

# Workflows

Last Modified on 11/12/2024 11:24 am EST

## Create a New State

### Overview

States represent the data collection and review stages (e.g. Create, Triage, Review, Investigate, Close, etc.). States allow you to control where an object is created or viewed in an application, required fields that must be completed during certain stages, which state the Object will transition (Triggers) and narrow search results.

A default workflow (**Creation**, **Draft**, **Active**, and **Archived** states) is automatically added to the Object Type when creating an Object Type. These states can be deleted or supplemented with additional States as needed (except for the **Creation** state, which cannot be deleted and allows only limited configuration).

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### User Account Requirements

The user account you use to log into Resolver must have Administrator permission to access Object Types.

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### Related Setup/Information

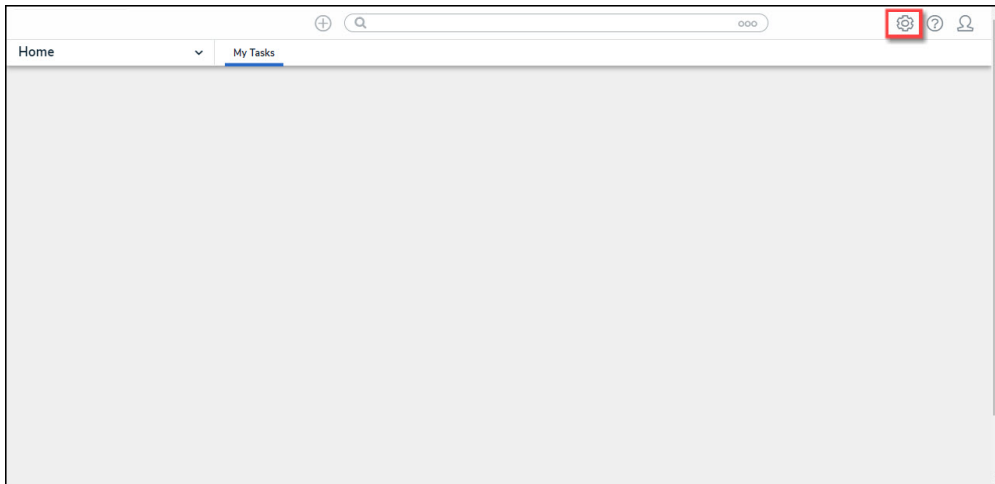
See the [Edit or Delete a State](#) article for more information on marking fields, properties, or roles as required and changing the State's name or color.

See the [Add a Trigger & Transition to a State](#) article for more information on adding triggers, transitions, or actions to a state.

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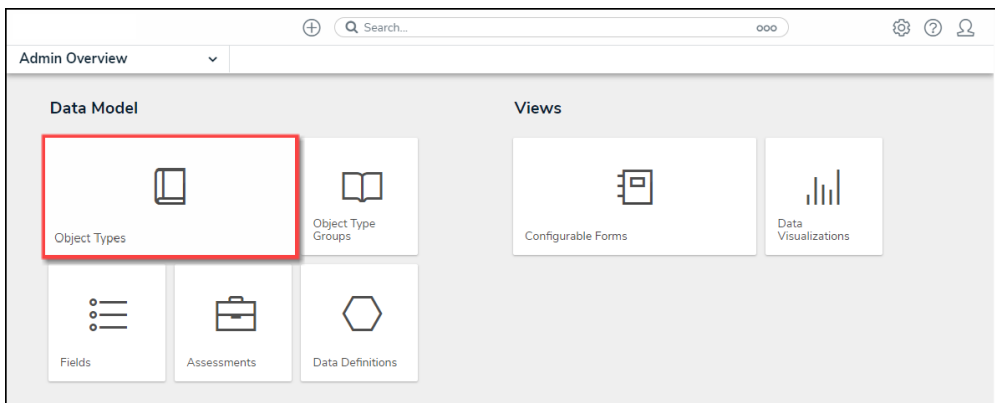
### Navigation

1. From the **Home** screen, click on the **Administration** icon.



*Administration Icon*

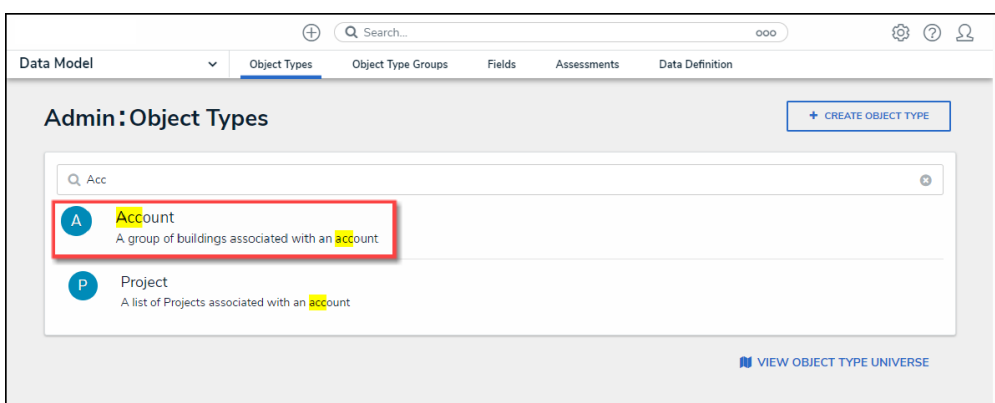
2. From the **Admin Overview** screen, click on the **Configurable Forms** tile under the **Views** section.



*Configurable Forms Tile*

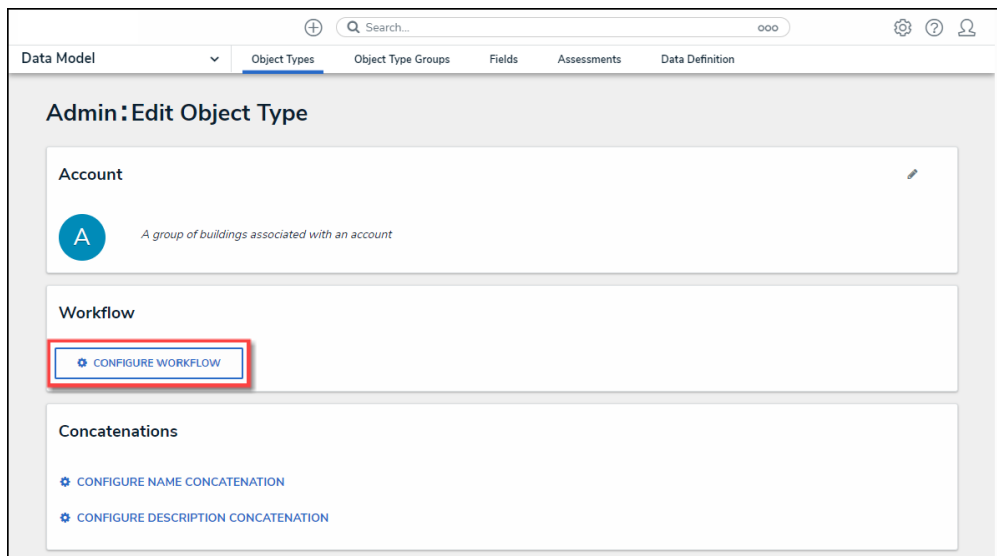
## Creating a New State

1. From the **Admin: Object Types** screen, enter an Object Type Name in the **Search** field to narrow the search results list.
2. Click on an **Object Type Name** from the search results lists.



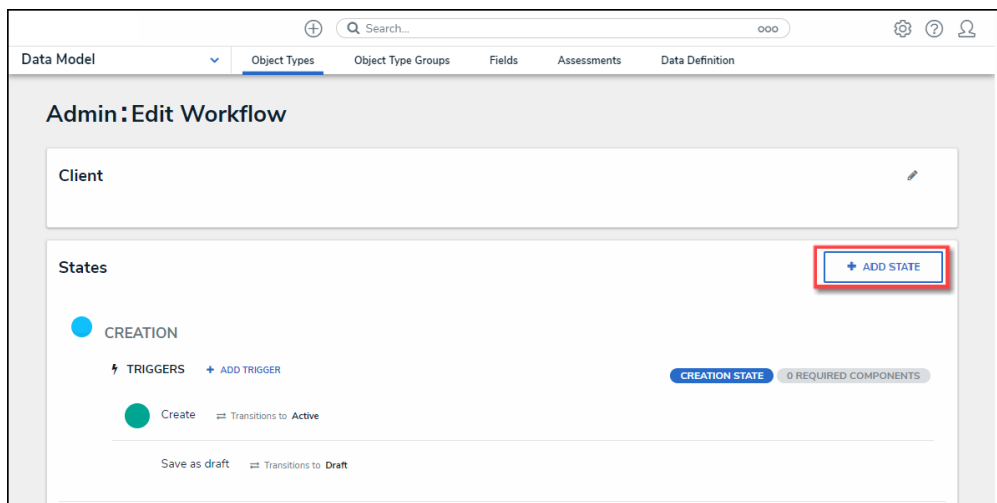
*Object Type Name Link*

3. From the **Admin: Edit Object Type** screen, click the **Configure Workflow** button.



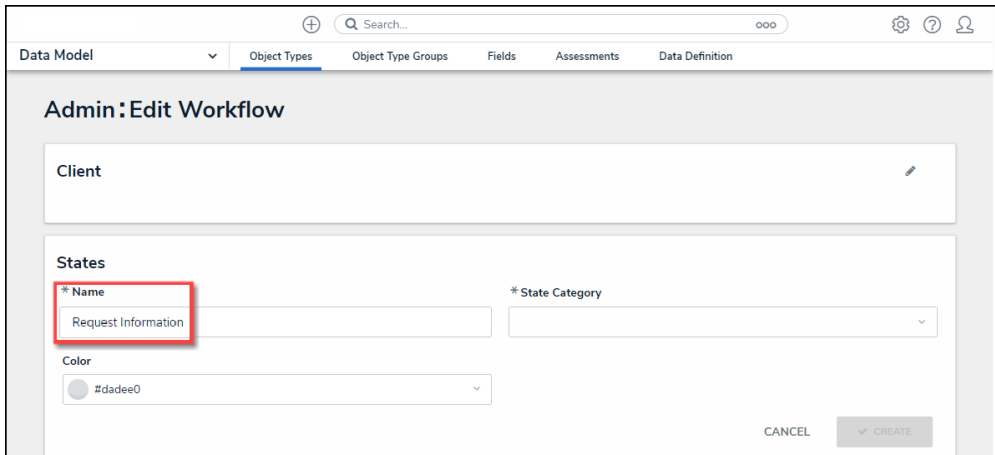
*Configure Workflow Button*

4. From the **Admin: Edit Workflow** screen, click the **+ Add State** button.



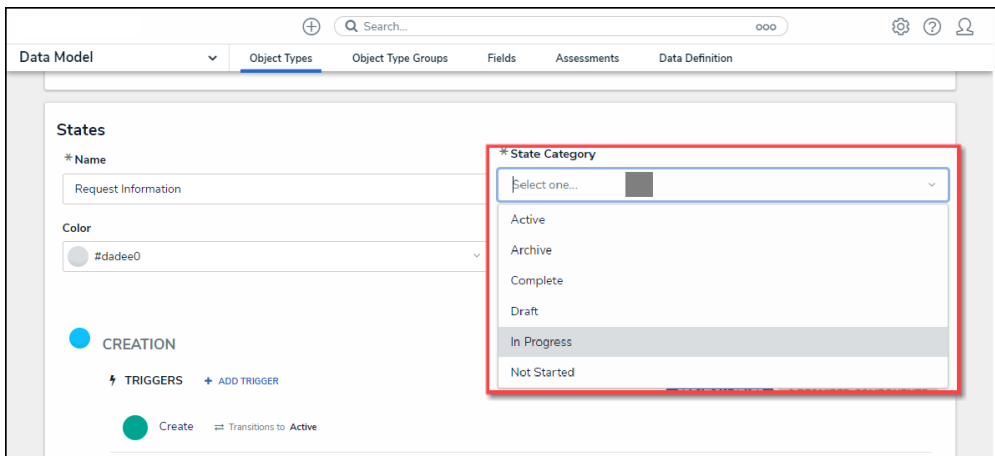
*+ Add State Button*

5. Enter the **State's Name** in the **Name** field.



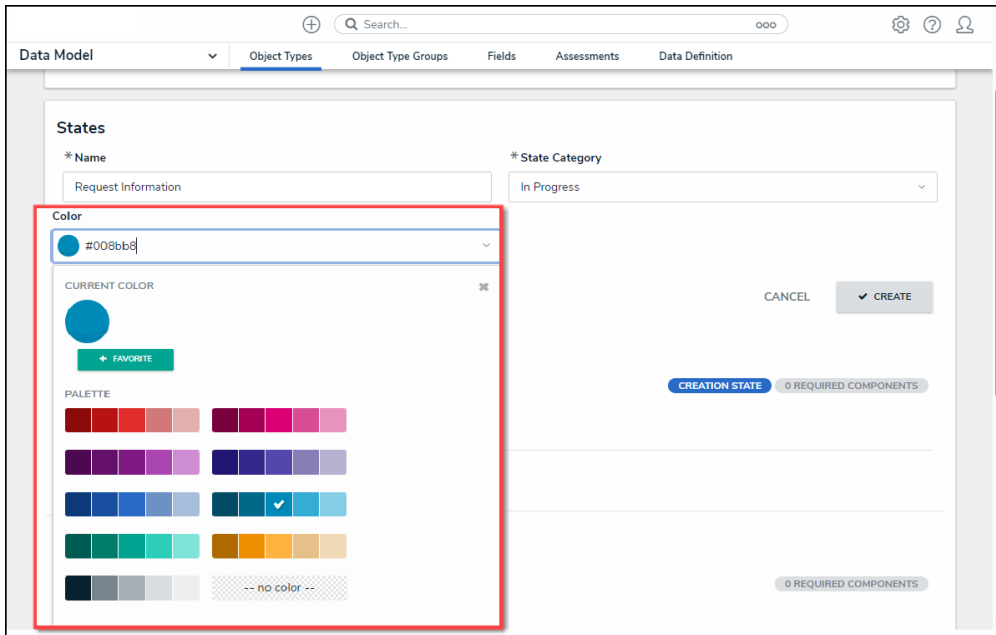
*Name Field*

6. Select a **Category** from the **State Category** dropdown menu.



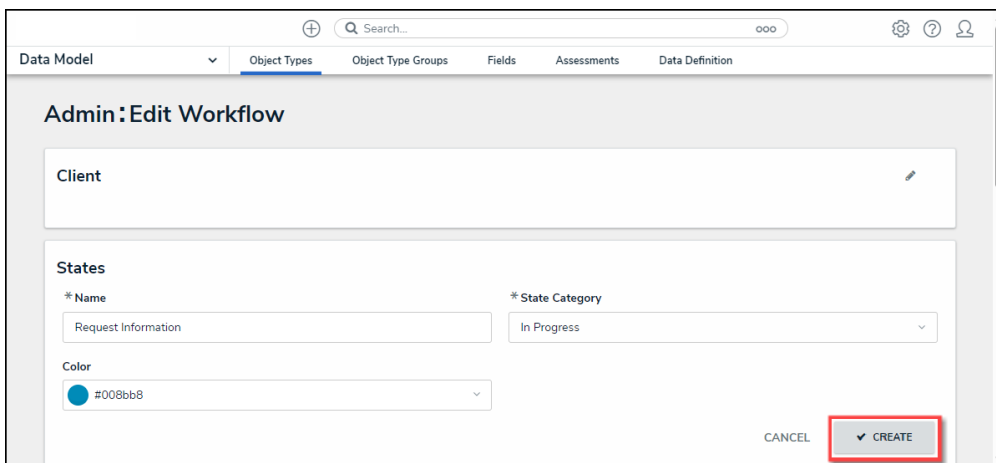
*State Category Field*

7. **(Optional)** Select a **Color Code** from the **Color** dropdown pallet or enter a 6-digit hex color code into the **Color** field.



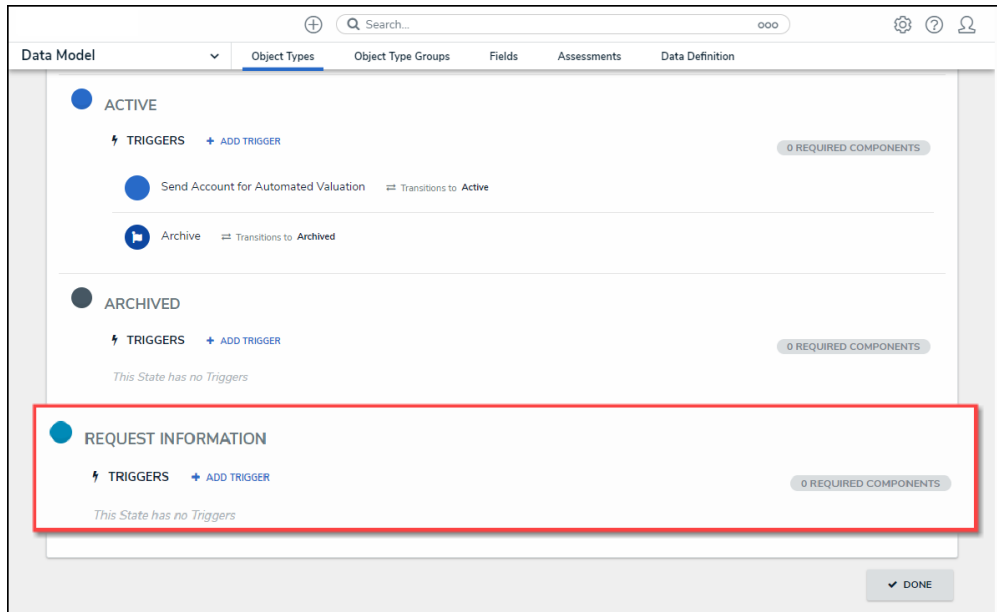
*Color Field*

8. Click the **Create** button to create the new State.



*Create Button*



9. The new State will appear at the bottom of the list on the **Admin: Edit Object Type** screen.



*New State*

## Edit the Workflow Name or Description

### To edit the workflow name or description:

1. Click the  icon in the top bar > **Object Types** in the **Data Model** section.
2. Click the object type or enter the name of the object type in the **Search** field, then click it to display the **Edit Object Type** page.
3. Click the  icon next the workflow name near the top of the page.
4. Make your changes to the **Name** or **Description** fields as needed.
5. Click **Done** when finished.

## Add a Trigger & Transition to a State

### Overview

Timed Triggers automate the Workflow of an object which can transition an object from State to State (e.g., notify users of an overdue date and process imported objects into Workflows). Timed Triggers are scheduled to run at midnight local time.

## User Account Requirements

The user account you use to log into Resolver must have Administrator permission to create Timed Triggers.

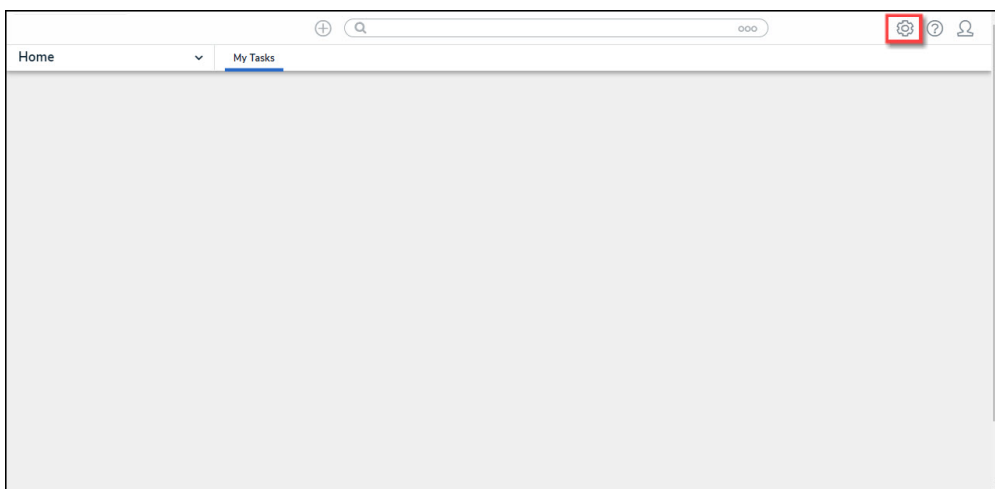
## Related Information/Setup

Please follow the link below for more information on Triggers.

- [Creating a Date-Based Trigger](#)
- [Orchestration Event Action in Resolver Core](#)
- [Add a Create Object Action in Resolver Core](#)

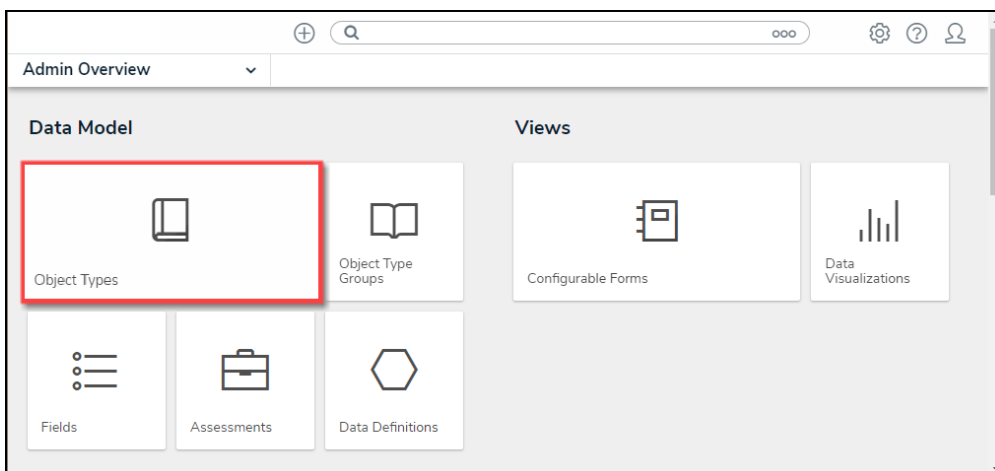
## Navigation

1. From the **Home** screen, click on the **Administration** icon.



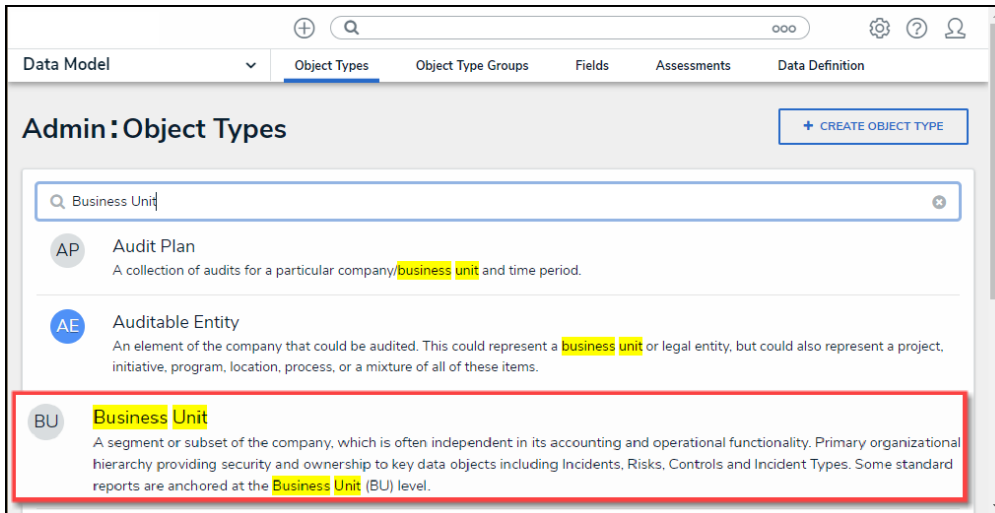
*Administration Icon*

2. From the **Admin Overview** screen, click on the **Object Types** tile under the **Data Model** section.



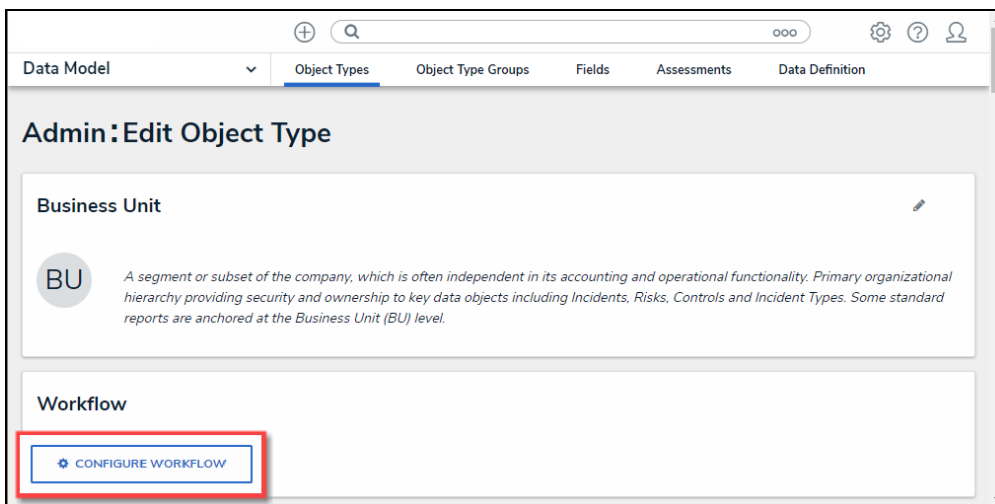
*Dashboard Data Sets Tile*

3. From the **Admin Object Types** screen, enter an Object Type Name in the **Search** field to narrow the search results and click on an Object Type.



*Object Type*

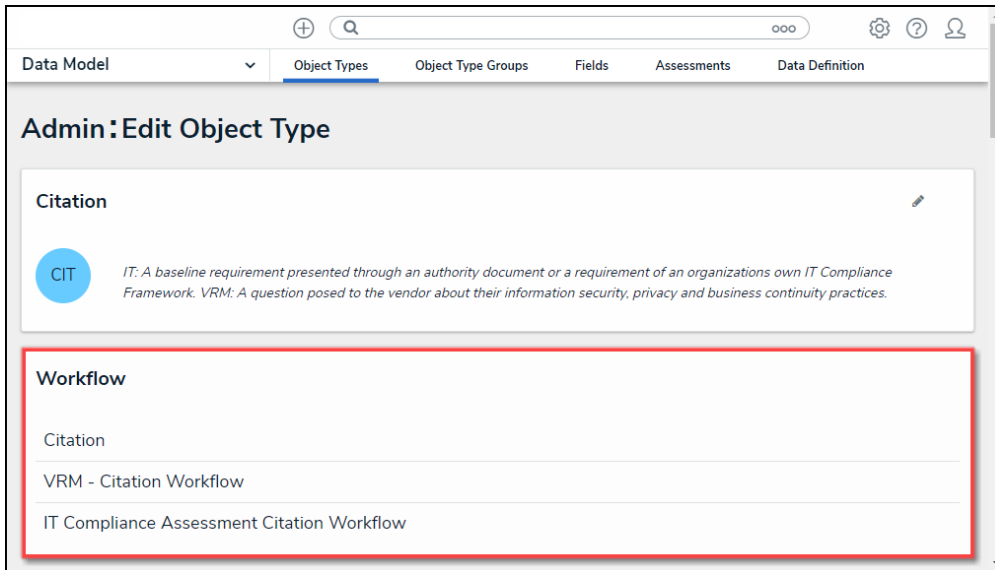
4. From the **Edit Object** screen, click the **Configure Workflow** button on the **Workflow** section.



*Configure Workflow Button*

5. If more than one Workflow is set up for the Object Type, click the desired Workflow from the list.





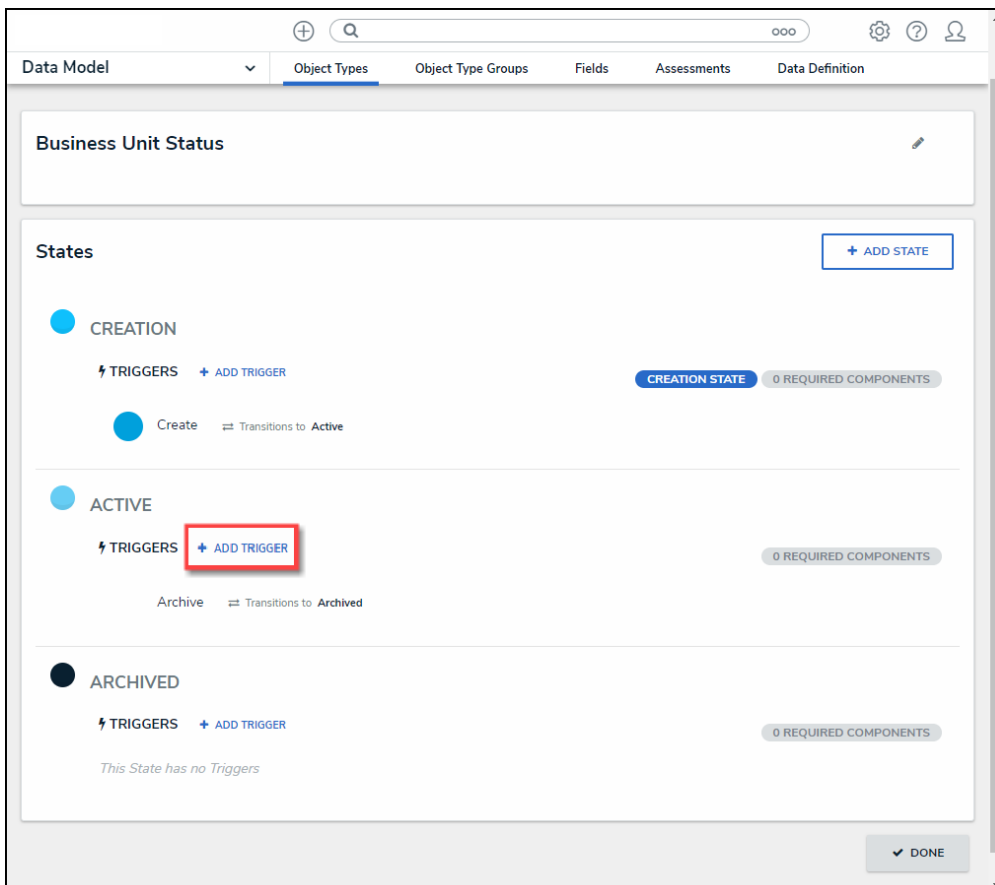
*Multiple Workflows*

6. From the **Edit Workflow** screen, click the **+Add Trigger** link under the **State** you want to add a Trigger.



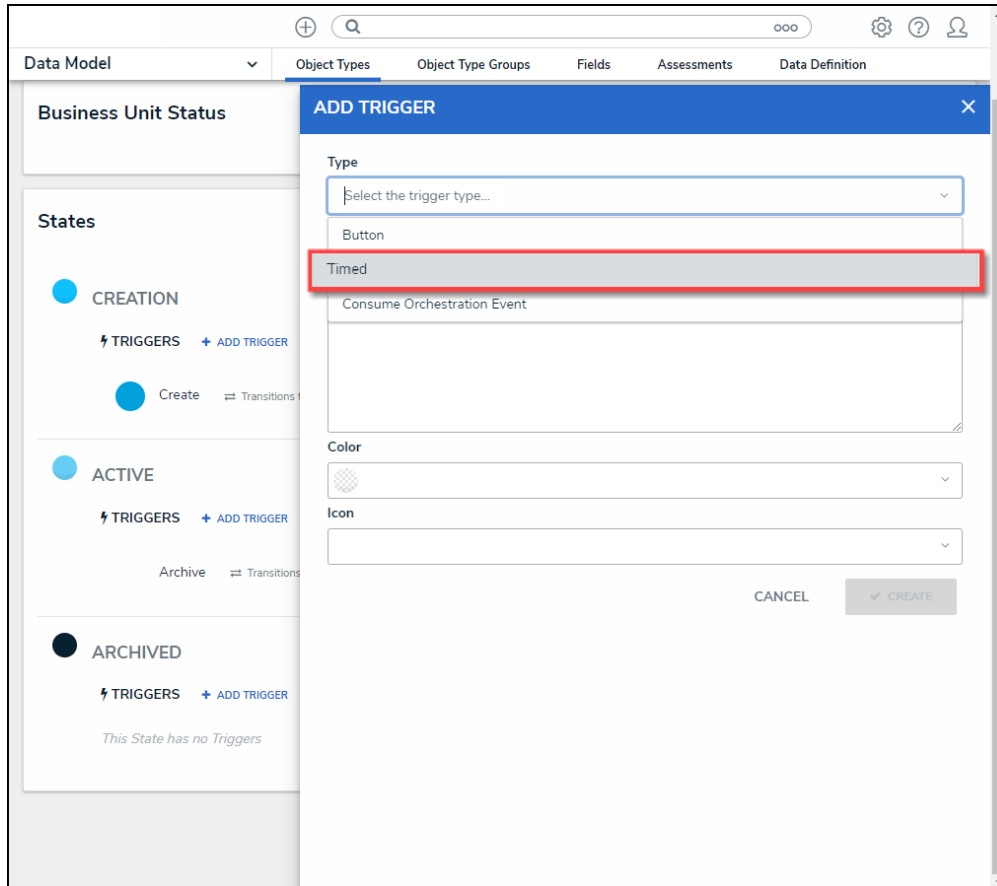
**Note:**

*Timed Trigger cannot be added to a **Creation** state.*



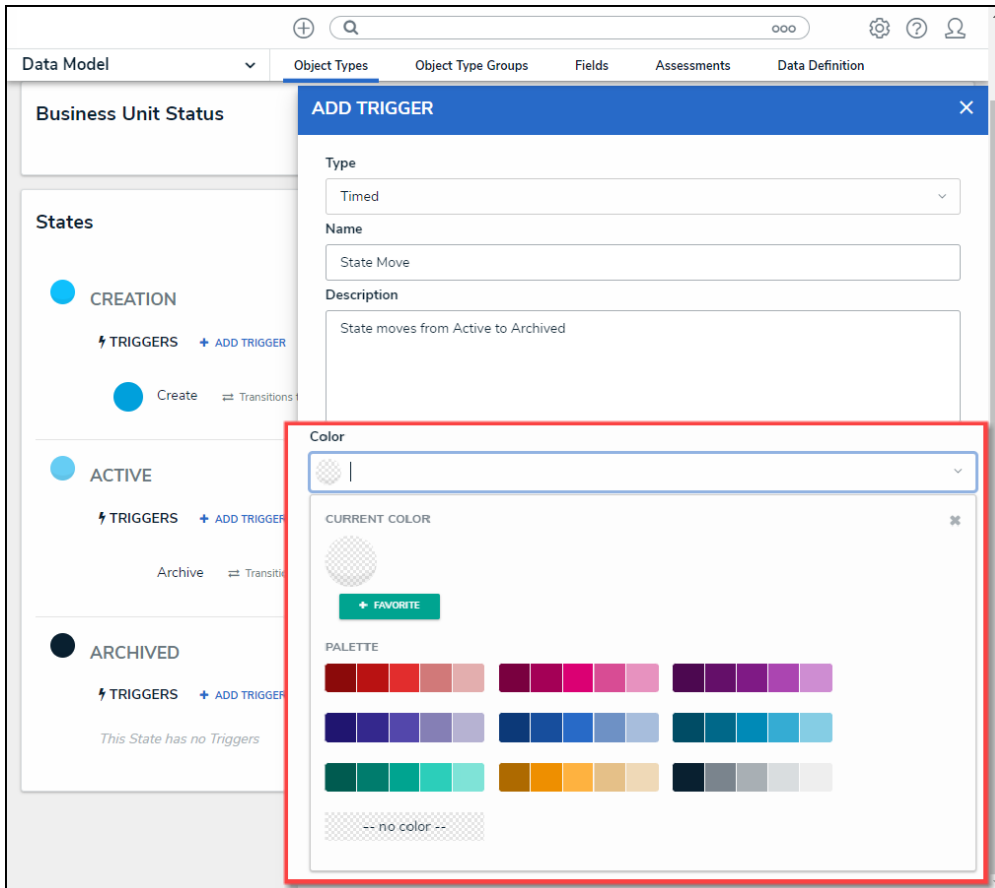
## Adding a Nightly Trigger to a State

1. From the **Add Triggers** pop-up, select **Timed** from the **Type** field dropdown menu.



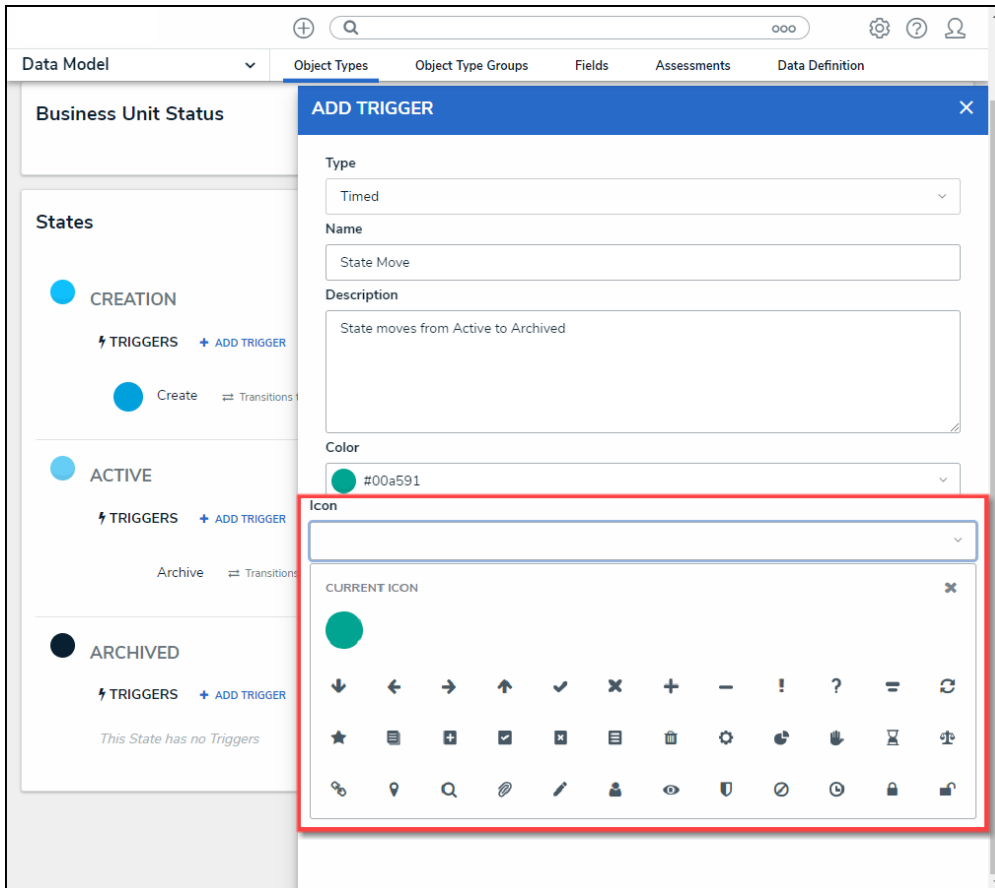
Type Field

2. Enter a **Trigger Name** in the **Name** field.
3. **(Optional)** Enter a brief description outlining the Nightly Trigger in the Description field.
4. **(Optional)** Select a color from the **Color** dropdown menu. The **Color** selected will be applied to the Icon if one is selected.



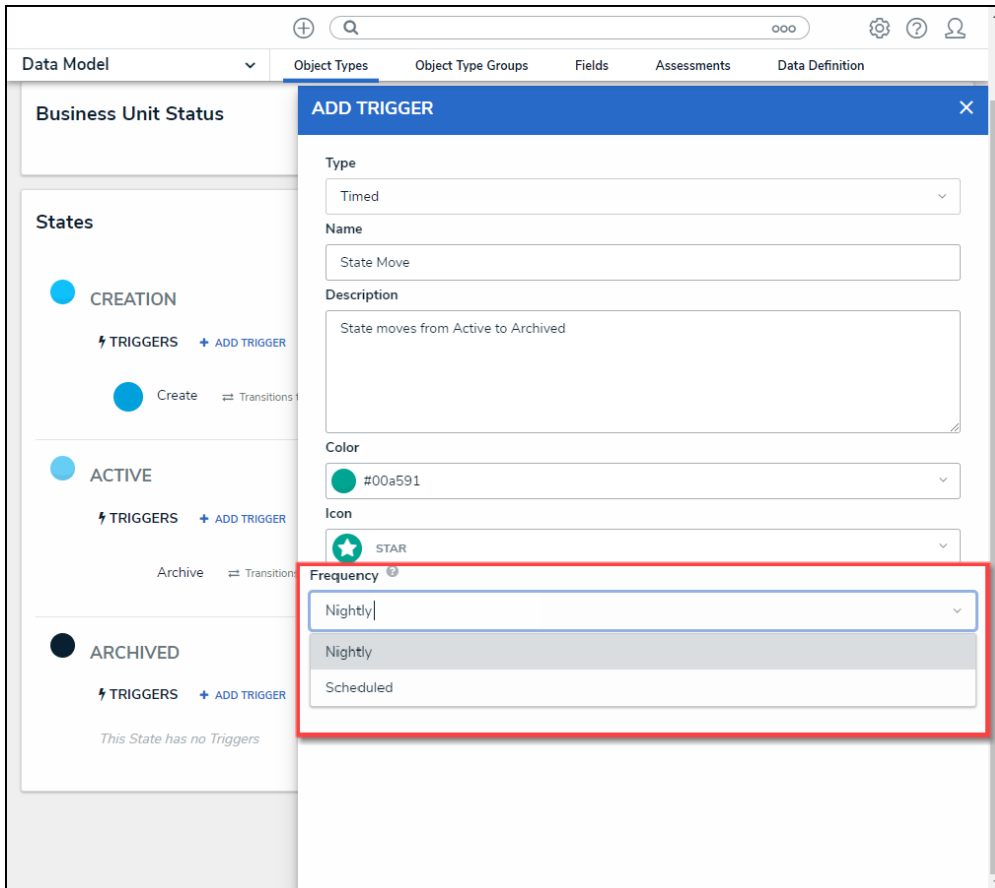
*Color Dropdown*

5. **(Optional)** Select an icon from the **Icon** dropdown menu. The **Icon** represents the Trigger within the system and appears just before the Trigger Name on the corresponding screens.



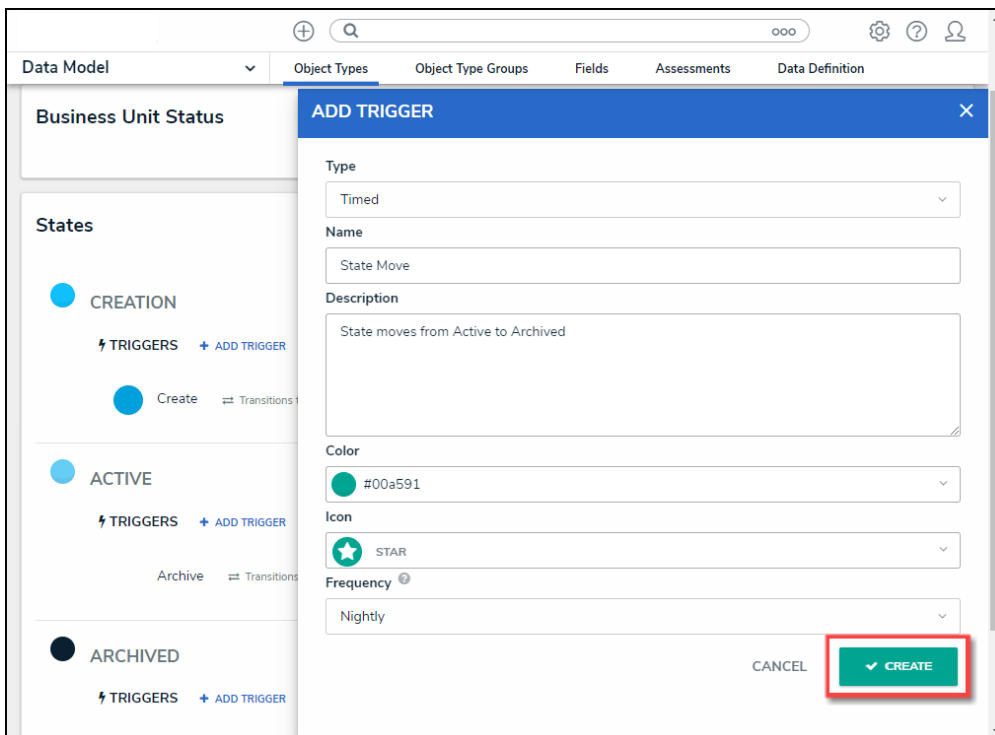
*Icon Dropdown*

6. Select **Nightly** from the **Frequency** field dropdown menu.



*Frequency Field*

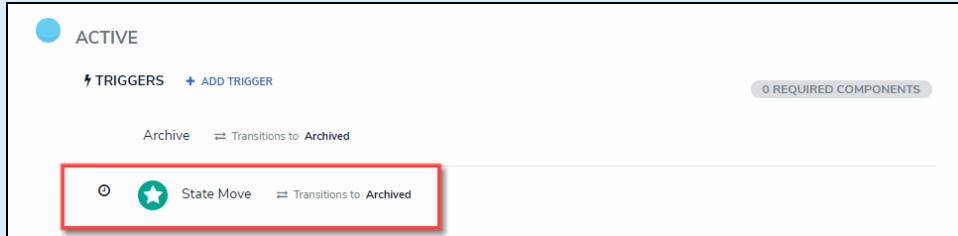
7. Click the **Create** button to create the Nightly Trigger.



*Create Button*

**Note:**

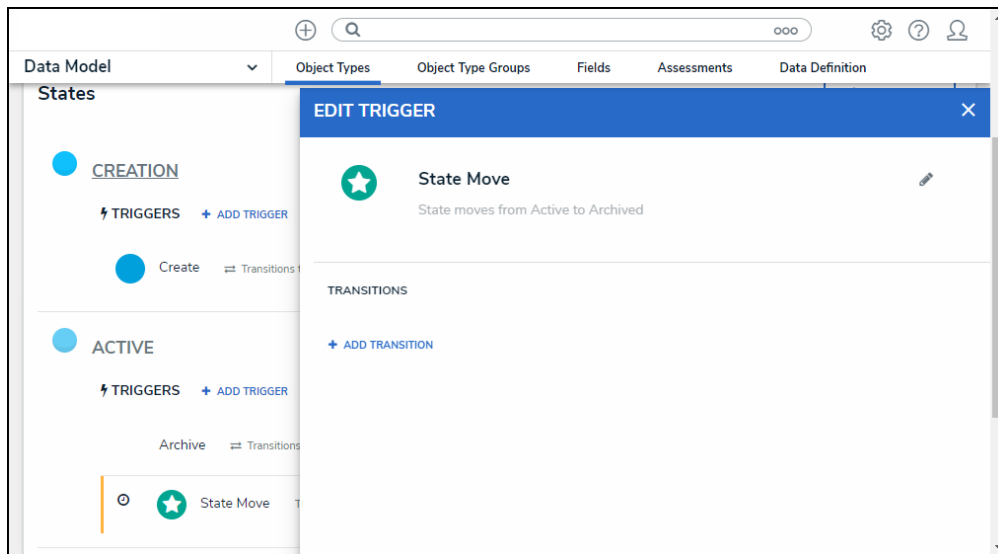
The **Nightly Trigger** will appear on the **Admin Edit Workflow** screen with a **Clock icon** indicating that the Triggers is a **Nightly Trigger**.



*Clock Icon*

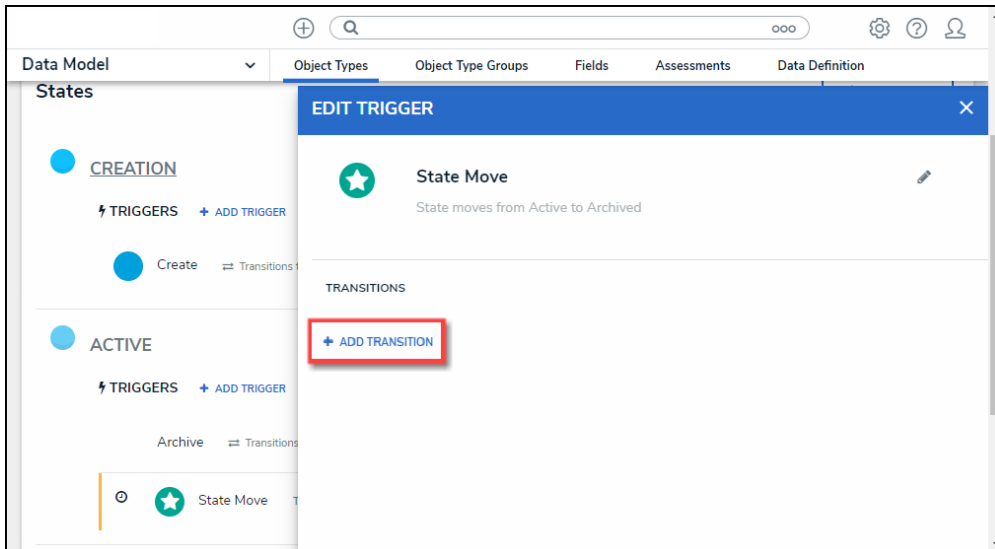
## Adding a Transition to a State

1. The **Edit Trigger** pop-up will appear when you click the **Create** button to create the Trigger.



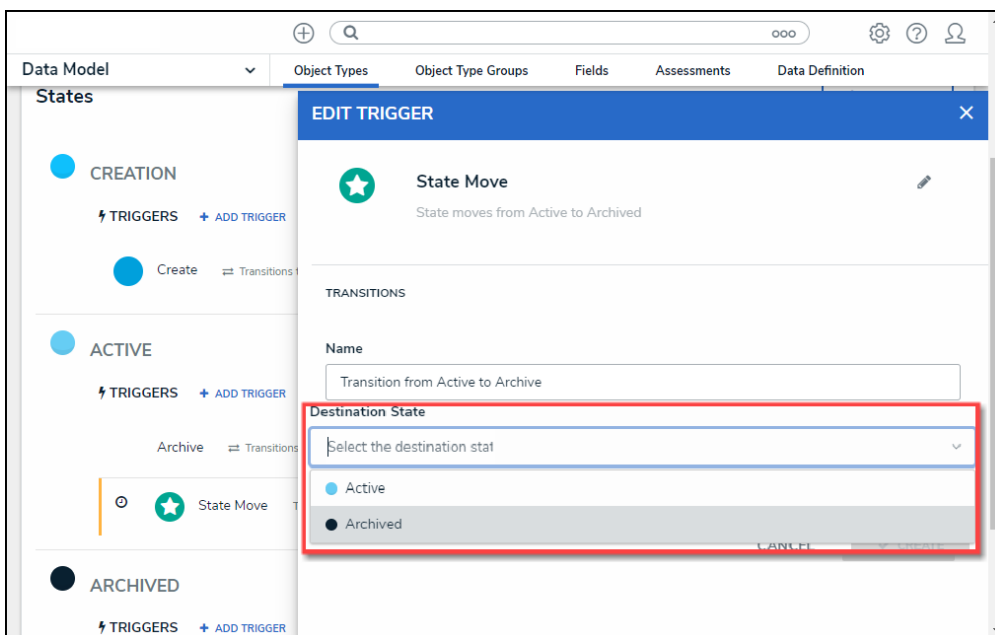
*Edit Trigger Pop-up*

2. Click the **+Add Transition** link under the **Transition** section.



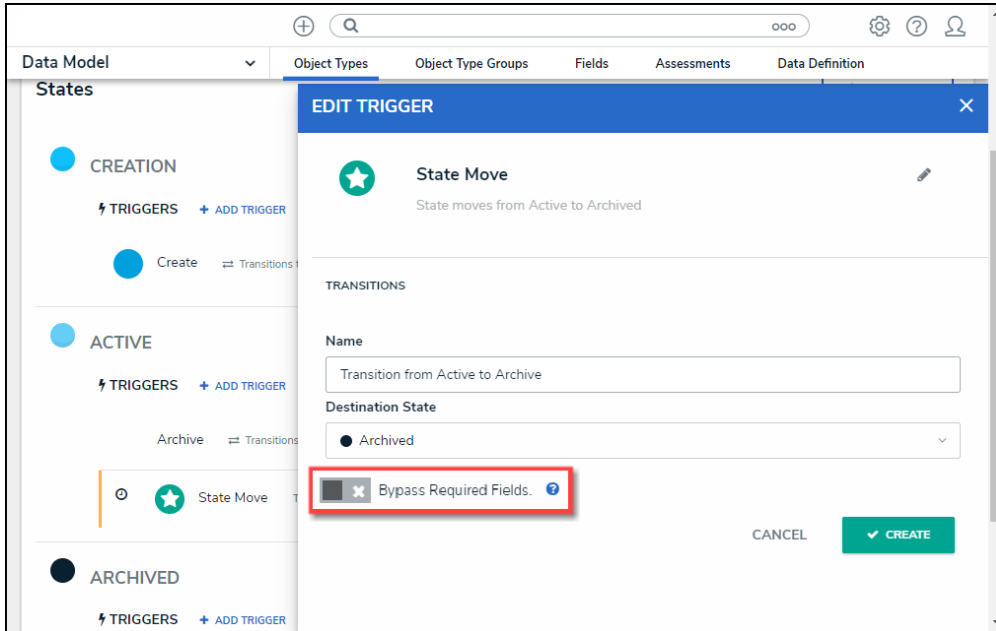
*+Add Transition Link*

3. Enter a Transition name in the **Name** field.
4. Select a state from the **Destination State** dropdown menu, indicating the State the Object Type will move to when the Transition is executed.



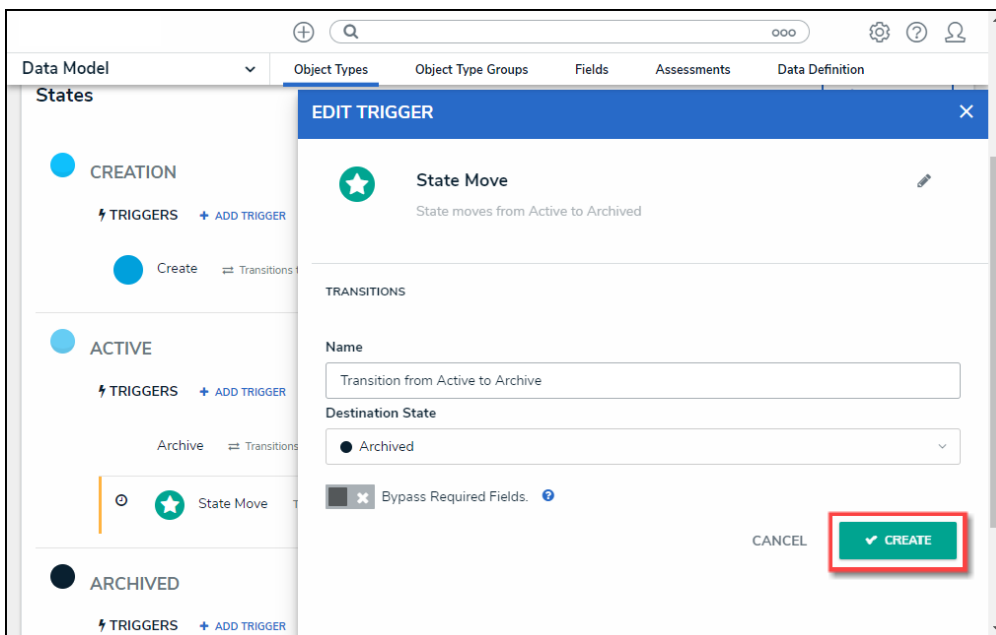
*Destination State Dropdown*

5. **(Optional)** Select the **Bypass Required Fields** toggle switch to allow the Transition to move the Object Type to the indicated State if there are empty required fields on the Object Type Form.



*Bypass Required Fields*

6. Click the **Create** button to create the Transition.



*Create Button*

## Add a Condition to a Transition

### Overview

A **Condition** controls an object's movement to different states or performs a specific action. A **Condition** consists of fields, formulas, and workflow states that create a formula. The formula uses a set of parameters to control whether a transition or action can occur.



## Related Information/Setup

For more information on formulas, see the following articles:

- [Formulas Overview](#)
- [Variables, Operators & Functions](#)
- [Null Values in Formulas](#)
- [Formula Examples](#)

Before adding a Condition to a Transition, you must create a State and a Trigger. See the following articles for more information on creating States and Triggers.

- [Create a New State](#)
- [Add a Trigger and Transition to a State](#)

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## Example

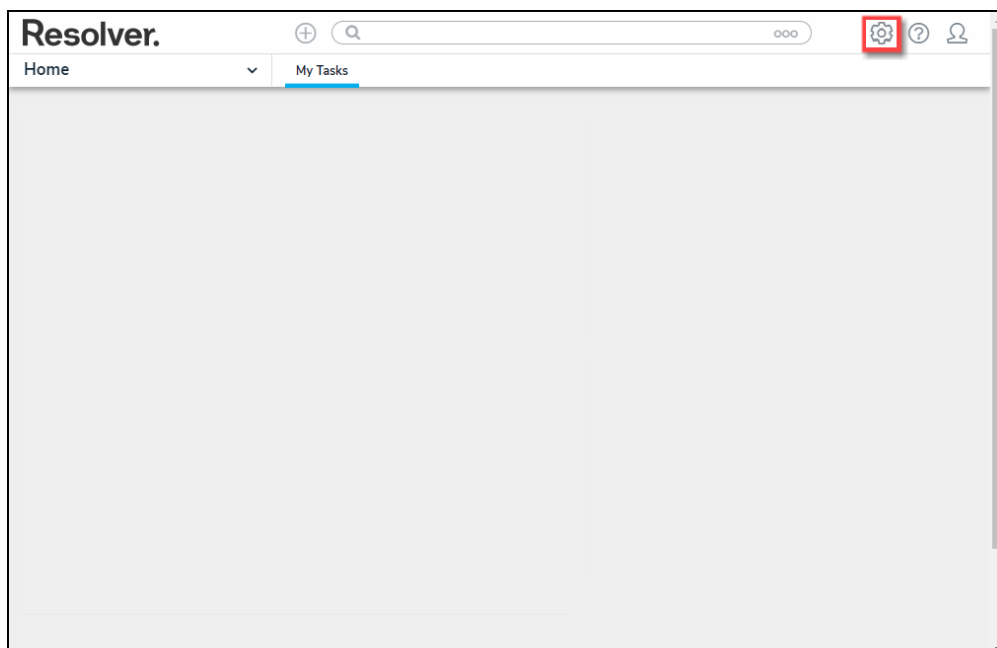
The following example outlines an everyday scenario where you would want to add a condition to a transition.

Your company's policy for severe incidents is to skip the typical review process and transition to the investigation stage. Create a Condition on the Incident object type workflow for the **Submit for Review** trigger. If the "Severe" option is selected. The object is automatically transitioned to the **Investigation Required** state once the **Submit for Review** trigger is selected on a form.

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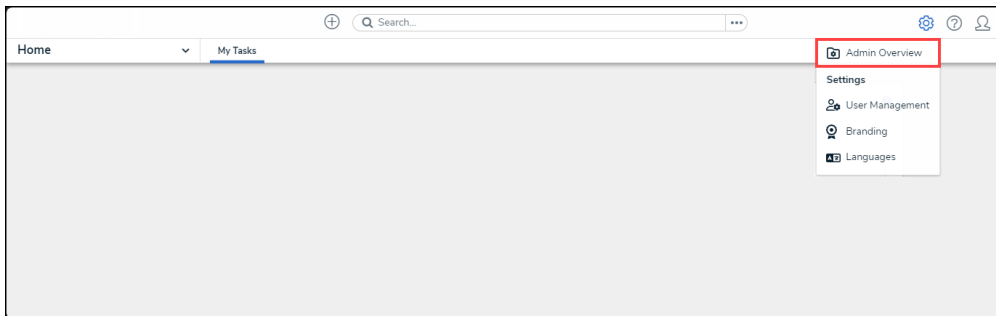
## Navigation

1. From the **Home** screen, click the **Administration** icon.



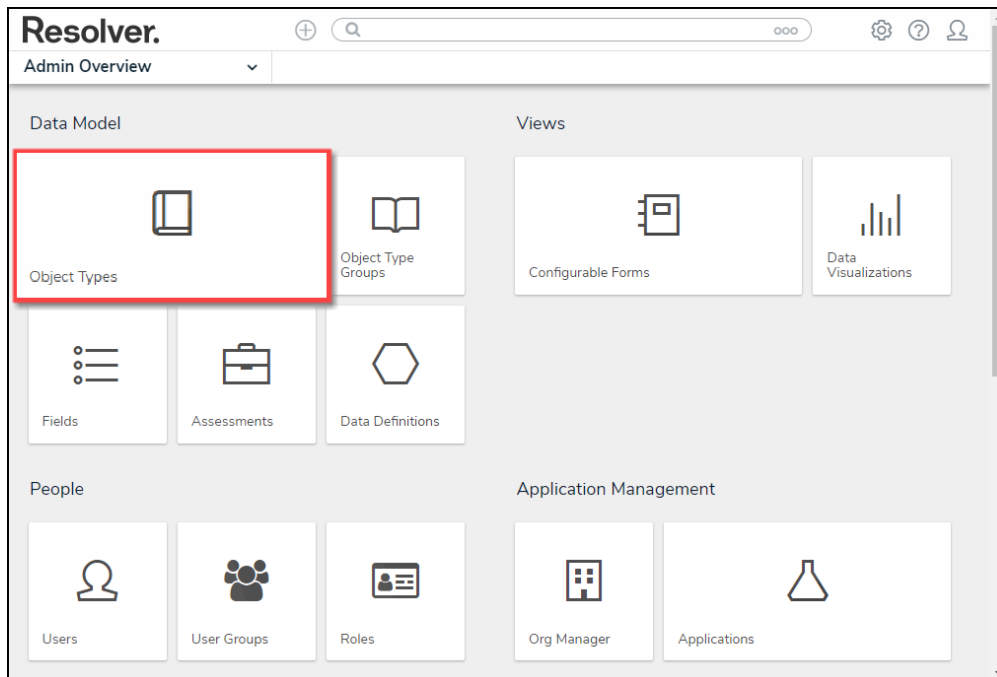
*Administration Icon*

2. From the **Administration Settings** menu, click the **Admin: Overview** link.



*Admin: Overview Link*

3. From the **Admin Overview** screen, click the **Object Types** tile on the **Data Models** section.



*Object Types Tile*

4. From the **Object Types** screen, enter an **Object Type Name** in the **Search** field to narrow down the list.
5. Click the **Object Type's Name** you want to edit.

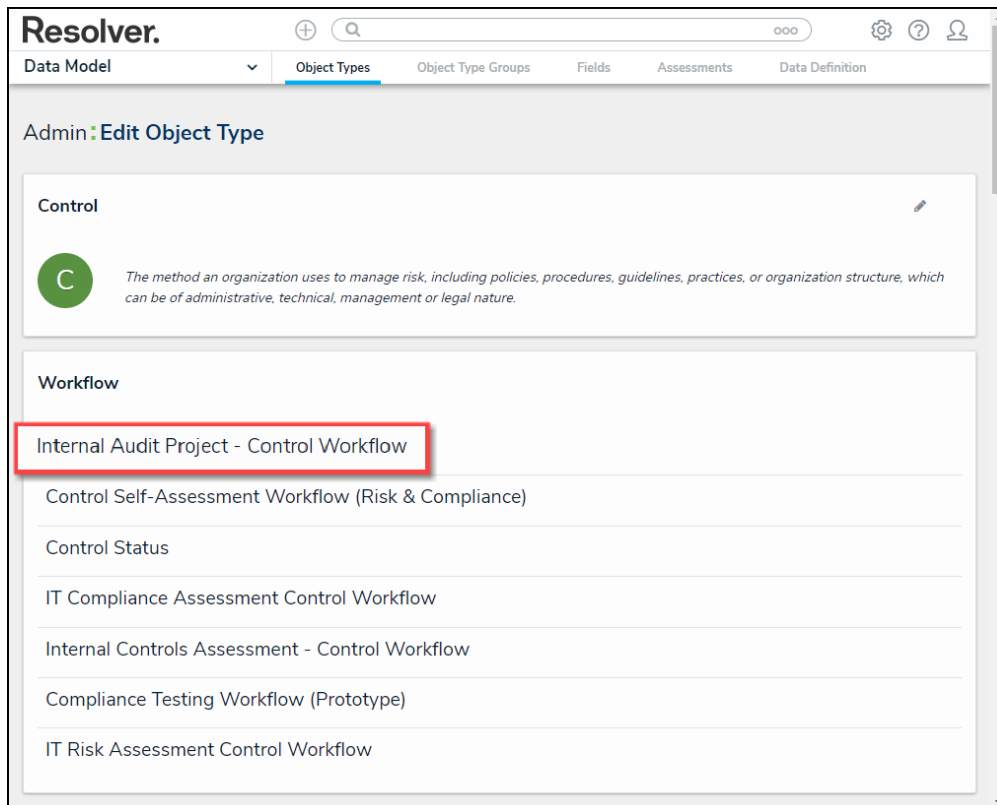
The screenshot shows the Resolver Admin interface. At the top, there is a navigation bar with the Resolver logo, a search bar, and several icons. Below the navigation bar, there is a breadcrumb trail: Data Model > Object Types > Object Type Groups > Fields > Assessments > Data Definition. The main content area is titled 'Admin: Object Types' and includes a '+ CREATE OBJECT TYPE' button. A search bar contains the text 'Control'. Below the search bar, there is a list of object types, each with a circular icon and a description. The 'Control' object type is highlighted with a red box. The descriptions for the other object types are as follows:

- BU Business Unit**: A segment or subset of the company, which is often independent in its accounting and operational functionality. Primary organizational hierarchy providing security and ownership to key data objects including Incidents, Risks, Controls and Incident Types. Some standard reports are anchored at the Business Unit (BU) level.
- C Certification**: Statements signed off on by business users to certify on the effectiveness of controls.
- C Control**: The method an organization uses to manage risk, including policies, procedures, guidelines, practices, or organization structure, which can be of administrative, technical, management or legal nature.
- M Market**: Alternate organizational hierarchy providing security and ownership to key data objects including Incidents, Risks, Controls and Incident Types, most often used within Brand Protection use cases. Includes link to Business Unit and some anchored standard reports.
- R Region**: Alternate organizational hierarchy providing security and ownership to key data objects including Incidents, Risks, Controls and Incident Types, most often used within Loss Prevention use cases. Includes link to Business Unit and some anchored standard reports.
- R Request**: VRM: A request allows members of the business to request a vendor risk assessment. IA & IC: A request is sent by members of the internal audit controls team to an audit client/request owner to provide documentation to assist with completion of the audit control testing.
- T Test**: A method used to test the operating and design effectiveness of a control, which may include various testing methods or strategies.

At the bottom right of the main content area, there is a button labeled 'VIEW OBJECT TYPE UNIVERSE'.

*Click the Object Type's Name*

6. From the **Edit Object Type** screen, click on a workflow under the **Workflow** section.



*Click on a Workflow*

7. If there are no workflows listed, click on the **Configure Workflow** button.



*Configure Workflow Button*

8. From the **Edit Workflow** screen, click a **Trigger** under the **State** section.



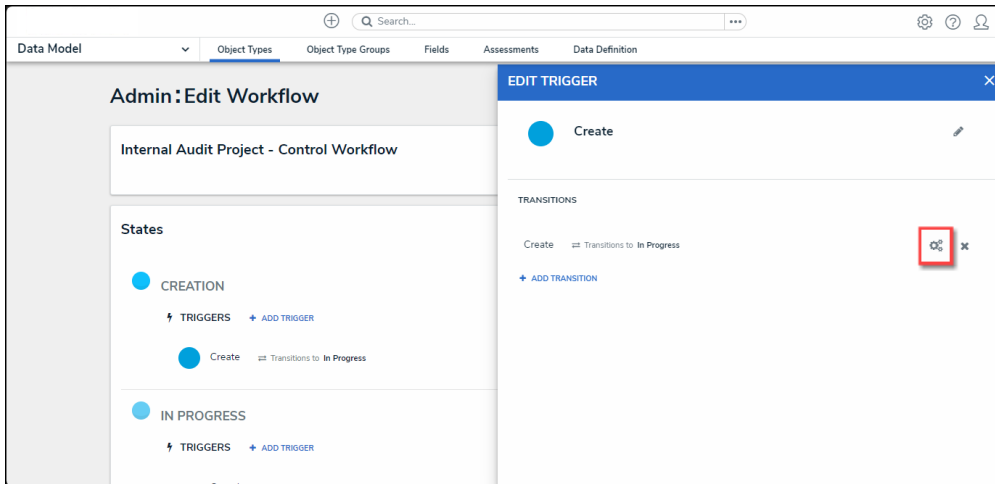
**Note:**

You must already have a **Trigger** added to a **State** before you can add a condition to a transition.

The screenshot displays the Resolver application interface for editing a workflow. At the top, the Resolver logo and navigation tabs (Data Model, Object Types, Object Type Groups, Fields, Assessments, Data Definition) are visible. The main content area is titled 'Admin: Edit Workflow' and shows the 'Internal Audit Project - Control Workflow'. Below this, the 'States' section is divided into four categories: CREATION, IN PROGRESS, COMPLETE, and ARCHIVE. Each state has a 'TRIGGERS' section with an 'ADD TRIGGER' button and a 'REQUIRED COMPONENTS' indicator. In the CREATION state, a transition named 'Create' is highlighted with a red box, indicating it transitions to the 'In Progress' state. A 'DONE' button is located at the bottom right of the interface.

*Click on a Trigger*

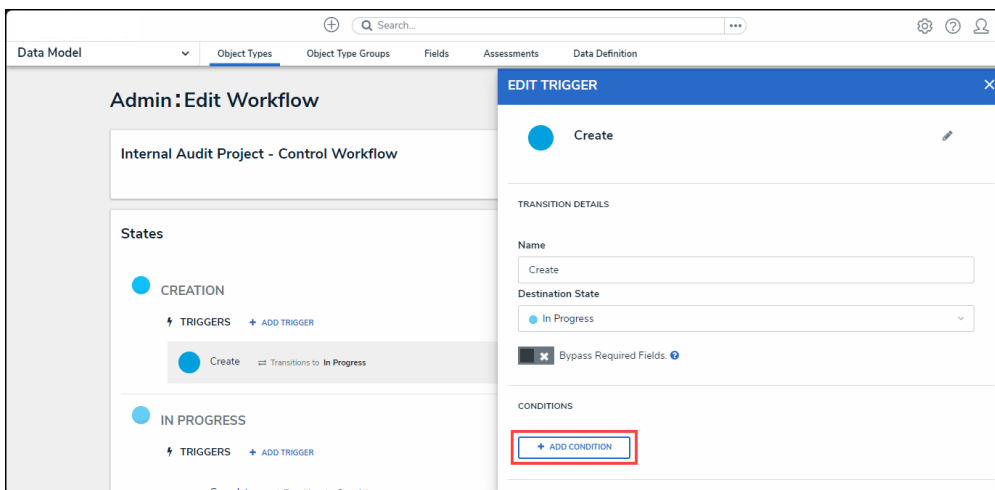
9. From the **Edit Trigger** pop-up, click the **Edit** icon next to the transition.



*Click the Edit Icon*

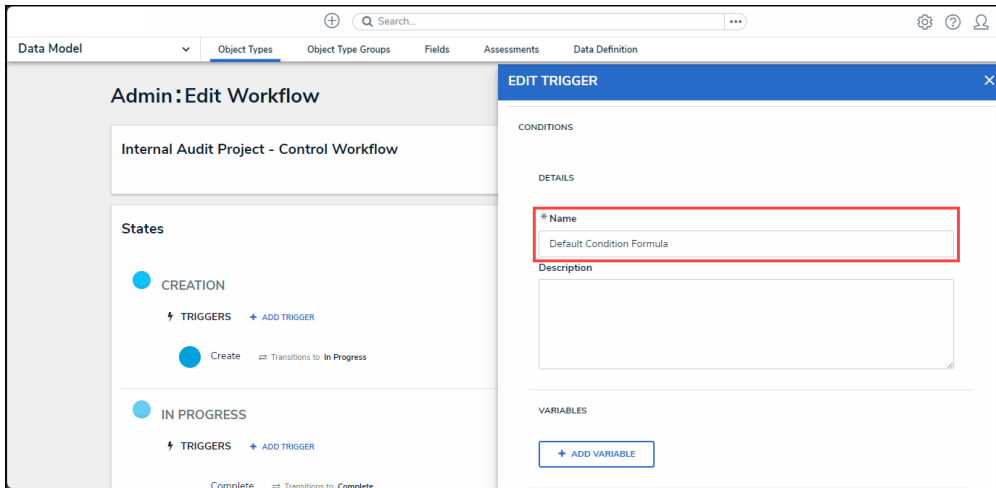
## Adding a Condition on a Transition

1. From the **Condition** section, click the **+Add Condition** button.



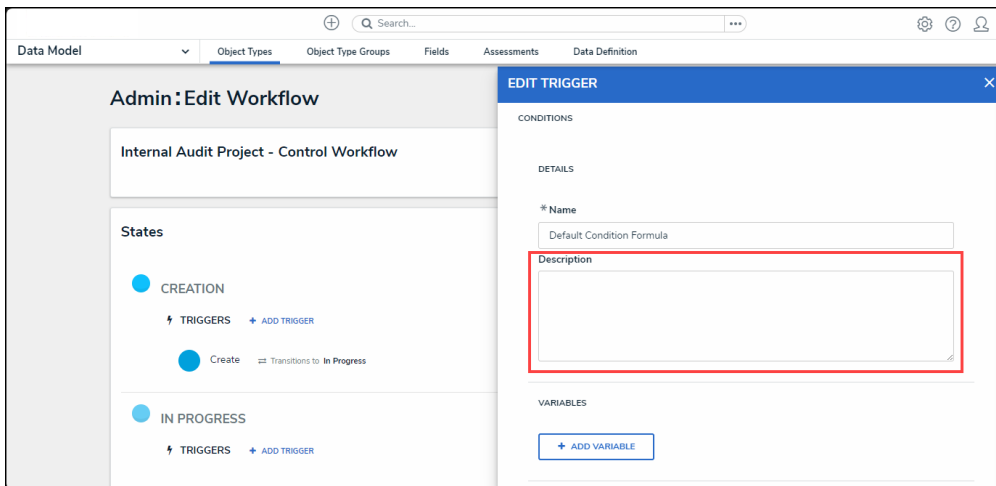
*+ Add Conditions Button*

2. **(Optional)** Enter a condition name in the **Name** field under the **Details** section. By default, conditions are named **Default Condition Formula**.



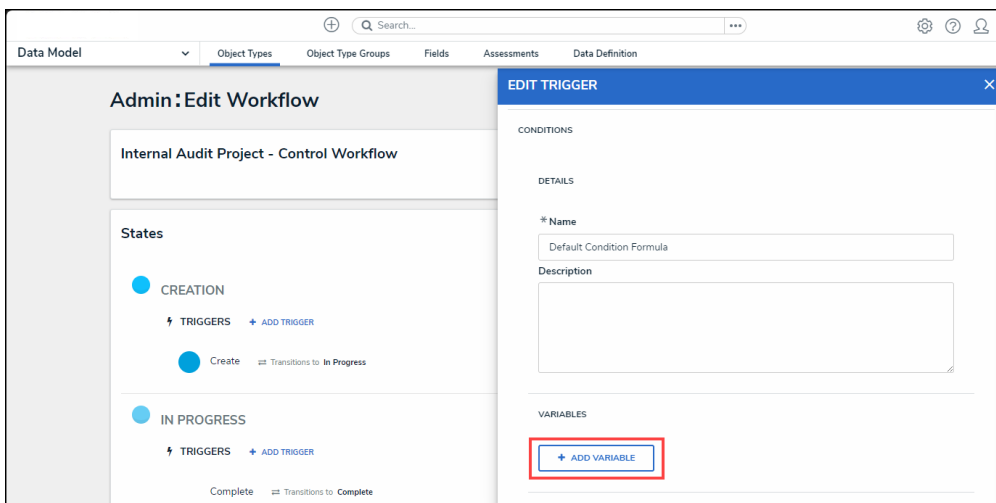
*Name Field*

3. **(Optional)** Enter a brief condition description in the **Description** field.



*Description Field*

4. From the **Variables** section, click the **+Add Variable** button.



*+Add Variable Button*

5. From the **Variables** section, select a **Variable Type** from the drop-down list. A **Variable** is a value in which the formula calculations are performed.

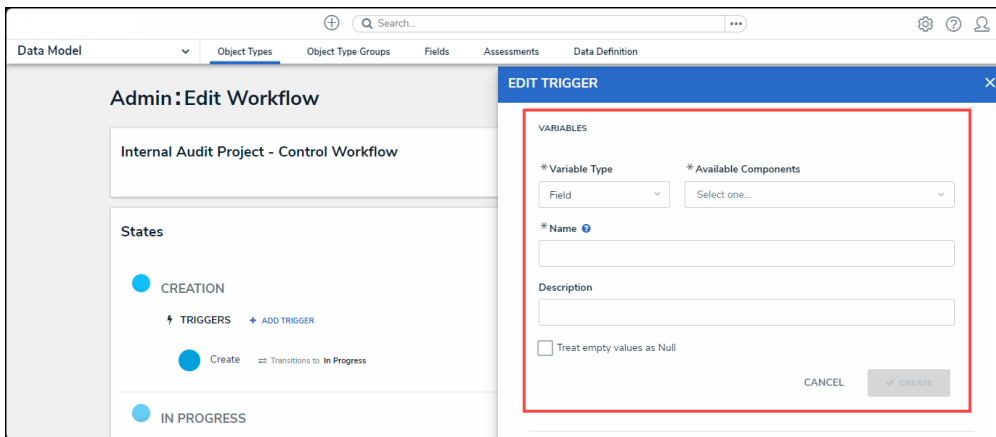
- **Field:** After selecting the **Field** variable, the following field will appear:
  - **Available Components:** Select a field or formula from the **Available Components** drop-down field adding it directly to the Object Type.



**Note:**

*Fields must be added to a formula after an Object Type or through an association (Relationship or Reference).*

*Only numeric fields, date fields, and select lists (numeric values) are accepted. For more information, see the Fields article.*



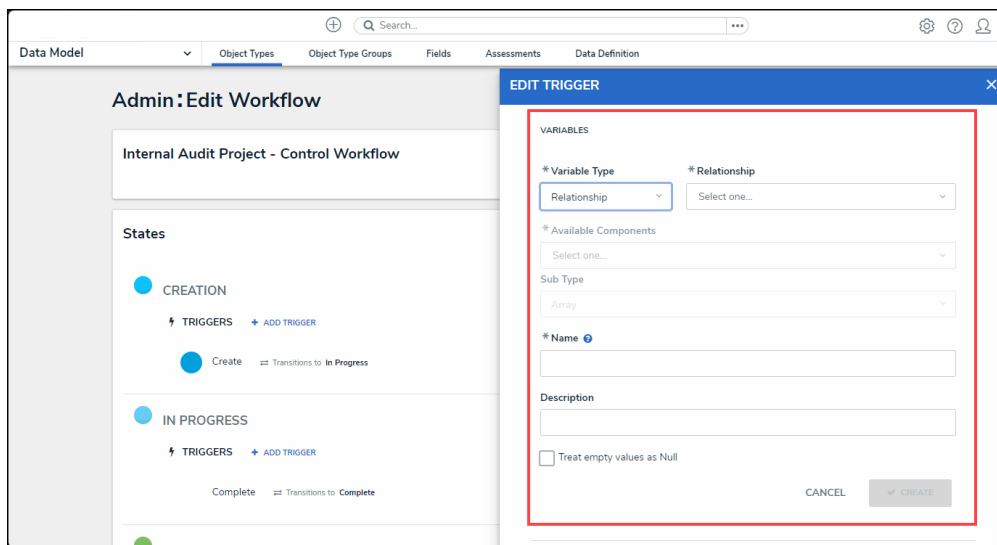
*Variable Type = Field*

- **Relationship:** After selecting the **Relationship** variable, the following fields will appear:
  - **Relationship:** Select the Object Type **Relationship** from the drop-down list. Relationships connect two or more objects. Relationships must be added to an Object Type to appear on the Relationship drop-down list. See the [Add Relationships to an Object Type](#) article for further information on adding a Relationship to an Object Type.
  - **Available Components:** Select a field or formula from the **Available Components** drop-down field adding it directly to the Object Type.
  - **Sub Type:** Select a **Sub Type** from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed. For more information on Subtypes, see the Sub Type Table in the [Variables, Operations, & Functions](#) article.
    - **Array:** Creates a set of values from the variable.
    - **Sum:** Calculates a total from the variable's set of values and returns a



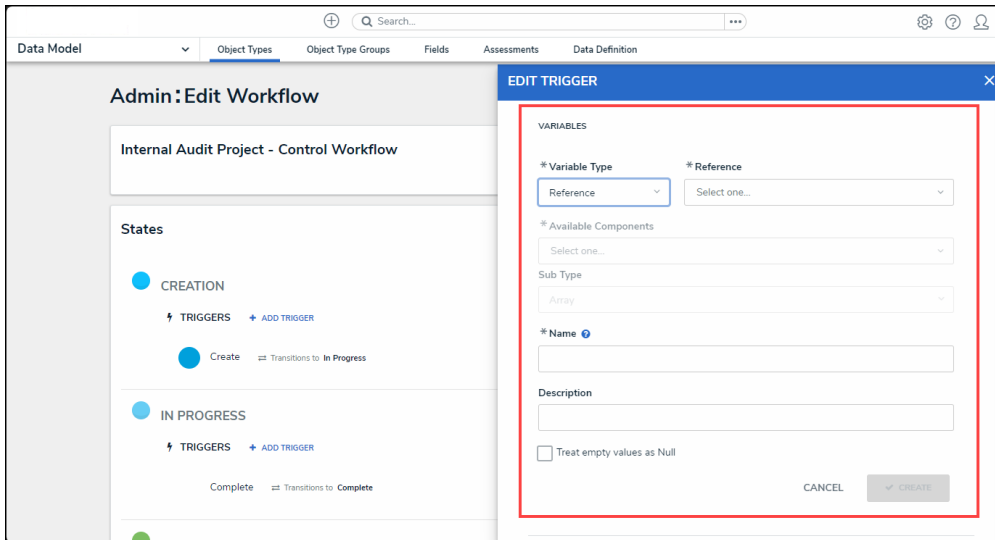
single number. Select list variables cannot use Sum Sub Types.

- **Count:** The number of times a variable has been added to an object.
- **Average:** Calculates an average number from the variable's set of values. Select list variables cannot use Average Sub Types.
- **Every:** Checks if the variable contains a value on the objects in the relationship/reference.
- **Min:** Calculates the lowest number from the variable's set of values. Select list variables cannot use Min Sub Types.
- **Max:** Calculates the highest number from the variable's set of values. Select list variables cannot use Max Sub Types.



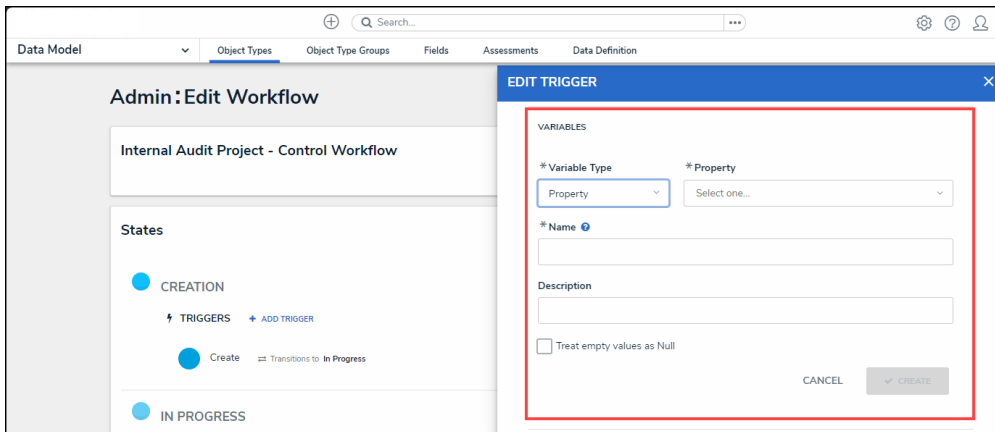
*Variable Type = Relationship*

- **Reference:** After selecting the **Reference** variable, the following fields will appear:
  - **Reference:** Select the Object Type **Reference** from the drop-down list. References indicate that an object is connected to another object through a relationship. References are automatically created when a relationship is created. For further information on adding a Relationship to an Object Type, see the [Add References to an Object Type](#) article.
  - **Available Components:** Select a field or formula from the **Available Components** drop-down field adding it directly to the Object Type.
  - **Sub Type:** Select a **Sub Type** from the drop-down list. Subtypes specify how the data from multiple objects are compiled, calculated, and displayed.



*Variable Type = Reference*

- **Property:** After selecting the **Property** variable, the following field will appear:
  - **Property:** Select a **Property** type from the drop-down list:
    - **Is Submitter Confidential:** This property type creates a formula that compares the number of confidential submissions against the number of not confidential submissions for customers that use the **Confidential Reporting Portal**.



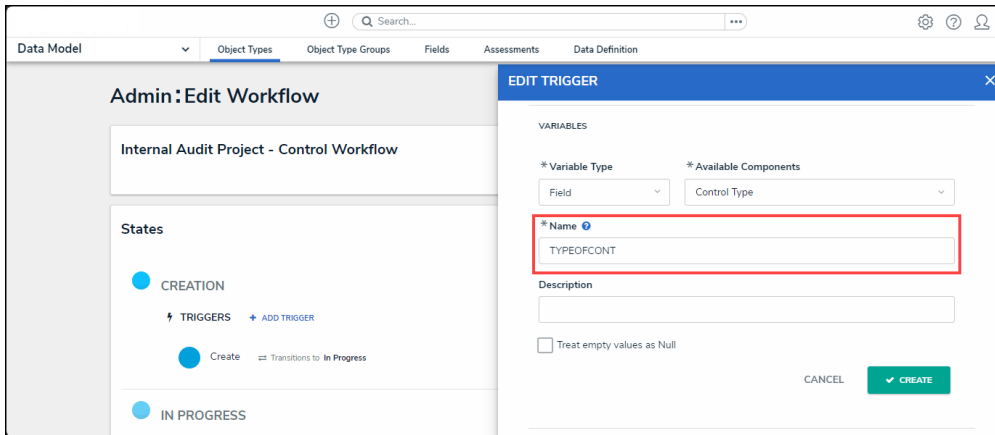
*Variable Type = Property*

6. The system will automatically populate the Name field with the field or formula's unique ID by default.
7. **(Optional)** Enter a Variable name in the **Name** field.



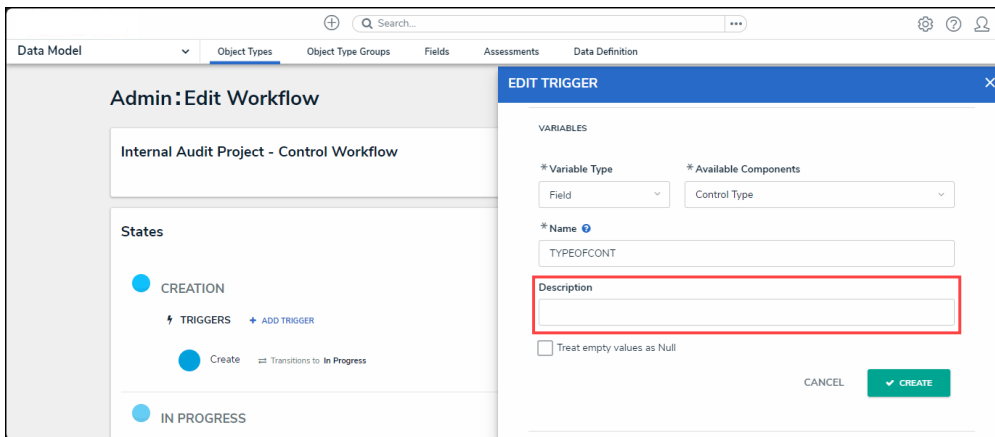
**Warning:**

*Using a function name (Sub Type Name) in the name field will cause an error.*



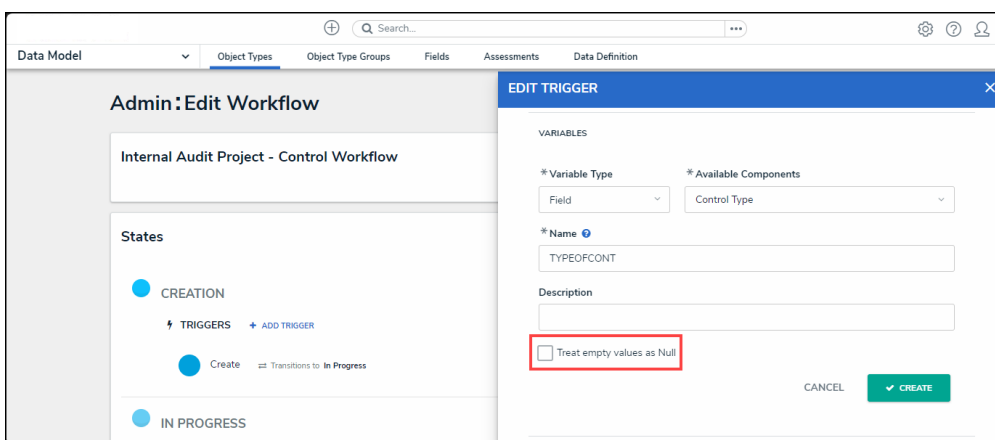
*Variable Name*

8. **(Optional)** Enter a Variable description in the **Description** field.



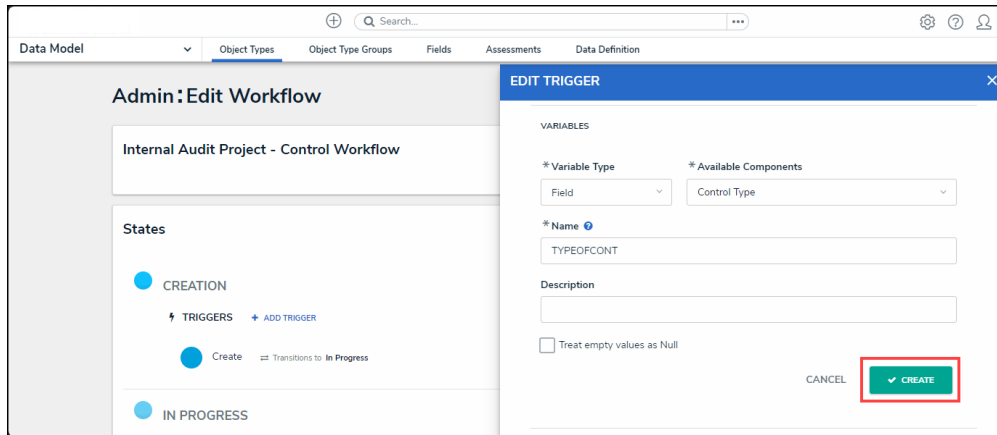
*Description Field*

9. **(Optional)** Select the **Treat empty values as Null** checkbox, to exclude blank objects from a formula calculation. For more information, see the [Null Values in Formulas](#) article.



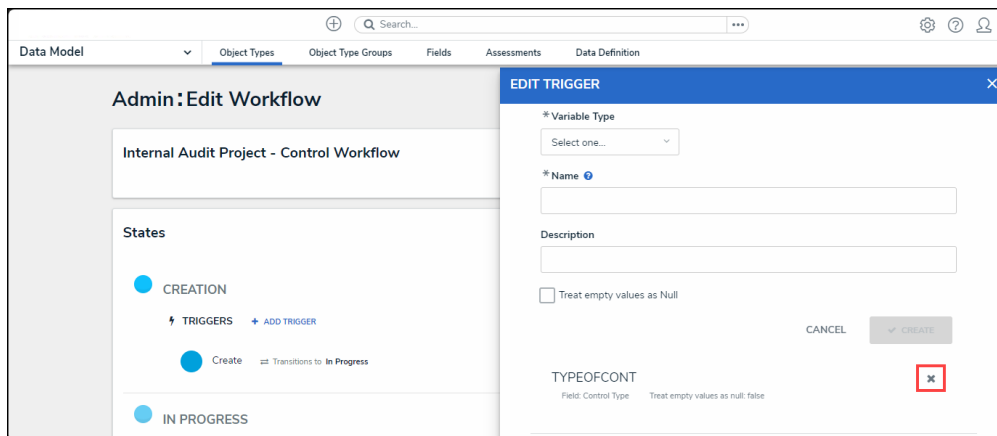
*Treat Empty Value as Null Checkbox*

10. Click the **Create** button to add the variable.



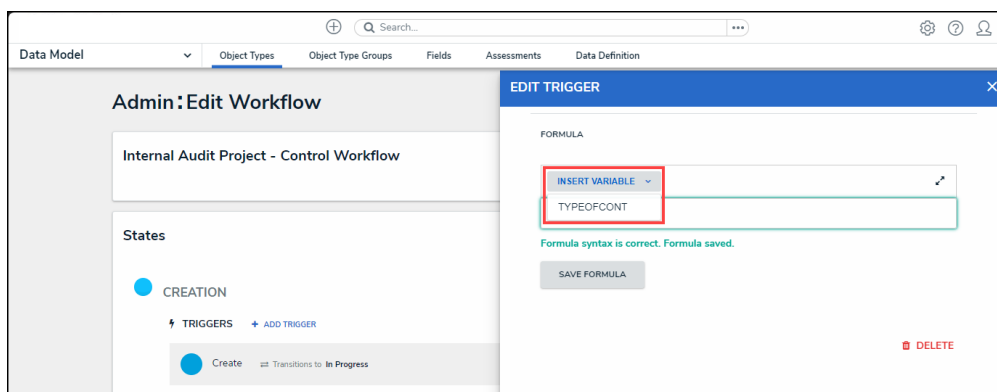
*Create Button*

11. Repeat steps 7 - 16 to add additional variables.
12. Click the **x** icon next to the variable to delete the variable.



*X Icon - Delete a Variable*

13. **(Optional)** Click the **Insert Variable** button and select a variable from the dropdown list to use within the **Formula** field.

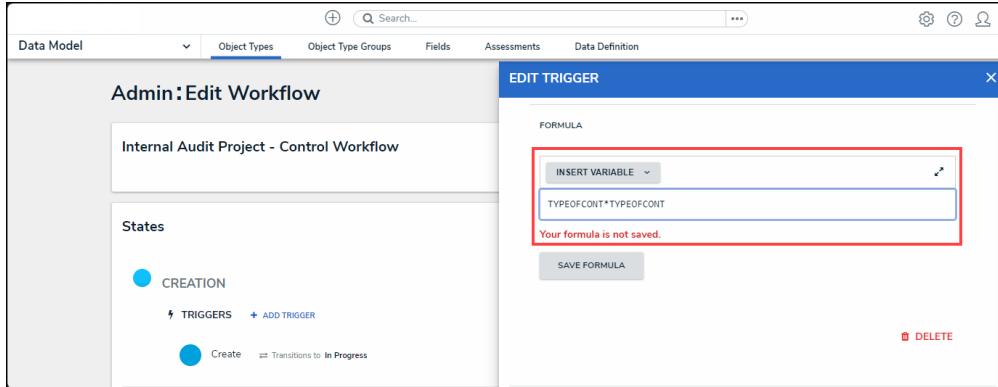


*Insert Variable Button*

14. From the **Formula** section, enter a **Formula** using the variable name(s) you entered in the **Name** field under the **Variables** section. Include operators and functions in the

**Formula** field (e.g., **INCIDENTSE==3**). For more information on Operators, see the Operators Table in the [Variables, Operators, & Functions](#) article.

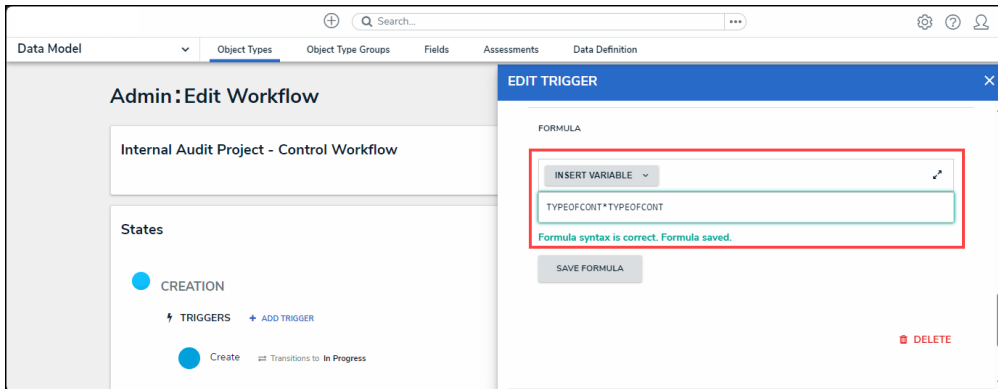
15. A system notification will appear under the **Formula** field, indicating that **Your formula is not saved.**



*System Notification - Your Formula is Not Saved*

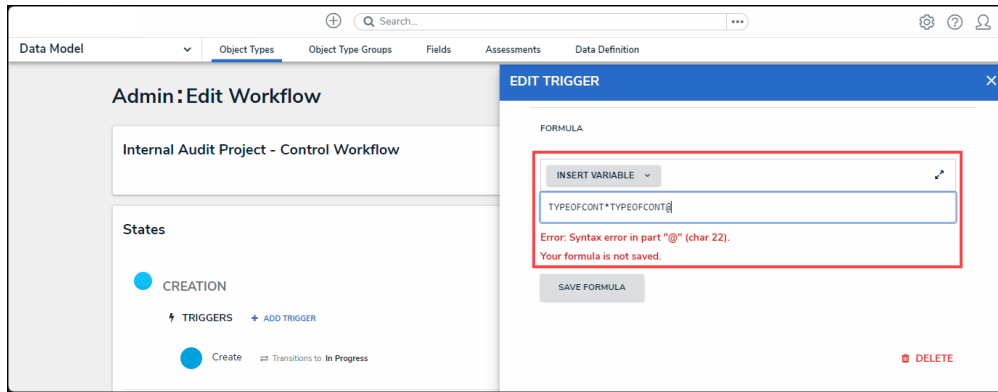
16. Click on the **Save Formula** button. The system will perform a Syntax Validation on the formula if the formula is:

- **Valid:** A system notification will appear under the **Formula** field; **Formula syntax is correct. Formula saved.**



*System Notification - Valid Formula*

- **Invalid:** A system notification will appear under the **Formula** field; **Error Syntax error in part (char 1). The formula is not saved.** The error will indicate the character (char) location of the error in the formula and that the formula is invalid and not saved.



*System Notification - Invalid Formula*

17. Syntax Validation helps to prevent users from saving invalid formula expressions, which can negatively impact APIs.
18. Click the **Done** button to add the Variables to the Object Type.