iConnect 150069 Design Approach

Project Overview

Update the rules functionality to allow a user to apply the same rule to multiple fields. Currently, a rule must be added to each field individually. This project will enhance the rule functionality to allow you to add rules to multiple fields.

Features/Requirements

- Enhance the rules window so you can create rules for multiple fields.
- Each rule may have one or more variable fields. FireLight will provide a method to modify these variable fields.
- Once multiple rules are created, modifications are made through the rules window.

Use Cases / Workflow Changes

There are no changes to the normal workflow of the system.

Admin Changes

A user can create rules in two locations.

1. Form Designer -> Rules Window.
2. Rule Set View -> Rules Window.

Since this functionality requires the selection of multiple fields, we will enhance the rule functionality in the Form Designer (it will be added to Wizard in a later release). We will also add a new button "Create Multiple" in Rules Window. Note that there are no changes to adding a rule to a single field.

- Select multiple fields in the designer.
- You can type any rule or select a rule template from the "New Rule Template" window by clicking the "New" button in the rules window.
- After creating the rule, click on the "Create Multiple" button.
  - If there are no errors in the rule, FireLight will scan the rule for *dataitemid* and *value* attributes as the value of these attributes are replaced to create a new rule for the selected fields.
  - If there are errors in the rule, the errors will appear in the rules window and you cannot save it until all errors are fixed.

- Each unique *dataitemid* and *value* will be replaced with a unique label (*{item<number>}*) and the labels with user defined values. For example, the required rule template for field "TextBox_1" shown in Figure 1.

```
<if>
   <condition>
      <not>
         <isnullorwhitespace>
            <diget dataitemid="TextBox_1" />
         </isnullorwhitespace>
      </not>
   </condition>
   <removemessage dataitemid="TextBox_1" />
   <else />
   <postmessage dataitemid="TextBox_1">
      <const value="This is a required field." />
   </postmessage>
</if>
```

Figure 1

This required rule template has three occurrence of *dataitemid* ("TextBox_1") and one occurrence of *value* ("This is required field"). The value of these attributes can be replaced with a label {item1} and {item2} respectively as shown below in Figure 2.

```
<if>
   <condition>
      <not>
         <isnullorwhitespace>
            <diget dataitemid="{item1}" />
         </isnullorwhitespace>
      </not>
   </condition>
   <removemessage dataitemid="{item1}" />
   <else />
   <postmessage dataitemid="{item1}">
      <const value="{item2}" />
   </postmessage>
</if>
```

Figure 2

- FireLight will display a new dialog "Add Rule to Multiple Fields", which allows you to create rules for the selected fields.
- This dialog contains two sections. The left section lists the rule name and all replaceable items as per the labels for each selected field.
- The right section displays the rule with labels added (Figure 2) so you can easily determine which label will be replaced by which value.
- You can edit the left section. For example, you may modify a required error message in *item2* for another field.
- After updating, you can click on the "Create Rules" button to create the rule for the selected multiple fields.
- If there are no errors, Firelight will create the rules, show a success dialog and redirect the user to main rules window. The user can view the newly created rules in rules window.
- If there are errors, Firelight will show a dialog with the error.

No field selected:

- If no fields are selected an error message will appear if you click on the "Create Multiple" button.

App Changes

There are no changes in FireLight App.

Integration Changes

None

UI Mock Ups

1. Select fields and Rules Window

Fields are selected in the Rules Window. In Figure 3 below, three fields ("TextBox_1", "TextBox_2" and "TextBox_3") and the "Required Field" rule are selected.
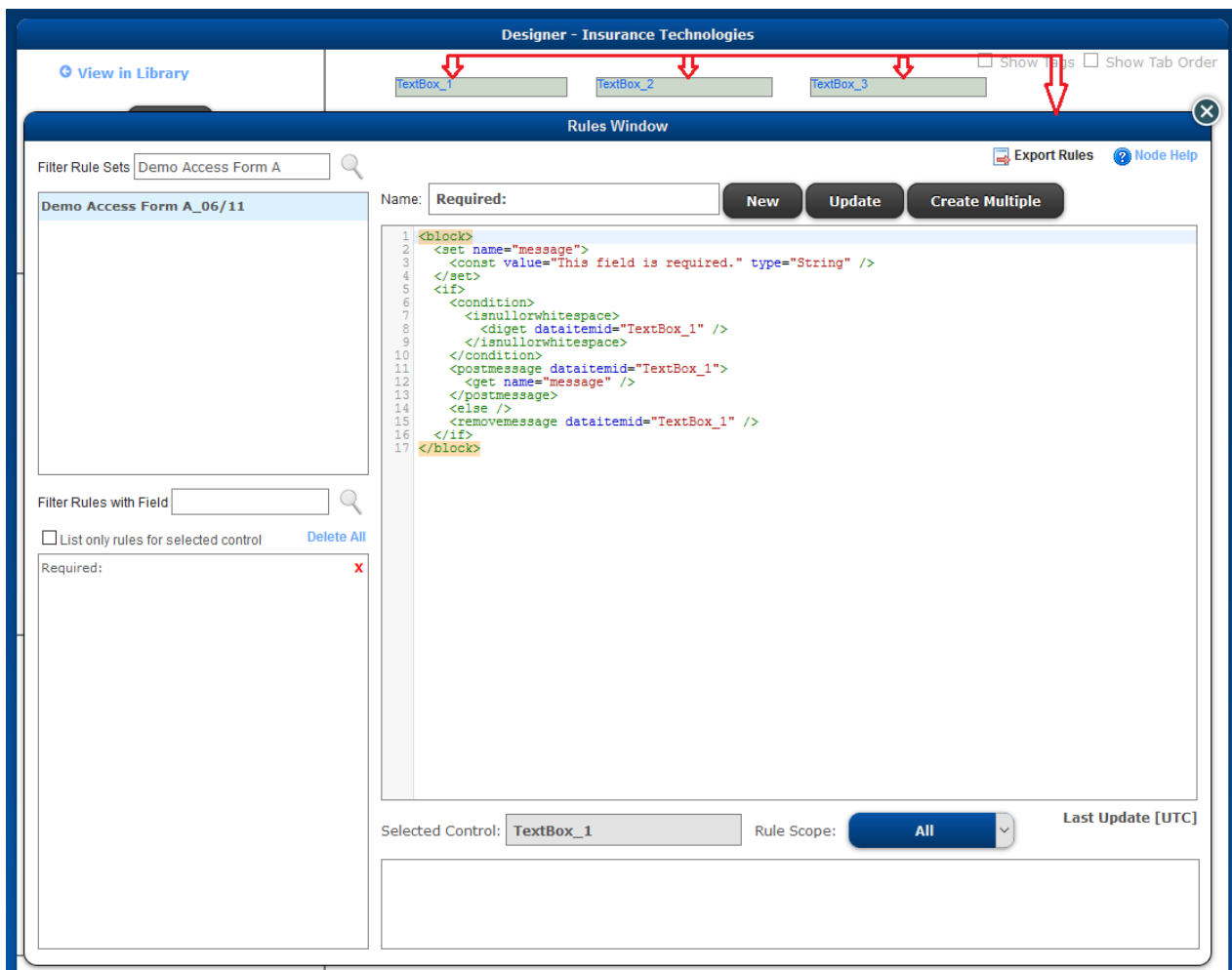

Figure 3

2. Add Rule through Multiple Fields Dialog

After making changes to the rule, click on the "Create Multiple" button. If there are no errors, a dialog "Add Rule to Multiple Fields" appears as shown below in Figure 4. The right section shows the rule code with replaceable labels. This section will be read only and cannot be changed. The left section shows all replaceable labels for all selected fields; you can modify the rule name and label values for each rule.

For example, the Rule Name has been changed on all three fields to "Required Field 1", "Required Field 2" and "Required Field 3". You can also modify the label value in *item2* which is the required message on each field.
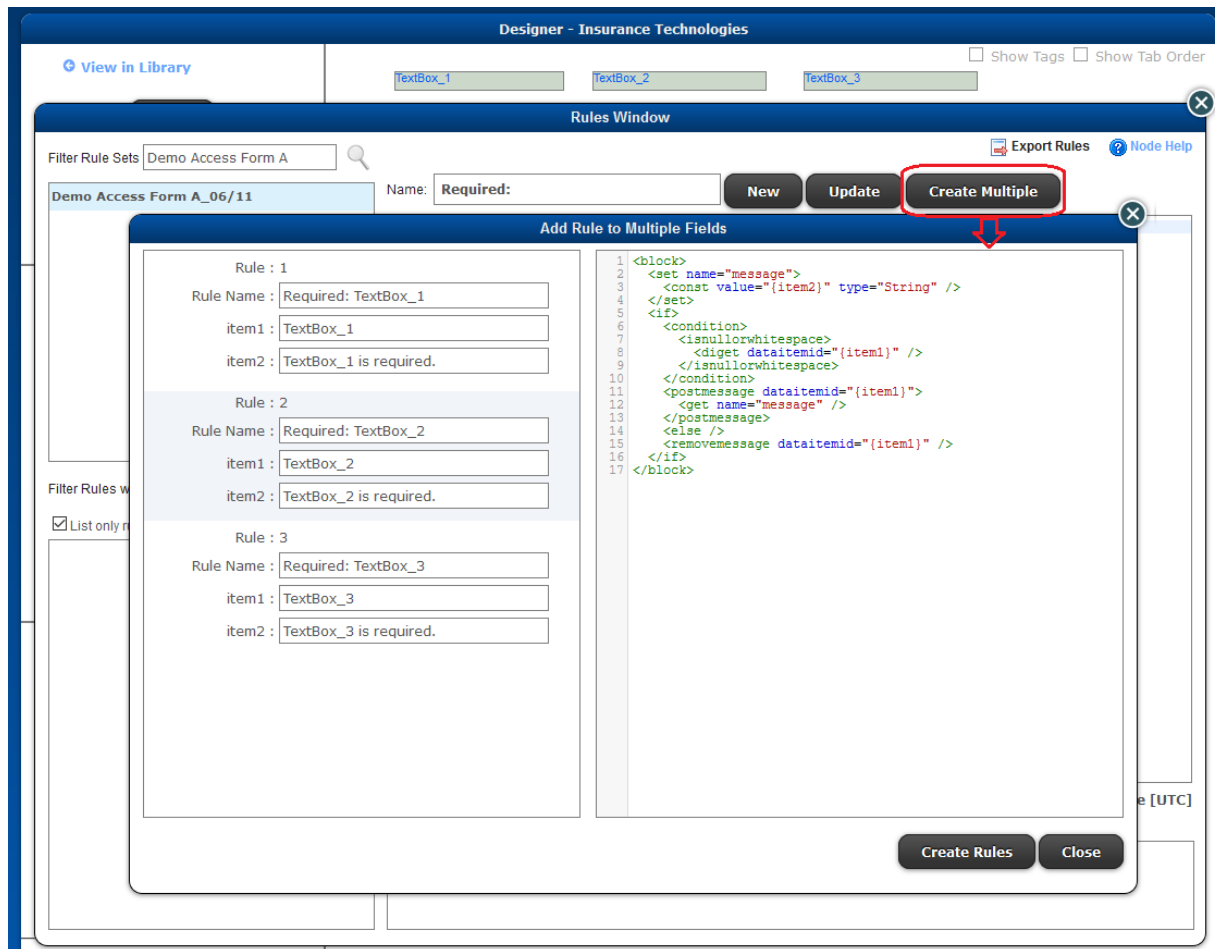

Figure 4

Note that FireLight automatically fills other field ids in its replaceable label if the rule code has one "dataitemid". For example, the above required field rule has one "dataitemid" which is either "TextBox_1" or "TextBox_2" or "TextBox_3". In this case, FireLight will automatically fill "TextBox_1" in item1 in rule 1, "TextBox_2" in item1 in rule 2 and "TextBox_3" in item1 in rule 3.

If the rule code is using more than one "dataitemid", you must modify the field id in the corresponding replacable label.

3. Confirmation Message

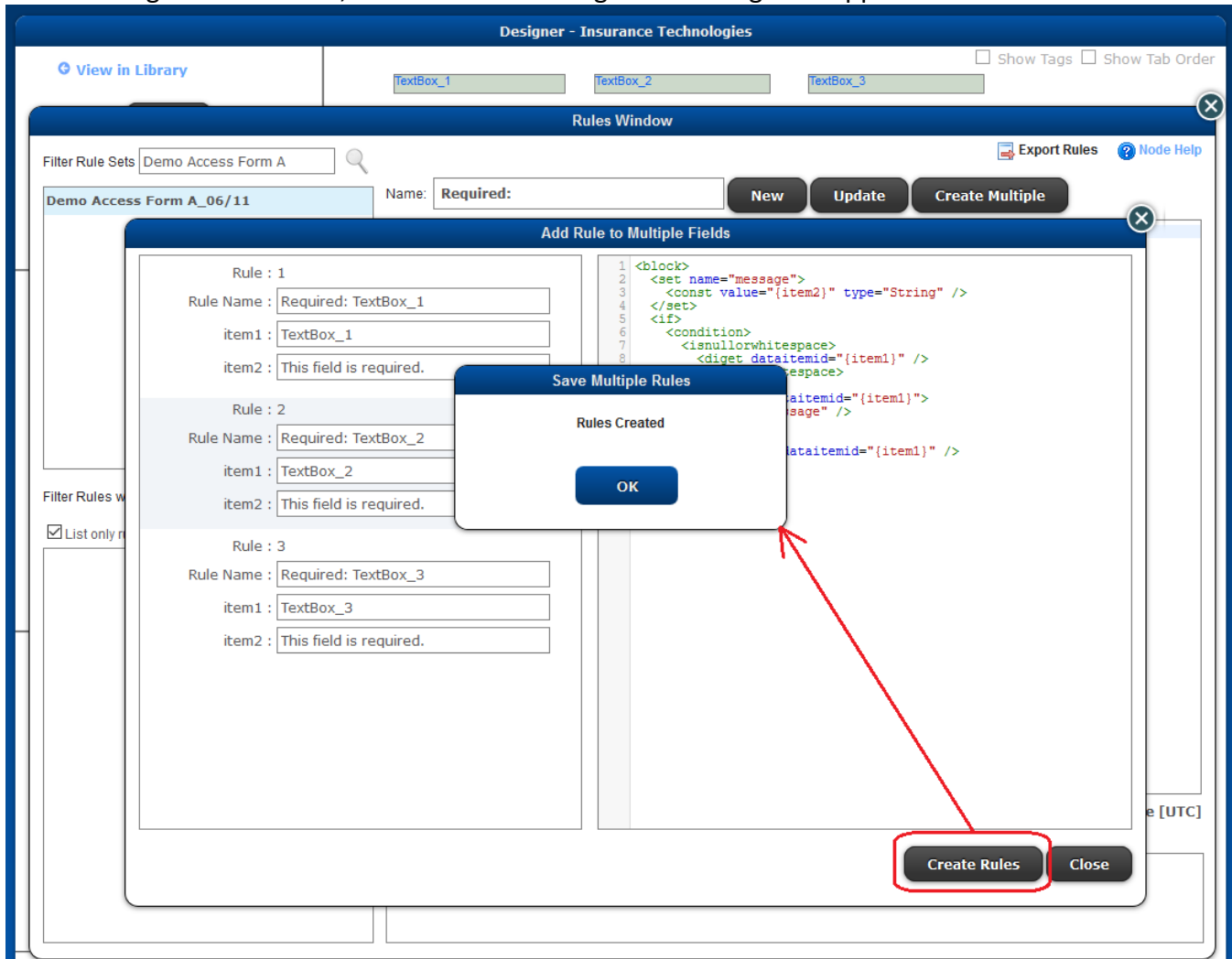After clicking "Create Rules", a confirmation dialog shown in Figure 5 appears.

Figure 5

4. Redirect to Rules Window

Click on the "OK" button in the confirmation dialog to be redirected to the main Rules Window shown in Figure 6.
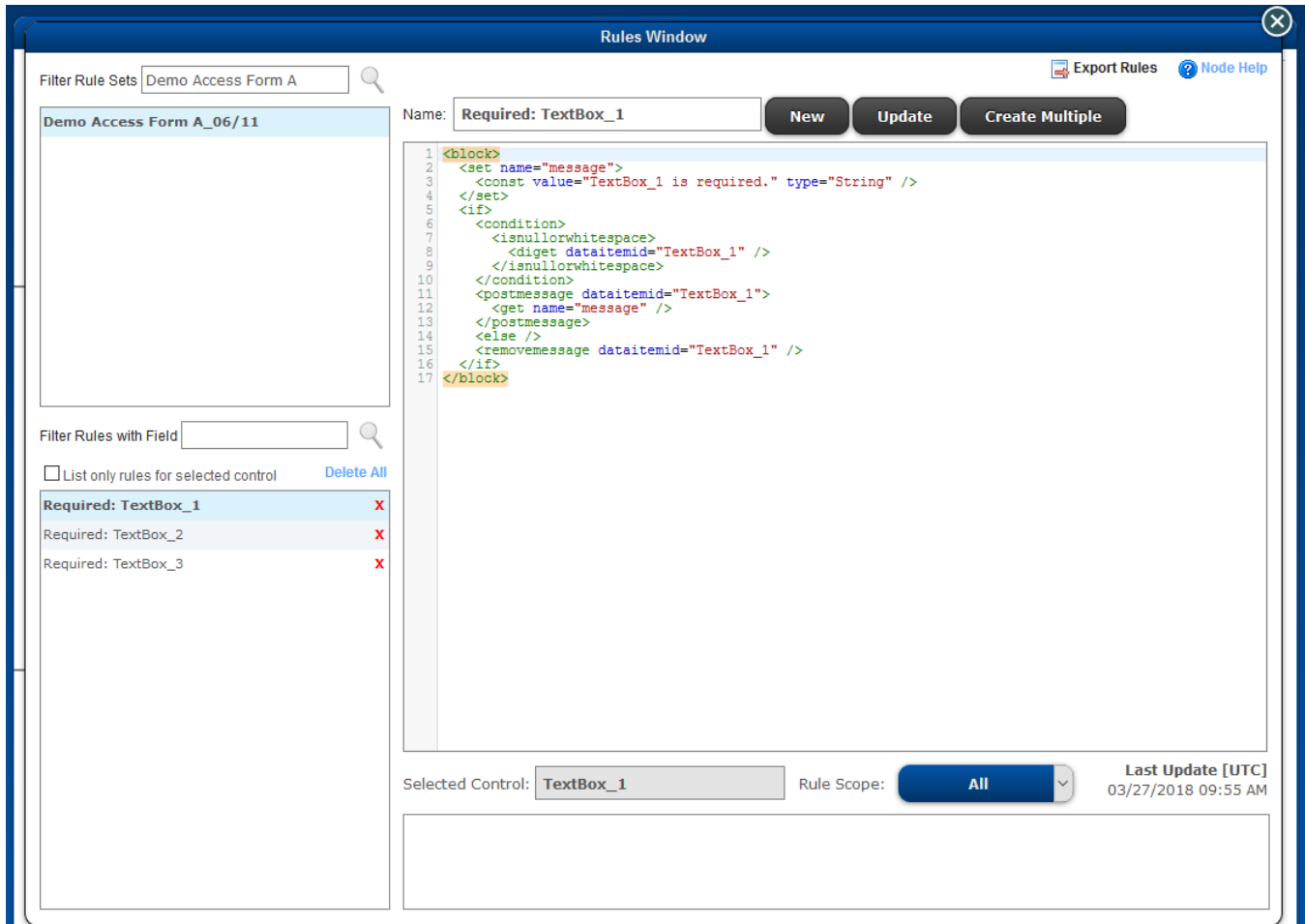

Figure 6

5. Validate Rule Name Uniqueness Setting

An error will be shown if the rule names are not unique and "Validate Rule Name Uniqueness" setting is on in the Organizations page as shown in Figure 7. After clicking "OK", you remain on the "Add Rule to Multiple Fields" dialog to modify the rule names.
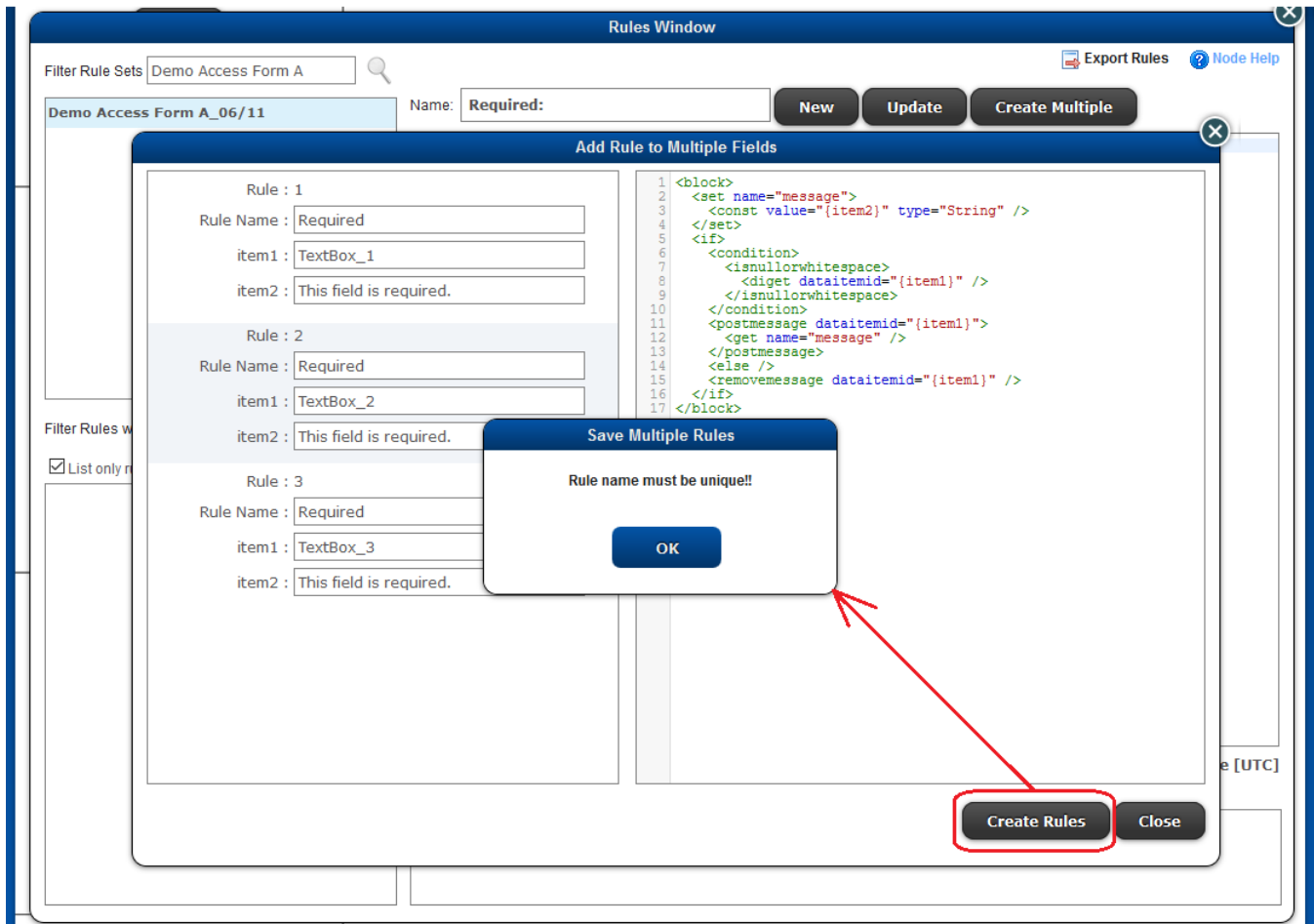

Figure 7

6. No fields selected

If you click on the "Create Multiple" button without selecting one or more fields, an error message appears as shown in Figure 8.
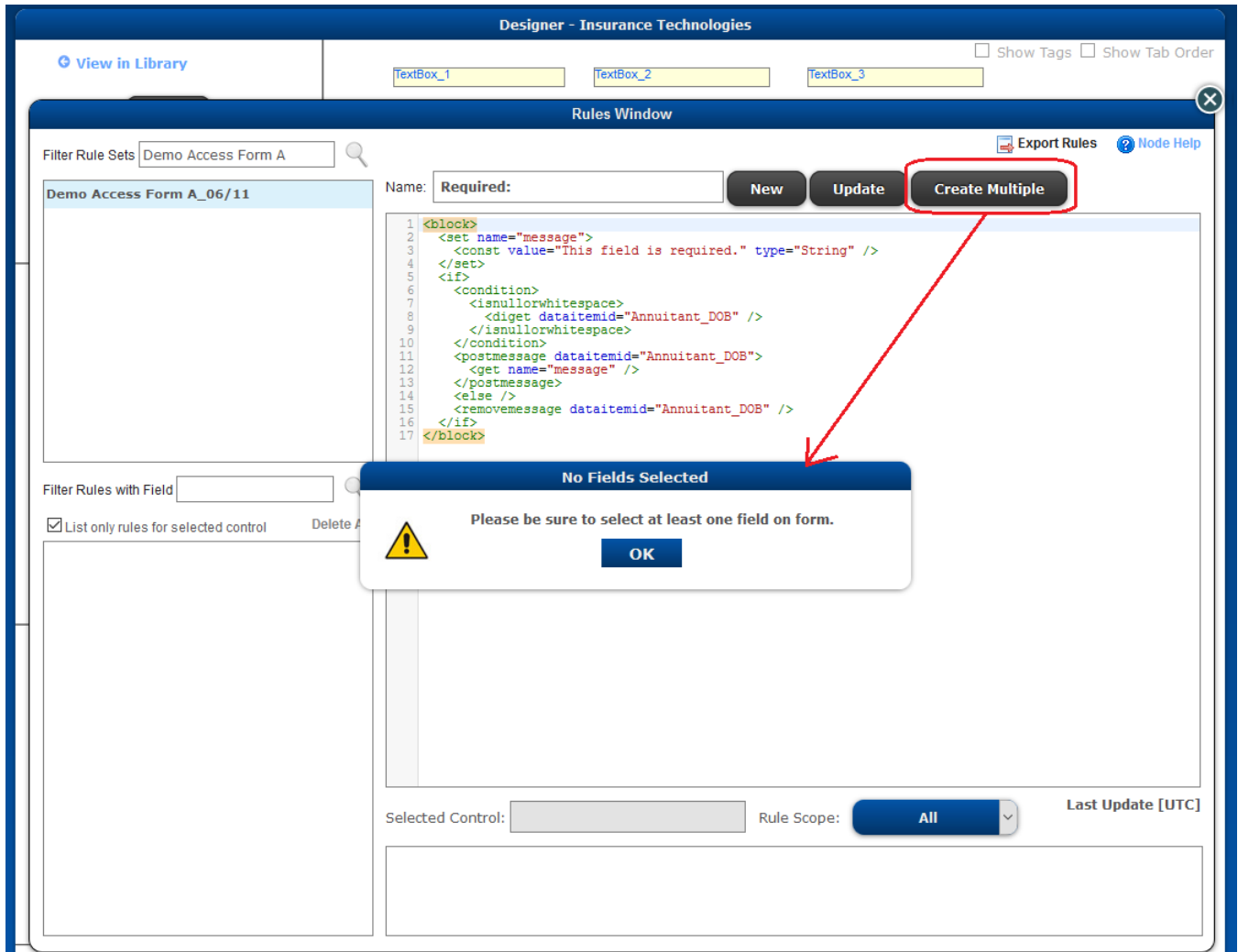

Figure 8

How to Enable and Use This Feature

1. You can apply any rule to multiple fields by selecting multiple fields on the design page, either by selecting fields one by one with the CTRL key, or with the lasso select. After selection, you can open the Rules Window to type the rule in the window or select a rule template from the "New Rule Template" window. When you click the "Create Multiple" button, a new dialog "Add Rule to Multiple Fields" appears. You can modify replaceable values for different labels and create rules for the selected fields by clicking the "Create Rules" button (see UI Mockups section above for additional details).

2. This functionality always creates a new rule. You cannot use this functionality to update existing rules, only to create new rules. Once multiple rules are created, modifications are made through the rules window.

3. FireLight automatically fills other field ids in its replaceable label if the rule has one *dataitemid*.

4. This functionality is designed for simple rules with one *dataitemid*, such as making a field required. It is also designed to create complicated rules with multiple *dataitemids*.

Areas Impacted

System Area	Yes	Comment
Admin Tool		
- Form Library		
- Design Forms	Yes	Add new button "Create Multiple" in rules window. Clicking this button results in new dialog "Add Rule to Multiple Fields" that will facilitate user to create a rule for all selected fields.
- Profile Administration		
- Reports		
- Deployment		
FireLight App		
- New Application		
- Edit Application		
- Signature Process		
- Review Queue		
- Manual Review		
- User Preferences		
- Inbound Integration		
- Outbound Integration		
- PDF Generation		
- Email System		
FireLight Console		
- Windows		
- iOS		
Other Systems		
- DTCC Integration		
- Commission Netting		
- Activity Reporting		