

USING DBXL URN-BASED SOLUTIONS AND EMAIL FORMS TO COMMUNICATE WITH EXTERNAL USERS

PRODUCT: DBXL v2.5
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SCENARIO

There are times when we want someone not logged into the domain to be able to edit a form which needs to be submitted to DBXL. Let's say that "User A" is a person who works inside the domain and therefore has access to submit to DBXL and "User B" is a person who is working outside of the domain.

VALUE PROPOSITION

Using DBXL's "URN-based solution" feature gives us the power to use InfoPath forms to capture offline e-mailed data for centralized DBXL upload. We can email forms back-and-forth, to and from external users (sometimes offline/disconnected or simply not a member of the domain), and at the same time, manage those forms in private locations such as a domain. We need to make sure that the form data in both the public and the private locations are in-sync.

Here's an outline of the solution we're trying to accomplish:

1. User A emails the form template (XSN) file to an external user, User B (External version).
2. User B opens the form template, fills it out and emails back to User A.
3. User A receives the form (XML) and opens it with the higher version of the form template (Internal version).
4. User A submits the form to DBXL.
5. User A opens the form from DBXL, edits it and emails it back to User B.

Note that User A may receive a warning message that the original form template cannot be found and suggests another form template to open the form instead. Clicking Yes will open the form with the correct version of the form template.

6. User B receives the form, accepts the changes, re-edits and re-emails back to User A.

Note that User B may receive a warning message that the form template associated with the form has a higher version than the one stored on the machine. Clicking Yes will allow user to open the form.

7. User A receives the form and re-submits it to DBXL.

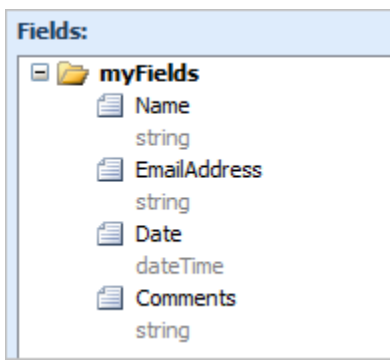


REQUIREMENTS

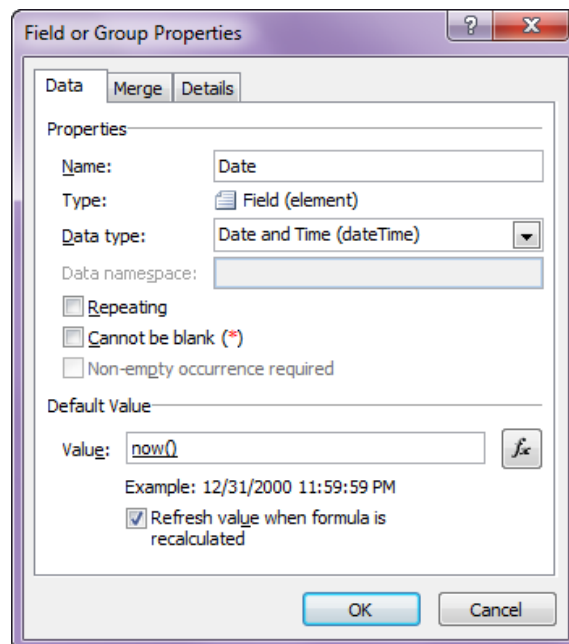
- DBXL v2.4 or higher
- InfoPath 2007 with SP2 or InfoPath 2010 with SP2
- Outlook 2007 or 2010 (for domain members)

DESIGN THE EXTERNAL VERSION TEMPLATE

1. Design a blank, InfoPath form template. In InfoPath 2010, select *New > Blank 2007 Form (InfoPath Filler)*.
2. Add the following fields and drag them onto your design canvas.



3. Add a default value to the *Date* field using InfoPath's **now()** function. We will use this for our DBXL metadata which we will configure later.



4. In *Data > Data Connections*, add an Email Submit data connection:
 - a. Specify User A's email address in the To field and using the formula **concat(Name, " - ", Date)** as the Subject:

Submitting through e-mail will create an e-mail message with the following properties. The document will be attached to this message with a name specified in the "Attachment Name" field.

<u>To</u> :	@Qdabra.com	
	Example: someone@example.com	
<u>Cc</u> :		
<u>Bcc</u> :		
<u>Subject</u> :	<input ",="" -="" date)"="" type="text" value="concat(Name, "/>	

- b. Select the option to send the form data as an attachment and use the same formula as the attachment's name:

Select the attachments to include with the e-mail message.

☐ Send only the active view of the form and no attachment
☒ Send the form data as an attachment:

Attachment Name:



Example: Status report or concat("Status Report - ", field1)

☐ Attach the form template to ensure that users can open the form

- c. Enter a desired name for your data connection and make it your default submit and then make it your default submit data connection.
5. Add a button labeled "Submit" on your design canvas that has the following rules:
 - a. Submit using your email submit data connection.
 - b. Close the form without prompting to save.



Details for:
Submit via Email

Condition:
None - Rule runs when button is clicked

Rule type:
Action

Run these actions: * Add ▼

Submit using a data connection: Email Submit

Close this form: No Prompt

6. Go to *File > Form Options > Security and Trust* and make the form restricted for external users.

Security Level

Form template requires the following level of trust from the user:

☐ Automatically determine security level (recommended)

☒ Restricted (the form cannot access content outside the form)

☐ Domain (the form can access content from the domain in which it is located)

☐ Full Trust (the form has access to files and settings on the computer)

For a form to run with full trust, it must be installed or digitally signed with a certificate. To preview or debug a form with full trust, this is not necessary.

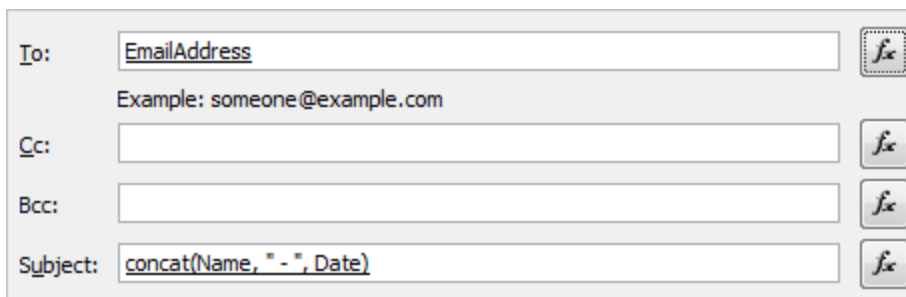
7. Save your form template. For the purposes of this documentation, we will name it **EmailForm**.



DESIGN THE INTERNAL VERSION TEMPLATE

The Internal version of the form template will have the same fields and layout; so you can just modify the External version.

8. With the **EmailForm** XSN still opened in InfoPath Designer, go to File > Save As and give it a different name: **EmailForm_Internal** (to make sure that we are not working on the External version).
9. Go to *Data Connections* and modify the email submit data connection changing the To field to point to the **EmailAddress** field of your main data source:



10. Leave the rest of the data connection properties and click **Finish** to save your changes.
11. Add a data connection that retrieves the DBXL document type name from an XML file:
 - a. First, create an XML file specifying the DBXL document type name.
 - i. Open a text editor such as Notepad.
 - ii. Paste the following texts:


```
<?xml version="1.0" encoding="utf-8"?>
<DocTypeName>EmailForm</DocTypeName>
```

(For the purposes of this documentation, we will name our document type: **EmailForm**)

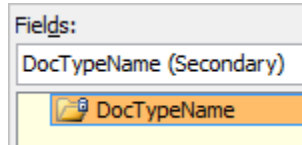
 - iii. Save the file as *DocTypeName.xml*.
 - b. Go to *Data Connections* and create a new connection to receive data from the XML document created above.
 - c. Include the data as a resource file and enable the form to automatically retrieve data when it opens.
12. Add a data connection that submits to DBXL following these guidelines:
 - a. Create a new connection to submit data to a Web service.
 - b. Enter your DBXL Document Web Service URL in the format:


```
http://<servername>/QdabraWebService/DbxlDocumentService.asmx
```

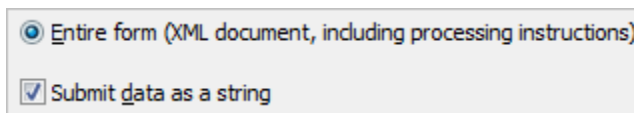
 replacing *<servername>* with your DBXL server's name.
 - c. Select **SubmitDocument** from the list of operations.



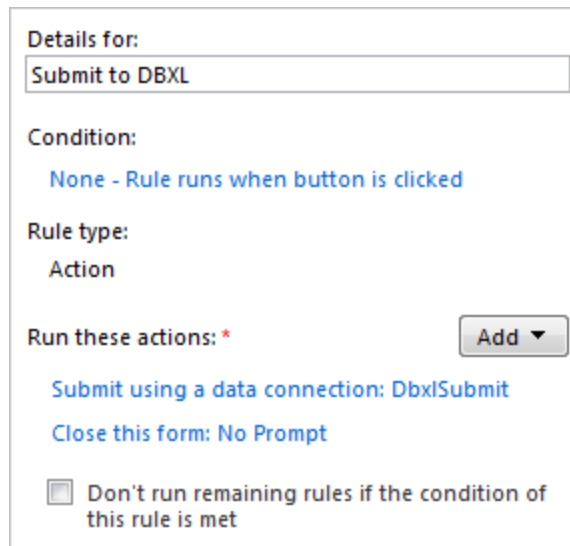
- d. Specify the following parameters:
- i. tns:docTypeName – DocTypeName node of the secondary data source created in Step 11:



- ii. tns:xml – entire form submitted as a string:



- iii. tns:name – /my:myFields/my:Name
 - iv. tns:author – /my:myFields/my:EmailAddress
 - v. tns:description – /my:myFields/my:Date
- e. Enter a desired name for your DBXL submit data connection and exit out of the data connection wizard.
13. Change the label of the existing Submit button to something like “Email User”.
14. Add another button labeled “Submit to DBXL” with the following rules:
- a. Submit using your DBXL submit data connection.
 - b. Close the form without prompting to save.



15. Go to *File > Form Options > Security and Trust* and enable the form to be access content from the domain, selecting **Domain** in the options:



Security Level

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For a form to run with full trust, it must be installed or digitally signed with a certificate. To preview or debug a form with full trust, this is not necessary.

16. Save your form template named **EmailForm_Internal** and then close it.

MANIPULATING FORM VERSIONS

We want to manipulate InfoPath to think that our External and Internal XSNs are one-and-the-same, when in fact, they are two different form templates. To make this happen, first, we need to give these two form templates the same ID. The ID contains the URN which is used to determine which template a form will be opened with; but this ID is dynamic. As the Name changes, so does the ID; and every time you do a Save As, the Name and the ID change. The key is that both forms have the same ID and that your internal form has a higher form version number than the external form.

After you've created both versions of your form, you will tell InfoPath they are the same form by setting both of their IDs to the same value.

17. Change the URN of the External version template.
- Open the **EmailForm** XSN in InfoPath Designer.
 - Go to the *File* tab and under *Form Statistics* on the right-hand pane, click **Form Template Properties**.

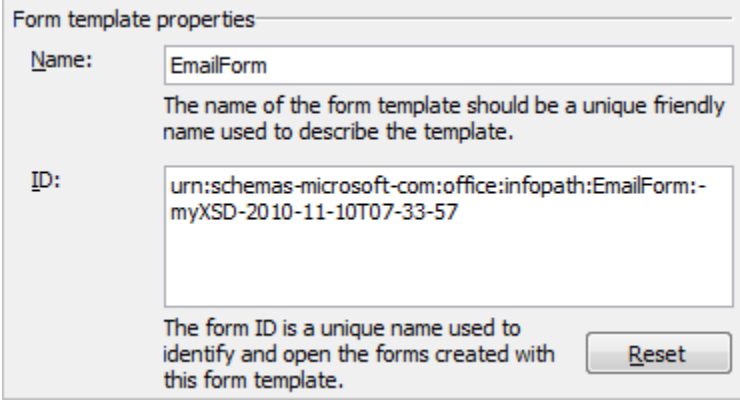
Form Statistics

Name	PublicEmailTemplate.xsn
Size	5.91KB
Created	11/10/2010 5:58 PM
Modified	11/10/2010 5:58 PM

 **Form Template Properties**

You will see something similar to this:



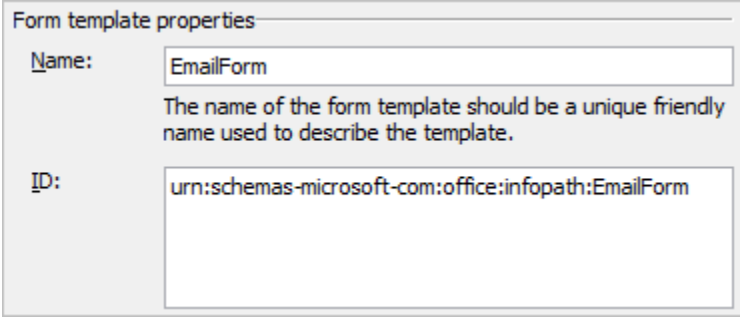


Form template properties

Name: EmailForm
The name of the form template should be a unique friendly name used to describe the template.

ID: urn:schemas-microsoft-com:office:infopath:EmailForm:-myXSD-2010-11-10T07-33-57
The form ID is a unique name used to identify and open the forms created with this form template.

- c. Remove timestamp, so our URN will be as shown:

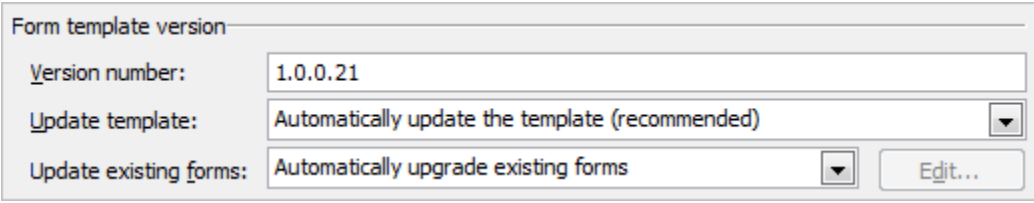


Form template properties

Name: EmailForm
The name of the form template should be a unique friendly name used to describe the template.

ID: urn:schemas-microsoft-com:office:infopath:EmailForm

- d. Click OK.
- e. Go to **File > Form Options > Versioning**. Notice that the Version number is something like 1.0.0.x, where x is a number that automatically increments as we make changes to our template. We can leave it this way for our external form.



Form template version

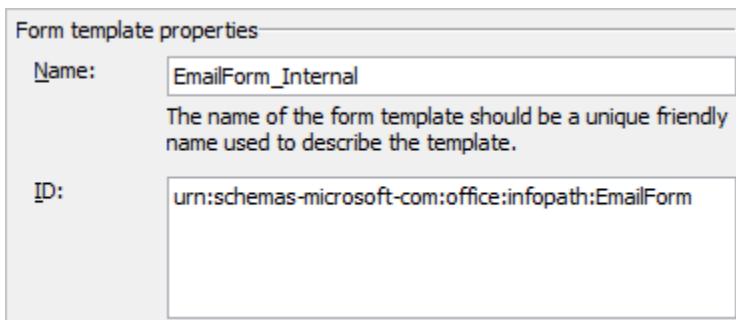
Version number: 1.0.0.21

Udate template: Automatically update the template (recommended)

Udate existing forms: Automatically upgrade existing forms

- f. Click **OK**, then **File > Save** and close InfoPath Designer.
18. Change the URN of the Internal version template.
- Open the **EmailForm_Internal** XSN in InfoPath Designer.
 - Go to the **File > Form Template Properties**.
 - Change the URN of the **EmailForm_Internal** template to be the same to that of the **EmailForm**'s.





Form template properties

Name:

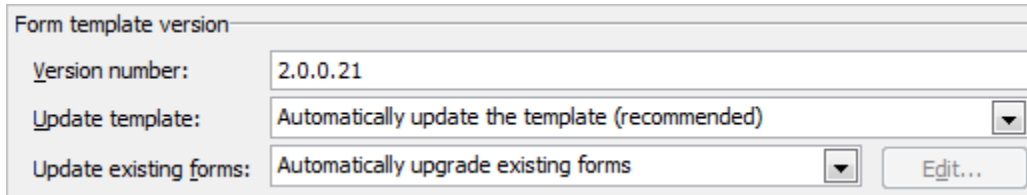
The name of the form template should be a unique friendly name used to describe the template.

ID:

- d. Click OK.

Now that we've given both of these forms the same ID, we will then ensure that our internal form has a higher version number by updating it from 1.0.0.x to 2.0.0.x. This will ensure that our internal form is always newer than the external form, and InfoPath will try to upgrade the external form to the internal form because of its newer version.

19. Update the internal form's version.
 - a. With the **EmailForm_Internal** XSN still open in the Designer, go to **File > Form Options > Versioning**.
 - b. Change the Version Number from 1.0.0.x to 2.0.0.x.



Form template version

Version number:

Update template:

Update existing forms:

- c. Click **OK**, then **File > Save** and close InfoPath Designer.

PUBLISH THE INTERNAL VERSION TEMPLATE TO DBXL

We will now publish the Internal version to DBXL so that internal users can submit and edit forms that have been filled out by external users.

20. Open your DBXL Administration Tool (DAT) by clicking on the link in your default.htm page (usually <http://<servername>/qdabrawebservice/default.htm> where <servername> is the machine where DBXL is installed).
21. Create a new doctype by clicking on **New Configuration** in the *Catalog* view.
22. Name your doctype **EmailForm** – recall that this is the name we specified in the *DocTypeName.xml* we created earlier.
23. Attach **EmailForm_Internal** in the XSN File section.



24. Check the **URN-based solution** box in the *Form Template Properties* section.

Document Type Details	
Name	Solution Group
EmailForm	 
Description	
InfoPath Form Template	
XSN File	Form Template Properties
 EmailForm_Internal.xsn Microsoft InfoPath Form Template 7.03 KB	Form Version: Last Modified: ☐ Form template is signed ☒ URN-based solution
URL to Form Template	

25. Click **Save**.

TEST YOUR SOLUTION

Send the **EmailForm** template to an external user by attaching the XSN in the Outlook message. Have the user fill it out and submit. When you receive the form via email, you will click the **Open Form** button at the top of the Outlook message, which will open the form using the Internal version template.

Notes:

- In InfoPath 2010, there might be a need to cache the higher version of the template first. You can do that by simply double-clicking on the Internal version (**EmailForm_Internal**) template on your local machine to open it. You may then close it right away.
- In InfoPath 2007, you might be presented with a dialog notifying you of a form template conflict. This will occur if you've had both forms open on your computer since both have the same id. You can choose which template to open the form with which will be the Internal version form to further process the data sent by the external user.



Verify that you can submit the filled out form to DBXL by clicking on the *Submit to DBXL* button. After submitting, try to open the form from DBXL, make changes and re-submit to the external user by clicking on the *Email User* button.

Notes:

- In order to open URN-based forms from DBXL, you would need to cache the form on your machine first. You can do so by opening a new form in the DBXL doctype and then closing the form right away.
- When opening URN-based DBXL documents, make sure to click on the *Download* icon  rather than the *Open* link.
- You might encounter InfoPath Security warning dialogs – click Yes to accept and open the form.

From here on, you can keep doing this process – emailing forms back and forth between the internal and external users, and maintaining them in DBXL.

