

Advanced Workflow FAQ Topics

(MechWorks PDM)

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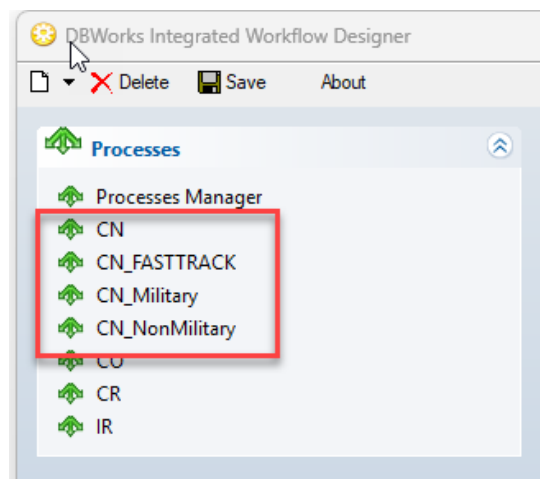
Branch Workflows:

Introduction:

Each organization has unique workflow approval processes. This is an example in which the environment has an initial [**Change Notice**] process that controls the specific route the documents must pass within the organization. There are many different considerations as to why documents may need to pass through alternative workflow approvals (Mechanical vs. Electrical), (Military vs. NonMilitary), (FDA vs. NonFDA), (FAA vs. NonFAA), (Product Line Specific routing), etc... While there are different methods to accomplish this goal, this documentation is attempting to demonstrate one of the more common methods in which one workflow process is acting as the gatekeeper to then route the documents into the desired/target workflow process.

Workflow Processes:

Within the default [**MechWorks PDM Administrative Tools Manager**], notice that the current environment has four different [**Change Notice**] workflow **Processes** defined:

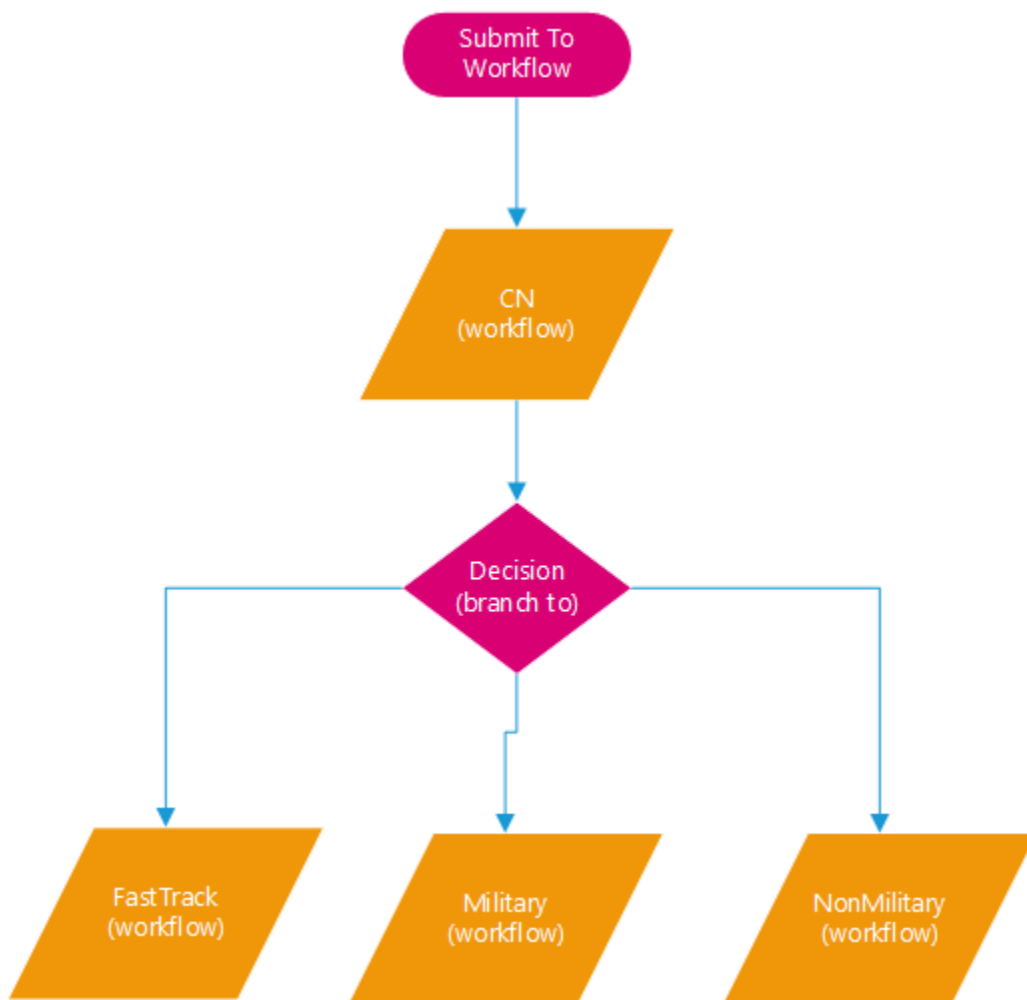


Each of the noted [**Change Notice**] **Processes** must have a unique [**Condition**] defined.

- For this environment, the above noted [**CN**] workflow process is defined as a document control workflow in which all documents initially enter (the gatekeeper workflow) when being [**Submitted to Workflow**] for the [**Change Notice**] process. The following three branching [**Change Notice**] workflow processes are then used to control the specific workflow route based on the criteria that must be satisfied. For this environment, all documents are initially submitted into the [**CN**] process, which is then used to determine which of the three optional workflows that the documents are then branched into:

- The [CN_FASTTRACK] workflow process is for expediting the overall approval processing (perhaps components need to be immediately addressed for assembly line purposes).
- The [CN_MILITARY] workflow process is for satisfying military approval requirements.
- The [CN_NONMILITARY] workflow process is used for documents that do not require either of the above workflow processes.

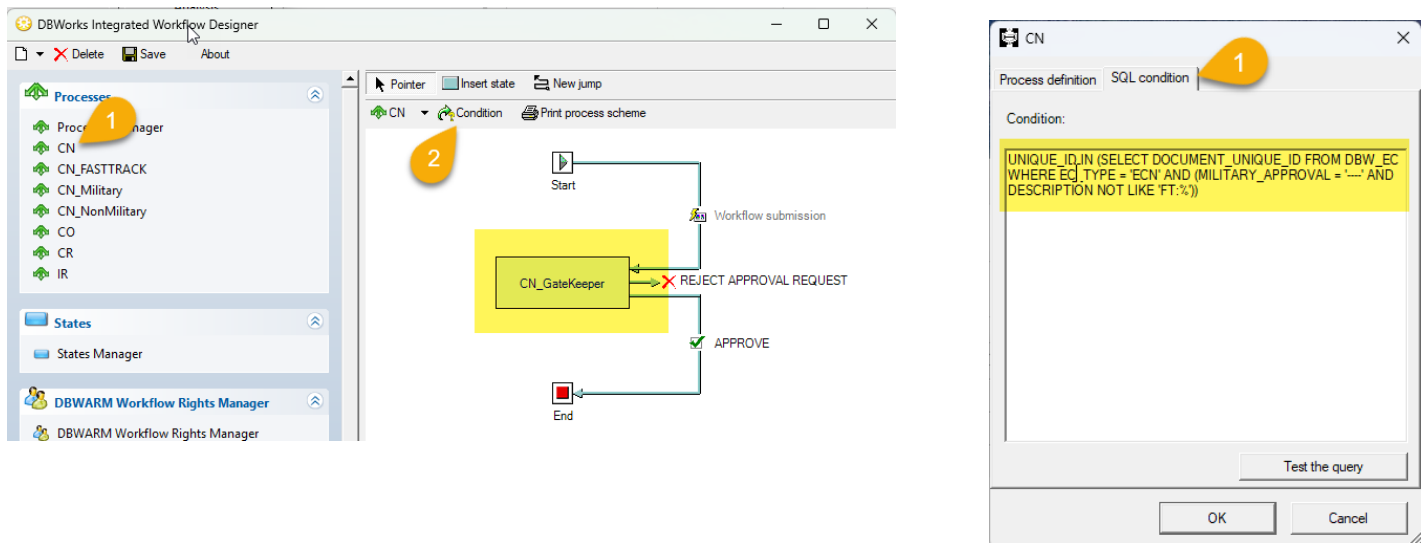
Basic Branch Diagram:



[CN] workflow process overview:

This is the primary **Change Notice** workflow process definition that all documents initially enter when being **[Submitted to Workflow]** (within this example environment), and it serves as the gatekeeping role to determine which workflow route the documents are next sent into (the branching workflows).

Within the **Processes**, reviewing the **[SQL Condition]** of the **[CN]** Process shows that it is being used as the initial “Document Control” workflow, in that all documents enter this workflow process when they are initially **submitted** into workflow.



Following is the conditional query (highlighting the areas that are specific to how the environment is configured):

UNIQUE_ID IN (SELECT DOCUMENT_UNIQUE_ID FROM DBW_EC WHERE EC_TYPE = 'ECN' AND (MILITARY_APPROVAL = '----' AND DESCRIPTION NOT LIKE 'FT:%'))

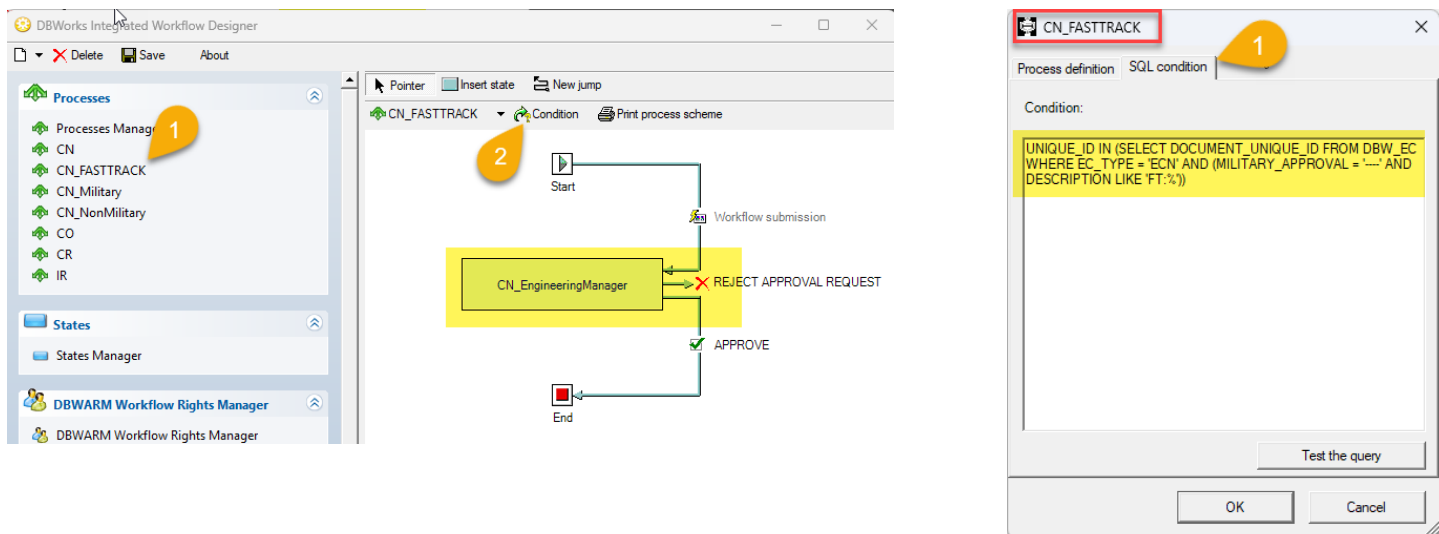
NOTE: The exact syntax noted within this example **[SQL Condition]** is only relative to this environment’s needs. What is critical is that for all environments trying to mirror this example environment, the defined **[SQL Condition]** for the initial **[CN]** process must always be able to be satisfied by default. In other words, the above highlighted syntax could have been something like **EC_TYPE = 'ECN' AND ('1' = '1')** but that would not be as informational for all administrative personnel.

[\[CN_FASTTRACK\] workflow process overview:](#)

This is the first of three optionally defined **Change Notice** workflow process definitions that documents can enter after being **[Approved]** from the initial **[CN]** process (within this example environment), and it serves as a method to expedite the workflow approval process.

Within the **Processes**, reviewing the **[SQL Condition]** of the **[CN_FASTTRACK]** process shows that it is being used as a secondary workflow process, but only when the revision approval process needs to be immediately applied without involving additional department actions. To enter this secondary workflow, the individual that approves the previously noted **[CN]** workflow process must satisfy two conditions:

1. Accept the default value within the form's **[MILITARY_APPROVAL]** field.
2. Within the form's **[DESCRIPTION]** field, the string must begin with the "FT:" character sequence.



Following is the conditional query (highlighting the areas that are specific to how the environment is configured):

UNIQUE_ID IN (SELECT DOCUMENT_UNIQUE_ID FROM DBW_EC WHERE EC_TYPE = 'ECN' AND (MILITARY_APPROVAL = '----' AND DESCRIPTION LIKE 'FT:%'))

*NOTE: While most environments would strictly use a field within the form to control the secondary workflow process assignment (like the noted **[MILITARY_APPROVAL]** field), this example includes the fact that additional criteria (like the beginning “**FT:**” characters within the **[DESCRIPTION]** field) can also be used to demonstrate the overall flexibility that could be considered.*

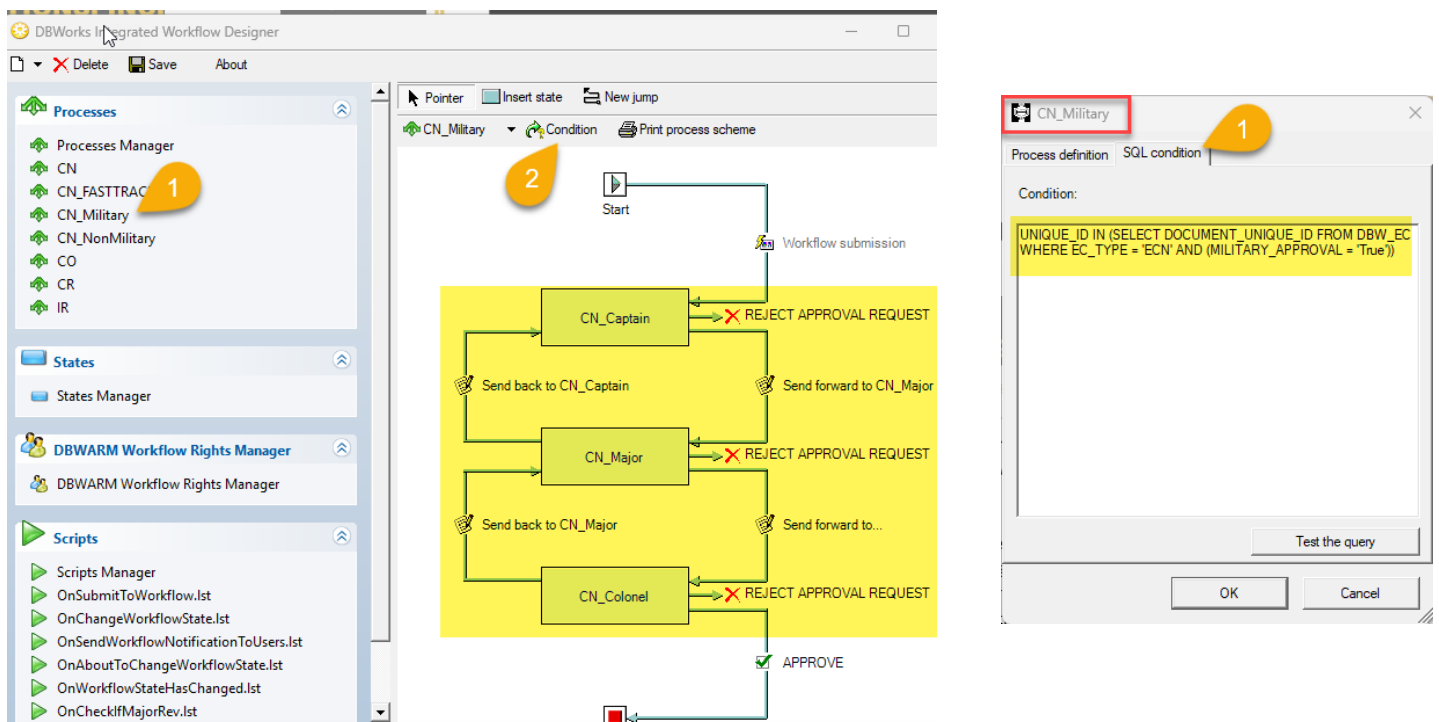
NOTE: The exact syntax noted within this example **[SQL Condition]** is only relative to this environment’s needs. What is critical is that for all environments trying to mirror this example environment, the defined **[SQL Condition]** for the optional **[CN_FASTTRACK]** process must not be able to be satisfied when documents are being **[Submitted to Workflow]** by default. In other words, the above highlighted syntax could have been something like **EC_TYPE = 'ECN' AND ('1' = '2')** but that would not be as informational for all administrative personnel.

[\[CN_MILITARY\] workflow process overview:](#)

This is the second of three optionally defined **Change Notice** workflow process definitions that documents can enter after being **[Approved]** from the initial **[CN]** process (within this example environment), and it serves as a formal workflow method for addressing military documents within this environment.

Within the **Processes**, reviewing the **[SQL Condition]** of the **[CN_MILITARY]** Process shows that it is being used as a secondary workflow process, but only when the revision approval process needs to satisfy military approval actions. To enter this secondary workflow, the individual that approves the previously noted **[CN]** workflow process must satisfy one condition:

1. Within the form's **[MILITARY_APPROVAL]** field, use its drop-down box to select "True".



Following is the conditional query (highlighting the areas that are specific to how the environment is configured):

UNIQUE_ID IN (SELECT DOCUMENT_UNIQUE_ID FROM DBW_EC WHERE EC_TYPE = 'ECN' AND (MILITARY_APPROVAL = 'True'))

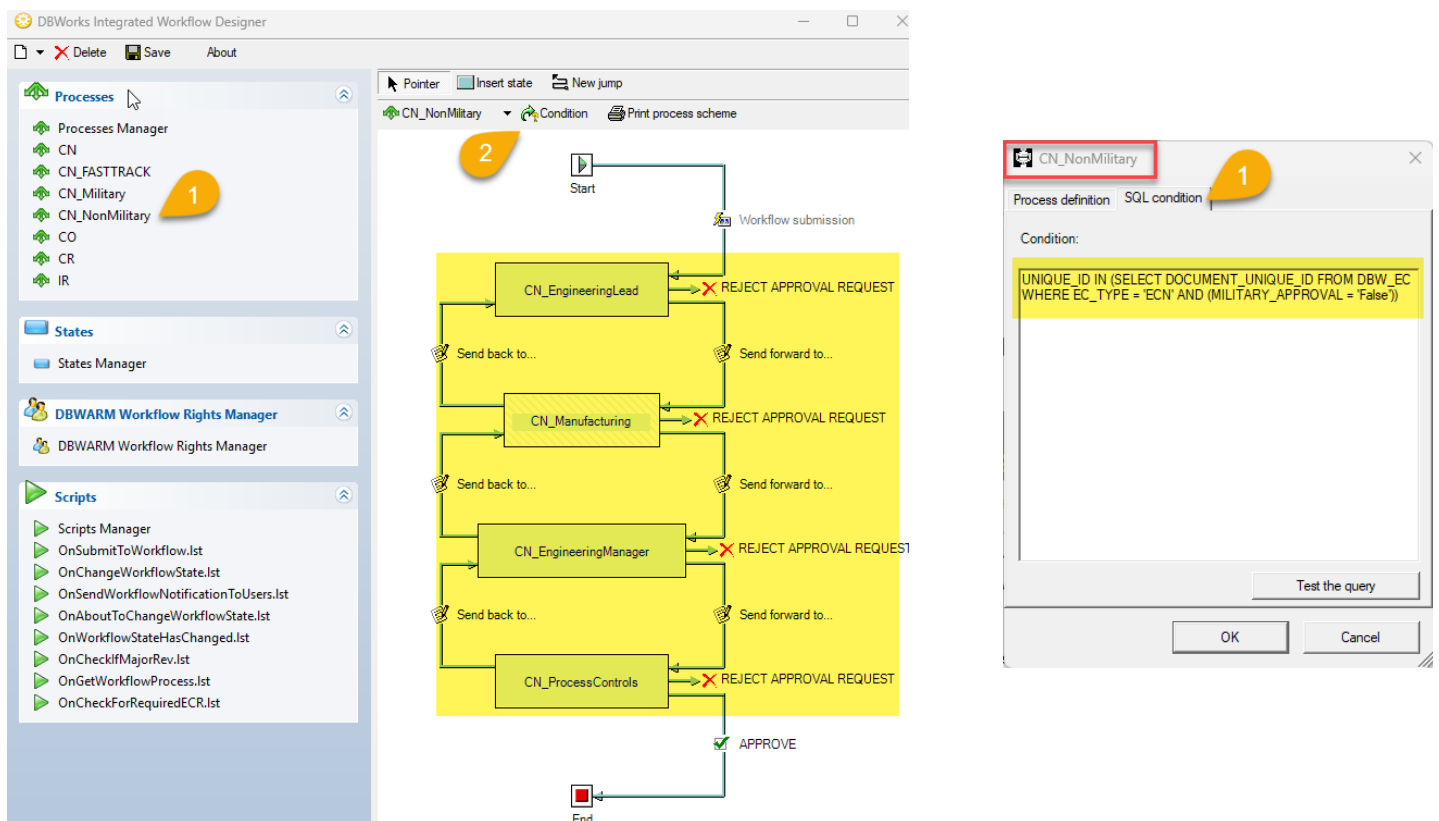
NOTE: The exact syntax noted within this example [SQL Condition] is only relative to this environment's needs. What is critical is that for all environments trying to mirror this example environment, the defined [SQL Condition] for the optional [CN_MILITARY] process must not be able to be satisfied when documents are being [Submitted to Workflow] by default. In other words, the above highlighted syntax could have been something like **EC_TYPE = 'ECN' AND ('1' = '2')** but that would not be as informational for all administrative personnel.

[\[CN_NONMILITARY\] workflow process overview:](#)

This is the third of three optionally defined **Change Notice** workflow process definitions that documents can enter after being **[Approved]** from the initial **[CN]** process (within this example environment), and it serves as a formal workflow method for addressing non-military documents within this environment.

Within the **Processes**, reviewing the **[SQL Condition]** of the **[CN_NonMilitary]** Process shows that it is being used as a secondary workflow process, but only when the revision approval process does not need to satisfy military approval actions. To enter this secondary workflow, the individual that approves the previously noted **[CN]** workflow process must satisfy one condition:

1. Within the form's **[MILITARY_APPROVAL]** field, use its drop-down box to select **"False"**.



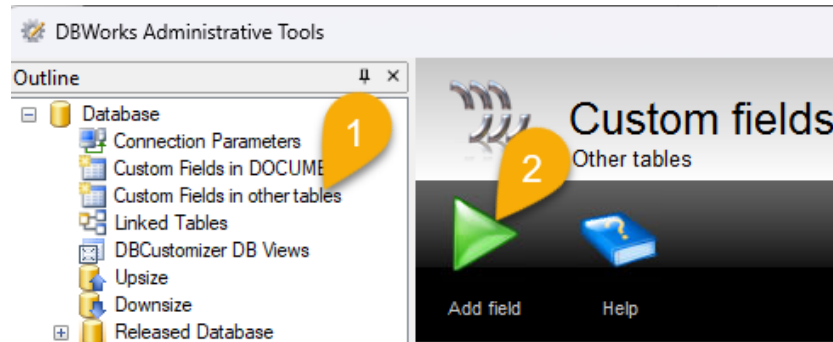
Following is the conditional query (highlighting the areas that are specific to how the environment is configured):

```
UNIQUE_ID IN (SELECT DOCUMENT_UNIQUE_ID FROM DBW_EC WHERE EC_TYPE = 'ECN' AND  
(MILITARY_APPROVAL = 'False'))
```

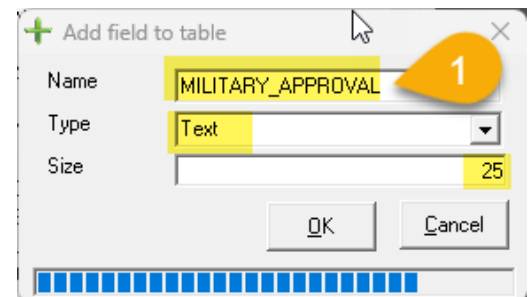
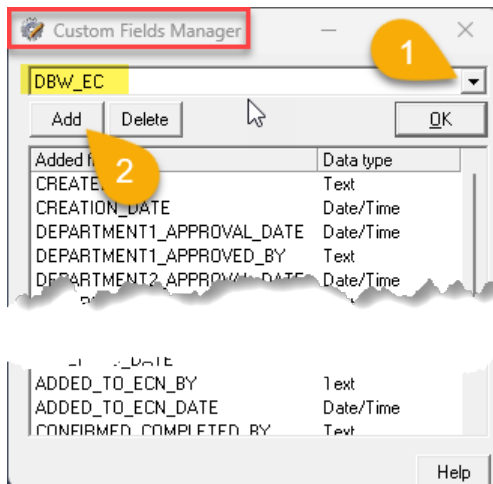
NOTE: The exact syntax noted within this example [SQL Condition] is only relative to this environment's needs. What is critical is that for all environments trying to mirror this example environment, the defined [SQL Condition] for the optional [CN_NONMILITARY] process must not be able to be satisfied when documents are being [Submitted to Workflow] by default. In other words, the above highlighted syntax could have been something like `EC_TYPE = 'ECN' AND ('1' = '2')` but that would not be as informational for all administrative personnel.

How to add a Custom Field to a workflow data form:

Within the default [**MechWorks PDM Administrative Tools Manager**], use the [**Custom Fields in other tables**] utility to add any required fields for the **Change Notice** forms. For this example, the [**MILITARY_APPROVAL**] field will be added to the [**DBW_EC**] table.



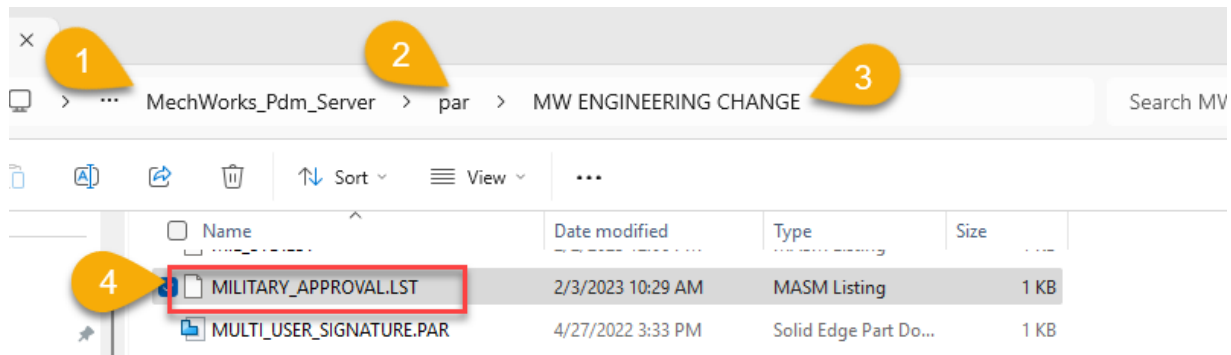
Use the drop-down selection to select the [**DBW_EC**] table, then select its [**Add**] command. Provide the field's required **Name** (without any spaces) and set its **Type** and **Size** values accordingly.



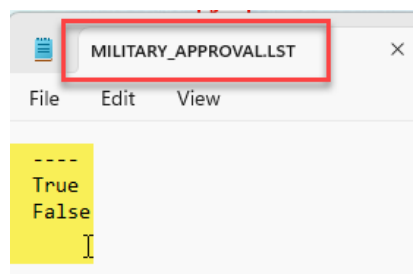
When done, select [**OK**]. Close the [**MechWorks PDM Administrative Tools Manager**], utility once the desired fields have been added to the desired tables.

Create list of drop-down selection values for newly added field:

For this example, the goal is to ensure that the users can only select between three values when assigning a value to the added [**MILITARY_APPROVAL**] field. To accomplish this, an LST file must be manually created with the same exact name as the target field (so **MILITARY_APPROVAL.LST**), within the **\par\MW ENGINEERING CHANGE** sub-folder structure within the environment's **GlobalParametersPath** folder. *NOTE: To identify the **GlobalParametersPath** folder, use the default [**About**] utility from within MechWorks PDM.*



Create and then open the created **MILITARY_APPROVAL.LST** file using a standard text editing tool (like **Notepad**) and type in the desired values (that users will select from). *NOTE: The file must end with an extra empty line.*



Referring to the previously noted [**SQL Condition**] assignments for the **Change Notice** workflows, this environment's file must contain the following four entries:

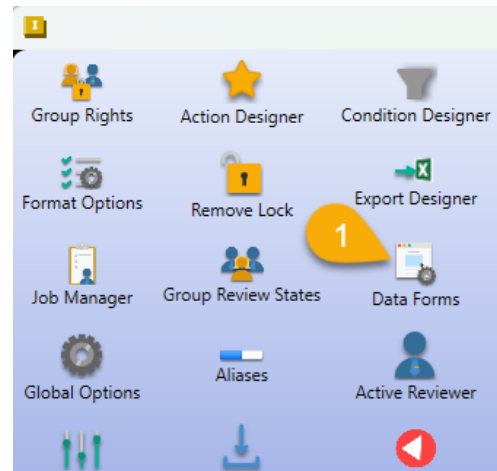
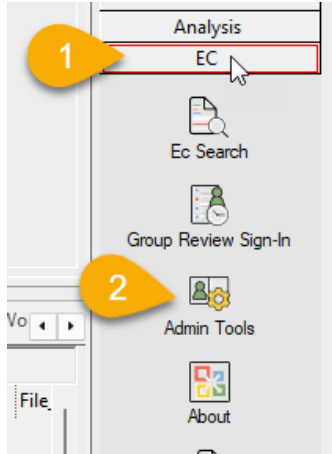
```

----
True
False

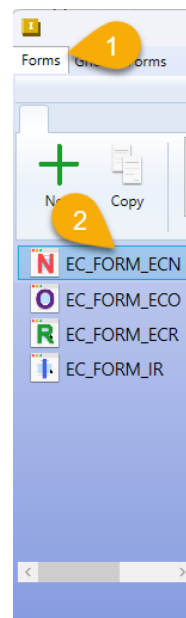
```

Add the newly created field to the desired Data Forms:

Using the **[Data Forms]** utility from within the Advanced Workflow **[Admin Tools]**, the **Change Notice** forms will need to be updated accordingly. The **[Data Forms]** utility is used to change the layout of the forms, add control definitions to the fields within the forms, create specific form layouts, etc...

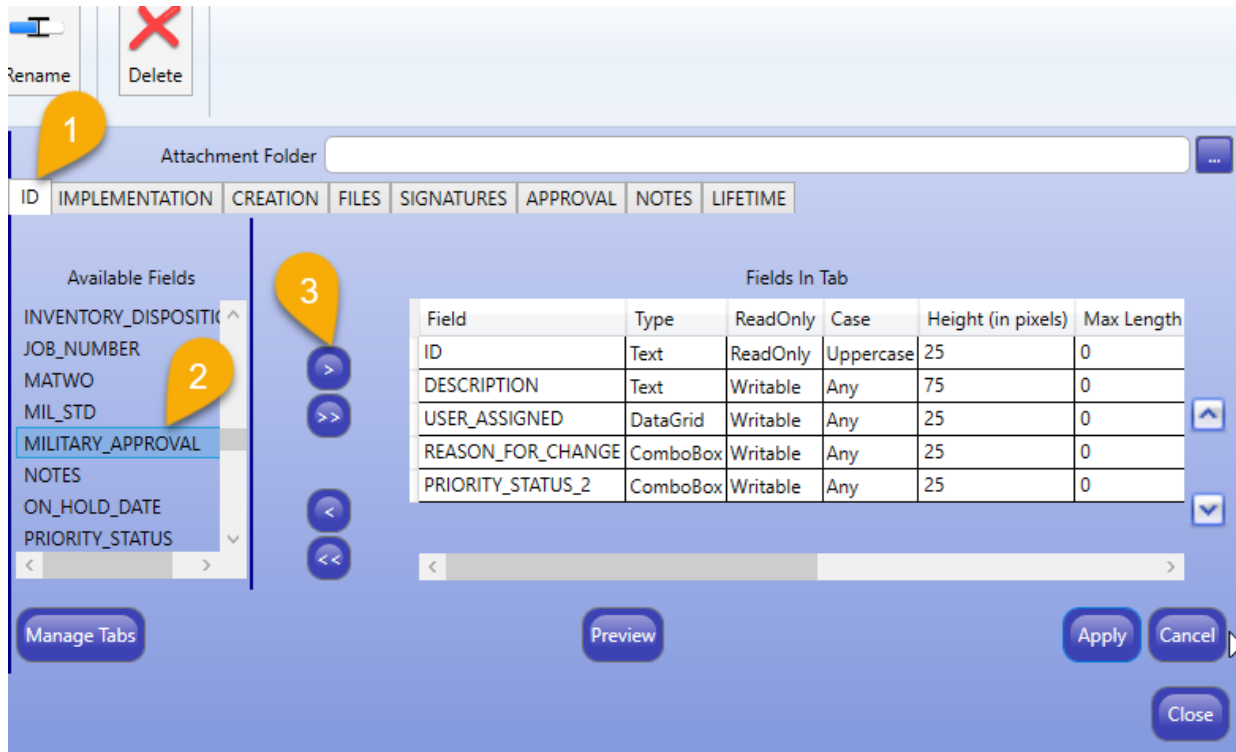


From the left-side of the **[Data Forms]** utility, select the specific **Change Form**, for this example select the **[EC_FORM_ECN]** form (which then displays its current layout).



The *[Fields In Tab] grid* within the Data Forms has field specific controls and is used to design the overall layout:

To add a field to the data form, ensure that the desired active **Tab** (at the top is selected so its grid layout is displayed on the right), then locate the desired field from within the **Available Fields** selection area. For this example, select the noted (**MILITARY_APPROVAL**) field, then select the **Single Arrow** to have the field added to the **Fields In Tab** layout area.



Attachment Folder

ID IMPLEMENTATION CREATION FILES SIGNATURES APPROVAL NOTES LIFETIME

Available Fields

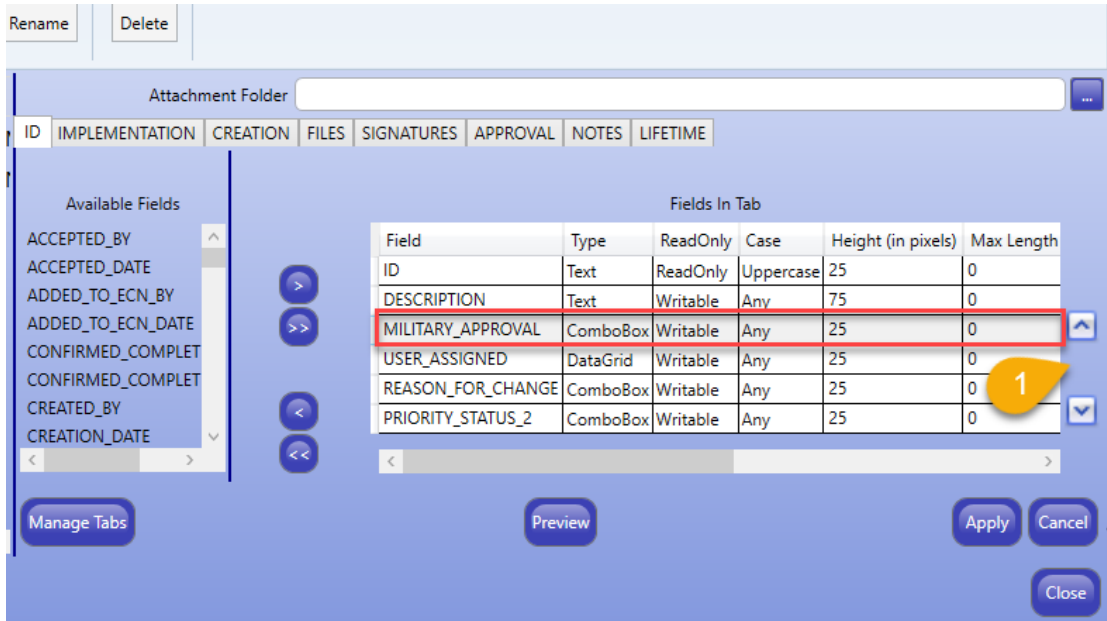
- INVENTORY_DISPOSITIO ^
- JOB_NUMBER
- MATWO
- MIL_STD
- MILITARY_APPROVAL**
- NOTES
- ON_HOLD_DATE
- PRIORITY_STATUS v

Fields In Tab

Field	Type	ReadOnly	Case	Height (in pixels)	Max Length
ID	Text	ReadOnly	Uppercase	25	0
DESCRIPTION	Text	Writable	Any	75	0
USER_ASSIGNED	DataGrid	Writable	Any	25	0
REASON_FOR_CHANGE	ComboBox	Writable	Any	25	0
PRIORITY_STATUS_2	ComboBox	Writable	Any	25	0

Manage Tabs Preview Apply Cancel Close

Select the field within the **Fields In Tab** grid to highlight it and then use the **Up/Down Arrows** on the right to reposition the field's location within the form.



Attachment Folder:

Available Fields:

- ACCEPTED_BY
- ACCEPTED_DATE
- ADDED_TO_ECN_BY
- ADDED_TO_ECN_DATE
- CONFIRMED_COMPLET
- CONFIRMED_COMPLET
- CREATED_BY
- CREATION_DATE

Fields In Tab:

Field	Type	ReadOnly	Case	Height (in pixels)	Max Length
ID	Text	ReadOnly	Uppercase	25	0
DESCRIPTION	Text	Writable	Any	75	0
MILITARY_APPROVAL	ComboBox	Writable	Any	25	0
USER_ASSIGNED	DataGrid	Writable	Any	25	0
REASON_FOR_CHANGE	ComboBox	Writable	Any	25	0
PRIORITY_STATUS_2	ComboBox	Writable	Any	25	0

Buttons: Manage Tabs, Preview, Apply, Cancel, Close

1. Notice that the **[MILITARY_APPROVAL]** field is identified as a **[ComboBox]** field within the figure above (which is the default **[EC_FORM_ECN]** form). This is because we previously created the **MILITARY_APPROVAL.LST** file within the noted folder, that contains the values for users to select from.
2. Notice that the **[MILITARY_APPROVAL]** field is identified as a **[Writable]** field within the figure above (which is the default **[EC_FORM_ECN]** form). For this environment's needs, it is critical that we only allow this field to be **[Writable]** from the default **[EC_FORM_ECN]** form.

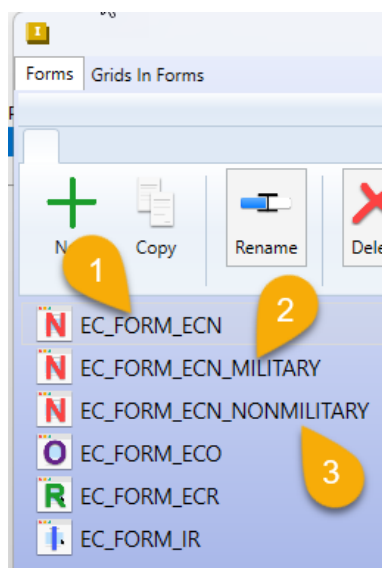
NOTE: Be sure to **[Apply]** your changes to save the layout of the form when it is configured as desired.

Copy an existing Data Form to create a similar Data Form:

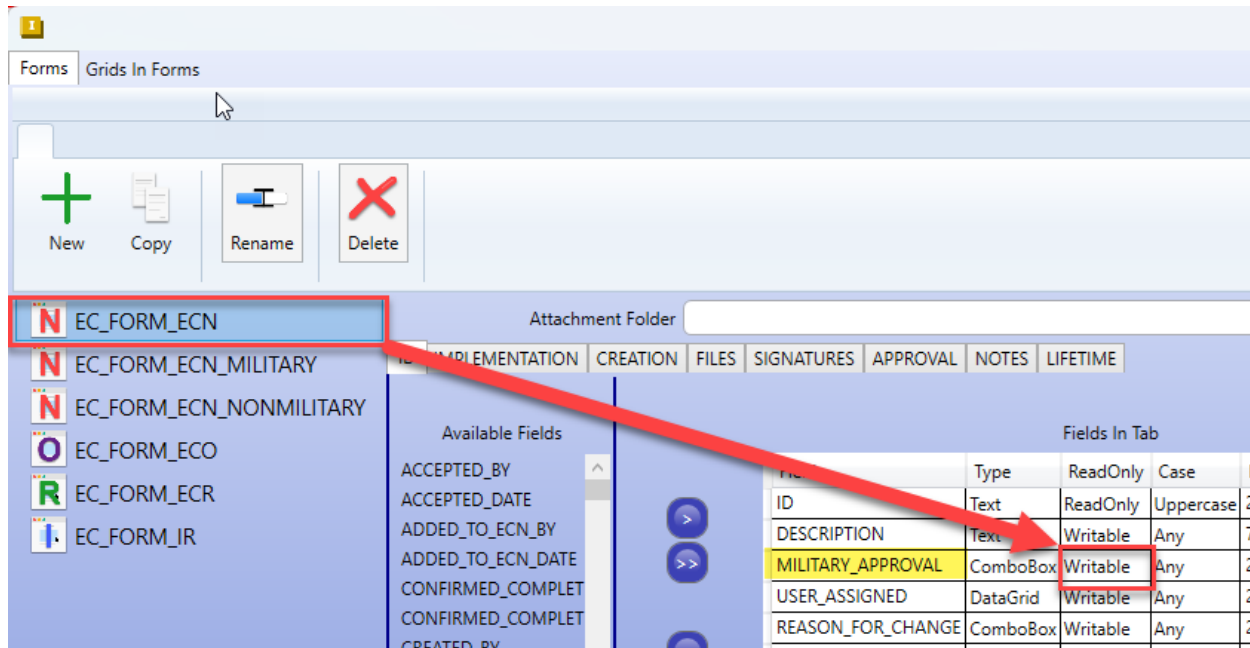
Once the layout of the default [EC_FORM_ECN] form is configured with the desired **Tabs**, and its grids within its **Fields In Tab** are correct, then it can be easily copied to make additional forms that are very similar (but can be modified accordingly). Select the source [EC_FORM_ECN] form once, then select the [Copy] command at the top of the [Data Forms] utility. Provide a name for the new form (without using spaces). Within the example below, the name of the new form will be [EC_FORM_ECN_MILITARY].



The above process can be repeated as needed to create copies of the source form. For this environment, the default [EC_FORM_ECN] form was copied two times to create both the [EC_FORM_ECN_MILITARY] form and the [EC_FORM_ECN_NONMILITARY] form.



At this time the layouts of each Data Form can be managed as needed to ensure that the users have access to the appropriate fields within each form as the documents move through their related workflows. While this documentation is not intended to cover all the differences within the three noted Data Forms, we need to highlight that the added **[MILITARY_APPROVAL]** field is only in a **[Writable]** state from within the **[EC_FORM_ECN]** form. As a reminder, all **Change Notice** documents that are **[Submitted To Workflow]** within this environment enter the **[CN]** workflow process (which is associated with the **[EC_FORM_ECN]** form).



Field Name	Type	ReadOnly	Case
ID	Text	ReadOnly	Uppercase
DESCRIPTION	Text	Writable	Any
MILITARY_APPROVAL	ComboBox	Writable	Any
USER_ASSIGNED	DataGrid	Writable	Any
REASON_FOR_CHANGE	ComboBox	Writable	Any

1. In contracts, for both copied Data Forms (**[EC_FORM_ECN_MILITARY]** and **[EC_FORM_ECN_NONMILITARY]**), the noted **[MILITARY_APPROVAL]** field has been changed to be **[ReadOnly]** (see the two following figures).
2. In addition, at the top of the Data Forms, notice that the two copied Data Forms include a **[SQL Filter]** feature that is not available within the default/original **[EC_FORM_ECN]** form. Each created Data Form that is a copy from an existing Data Form requires a specific **[SQL Filter]** to bind that Data Form's layout to the desired workflow process (which is based on the defined **[SQL Condition]** query).

Notice that the [SQL Filter] for the [EC_FORM_ECN_MILITARY] form is set to: **MILITARY_APPROVAL = 'True'**

Forms Grids In Forms

New Copy Rename Delete

1

SQL Filter MILITARY_APPROVAL = 'True'

Attachment Folder

IMPLEMENTATION CREATION FILES SIGNATURES APPROVAL NOTES LIFETIME MILITARY

Available Fields

ACCEPTED_BY
ACCEPTED_DATE
ADDED_TO_ECN_BY
ADDED_TO_ECN_DATE
CONFIRMED_COMPLET
CONFIRMED COMPLET

Fields In Tab

Field	Type	ReadOnly	Case	Heig
ID	Text	ReadOnly	Uppercase	25
DESCRIPTION		Writable	Any	75
MILITARY_APPROVAL	ComboBo	ReadOnly	Any	25
USER_ASSIGNED	DataGrid	Writable	Any	25
REASON FOR CHANGE				25

Notice that the [SQL Filter] for the [EC_FORM_ECN_NONMILITARY] form is set to: **MILITARY_APPROVAL = 'False'**

Forms Grids In Forms

New Copy Rename Delete

1

SQL Filter MILITARY_APPROVAL = 'False'

Attachment Folder

ID IMPLEMENTATION CREATION FILES SIGNATURES APPROVAL NOTES LIFETIME

Available Fields

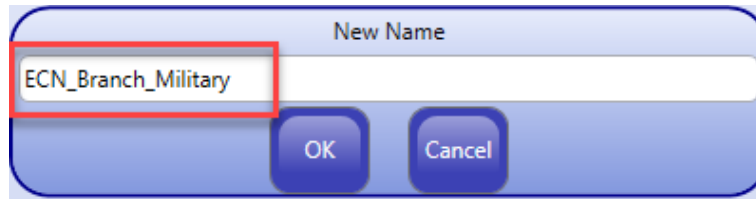
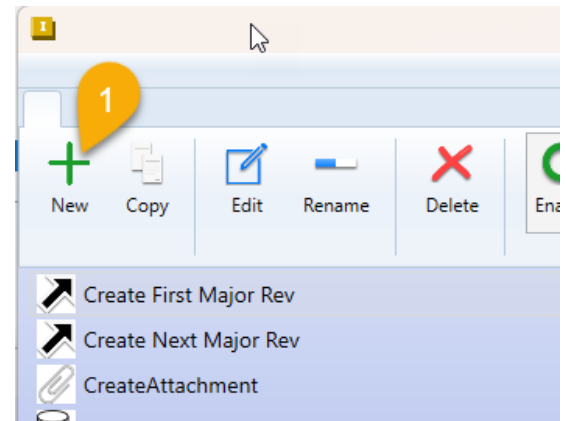
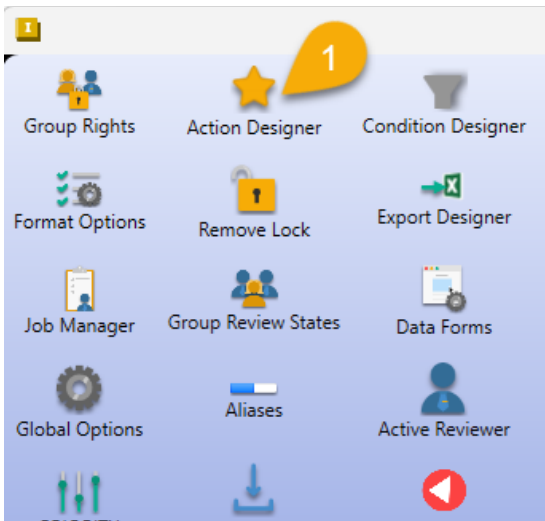
ACCEPTED_BY
ACCEPTED_DATE
ADDED_TO_ECN_BY
ADDED_TO_ECN_DATE
CONFIRMED_COMPLET
CONFIRMED COMPLET

Fields In Tab

Field	Type	ReadOnly	Case	Height (
ID	Text	ReadOnly	Uppercase	25
DESCRIPTION		Writable	Any	75
MILITARY_APPROVAL	ComboBox	ReadOnly	Any	25
USER_ASSIGNED	DataGrid	Writable	Any	25

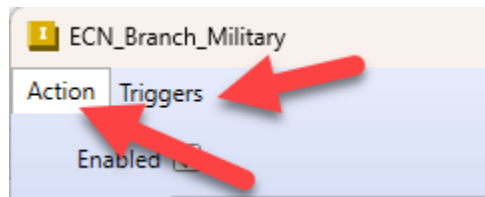
Define the *Action* used to branch from the current workflow into another workflow:

The final configuration needed is to create the appropriate actions using the **[Action Designer]** utility from within the Advanced Workflow **[Admin Tools]**. Use its **[New]** command to define a new Action and provide a descriptive name (while spaces are allowed, we recommend avoiding spaces). For this example, the **[ECN_Branch_Military]** Action is being created.



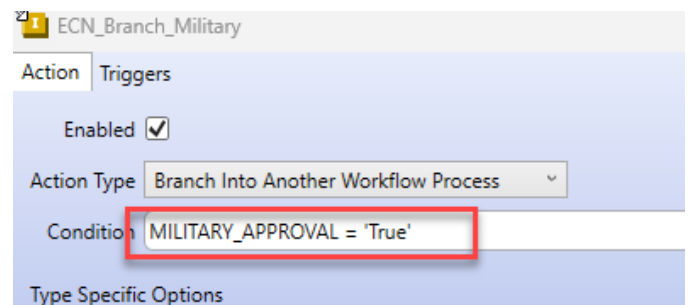
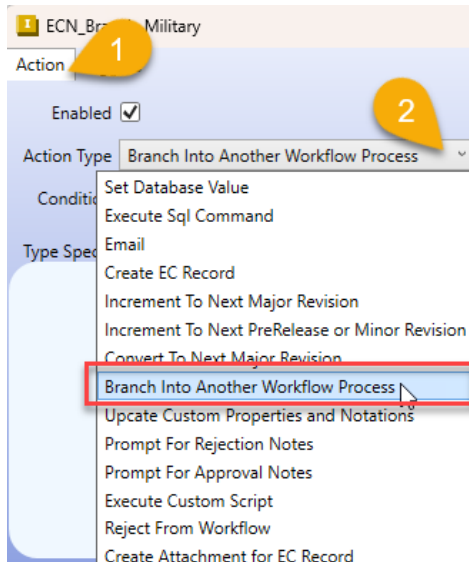
All **Actions** have two very specific tabs to be familiar with, the **[Action]** tab and the **[Triggers]** tab. Both will have to be configured accordingly:

- The **[Action]** tab is used to define the **type** of Action that is being created (there is a list of Action types to select from).
- The **[Triggers]** tab is used to determine **when** the defined Action takes place (each defined workflow and its processes are listed for selection purposes).

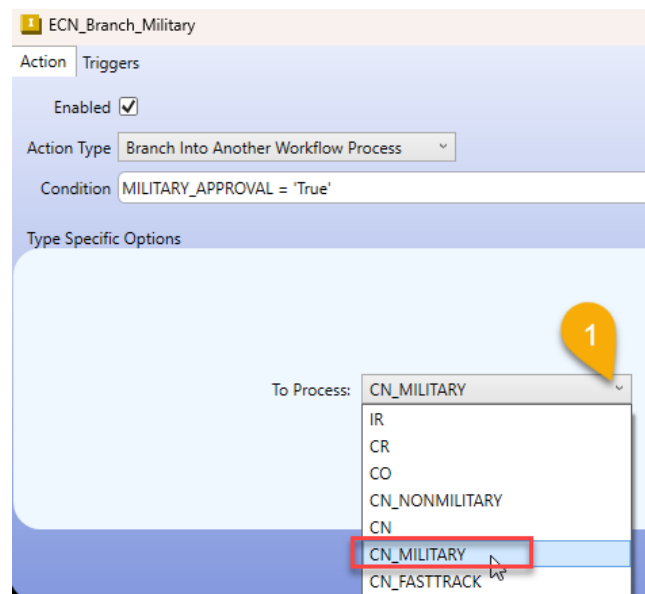


Branch details for the ECN Branch Military Action:

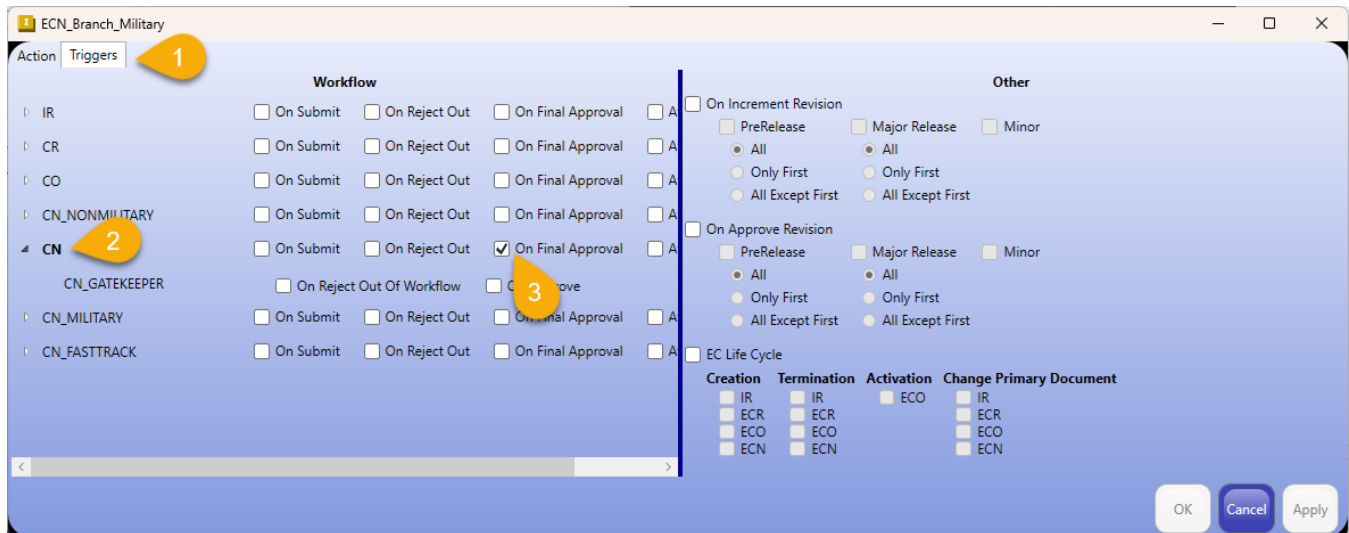
Start by defining the specific type of action desired. Using the drop-down box, select the [Branch Into Another Workflow Process] action. Then assign the [SQL Condition] that must be satisfied. Based on this environment's example, the desired [SQL Condition] for this action is: **MILITARY_APPROVAL = 'True'**



Use the [To Process] drop-down to select the desired workflow process, which is [CN_MILITARY] for this Action:



From the **[Triggers]** tab, activate when the Action should be executed. For this Action, it only needs to be triggered for execution when the default **[CN]** workflow process is **Approved** (which is identified by its **[X] On Final Approval**] option.



ECN_Branch_Military

Action: **Triggers**

Workflow

- IR: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A
- CR: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A
- CO: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A
- CN_NONMILITARY: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A
- CN**: ☐ On Submit, ☐ On Reject Out, ☒ On Final Approval, ☐ A
- CN_GATEKEEPER: ☐ On Reject Out Of Workflow, ☐ On Approve
- CN_MILITARY: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A
- CN_FASTTRACK: ☐ On Submit, ☐ On Reject Out, ☐ On Final Approval, ☐ A

Other

- ☐ On Increment Revision
 - PreRelease: ☐ All, ☐ Only First, ☐ All Except First
 - Major Release: ☐ All, ☐ Only First, ☐ All Except First
 - Minor: ☐ All, ☐ Only First, ☐ All Except First
- ☐ On Approve Revision
 - PreRelease: ☐ All, ☐ Only First, ☐ All Except First
 - Major Release: ☐ All, ☐ Only First, ☐ All Except First
 - Minor: ☐ All, ☐ Only First, ☐ All Except First
- ☐ EC Life Cycle

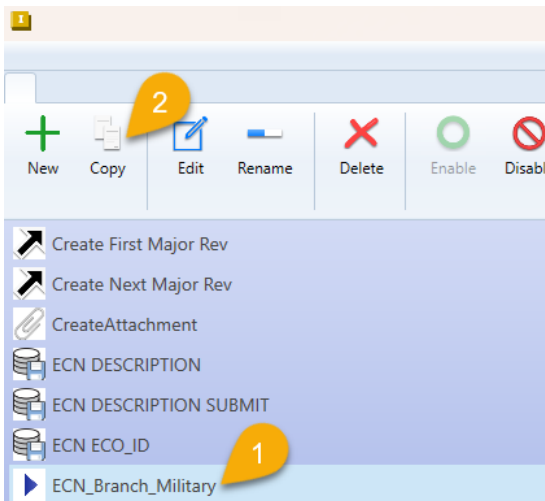
Creation	Termination	Activation	Change Primary Document
<input type="checkbox"/> IR	<input type="checkbox"/> IR	<input type="checkbox"/> ECO	<input type="checkbox"/> IR
<input type="checkbox"/> ECR	<input type="checkbox"/> ECR		<input type="checkbox"/> ECR
<input type="checkbox"/> ECO	<input type="checkbox"/> ECO		<input type="checkbox"/> ECO
<input type="checkbox"/> ECN	<input type="checkbox"/> ECN		<input type="checkbox"/> ECN

OK Cancel Apply

When done, be sure to **[Apply]** your changes to save the Action accordingly.

[Copy an existing Action to create a similar Action:](#)

Since we need another Action that is almost identical to the previously created Action, the **[Copy]** command can be used to copy the existing **[ECN_Branch_Military]** Action to a new **[ECN_Branch_NonMilitary]** Action. Select the **[ECN_Branch_Military]** Action one time, then select the **[Copy]** command and provide a descriptive name:

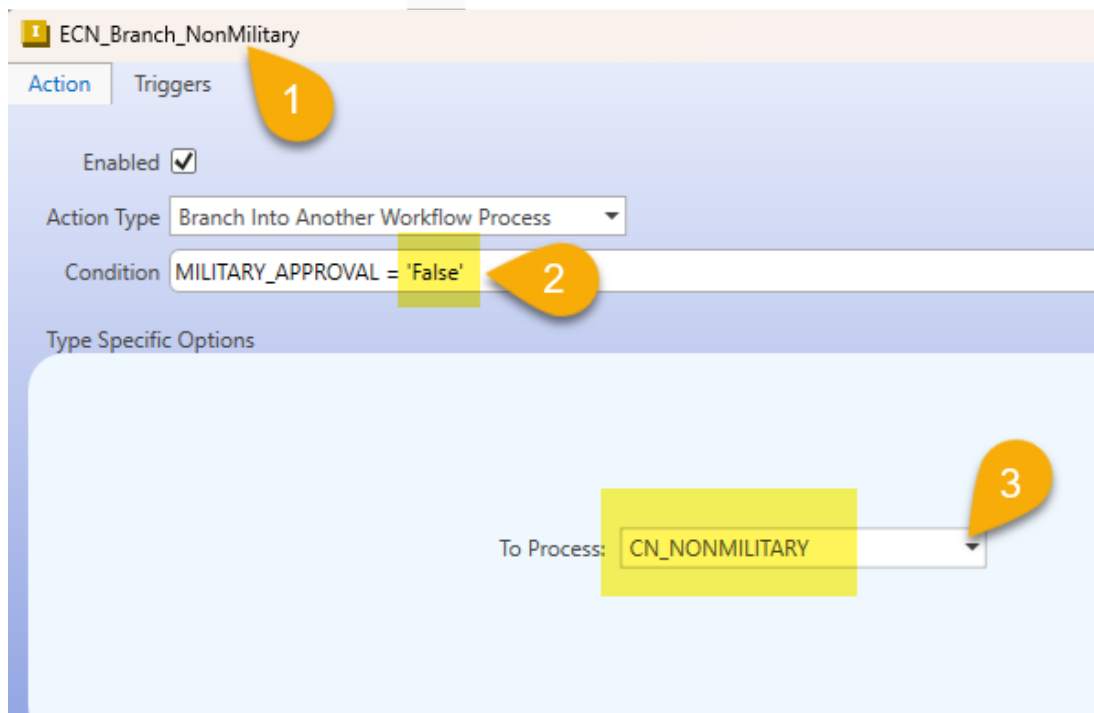


NOTE: As noted earlier, while spaces are allowed, we recommend avoiding spaces within the name of the Actions.

For this specific example, there are two differences between the definitions of the two Actions:

- the defined [SQL Condition]
- the target workflow process([To Process]).

For the [ECN_Branch_NonMilitary] Action, change its [SQL Condition] from 'True' to 'False' and change its target [To Process] from [CN_MILITARY] to [CN_NONMILITARY] as seen within the following figure:



ECN_Branch_NonMilitary

Action Triggers

Enabled ☒

Action Type Branch Into Another Workflow Process

Condition MILITARY_APPROVAL = 'False'

Type Specific Options

To Process: CN_NONMILITARY

When complete, **[Apply]** the changes and test/validate that the environment's workflows can branch accordingly.

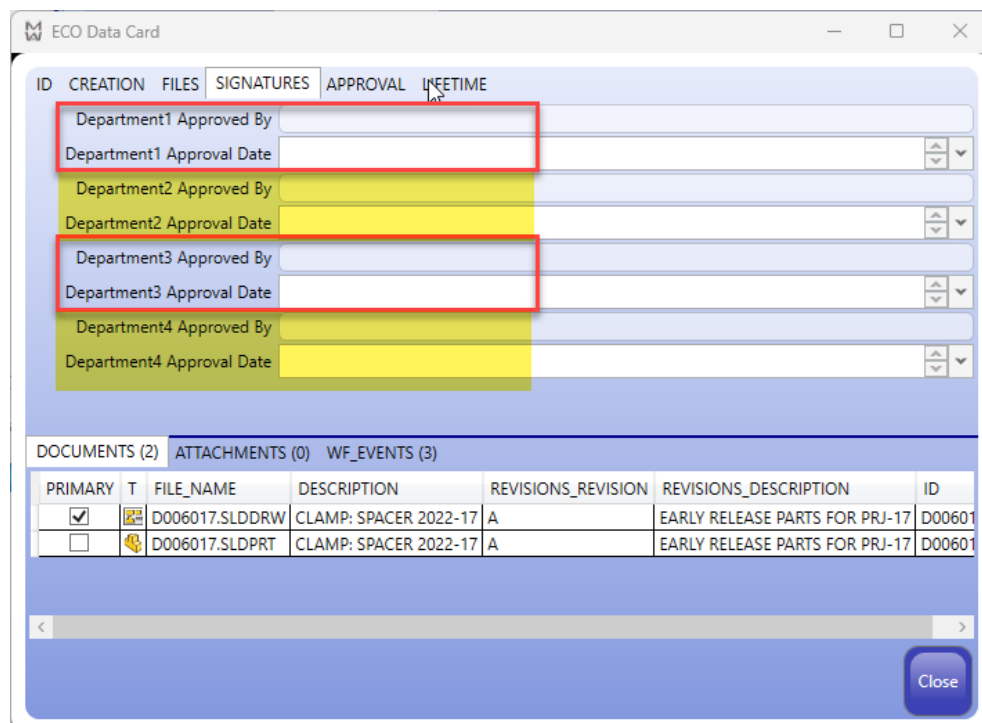
Automatically update specific fields within the Data Forms:

Introduction:

While there may be other fields within the Data Forms to be automatically populated with values, many organizations want the Data Forms to be automatically populated with the name of the user that approved specific workflow states as well as the date when they approved the workflow states. For example, a workflow state could be defined for a department's usage in which one of multiple users could approve/reject it accordingly, and the goal may be to automatically capture the details of exactly which individual approved/rejected it (and when).

NOTE: It goes without saying that the values that are automatically populated within the Data Forms can also be included as Custom Properties, etc. so they can be visible within the desired title-block areas of drawings etc. (if that is desired).

Referencing the following example workflow's Data Form, notice that there are four different department categories for capturing the **[Approved By]** and **[Approval Date]** values.

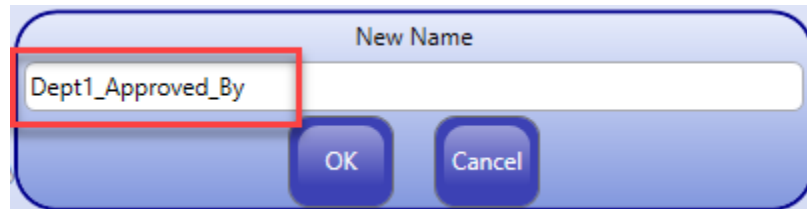
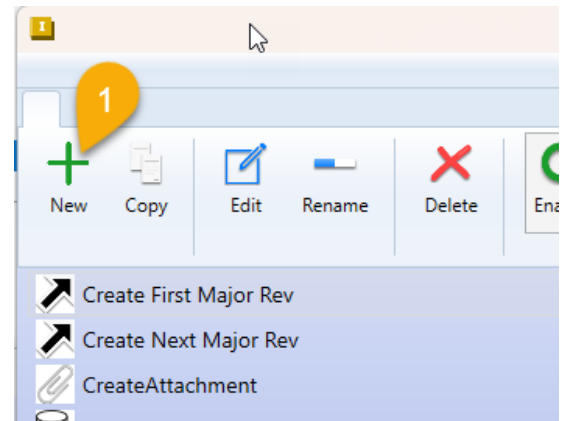
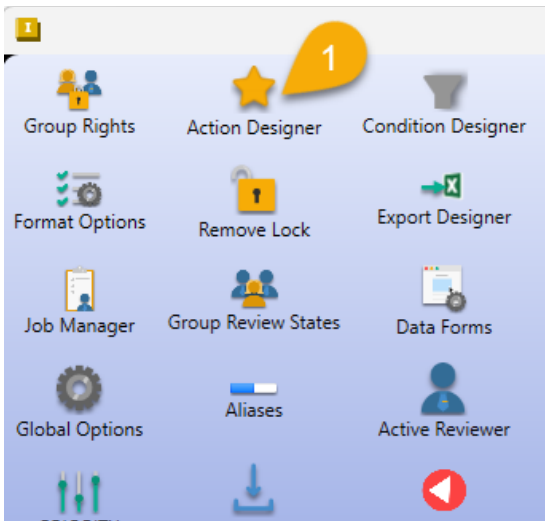


ID	CREATION	FILES	SIGNATURES	APPROVAL	INTEIME
Department1 Approved By					
Department1 Approval Date					
Department2 Approved By					
Department2 Approval Date					
Department3 Approved By					
Department3 Approval Date					
Department4 Approved By					
Department4 Approval Date					

PRIMARY	T	FILE_NAME	DESCRIPTION	REVISIONS_REVISION	REVISIONS_DESCRIPTION	ID
<input checked="" type="checkbox"/>		D006017.SLDDRW	CLAMP: SPACER 2022-17	A	EARLY RELEASE PARTS FOR PRJ-17	D00601
<input type="checkbox"/>		D006017.SLDPRT	CLAMP: SPACER 2022-17	A	EARLY RELEASE PARTS FOR PRJ-17	D00601

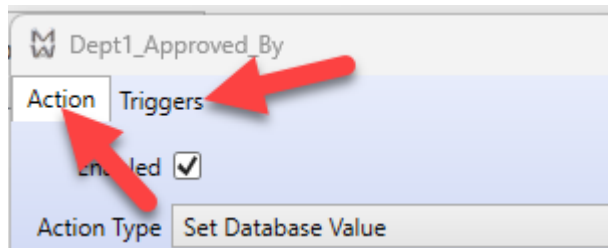
Define the **Action** used to populate the desired **[Approved By]** field:

Create the appropriate Action using the **[Action Designer]** utility from within the Advanced Workflow **[Admin Tools]**. Use its **[New]** command to define a new Action and provide a descriptive name (while spaces are allowed, we recommend avoiding spaces). For this example, the **[Dept1_Approved_By]** action is being created.



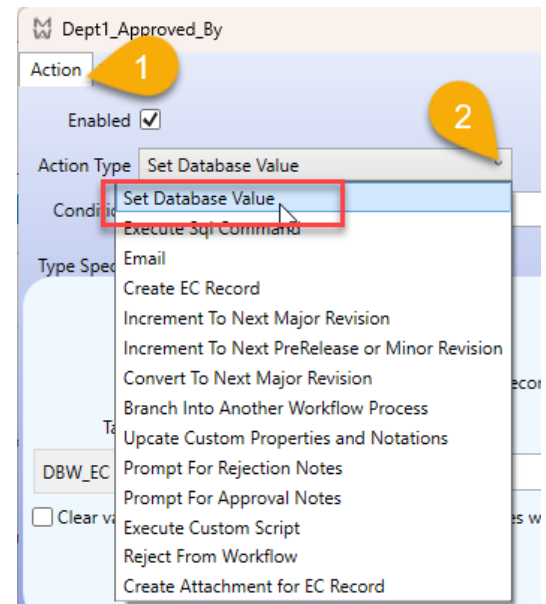
All **Actions** have two very specific tabs to be familiar with, the **[Action]** tab and the **[Triggers]** tab. Both will have to be configured accordingly:

- The **[Action]** tab is used to define the **type** of Action that is being created (there is a list of Action types to select from).
- The **[Triggers]** tab is used to determine **when** the defined Action takes place (each defined workflow and its processes are listed for selection purposes).



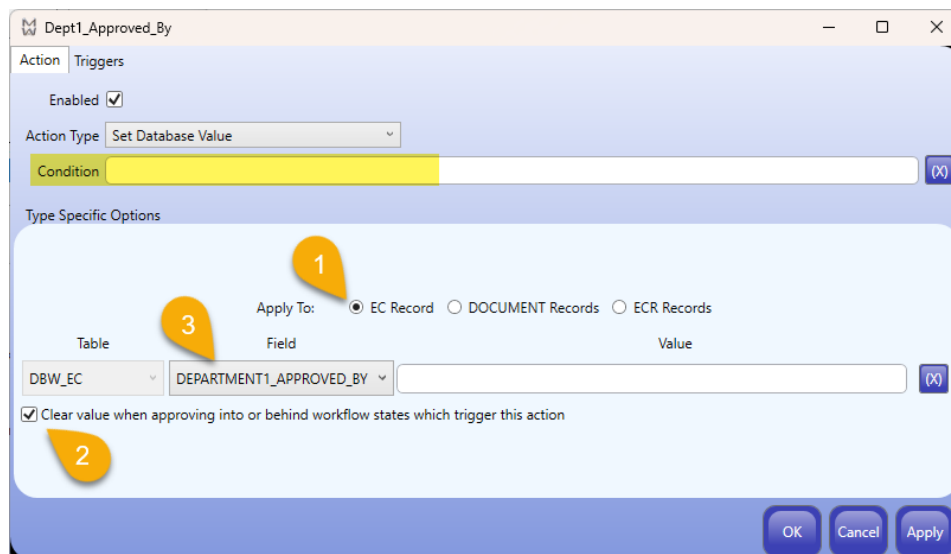
Set Database Value details for the Dept1 Approved By Action:

Start by defining the specific type of Action desired. Using the drop-down box, select the [Set Database Value] Action. Optionally, a specific [SQL Condition] could be considered, but it will be left **NULL** for this example.



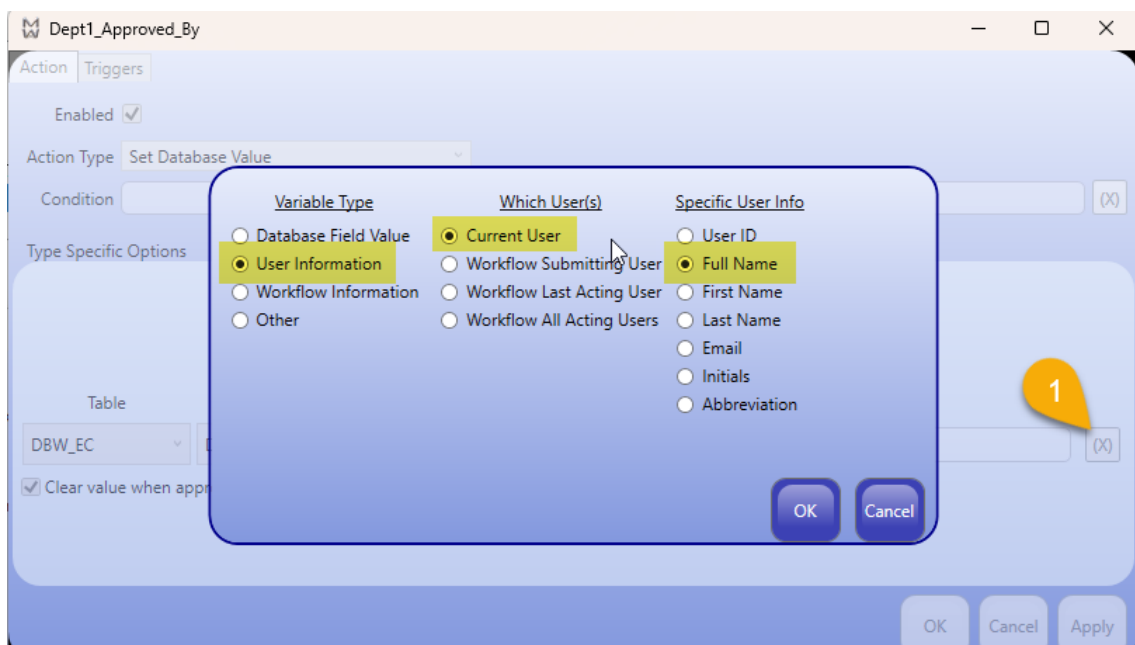
Within the [Type Specific Options] area of the dialog, start by applying the following three settings:

1. For this example, ensure that the [X] **EC Record** option is selected (since the goal is to update a field that is part of the Change Order's workflow's Data Form).
2. To ensure that the data is always updated (consider when workflow processes are approved and then a later rejection kicks the workflow back through the approval process), activate the [X] **Clear value when approving into or behind workflow states which trigger this action**.
3. Be sure to select the [DEPARTMENT1_APPROVED_BY] field from the drop-down list.

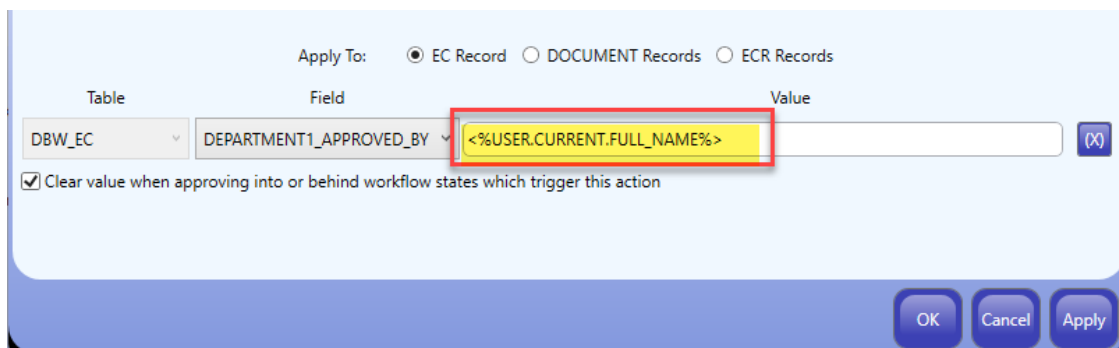


Next, select the button on the right to display a selection dialog with many variables/arguments. Because the goal for this Action is to capture the user's information, select the choices that are desired (similar to the following highlighted selections):

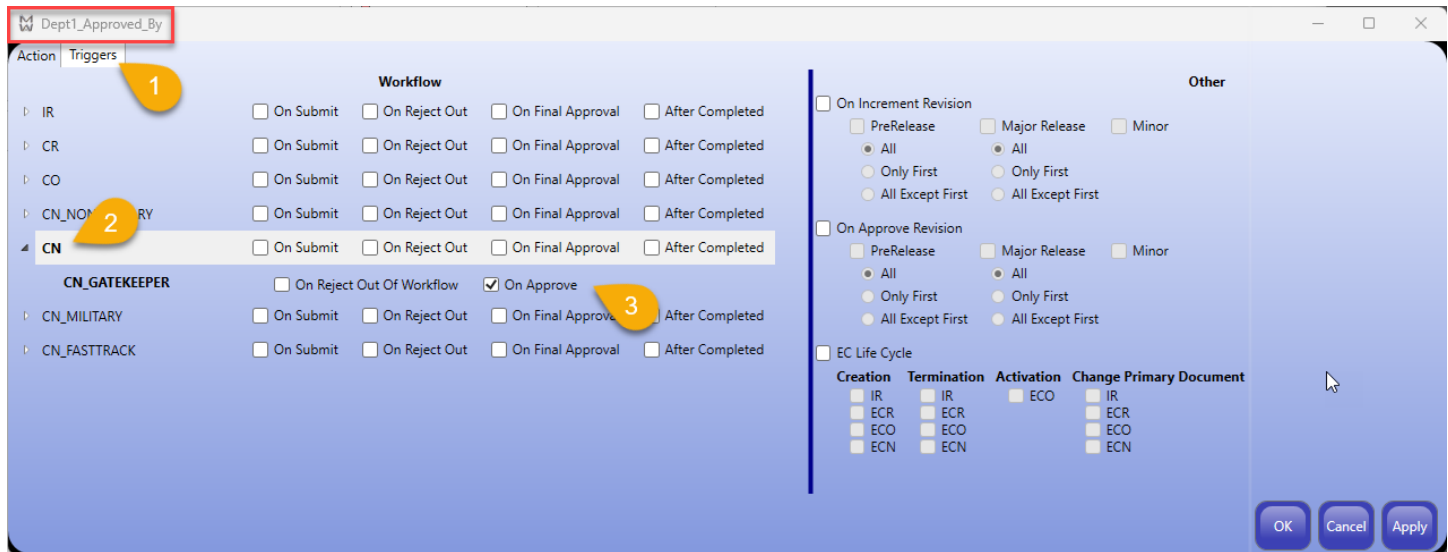
- Select **[X] User Information** as the **Variable Type** argument.
- Select **[X] Current User** as the **Which User(s)** argument.
- Depending on the environment's needs, select the desired option from the **Specific User Info**, for this example, **[X] Full Name** is selected. Select the **[OK]** button after selecting the three desired arguments.
 - NOTE: Please keep in mind that these specific values are part of the default **DBWARM** values.



As seen within the following figure, the selection process noted above is used to automatically create an argument that is populated within the dialog to ensure that it is an accurate value:



From the **[Triggers]** tab, activate when the Action should be executed. For this example Action, it must be triggered for execution when the default **[CN]** workflow process is **Approved** (which is identified by its **[X] On Approve**) option for the **[CN_GATEKEEPER]** workflow state.



Dept1_Approved_By

Action Triggers

1

2

3

Workflow

Workflow	On Submit	On Reject Out	On Final Approval	After Completed
IR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CN_NON_REV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CN_GATEKEEPER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> On Approve	<input type="checkbox"/>
CN_MILITARY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CN_FASTTRACK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other

☐ On Increment Revision

PreRelease ☐ Major Release ☐ Minor

☐ All ☐ Only First ☐ All Except First

☐ On Approve Revision

PreRelease ☐ Major Release ☐ Minor

☐ All ☐ Only First ☐ All Except First

☐ EC Life Cycle

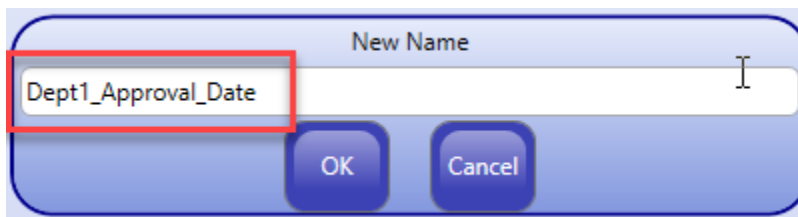
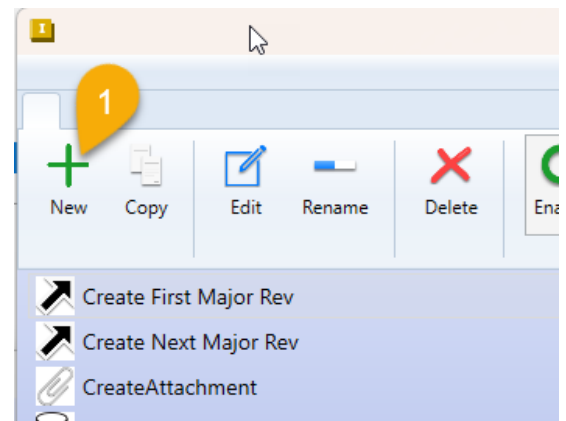
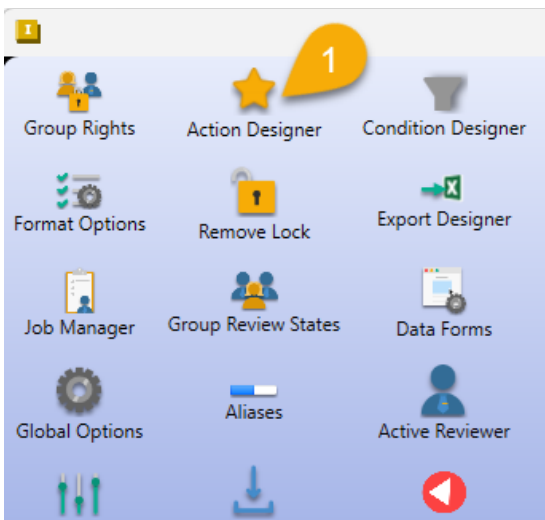
Creation	Termination	Activation	Change Primary Document
<input type="checkbox"/> IR	<input type="checkbox"/> IR	<input type="checkbox"/> ECO	<input type="checkbox"/> IR
<input type="checkbox"/> ECR	<input type="checkbox"/> ECR		<input type="checkbox"/> ECR
<input type="checkbox"/> ECO	<input type="checkbox"/> ECO		<input type="checkbox"/> ECO
<input type="checkbox"/> ECN	<input type="checkbox"/> ECN		<input type="checkbox"/> ECN

OK Cancel Apply

When done, be sure to **[Apply]** your changes to save the Action accordingly.

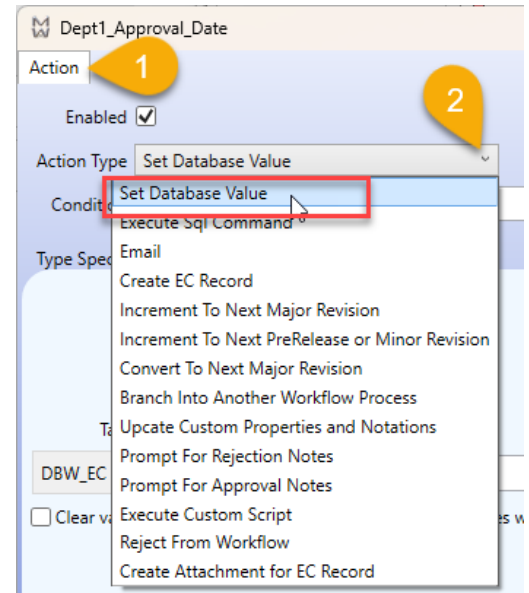
*Define the **Action** used to populate the desired **[Department1 Approval Date]** field:*

Create the appropriate Action using the **[Action Designer]** utility from within the Advanced Workflow **[Admin Tools]**. Use its **[New]** command to define a new Action and provide a descriptive name (while spaces are allowed, we recommend avoiding spaces). For this example, the **[Dept1_Approval_Date]** Action is being created.



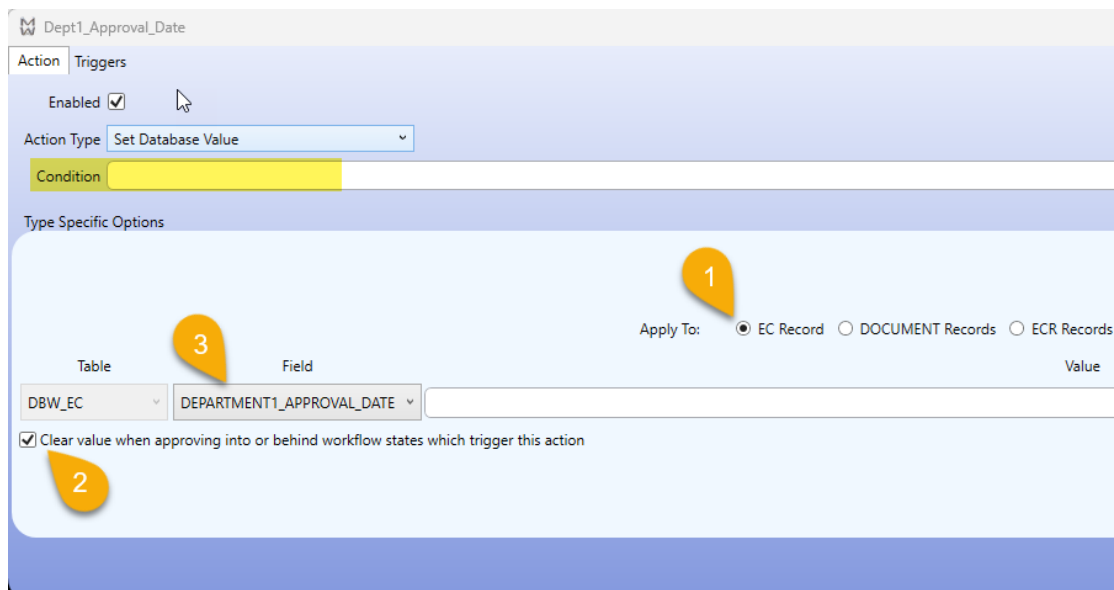
Set Database Value details for the Dept1 Approval Date Action:

Start by defining the specific type of action desired. Using the drop-down box, select the **[Set Database Value]** Action. Optionally, a specific **[SQL Condition]** could be considered, but it will be left **NULL** for this example.



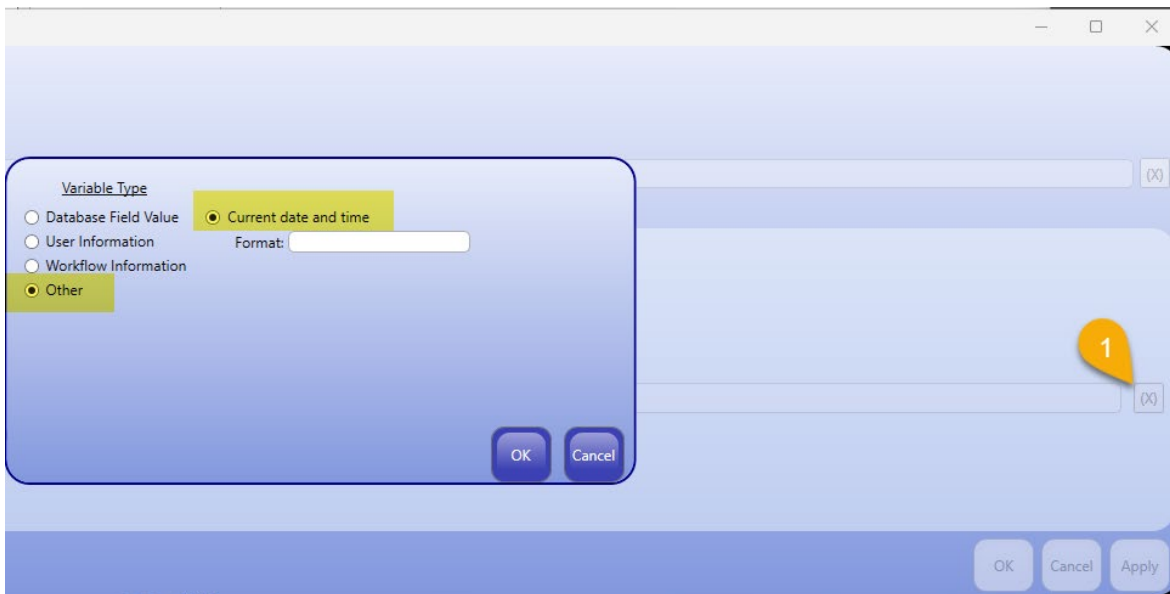
Within the **[Type Specific Options]** area of the dialog, start by applying the following three settings:

1. For this example, ensure that the **[X] EC Record** is selected (since the goal is to update a field that is part of the Change Order's workflow's Data Form).
2. To ensure that the data is always updated (consider when workflow processes are approved and then a later rejection kicks the workflow back through the approval process), activate the **[X] Clear value when approving into or behind workflow states which trigger this action**.
3. Be sure to select the **[DEPARTMENT1_APPROVAL_DATE]** field from the drop-down list.

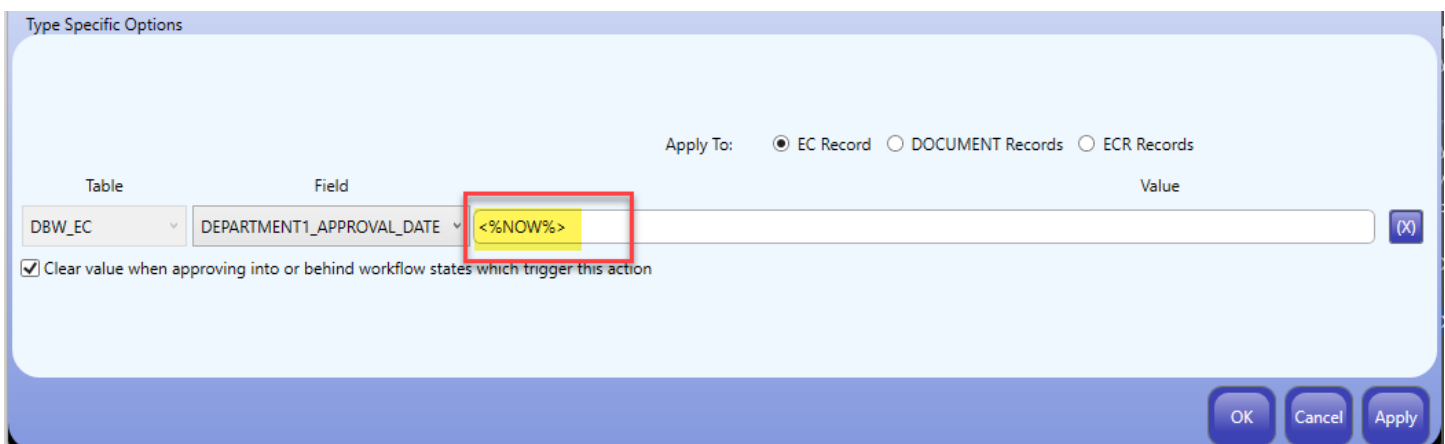


Next, select the button on the right to display a selection dialog with many variables/arguments. Because the goal for this Action is to capture the date information, select the choices that are desired (similar to the following highlighted selections):

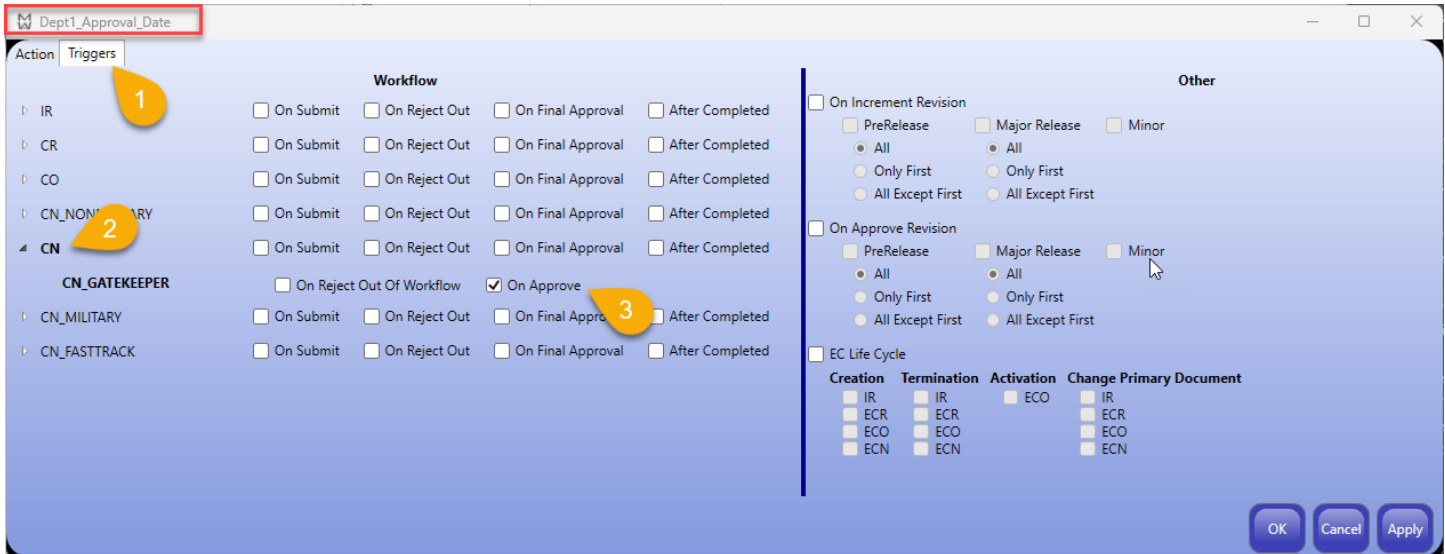
- Select **[X] Other** as the **Variable Type** argument.
- Select **[X] Current Date and Time** as the secondary argument (no reason to configure the **Format** for this example).



As seen within the following figure, the selection process noted above is used to automatically create an argument that is populated within the dialog to ensure that it is an accurate value:



From the **[Triggers]** tab, activate when the Action should be executed. For this example Action, it must be triggered for execution when the default **[CN]** workflow process is **Approved** (which is identified by its **[X] On Approve**) option for the **[CN_GATEKEEPER]** workflow state.



Dept1_Approval_Date

Action Triggers

Workflow

- IR
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CR
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CO
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CN_NONMILITARY
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CN**
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CN_GATEKEEPER**
 - ☐ On Reject Out Of Workflow
 - ☒ On Approve
- CN_MILITARY
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed
- CN_FASTTRACK
 - ☐ On Submit
 - ☐ On Reject Out
 - ☐ On Final Approval
 - ☐ After Completed

Other

- ☐ On Increment Revision
 - ☐ PreRelease
 - ☐ Major Release
 - ☐ Minor
 - ☒ All
 - ☐ Only First
 - ☐ All Except First
- ☐ On Approve Revision
 - ☐ PreRelease
 - ☐ Major Release
 - ☐ Minor
 - ☒ All
 - ☐ Only First
 - ☐ All Except First
- ☐ EC Life Cycle

Creation	Termination	Activation	Change Primary Document
<input type="checkbox"/> IR	<input type="checkbox"/> IR	<input type="checkbox"/> ECO	<input type="checkbox"/> IR
<input type="checkbox"/> ECR	<input type="checkbox"/> ECR		<input type="checkbox"/> ECR
<input type="checkbox"/> ECO	<input type="checkbox"/> ECO		<input type="checkbox"/> ECO
<input type="checkbox"/> ECN	<input type="checkbox"/> ECN		<input type="checkbox"/> ECN

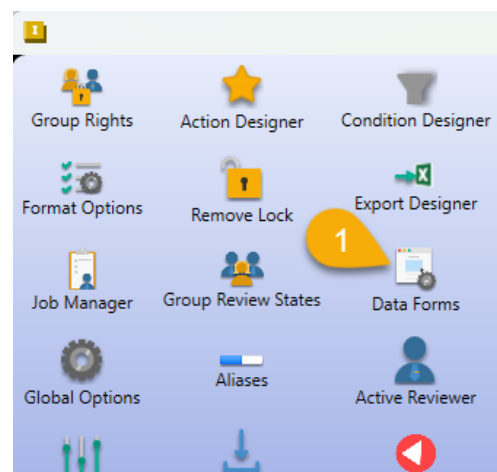
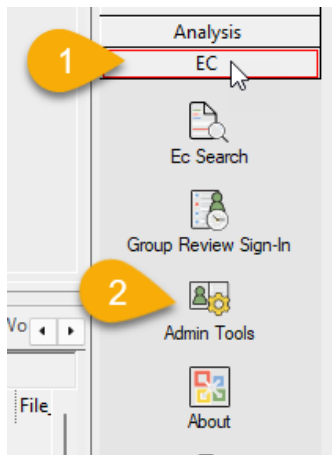
OK Cancel Apply

When done, be sure to **[Apply]** your changes to save the Action accordingly.

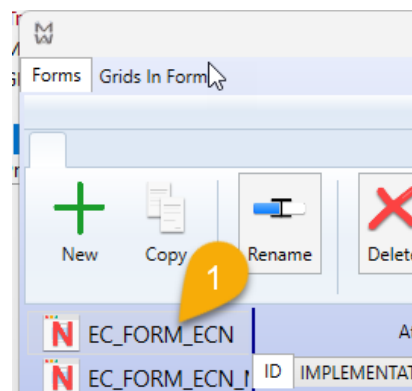
*For system-controlled fields within the Data Forms, best practice is to set them to be **[ReadOnly]**:*

For the two fields that we just created the **Actions** for ([**DEPARTMENT1_APPROVED_BY**] and [**DEPARTMENT1_APPROVAL_DATE**]), we recommend that they are configured as **[ReadOnly]** fields within the Data Forms that are being updated by the defined **Actions** (otherwise users could accidentally change the values). Please keep in mind that both previous **Actions** are specific to the [**EC_FORM_ECN**] Data Form within this example environment.

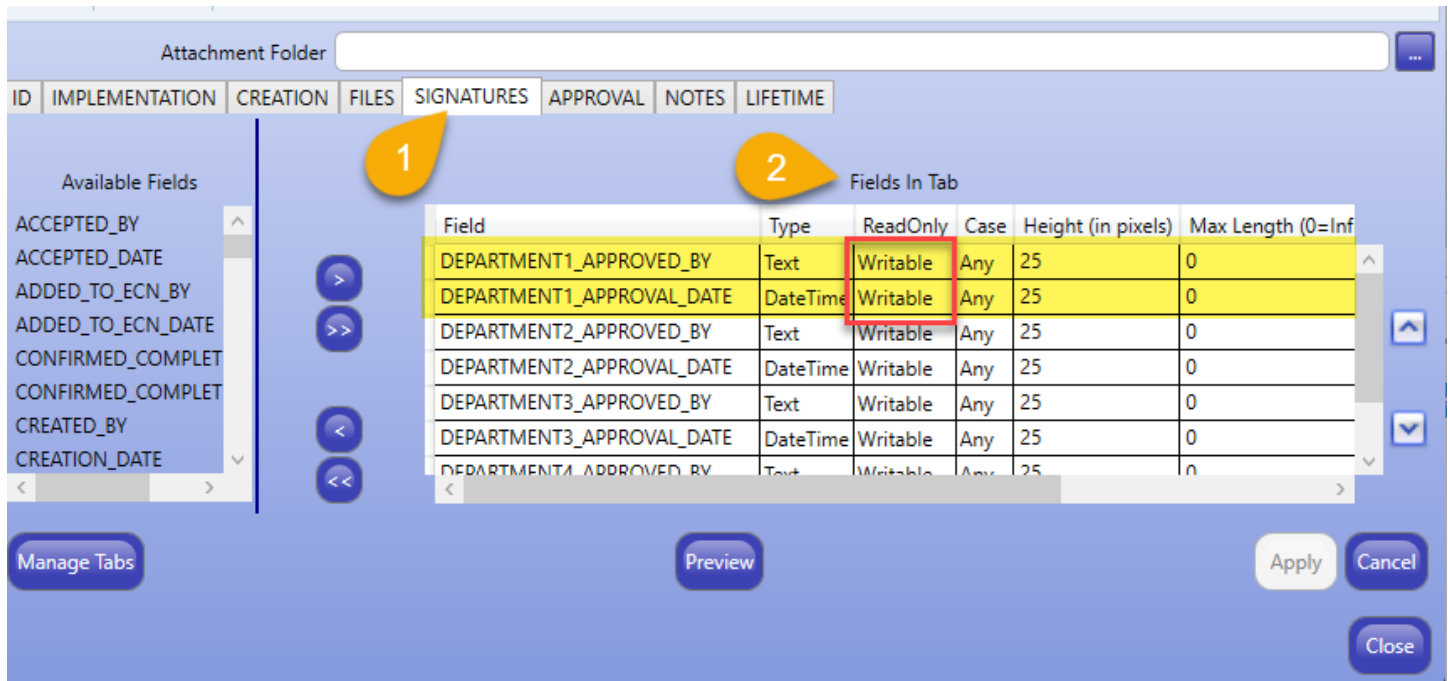
Using the [**Data Forms**] utility from within the Advanced Workflow [**Admin Tools**], the [**EC_FORM_ECN**] Data Form will need to be updated accordingly. The [**Data Forms**] utility is used to change the layout of the forms, add control definitions to the fields within the forms, create specific form layouts, etc...



From the left-side of the [**Data Forms**] utility, select the specific **Change Form**, for this example select the [**EC_FORM_ECN**] form (which then displays its current layout).



For this environment, the two fields ([DEPARTMENT1_APPROVED_BY] and [DEPARTMENT1_APPROVAL_DATE]) are located within the [SIGNATURES] tab of the Data Form and can be seen within the [Fields In Tab] area. Notice that they are each configured as [Writable].

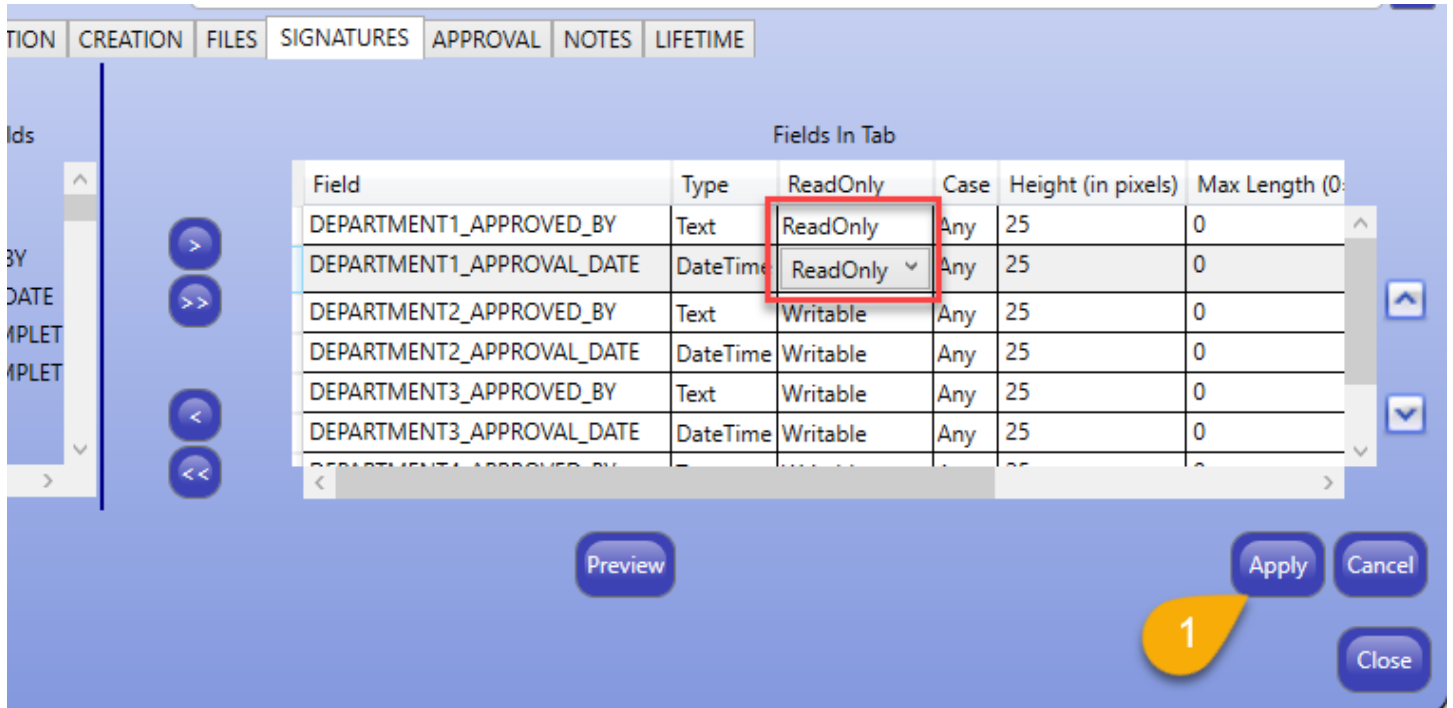


Field	Type	ReadOnly	Case	Height (in pixels)	Max Length (0=Inf)
DEPARTMENT1_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT1_APPROVAL_DATE	DateTime	Writable	Any	25	0
DEPARTMENT2_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT2_APPROVAL_DATE	DateTime	Writable	Any	25	0
DEPARTMENT3_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT3_APPROVAL_DATE	DateTime	Writable	Any	25	0
DEPARTMENT4_APPROVED_BY	Text	Writable	Any	25	0

Selecting within the noted field, displays a drop-down list with three options. We recommend that system populated fields are set to the [ReadOnly] option to avoid potential conflicts.

Fields In Tab					
Field	Type	ReadOnly	Case	Height (in pixels)	Max Length (0=Inf)
DEPARTMENT1_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT1_APPROVAL_DATE	DateTime	Writable	Any	25	0
DEPARTMENT2_APPROVED_BY	Text	ReadOnly	Any	25	0
DEPARTMENT2_APPROVAL_DATE	DateTime	ReadOnly While In Workflow	Any	25	0

With both fields defined as [ReadOnly], select the [Apply] button followed by the [Close] button to begin to test/validate the results.



Field	Type	ReadOnly	Case	Height (in pixels)	Max Length (0:
DEPARTMENT1_APPROVED_BY	Text	ReadOnly	Any	25	0
DEPARTMENT1_APPROVAL_DATE	DateTime	ReadOnly	Any	25	0
DEPARTMENT2_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT2_APPROVAL_DATE	DateTime	Writable	Any	25	0
DEPARTMENT3_APPROVED_BY	Text	Writable	Any	25	0
DEPARTMENT3_APPROVAL_DATE	DateTime	Writable	Any	25	0

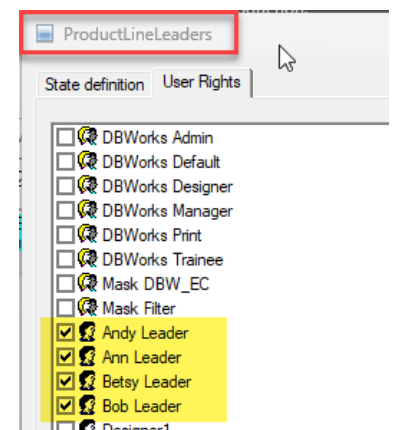
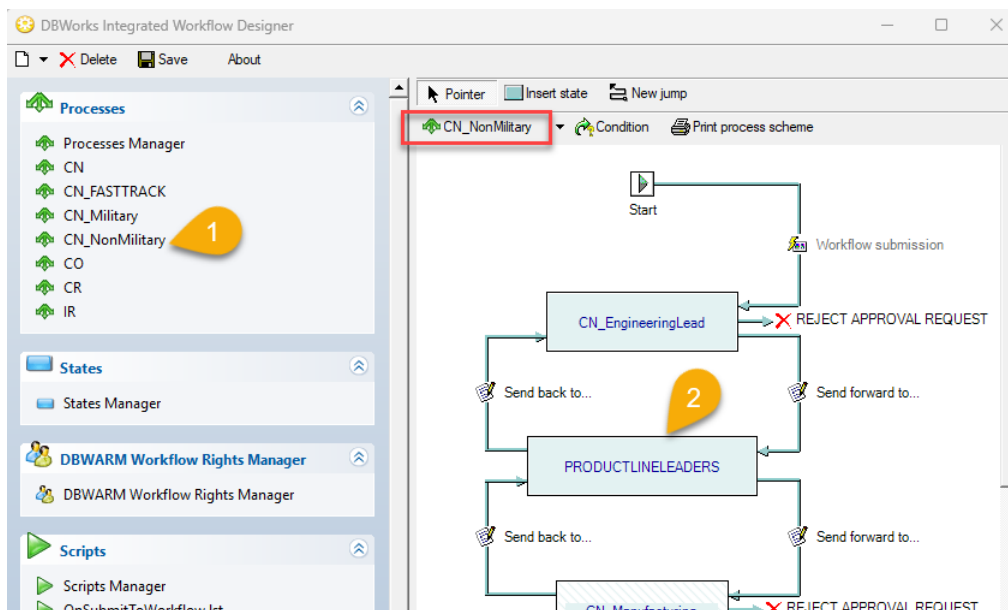
1. Notice that the [DEPARTMENT1_APPROVED_BY] field is now configured as a [ReadOnly] field within the figure above.
2. Notice that the [DEPARTMENT1_APPROVAL_DATE] field is now configured as a [ReadOnly] field within the figure above.

Prompt for assigned user list for the next workflow's state, allowing a specific user to be assigned the process:

Introduction:

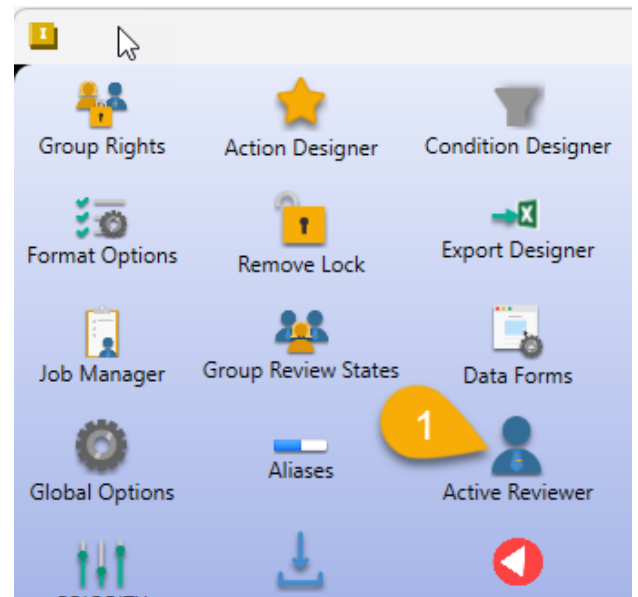
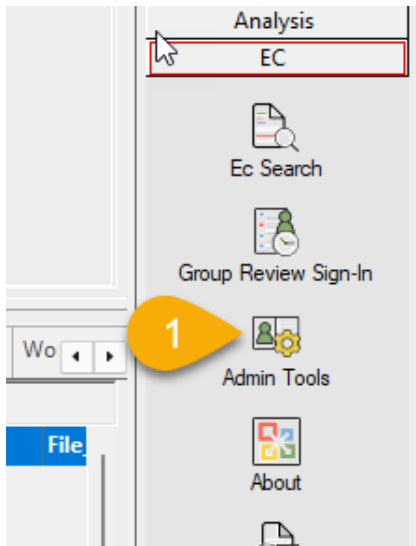
Frequently, a workflow's **State** will account for one from multiple assigned users, in which any one of the assigned users can review the workflow and approve/reject it accordingly. For some workflow **States** with this condition, it may be desirable to prompt for the specific user that should be assigned to review the workflow (think of a team of Managers that could all be assigned to a workflow state named **[ProductLineLeaders]**). To prompt for the list of assigned Managers when getting ready to pass the workflow into the **[ProductLineLeaders]** workflow State, the administrator would need to configure the **[Active Reviewer]** settings.

The following figures show that four Managers (Andy, Ann, Betsy, and Bob) have been assigned to the **[ProductLineLeaders]** workflow **State** using the default workflow designer tools within the **[MechWorks PDM Administrative Tools Manager]** and that the noted **State** has been added to the **[CN_NonMilitary]** workflow process.

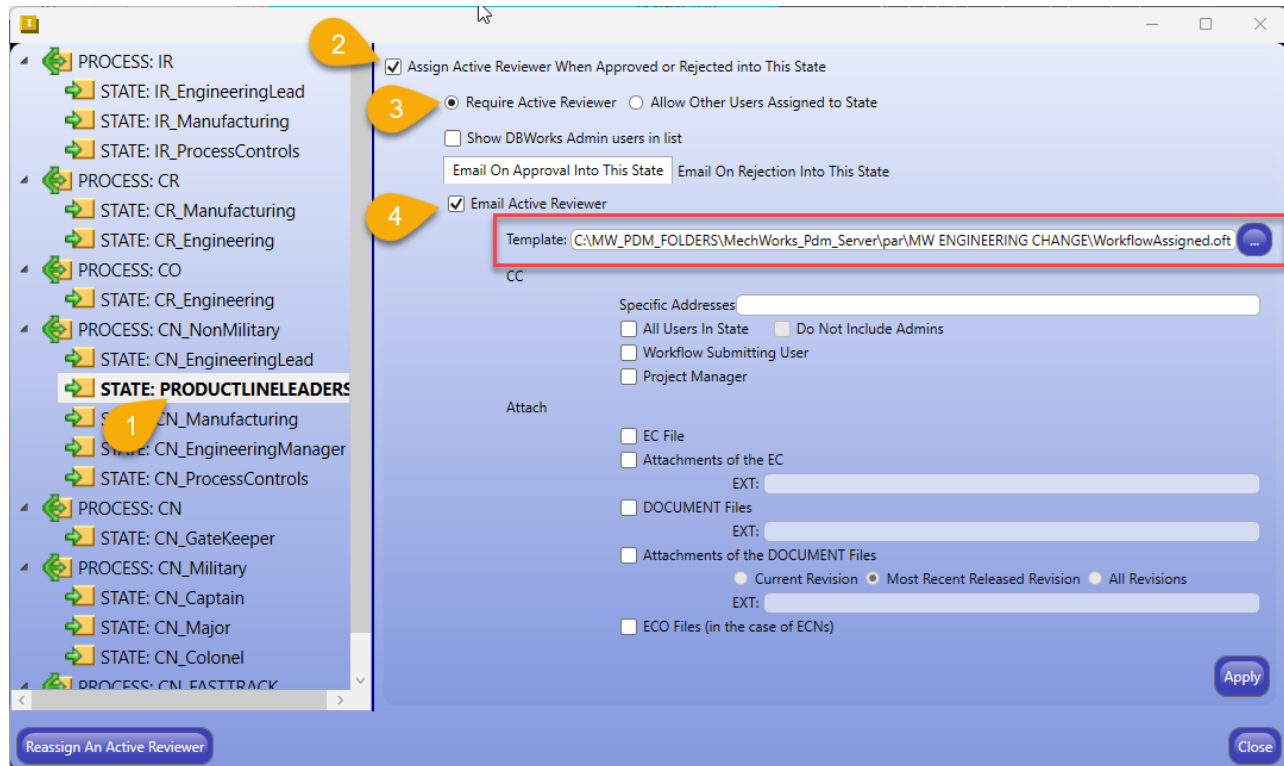


Configure the [Active Reviewer] options for the [ProductLineLeaders] workflow State:

Access the [Active Reviewer] administrative utility from within the Advanced Workflow [Admin Tools].



Using the [Active Reviewer] dialog, select the workflow **State** on the leftside of the dialog, for this example, the [ProductLineLeaders] workflow **State** was selected one time.



On the right side of the dialog, typically the first two options will be activated to officially assign a reviewer:

- [X] Assign Active Reviewer When Approved or Rejected into this State
- [X] Require Active Reviewer

If it is desirable to have an email sent to the assigned Active Reviewer, then that related option will also need to be activated. When ready, select the [Apply] command. After doing so, notice that the icon in front of the workflow **State** has automatically changed, making it easier to identify which workflow **States** have been configured to use the [Active Reviewer] configuration.

