



Basic Administrator Training

Exercise: 5
Workflow Configuration

Version Information

Version	Date Released	Notes
2019-1	Jan 7 th 2019	Updated Format
2019-2	May 20 th 2019	Re-Branded to meet Galvanize design guidelines
2020-1	Feb 3 rd 2020	Updated Screenshots after Version 10 Update

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Overall Objectives

In Rsam, workflow determines how records or objects progress through the process. Workflow can be simple or elaborate, depending on what the process calls for. Before we review baseline workflow through the menus, screens, and configuration options, we'll view workflow images from a Visio diagram.

Through this series of scenarios, Rsam Administrators will gain an understanding of the elements that make-up the Rsam workflow, as well as knowledge of the Rsam workflow configuration interface, the functionality each element contributes, and basic knowledge for creating a workflow for an Rsam record.

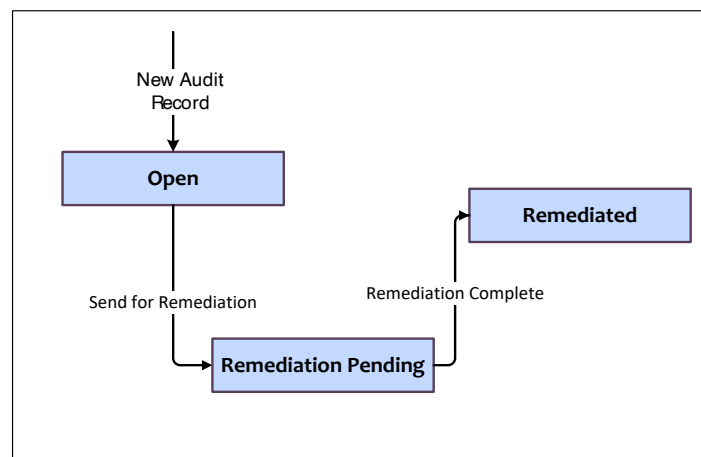
Scenario Description

The scenario is based on the remediation of an Audit Record. Through this process we will create a simple workflow to send an Audit Record for Remediation by the Remediation Owner and then mark the Audit Record as Remediated by:

- Enabling assignment of a role via the user lookup attribute
- Creating new Workflow States and Buttons to implement your process;
- View the revised process within the Rsam interface.

Workflow Diagram

Even before Rsam introduced dynamic Workflow configurations, visualization of the Rsam- enabled process was essential during implementation. This also provides a common understanding of the process that needs to be configured in the Rsam Workflow. The diagram below introduces the states we will utilize in this tutorial.



States specify where the record or object is within the workflow process. Each State represents a step in your Audit Record remediation process. Descriptions are below:

Definitions:

- **Open** – Used to collect data about the Audit Finding. In this state, the Audit Manager fills out the details of the audit record, assigns a remediation owner, and sends it for remediation.
- **Remediation Pending**– Used to add a Remediation Plan for the audit record. In this state, the Remediation Owner creates the remediation plan and can report the remediation as closed.
- **Remediated** – Once the remediation has been completed, audit records will be marked as remediated.

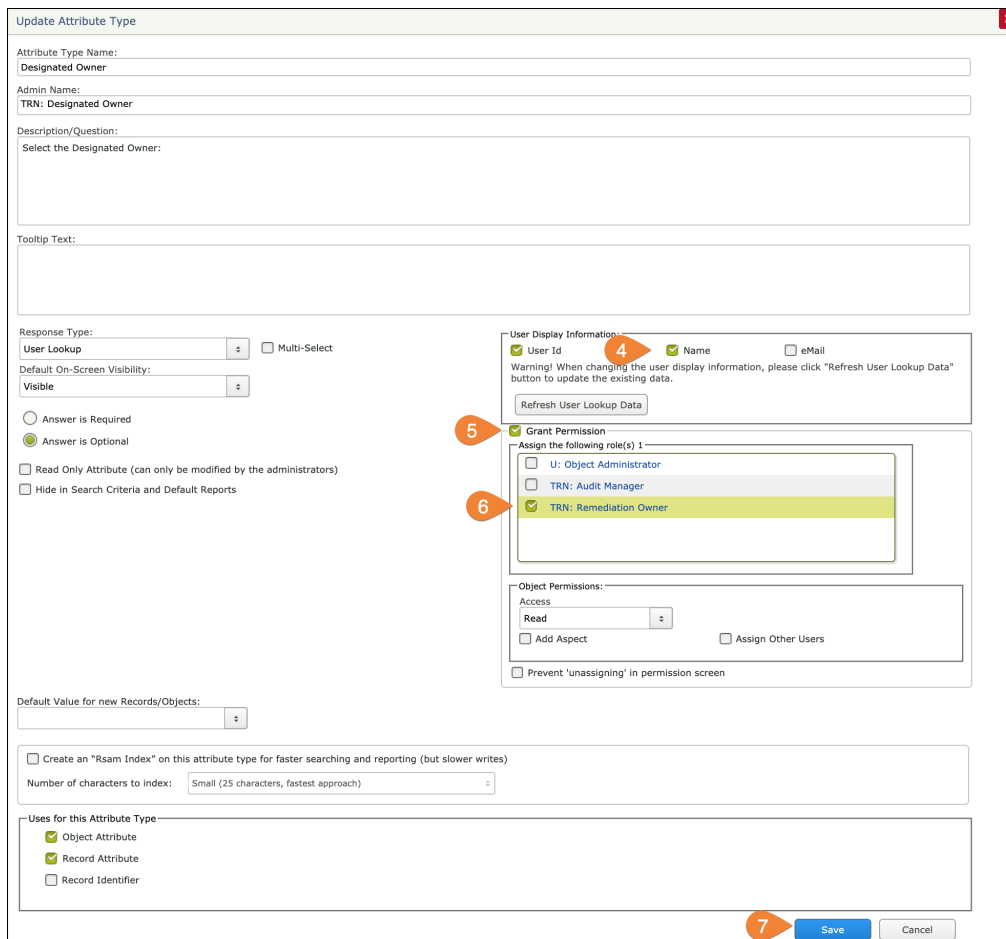
Session 1: Role Assignment via Attributes



Make sure that you have enabled Administration filters and selected: **Audit Application**

Before configuring workflow, we will first enable role assignment to an attribute we created earlier. Steps to Follow

1. Login as **r_admin**
2. Select **Manage -> Administration** and return to the **Attributes** administration screen
3. Reopen the **TRN: Designated Owner** attribute type Attribute Type
4. Check **Name** within the **User Display Information** dialog box
5. Check the **Grant Permissions** checkbox
6. Select **TRN: Remediation Owner** as the role to assign
7. Click on **Save**



The screenshot shows the 'Update Attribute Type' dialog box for the 'Designated Owner' attribute. The dialog is divided into several sections:

- Attribute Type Name:** Designated Owner
- Admin Name:** TRN: Designated Owner
- Description/Question:** Select the Designated Owner:
- Tooltip Text:**
- Response Type:** User Lookup (Multi-Select is unchecked)
- Default On-Screen Visibility:** Visible
- Answer is Required:** Answer is Optional (selected)
- Read Only Attribute:** (can only be modified by the administrators) (unchecked)
- Hide in Search Criteria and Default Reports:** (unchecked)
- Default Value for new Records/Objects:**
- Create an "Rsam Index" on this attribute type for faster searching and reporting (but slower writes):** (unchecked)
- Number of characters to index:** Small (25 characters, fastest approach)
- Uses for this Attribute Type:**
 - ☒ Object Attribute
 - ☒ Record Attribute
 - ☐ Record Identifier
- User Display Information:**
 - ☒ User Id
 - ☒ Name
 - ☐ eMail

Warning! When changing the user display information, please click "Refresh User Lookup Data" button to update the existing data.

Refresh User Lookup Data
- Grant Permission:** (checked)
 - Assign the following role(s) 1
 - ☐ U: Object Administrator
 - ☐ TRN: Audit Manager
 - ☒ TRN: Remediation Owner
- Object Permissions:**
 - Access: Read
 - ☐ Add Aspect
 - ☐ Assign Other Users
 - ☐ Prevent 'unassigning' in permission screen

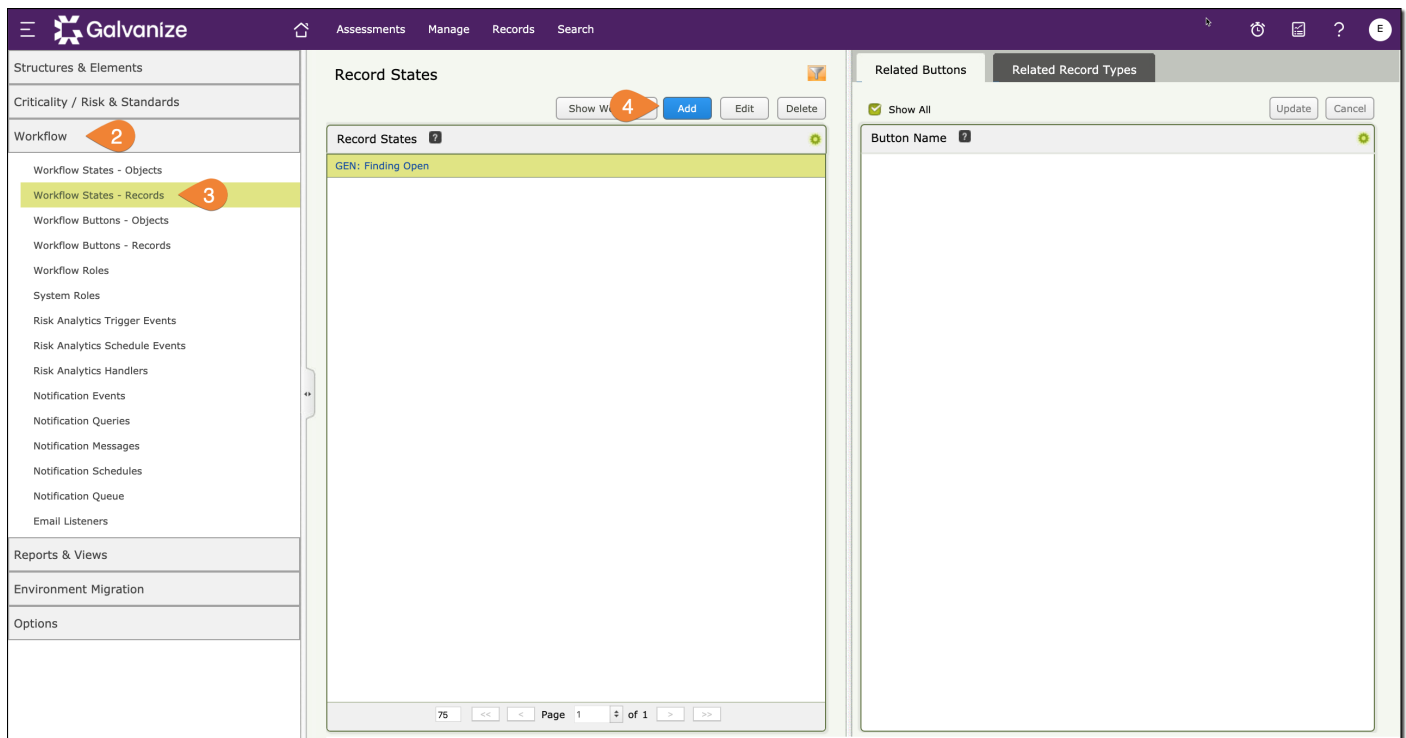
At the bottom right, there are 'Save' and 'Cancel' buttons. Numbered callouts 1 through 7 point to the following elements: 1. Login as r_admin, 2. Select Manage -> Administration, 3. Reopen the TRN: Designated Owner attribute type Attribute Type, 4. Check Name within the User Display Information dialog box, 5. Check the Grant Permissions checkbox, 6. Select TRN: Remediation Owner as the role to assign, 7. Click on Save.

Session 2: Workflow States

Add Workflow States

Steps to Follow

1. Click **Manage -> Administration**
2. Select **Workflow**
3. Select **Workflow States – Records**
4. Click **Add**



5. Add the details for the two workflow states with the information provided in the table below.
6. Click **Save & New** after the first workflow state is created (See diagram next page)
7. **Save** after the second state. (See diagram next page)

State Name	Admin Name	Description	Associated Color
Remediation Pending	TRN: Remediation Pending	Records in Remediation Pending are pending the completion of submitted remediation plans.	No Color
Remediated	TRN: Remediated	Records in Remediated have been closed and remediation activities completed.	No Color

Add State

State Name:

Remediation Pending


Admin Name:

TRN: Remediation Pending

State Description:

Records in Remediation Pending are pending the completion of submitted remediation plans

Associated Color (for dashboard charts):



☒ No Color

7

Save

Save & New

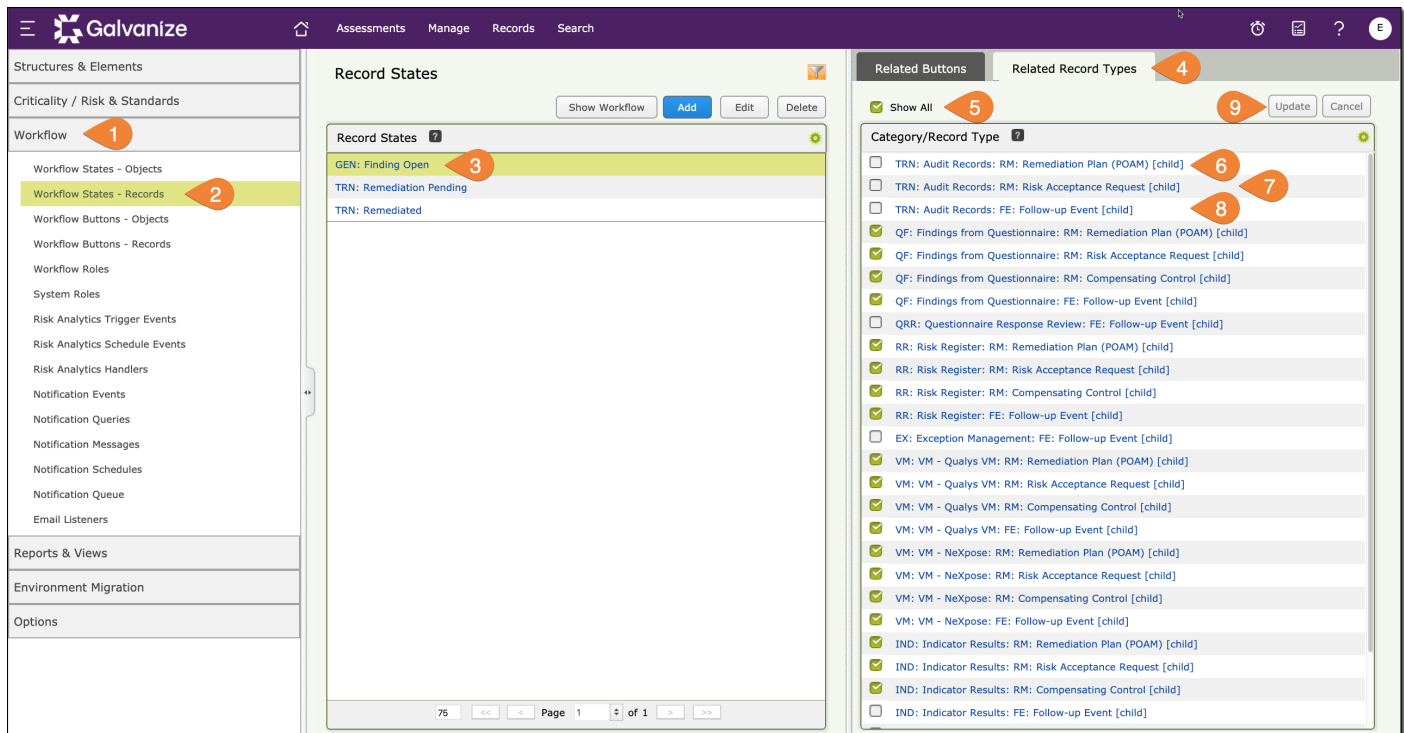
6

Cancel

Session 3: Associate Current Workflow State with Record Types

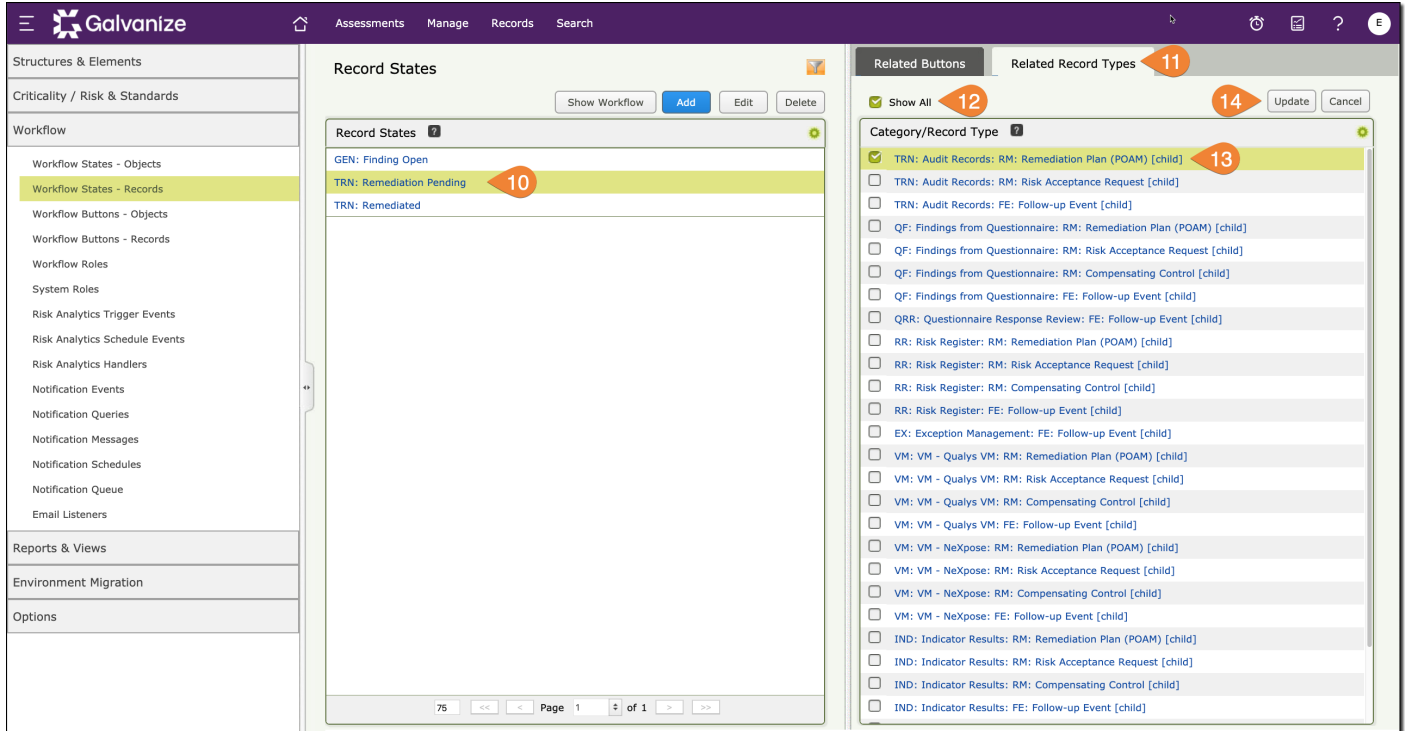
Steps to Follow

1. Select **Workflow**
2. Select **Workflow States - Records**
3. In the **Record States** Pane Click **GEN: Finding Open**
4. In the right-hand Window Pane Select the **Related Record Types** tab
5. Ensure **Show All** is checked
6. Check **TRN: Audit Records: RM: Remediation Plan (POAM) [child]**
7. Check **TRN: Audit Records: RM: Risk Acceptance Request [child]**
8. Check **TRN: Audit Records: FE: Follow-up Event [child]**
9. Click **Update**



The screenshot displays the Galvanize application interface for configuring workflow states. The left sidebar shows the navigation menu with 'Workflow' (1) and 'Workflow States - Records' (2) selected. The central pane shows the 'Record States' (3) for 'GEN: Finding Open' (4). The right pane shows the 'Related Record Types' (5) with 'Show All' (6) checked. A list of record types is shown, with 'TRN: Audit Records: RM: Remediation Plan (POAM) [child]' (7), 'TRN: Audit Records: RM: Risk Acceptance Request [child]' (8), and 'TRN: Audit Records: FE: Follow-up Event [child]' (9) selected. An 'Update' button is visible at the bottom right.

10. In the **Record States** Pane Click **TRN: Remediation Pending**
11. In the right-hand Window Pane Select the **Related Record Types** tab
12. Ensure **Show All** is checked
13. Check **TRN: Audit Records: RM: Remediation Plan (POAM) [child]**
14. Click **Update**

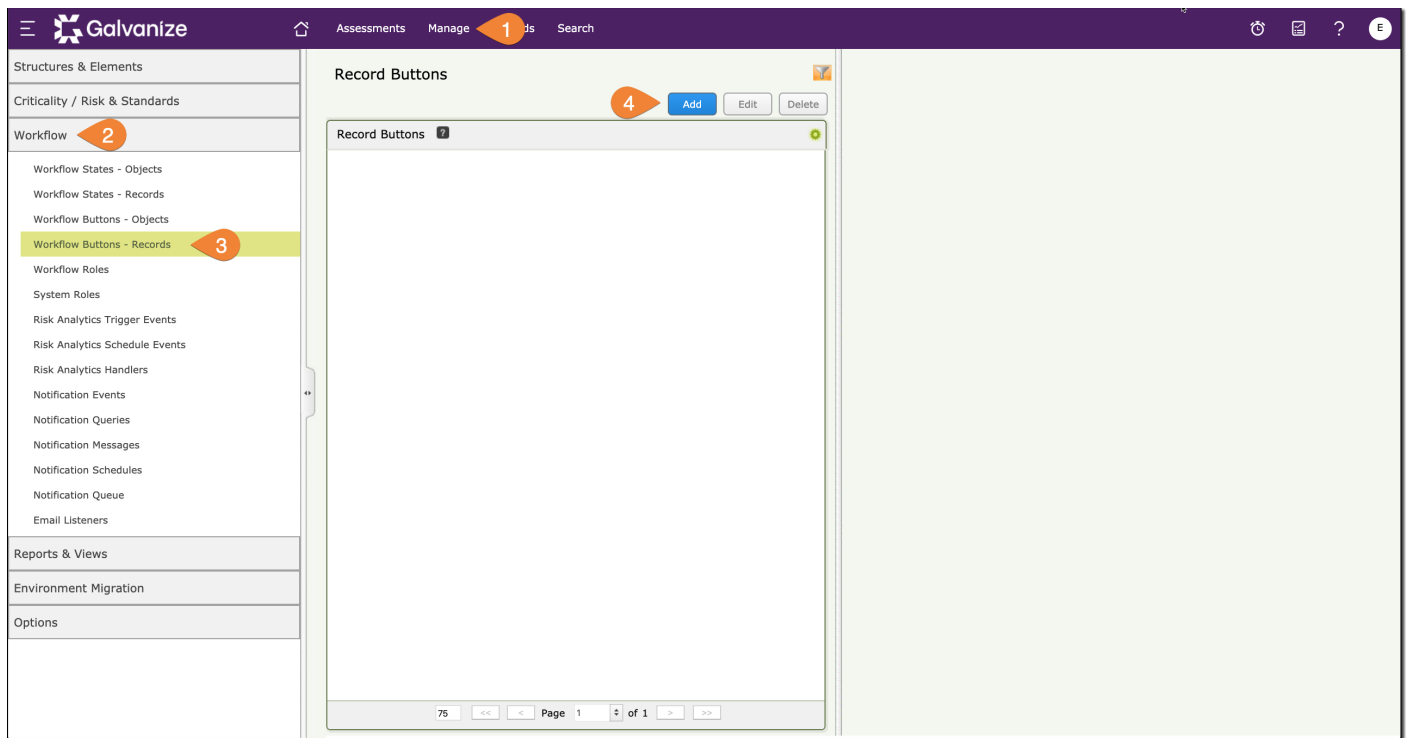


The screenshot shows the Galvanize application interface. On the left is a sidebar with a menu. The main area is divided into two panes. The left pane, titled 'Record States', contains a list of states: 'GEN: Finding Open', 'TRN: Remediation Pending' (highlighted with a red circle 10), and 'TRN: Remediated'. Above this list are buttons for 'Show Workflow', 'Add', 'Edit', and 'Delete'. The right pane, titled 'Related Record Types', has a tab labeled 'Related Record Types' (11). Below the tab are buttons for 'Show All' (12), 'Update', and 'Cancel' (14). A list of record types follows, with 'TRN: Audit Records: RM: Remediation Plan (POAM) [child]' (13) selected. Other record types include 'TRN: Audit Records: RM: Risk Acceptance Request [child]', 'TRN: Audit Records: FE: Follow-up Event [child]', 'QF: Findings from Questionnaire: RM: Remediation Plan (POAM) [child]', 'QF: Findings from Questionnaire: RM: Risk Acceptance Request [child]', 'QF: Findings from Questionnaire: RM: Compensating Control [child]', 'QF: Findings from Questionnaire: FE: Follow-up Event [child]', 'QRR: Questionnaire Response Review: FE: Follow-up Event [child]', 'RR: Risk Register: RM: Remediation Plan (POAM) [child]', 'RR: Risk Register: RM: Risk Acceptance Request [child]', 'RR: Risk Register: RM: Compensating Control [child]', 'RR: Risk Register: FE: Follow-up Event [child]', 'EX: Exception Management: FE: Follow-up Event [child]', 'VM: VM - Qualys VM: RM: Remediation Plan (POAM) [child]', 'VM: VM - Qualys VM: RM: Risk Acceptance Request [child]', 'VM: VM - Qualys VM: RM: Compensating Control [child]', 'VM: VM - Qualys VM: FE: Follow-up Event [child]', 'VM: VM - NeXpose: RM: Remediation Plan (POAM) [child]', 'VM: VM - NeXpose: RM: Risk Acceptance Request [child]', 'VM: VM - NeXpose: RM: Compensating Control [child]', 'VM: VM - NeXpose: FE: Follow-up Event [child]', 'IND: Indicator Results: RM: Remediation Plan (POAM) [child]', 'IND: Indicator Results: RM: Risk Acceptance Request [child]', 'IND: Indicator Results: RM: Compensating Control [child]', and 'IND: Indicator Results: FE: Follow-up Event [child]'. At the bottom of the Record States pane, there is a pagination bar showing 'Page 1 of 1'.

Session 4: Workflow Buttons

Add Workflow Buttons

1. Click **Manage** -> **Administration**
2. Select **Workflow**
3. Click **Workflow Buttons – Records**
4. Select **Add**



5. Enter the **Button Name**, **Admin Name**, and **Button Description** according to the table below. Leave all other fields as is.
6. Click **Save & New** after the first button, and **Save** after the second button

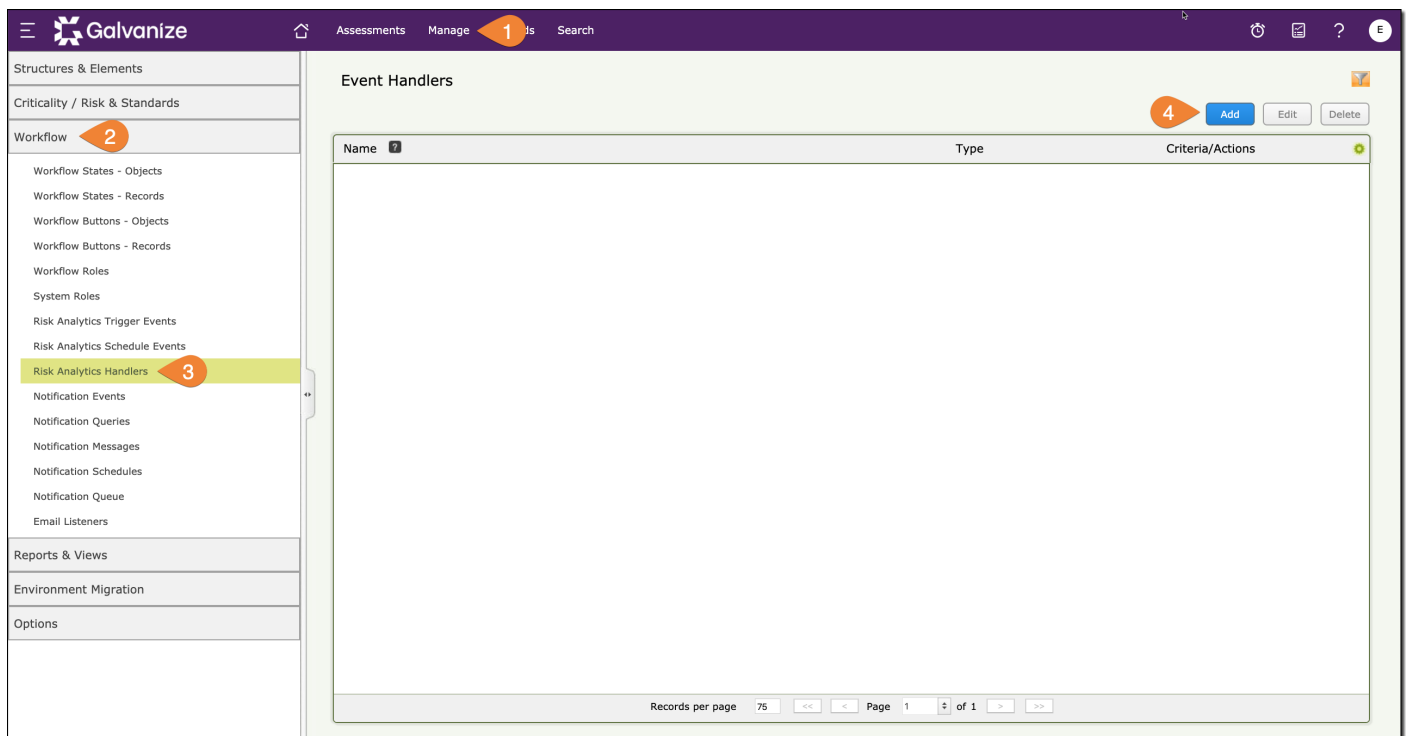
Button Name	Admin Name	Button Description
Send for Remediation	TRN: Send for Remediation	Sends the Audit Record to the Remediation Owner for Remediation.
Remediation Complete	TRN: Remediation Complete	Marks the Audit Record as Remediated

Session 5: Risk Analytics

Workflow actions can be configured within a button's configuration and/or as a Risk Analytic Handler attached to a workflow button. In general, using a risk analytics handler to control workflow is more common and provides users the ability to control when an action is executed by using criteria (i.e. Have all attributes been answered?).

Create Risk Analytics Handlers for Workflow

1. Navigate to **Manage -> Administration** –
2. Select **Workflow**
3. Select **Risk Analytics Handlers**
4. Click **Add** to add a new Handler

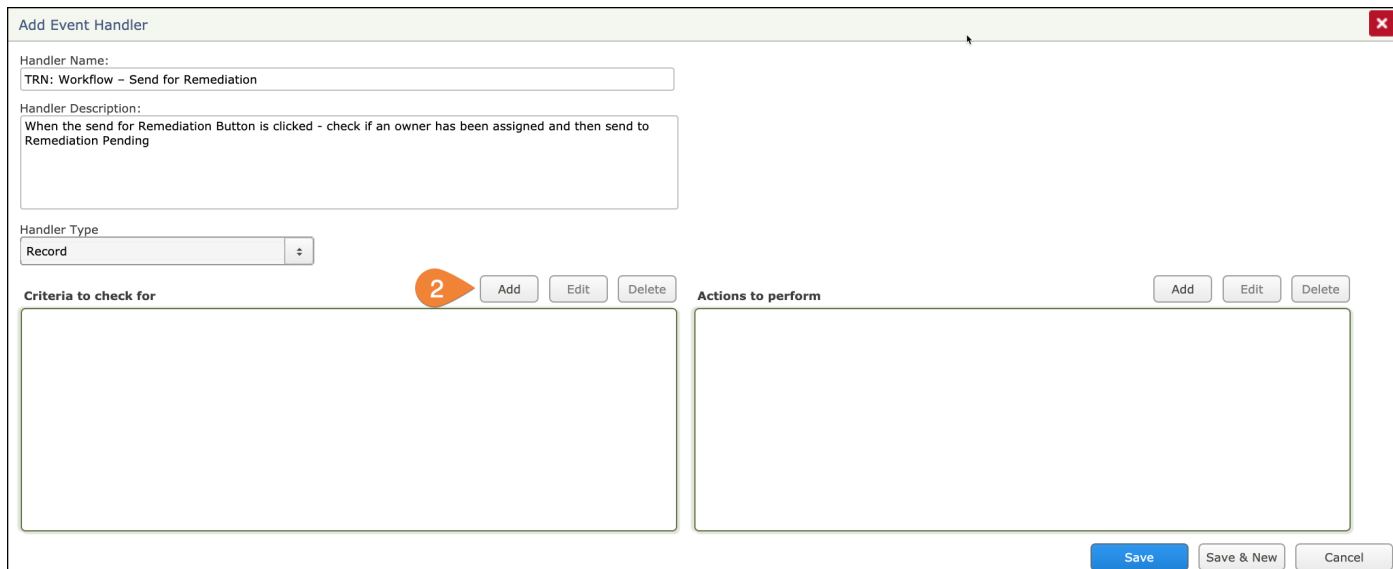


Creating a Handler

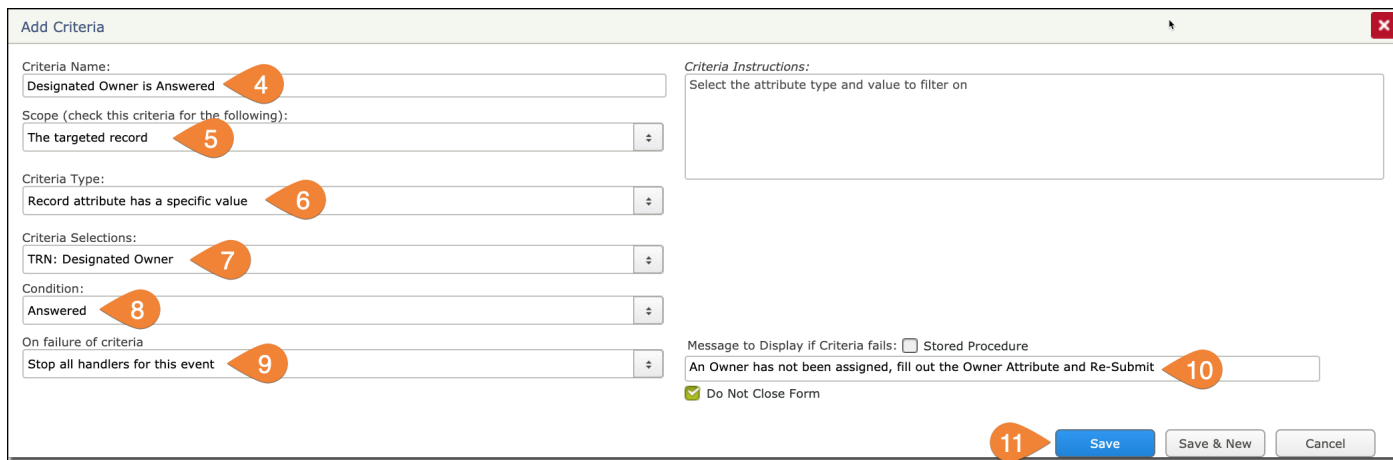
1. Create a handler as per the table below.

Handler Name	Handler Description	Handler Type
TRN: Workflow – Send for Remediation	When the send for Remediation Button is clicked - check if an owner has been assigned and then send to Remediation Pending	Record

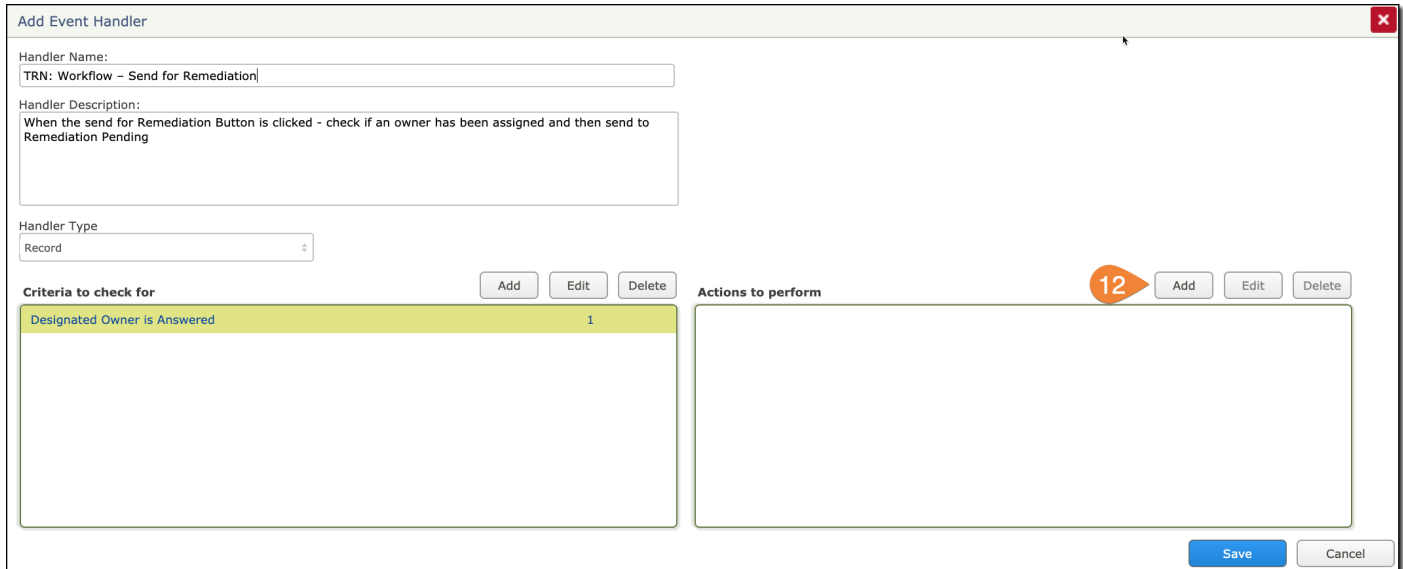
2. Click **Add** next to the **Criteria to Check for** to add criteria (i.e. The IF statement)
3. Click **Yes** when prompted to save



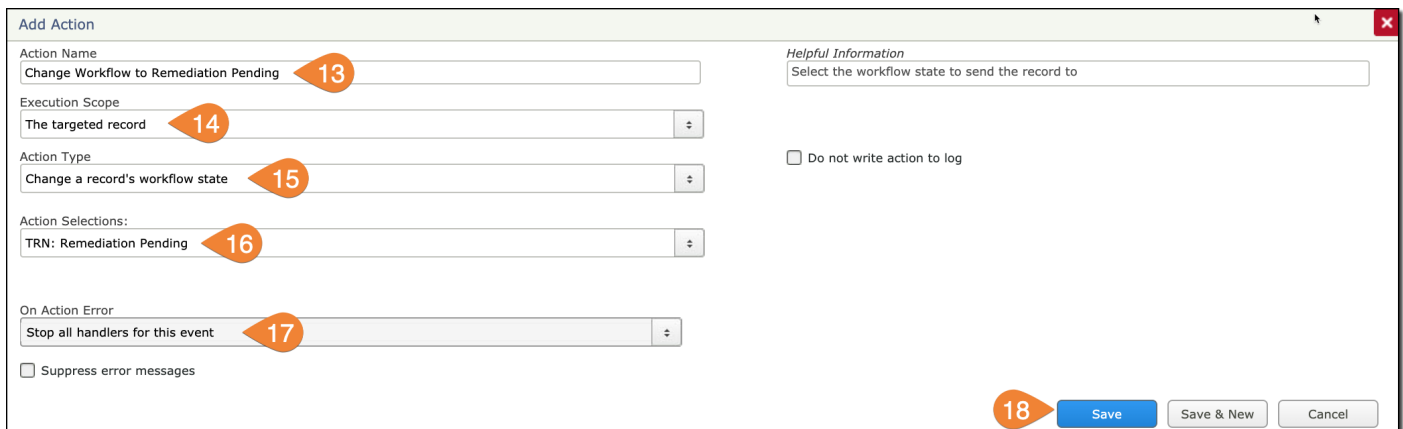
4. Name your Criteria – **Designated Owner is Answered**
5. Leave the Scope as **Targeted Record**
6. Change **Criteria Type** to **Record Attribute has a specific value**
7. For **Criteria Selections** select **TRN: Designated Owner**
8. For **Condition** – select **Answered**
9. For **On Failure of Criteria** select **Stop all handlers for this event**
10. In the **Message to Display if Criteria Fails** text box enter: **An Owner has not been assigned, fill out the Owner Attribute and Re-Submit**
11. Click **Save**



12. Click Add next to the Actions to Perform to add Actions (i.e. The Then statement)



13. Name your Action – **Change Workflow to Remediation Pending**
14. Leave the **Execution Scope** as **Targeted Record**
15. Select the **Action Type** to **Change a Record's Workflow State**
16. Change the Action Selections to **TRN: Remediation Pending**
17. Make Sure **On Action Error** is set to **Stop all handlers for this event**
18. Click **Save**
19. Click **Save** to save the handler



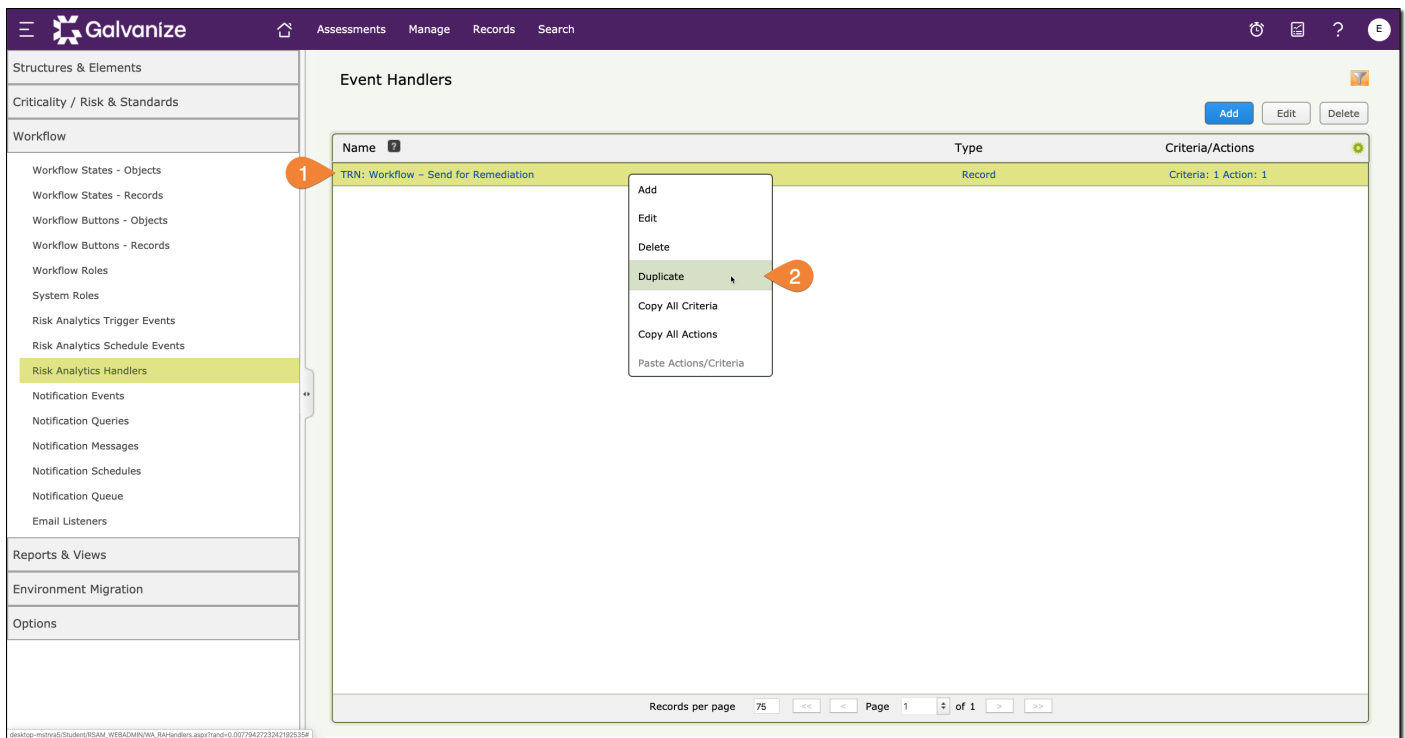
Suite 1500, 980 Howe Street | Vancouver BC, Canada V6Z 0C8 | 1 [604] 669 4225 | Page 15 of 24

Session 6: Duplicating Handlers

To create the handler for the **Remediation Complete** button, we will duplicate the first handler we created and modify the copy.

Steps to Follow

1. Select the handler you created in the previous step: **TRN: Workflow – Send for Remediation**
2. Right Click on the handler and select **Duplicate**

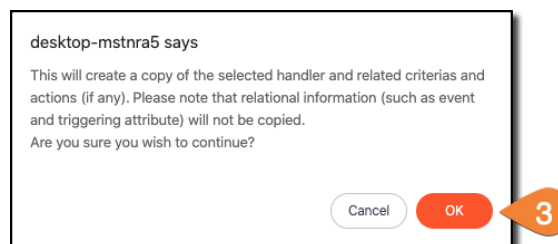


The screenshot shows the Galvanize application interface. On the left, the 'Risk Analytics Handlers' section is expanded in the sidebar. The main panel, titled 'Event Handlers', contains a table with the following data:

Name	Type	Criteria/Actions
TRN: Workflow – Send for Remediation	Record	Criteria: 1 Action: 1

A right-click context menu is open over the first handler, showing options: Add, Edit, Delete, Duplicate, Copy All Criteria, Copy All Actions, and Paste Actions/Criteria. The 'Duplicate' option is highlighted. Callout 1 points to the handler name, and callout 2 points to the 'Duplicate' menu item.

3. Select **OK** to create a copy of the selected handler

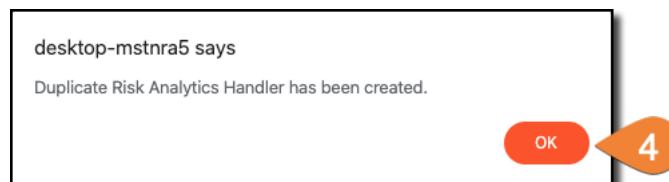


desktop-mstnra5 says

This will create a copy of the selected handler and related criterias and actions (if any). Please note that relational information (such as event and triggering attribute) will not be copied. Are you sure you wish to continue?

Cancel OK

4. Select **OK** to confirm duplication

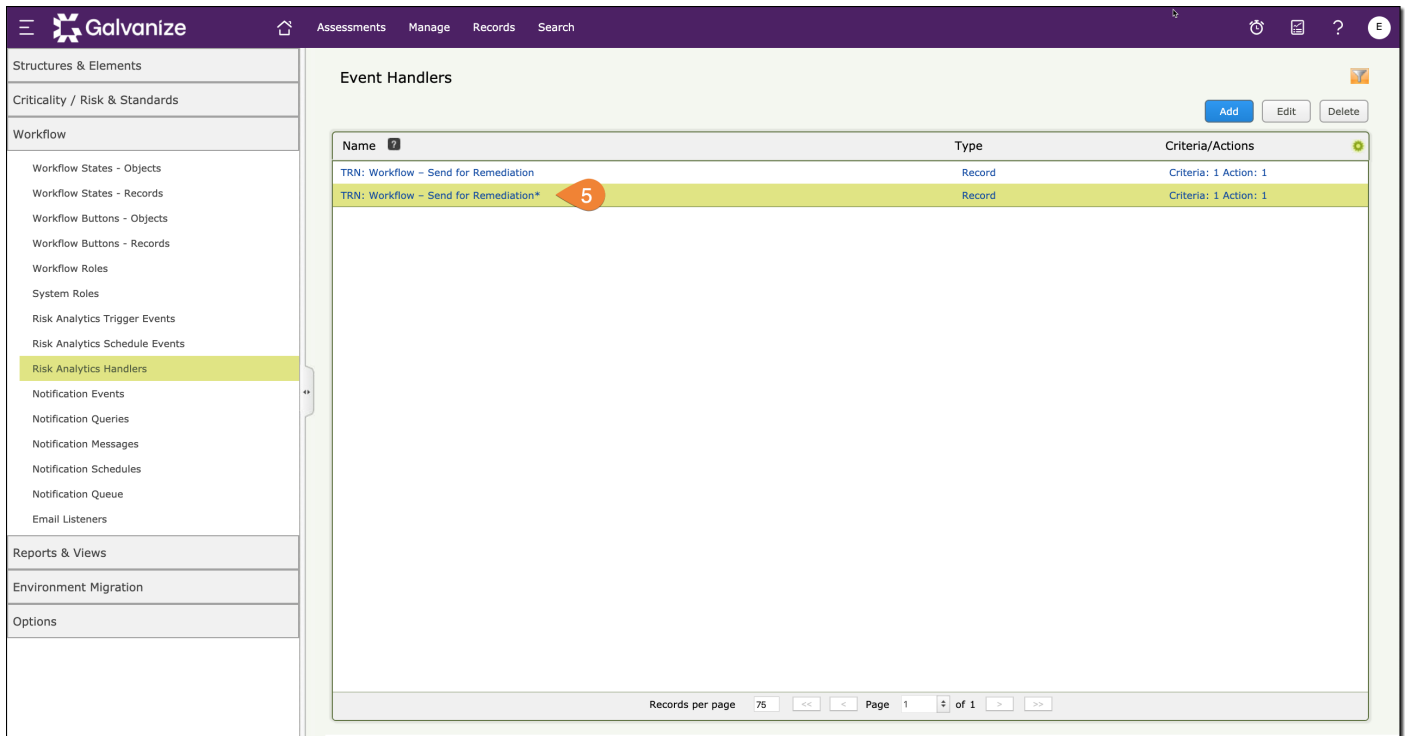


desktop-mstnra5 says

Duplicate Risk Analytics Handler has been created.

OK

5. Double-click the duplicate handler TRN: **Workflow – Send for Remediation*** to open

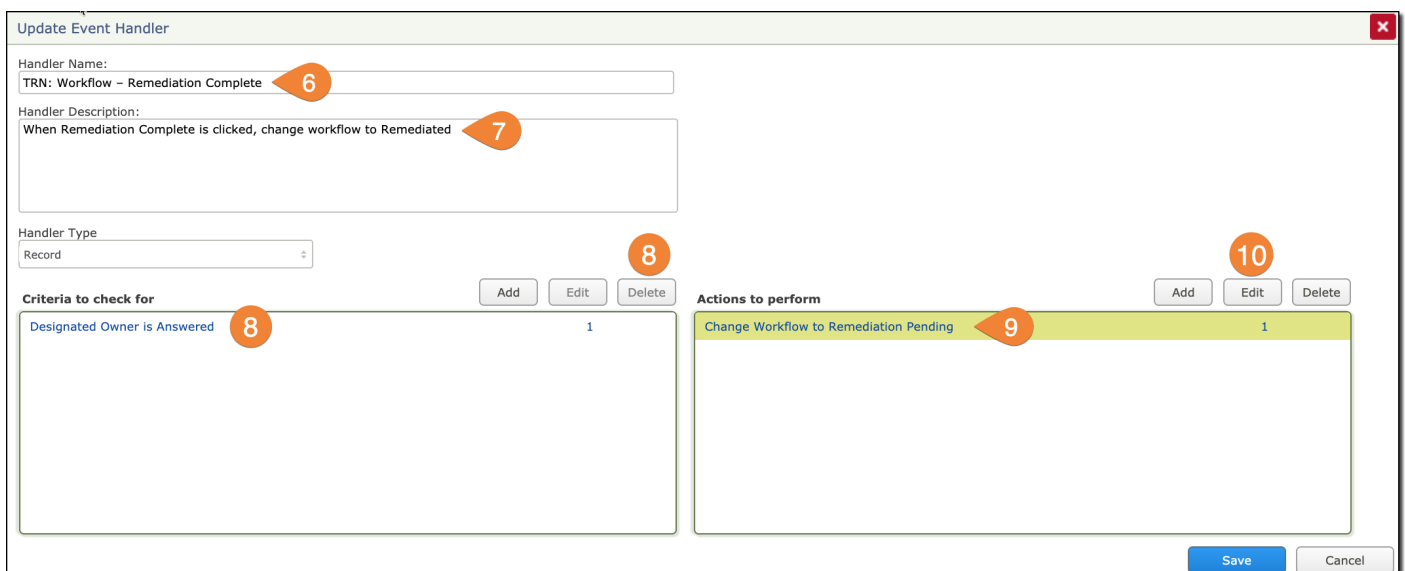


Event Handlers

Name	Type	Criteria/Actions
TRN: Workflow – Send for Remediation	Record	Criteria: 1 Action: 1
TRN: Workflow – Send for Remediation*	Record	Criteria: 1 Action: 1

Records per page 75 Page 1 of 1

6. Rename the handler name to **TRN: Workflow – Remediation Complete**
7. Modify the handler description to: **When Remediation Complete is clicked, change workflow to Remediated**
8. Select the existing criteria and click **Delete**. At the “Delete the Criteria” dialog box, select **OK**
9. Select the **Change Workflow to Remediation Pending** action
10. Click **Edit**



Update Event Handler

Handler Name:
TRN: Workflow – Remediation Complete

Handler Description:
When Remediation Complete is clicked, change workflow to Remediated

Handler Type:
Record

Criteria to check for

Criteria	Count
Designated Owner is Answered	1

Actions to perform

Action	Count
Change Workflow to Remediation Pending	1

Save Cancel

11. Rename your Action – **Change Workflow to Remediated**
12. Leave the Scope as **Targeted Record**
13. Leave Action Type as **Change a Record's workflow state**
14. Change the Action Selections to **TRN: Remediated**
15. Leave On Action Error to **Stop All handlers for this event**
16. Click **Save**

Update Action

Action Name

Change Workflow to Remediated 11

Execution Scope

The targeted record 12

Action Type

Change a record's workflow state 13

Action Selections:

TRN: Remediated 14

On Action Error

Stop all handlers for this event 15

☐ Suppress error messages

Helpful Information

Select the workflow state to send the record to

☐ Do not write action to log

16

Save

Cancel

17. Click **Save** again to save the handler

Update Event Handler

Handler Name:

TRN: Workflow – Remediation Complete

Handler Description:

When Remediation Complete is clicked, change workflow to Remediated

Handler Type

Record

Criteria to check for

Add Edit Delete

Designated Owner is Answered 1

Actions to perform

Add Edit Delete

Change Workflow to Remediated 1

17

Save

Cancel

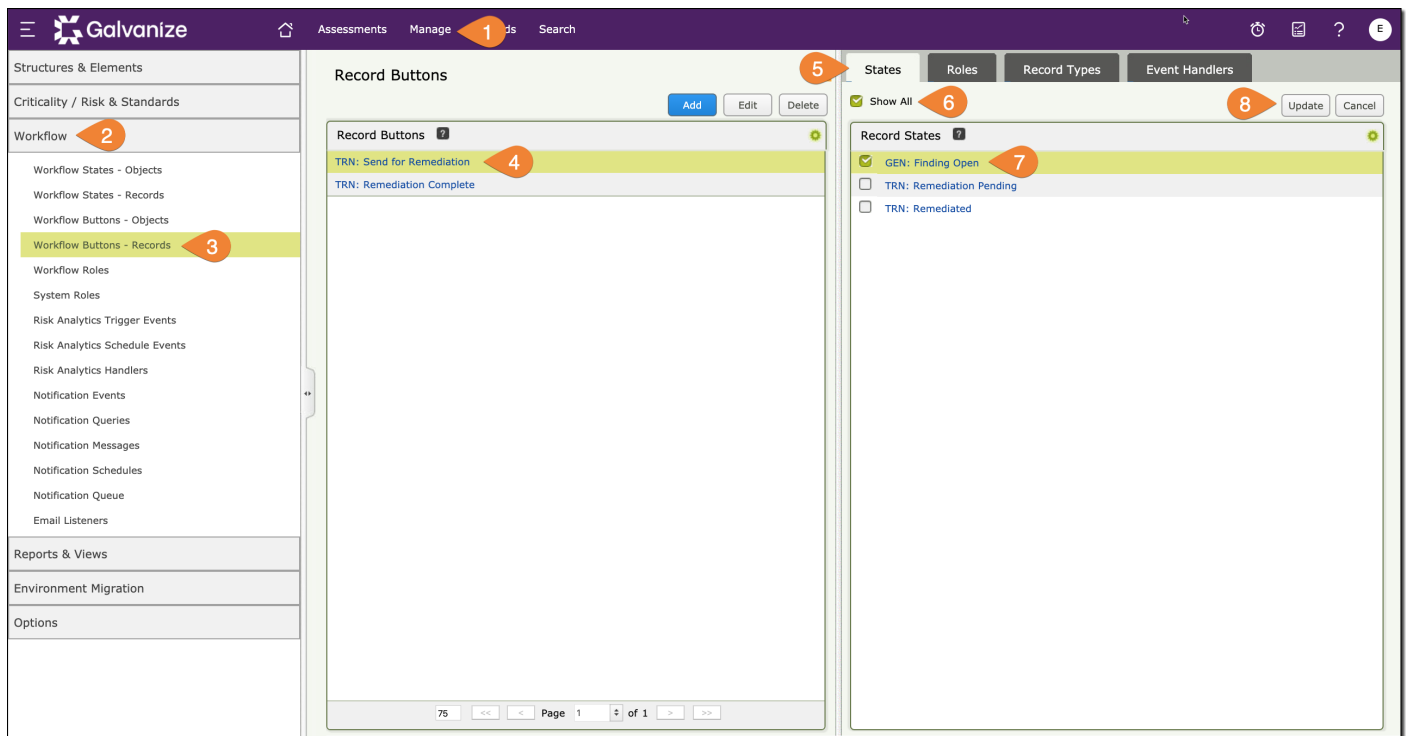
Session 7: Linking Workflow Buttons

After creating the **Send for Remediation** and **Remediation Complete** workflow buttons we have to tell Rsam:

- Which Roles can see the Button (Who)
- During which States will the Buttons be visible (When)
- What Record Types will display the Button when selected (What)
- What Risk Analytics will run when the Button is clicked

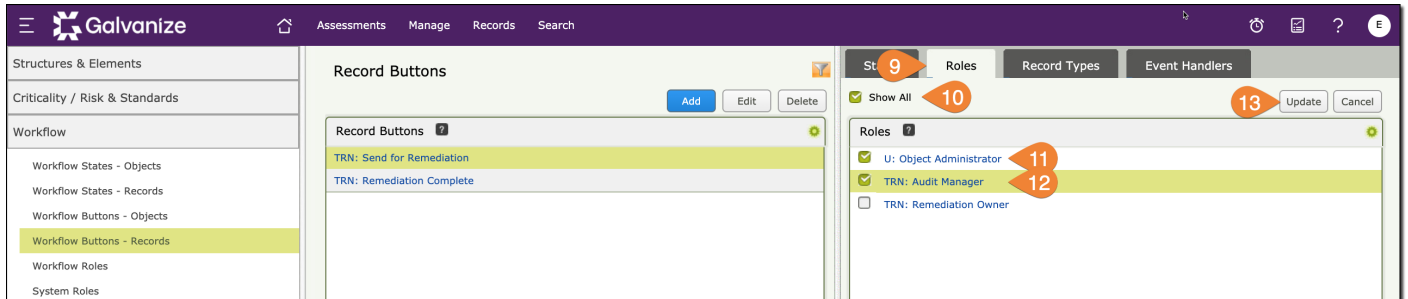
Linking Buttons

1. Click **Manage** -> **Administration**
2. Select **Workflow**
3. Select **Workflow Buttons – Records**
4. Select the **TRN: Send for Remediation** record button
5. On the right-hand screen, select the **States** tab
6. Check the **Show All** box
7. Check off **GEN: Finding Open**
8. Click **Update**



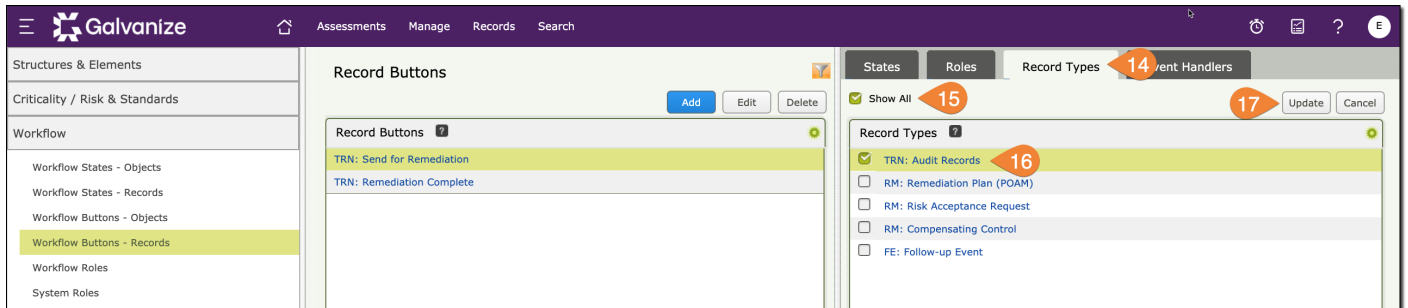
The screenshot displays the Galvanize application interface for configuring workflow buttons. The left sidebar contains a navigation menu with categories like 'Structures & Elements', 'Criticality / Risk & Standards', 'Workflow', 'Workflow Roles', 'System Roles', 'Risk Analytics Trigger Events', 'Risk Analytics Schedule Events', 'Risk Analytics Handlers', 'Notification Events', 'Notification Queries', 'Notification Messages', 'Notification Schedules', 'Notification Queue', and 'Email Listeners'. The 'Workflow' category is expanded, and 'Workflow Buttons - Records' is selected. The main content area shows the 'Record Buttons' list with two entries: 'TRN: Send for Remediation' and 'TRN: Remediation Complete'. The 'TRN: Send for Remediation' button is selected. The right-hand panel shows the 'States' tab with a 'Show All' checkbox checked and a list of states: 'GEN: Finding Open', 'TRN: Remediation Pending', and 'TRN: Remediated'. The 'GEN: Finding Open' state is selected. The 'Update' button is visible in the top right corner of the right-hand panel.

9. Select **Roles** tab
10. Check the **Show All** box
11. Check off **U: Object Administrator**
12. Check off **TRN: Audit Manager**
13. Click **Update**



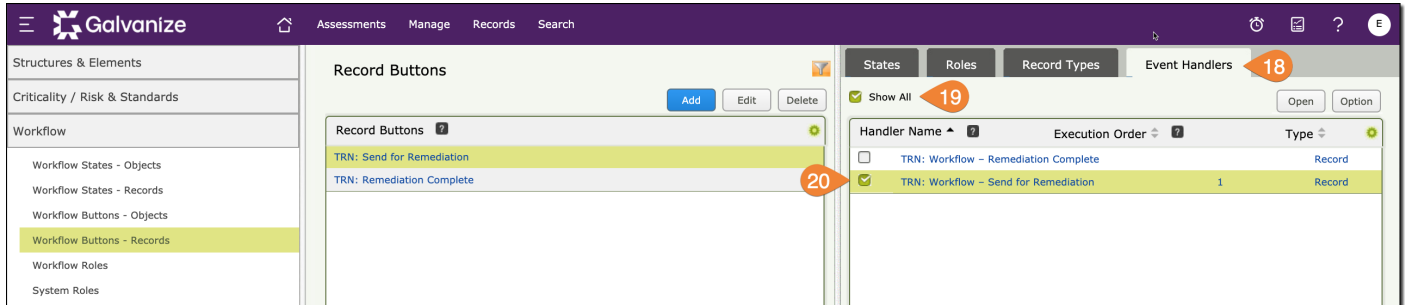
The screenshot shows the Galvanize Roles configuration page. The 'Roles' tab is selected. The 'Show All' checkbox is checked. The 'U: Object Administrator' and 'TRN: Audit Manager' checkboxes are checked. The 'Update' button is highlighted.

14. Select **Record Types** tab
15. Check the **Show All** box
16. Check off **TRN: Audit Record**
17. Click **Update**



The screenshot shows the Galvanize Record Types configuration page. The 'Record Types' tab is selected. The 'Show All' checkbox is checked. The 'TRN: Audit Records' checkbox is checked. The 'Update' button is highlighted.

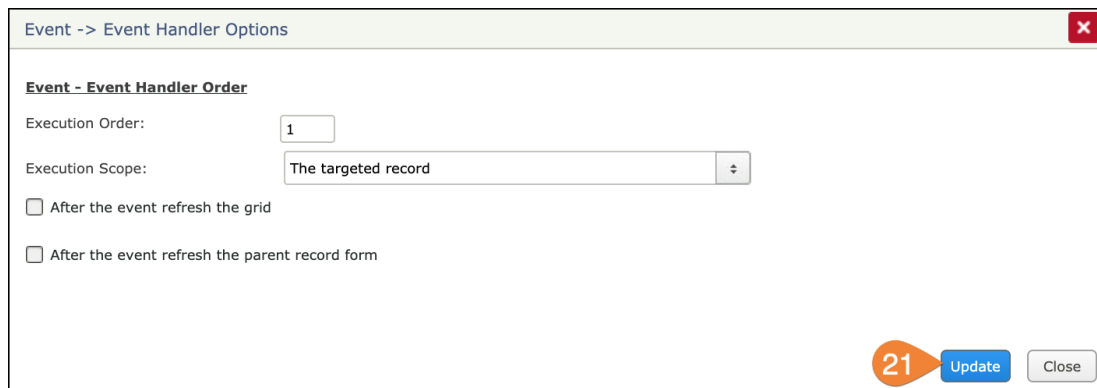
18. Select **Event Handlers** tab
19. Check the **Show All** box
20. Check off **TRN: Workflow – Send for Remediation**



The screenshot shows the Galvanize interface with the 'Event Handlers' tab selected. The 'Show All' checkbox is checked. The 'TRN: Workflow – Send for Remediation' handler is selected in the list.

Handler Name	Execution Order	Type
TRN: Workflow – Remediation Complete		Record
TRN: Workflow – Send for Remediation	1	Record

21. Click **Update** when the pop-up comes up.



The screenshot shows the 'Event -> Event Handler Options' pop-up window. The 'Execution Order' is set to 1. The 'Execution Scope' is set to 'The targeted record'. The 'Update' button is highlighted.

Event - Event Handler Order

Execution Order:

Execution Scope:

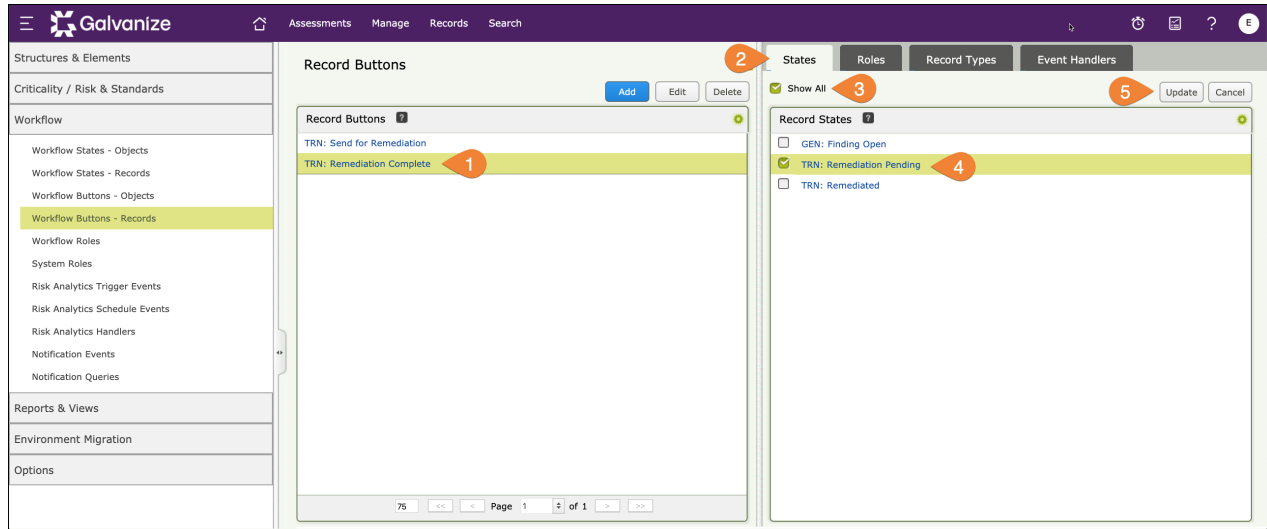
☐ After the event refresh the grid

☐ After the event refresh the parent record form

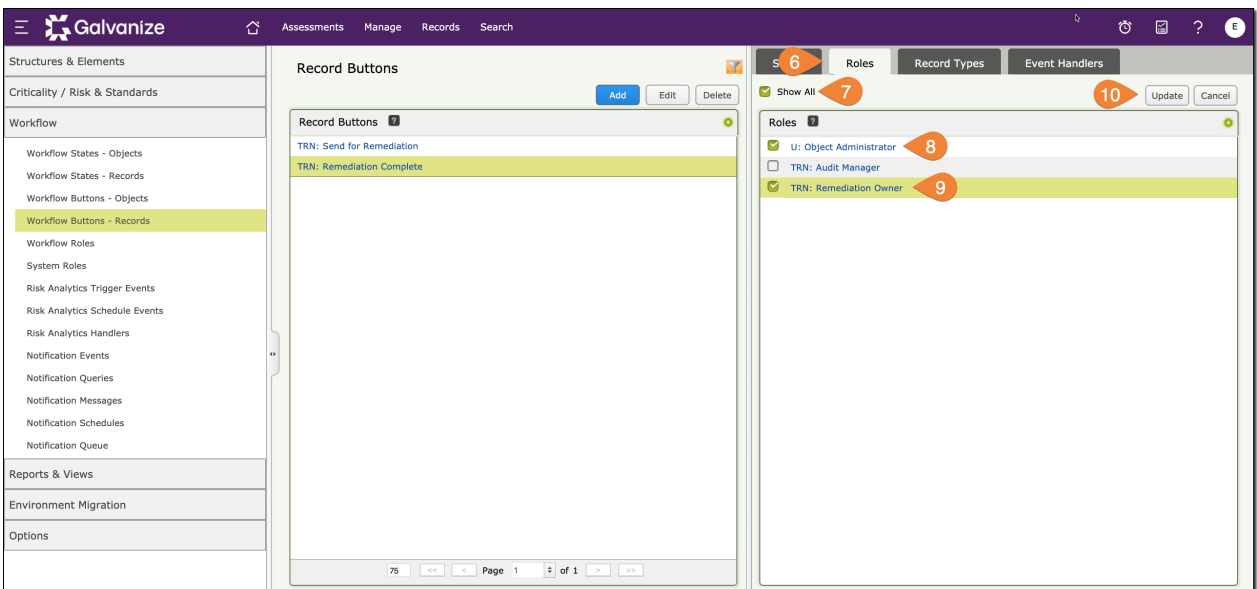
21

Link the Second Button

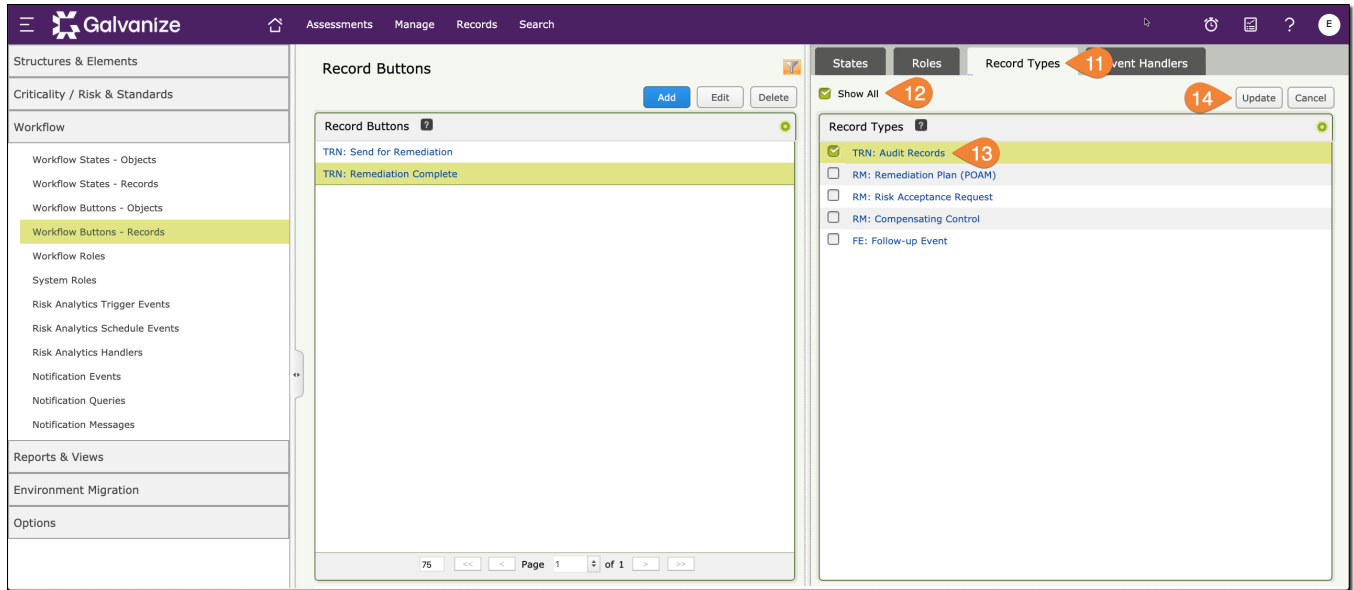
1. Select the **TRN: Remediation Complete** button from the middle screen
2. On the right-hand pane, select **States** tab
3. Check the **Show All** box
4. Check **TRN: Remediation Pending**
5. Click **Update**



6. Select **Roles** tab
7. Check **Show All** box
8. Check off **U: Object Administrator**
9. Check off **TRN: Remediation Owner**
10. Click **Update**

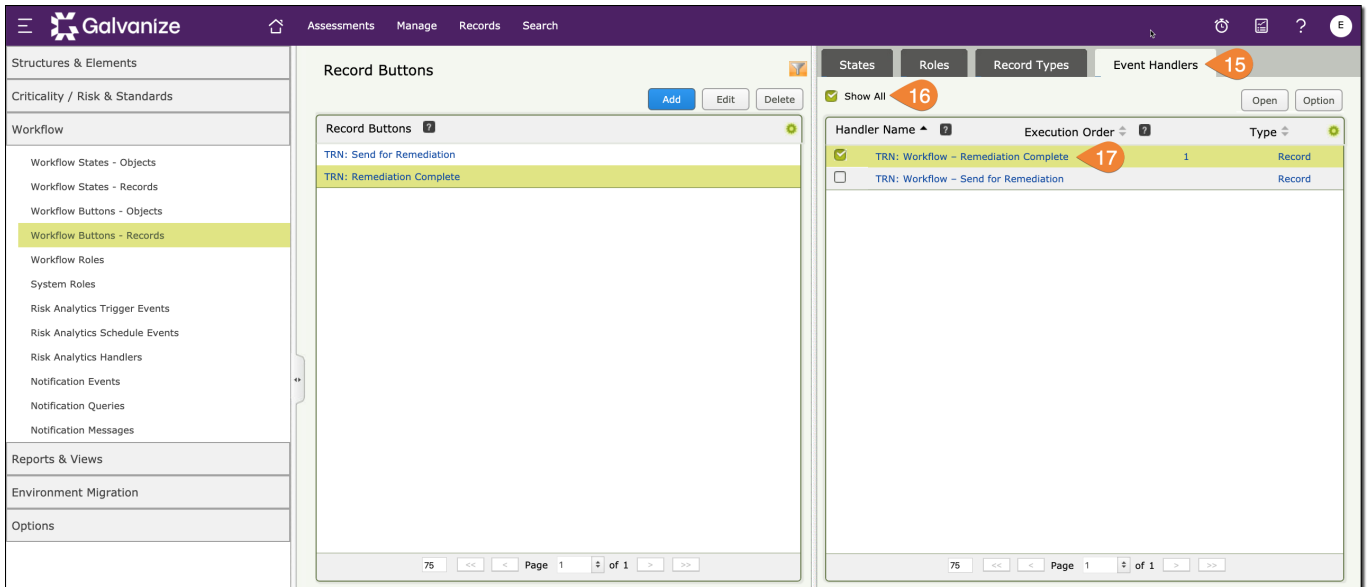


11. Select **Record Types** tab
12. Check the **Show All** box
13. Check off **TRN: Audit Records**
14. Click **Update**



The screenshot shows the Galvanize interface with the 'Record Types' tab selected. The 'Show All' checkbox is checked. The 'TRN: Audit Records' checkbox is checked. The 'Update' button is visible.

15. Select **Event Handlers** tab
16. Check the **Show All** box
17. Check off **TRN: Workflow – Remediation Complete**



The screenshot shows the Galvanize interface with the 'Event Handlers' tab selected. The 'Show All' checkbox is checked. The 'TRN: Workflow – Remediation Complete' checkbox is checked. The 'Update' button is visible.

18. When a dialog box appears, leave the default settings and Click **Update**

Session 8: Validating the Configuration

We will now create a new record, assign this to the Remediation Owner. Then login to the Remediation Owner account to see if the record was sent to them. This is a very basic workflow structure but highlights what can be done with minimal configuration work.

Testing the Workflow

1. Logout of Administrator Account
2. Login as **Aud_Manager_1** account created in first exercise
3. Create a new Audit Record, specify **Rem_Owner_1** in the owner attribute.
4. Click **Update**
5. Click on **Action** then select the **Send for Remediation** button
6. Logout of Audit Manager Account
7. Login as **Rem_Owner_1**
8. Open the new record
 - a) Notice that you only see the one record, and within that record only see a single tab
9. Close the record, and click on **ADD -> Remediation Plan (POAM)**
 - a) Enter in the desired attributes and click on **Save & Close**
10. Highlight the Audit Record, Click **Action -> Remediation Complete**
11. The workflow state changes to **Remediated**.

Stop Here

- Take a Break
- Next Session Continues Shortly