

SAVE IMAGES OR ATTACHMENTS TO SHAREPOINT AND REPLACE WITH LINKS

PRODUCT: qRules v2.3 and later
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SCENARIO

SharePoint Images and Files – your InfoPath form uses a Picture control or a File Attachment control allowing users to attach images or files.

VALUE PROPOSITION

qRules provides a handy command called **SaveToSharePoint**, that allows you to save attachments in your InfoPath forms to a SharePoint server, to reduce the size of your XML forms, and allow these files to be accessed without opening up your forms in InfoPath.

In addition, you can also extract your file attachment's details, including file name, extension, and size – using the **GetAttachmentAttribute** command.

REQUIREMENTS

- SharePoint 2007 or 2010
- InfoPath 2007 SP2 or 2010 SP2
- qRules v2.3



PRE-REQUISITE

Refer to the qRules Quick Start guide (located in **Start > All Programs > Qdabra > Tools > qRules**) for steps on how to:

1. Download and install qRules.
2. Add qRules to your InfoPath form template.

HOW TO USE THE SAVEDTOSHAREPOINT COMMAND

One of the commands in qRules is the **SaveToSharePoint** command. This allows users to save a file, a set of files, an image, or a set of images to a SharePoint Document Library.

- **Arguments:**
 - **url:** URL to SharePoint document library
 - **dsname:** data source (optional): only needs to be specified if the xpath to attach is not located in the Main data source.
 - **xpath:** XPath to file/image attachment
 - **name:** Name for file (extension will be added by qRules) (optional)
 - **overwrite:** Overwrite existing file if name is specified (yes | no) -- default is no. Not available if /dsname is specified. (optional)
 - **dsname:** Data Connection Name for Copy web service (optional)
 - **dsurl** (optional): If we use the Copy web service data connection option with this command, the /url parameter needs to be to the same site that the data connection used. That is, if I created my data connection to the copy service using <http://serverA> but my command url is <http://serverB> (and therefore my form is published to serverA), the web method will fail. The /dsurl parameter can be used with the /dsname parameter to change the service url of the data connection.
- **Examples:**
 - *SaveToSharePoint /url=http://<servername>/MyDocLib /xpath=/my:myFields/my:File*
 - *SaveToSharePoint /url=http://<servername>/MyDocLib /xpath=/my:myFields/my:Images/my:Image*
- **Additional observations:**
 - Source field must have **qRulesLink** and **qRulesFilename** attributes (see Appendix C in the [qRules User Guide](#)).
 - If uploading more than one file/image, the source field must be repeating (not a repeating field in a repeating group (see Appendix C in the [qRules User guide](#)).
 - This command can work without SharePoint, by saving files to an ordinary IIS website. [Click here for instructions.](#)
 - qRules will perform no action if the user calls the rule with no image/file attached. When designing your InfoPath solution, you can design your form such that the rule only executes when the image/file attachment is not empty (blank).
 - The InfoPath form and the SharePoint Document Library must live on the same machine.
 - This command works with file attachments saved in the browser. When using the command in the browser, there are two options:
 - Make the form template full trust and Admin deploy it. (MOSS 2007 and SharePoint 2010 without sandbox)
 - Use the dsname parameter and sandbox publish the form (SharePoint 2010).



Design your InfoPath form template

The following steps assume that you already have a SharePoint Document Library set up on the same machine where your InfoPath form is stored.

1. Open your form template in InfoPath Design mode.
2. Add the following fields to your main data source:

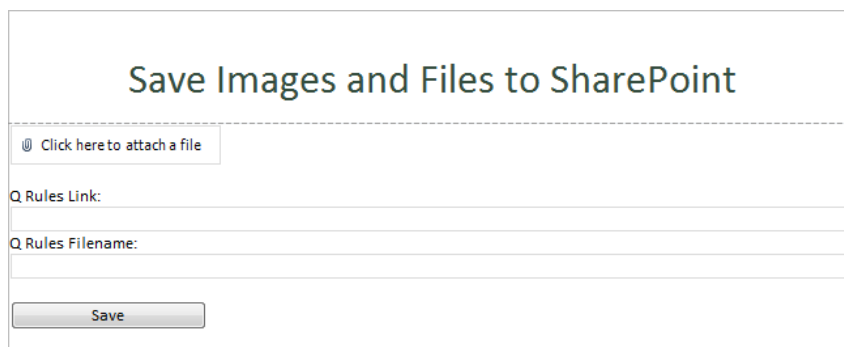
Name	Type	Data Type
File	Field (element)	Picture or File Attachment (base64)
qRulesLink	Field (attribute)	Text (string)
qRuleFilename	Field (attribute)	Text (string)

Your main data source should look similar to this:



3. Drag the **File** field as a file attachment on your canvas.
(You may also use a Picture control for image attachments. Note though, IPFS do not allow Picture controls; that's why we recommend using a File Attachment control instead. This allows you to attach any file including images, and – it works in the browser!)
4. Drag the **qRulesLink** and the **qRulesFilename** attributes as text boxes on your canvas.
5. Add a button labeled **Save**.

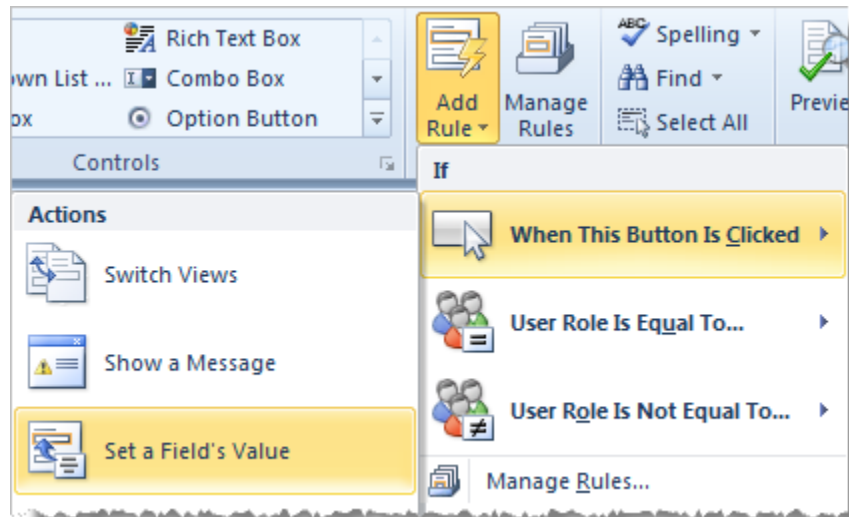
Your canvas may look similar to this:



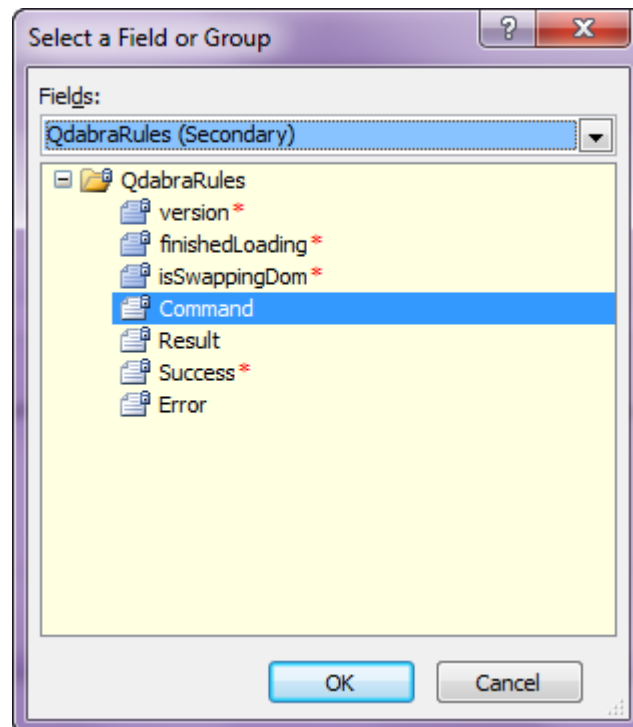
Add rule to save the attachment to SharePoint

6. Click on the **Save** button and then add a rule that sets a field's value when the button is clicked:





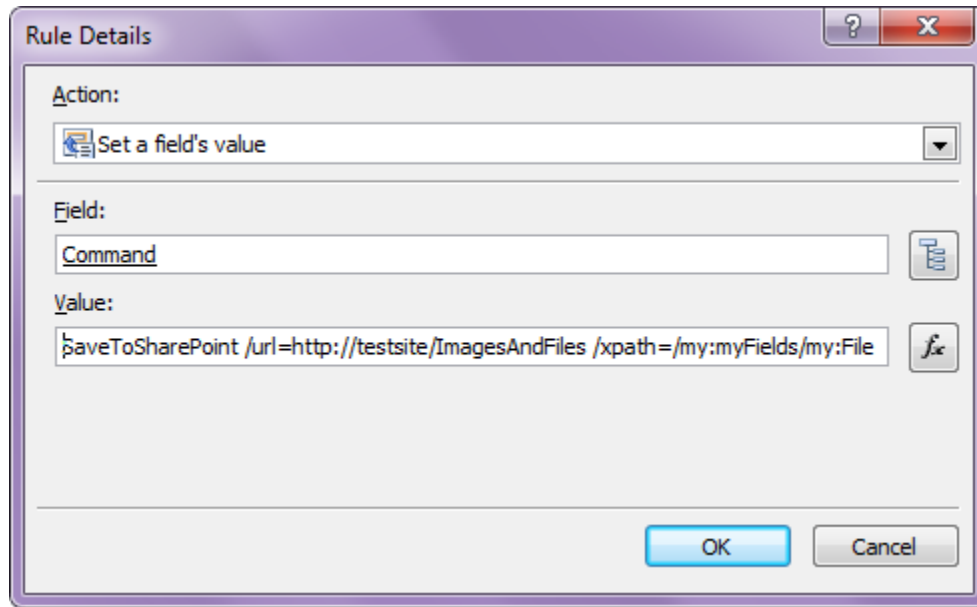
- a. The Field will be the **Command** node of the *QdabraRules (Secondary)* data source.



- b. For the Value, enter the command syntax:
SaveToSharePoint /url=<SharePointLibraryURL> /xpath=/my:myFields/my:File
 replacing ***<SharePointLibraryURL>*** e.g. `http://testsite/ImagesAndFiles`

Your rule action may be similar to this:





Rule Details

Action:
 Set a field's value

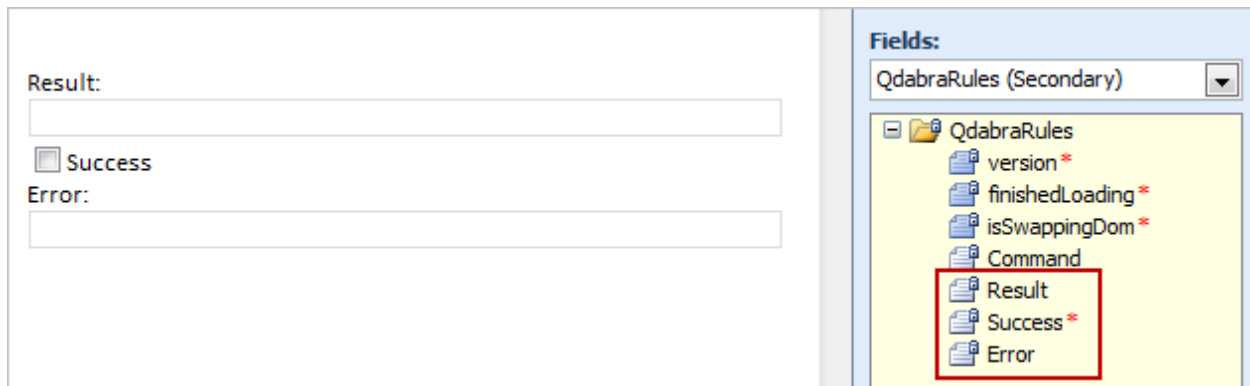
Field:
 Command

Value:
 SaveToSharePoint /url=http://testsite/ImagesAndFiles /xpath=/my:myFields/my:File

OK Cancel

Test your form

Tip: For testing purposes, it would be helpful to see the qRules result and any error it may throw after the command executes. Do this by dragging the **Result**, **Success** and **Error** nodes from the **QdabraRules (Secondary)** data source on to the canvas.



Result:

☐ Success

Error:

Fields:
 QdabraRules (Secondary)

- QdabraRules
 - version *
 - finishedLoading *
 - isSwappingDom *
 - Command
 - Result**
 - Success ***
 - Error**

- Preview your form.
- Attach a sample file and click on the **Save** button.

Your result may look similar to this:



Save Images and Files to SharePoint

 Click here to attach a file

Q Rules Link:

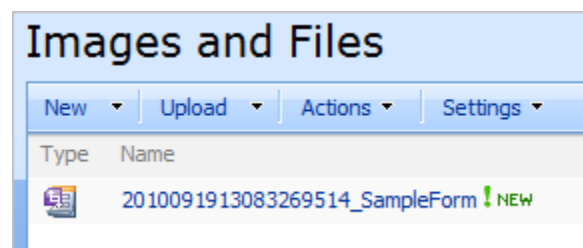
Q Rules Filename:

Result:

☒ Success

Error:

If you go to your SharePoint library, you should be able to see the file that you just saved.



Additional observations

1. This command requires Full Trust (and admin deploy) if used in the browser in MOSS 2007.
 - a. InfoPath 2010: Go to **File** → **Info** → **Form Options**. In the Form Options dialog box, select **Security and Trust**, uncheck **Automatically determine security level (recommended)** and select the option button **Full Trust**. Click **OK**.
 - b. InfoPath 2007: Go to **Tools** → **Form Options**. In the Form Options dialog box, select **Security and Trust**, uncheck **Automatically determine security level (recommended)** and select the option button **Full Trust**. Click **OK**.
2. In SharePoint 2010, you can sandbox-publish a form that uses this command, but you will need to use the **dsnamews** parameter. More information on this below.

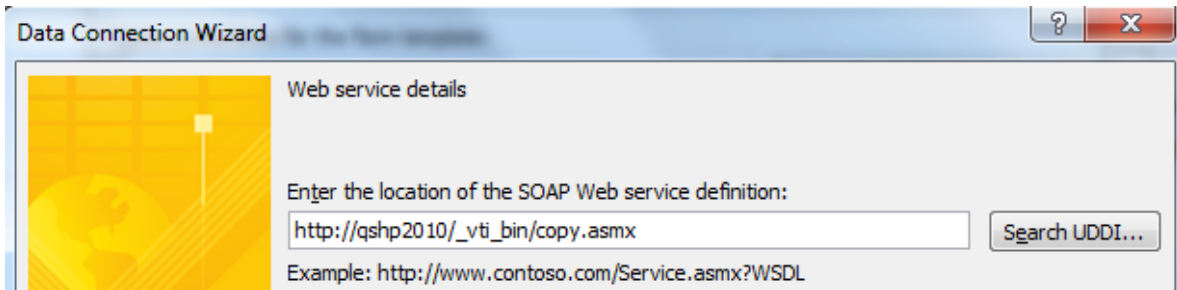
Using the dsnamews parameter

The parameter **dsnamews** allows us to use this command in the browser, without making the form Full trust, and without admin deploying on SharePoint 2010.

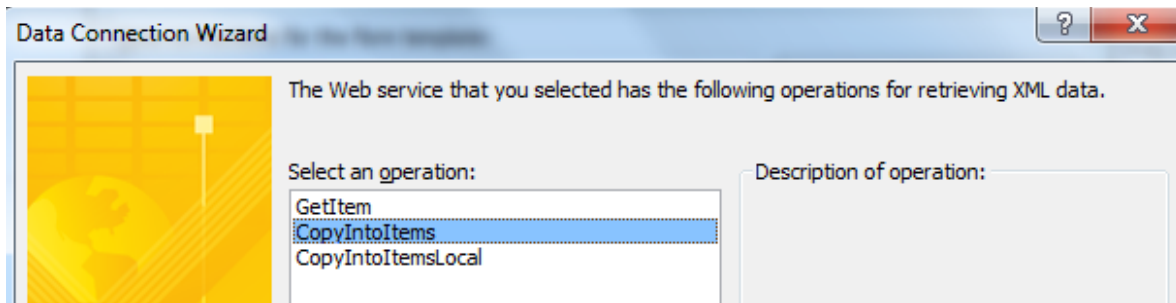


What is dsnamews? It is a data connection to the SharePoint copy web service, which is located in [http://\[yourservername\]/_vti_bin/copy.asmx](http://[yourservername]/_vti_bin/copy.asmx). Therefore, you will:

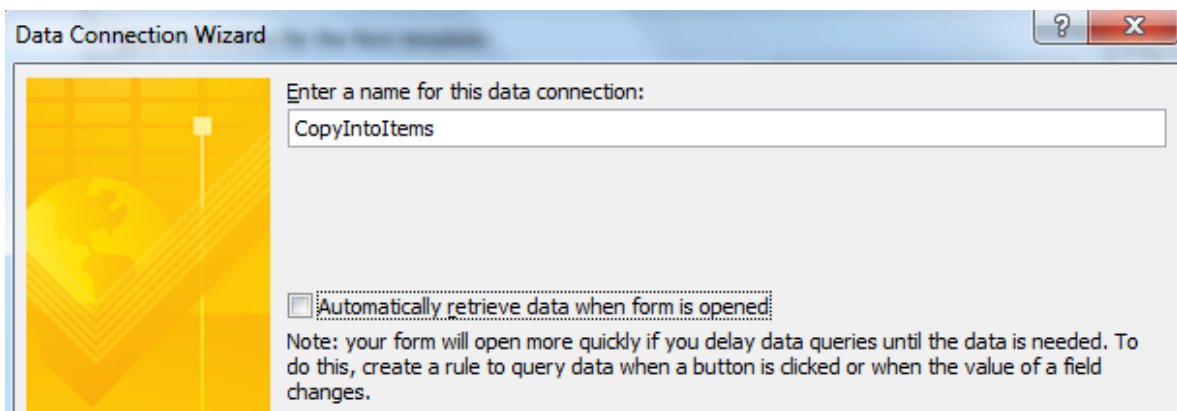
1. Add a new data connection to your form, to receive data from a web service.
2. For the web service URL, use the URL to the SharePoint Copy web service shown above.



3. Select CopyIntoItems and click **Next** three times.



4. Uncheck the checkbox for "Automatically retrieve data when form is opened" and click **Finish**.



The Command you will use in your form changes very slightly: simply provide the dsnamews parameter, as shown below!

SaveToSharePoint **/url=http://dbxl23demo/Documents/** **/xpath=/my:myFields/my:attachment**
/dsnamews=CopyIntoItems



By doing this, you avoid having to set the form to Full trust as well as avoiding admin deploy in your SharePoint 2010 environment.

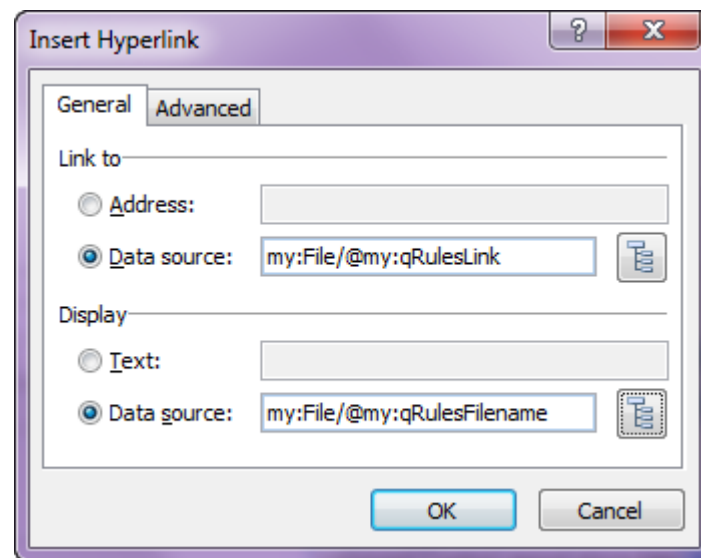
Add a hyperlink control that links to your file

For users to be able to open the saved file attachment, add a hyperlink control that links to your file in SharePoint.

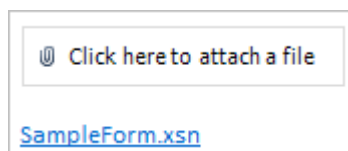
9. Insert a Hyperlink control on your canvas.



10. Set the hyperlink to link to the **qRulesLink** attribute and display the **qRulesFilename**.



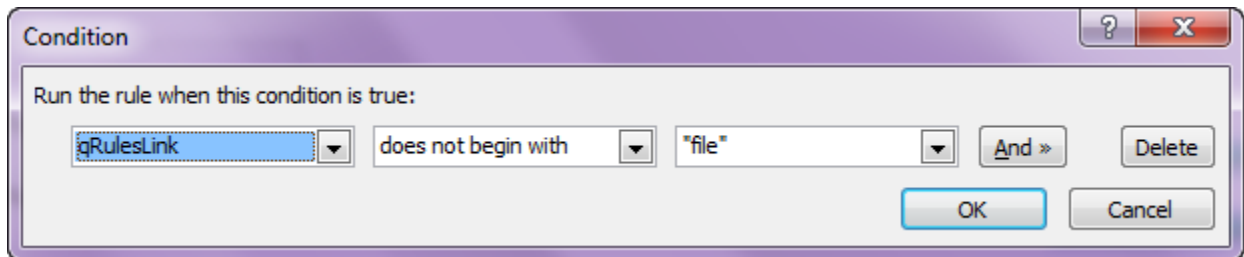
11. You may preview your form once again to see the changes you've made. Notice the hyperlink that displays your file's name and when clicked, opens your file from SharePoint.



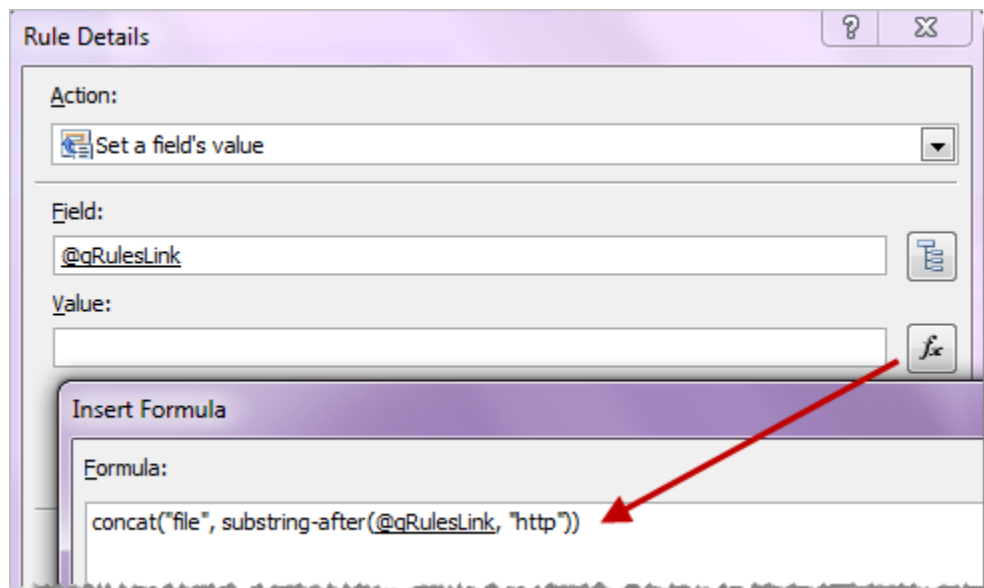
Add a rule that opens the file in Edit mode

You will notice, when you click on the link to open your uploaded file in SharePoint, there are times that the file would open as read-only. Follow these steps to make the file open in Edit mode instead.

12. Add a new rule to the **Save** button that runs right after the SaveToSharePoint command executes.
13. Set the condition to run the rule if the **qRulesLink** attribute (of the *File* field in the main data source) does not begin with the text **file**.



14. Set the action to set the value of the **qRulesLink** attribute to the formula:
`concat("file", substring-after(@qRulesLink, "http"))`



Your rule should look similar to this:

Details for:
Set link to open in Edit Mode
Condition: qRulesLink does not begin with "file"
Rule type: Action
Run these actions: *
Set a field's value: @qRulesLink = concat("file", substring-after(@qRulesLink, "http"))
☐ Don't run remaining rules if the condition of this rule is met

15. You may preview your form once again to see the changes you've made. Notice that *qRulesLink* now begins with "file". Clicking on the hyperlink should open your uploaded file in Edit mode.

SampleForm.xsn
Q Rules Link:
file://testsite/ImagesAndFiles/2010091913480182018_SampleForm.xsn
Q Rules Filename:
SampleForm.xsn



HOW TO USE THE GETATTACHMENTATTRIBUTE COMMAND

The **GetAttachmentAttribute** command gives you the ability to obtain attributes from an attachment included in an InfoPath form in a File Control. Extract the details, including file name, extension, and size.

- Arguments:
 - **dsname (optional)**: only needs to be specified if the xpath to delete is not located in the Main data source.
 - **xpath**: Xpath of the file attachment field.
 - **attr**: : specific attribute value to obtain, such as Name, Ext, Size or File.
- Examples:
 - `GetAttachmentAttribute /xpath=/my:myFields/my:FileAttachment /attr=Name`
 - `GetAttachmentAttribute /xpath=/my:myFields/my:FileAttachment /attr=Ext`
 - `GetAttachmentAttribute /xpath=/my:myFields/my:FileAttachment /attr=Size`
 - `GetAttachmentAttribute /xpath=/my:myFields/my:FileAttachment /attr=File`
 - `concat("GetAttachmentAttribute /xpath=/my:myFields/my:FileAttachment /attr=",
AttributeValue)`

This tutorial aims to demonstrate how to get ALL the attributes available in the command. If desired, you may set up your form template to only get the attributes that you are interested in such as the size; since you already have the filename (with the extension) retrieved via *SaveToSharePoint*.

Modify your InfoPath form template

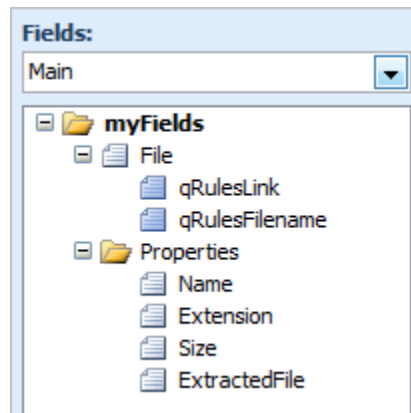
The following steps assume that you have designed your form template through the steps in the previous section.

1. Open your form template in InfoPath Design mode.
2. Add the following fields to your main data source:

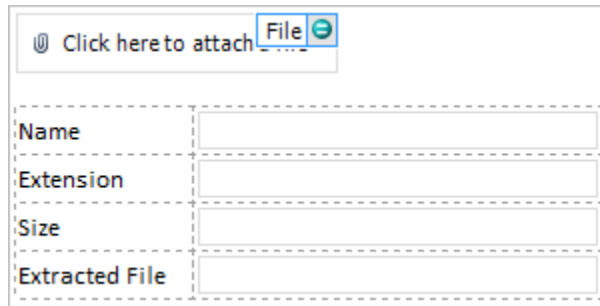
Name	Type	Data Type
Properties	Group	
Name	Field (element)	Text (string)
Extension	Field (attribute)	Text (string)
Size	Field (element)	Text (string)
ExtractedFile	Field (element)	Text (string)



Your main data source should look similar to this:



3. Drag the new fields as text boxes on your canvas; you may place them just right below your attachment control.



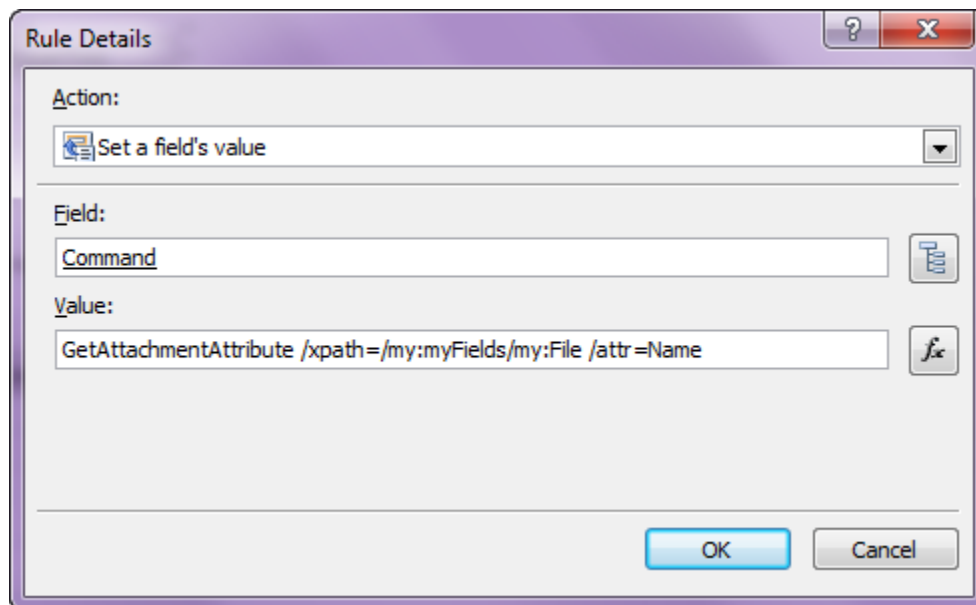
4. Add a button labeled **Get Properties**.

Add rules to get the attachment attributes

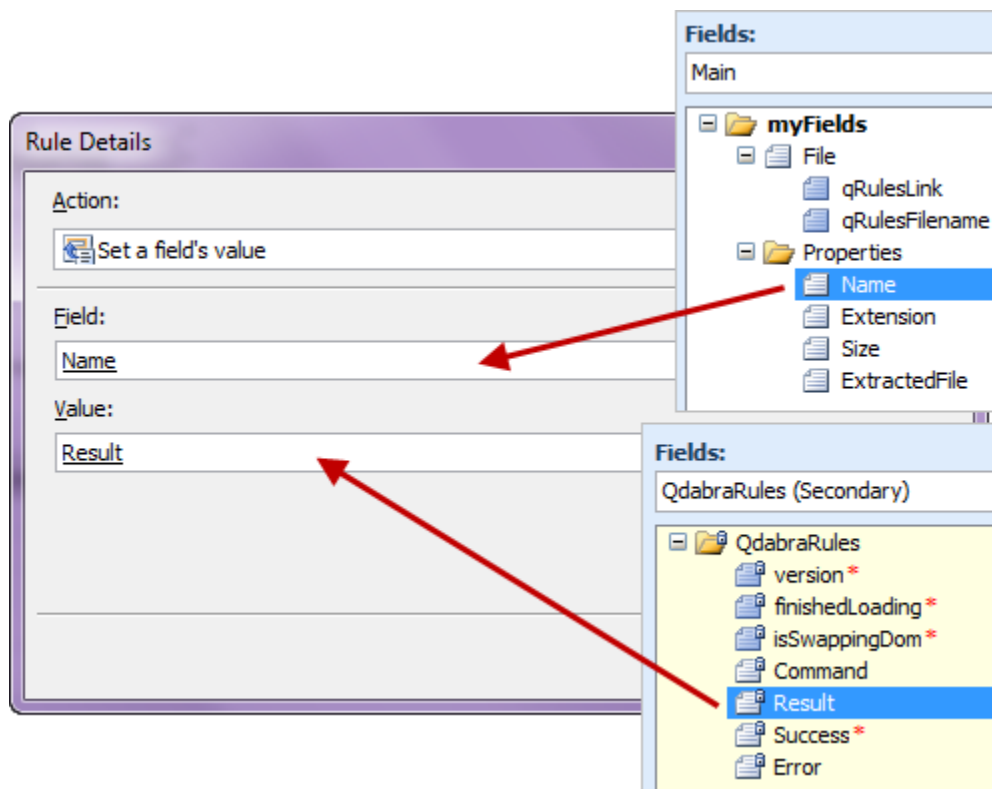
5. Click on the **Get Properties** button and then add a rule that sets a field's value when the button is clicked.
 - a. The field to set will be the **Command** node of the *QdabraRules (Secondary)* data source.
 - b. For the Value, enter the command syntax:
GetAttachmentAttribute /xpath=/my:myFields/my:File /attr=Name



Your rule action should look similar to this:



- c. You may name this rule "Get Attachment Name".
- d. In the same rule, add another action that sets the value of the **Name** field to the *QdabraRules'* **Result** node.

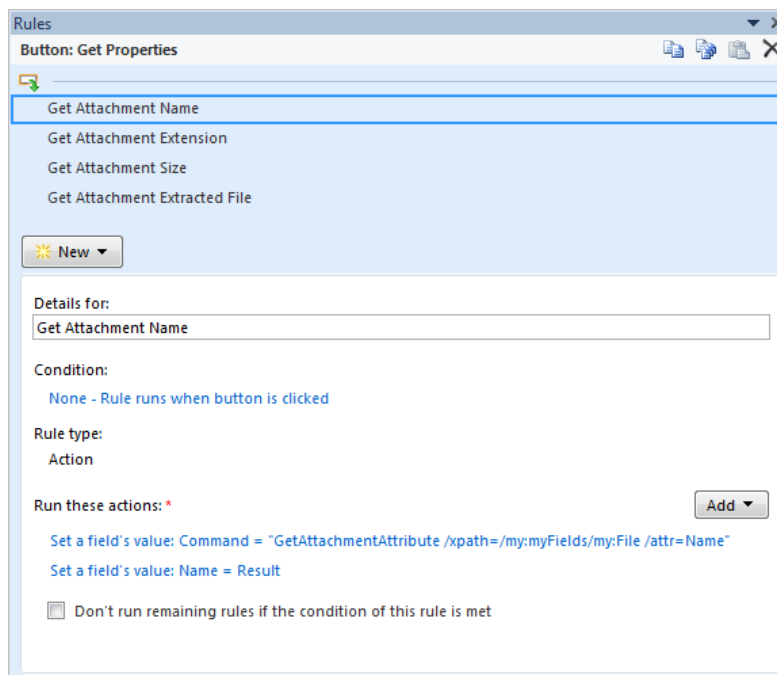


6. Repeat Step 5 to create three more rules to get the attributes for the other fields: *Extension*, *Size* and *ExtractedFile*. Respectively, the commands are:

- a. `GetAttachmentAttribute /xpath=/my:myFields/my:File /attr=Ext`
- b. `GetAttachmentAttribute /xpath=/my:myFields/my:File /attr=Size`
- c. `GetAttachmentAttribute /xpath=/my:myFields/my:File /attr=File`

Remember to set the corresponding field to **QdabraRules Result** after every action.

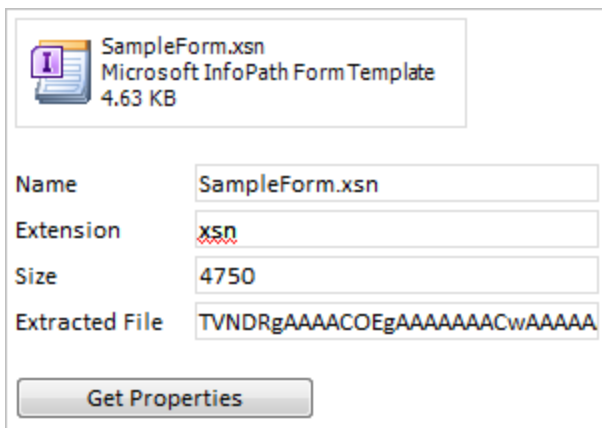
Your button rules may look similar to this:



Test your form

7. Preview your form.
8. Attach a sample file and click on the **Get Properties** button.

Your result may look similar to this:

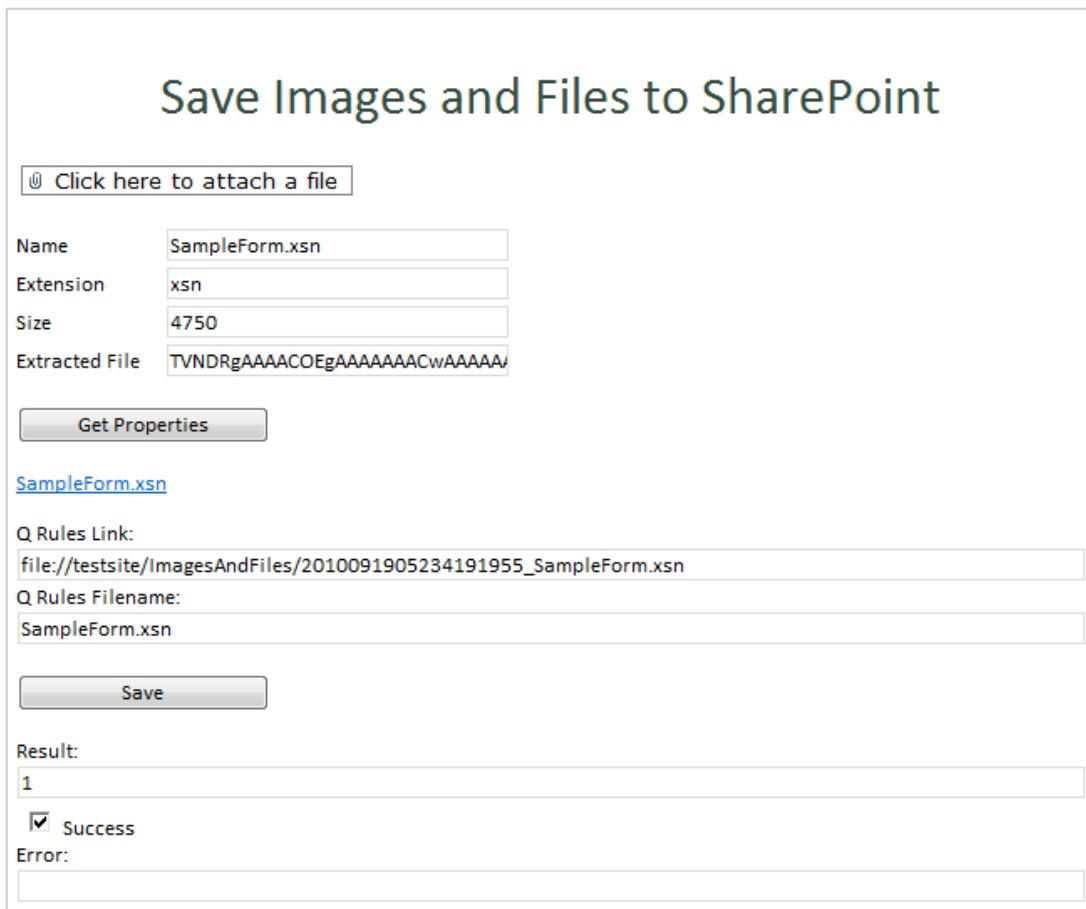



USING YOUR FORM IN INFOPATH FORMS SERVICES (IPFS)

Make sure to follow these guidelines if you wish to use the form in IPFS:

- If you are NOT using the dsnamews parameter, set your form's security level to Full Trust, then refer to the qRules v2.3 User guide (located in **Start > All Programs > Qdabra > Tools > qRules**), section: *"Using qRules in Infopath Forms Services (IPFS)"* for steps on how to:
 - Browser-enable your form template.
 - Set your qRules-enabled buttons to ALWAYS send data to the server.
 - Publish your form as an admin-approved template.
 - Upload the form template to your InfoPath Forms Server via SharePoint Central Administration.
 - Activate the form template to your site collection.
 - Create or set your SharePoint library to allow management of content types.
 - Add the form template in your SharePoint library as a content type.
- If you are using the dsnamews parameter on SharePoint 2010, you can simply publish your form directly to a form library (assuming sandbox is enabled). You will still need to make sure that the qRules enabled buttons are set to ALWAYS send data to the server.

Your browser-enabled form may look similar to this:



Save Images and Files to SharePoint

 [Click here to attach a file](#)

Name

Extension

Size

Extracted File

[SampleForm.xsn](#)

Q Rules Link:

Q Rules Filename:

Result:

☒ Success

Error:



SUPPORT

If you have questions about the information in this document, please contact Qdabra Software for assistance.

Licensed customers can contact us via Support@Qdabra.com.

You can also use the InfoPathDev.com [Qdabra Product support forums](http://InfoPathDev.com) to request help from the community.

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