



BizTalk M-Files Adapter – User Manual



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Requirements

- Microsoft BizTalk Server
- Unitfly BizTalk M-Files Adapter
- M-Files client

Introduction

BizTalk M-Files Adapter can save files and metadata into M-Files and receive files and metadata from M-Files. Adapter can be used for syncing data between M-Files and any other system connectable by BizTalk.

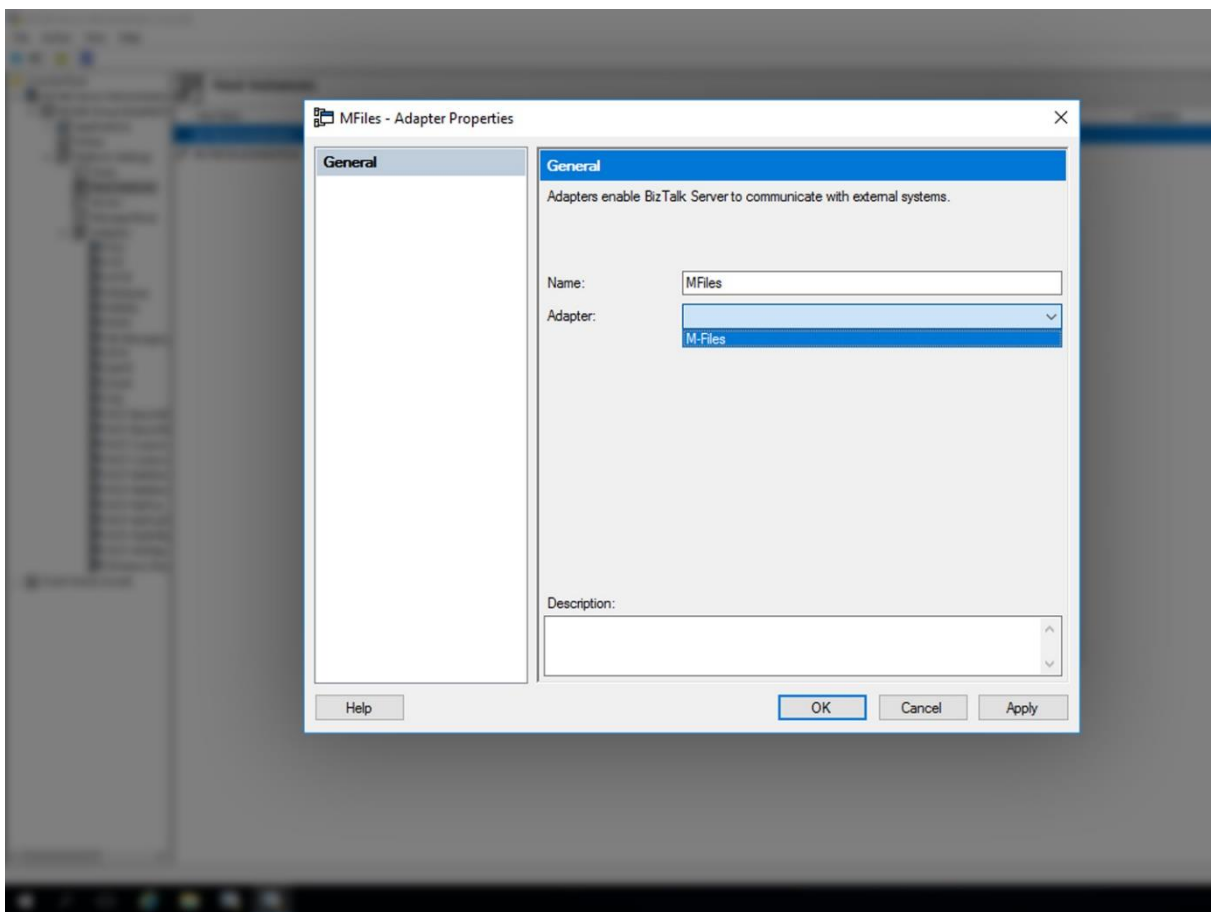
Adapter installation

Before installing you should stop all BizTalk host instances and close the BizTalk Administration Console. After you run the setup application, all of the necessary files will be installed on your system and adapter is ready to add to the BizTalk Administration Console.

Adding adapter to BizTalk Administration Console

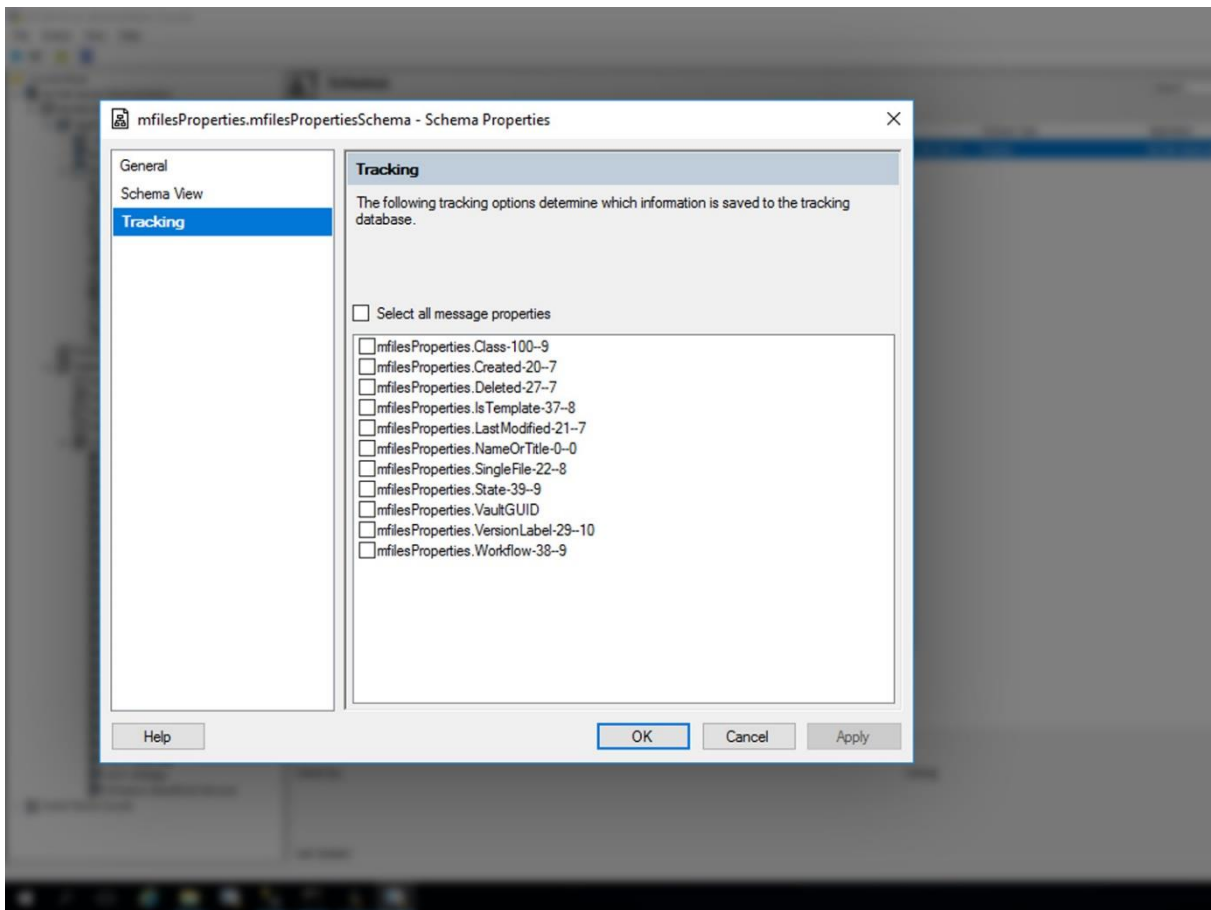
After installation, the adapter will be automatically added to the available adapter list in the BizTalk Administration Console, so you can begin by adding M-Files adapter at Adapters.

- Right click on the Adapter and select New,
- From available adapters select M-Files,
- Enter name and click OK.



Context

Along with installation, M-Files adapter imports default property schema that is used by adapter. M-Files property schema can be found in default BizTalk application under Schemas. This is default schema that every message that goes through adapter uses to promote M-Files specific properties to the context. Custom schema, with custom properties from custom vaults, can be generated by using Visual Studio.



Context naming is: **Name of a property - Property ID - Alias - Property Type**

Although, there is place in naming convention for alias, alias as property identification is not used in adapter. List of default properties:

- NameOrTitle-0--0
- Created-20--7
- LastModified-21--7
- SingleFile-22--8
- Deleted-27--7
- VersionLabel-29--10
- IsTemplate-37--8
- Workflow-38--9
- State-39--9
- Class-100--9
- VaultGUID

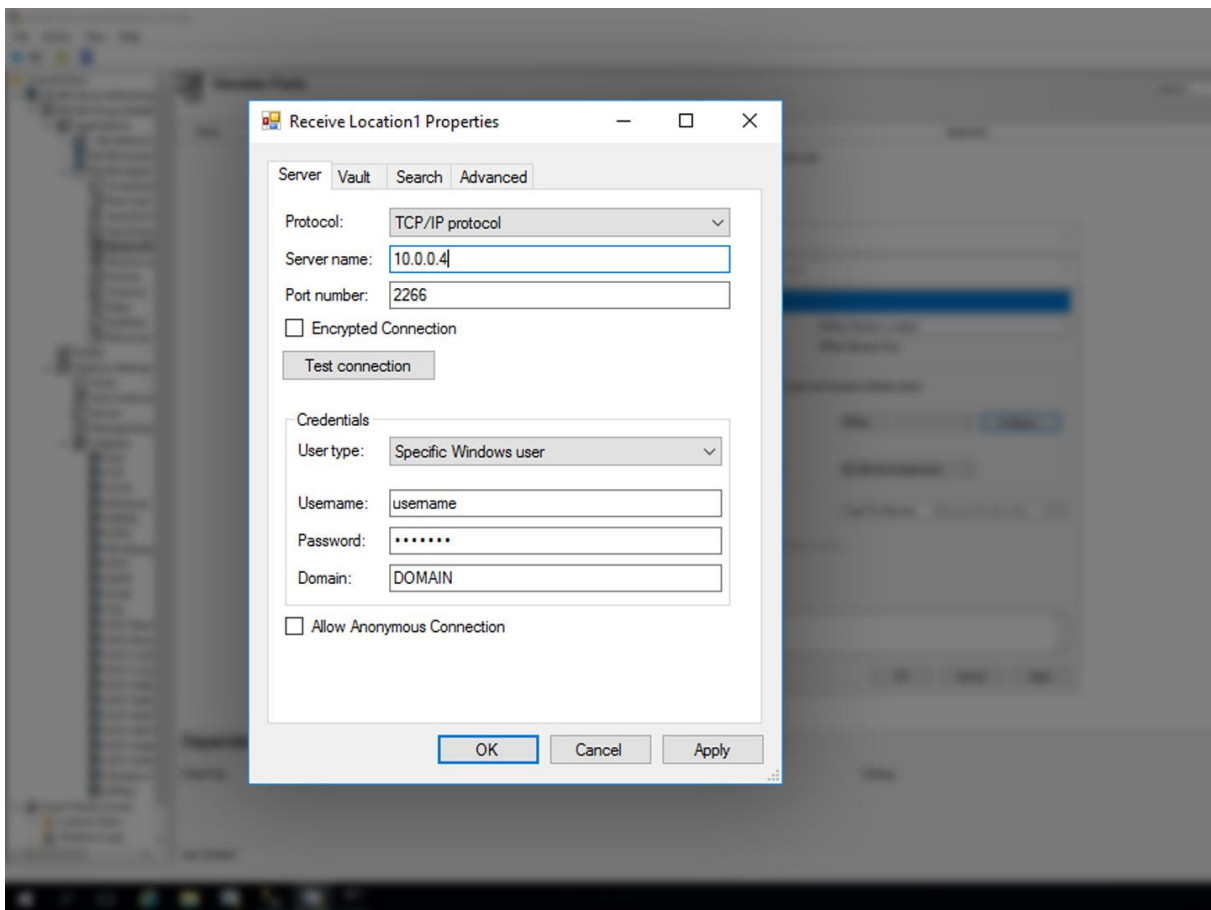
Adapter Properties - Receive port

M-Files receive adapter is used for connecting to M-Files server and collecting items. Items could be collected as Files (Documents) or XML representation of an object. In one batch you can collect both, file and XML representation of that file or object.

Receive Location Properties Dialog

1. Server Window Tab

Server tab is containing all required information for connecting to M-Files server.

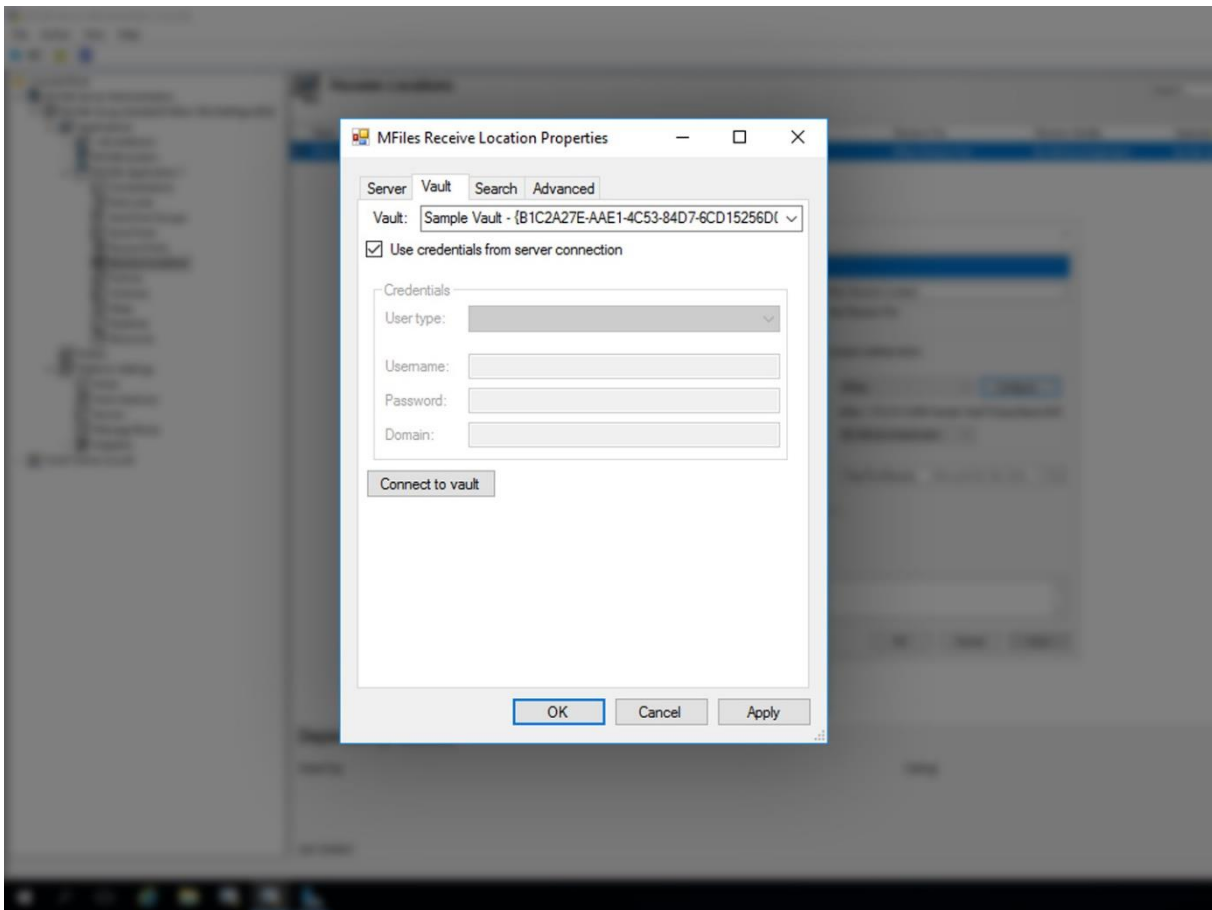


- **Protocol**
 - TCP/IP - Transmission Control Protocol and the Internet Protocol. It's conceptual model and set of communications protocols used on the Internet and similar computer networks.
 - SPX protocol - Transport layer protocol, sits on top of the IPX layer and provides connection-oriented services between two nodes on the network.
 - HTTPS - Hypertext Transfer Protocol with a connection encrypted by Secure Sockets Layer. The main motivation for HTTPS is authentication of the visited application and protection of the privacy and integrity of the exchanged data.

- **Server name** - DNS name or IP address of a M-Files server.
- **Port number** - Port number used for connecting to M-Files server. Usually for TCP/IP connection is 2266, for HTTPS is 4433.
- **Encrypted Connection** - Encrypted connection between server and a client.
- **User type**
 - Specific Windows User - Using windows integrated security on M-Files server. Usually domain user or user from a local server.
 - Specific M-Files User - Created M-Files user on M-Files server.
- **Username** - Username used for connecting to M-Files server.
- **Password** - Password used for connecting to M-Files server.
- **Domain** - Used only in "Specific Windows User" mode; Domain where user belong.

2. Vault Windows Tab

Vault tab is used to define desired valut to connect to on M-Files server. You can use same credentials as for connecting to M-Files server or you can define new for vault.



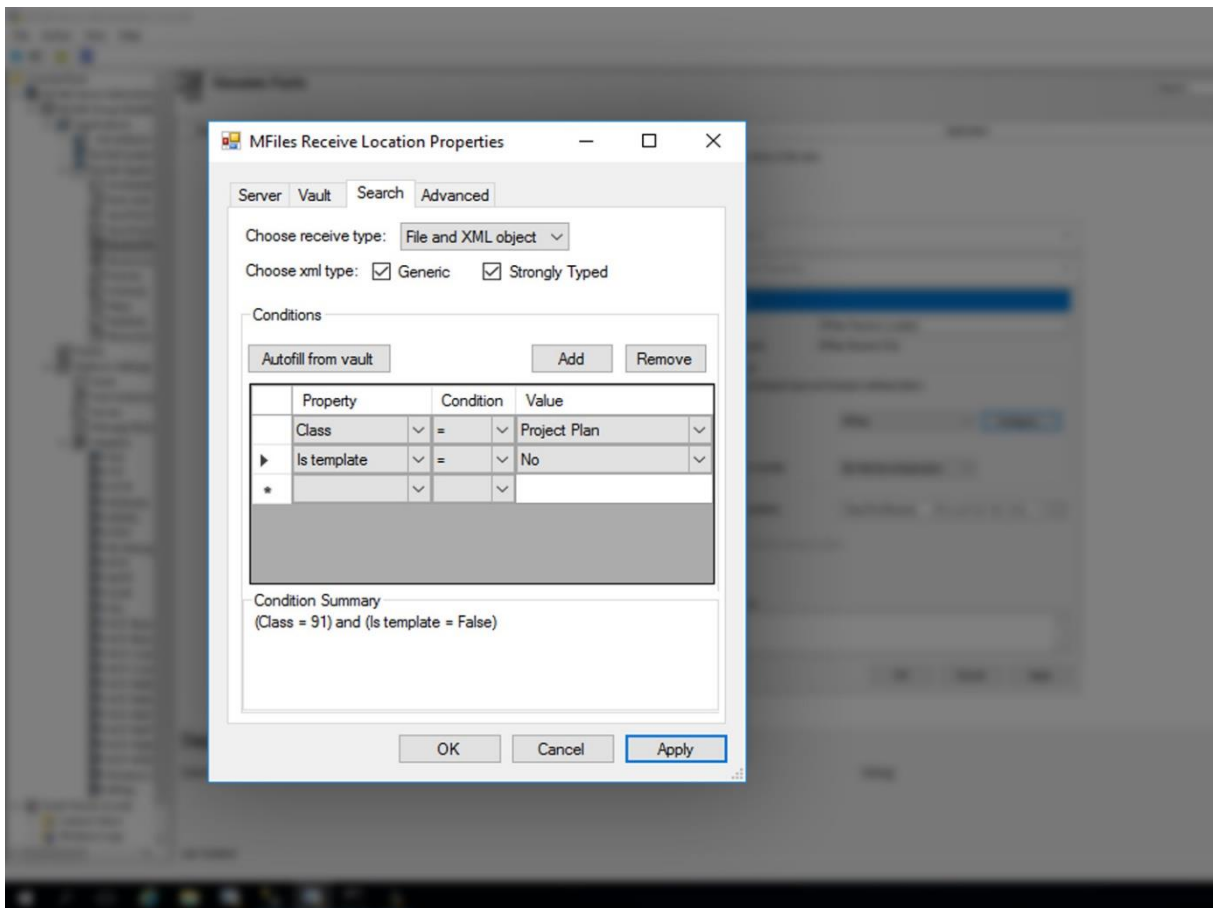
- **Vault**
 - Drop down list of all vaults on M-Files server defined on Server tab. If there is no vault on server or if server is unavailable, vault name can be entered directly in Vault field.
- **Use credentials from server connection**
 - Use same credentials as for connecting to M-Files server from Server window.
- **User type**

- Specific Windows User - Using windows integrated security on M-Files server. Usually domain user or user from a local server.
- Specific M-Files User - Created M-Files user on M-Files server.
- **Username** - Username used for connecting to M-Files server vault.
- **Password** - Password used for connecting to M-Files server vault.
- **Domain** - Only in "Specific Windows User" mode. Domain where user belong.

Clicking "Connect to vault" button, you are test connection to M-Files server vault.

3. Search Window Tab

Search tab defines search conditions and filters for pulling files or objects from M-Files server.



- **Chose receive type**
 - File - Downloads all files that match search conditions.
 - XML object - Downloads all XML documents that describes object matched by search conditions.
 - Generic XML type example:

```
<?xml version="1.0"?>
<Object xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" Id="249">
  <ObjectType Id="0" Type="0">Document</ObjectType>
  <ObjectClass Id="15" Type="0">Agenda</ObjectClass>
  <ObjectProperties>
    <Property>
      <Name Id="0" Type="0">Name or title</Name>
      <Value>Agenda - Project Meeting 4/2006</Value>
```



```

</Property>
<Property>
  <Name Id="21" Type="0">Last modified</Name>
  <Value>7/9/2007 2:03 PM</Value>
</Property>
<Property>
  <Name Id="22" Type="0">Single file</Name>
  <Value>Yes</Value>
</Property>
<Property>
  <Name Id="23" Type="0">Last modified by</Name>
  <Value>Tina Smith</Value>
  <ValueListItemId>24</ValueListItemId>
</Property>
<Property>
  <Name Id="24" Type="0">Status changed</Name>
  <Value>7/9/2007 2:03 PM</Value>
</Property>
<Property>
  <Name Id="30" Type="0">Size on server (this version)</Name>
  <Value>0</Value>
</Property>
<Property>
  <Name Id="100" Type="0">Class</Name>
  <Value>Agenda</Value>
  <ValueListItemId>15</ValueListItemId>
</Property>
<Property>
  <Name Id="101" Type="0">Class groups</Name>
  <Value>4. MEETINGS; 7. PROJECT DOCUMENTATION</Value>
</Property>
<Property>
  <Name Id="1002" Type="0">Document date</Name>
  <Value>3/5/2006</Value>
</Property>
<Property>
  <Name Id="1004" Type="0">Keywords</Name>
  <Value />
</Property>
<Property>
  <Name Id="1010" Type="0">Event date</Name>
  <Value>5/15/2006</Value>
</Property>
<Property>
  <Name Id="1017" Type="0">Meeting type</Name>
  <Value>Project meeting</Value>
</Property>
<Property>
  <Name Id="1034" Type="0">Description</Name>
  <Value />
</Property>
<Property>
  <Name Id="1078" Type="0">Project</Name>
  <Value>Austin District Redevelopment</Value>
  <PropertyList>
    <Property>
      <Name Id="0" Type="0">Name or title</Name>
      <Value>Austin District Redevelopment</Value>
    </Property>
    <Property>
      <Name Id="21" Type="0">Last modified</Name>
      <Value>7/9/2007 1:41 PM</Value>
    </Property>
    <Property>
      <Name Id="22" Type="0">Single file</Name>
      <Value>No</Value>
    </Property>
    <Property>
      <Name Id="23" Type="0">Last modified by</Name>
      <Value>Jonathan Lockhart</Value>
      <ValueListItemId>28</ValueListItemId>
    </Property>
  </PropertyList>
</Property>

```

```

    <Name Id="24" Type="0">Status changed</Name>
    <Value>7/9/2007 1:41 PM</Value>
  </Property>
</Property>
  <Name Id="30" Type="0">Size on server (this version)</Name>
  <Value>0</Value>
</Property>
</Property>
  <Name Id="100" Type="0">Class</Name>
  <Value>Customer Project</Value>
  <ValueListItemId>80</ValueListItemId>
</Property>
</Property>
  <Name Id="101" Type="0">Class groups</Name>
  <Value />
</Property>
</Property>
  <Name Id="1079" Type="0">Customer</Name>
  <Value>A&A Consulting (AEC)</Value>
  <PropertyList>
    <Property>
      <Name Id="0" Type="0">Name or title</Name>
      <Value>A&A Consulting (AEC)</Value>
    </Property>
    <Property>
      <Name Id="21" Type="0">Last modified</Name>
      <Value>6/10/2008 5:25 PM</Value>
    </Property>
    <Property>
      <Name Id="22" Type="0">Single file</Name>
      <Value>No</Value>
    </Property>
    <Property>
      <Name Id="23" Type="0">Last modified by</Name>
      <Value>Samuel Lewis</Value>
      <ValueListItemId>26</ValueListItemId>
    </Property>
    <Property>
      <Name Id="24" Type="0">Status changed</Name>
      <Value>6/10/2008 5:25 PM</Value>
    </Property>
    <Property>
      <Name Id="30" Type="0">Size on server (this version)</Name>
      <Value>0</Value>
    </Property>
    <Property>
      <Name Id="100" Type="0">Class</Name>
      <Value>Customer</Value>
      <ValueListItemId>78</ValueListItemId>
    </Property>
    <Property>
      <Name Id="101" Type="0">Class groups</Name>
      <Value />
    </Property>
    <Property>
      <Name Id="1073" Type="0">Address (line 1)</Name>
      <Value>444 Blackwell Road</Value>
    </Property>
    <Property>
      <Name Id="1082" Type="0">Address (line 2)</Name>
      <Value>14th Floor</Value>
    </Property>
    <Property>
      <Name Id="1085" Type="0">Telephone number</Name>
      <Value>(305) 555-0180</Value>
    </Property>
    <Property>
      <Name Id="1086" Type="0">Web site</Name>
      <Value>http://www.m-files.com</Value>
    </Property>
    <Property>
      <Name Id="1087" Type="0">ZIP/postal code</Name>
      <Value>33101</Value>
    </Property>
  </PropertyList>

```

```

    </Property>
  <Property>
    <Name Id="1088" Type="0">City</Name>
    <Value>Miami</Value>
  </Property>
  <Property>
    <Name Id="1089" Type="0">State/province</Name>
    <Value>FL</Value>
  </Property>
  <Property>
    <Name Id="1090" Type="0">Country</Name>
    <Value>USA</Value>
  </Property>
  <Property>
    <Name Id="1110" Type="0">Customer name</Name>
    <Value>A&A Consulting (AEC)</Value>
  </Property>
  <Property>
    <Name Id="20" Type="0">Created</Name>
    <Value>7/12/2006 10:35 AM</Value>
  </Property>
  <Property>
    <Name Id="25" Type="0">Created by</Name>
    <Value>(M-Files Server)</Value>
    <ValueListItemId>-102</ValueListItemId>
  </Property>
  <Property>
    <Name Id="31" Type="0">Size on server (all versions)</Name>
    <Value>0</Value>
  </Property>
  <Property>
    <Name Id="32" Type="0">Marked for archiving</Name>
    <Value>No</Value>
  </Property>
  <Property>
    <Name Id="89" Type="0">Object changed</Name>
    <Value>6/10/2008 5:25 PM</Value>
  </Property>
</PropertyList>
</Property>
<Property>
  <Name Id="1094" Type="0">Project manager</Name>
  <Value>Samuel Lewis</Value>
  <ValueListItemId>6</ValueListItemId>
</Property>
<Property>
  <Name Id="1095" Type="0">In progress</Name>
  <Value>Yes</Value>
</Property>
<Property>
  <Name Id="20" Type="0">Created</Name>
  <Value>7/5/2007 5:26 PM</Value>
</Property>
<Property>
  <Name Id="25" Type="0">Created by</Name>
  <Value>Andy Nash</Value>
  <ValueListItemId>21</ValueListItemId>
</Property>
<Property>
  <Name Id="31" Type="0">Size on server (all versions)</Name>
  <Value>0</Value>
</Property>
<Property>
  <Name Id="32" Type="0">Marked for archiving</Name>
  <Value>No</Value>
</Property>
<Property>
  <Name Id="89" Type="0">Object changed</Name>
  <Value>7/9/2007 1:41 PM</Value>
</Property>
</PropertyList>
</Property>
<Property>

```

```

    <Name Id="20" Type="0">Created</Name>
    <Value>7/6/2007 9:19 AM</Value>
  </Property>
  <Property>
    <Name Id="25" Type="0">Created by</Name>
    <Value>Tina Smith</Value>
    <ValueListItemId>24</ValueListItemId>
  </Property>
  <Property>
    <Name Id="31" Type="0">Size on server (all versions)</Name>
    <Value>28672</Value>
  </Property>
  <Property>
    <Name Id="32" Type="0">Marked for archiving</Name>
    <Value>No</Value>
  </Property>
  <Property>
    <Name Id="89" Type="0">Object changed</Name>
    <Value>7/9/2007 2:03 PM</Value>
  </Property>
</ObjectProperties>
</Object>

```

- Strongly XML type example

```

<?xml version="1.0" encoding="utf-8"?>
<Document>
  <Name_x0020_or_x0020_title>Project Schedule</Name_x0020_or_x0020_title>
  <Last_x0020_modified>6/8/2011 5:38 AM</Last_x0020_modified>
  <Single_x0020_file>Yes</Single_x0020_file>
  <Last_x0020_modified_x0020_by>Andy Nash</Last_x0020_modified_x0020_by>
  <Status_x0020_changed>6/8/2011 5:38 AM</Status_x0020_changed>

<Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>
  <Class>Agenda</Class>
  <Class_x0020_groups>4. MEETINGS; 7. PROJECT DOCUMENTATION</Class_x0020_groups>
  <Document_x0020_date></Document_x0020_date>
  <Keywords>project plan</Keywords>
  <Event_x0020_date></Event_x0020_date>
  <Meeting_x0020_type></Meeting_x0020_type>
  <Description></Description>
  <Document>
    <Name_x0020_or_x0020_title>Project Plan / Records Management</Name_x0020_or_x0020_title>
    <Last_x0020_modified>6/8/2011 5:38 AM</Last_x0020_modified>
    <Single_x0020_file>Yes</Single_x0020_file>
    <Last_x0020_modified_x0020_by>Andy Nash</Last_x0020_modified_x0020_by>
    <Status_x0020_changed>6/8/2011 5:38 AM</Status_x0020_changed>

<Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>
  <Class>Project Plan</Class>
  <Class_x0020_groups>7. PROJECT DOCUMENTATION</Class_x0020_groups>
  <Document_x0020_date>7/9/2007</Document_x0020_date>
  <Keywords></Keywords>
  <Description></Description>
  <Project>
    <Name_x0020_or_x0020_title>Development of Legal Records Management
Application</Name_x0020_or_x0020_title>
    <Last_x0020_modified>7/6/2007 11:29 AM</Last_x0020_modified>
    <Single_x0020_file>No</Single_x0020_file>
    <Last_x0020_modified_x0020_by>Andy Nash</Last_x0020_modified_x0020_by>
    <Status_x0020_changed>7/6/2007 11:29 AM</Status_x0020_changed>

<Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>
  <Class>Customer Project</Class>
  <Class_x0020_groups></Class_x0020_groups>
  <Customer>
    <Name_x0020_or_x0020_title>Davis & Cobb, Attorneys at Law</Name_x0020_or_x0020_title>
    <Last_x0020_modified>6/10/2008 5:25 PM</Last_x0020_modified>
    <Single_x0020_file>No</Single_x0020_file>

```

```

<Last_x0020_modified_x0020_by>Samuel Lewis</Last_x0020_modified_x0020_by>
<Status_x0020_changed>6/10/2008 5:25 PM</Status_x0020_changed>

<Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_this_x0020_version_x0029_>
  <Class>Customer</Class>
  <Class_x0020_groups></Class_x0020_groups>
  <Address_x0020__x0028_line_x0020_1_x0029_>1500 Park Avenue</Address_x0020__x0028_line_x0020_1_x0029_>
  <Address_x0020__x0028_line_x0020_2_x0029_></Address_x0020__x0028_line_x0020_2_x0029_>
  <Telephone_x0020_number>(212) 555-0169</Telephone_x0020_number>
  <Web_x0020_site>http://www.m-files.com</Web_x0020_site>
  <ZIP_x002F_postal_x0020_code>10001</ZIP_x002F_postal_x0020_code>
  <City>New York</City>
  <State_x002F_province>NY</State_x002F_province>
  <Country>USA</Country>
  <Customer_x0020_name>Davis & Cobb, Attorneys at Law</Customer_x0020_name>
  <Created>7/12/2006 10:35 AM</Created>
  <Created_x0020_by>(M-Files Server)</Created_x0020_by>

<Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>
  <Marked_x0020_for_x0020_archiving>No</Marked_x0020_for_x0020_archiving>
  <Object_x0020_changed>6/10/2008 5:25 PM</Object_x0020_changed>
</Customer>
  <Project_x0020_manager>Alex Kramer</Project_x0020_manager>
  <In_x0020_progress>No</In_x0020_progress>
  <Created>7/12/2006 10:40 AM</Created>
  <Created_x0020_by>(M-Files Server)</Created_x0020_by>

<Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>0</Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>
  <Marked_x0020_for_x0020_archiving>No</Marked_x0020_for_x0020_archiving>
  <Object_x0020_changed>7/6/2007 11:29 AM</Object_x0020_changed>
</Project>
  <Created>11/26/2004 6:29 AM</Created>
  <Created_x0020_by>Bill Richards</Created_x0020_by>

<Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>43520</Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>
  <Marked_x0020_for_x0020_archiving>No</Marked_x0020_for_x0020_archiving>
  <Object_x0020_changed>6/8/2011 5:38 AM</Object_x0020_changed>
</Document>
  <Created>7/6/2007 9:20 AM</Created>
  <Created_x0020_by>Tina Smith</Created_x0020_by>

<Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>8426</Size_x0020_on_x0020_server_x0020__x0028_all_x0020_versions_x0029_>
  <Marked_x0020_for_x0020_archiving>No</Marked_x0020_for_x0020_archiving>
  <Object_x0020_changed>6/8/2011 5:38 AM</Object_x0020_changed>
</Document>

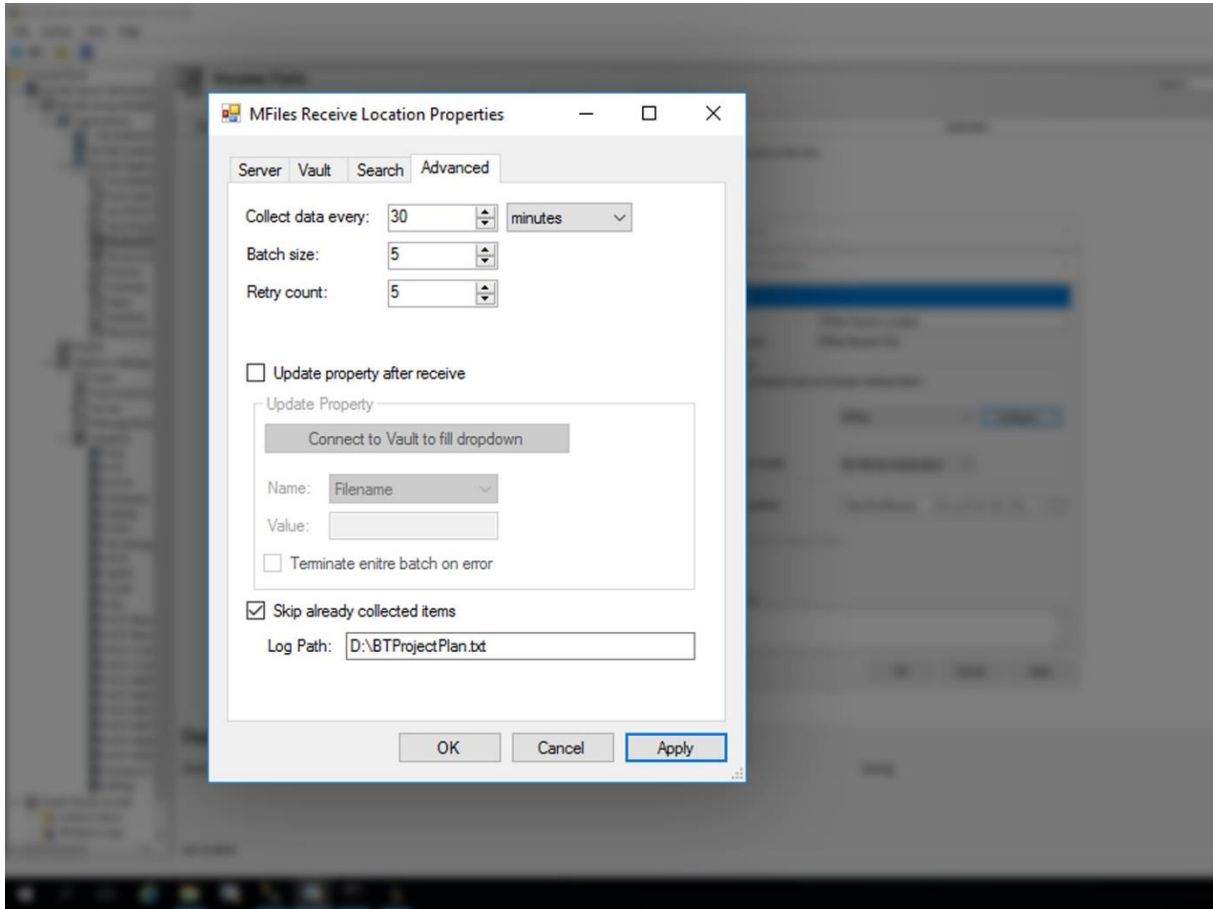
```

“Autofill from Vault” button can be used to connect to Vault defined in Vault tab, and populating Property list with custom properties.

- **Conditions** - added with "Add Condition" button and removed with "Remove Condition" button.
 - Property - All available properties from M-Files server. If you have successfully connected to M-Files server vault on **Vault** windows, you'll be able to see all properties from specific vault that are available. Default properties are always available.
 - Condition - Conditions for matching specific properties with Value.
 - Value - Value for matching selected Property with selected Condition.

4. Advanced Window Tab

Advanced tab is collection of all other information and settings, such as polling or updating property after receiving object.



- **Collect data every** - interval for connecting to M-Files vault.
- **Batch size** - size of one batch per one connection to M-Files vault.
- **Retry count** - in case of unsuccessful connection to server because any circumstance, this is number of try-outs by adapter before location is stopped.
- **Update property after receive** - Using for update property after receive.
 - Name - Property name
 - Value - New value for that property
 - Terminate on error - If update is unsuccessful, process can be terminated if check box is checked. If checkbox is unchecked then after unsuccessful update it will be written as a warning in event log.
- **Skip already collected items** - If item have same ID, Type and Version as object previously collected, it wouldn't be collected if is gathered again by filter. Collection of all collected file is stored in textual file.
 - Text file - location where item collection of already collected item is stored. If doesn't exist it will be created. If already exist system will try to deserialize and update existing file.

Adapter Properties - Send port

M-Files send adapter for BizTalk can be used for saving items into M-Files or storing data and files that goes through BizTalk. Item can be classified and very easily searched as M-Files is using metadata for classification. By send port adapter you can also create or update existing objects in M-Files.

First two tabs are identical as for Receive part.

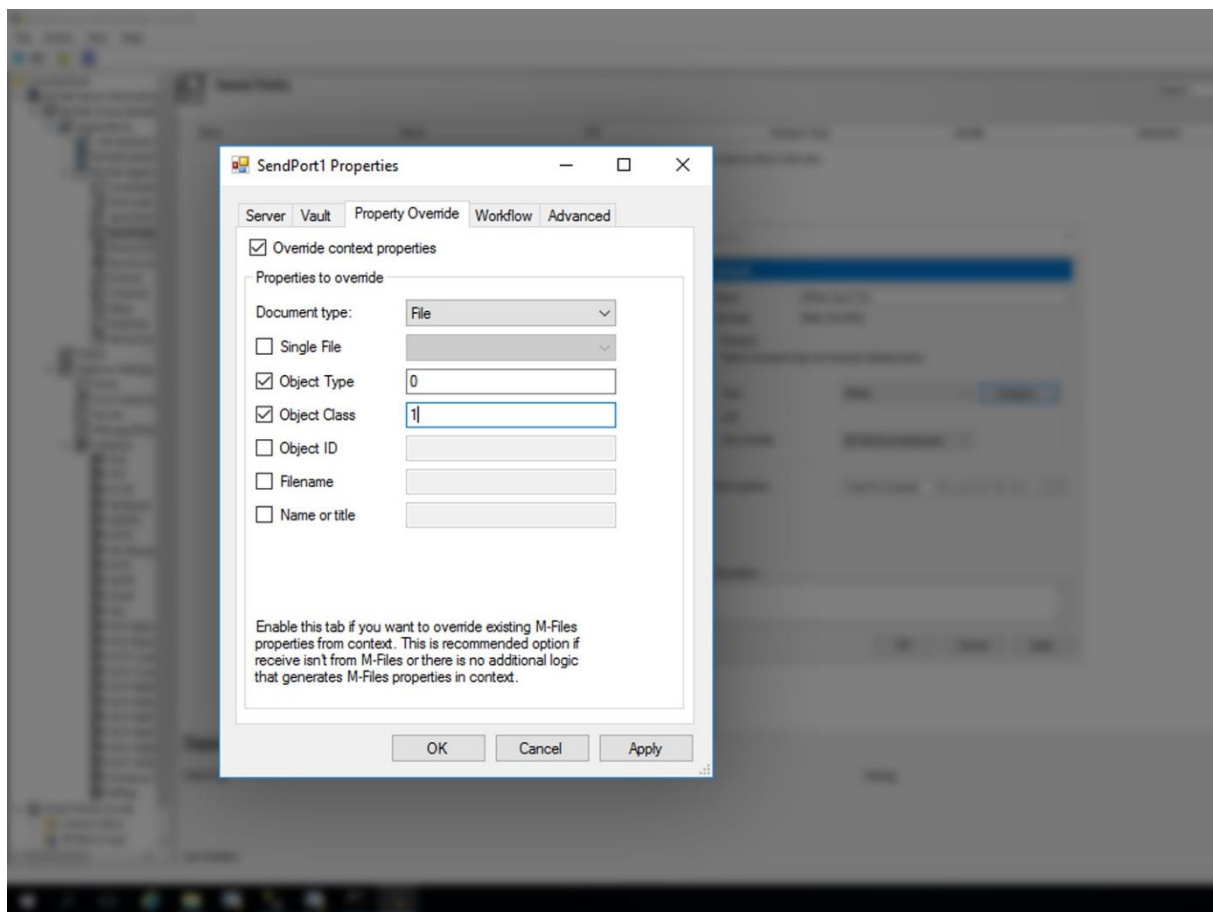
Send Port Properties Dialog

3. Property Override Window Tab

You can override properties values in context. M-Files adapter has a set of default properties. Only M-Files receive port automatically populates all properties. If "Property Override" Window Tab is no active,

- Name or title property will have "%SourceFileName%" value,
- Object Type will be "Document" (0),
- Object Class will be "Unclassified Document (1)"

With custom schema populated trough Visual Studio custom properties could be populated in send adapter, trough pipeline for example.

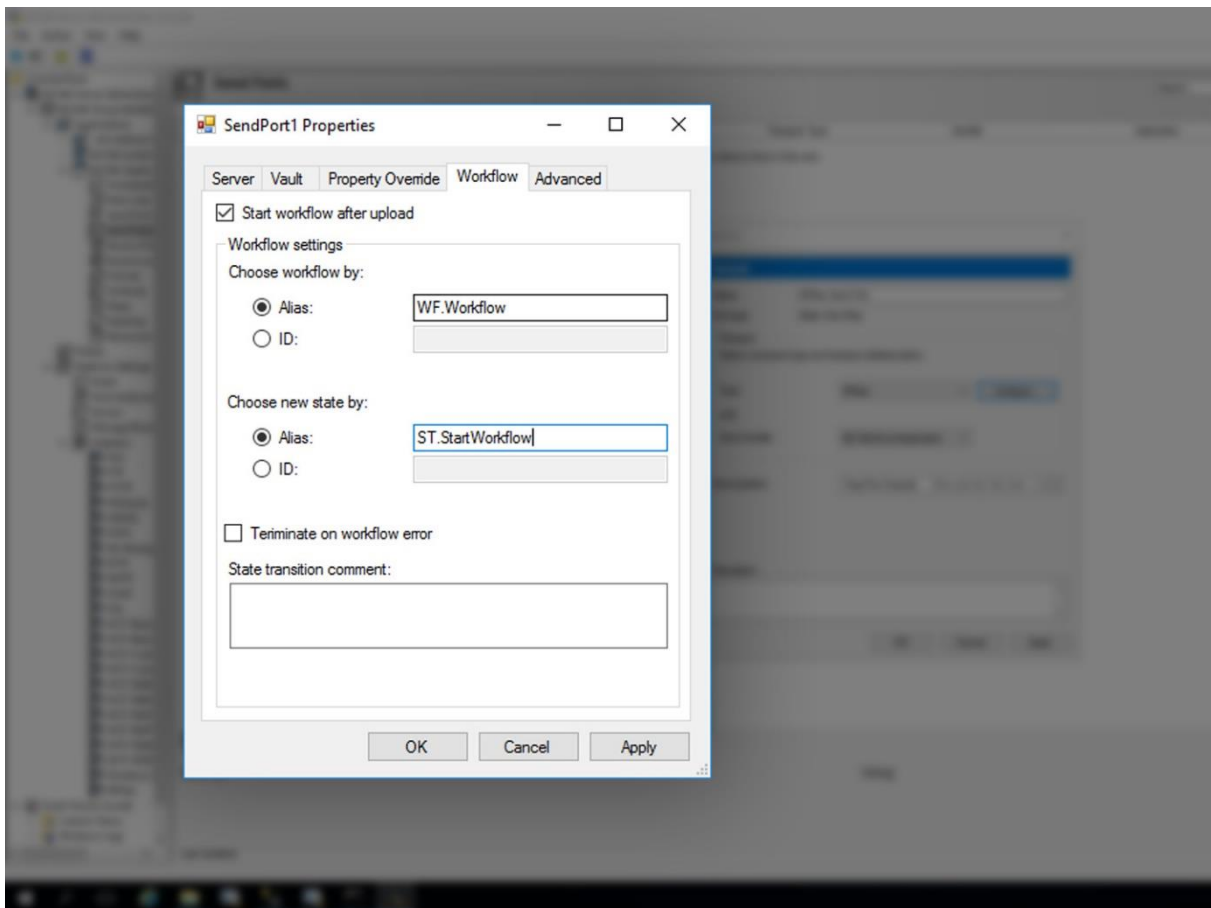


- **Document type** - Will this item be saved as a file or as an object.

- **Single File** - File can be saved as a Single File Document
- **Object Type** - Object Type ID from M-Files. You can check object type ID by opening M-Files administrator console and check Object Type from tree.
- **Object Class** - Object Class ID from M-Files. You can check object type ID by opening M-Files administrator console and check Object Class from tree.
- **Object ID** - Object ID from M-Files. You can check object ID by selecting object in M-Files client console and reading in from metadata card.
- **FileName** - File name for saving file to M-Files.
- **Name or title** - Object name can be override. Note that file will be replaced after every transfer as name is static.

4. Workflow Window Tab

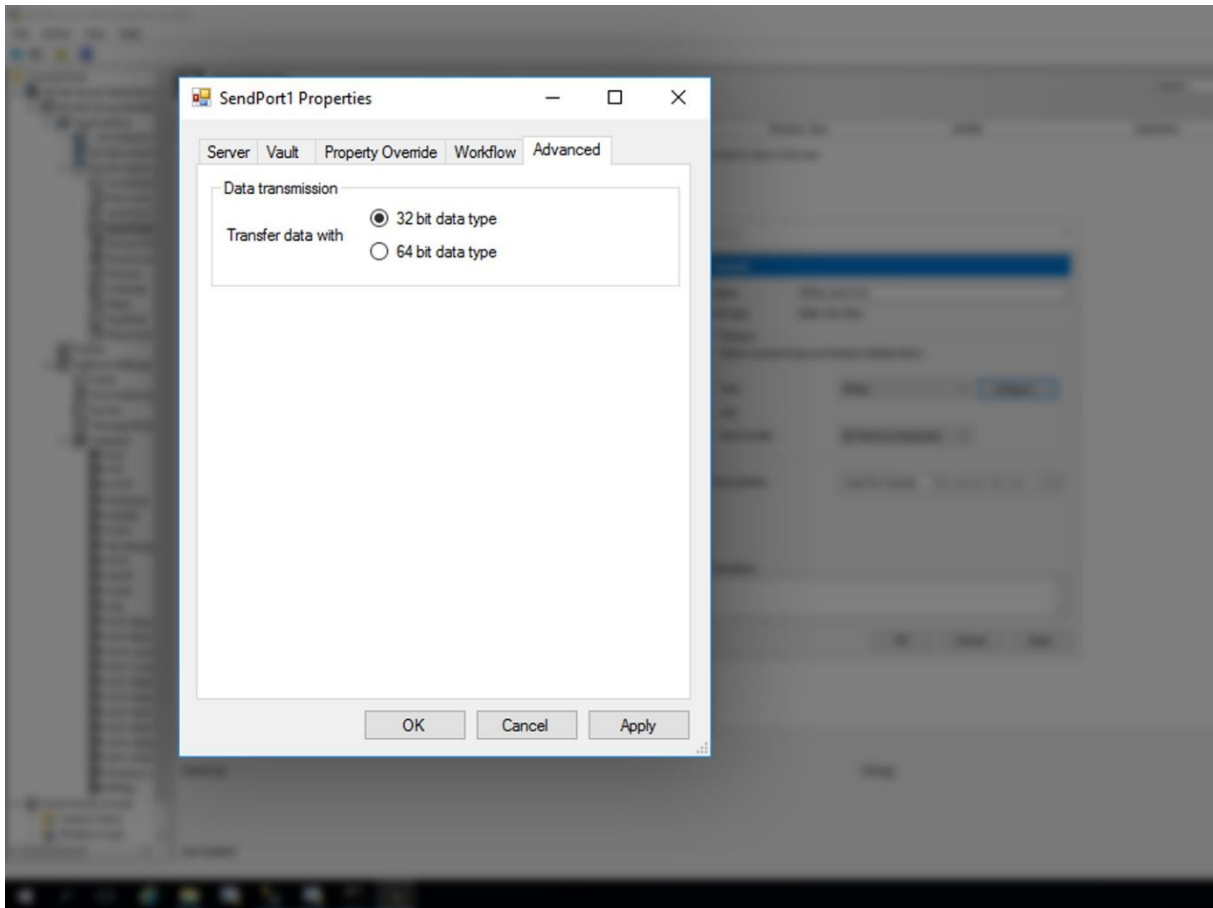
You can start business process over created or updated item.



- **Chose workflow by**
 - Alias - Alias of a wanted workflow. To set or see an Alias you must use M-Files Admin console.
 - ID - ID of a wanted workflow. To set or see an Alias you must use M-Files Admin console.
- **Chose new state by** - you can choose any state you want to item enter.
 - Alias - Alias of a wanted workflow state. To set or see an Alias you must use M-Files Admin console. State must exist in selected workflow.

- ID - ID of a wanted workflow state. To set or see an ID you must use M-Files Admin console. State must exist in selected workflow.
- **Terminate on error** - if starting selected workflow on specific state fails, you can terminate send process or continue with sending item and then error will be written in Event log of a system as a warning.
- **State transition comment** - by default is "Transition made by BizTalk", but can be changed in everything.

5. Advanced Window Tab



- **Data transmission** - files can be saved in 32 bit architecture or 64 bit architecture in M-Files.



Contact Us

Feel free to contact us, we believe that together we can transform and improve your business.

Web

unitfly.com

E-mail

info@unitfly.com

Social Networks



Twitter

<https://twitter.com/unitfly>



Facebook

<http://facebook.com/unitfly>



LinkedIn

<http://linkedin.com/company/unitfly>