# iConnect 117395 Design Approach

Keep a history of changes on Form Design in the Admin Tool.

## Workflow Changes

There is no changes to the normal workflow of the system. We need to add new functionality to log all changes made in a form in form designer including rules.

## Features/Requirements

We need to keep history of changes for each form. There are several things a user can do in form designer like adding/deleting/moving/aligning control. User can also update various properties for fields. User can add/delete/modify rules also.

We need a way to keep all these changes in the system so user can view history of changes for each form.

## Admin Changes

To accomplish this task, we need to store these changes into database. Currently form definition and rule definition are stored in "FormLibrary" table. We could create a new column in this table but in this case we would not be able to store date wise history efficiently.

To store history efficiently, we need to –

1. **Create a new table**
   We need to create a new table called "FormHistory". The purpose of "FormHistory" is to store all actions performed on form in form designer. The columns will be
   a. FormGuid [GUID] - form's identifier
   b. Action [STRING] – action in simple English. For example – new textbox "TextBox_1" added, rule "XXX" has been modified etc.
   c. OldValue [String] – action's old value, if any.
   d. NewValue [String] – action's new value, if any.
   e. ActionDate [DATETIME] – action date and time.
   f. Login [STRING] – user login name like IT.
   g. IP [STRING] – IP of system.

2. **Create a new property in RuleDef class**
   We need to show last modified date with each rule in rule dialog. For this purpose, we need to create a new property called "LastUpdated" in RuleDef class. Whenever user creates a new rule or modify existing one, we will update this field. This new property become part of rule definition. With the help of this property, we can show last modification date of rule in rule dialog.

**Process**

Whatever user do on designer, we can store it temporarily in session object. The following form's changes can be logged in history –

1. Add new control.
2. Delete control.
3. Move control.
4. Resize control.
5. Change field properties.
6. Align controls.
7. Setting tab order.
8. Update rule. (Only last update is persisted and rule script code will not be persisted)

When user saves the form, data will be persisted in database. The changes in form history would get discarded if user will not save form. This approach is similar to current process of updating form/rules. Advantage of this approach is that we will not need to hit server frequently.

We will give a link "Form History" on form design page. When clicked, it will display new dialog showing form history. We will show data in tabular format.

## App Changes

No changes in FireLight App.
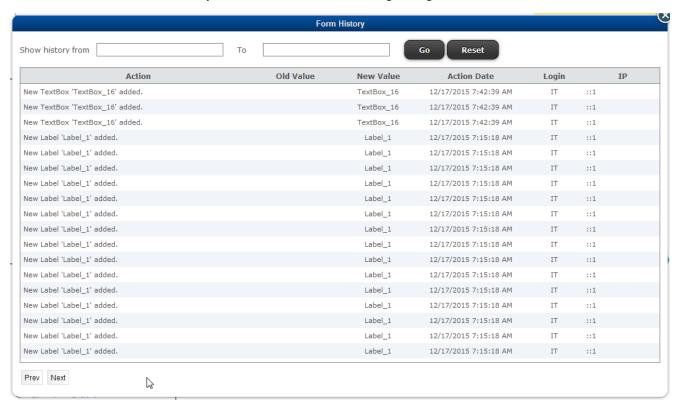
## UI Mock Ups

"Form History" link in designer.

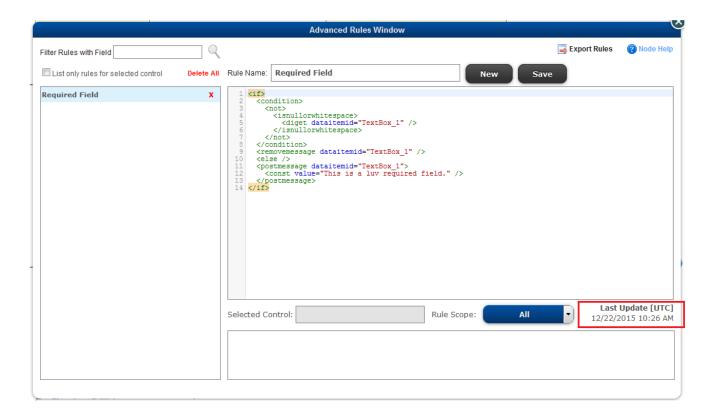When user click on "Form History" link, we will show following dialog.



Form history dialog will have following facilities –
- A. It will show data in tabular format.
- B. User can sort data on various fields.
- C. User can filter data based on date. On top of dialog, the user can fill date in "From" and "To" from calendar.
- D. Reset button will reset the search.
- E. To navigate between pages, we will give "Prev" and "Next" buttons.

On Rules Dialog, We will show "Last Updated" with each rule as shown below

## Areas Impacted

| System Area | Yes | Comment |
| --- | --- | --- |
| **Admin Tool** | | |
| - **Form Library** | | |
| - **Design Forms** | Yes | New functionality will be added to show history of changes for each form on form designer. History will be shown in a dialog. |
| - **Profile Administration** | | |
| - **Reports** | | |
| - **Deployment** | | |
| | | |
| **FireLight App** | | |
| - **New Application** | | |
| - **Edit Application** | | |
| - **Signature Process** | | |
| - **Review Queue** | | |
| - **Manual Review** | | |
| - **User Preferences** | | |
| - **Inbound Integration** | | |
| - **Outbound Integration** | | |
| - **PDF Generation** | | |
| | | |
| **FireLight Console** | | |
| - **Windows O/S** | | |
| - **iOS** | | |
| - **Android** | | |
| - | | |
| **Other Systems** | | |

| | | |
|---|---|---|
| - **DTCC Integration** | | |
| - **Commission netting** | | |
| - **Activity Reporting** | | |