilesvaultconnection".
- Data handler:** A dropdown menu showing "Connector API - Datahandler".
- Table / View:** An empty text input field with a magnifying glass icon on the right.
- Owner of the data record:** A dropdown menu with an empty selection.

At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

6.2.1.1. Title

Enter a name for your data group.

6.2.1.2. Database connection

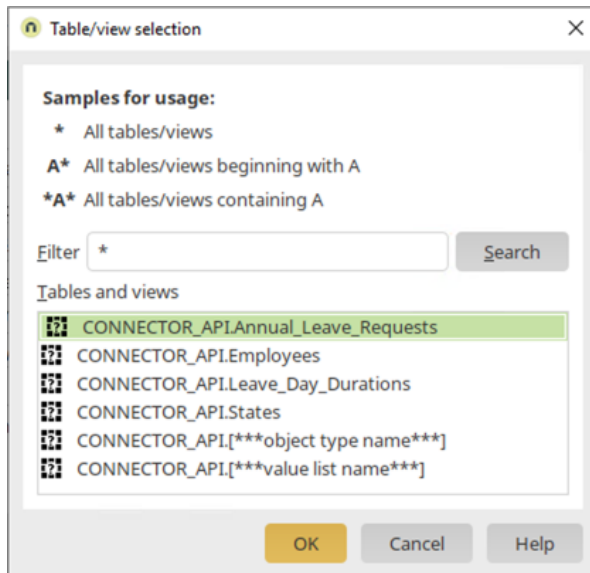
Select your M-Files connection as setup in steps 1 to 5.

6.2.1.3. Data handler

Select Connector API – Datahandler.

6.2.1.4. Table / View

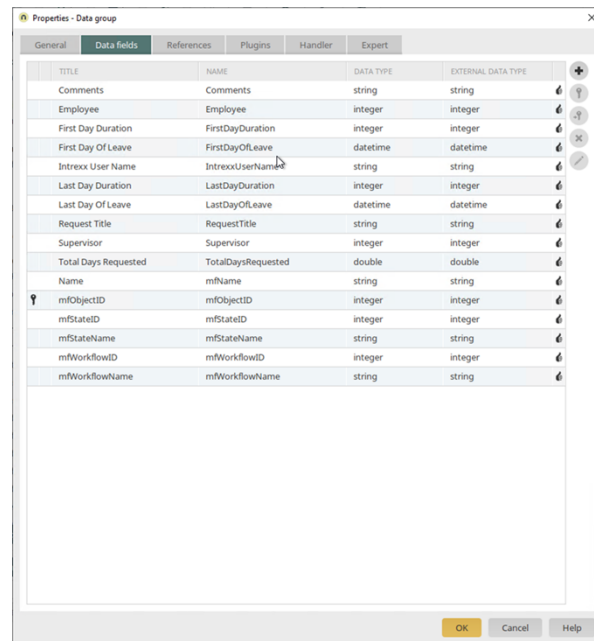
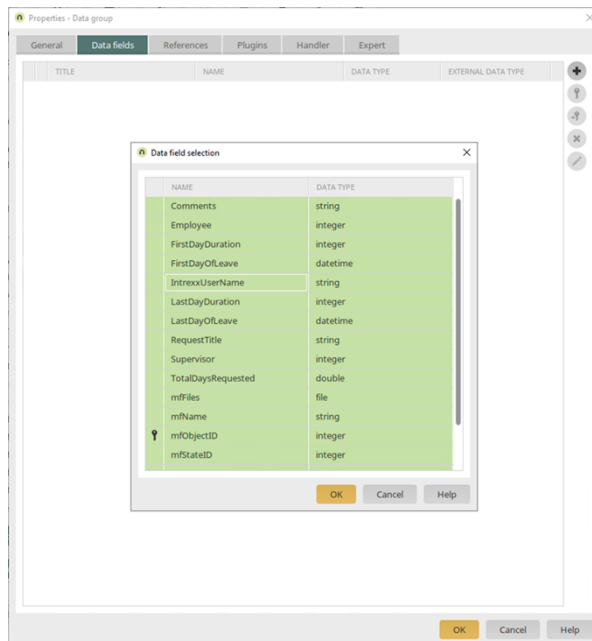
Click on the magnifying glass button.



Enter an asterisk (*) in the Filter box and click Search, then select the relevant table for the data group being created.

6.2.2. Data Fields

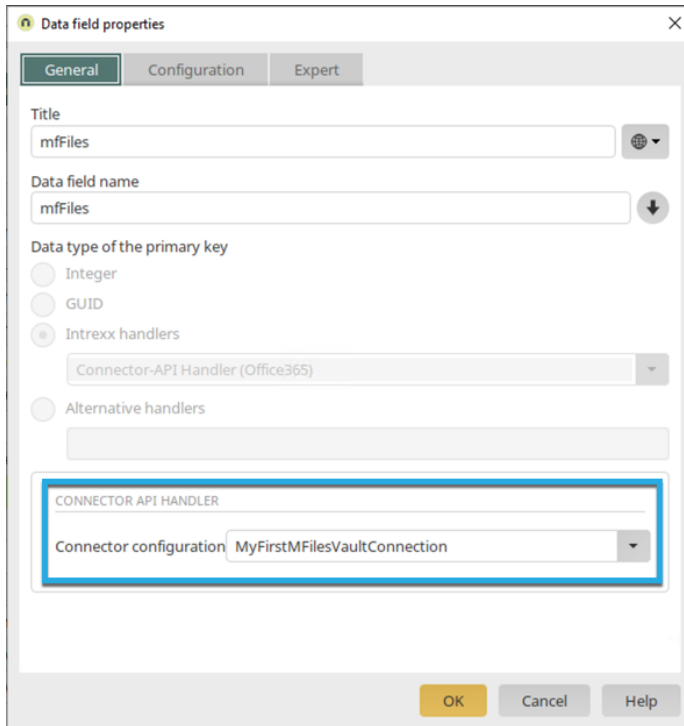
Click the plus button, select all fields and click OK.



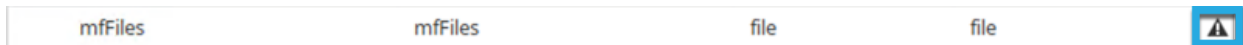
IT IS ADVISABLE TO CHANGE THE TITLES OF THE FIELDS TO REFLECT THE PREFERRED LABEL FORMAT BUT DO NOT CHANGE THE DATA FIELD NAME.

6.2.2.1. File Field Settings

The mfFiles field also requires confirmation of the connector configuration to use. Edit the mfFiles field while in the Data Fields tab by double clicking on it and select the relevant configuration.



A warning triangle may persist on the Data Fields dialogue however if the above steps have been followed then this can be ignored.

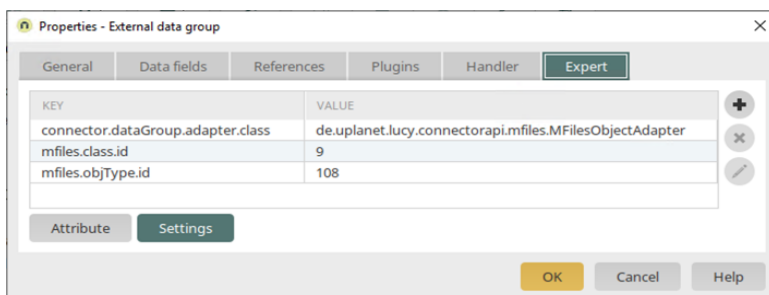


6.2.3. References, Plugins and Handler

No settings are required in these tabs for normal setup.

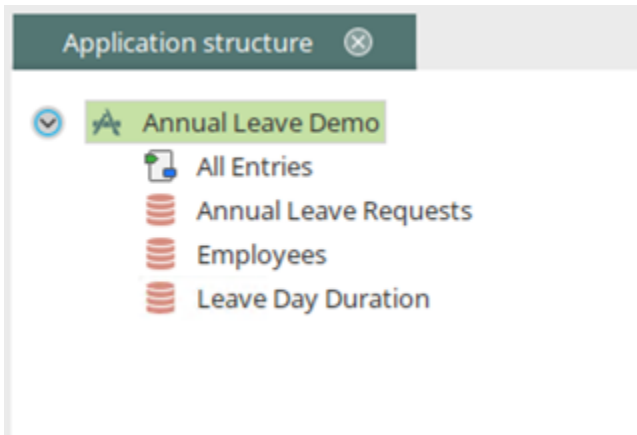
6.2.4. Expert

Settings from the data group setup in the Integration module automatically populate in the new external data group.



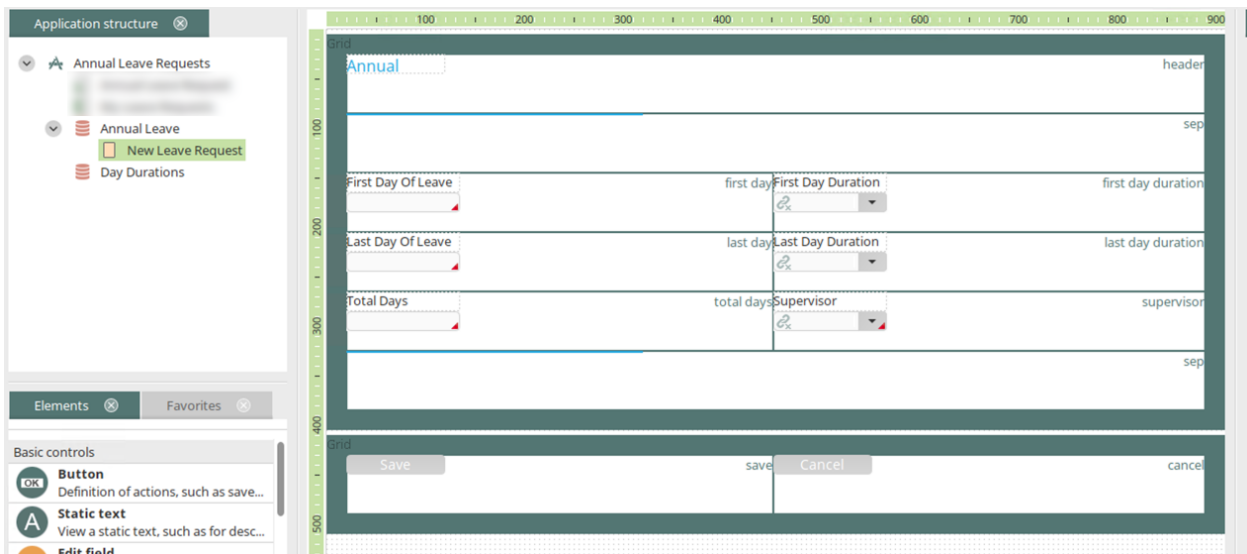
IF CHANGES ARE MADE IN THE INTEGRATION MODULE AFTER APPLICATIONS HAVE BEEN PUBLISHED, ALL APPLICATIONS USING THE EDITED INTEGRATION DATA GROUP MUST BE REPUBLISHED.

Repeat the above for the other data groups listed at the beginning of this section.



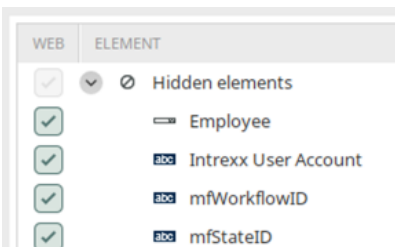
6.3. Data Group Edit Pages

Create a new edit page for the data group.



In this example the duration dropdown boxes are populated with values from the Leave Day Duration data group and the supervisor dropdown is populated from the Employees data group.

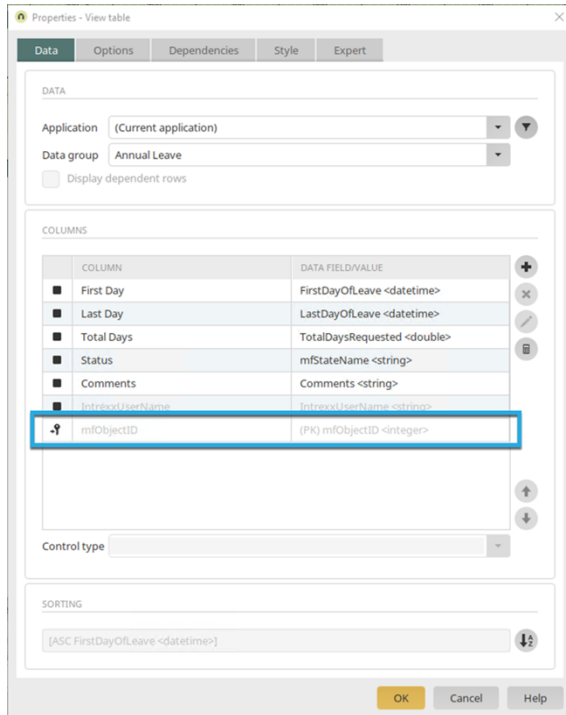
There are also default values populated in the Hidden area of the page.



*Employee defaults to the employee object with the current Intrexx users Username
Intrexx User Account defaults to the current users Username – this enables easy filtering based on portal login. VAULT STRUCTURE WILL DICTATE WHICH IS THE BEST WAY TO ACHIEVE THIS.*

6.4. View Pages/Tables

When using view pages/tables mfObjectID must be included but this can be hidden if preferred.



6.4.1. Using Intrexx Filters

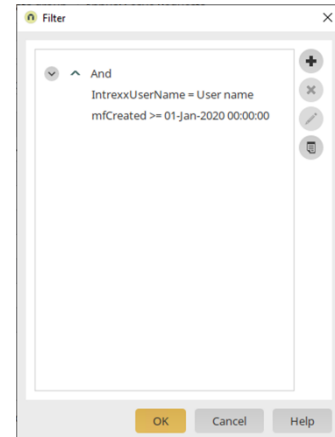
Intrexx filters can be applied to further filter the data before M-Files is polled. All fields created using a semantic alias can be used within a filter and filters can also be stacked so you can use as many as you need to fine tune the amount of data brought forward. If using a lookup field within an Intrexx filter then you must ensure that you use the index (integer) value rather than the display (string) value as M-Files does not support searching based on a lookup display value. *Any M-Files properties used for filtering must have the 'Allow searching for objects by this property' option checked in M-Files Admin.*

Filtering Default Fields

The following default fields support Intrexx filtering:

- mfCreated
- mflsTemplate
- mfLastMod
- mfName
- mfWorkflowID
- mfStateID

Fields used in filters must be added to the page/element the filter is applied to. In view tables these fields can be hidden if preferred.



7. Setup Checklist

7.1. Integration Setup

- Correct Intrexx version installed
- M-Files server setup for REST API access
- All M-Files properties include a unique semantic alias
- Intrexx integration data groups setup with required data fields (correct template/adaptor used)
- Multiline text fields typeName changed in the XML to 'text'
- Additional settings added to mfFiles field if used
- Data field names match M-Files semantic aliases (no trailing spaces where not wanted)
- All additional data group settings added (value lists and documents/objects use different adaptors)
- Authentication set to HTTP_BASIC
- Service user added with authentication credentials (optional)
- Vault GUID and REST URL added to Expert Settings of connection with Impersonation GUID if applicable

7.2. Application Setup

- Data group connection setup correctly
- Fields added to data group
- mfFiles field API handler added
- mfObjectID added to all pages/elements calling data
- Fields included in Intrexx filters must be included in elements using the filter
- If lookup fields are used in filters, the integer value must be used

8. Advice Notes

Each element will only present up to 1000 records, that said, this is not advised as the load time will be detrimental to user experience. Try to filter data as much as possible to keep lists concise. This is a live connection and M-Files will be polled each time the page/element is refreshed.

If using Workflow State data groups, it is advisable to break these into workflows and always apply the `mfiles.valueListOwner.id` setting to avoid requesting all states for all workflows. This filter can be added as an Intrexx filter is preferred and the principle applied to all large lists that can be shortened.

Not all default fields will write back to M-Files as they are controlled by M-Files. Default fields with write functionality to M-Files are:

- `mfName`
- `mflsTemplate`
- `mfStateID`
- `mfWorkflowID`
- `mfFiles` – Files are added to M-Files using the `MFilesFileAdapter`

All other default fields are either handled automatically by M-Files or not required.