



## QDABRA DATABASE ACCELERATOR

### Using DBXL resources

The DBXLResource API allows users to use custom XML in their DBXL Document Type Configurations. As explained in the scenarios below, this grants the user to customization flexibility. The scenarios explain situations in which the administrator sets and controls the XML and situations in which the users are allowed to customize their XML resource.

In default DBXL v2.2 and later, the methods can be found in <http://<servername>/QdabraWebService/DBXLResource.aspx>. Note that users must have DocType Level Admin permissions to create, modify and delete resources.

#### SAMPLEDATA

The following table shows the sample data that will be used throughout the scenarios in this document.

| id | Projects |
|----|----------|
| 1  | Project1 |
| 2  | Project2 |
| 3  | Project3 |
| 4  | Project4 |
| 5  | Project5 |

#### SCENARIO 1: RESOURCE USES AN EXISTING DOC ID

In this scenario, an administrator creates two DocTypes, where one will manage settings for the other. The settings will apply to all users; therefore, AllowUserVersions will be set to False. This set up is useful for server migrations, when DocIDs are likely to change. Instead of hard coding the DocID value into the InfoPath form, the resource will allow the user to change the DocID, as necessary, using ModifyResource.

Follow these steps to set up this scenario.

1. Create the Configuration Document Type
  - a) Create a new, blank InfoPath form.
  - b) In the **Design Tasks** taskpane, click on **Controls**, then click on **Multiple-Selection List Box**.
  - c) Double-click on the control that was inserted in the view and change the **Field name** to *projects*.
  - d) In the List box entries section, select **Look up values from an external data source** and click **Add**. This will open the Data Connection Wizard.
  - e) In the first screen, the new connection will automatically be set to receive data. Click **Next**.
  - f) Select **Web Service** and click **Next**.
  - g) Enter the URL of the QueryDB service, which in default installations is <http://<servername>/QdabraWebService/QueryDB.aspx>. Click **Next**.



- h) Select **GetDropdownEntries** and click **Next**.
- i) Enter the parameters for your data connection. In our example, they can be seen in the screenshot shown in Figure 1.

| Parameters:       |        |          |
|-------------------|--------|----------|
| Parameter         | Type   | Value    |
| ns1:database      | string | SampleDB |
| ns1:table         | string | Projects |
| ns1:valueColumn   | string | ID       |
| ns1:displayColumn | string | Projects |
| ns1:sortColumn    | string |          |
| ns1:sortOrder     | string |          |
| ns1:filterXml     | string |          |

Figure 1

- j) When done, click **Next** twice, then click **Finish**, making sure that the checkbox for **Automatically retrieve data when form is opened** is checked.
- k) Click the **Select Xpath** button to the right of the **Entries** field.
- l) Expand the nodes and select the *GetDropdownEntries/entry* node. Click **OK**.
- m) Click the **Select Xpath** button to the right of the **Display name** field, select the **display** node and click **OK**.
- n) Click **OK** to exit the **Multiple-Selection List Box** properties screen.
- o) Create a button that submits the form to DBXL. For instructions on doing this, see the Getting Started document.
- p) Click on **File > Save As** and save the form to a local folder. For the purposes of this example, we are naming the form *Config-Scenario1.xsn*. A preview of the form might look as seen in Figure 2.

The screenshot shows a form titled "CONFIG" with a blue header. Below the header is a list of five items, each with a checkbox and a label: "Project1", "Project2", "Project3", "Project4", and "Project5". The checkboxes are currently unchecked. At the bottom right of the form is a "Submit" button.

- 2. Create the Target Document Type
  - a) Right click on the *projects* control and select **Change to > More**.
  - b) Select **Drop-down List Box** and click **OK**.
  - c) Click on **File > Save As** and save the form to a local folder. For the purposes of this example, we are naming the form *Target-Scenario1.xsn*.
  - d) Close InfoPath.
- 3. Create the configurations in DAT



- a) Open the DBXL Administration Tool, which in default installations of DBXL is located in <http://<servername>/QdabraWebService/Forms/DAT/template.xsn>.
  - b) Click on **New Configuration**.
  - c) Attach *Config-Scenario1.xsn* in the **InfoPath Form Template** field.
  - d) Name this *ConfigDocType-Scenario1* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
  - e) Click on **New Configuration**.
  - f) Attach *Target-Scenario1.xsn* in the **InfoPath Form Template** field.
  - g) Name this *TargetDocType-Scenario1* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
4. Add a document to the ConfigDocType
- a) Click on the **Open** icon for **ConfigDocType-Scenario1**.
  - b) Check the boxes for projects number 1, 3 and 5.
  - c) Click Submit and then close the form.
  - d) In DAT, click **Edit** for **ConfigDocType-Scenario1** and then click on the **Documents** tab.
  - e) Note the DocID of the document submitted. We will use this in the next step.
5. Create the resource
- a) Create a new, blank form in InfoPath.
  - b) Click on **Tools > Data Connection**, and then click **Add**.
  - c) Select **Receive Data** and click **Next**. Then select **Web Service** and click **Next**.
  - d) Enter the URL of the Resource service, which in default installations is <http://<servername>/QdabraWebService/DBXLResource.asmx>. Click **Next**.
  - e) Select **CreateResource** and click **Next**.
  - f) Enter the parameters as seen in Figure 3, noting that the value for DocID may vary.

| Parameter             | Type    | Value                   |
|-----------------------|---------|-------------------------|
| tns:docTypeName       | string  | TargetDocType-Scenario1 |
| tns:resourceName      | string  | SelectedProjects        |
| tns:description       | string  | Scenario 1              |
| tns:docID             | int     | 90                      |
| tns:allowUserVersions | boolean | False                   |

Figure 3

- g) Click **Next** twice, then click on **Finish** and **Close** to exit.
  - h) To see the result of the query drag the **Success** node, */dfs:myFields/dfs:dataFields/tns:CreateResourceResponse/tns:CreateResourceResult/tns:Success*, into the view.
  - i) Click **Preview** to execute the query. You will see the **Success** checkbox shown as checked. This means the resource has been successfully created. You can now close this form without saving.
6. Modify the TargetDocType to use the resource
- a) Open the form *TargetDocType-Scenario1.xsn* in Design mode in InfoPath.
  - b) Double-click on the *projects* dropdown control in the view.
  - c) In the List box entries section, select **Look up values from an external data source**.
  - d) Click on **Add**. This will open the Data Connection Wizard.
  - e) In the first screen, the new connection will automatically be set to receive data. Click **Next**.
  - f) Select **Web Service** and click **Next**.
  - g) Enter the URL of the DBXLResource service and click **Next**.
  - h) Select *GetResourceXml* and click **Next**.



- i) Enter the **docTypeName** and **resourceName** parameters and click **Next**. These must match the settings in Figure 3. You will be asked again to enter the same parameters.
  - j) Click **Next**, then click **Finish**, making sure that the checkbox for **Automatically retrieve data when form is opened** is checked.
  - k) In the Data Source dropdown, change the selection to **GetDropdownEntries**.
  - l) Click the **Select Xpath** button to the right of the **Entries** field.
  - m) Expand the nodes and select the `/dfs:myFields/dfs:dataFields/tns:GetDropdownEntriesResponse/tns:GetDropdownEntriesResult/tns:entry` node.
  - n) Click on **Filter Data**, then click on **Add**.
  - o) In the first dropdown, choose **Select a field or group**, then select the `/dfs:myFields/dfs:dataFields/tns:GetDropdownEntriesResponse/tns:GetDropdownEntriesResult/tns:entry/@value` node.
  - p) In the middle dropdown, leave the selection as **is equal to**.
  - q) In the third dropdown, choose **Select a field or group**.
  - r) Change the Data Source to **GetResourceXml** and select the `/dfs:myFields/dfs:dataFields/ns1:GetResourceXmlResponse/ns1:resourceXml/my:myFields/my:group1/my:projects` node, as seen in Figure 3. Click **OK** three times.
  - s) Click the **Select Xpath** button to the right of the **Display name** field.
  - t) Select the **display** node and click **OK** twice.
  - u) Save and close the form.
7. Verify the result
- a) In Catalog view in DAT, click to **Edit** the **TargetDocType-Scenario1**.
  - b) Attach the updated Target-Scenario1.xsn and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
  - c) Click on the **Open** icon for **TargetDocType-Scenario1**.
  - d) The form will open and the dropdown will only show the three projects selected in the ConfigDocType-Scenario1, as seen in Figure 4.

The figure shows a web form with two main sections: 'CONFIG' and 'TARGET'. In the 'CONFIG' section, there is a list of five projects with checkboxes: Project1 (checked), Project2 (unchecked), Project3 (checked), Project4 (unchecked), and Project5 (checked). Red arrows originate from the checked checkboxes for Project1, Project3, and Project5 and point towards a dropdown menu in the 'TARGET' section. The dropdown menu is currently open, displaying a list of three items: 'Project1', 'Project3', and 'Project5'. Below the 'CONFIG' section is a 'Submit' button.

Figure 4

To modify the resource, we can use ModifyResource. Here is an example.

8. Add a second document to the ConfigDocType.
  - a) In DAT, click on the **Open** icon for **ConfigDocType-Scenario1**.
  - b) Check the boxes for projects number 2 and 4.
  - c) Click Submit and then close the form.



- d) In DAT, click **Edit** for **ConfigDocType-Scenario1** and then click on the **Documents** tab.
- e) Note the DocID of the document submitted. We will use this in the next step.
- 9. Modify the resource
  - a) Design a new, blank form in InfoPath.
  - b) Click on **Tools > Data Connection**, and then click **Add**.
  - c) Select **Receive Data** and click **Next**. Then select **Web Service** and click **Next**.
  - d) Enter the URL of the Resource service, which in default installations is <http://<servername>/QdabraWebService/DBXLResource.asmx>. Click **Next**.
  - e) Select **ModifyResource** and click **Next**.
  - f) Enter the parameters as seen in Figure 3, but change the value for DocID to the one created in step 8.
  - g) To see the result of the query drag the **Success** node, `/dfs:myFields/dfs:dataFields/tns:ModifyResourceResponse/tns:ModifyResourceResult/tns:Success`, into the view.
  - h) Click **Preview** to execute the query. You will see the **Success** checkbox shown as checked. This means the resource has been successfully modified.
- 10. Check the result by clicking on the **Open** icon for **TargetDocType-Scenario1**. The form will open and the dropdown will only show the two projects selected in the new document created for ConfigDocType-Scenario1 in step 8.

Note that during server migrations, the DocID may change. This setup allows you to quickly change these references in your new environment.

To delete the resource, call DeleteResource. However, note that deleting the resource will break your form, which you will need to edit manually to fix the data connections.

## SCENARIO 2: RESOURCE USES XML

In this scenario, an administrator creates one DocType and sets up an Xml resource to control settings in the DocType. The settings will apply to all users; therefore, AllowUserVersions will be set to False. This avoids the use of a separate DocType, which is economical for licensing purposes. When setting up this scenario, the DocID parameter in CreateResource must be set to 0.

Before we begin, open **Target-Scenario1.xsn** in design mode in InfoPath and save it as Target-Scenario2.xsn, so that we don't overwrite our previous work. For the same reasons, save **Config-Scenario1.xsn** as Config-Scenario2.xsn.

- 1. Setup the Target Document Type in DAT.
  - a. Open the DBXL Administration Tool.
  - b. Click on **New Configuration**.
  - c. Attach *Target-Scenario2.xsn* in the **InfoPath Form Template** field.
  - d. Name this *TargetDocType-Scenario2* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
- 2. Create the resource for TargetDocType-Scenario2.
  - a. Create a new, blank form in InfoPath.
  - b. Click on **Tools > Data Connection**, and then click **Add**.
  - c. Select **Receive Data** and click **Next**. Then select **Web Service** and click **Next**.
  - d. Enter the URL of the Resource service and click **Next**.
  - e. Select **CreateResource** and click **Next**.



- f. Enter the parameters as seen in Figure 5, noting that the value for DocID is now 0.

| Parameter             | Type    | Value                   |
|-----------------------|---------|-------------------------|
| tns:docTypeName       | string  | TargetDocType-Scenario2 |
| tns:resourceName      | string  | SelectedProjects        |
| tns:description       | string  | Scenario 2              |
| tns:docID             | int     | 0                       |
| tns:allowUserVersions | boolean | false                   |

Figure 5

- g. Click **Next** twice, then click on **Finish** and **Close** to exit.
- h. To see the result of the query drag the **Success** node, */dfs:myFields/dfs:dataFields/tns:CreateResourceResponse/tns:CreateResourceResult/tns:Success*, into the view.
- i. Click **Preview** to execute the query. You will see the **Success** checkbox shown as checked. This means the resource has been successfully created. You can now close this form without saving.
3. Create an auxiliary XML file.
- a. In a text editor, such as Notepad, create an XML file, as seen below:
- ```
<config>

    <doctype name>TargetDocType-Scenario2</doctype name>

    <resource name>SelectedProjects</resource name>

</config>
```
- b. Save the file as configuration2.xml.
4. Add the auxiliary XML file to Config-Scenario2.xsn
- a. Open **Config-Scenario2.xsn** in design mode in InfoPath.
- b. Click on **Tools > Data Connections**.
- c. Select **Add**, then **Receive Data**, and click **Next**.
- d. Select **XML Document** and click **Next**.
- e. Select the document created in step 3 by using the **Browse** button. Click Next when the file is selected.
- f. Opt to **Include the data as a resource file in the form template or template part**, as well as **Automatically retrieve data when form is opened**. **Finish** the wizard.
5. Modify the button to submit to SaveResourceXml
- a. Double click on the **Submit** button and click on **Submit Options**.
- b. Click **Add**. This will open the Data Connection Wizard.
- c. Enter the URL for DbxlResource.asmx and click **Next**.
- d. Select **SaveResourceXml** and click **Next**.
- e. You will be shown a screen with three parameters.
- i. Double click on the **docTypeName** parameter, then select the **doctype name** node from the **configuration (Secondary)** data connection.
- ii. Double click on the **resourceName** parameter, then select the **resource name** node from the **configuration (Secondary)** data connection.



- iii. For both fields, select to **Submit data as string**.
- iv. Double click on the **resourceXml** parameter and select the group that contains the projects in the **Main** Data source, as seen in Figure 6.

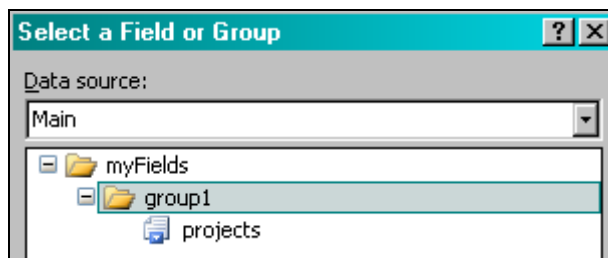


Figure 6

- v. Change the **Include** dropdown for the resourceXml parameter to select **XML subtree, including selected element**.

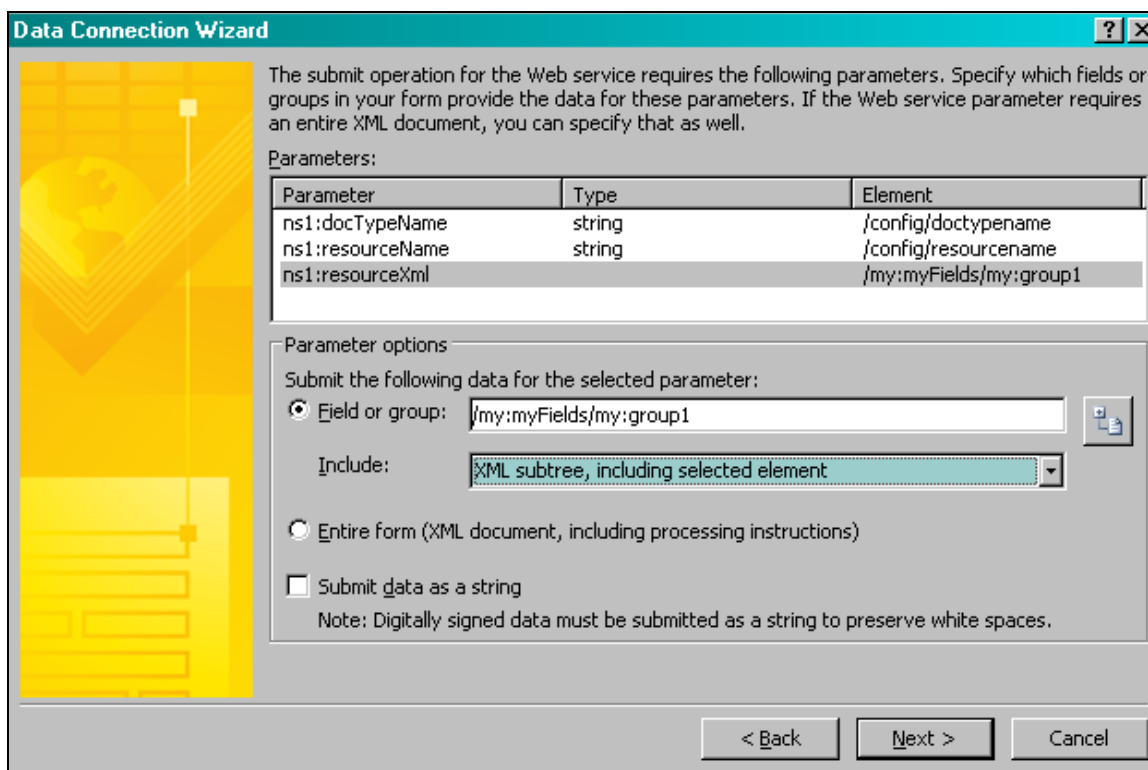


Figure 7

- f. Click **Next**, then click **Finish**.
  - g. In the **Choose a data connection for submit**, make sure that this new connection is selected. By default, InfoPath selects this data connection you have just created. Click **OK** twice.
6. Generate the initial XML for your resource.
- a. Click on **Preview** for **Config-Scenario2.xsn**.



- b. Select the projects you wish to include and click on **Submit**.
  - c. Close the Preview, then save and close the file.
7. Modify the data connection in the form
  - a. Open Target-Scenario2.xsn in design mode in InfoPath.
  - b. Click on **Tools > Data Connections**.
  - c. Click to **Modify** the Data Connection called **GetResourceXml**.
  - d. Click **Next** until you reach the parameter-entry screen.
  - e. Modify the **docTypeName** parameter to **TargetDocType-Scenario2** and finish the wizard.
8. Modify the filter for the dropdown.
  - a. Double click on the dropdown control.
  - b. Click on the **Select XPath** icon next to the **Entries** field.
  - c. In the **Select a Field or Group** dialog, click on **Filter Data**.
  - d. Click **Remove** to remove the existing filter (used in Scenario 1), then click **Add**.
  - e. In the first dropdown, choose **Select a field or group**, then select the *value* node.
  - f. In the middle dropdown, leave the selection as **is equal to**.
  - g. In the third dropdown, choose **Select a field or group**.
  - h. Change the Data Source to **GetResourceXml** and select the *projects* node. Click **OK** four times.
  - i. Save and close the form.
9. Verify the result
  - a. Click to **Edit** the **TargetDocType-Scenario2** configuration in DAT.
  - b. Attach the updated Target-Scenario2.xsn form and click **Save**. Click **OK** on the confirmation dialog, then click **Catalog**.
  - c. Click to open **TargetDocType-Scenario2** and verify that the projects selected in step 6 are shown in the dropdown, as seen in Figure 8.

| CONFIG                                       | TARGET   |
|----------------------------------------------|----------|
| <input checked="" type="checkbox"/> Project1 |          |
| <input type="checkbox"/> Project2            |          |
| <input type="checkbox"/> Project3            |          |
| <input type="checkbox"/> Project4            |          |
| <input checked="" type="checkbox"/> Project5 | Project1 |
|                                              | Project5 |

Submit

Figure 8

To modify the resource, we can use SaveResourceXml to update the xml. One simple way is to open Config-Scenario.xsn, select a different set of projects, and submit the form. Alternatively, you may wish to design a form that:

1. Reads the current xml using GetResourceXml
2. Displays fields that allow the administrator to modify the values.
3. Updates the resource Xml by using SaveResourceXml.



### SCENARIO 3: RESOURCE USES ANOTHER DOCID AND USER VERSIONS

In this scenario, an administrator creates two DocTypes, where one will manage settings for the other. The users will be allowed to save individual versions of the XML; therefore, AllowUserVersions will be set to True. The original XML is stored in the ConfigDocType; user versions are stored in a SQL table.

Like Scenario 1, this setup is useful for server migrations, when DocIDs are likely to change. Instead of hard coding the DocID value into the InfoPath form, the user can change the resource's reference DocID as necessary.

Before we begin, open **Target-Scenario1.xsn** in design mode in InfoPath and save it as Target-Scenario3.xsn, so that we don't overwrite our previous work. For the same reasons, save **Config-Scenario1.xsn** as Config-Scenario3.xsn.

1. Create the configurations in DAT
  - a. Open the DBXL Administration Tool.
  - b. Click on **New Configuration**.
  - c. Attach *Config-Scenario3.xsn* in the **InfoPath Form Template** field.
  - d. Name this *ConfigDocType-Scenario3* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
  - e. Click on **New Configuration**.
  - f. Attach *Target-Scenario3.xsn* in the **InfoPath Form Template** field.
  - g. Name this *TargetDocType-Scenario3* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
2. Add a document to the ConfigDocType
  - a. Click on the **Open** icon for **ConfigDocType-Scenario3**.
  - b. Check the boxes for projects number 1, 3 and 5.
  - c. Click Submit and then close the form.
  - d. In DAT, click **Edit** for **ConfigDocType-Scenario3** and then click on the **Documents** tab.
  - e. Note the DocID of the document submitted. We will use this in the next step.
3. Create the resource.
  - a. Create a new, blank form in InfoPath.
  - b. Click on **Tools > Data Connection**, and then click **Add**.
  - c. Select **Receive Data** and click **Next**. Then select **Web Service** and click **Next**.
  - d. Enter the URL of the Resource service and click **Next**.
  - e. Select **CreateResource** and click **Next**.
  - f. Enter the parameters as seen in Figure 9.

| Parameter             | Type    | Value                   |
|-----------------------|---------|-------------------------|
| tns:docTypeName       | string  | TargetDocType-Scenario3 |
| tns:resourceName      | string  | SelectedProjects        |
| tns:description       | string  | Scenario 3              |
| tns:docID             | int     | 299                     |
| tns:allowUserVersions | boolean | true                    |

Figure 9

- g. Click **Next** twice, then click on **Finish** and **Close** to exit.



&lt;/config&gt;

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- iv. Change the **Include** dropdown for the resourceXml parameter to select **XML subtree, including selected element**.
    - g. Click **Next**, then click **Finish**.
    - h. In the **Choose a data connection for submit**, make sure that this new connection is selected. By default, InfoPath selects this data connection you have just created. Click **OK** twice.
    - i. Save and close the file.
  9. Verify the SaveUserResourceXml button
    - a. Click to **Edit** the **TargetDocType-Scenario3** configuration in DAT.
    - b. Attach the updated Target-Scenario3.xsn form and click **Save**. Click **OK** on the confirmation dialog, then click **Catalog**.
    - c. Click to open **TargetDocType-Scenario3**. It will load with the projects you, as admin, selected in step 2. Close the form.
    - d. Open the Config-Scenario3User.xsn form, select a different set of projects and then click the SaveUserResourceXml button. You will be notified, thru a dialog, that the form was submitted.
    - e. Click to open **TargetDocType-Scenario3**. It will load with the projects you selected, as a regular user, in step 9(d). Close the form.
  10. Create a button that calls ResetUserResourceXml
    - a. Open Config-Scenario3User.xsn in design mode in InfoPath.
    - b. Insert a new button and double click on it.
    - c. Change its label to **ResetUserResourceXml**, and then change the **Action** dropdown to **Rules and Custom code**.
    - d. Click on **Rules**. Click **Add**. Click **Add Action**.
    - e. Select **Query using a data connection** from the dropdown and click **Add**. This will open the Data Connection Wizard.
    - f. In the first screen, click **Next**. Select **Web service** and click **Next**.
    - g. Enter the URL for DbxlResource.asmx and click **Next**.
    - h. Select **ResetUserResourceXml** and click **Next**.
    - i. You will be shown a screen with two parameters.
      - i. For **docTypeName** parameter, type in the name of the document type, which is **TargetDocType-Scenario3**.
      - ii. For the **resourceName** parameter, enter the name of the resource, which in this example is **SelectedProjects**.
    - j. Click **Next**. Make sure to uncheck the checkbox for **Automatically retrieve data when from is opened**. **Finish** the wizard.
    - k. In the **Action** screen, make sure that this new data connection is selected in the **Data connection** dropdown, and then click **OK** until all dialogs are closed.
  11. Verify the ResetUserResourceXml button
    - a. Click **Preview** for the Config-Scenario3User.xsn form and click the ResetUserResourceXml button. This resets this users ResourceXml to the one originally saved by the admin in step 2.
    - b. Click to open **TargetDocType-Scenario3**. It will load with the projects you, as admin, selected in step 2. Close the form.

Note that the user is automatically detected (and stored in SQL) when we call SaveUserResourceXml and GetUserResourceXml, so there are no additional steps on our part regarding the users.

#### SCENARIO 4: RESOURCE USES XML AND STORES CUSTOM USER SETTINGS



In this scenario, an administrator creates one DocType and sets up an xml resource to control settings in the DocType. The individual users will be allowed to modify and save personal settings; therefore, AllowUserVersions will be set to True. This scenario, like Scenario 2, avoids the use of a separate DocType, which is economical for licensing purposes. When setting up this scenario, the DocID parameter in CreateResource must be set to 0.

Before we begin, open **Target-Scenario3.xsn** in design mode in InfoPath and save it as Target-Scenario4.xsn, so that we don't overwrite our previous work. For the same reasons, save **Config-Scenario3.xsn** as Config-Scenario4.xsn and **Config-Scenario3User.xsn** as Config-Scenario4User.xsn

1. Create the configuration in DAT
  - a. Open the DBXL Administration Tool.
  - b. Click on **New Configuration**.
  - c. Attach *Target-Scenario4.xsn* in the **InfoPath Form Template** field.
  - d. Name this *TargetDocType-Scenario4* and click **Save**. Click **OK** in the confirmation message, then click on **Catalog**.
2. Create the resource.
  - a. Create a new, blank form in InfoPath.
  - b. Click on **Tools > Data Connection**, and then click **Add**.
  - c. Select **Receive Data** and click **Next**. Then select **Web Service** and click **Next**.
  - d. Enter the URL of the Resource service and click **Next**.
  - e. Select **CreateResource** and click **Next**.
  - f. Enter the parameters as seen in Figure 10.

| Parameter             | Type    | Value                   |
|-----------------------|---------|-------------------------|
| tns:docTypeName       | string  | TargetDocType-Scenario4 |
| tns:resourceName      | string  | SelectedProjects        |
| tns:description       | string  | Scenario 4              |
| tns:docID             | int     | 0                       |
| tns:allowUserVersions | boolean | true                    |

Figure 10

- g. Click **Next** twice, then click on **Finish** and **Close** to exit.
    - h. To see the result of the query drag the **Success** node, */dfs:myFields/dfs:dataFields/tns:CreateResourceResponse/tns:CreateResourceResult/tns:Success*, into the view.
    - i. Click **Preview** to execute the query. You will see the **Success** checkbox shown as checked. This means the resource has been successfully created. You can now close this form without saving.
3. Create a new auxiliary XML file.
  - a. In a text editor, such as Notepad, create an XML file, as seen below:

```
<config>

    <doctypeName>TargetDocType-Scenario4</doctypeName>

    <resourceName>SelectedProjects</resourceName>

</config>
```



- b. Save the file as configuration4.xml.
4. Add the auxiliary XML file to Config-Scenario4.xsn
  - a. Click on **Tools > Data Connections**.
  - b. Select **Add**, then **Receive Data**, and click **Next**.
  - c. Select **XML Document** and click **Next**.
  - d. Select the xml document by using the **Browse** button. Click Next when the file is selected.
  - e. Opt to **Include the data as a resource file in the form template or template part**, as well as **Automatically retrieve data when form is opened**. **Finish** the wizard.
5. Modify the GetUserResourceXml connection in Target-Scenario4.xsn
  - a. Open **Target-Scenario4.xsn** in design mode in InfoPath.
  - b. Click on **File > Data Connections**.
  - c. Select **GetUserResourceXml** and click on **Modify**. Click **Next** twice.
  - d. Change the DocTypeName to **TargetDocType-Scenario4** and click **Next** until the wizard is complete, then click **Finish**, making sure that the **Automatically retrieve data when form is opened** is checked. For convenience, make sure the Data Connection is named GetUserResourceXml.
6. Modify Config-Scenario4.xsn to submit to *TargetDocType-Scenario4*.
  - a. Double click on the Submit button and change its label to SaveResourceXml.
  - b. Click on **Submit Options**.
  - c. Click **Add**. This will open the Data Connection Wizard.
  - d. Enter the URL for DbxlResource.asmx and click **Next**.
  - e. Select **SaveResourceXml** and click **Next**.
  - f. You will be shown a screen with three parameters.
    - i. Double click on the **docTypeName** parameter, then select the **doctypeName** node from the **configuration (Secondary)** data connection. Opt to submit this field as a string.
    - ii. Double click on the **resourceName** parameter, then select the **resourcename** node from the **configuration (Secondary)** data connection. Opt to submit this field as a string.
    - iii. Double click on the **resourceXml** parameter and select the group that contains the *projects* node in the **Main** Data source. Note that this XML tree being submitted must match exactly with the XML of the document submitted in step 2.
    - iv. Change the **Include** dropdown for the resourceXml parameter to select **XML subtree, including selected element**.
  - g. Click **Next**, then click **Finish**.
  - h. In the **Choose a data connection for submit**, make sure that this new connection is selected. By default, InfoPath selects this data connection you have just created. Click **OK** twice.
  - i. Save and close the file.
7. Modify the auxiliary XML file in Config-Scenario4User.xsn
  - a. Click on **Tools > Data Connections**.
  - b. Select the configuration xml and click **Modify**.
  - c. Select the updated configuration4.xml using the Browse button and click **Next**.
  - d. Opt to **Include the data as a resource file in the form template or template part**, as well as **Automatically retrieve data when form is opened**. **Finish** the wizard.
  - e. Save and close the Config-Scenario4User.xsn file.
8. Use Config-Scenario4.xsn to generate the initial xml.
  - a. Open Config-Scenario4.xsn, select a set of projects and click on SaveResourceXml. A dialog box will confirm the success of the operation.



- b. Close the form.
9. Verify the result
  - a. In DAT, click to **Edit** the configuration for **TargetDocType-Scenario4**. Attach the updated form and click **Save**.
  - b. Open TargetDocType-Scenario4 and verify that it shows only the projects selected in step 7. Close the form.
  - c. Open Config-Scenario4User.xsn, select a different set of projects and submit.
  - d. Open TargetDocType-Scenario4 from DAT to see the form showing the selections made in (c).
10. Create a button that calls ResetUserResourceXml
  - a. Open Config-Scenario4User.xsn in design mode in InfoPath.
  - b. Insert a new button and double click on it.
  - c. Change its label to **ResetUserResourceXml**, and then change the **Action** dropdown to **Rules and Custom code**.
  - d. Click on **Rules**. Click **Add**. Click **Add Action**.
  - e. Select **Query using a data connection** from the dropdown and click **Add**. This will open the Data Connection Wizard.
  - f. In the first screen, click **Next**. Select **Web service** and click **Next**.
  - g. Enter the URL for DbxlResource.asmx and click **Next**.
  - h. Select **ResetUserResourceXml** and click **Next**.
  - i. You will be shown a screen with two parameters.
    - iii. For **docTypeName** parameter, type in the name of the document type, which is **TargetDocType-Scenario4**.
    - iv. For the **resourceName** parameter, enter the name of the resource, which in this example is **SelectedProjects**.
  - j. Click **Next**. Make sure to uncheck the checkbox for **Automatically retrieve data when from is opened**. **Finish** the wizard.
  - k. In the **Action** screen, make sure that this new data connection is selected in the **Data connection** dropdown, and then click **OK** until all dialogs are closed.
11. Verify the ResetUserResourceXml button
  - a. Click **Preview** for the Config-Scenario4User.xsn form and click the ResetUserResourceXml button. You will be notified, thru a dialog, that the form was submitted.
  - b. Click to open **TargetDocType-Scenario4**. It will load with the projects you, as admin, selected in step 8. Close the form.

## FURTHER WORK

Here are two ideas for developers to consider when using the DBXLResources feature:

1. Incorporate Config xsns as a separate view in the Target document types for scenarios 3 and 4. When attempting this, remember that the individual users need to submit an xml structure that is identical to the one submitted by the admin using SaveResourceXml.
2. Improve the Config xsns from Scenarios 2, 3 and 4 to automatically display the currently-saved xml. That is, the checkboxes are right now being shown as unchecked, thus not allowing the user to see what the current version of the xml looks like. Ideally, we the developer will show the current version and submit changes to overwrite.