



Dynamic Data Management User Guide

Last Updated: July 18, 2019

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1. Dynamic Data Management (DDM) – Overview and Benefits

Dynamic Data Management (DDM) is a scenarios-based rules engine that ensures that the value of any fee or field is automatically populated for various loan scenarios, defined by the administrator. With DDM, you can control the order of operations and ensure that the relevant field value is populated for that scenario.

DDM is easier to organize and maintain. It helps overcome the challenges associated with maintaining hundreds of closing cost templates, and provides better visibility into the rules that have been set up by the Encompass administrator. With DDM, you can create a look-up table for a fee or a field based on multiple variables. This eliminates complex advanced code and makes it easier to maintain the rule as changes happen.

DDM also provides more possibilities for automation. For an end user, it is about minimizing data entry and having accurate/consistent data in the loan. With the automation, you can reduce origination cost and time.

For a synopsis of DDM, see [Appendix A: FAQs](#).

2. Top Use Cases for DDM

The following two categories of use cases are the most recommended for DDM:

- Migrating field triggers that run advanced code, update the value of one or more fields, and, copy new value into one or more fields – Triggers that run advanced code are one of the best instances where DDM can be implemented since DDM helps eliminate advanced code with Data Tables, provides advanced visibility into and easier maintenance of the rule.
- Moving fees from closing cost templates – High-maintenance lender fees such as Underwriting, or Processing fees are the best ones to target since using DDM eliminates the challenge of updating hundreds of closing cost templates when these fees change.

For more details on use cases, see [Top Use Cases for Dynamic Data Management](#).

3. When Do DDM Rules Run?

Before we configure DDM, it is important to understand when and where these rules run. By default, DDM rules run when an existing loan file is updated and then saved, or when a loan is created by importing a loan file. The rules run in the following instances in SmartClient and Encompass Connect products:

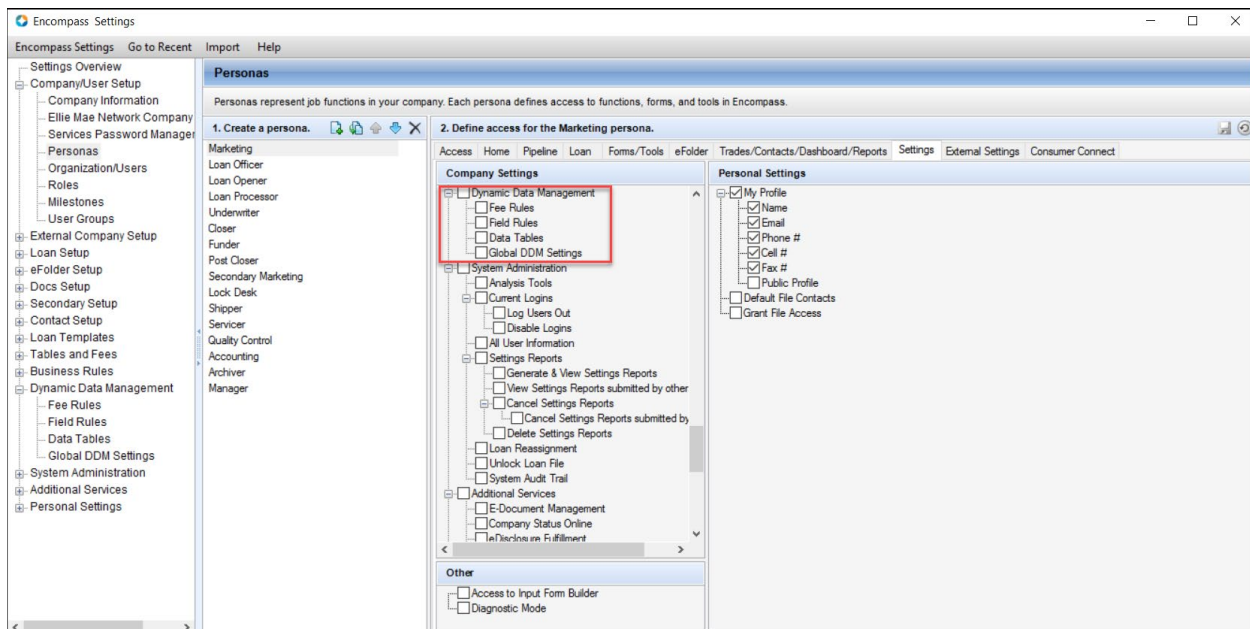
- On Encompass Consumer Connect, when an application is submitted, and a loan is created
- On Encompass TPO Connect, when a loan is registered and submitted/saved
- On Encompass Loan Officer Connect when a loan is created or saved

The rules also run when your custom application built using SDK or API creates or updates a loan.

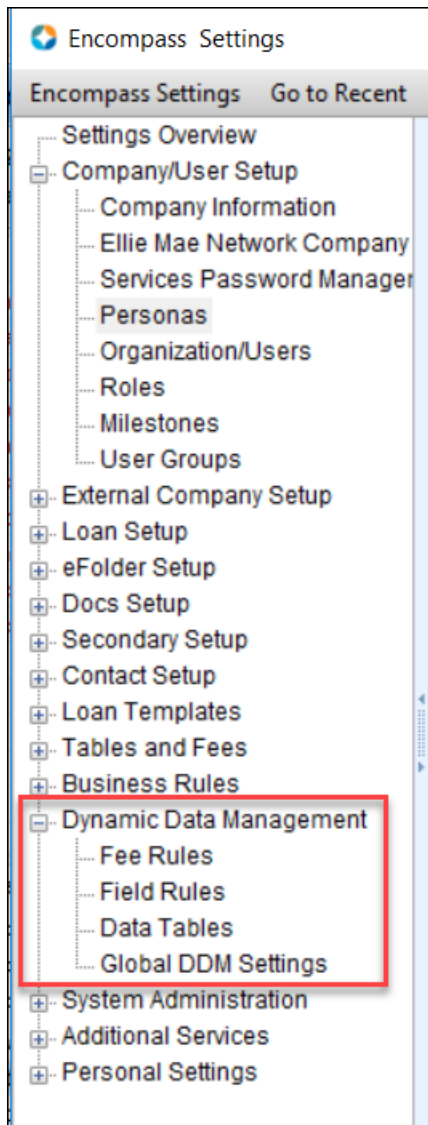
4. Accessing DDM Configuration

To access Dynamic Data Management Personas settings, go to:

Encompass Settings>Company/User Setup>Personas>Settings



A user assigned with DDM Persona rights can access Dynamic Data Management from Encompass Settings. Dynamic Data Management is accessible as a menu option between *Business Rules* and *System Administration* settings.



Access to the data templates that can be imported for a Field Rule is controlled by the following two settings:

- **Encompass Settings > Company/User Setup > Personas > Settings > Personal Templates > Data Templates**
 - If the administrator or authorized user has been granted persona access to personal data templates, the **Import from Data Template** icon will be displayed on the Add New Field Rule window and the Rule Settings window is enabled and can be used to initiate the data template import process. If persona access has not been granted, then the icon will not be available for use.
- **Encompass Settings > Company/User Setup > User Groups > Loan Templates > Misc. Data Templates**
 - If the administrator or authorized user is not a member of a user group that has been granted access rights to public data templates, the **Import from Data Template** icon will be enabled on the Add New Field Rule window and the Rule Settings window, and they can select the **Import from data template** option, however, no public folders or templates from public folders will be displayed. Thus, the administrator or user is prevented from selecting a data template to import.

5. Rule Types

There are two types of rules you can set up with DDM:

- **Fee Rule** – Configure the value for the fee amount and all fee-related attributes using a Fee Rule. For a Fee Rule, when you specify the *2015 Itemization* input form line number, all the related fields associated with that line are displayed. Completely calculated fields (such as the sub-total amounts) are not available for automation with the Fee Rule. A calculated fee in the *2015 Itemization* input form (such as field ID 454 for the origination charges in 801a) is available for automation in the context of the respective fee line.
- **Field Rule** – Configure values for any set of fields you want to automate with a Field Rule. When you create a Fee Rule, you choose the set of fields that you want to manage using that rule.

6. Fee Rules

Use the Fee Rules setting to create and manage fees in the *2015 Itemization* input form. You can create Fee Rules for each line in the *2015 Itemization* input form under Sections 800, 900, 1000, 1100, 1200 and 1300 to populate the fields that are not auto-calculated by Encompass. Within each Fee Rule you can create multiple Fee Scenario conditions that are unique and define how fee data should be populated when a loan file satisfies the unique Fee Scenario condition.

Create a Fee Rule by entering the fee line and defining the Fee Scenarios for which the fee is to be automated. For each scenario, define the conditions that characterize the scenario and the values for the fields you want to automate.

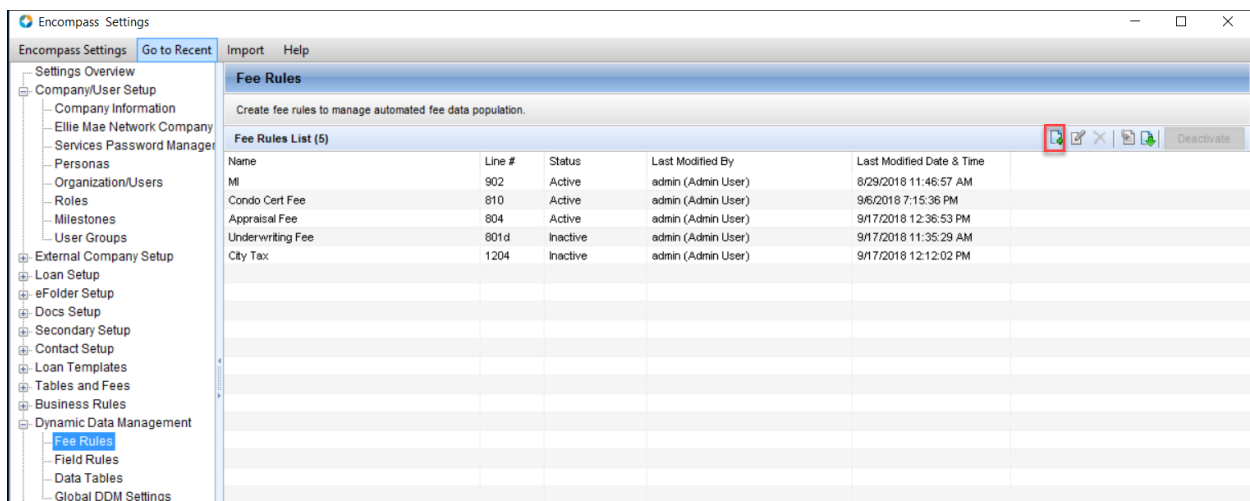
6.1. Fee Scenario

Use the Fee Scenario setting to define unique Fee Scenarios associated with the fee line. A Fee Scenario consists of the following:

- A listing of the user-defined Fee Scenarios.
- The *Details* tab to define the conditions that characterize each Fee Scenario.
- The *Value* tab containing list of fields that you can automate for that respective fee line. For each scenario, using options under this tab, you can define how the loan file needs to be populated when the conditions you have defined in the *Details* tab are met by the loan file.

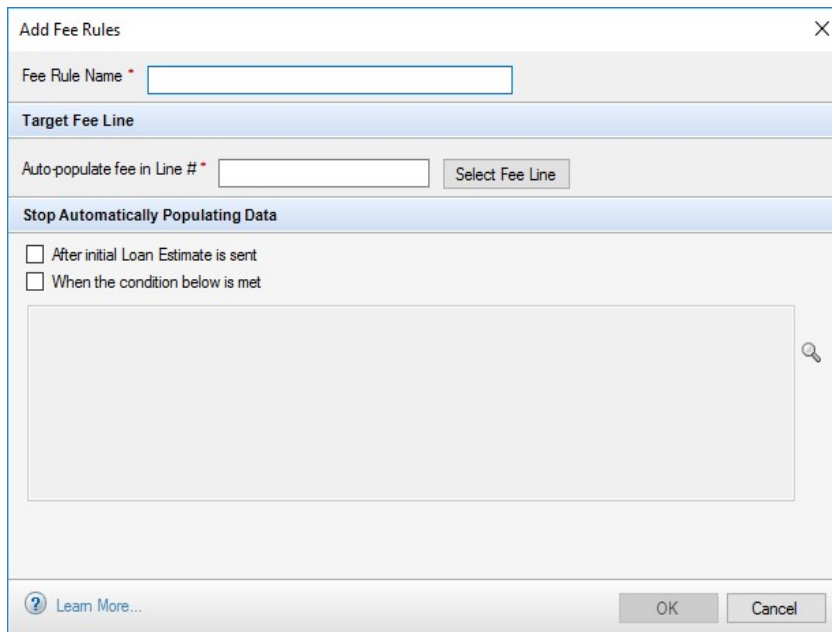
6.1.1. Create a Fee Rule

1. On the menu bar, click **Encompass**, and then click **Settings**.
2. On the left panel, click **Dynamic Data Management**, and then click **Fee Rules**. On the *Fee Rules* panel, click the **New** icon.



6.1.1.1. *Add Fee Rules*

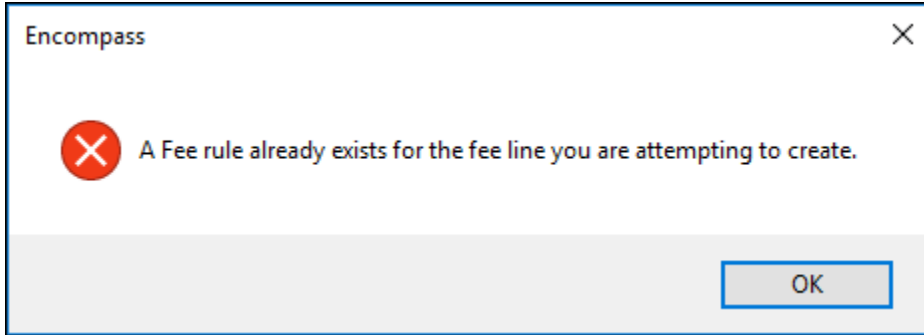
1. In the *Add Fee Rules* window, go to the *Fee Rule Name* field, and type a unique Fee Rule name.



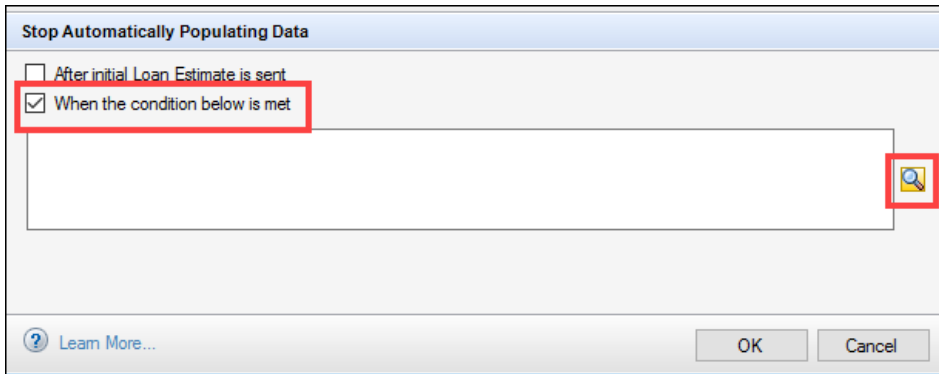
The image shows a software dialog box titled "Add Fee Rules" with a close button (X) in the top right corner. The dialog is organized into several sections:

- Fee Rule Name:** A text input field with a red asterisk indicating it is a required field.
- Target Fee Line:** A section header.
- Auto-populate fee in Line #:** A text input field with a red asterisk, followed by a "Select Fee Line" button.
- Stop Automatically Populating Data:** A section header.
- Options:** Two checkboxes:
 - After initial Loan Estimate is sent
 - When the condition below is met
- Condition Field:** A large, empty rectangular area with a magnifying glass icon on the right side, intended for defining a condition.
- Footer:** A "Learn More..." link with a question mark icon, and "OK" and "Cancel" buttons.

- In the *Target Fee Line* panel, type the fee line from the *2015 Itemization* input form. You can also select the itemization line using the **Select Fee Line** button. The fee line you provide should be unique. If you create a rule for an existing fee line, an error message will be displayed when you attempt to click **OK**.



- Use the options in the *Stop Automatically Populating Data* panel to define a stop condition for this Fee Rule. If you have unique conditions to stop triggering a specific Fee Rule, select the **When the condition below is met** check box, click the **Lookup** icon, and use the Advanced Condition Editor to define the stop condition. Note that this rule level stop condition applies in addition to the global stop condition specified in [Global DDM Settings](#). The rule will be triggered only if it passes the global stop condition specified in [Global DDM Settings](#) and the rule level stop condition defined here.



- In the *Add Fee Rule* window, click **OK** to display the *Add/Edit Fee Scenario* window.

6.1.1.2. Add Fee Scenarios

The *Add/Edit Fee Scenario* window displays a default blank Fee Scenario with a *New Fee Scenario Name* when you add a new Fee Rule. When you have at least one Fee Scenario, you can click the **New** icon to add additional Fee Scenarios as required.

Created Fee Scenarios default to *Inactive* status and you will need to click the **Activate** button once the scenario definition is complete.

The screenshot shows the 'Add/Edit Fee Scenario' window. At the top, there is a header 'Add/Edit Fee Scenario' and a close button. Below the header, a note states: 'Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.' Below this is a table titled 'Scenarios for Line 801a'. The table has columns: Order, Fee Scenario Name, Effective Date, Condition, Stop Condition, Channel, Status, Last Modified By, and Last Modified Date & Time. The first row is: 1, New Fee Scenario Name, (blank), No Condition, Initial LE Sent, All Channels, Inactive, (blank), (blank). Below the table are 'Activate' and 'Rule Settings' buttons. Below the table is a 'New Fee Scenario Name Details' dialog box. The dialog box has tabs for 'Details' and 'Values'. Under 'Details', there is a 'Fee Scenario Name' field with 'New Fee Scenario Name' entered. Below that is a 'Channels this fee scenario applies to' section with checkboxes for 'No channel selected', 'Banked - Retail', 'Banked - Wholesale', 'Brokered', and 'Correspondent'. Below that is a 'Conditions for the fee scenario' section with radio buttons for 'No - Always apply this rule' (selected) and 'Yes - Apply this rule only if'. Below that is a field for 'Effective Date for the fee scenario' with a dropdown menu set to 'Please select'. Below that is a 'Criteria' dropdown menu set to 'Please select' and a 'Date' field with a calendar icon. Below that is a 'Notes/Comments' text area. At the bottom of the dialog box are 'Learn more...', 'Save', and 'Close' buttons.

6.1.1.3. Fee Scenario Listing

1. **Order** indicates the priority of the Fee Scenario amongst other Fee Scenarios you have defined. Order number is assigned by the system when you create a scenario. When you have at least two Fee Scenarios available, click the **Up** and **Down** arrows to re-arrange the priority of the Fee Scenarios. Order is not editable by your end-user, and will be updated by the system when they re-order.

NOTE: With DDM, you can control the order of execution. For a rule, DDM starts running from the scenario on top to the scenario at the bottom. The first scenario where the loan data matches with the condition in the scenario is the one picked for execution. It is important to have the scenario with the most stringent condition at the top while keeping the one that is the least stringent at the bottom.

2. **Fee Scenario Name** indicates the unique Fee Scenario name.
3. **Effective Date** can be used to add date driven conditions for your Fee Scenario.
4. **Conditions** column displays the Fee Scenario conditions that you have defined in the *Details* tab.

5. **Stop Condition** displays the stop condition provided at the rule level.
6. **Channel** column displays the channels that you have defined for the Fee Scenario in the *Details* tab.
7. When you create a Fee Scenario, the **Status** defaults to *Inactive*. When a Fee Scenario is saved, you can **Activate** the Fee Scenario.

NOTE: Only **Active** Fee Scenarios will be executed for auto-population of data in the loan file.

8. **Last Modified By** displays the User ID that created/modified the Fee Scenario.
9. **Last Modified Date & Time** displays the last modified date and time of the Fee Scenario. Any changes to Fee Scenario Details, *Value* tab details will be treated as a modification to the Fee Scenario.

6.1.1.4. *Details Tab*

1. Provide a unique **Fee Scenario Name**.
2. Select **Channels** for which this Fee Scenario should apply to.
3. Under *Conditions for this Fee Scenario*, you can select **No** to always apply the Fee Scenario rule. Alternatively, you can select **Yes** to define a unique condition that a loan file should satisfy to apply this Fee Scenario.
4. *Effective Date for the fee scenario* is optional, but if your Fee Scenario includes date-driven conditions, you can provide the conditions here. It is also useful for long-term maintenance of the rule. As your business needs evolve and you change the scenario, you can enter an effective date for the scenario.
5. *Notes/Comments* to provide context to the Fee Scenario being created.
6. When you click **Save**, the scenario listing table displays the updated scenario details.

6.1.1.5. Value Tab

1. Click the **Value** tab to see the list of fields applicable for the fee line you had provided. You may not be able to add or remove a field listed under the *Value* tab for a Fee Scenario, but you may choose to not define a setting for that field.

Add/Edit Fee Scenario X

Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Scenarios for Line 801g Activate Rule Settings

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status	Last Modified By	Last Modified Date & Time
1	New Fee Scenario Name		No Condition	No Condition	All Channels	Inactive		

New Fee Scenario Name Values Help Refresh

Details Values

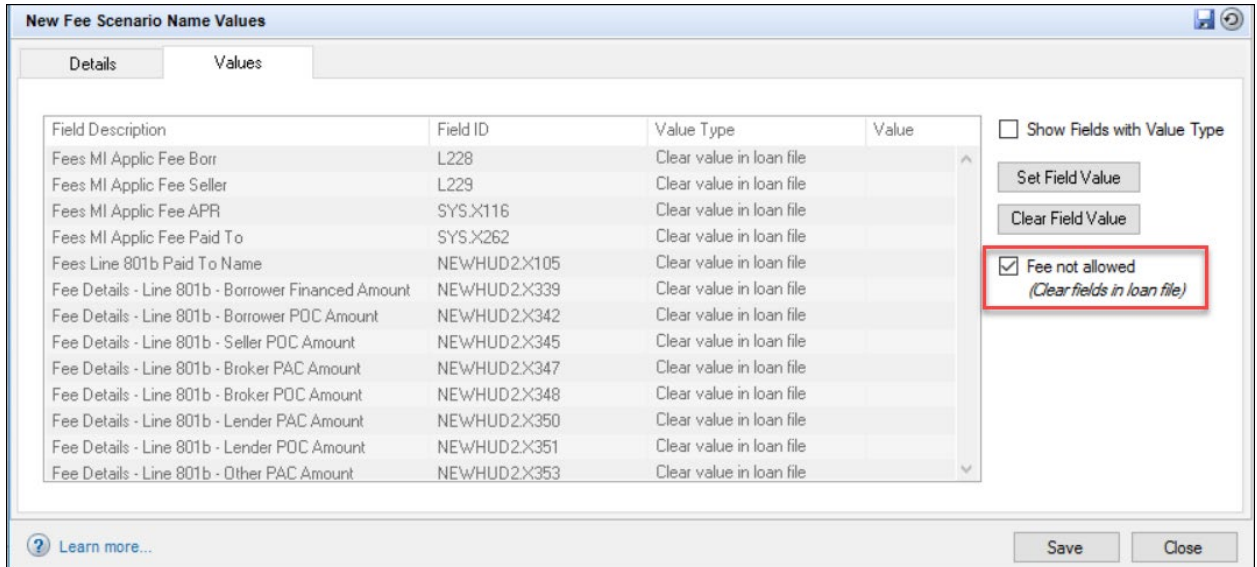
Field Description	Field ID	Value Type	Value
Fees Line 801 User Def Fee 1 Descr	154	No Value Set	
Fees Line 801g Paid To Name	NEWHUD.X1045	No Value Set	
Fees Line 801 User Def Fee 1 Borr	155	No Value Set	
Hud line 801g Seller Amount	200	No Value Set	
Fees Line 820 APR	SYS.X37	No Value Set	
Fees Line 820 Paid To	SYS.X290	No Value Set	
Fee Details - Line 801g - Borrower Financed Amount	NEWHUD2.X504	No Value Set	
Fee Details - Line 801g - Borrower POC Amount	NEWHUD2.X507	No Value Set	
Fee Details - Line 801g - Seller POC Amount	NEWHUD2.X510	No Value Set	
Fee Details - Line 801g - Broker PAC Amount	NEWHUD2.X512	No Value Set	
Fee Details - Line 801g - Broker POC Amount	NEWHUD2.X513	No Value Set	
Fee Details - Line 801g - Lender PAC Amount	NEWHUD2.X515	No Value Set	
Fee Details - Line 801g - Lender POC Amount	NEWHUD2.X516	No Value Set	

Show Fields with Value Type

 Fee not allowed
(Clear fields in loan file)

[Learn more...](#) Save Close

- By default, the *Value Type* for the listed fields is *No Value Set* and the *Value* column is blank. If the respective Fee Scenario requires the fee data to be cleared for all the field IDs under the fee line, select the **Fee not allowed** check box to disable the list of fields in the *Value* tab.



- To populate data in the corresponding field, you can select the field row and then click the **Set Field Value** button. Clicking this button displays a *Set Field Value* window where you can define the data needs to be populated in the loan file when the loan scenario is satisfied.
- For a selected field, you can click the **Clear Field Value** button to set the *Value Type* to **No Value Set**. This option can be used when you want to clear any *Value Type* and *Value* that you may have already provided for the field ID. This is the equivalent of not setting the field value using the rule and let the value in the loan file be as is.

6.1.1.5.1. Set Field Value Window

The screenshot shows the 'Set Field Value' dialog box. The 'Field Id' is 454 and the 'Field Description' is 'Fees Loan Origination Fee Borr'. The 'Value Type' dropdown is open, showing options: 'No Value Set', 'Specific Value', 'Table', 'Calculation', 'Clear value in loan file', and 'Use Calculated Value'. The 'This is a lockable/calculated field' checkbox is checked. The 'OK' and 'Cancel' buttons are at the bottom right.

1. The **Field Id** and **Field Description** are provided for your reference and cannot be edited.
2. The following *Value Types* are available in the drop-down list:

a. No Value Set

This is the default value type associated with the field. You can choose this option if, for the respective Field Scenario, you do not want the rule to update any data and instead continue with the existing loan file.

b. Specific Value

Select this option when you want a specific value to be updated to the field, given that the loan file satisfies the respective Field Scenario conditions you have defined. Contact information-specific fields include an Address Book icon to display the details.

c. Table

Based on the field, you will have the option to choose either a Data Table (defined by you) or a System Table. You can select Data Tables in this setting, only if you have already defined them in the [Data Tables](#) setting within the Dynamic Data Management setting.

Note: A Data Table may be configured with up to 8 output columns. When selecting the Data Table to refer to, you will also be required to select the specific Output column from which this field will get the value.

System tables available in the [Tables and Fees](#) setting in Encompass Settings will be available for selection only for respective fee lines that require them. Considering that these system tables impact the borrower portion of the fee, you will have ability to select a system table for the field ID that corresponds to the borrower portion of the fee in a fee line, and not in any other field. Once you have selected the Data Table or a system table from the list, the *Value* field will display the selected table.

d. Calculation

You can provide custom calculations to derive the value for a field. This is similar to defining a calculation for a custom field.

e. Clear value in loan file

Choosing this option for a field ID will clear its value in the loan file when this DDM rule is executed.

f. Use Calculated Value

If a field with UI lock has been unlocked, then the **Use Calculated Value** setting will revert the field to a system-calculated field.

NOTE: *Only the calculated fields in the 2015 Itemization input form have been exposed in DDM. At this time, calculated fields outside of 2015 Itemization cannot be controlled via DDM.*

3. In the *Add/Edit Fee Scenario* window, select the **Show Fields with Value Type** check box to view fields that have Value type defined. This offers a concise view of the fields that are being automated by this scenario.
4. Click the **Save** icon.
5. Click the **Activate** button to enable the Fee Scenario. Activating a Fee Scenario will also activate the Fee Rule if the rule is already not active.

NOTE: *Use [Analysis Tools](#) to get visibility on whether you have field trigger business rules on the same trigger fields that you have for the DDM rule you are creating or activating. Ensure there is no conflict. If there is an overlap, and the DDM rule is replacing a field trigger, deactivate the field trigger.*

 - a. To create additional Fee Rules from the Fee Rules landing page, repeat the steps mentioned in [Add Fee Rules](#). Encompass will allow you to create one Fee Rule for every 2015 itemization line. For managing multiple conditions of automated data population under a Fee Rule, you may define and manage multiple Fee Scenarios.
 - b. To create additional Fee Scenarios under the existing Fee Rule, you can select the specific Fee Rule in the landing page and click the **Edit** icon. This will navigate you to the Fee Scenarios window. Follow the instructions in the [Add Fee Scenario](#) section to add more scenarios to the Fee Rule.
6. Click the **Rule Settings** button to modify Fee Rule details such as fee name, fee line number, and the rule level stop condition. Updating the details through *Rule Settings* will overwrite the rule for the changes done, including the Fee Scenario updates. If you change the line number from the *Rule Settings*, all the values defined for the previous line number across all scenarios will be cleared and a warning message will be displayed.

6.1.1.5.1.1. Controlling the Sequence of Operations

Once you define multiple scenarios, you can control the sequence of execution by moving the scenarios, using the **Up** and **Down** arrows. The scenario that has the strictest conditions should be on top of the list and the least strict ones should be at the bottom. When the rule runs, Encompass looks for the first scenario from the top that meets the conditions and executes that scenario. This is similar to the order selection of milestone templates.

Add/Edit Fee Scenario							
Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.							
Scenarios for Line 804							
Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status	Last Modified
1	Manual Override		[<APPRAISALOVERRIDE] = "Y"	No Condition	All Channels	Active	adn
2	No appraisal fee		[1172] = "FHA" and [MORNET.X40] = "StreamlineWithoutAppraisal"	No Condition	All Channels	Active	adn
3	Appraisal Fee E If Oct 2018	3142 - Application	No Condition	No Condition	All Channels	Active	adn
4	Appraisal Fee Prior to Oct 2018	3142 - Application	No Condition	No Condition	All Channels	Active	adn

7. Eliminating the **GetMI** Click for FHA and VA Loans

You can create Fee Scenarios for FHA and VA loans under Fee line 902. When the scenarios are configured as shown below by referring to the system table, Encompass will automatically pull the appropriate values for upfront and monthly MI. This eliminates the need for the user to click the **GetMI** button and streamlines the workflow.

Loan Type	Fee Line	Field ID	Field Description	Value Type	Value
Required Settings for GetMI					
FHA	902	337	Fees Mtg Ins Premium Borr	Table	Select MI Table from the table list.
VA	902	337	Fees Mtg Ins Premium Borr	Table	Select MI Table from the table list.

To Create a Rule for FHA and VA Loans:

1. Create/modify a [Fee Rule](#) for fee line 902.
2. In the *Add/Edit Fee Scenario* window, you can add scenarios.
 - a. Create a scenario “MI for VA “and another scenario “MI for FHA”.
 - b. Set the condition for the VA scenario as:
 - c. [1172] = "VA" and [990] <> "Y" and [3533] <> "Y" and [CX.FEE_VA_MI_OVERRIDE] <> "Y"
 - d. Set the condition for the FHA scenario as:
 - e. [1172] = "FHA" and [3533] <> "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y".

NOTE: There may be exceptions where you may not rely on the GetMI for VA and FHA loans. For example, a VA loan with split eligibility, where two veterans (borrower and co-borrower are both veterans), want to use their eligibility to qualify for the loan. This is not currently supported via GetMI in Encompass. Similarly, for both FHA & VA loans, if the borrower pays more amount in cash (more than just the cents portion of the upfront MIP), you may be overriding the fields [1765] and [1760] in the MIP / Guarantee Fee window. It is important that your automation scenario excludes these exceptions, so that any manual overrides you do for handling these exceptions are not replaced by what the rule automatically fills in. The CX.FEE_VA_MI_OVERRIDE and the CX.FEE_FHA_MI_OVERRIDE custom fields help you capture such exceptions, and including them in the condition ensures that the rule bypasses these custom manual overrides. You need to have a workflow to set the custom field for such exceptions based on your needs.

There are also situations where you may want to clear the MI-related fields. For example, for VA loans you can use the VA Exempt field (field ID 990) to clear the VA Funding Fee. Similarly, you may want to clear the MI fields when the Lender Paid Mortgage Insurance checkbox (field ID 3533) is selected. Hence, you see the field IDs 990 and 3533 as well in the advanced condition.

3. For the MI for VA scenario, click the **Values** tab.
4. Select **Field ID 337** and click the **Set Field Value** button.

- Select **Value Type** as **Table** and in the *List of Tables* window, choose System Table **MI Tables**.
When set up, the scenario will look as shown below:

Add/Edit Fee Scenario

Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status
1	MI for VA		[1172] = "VA" and [990] <> "Y" and [3533] <> "Y" and [CX.FEE_VA_MI_OVERRIDE] <> "Y"	No Condition	All Channels	Active
2	MI for FHA		[1172] = "FHA" and [3533] <> "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition	All Channels	Active

MI for VA Values

Field Description	Field ID	Value Type	Value
File Contacts Mtg Ins Co Name	L248	No Value Set	
Fees Mtg Ins Premium Borr	337	Table	MI Tables
Trans Details Loan Amt	1109	No Value Set	
Insurance Mtg Ins Upfront Factor	1107	No Value Set	
Expenses Calc MIP/PMI MIP Funding Amt	1826	No Value Set	
Expenses Calc MIP/PMI Lock	1765	No Value Set	
Expenses Calc MIP/PMI Amt Paid In Cash	1760	No Value Set	
Refund prorated unearned Up Front MI Premiums	3262	No Value Set	
FHA Process Management Solution Round To \$50	SYS:X11	No Value Set	
Charges for the insurance are added to your loan payment	3531	No Value Set	
Charges for the insurance are collected upfront at loan clos	3532	No Value Set	
Lender Paid Mortgage Insurance	3533	No Value Set	
MI Factor Field Locked	3625	No Value Set	

Show Fields with Value Type

 Fee not allowed
(Clear fields in loan file)

[Learn more...](#)

- Create another scenario for VA loans with the condition set to **Loan Type** is **VA**.
- Click the **Values** tab.
- Repeat steps 4 and 5.

9. When set up, the rule will look like below:

Add/Edit Fee Scenario

Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Scenarios for Line 902

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status
1	MI for VA		[1172] = "VA" and [990] <> "Y" and [3533] <> "Y" and [C\FEE_VA_MI_OVERRIDE] <> "Y"	No Condition	All Channels	Active
2	MI for FHA		[1172] = "FHA" and [3533] <> "Y" and [C\FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition	All Channels	Active

MI for FHA Values

Field Description	Field ID	Value Type	Value
File Contacts Mtg Ins Co Name	L248	No Value Set	
Fees Mtg Ins Premium Borr	337	Table	MI Tables
Trans Details Loan Amt	1109	No Value Set	
Insurance Mtg Ins Upfront Factor	1107	No Value Set	
Expenses Calc MIP/PMI MIP Funding Amt	1826	No Value Set	
Expenses Calc MIP/PMI Lock	1765	No Value Set	
Expenses Calc MIP/PMI Amt Paid In Cash	1760	No Value Set	
Refund prorated unearned Up Front MI Premiums	3262	No Value Set	
FHA Process Management Solution Round To \$50	SYS.X11	No Value Set	
Charges for the insurance are added to your loan payment	3531	No Value Set	
Charges for the insurance are collected upfront at loan clos	3532	No Value Set	
Lender Paid Mortgage Insurance	3533	No Value Set	
MI Factor Field Locked	3625	No Value Set	

Show Fields with Value Type

 Fee not allowed
(Clear fields in loan file)

10. Add a couple of scenarios to clear the VA and FHA MI fields for the conditions described in step 2. For example, for VA loans, you may want to clear upfront MIP fields when funding fee is exempt or when lender is paying the mortgage insurance. Similarly, for FHA loans, you may want to clear the upfront and monthly MI fields when the lender is paying mortgage insurance.
- Use the arrows to move these scenarios up, so that they are above the *MI for VA* and *MI for FHA* scenarios. Moving the scenarios up controls the order of execution of the scenarios and ensures that the program clears the MI-related fields when the loan data meets the condition.

When setup, the scenarios will display as shown below:
 For VA Loans

Add/Edit Fee Scenario ✕

Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Activate Rule Settings

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition
1	Clear VA for Funding Fee Exempt and Lender Paid MI		[1172] = "VA" and ([990] = "Y" or [3533] = "Y") and [CX.FEE_VA_MI_OVERRIDE] <> "Y"	No Condition
2	Clear FHA for Lender Paid MI		[1172] = "FHA" and [3533] = "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition
3	MI for VA		[1172] = "VA" and [990] <> "Y" and [3533] <> "Y" and [CX.FEE_VA_MI_OVERRIDE] <> "Y"	No Condition
4	MI for FHA		[1172] = "FHA" and [3533] <> "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition

< >

Clear VA for Funding Fee Exempt and Lender Paid MI Values

Details Values

Field Description	Field ID	Value Type	Value
Insurance Mtg Ins Upfront Factor	1107	Clear value in loan file	
Expenses Calc MIP/PMI MIP Funding Amt	1826	Clear value in loan file	
Expenses Calc MIP/PMI Lock	1765	Clear value in loan file	
Expenses Calc MIP/PMI Amt Paid In Cash	1760	Clear value in loan file	

Show Fields with Value Type
 Set Field Value
 Clear Field Value
 Fee not allowed
(Clear fields in loan file)

[Learn more...](#)
Save Close

For FHA Loans

Add/Edit Fee Scenario

Fee scenario order is important. The system applies the first fee scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Scenarios for Line 902

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition
1	Clear VA for Funding Fee Exempt and Lender Paid MI		[1172] = "VA" and ([990] = "Y" or [3533] = "Y") and [CX.FEE_VA_MI_OVERRIDE] <> "Y"	No Condition
2	Clear FHA for Lender Paid MI		[1172] = "FHA" and [3533] = "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition
3	MI for VA		[1172] = "VA" and [990] <> "Y" and [3533] <> "Y" and [CX.FEE_VA_MI_OVERRIDE] <> "Y"	No Condition
4	MI for FHA		[1172] = "FHA" and [3533] <> "Y" and [CX.FEE_FHA_MI_OVERRIDE] <> "Y"	No Condition

Clear FHA for Lender Paid MI Values

Details Values

Field Description	Field ID	Value Type	Value
Insurance Mtg Ins Upfront Factor	1107	Clear value in loan file	
Expenses Calc MIP/PMI MIP Funding Amt	1826	Clear value in loan file	
Expenses Calc MIP/PMI Lock	1765	Clear value in loan file	
Expenses Calc MIP/PMI Amt Paid In Cash	1760	Clear value in loan file	
Insurance Mtg Ins Periodic Factor 1	1199	Clear value in loan file	
Insurance Mtg Ins Period 1	1198	Clear value in loan file	
Insurance Mtg Ins Periodic Factor 2	1201	Clear value in loan file	
Insurance Mtg Ins Period 2	1200	Clear value in loan file	
Insurance Mtg Ins Cancel at %	1205	Clear value in loan file	

Show Fields with Value Type

Set Field Value

Clear Field Value

Fee not allowed
(Clear fields in loan file)

Learn more... Save Close

11. Save and activate the Fee Scenarios.

12. Execution of the MI DDM scenarios will auto-populate fields as documented in the table below:

Loan Type	Fee Line	Field ID	Field Description	Source for Data auto-population.
FHA	902	337	Fees Mtg Ins Premium Borr	GetMI function that refers to the MI Tables under <i>Tables and Fees</i> setting.
		1107	Insurance Mtg Ins Upfront Factor	
		1199	Insurance Mtg Ins Periodic Factor 1	
		1198	Insurance Mtg Ins Period 1	
		1201	Insurance Mtg Ins Periodic Factor 2	
		1200	Insurance Mtg Ins Period 2	
		1205	Insurance Mtg Ins Cancel at %	
	1003	232	Expenses Proposed Mtg Ins	
VA	905	1050	Fees VA Fund Fee Borr	GetMI function that refers to the MI Tables under <i>Tables and Fees</i> setting.

Apart from the field IDs mentioned in the table above, you will need to maintain DDM settings in the associated fee line for all the other fields in that fee line. For example, if you need to set the APR flag in line 905 to **Yes**, you can set that by defining a separate rule for line 905.

Note: You must download the latest FHA and VA MI tables from the *Encompass Settings > Tables and Fees > [MI Tables](#)*. It is important that you keep these tables updated as Ellie Mae makes periodic updates so that the rule continues to populate accurate values. Also, these rules are provided as examples only. Consult your Compliance/Operations department for exceptions where you do not want the rule to apply and accordingly include conditions so that the rule bypasses these exceptions. Such exceptions should continue to be handled by your manual workflow. In the absence of conditions in your rule to exclude these exceptions, your manual overrides will be replaced by what the rule automates.

8. Field Rules

Use the *Field Rules* setting to manage auto-population of data for standard Encompass fields. Creating a Field Rule is similar to creating a Fee Rule. The difference is that while a Fee Rule is driven by a fee line in the *2015 Itemization* input form, Field Rules are driven by a set of fields that you have chosen.

You can choose the fields you want to include for a Field Rule by entering the field IDs, or by importing from a data template or a .CSV file with fields and field values. Once you add the list of fields for the Field Rule, you can create Field Scenarios to define unique conditions that characterize the scenario and define the values that need to be populated to those fields in the loan file when the loan file meets the conditions for one of the Field Scenarios.

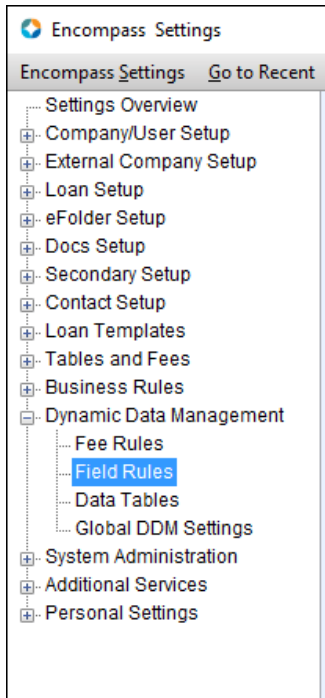
8.1. Field Scenario

Use this setting to define unique Field Scenarios associated to the fields you have included for the Field Rule. Each Field Scenario consists of the following:

- List of user-defined Field Scenarios.
- A *Details* tab listing user-defined conditions that may be unique for each Field Scenario.
- A *Value* tab listing the fields that you have chosen to manage using the Field Rule. For each scenario, using the options under this tab, you can define how the loan file needs to be populated when the conditions you have defined in the *Details* tab are met by the loan file.

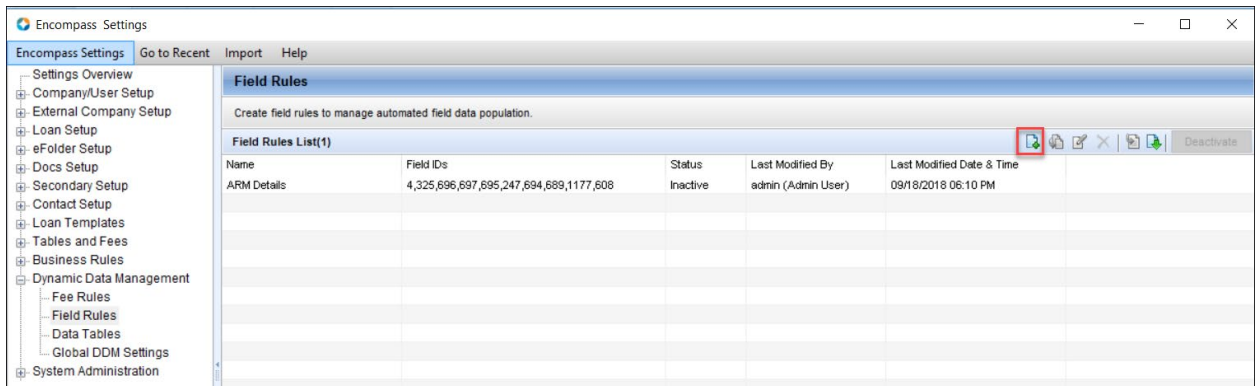
8.1.1. Create a Field Rule

1. On the menu bar, click **Encompass**, and then click **Settings**.
2. On the left panel, click **Dynamic Data Management**, and then click **Field Rules**.

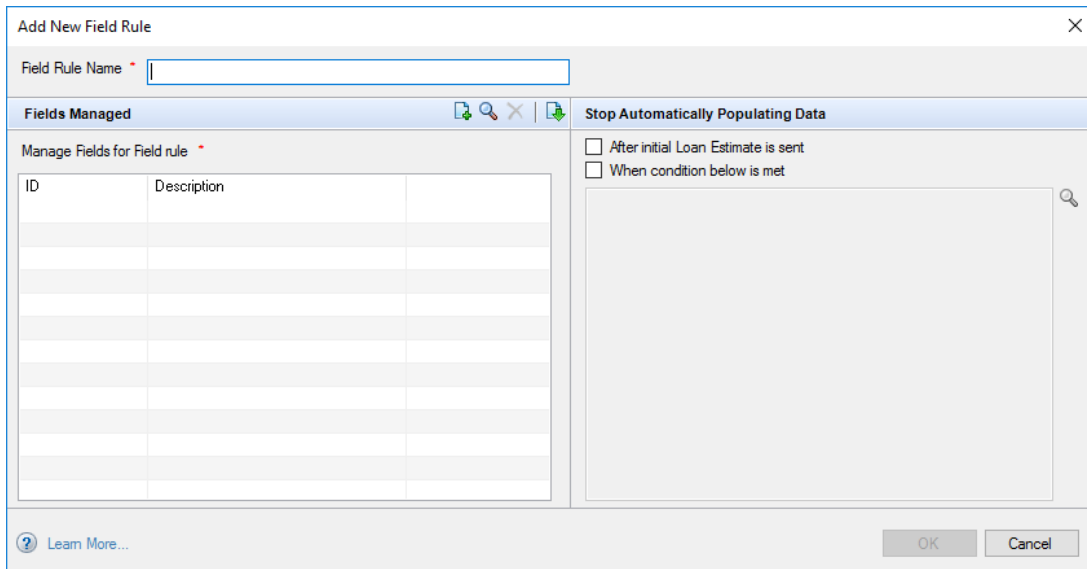


8.1.1.1. Add Field Rules

1. In the *Field Rules* setting, click the **New** icon.

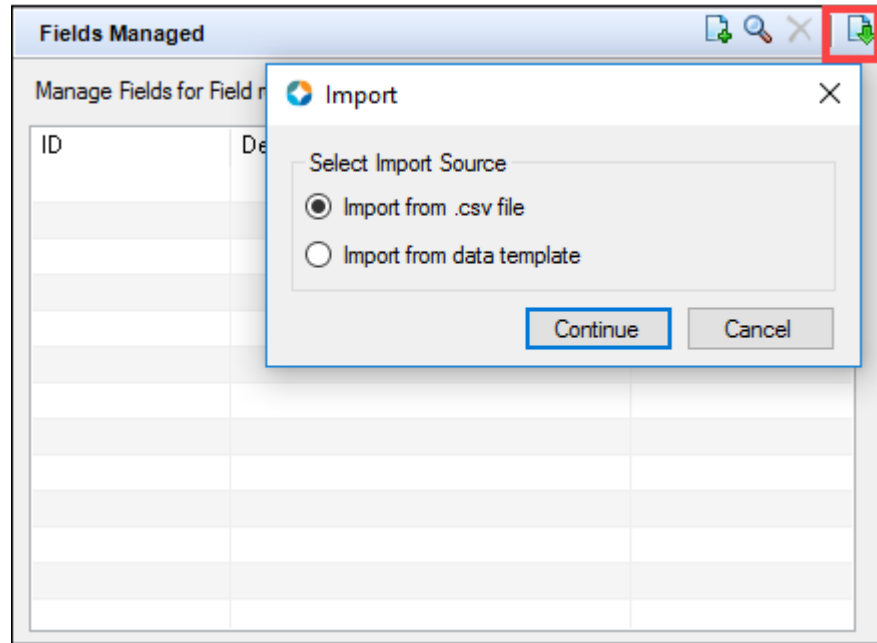


2. In the *Add New Field Rule* window:



- a Type a unique *Field Rule Name*.
- b Use the *Fields Managed* panel to add the list of fields for the Field Rule. These fields will populate the loan file when it satisfies your specified Field Scenario.
 - **Manually add fields:** Click the **New** icon to manually add fields to the Field Rule.

- **Import from .CSV file:** Click the **Import** icon and then select **Import from .csv file** to import a set of fields and field values from a CSV file. The CSV file should be of the format “field id, value” and not include any header row.

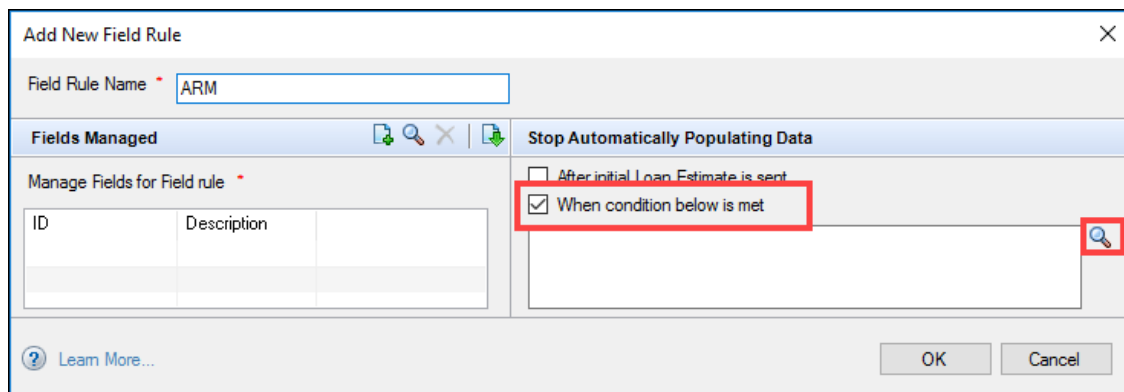


- **Import from Data Template:** Click the **Import** icon and then select **Import from data template** to import a set of fields and field values from a data template. You can select to import data from only one data template at a time.
- You can add more fields after importing fields from a CSV file or data template. **NOTE:** *Importing from a CSV file or from data template with already existing fields in the Field Rule, will replace the existing fields with the data in the CSV or data template. If it is an existing rule with scenarios, import replaces not only the fields but also the existing scenarios with a single default scenario. A warning message will be displayed prior to the replacement.*

Access to the data templates that can be imported for a Field Rule is controlled by the following two settings:

- **Encompass Settings > Company/User Setup > Personas > Settings > Personal Templates > Data Templates**
 - If the administrator or authorized user has been granted persona access to personal data templates, the **Import from Data Template** icon will be displayed on the Add New Field Rule window and the Rule Settings window is enabled and can be used to initiate the data template import process. If persona access has not been granted, then the icon will not be available for use.
- **Encompass Settings > Company/User Setup > User Groups > Loan Templates > Misc. Data Templates**

- If the administrator or authorized user is not a member of a user group that has been granted access rights to public data templates, the **Import from Data Template** icon will be enabled on the Add New Field Rule window and the Rule Settings window, and they can select the **Import from data template** option, however, no public folders or templates from public folders will be displayed. Thus, the administrator or user is prevented from selecting a data template to import.
- c Use the options in the *Stop Automatically Populating Data* panel to define a stop condition for this Field Rule to auto-populate data in the loan file. If you have unique conditions to stop applying the Field Rule, select the **When condition below is met** check box and use the options in the *Advanced Condition Editor* window to define the stop condition.



Note that this rule level stop condition applies in addition to the global stop condition specified in [Global DDM Settings](#). The rule will be triggered only if it passes the global stop condition specified in [Global DDM Settings](#) and the rule level stop condition defined here.

- d Click the **OK** button to display the *Add/Edit Field Scenario* window.

8.1.1.2. *Add Field Scenarios*

The *Add/Edit Field Scenario* window displays a default blank field scenario, *New Field Scenario Name*, when you add a new Field Rule. When you have at least one field scenario, you can click the **New** icon to add additional field scenarios as required.

Created field scenarios default to *Inactive* status and you will need to click the **Activate** button once the scenario definition is complete.

8.1.1.3. *Field Scenario Listing*

1. *Order* indicates the priority of the Field Scenario amongst other Field Scenarios you have defined. Order number is assigned by the system when you create a scenario. When you have at least two Field Scenarios available, you can re-arrange the priority of the Field Scenarios. Order is not editable by your end-user, and will be updated by the system when you re-arrange the sequence.

NOTE: *With DDM, you can control the order of execution. For a rule, DDM starts running from the scenario on top to the scenario at the bottom. The first scenario where the loan data matches with the condition in the scenario is the one selected for execution. It is important to place the scenario with the most stringent conditions at the top while keeping the one that is the least stringent at the bottom.*

2. *Field Scenario Name* denotes unique name for the Field Scenario.
3. *Effective Date* can be used to add date-driven conditions for your Field Scenario.
4. *Conditions* column displays the Field Scenario conditions that you have defined in the *Details* tab.
5. *Stop Condition* defined for the rule is displayed for quick reference.
6. *Channel* column displays the channels that you have defined for the Field Scenario in the *Details* tab.
7. When you create a Field Scenario, the *Status* will default to *Inactive*. When a Field Scenario is saved, you can activate the scenario.

NOTE: *Only active Field Scenarios will be validated for auto-population of data in the loan file.*

8. *Last Modified By* displays the User ID that created/modified the Field Scenario.
9. *Last Modified Date & Time* displays the last modified date and time of the Field Scenario. Any changes to Field Scenario Details, Value tab details will be treated as a modification to the Field Scenario.

8.1.1.4. *Details Tab*

1. Provide a unique *Field Scenario Name*.
2. Select *Channels* for which this Field Scenario will apply.
3. In the *Conditions for this Field Scenario*, select **No** to always apply the Field Scenario rule. Alternatively, you can select **Yes** to define a unique condition that a loan file should satisfy to apply this Field Scenario.
4. *Effective Date for the field scenario* is optional, but if your Field Scenario includes date-driven conditions, you can provide the conditions here. It is also useful for long-term maintenance of the rule. As your business needs evolve and you change the scenario, you can enter an effective date for the scenario.
5. *Notes/Comments* to provide context to the Field Scenario being created.

Add/Edit Field Scenario
✕

Field scenario order is important. The system applies the first field scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.

Activate
Rule Settings

Order	Field Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status	Last Modified By	Last Modified Date & Time
1	New Field Scenario Name		No Condition	No Condition	All Channels	Inactive		

New Field Scenario Name Details

Details Values

Field Scenario Name

Channels this field scenario applies to

No channel selected
 Banked - Retail
 Banked - Wholesale
 Brokered
 Correspondent

Conditions for the field scenario

No - Always apply this rule
 Yes - Apply this rule only if

is

Effective Date for the field scenario

Effective date: Please select

Criteria: Please select

Date:

Notes/Comments

? Learn more...
Save
Close

8.1.1.5. Value Tab

- Fields added earlier in the [Fields Managed](#) panel are displayed in the *Value* tab. If you need to update the selected list of fields, click the **Rule Settings** button to access the *Rule Settings* window where you can use the **New** and **Delete** icons to update the list of fields. You can also import fields from a .CSV file or from a data template.

NOTE: *Importing fields over an existing collection of fields in the Field Rule will overwrite all existing scenarios you have defined and replace them with a default single scenario.*

From the *Rule Settings* window, you can also modify the rule level stop condition.

The screenshot shows the 'Add/Edit Field Scenario' window. At the top, it says 'Field scenario order is important. The system applies the first field scenario rule it finds in this list that best matches the data in the loan. Use the arrows to manage the list order.' Below this is a table titled 'Scenarios for SHRIFLDDOCTYPE00111' with columns: Order, Fee Scenario Name, Effective Date, Condition, Stop Condition, Channel, Status, Last Modified By, and Last Modified Date & Time. The first row is selected and highlighted in blue.

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status	Last Modified By	Last Modified Date & Time
1	Scenario 001		No Condition	[@3054] <> #7/31	All Channels	Inactive	admin (Admin User)	09/06/2018 11:41 PM
2	New Field Scenario Name		No Condition	[@3054] <> #7/31	All Channels	Inactive	admin (Admin User)	09/06/2018 11:41 PM

Below the table is a section titled 'Scenario 001 Values' with two tabs: 'Details' and 'Values'. The 'Values' tab is active, showing a table with columns: Field Description, Field ID, Value Type, and Value.

Field Description	Field ID	Value Type	Value
Borrower First Name	4000	No Value Set	
Trans Details Loan Purpose	19	No Value Set	
Trans Details Interest Rate	3	Clear value in loa	
Trans Details Closed Date	748	No Value Set	
Trans Details Loan Amt	1109	Calculation	100+100

On the right side of the 'Values' tab, there is a checkbox labeled 'Show Fields with Value Type' which is unchecked. Below it are two buttons: 'Set Field Value' and 'Clear Field Value'. At the bottom of the window, there is a 'Learn more...' link on the left and 'Save' and 'Close' buttons on the right.

- By default, *Value Type* for the listed fields is *No Value Set* and the *Value* column is blank.
- To populate data in the relevant fields, select the field row and then click the **Set Field Value** button. This displays a *Set Field Value* window where you can define what data needs to be populated in the loan file when the loan scenario is satisfied.

8.1.1.5.1. Set Field Value Window

The screenshot shows a 'Set Field Value' dialog box. The 'Field Id' is 454 and the 'Field Description' is 'Fees Loan Origination Fee Borr'. The 'Value Type' dropdown is open, showing options: 'No Value Set', 'Specific Value', 'Table', 'Calculation', 'Clear value in loan file', and 'Use Calculated Value'. A checkbox 'This is a lockable/calculated field' is checked. 'OK' and 'Cancel' buttons are at the bottom right.

1. The *Field ID* and *Field Description* are provided for reference and cannot be edited.
2. The following *Value Types* are available:
 - a. No Value Set**

This is the default value type associated with the field. You can choose this option if, for the respective Field Scenario, you do not want the rule to update any data and instead continue with the existing loan file.
 - b. Specific Value**

Select this option when you want a specific value to be updated to the field, given that the loan file satisfies the respective Field Scenario conditions you have defined. Contact information-specific fields include an Address Book icon to display the details.
 - c. Table**

Based on the field, you will have the option to choose either a Data Table (defined by you) or a System Table. You can select Data Tables in this setting, only if you have already defined them in the [Data Tables](#) setting within the Dynamic Data Management setting.

Note: A Data Table may be configured with up to 8 output columns. When selecting the Data Table to refer to, you will also be required to select the specific Output column from which this field will get the value.
 - d. Calculation**

You can provide calculations to derive value for a field. This is similar to defining a calculation for a custom field.
 - e. Clear value in loan file**

Choose this option to clear the value existing for that field in the loan file.

f. Use Calculated Value

If a field with UI lock has been unlocked, then the **Use Calculated Value** setting will revert the field to a system-calculated field.

NOTE: Only the calculated fields in the 2015 Itemization input form have been exposed in DDM. At this time, calculated fields outside of 2015 Itemization cannot be controlled via DDM.

3. In the *Add/Edit Field Scenario* window, select the **Show Fields with Value Type** check box to view fields that have Value Type defined. This offers a concise view of the fields that are being automated by this scenario.
4. Click the **Save** icon.
5. Click the **Activate** button to enable the Field Scenario. Activating a Field Scenario will also activate the Field Rule if the rule is already not active.

Note: Use [Analysis Tools](#) to get visibility on whether you have field trigger business rules on the same trigger fields that you have for the DDM rule you are creating or activating. Ensure there is no conflict. If there is overlap, and the DDM rule is replacing a field trigger, deactivate the field trigger.

- a. To create additional Field Rules from the Field Rules home page, repeat the steps documented in [Add Field Rules](#).
- b. To create additional Field Scenarios under the existing Field Rule, you can select the specific Field Rule in the Field Rules home page and click the **Edit** icon. This will navigate you to the *Add/Edit Field Scenario* window. See [Add Field Scenarios](#) to add more scenarios to the Field Rule.

8.1.1.5.1.1. Controlling the Sequence of Operations

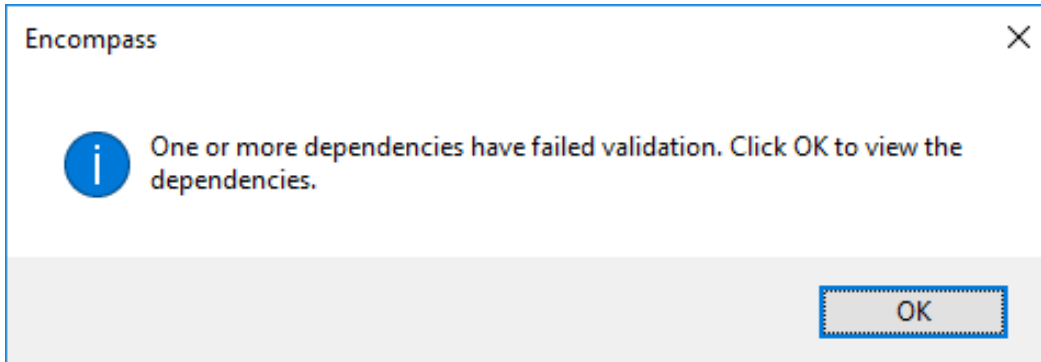
Once you define multiple scenarios, you can control the order of execution by moving the scenarios up and down. The scenario with the strictest conditions should be on top and the least strict ones should be at the bottom. When the DDM rule runs, Encompass looks for the first scenario from the top that meets the conditions and will execute that scenario. This is very similar to how milestone templates work.

9. Export and Import of Fee Rules, Field Rules

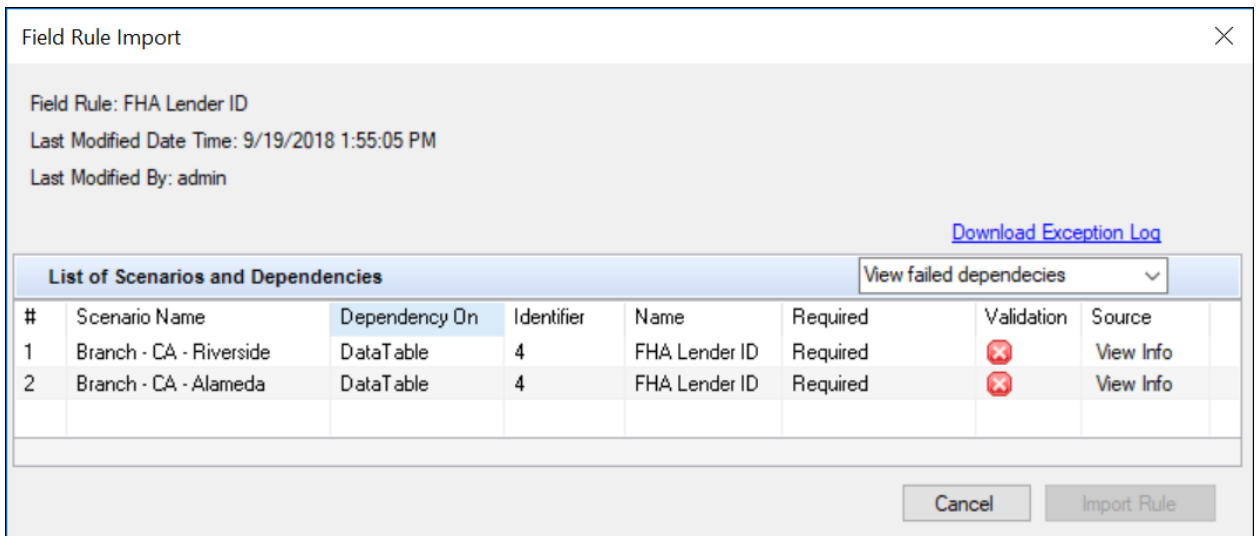
Once you have created the Fee Rule or a Field Rule in your test or lower environment and validated it, you can then export it and then import that rule in your production environment. See below for additional information on import of Rules:

1. Encompass allows only one Fee Rule to be available for a fee line. Hence, when you attempt to update a Fee Rule for which you already have a Fee Rule in the target system, you will be required to delete the existing Fee Rule for a fee line, prior to importing an updated Fee Rule. Encompass will prompt a message if a Fee Rule for the fee line already exists in the target system prior to cancelling the import process.
2. When you import a Field Rule, you need to ensure that there are no Field Rules existing with the same Field Rule name in the target system. System will prompt a message and cancel the import process, if a duplicate Field Rule name is identified.

- During the import process, if there are failed dependencies, the import process will terminate and the following message displays:



- When you click the **OK** button in the error message window, the *Rule Import* window with the details of the failed dependencies displays.



- Click the **View Info** link corresponding to a failed dependency to view the details.
- Click the **Download Exception Log** to download a .txt file with the details of all the failed dependencies. This link will display only when there are failed dependencies.
- From the *View failed dependencies* drop-down list, select **View All** to view all the validations performed as part of the import process. The drop-down will default to **View failed dependencies** when the import process identifies failed dependencies.
- When there are no failed dependencies, click the **Import Rule** button to import the Fee/Field Rule.
- Successfully imported Fee/Field Rules will be in *Inactive* status by default. You need to review the imported rule by activating at least one of the underlying scenarios.

10. Data Tables

Data Table is a user-defined table structure from which you can look-up values for a fee or field based on variables. You may already have such tables as a fee sheet provided by a vendor with who conduct business. Data Tables eliminate complex advanced code. In the absence of the Data Table, you would need to use a field trigger that executed advanced code with nested If, Then statements or select case statement.

A Data Table has variables and an output. The output is the fee or the field that is being looked up. The variables can be any field in Encompass - standard Encompass fields, custom fields, or virtual fields based on which the output is determined. The output is also referred to as the *output column* in the Data Table.

Part of the Data Table setup process is configuring the *Output* columns. Few points to note about Output columns:

1. There are 8 Output columns available for a Data Table to select from. To save a Data Table, you need to ensure the Data Table has at least one Output column.
2. The *Output Column* can be changed according to business needs.
3. For a given Data Table row, you can define each *Output* column with value that you will want to populate to a field in a loan file, when the loan file satisfies a specific Data Table row condition.
4. You can define values to each Output cell in a Data Table row using the below Value Types:
 - a. Specific value
 - b. Calculation
 - c. Clear Value in Loan File

Note: After you define the Data Table, you need to link it to the scenario by using the **Set Field Value** button from a scenario's Value tab. When you define the output in the Data Table, you are not setting a field ID for the output yet. The field ID is determined when you link it to the scenario by using the **Set Field Value** button from a scenario's Value tab.

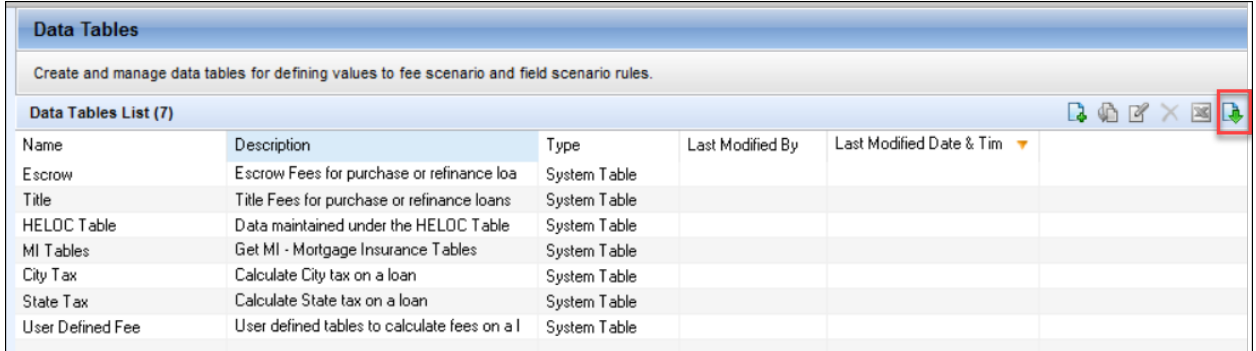
10.1. Create a Data Table

Creating a Data Table includes defining a table structure and adding data rows to the table structure. The table is a set of a dependent fields and an output.

1. On the menu bar, click **Encompass**, and then click **Settings**.
2. On the left panel, click **Dynamic Data Management**, and then click **Data Tables**.

10.1.1. Import Data Table

1. To create a new Data Table, click the **Import** icon and import a CSV file with values for a look-up table.



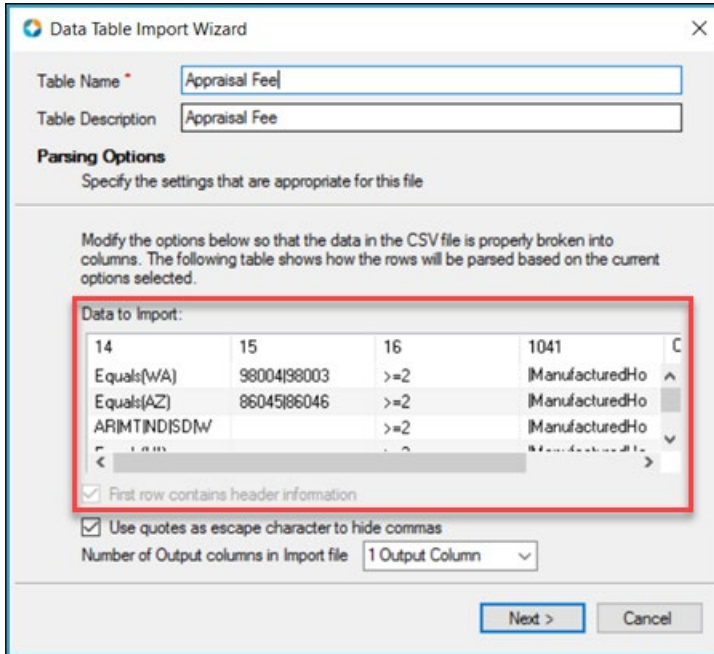
The screenshot shows a software window titled "Data Tables" with a subtitle "Create and manage data tables for defining values to fee scenario and field scenario rules." Below the subtitle is a toolbar with several icons, including a green arrow pointing down into a box, which is highlighted with a red square. This icon represents the "Import" function. Below the toolbar is a table titled "Data Tables List (7)".

Name	Description	Type	Last Modified By	Last Modified Date & Time
Escrow	Escrow Fees for purchase or refinance loa	System Table		
Title	Title Fees for purchase or refinance loans	System Table		
HELOC Table	Data maintained under the HELOC Table	System Table		
MI Tables	Get MI - Mortgage Insurance Tables	System Table		
City Tax	Calculate City tax on a loan	System Table		
State Tax	Calculate State tax on a loan	System Table		
User Defined Fee	User defined tables to calculate fees on a l	System Table		

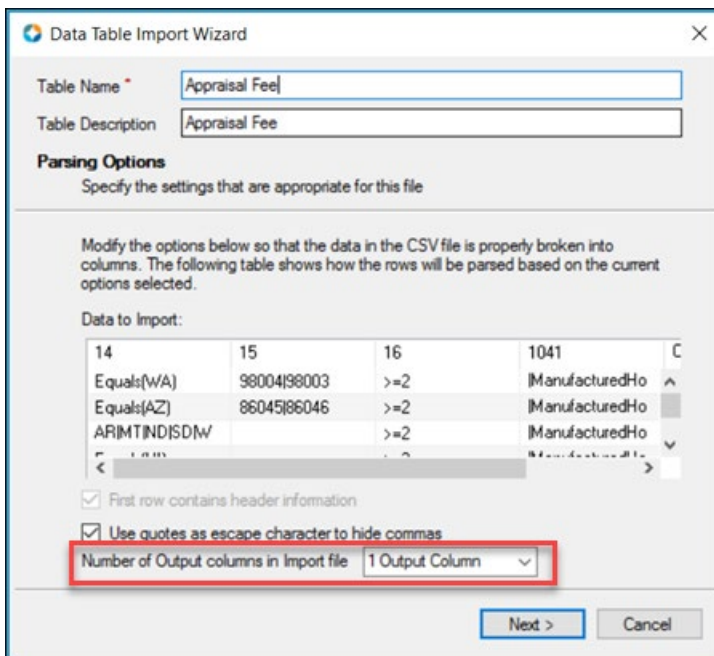
- The CSV file should be defined with the first row having the field IDs. During import, you need to ensure that you indicate whether the first row of the file includes field IDs. If not, you can assign field IDs to each of the columns, as part of the import process. See below for a sample CSV file. The header row has the field IDs. The last column(s) in the spreadsheet are for the output values. In the example below, there is an output column for *Appraisal Fee Amount*. The header row and the output column are selected in the image below. For details on how to format your CSV entries for importing as a Data Table, see [Section 10.1.1.1](#).

	14	15	16	1041	Appraisal Fee Amount
Equals(WA)	98004	98003	>=2	ManufacturedHousing MHSelect	725
Equals(AZ)	86045	86046	>=2	ManufacturedHousing MHSelect	700
AR MT ND SD WY			>=2	ManufacturedHousing MHSelect	950
Equals(HI)			>=2	ManufacturedHousing MHSelect	800
ID TX			>=2	ManufacturedHousing MHSelect	710
GA LA			>=2	ManufacturedHousing MHSelect	670
CA MS VA			>=2	ManufacturedHousing MHSelect	650
Equals(IN)			>=2	ManufacturedHousing MHSelect	630
MI OH			>=2	ManufacturedHousing MHSelect	600
AZ IL SC			>=2	ManufacturedHousing MHSelect	650
Equals(WA)			>=2	ManufacturedHousing MHSelect	700
Equals(WA)	98003	98004	>=2		675
Equals(AZ)	86045	86046	>=2		650
AR MT ND SD WY			>=2		900
Equals(HI)			>=2		750
ID TX			>=2		660
GA LA			>=2		620
CA MS VA			>=2		600
Equals(IN)			>=2		580

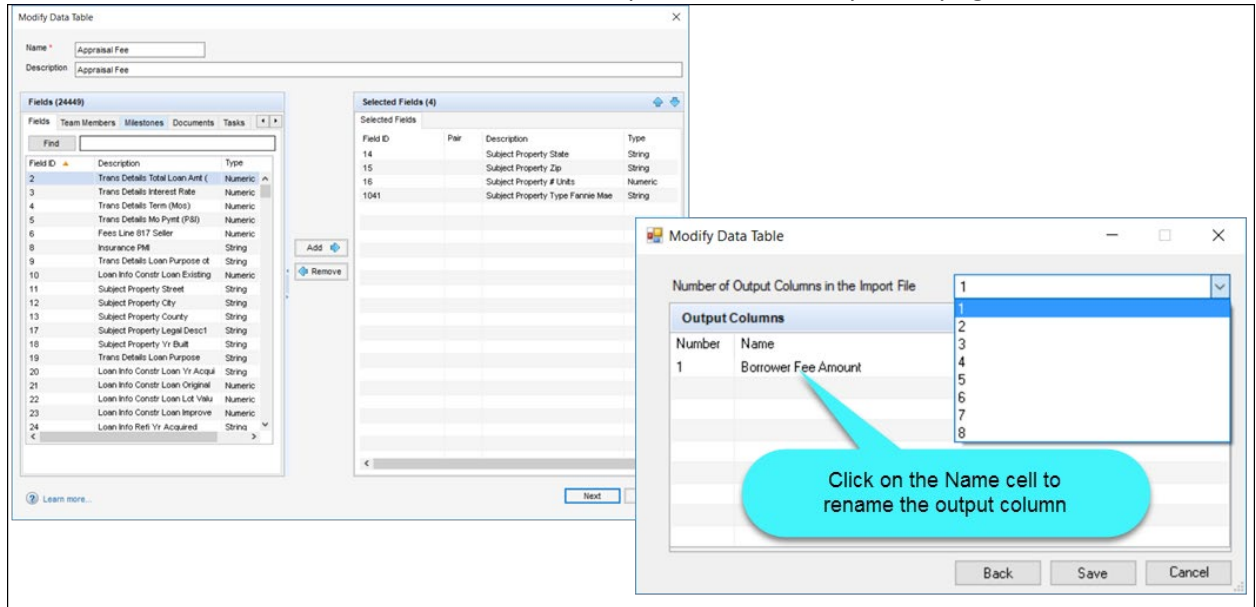
3. The Import Wizard provides you visibility on the imported data.



4. When importing, you will be required to specify the number of output columns. In this example, it is selected as 1 output column. If your use case involves the same variables/dependent fields for multiple output columns, the ability to have multiple columns comes in handy. Instead of defining multiple tables, you can use the same table and have multiple output columns. For example, you may have multiple lender fees based on the same set of dependent fields.



- You can review the dependent fields and output columns in the final step, before clicking the **Update** button to create the table. Optionally, you can rename the output column from the default *OUTPUT* name. You can also rename the output column later by modifying a Data Table.



10.1.1.1. Creating a CSV file to Import as a Data Table

As explained earlier, the first row in the CSV file should list the field IDs (these are the fields based on which you are looking up the value). The last column(s) in the CSV should be the output (these are the fee or field values that you look-up from the table). The solution currently supports up to eight output columns.

The following table provides guidance on how to enter data in CSV file to support the various field types and operators available in the Dynamic Data Management Data Table.

Field Type	Operator	How to enter data in CSV	
		Sample entry in a cell in Excel	Comment
Numeric	=	5	Enter as you would typically enter a number in a cell. No need to enter an “=” sign
	>	>5	Enter as you would typically in a cell
	>=	>=5	Enter as you would typically in a cell
	<	<5	Enter as you would typically in a cell
	<=	<=5	Enter as you would typically in a cell
	<>	<>5	Enter as you would typically in a cell
	Range	5--8	Use the “-” character twice as shown
	List of Values	3 5	Use the “ ” character as a delimiter
	No Value In Loan File	NoValueInLoanFile	Enter the string with matching case as shown
	Ignore this field	No entry needed!	Skip the cell as you would typically when you skip cells while entering data
String	Equals	Shelter Island	Enter as you would typically enter a string in a cell. No need to enter an “=”. Do not include surrounding parentheses such as (Shelter Island). Do not enter surrounding quotes such as “Shelter Island”
	Does not equal	<>Shelter Island	Use the <> operator
	Contains	Contains(Shelter Island)	Enter as shown
	Does not contain	NotContains(Shelter Island)	Enter as shown
	Begins with	BeginsWith(Shelter)	Enter as shown
	Ends with	EndsWith(Island)	Enter as shown
	List of Values	Shelter Island Riverhead	Use the “ ” character as a delimiter
	No Value In Loan File	NoValueInLoanFile	Enter with matching case as shown

Field Type	Operator	How to enter data in CSV	
		Sample entry in a cell in Excel	Comment
	Ignore this field	No entry needed!	Skip the cell as you would typically when you skip cells while entering data
Date	=	04/04/2019	Enter as you would typically enter a date in a cell. No need to enter an "=" sign
	>	>04/04/2019	
	>=	<04/04/2019	
	<	<=04/04/2019	
	< =	>=04/04/2019	
	<>	<>04/04/2019	
	Range	04/04/2019--04/19/2019	Use the "--" character twice as shown
	List of Values	04/04/2019 04/05/2019 04/06/2019	Use the " " character as a delimiter
	No Value In Loan File	NoValueInLoanFile	Enter with matching case as shown
	Ignore this field		Skip the cell as you would typically when you skip cells while entering data
Calculation	You can define a calculation for the output columns in a Data Table. The calculations you define here are like the calculations you define for a custom field in Encompass. For more information on how to define calculations please click here . The following rows define how to define a calculation in a csv row so that it can be imported as a Data Table		
	Sample calculation	Adv([(136]-250000)*.01)/Adv	The calculation syntax is like what you would enter for a calculated custom field. However, you need to have the "Adv(" prefix and the ")/Adv" suffix in the csv entry
	Clear the value of the field	ClearValueInLoanFile	Enter with matching case as shown

Here is an example .CSV file displaying the usage of various permissible operators.

	A	B	C	D	E	F	G
1	19	14	136	12	2025	Borrower Paid Mansion Tax	Seller Paid Transfer Tax
2	Purchase	NY	<1000000		>=04/01/2019	ClearValueInLoanFile	Adv([136] *.004)/Adv
3	Purchase	NY	>=1000000	East Hampton	>=04/01/2019	Adv([136]-250000)*.02)/Adv	Adv([136] *.004)/Adv
4	Purchase	NY	>=1000000	Southampton	>=04/01/2019	Adv([136]-250000)*.02)/Adv	Adv([136] *.004)/Adv
5	Purchase	NY	>=1000000	BeginsWith(Shelter)	>=04/01/2019	Adv([136]-250000)*.02)/Adv	Adv([136] *.004)/Adv
6	Purchase	NY	>=1000000	Southold Riverhead	>=04/01/2019	Adv([136]-150000)*.02)/Adv	Adv([136] *.004)/Adv
7	Purchase	NY	>=1000000		>=04/01/2019	Adv([136] *.01)/Adv	Adv([136] *.004)/Adv

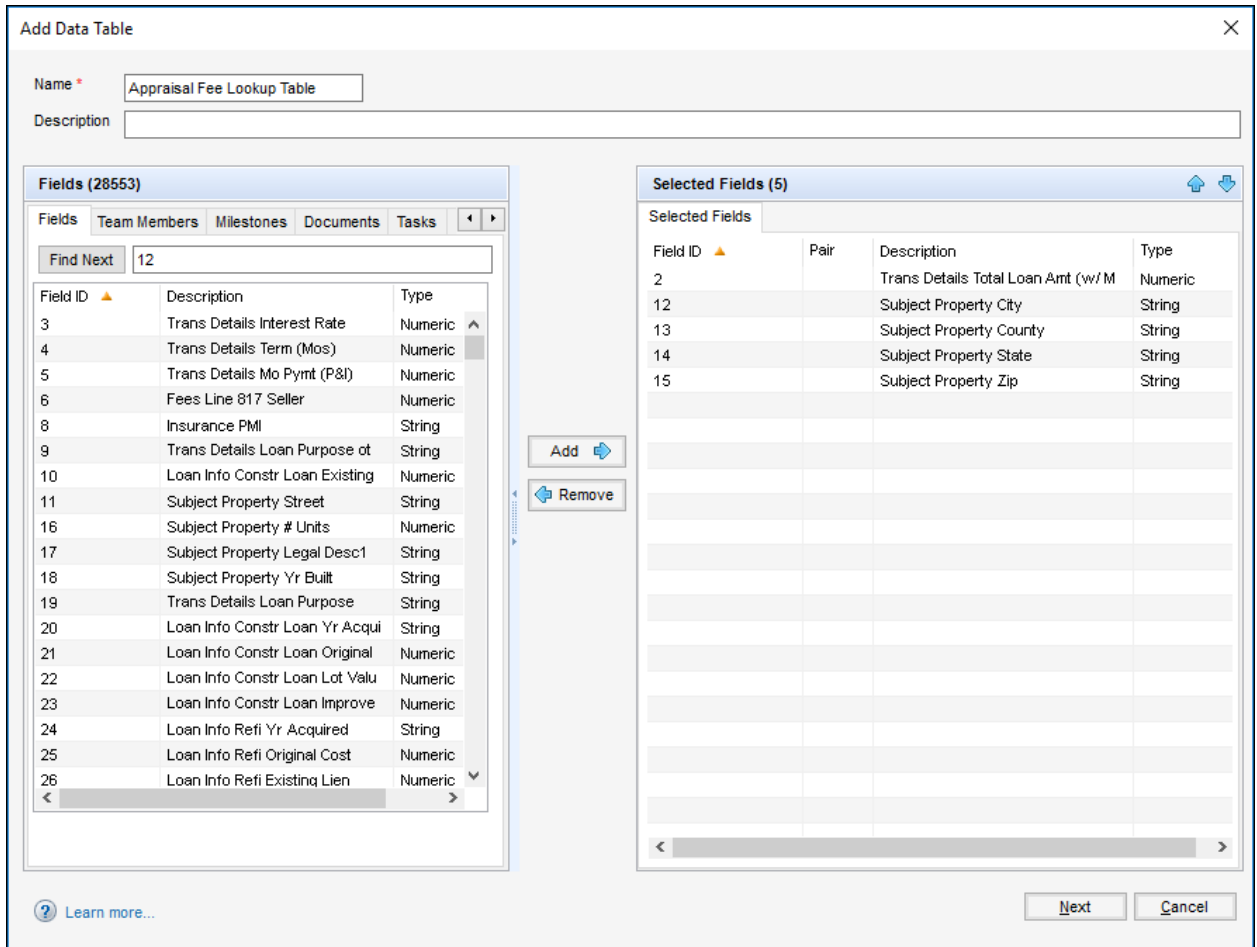
When this file is imported to Smart Client, the Dynamic Data Management Data Table will appear as shown below.

19 - Trans Details Loan Pur	14 - Subject Property State	136 - Trans Details Purchas	12 - Subject Property City	2025 - Loan Info Loan Created Date	BORROWER PAID MANSION TAX	SELLER PAID TRANSFER TAX
= Purchase	= NY	< 1000000		>= 04/01/2019	Clear value in Loan File	[136] *.004
= Purchase	= NY	>= 1000000	= East Hampton	>= 04/01/2019	([136]-250000)*.02	[136] *.004
= Purchase	= NY	>= 1000000	= Southampton	>= 04/01/2019	([136]-250000)*.02	[136] *.004
= Purchase	= NY	>= 1000000	BeginsWith Shelter	>= 04/01/2019	([136]-250000)*.02	[136] *.004
= Purchase	= NY	>= 1000000	Southold Riverhead	>= 04/01/2019	([136]-150000)*.02	[136] *.004
= Purchase	= NY	>= 1000000		>= 04/01/2019	[136] *.01	[136] *.004

10.1.2. Add Data Table

You can also create a Data Table directly from Encompass.

1. From the Data Tables setting, click the **New** icon to open the **Add Data Table** window.



2. In the *Add Data Table* window, add the following information:
 - a. Unique table name and brief description.
 - b. In the *Fields* panel, select the field that you want to include, and then click the **Add** button to move it to the *Selected Fields* panel.
 - c. In the *Selected Fields* panel, click the **Up** and **Down** icons to rearrange the fields.
 - d. Click the **Next** button to go to the *Add Data Table* and define the *Output Column* details.
 - i You can have a maximum of 8 Output columns in a Data Table. Encompass will require at least one Output column to be available to save a Data table.
 - ii Click in the output column name to rename it.
 - e. Click the **Save** button.

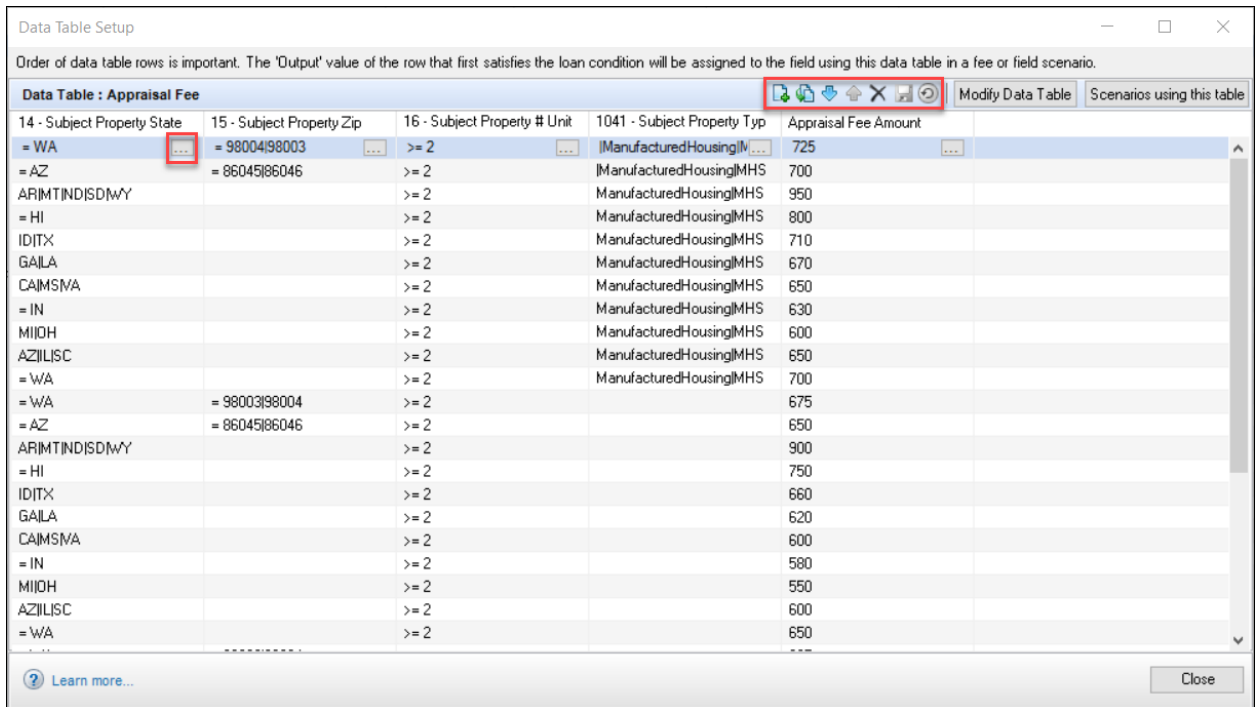
Note: The output column only has a label in the Data Table definition, and does not have a field ID yet. The field ID is set when you link the Data Table to the scenario from the **Value** tab.

10.1.3. Data Table – Adding Rows and Setting Values

From the *Data Tables* setting, double click an entry to view its details in the *Data Table Setup* window. Each column in the table is represented by the field IDs you have added to the table, followed by each Output column added when you created the Data Table.

To Add a Data Row:

1. In the *Data Table Setup* window, click the **New** icon.



Data Table Setup

Order of data table rows is important. The 'Output' value of the row that first satisfies the loan condition will be assigned to the field using this data table in a fee or field scenario.

Data Table : Appraisal Fee

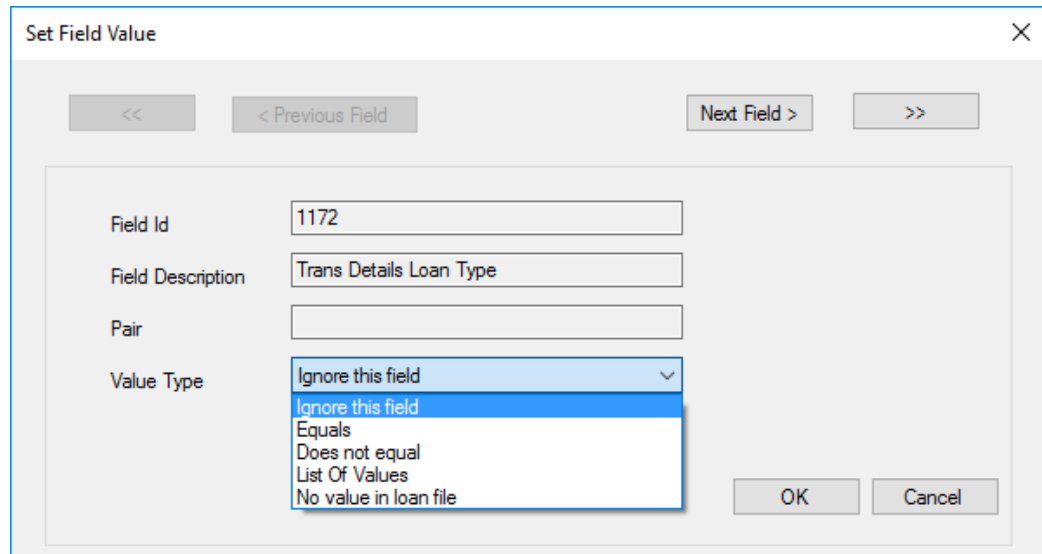
14 - Subject Property State	15 - Subject Property Zip	16 - Subject Property # Unit	1041 - Subject Property Typ	Appraisal Fee Amount
= WA	= 98004 98003	>= 2	ManufacturedHousing M...	725
= AZ	= 86045 86046	>= 2	ManufacturedHousing MHS	700
AR MT ND SD WY		>= 2	ManufacturedHousing MHS	950
= HI		>= 2	ManufacturedHousing MHS	800
ID TX		>= 2	ManufacturedHousing MHS	710
GA LA		>= 2	ManufacturedHousing MHS	670
CA MS VA		>= 2	ManufacturedHousing MHS	650
= IN		>= 2	ManufacturedHousing MHS	630
MI OH		>= 2	ManufacturedHousing MHS	600
AZ IL SC		>= 2	ManufacturedHousing MHS	650
= WA		>= 2	ManufacturedHousing MHS	700
= WA	= 98003 98004	>= 2		675
= AZ	= 86045 86046	>= 2		650
AR MT ND SD WY		>= 2		900
= HI		>= 2		750
ID TX		>= 2		660
GA LA		>= 2		620
CA MS VA		>= 2		600
= IN		>= 2		580
MI OH		>= 2		550
AZ IL SC		>= 2		600
= WA		>= 2		650

Learn more... Close

2. To create a new row by cloning an existing row, click the **Duplicate** icon.
3. Change the order of the rows by using the **Up** and **Down** arrows.
NOTE: Sequence of rows in a Data Table is important. It is similar to how you order the scenarios. Place the row with the most stringent set of variables at the top and the one with the least stringent at the bottom.
4. Delete a selected row by clicking the **Delete** icon.
5. Save the Data Table by clicking the **Save** icon.
6. Click the **Reset** icon to undo changes.
7. In the data row, click the **Buddy** icon to add data conditions using the *Set Field Value* window.

10.1.3.1. *Set Field Value*

Use the *Set Field Value* window to set data conditions to a field in a data row.

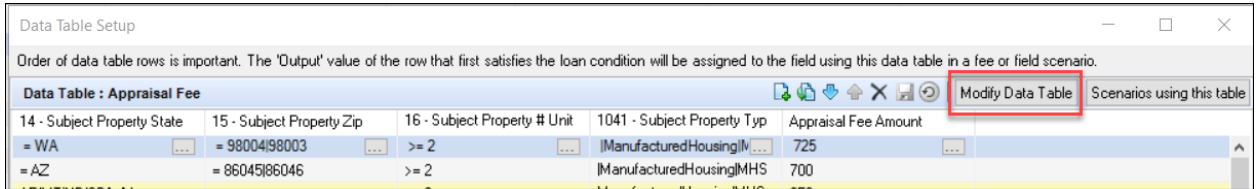


1. Use the navigation options in the *Set Field Value* window to navigate to other fields in the Data Table.
2. Depending on the data type of the field, the *Value Type* options will vary to provide respective numeric operations, text operations, options to select from enumerated drop-downs, provide list of values, find Zip and find County.
3. When you are defining a value for the Output columns, you will see that you can define values using the Value Types provided below. User should ensure that the value being set in an Output column for each data row is of the same data type corresponding to the field ID to which the user would assign this Output column to in a Fee Rule or in a Field Rule. Each Output column can hold different data types.
 - a **Specific value:** Provide a specific value that will be assigned to the field in the Fee Rule, Field Rule.
 - b **Calculation:** Define a custom calculation. When you assign a Output column with calculation to a field ID in a Fee Rule, Field Rule, system will calculate the value to be populated to the field in the loan file at run time.
 - c **Clear Value in loan file:** When you use this option for an Output column in a Data Table row, and assign it to a field ID in the Fee Rule, Field Rule, system will clear the value of field ID in the loan file during execution of that specific rule.
4. Export and Import function for Data Table is available in CSV format.

10.2. Modify a Data Table

1. Use the *Modify Data Table* option in the *Data Table Setup* window to add/re-order/delete the fields in the Data Table structure. You can also add more output columns and rename the output columns by clicking the Modify Data Table button.

NOTE: *Deleting a field ID from the table structure would also remove the data conditions you have defined for that field ID.*



2. Deletion of a Data Table can be done either when it is not associated to a fee or a Field Scenario or if all the associated scenarios are in Inactive status. Click the **Scenarios using this table** button to view the scenarios (both active and inactive) that are referring to this Data Table.
3. When you rename a Data Table that has been associated to a scenario in a Fee Rule or Field Rule, system will update the respective scenario with the updated table name.
4. If any Data Table row will be rendered empty by removing a specific field ID from the Data Table structure, system will prompt that such empty rows will be deleted from the Data Table.

10.3. System Tables

1. When you define a Fee Rule for a fee line that impacts a System table, you will have access to associate the system table as the Value type to the fee amount field.
2. **System Tables:** List of System tables that you can access when defining scenarios under DDM:
 - a. Escrow Tables
 - b. Title Tables
 - c. MI Tables
 - d. City Tax Tables
 - e. State Tax Tables
 - f. User Defined Fee Tables

Data Tables				
Create and manage data tables for defining values to fee scenario and field scenario rules.				
Data Tables List (9)				
Name	Description	Type	Last Modified By	Last Modified Date & Time ▼
Escrow	Multiple tables as available under 'Table a	System Table		
Title	Multiple tables as available under 'Table a	System Table		
HELOC Table	Data maintained under the HELOC Table	System Table		
MI Tables	Get MI - Mortgage Insurance Tables	System Table		
City Tax	City Tax	System Table		
State Tax	State Tax	System Table		
User Defined Fee	User Defined Fee 1	System Table		

System Tables are available in the context of the fee lines below. When you try setting the value of a field referred below in that line, and choose the Value Type as “Table” from the Set Field Value pop-up, the System Table will be listed.

Fee Line	Field ID	Field Description	Source for Data auto-population.
1102c	NEWHUD.X808	2010 Escrow Fee	GetEscrow function that refers to the Escrow Tables under <i>Tables and Fees</i> setting.
1103	NEWHUD.X572	Fees Line 1103 Borr	GetTitle function that refers to the Title Tables under <i>Tables and Fees</i> setting.
1104	NEWHUD.X639	Fees Line 1104 Borr	GetTitle function that refers to the Title Tables under <i>Tables and Fees</i> setting.
1204	1639	Fees City/County/Stamp Desc	GetCityTax function that refers to the City Tax Tables under <i>Tables and Fees</i> setting.
1205	1638	Fees State Tax/Stamp Descr	GetStateTax function that refers to the State Tax Tables under <i>Tables and Fees</i> setting.
1206	373	Fees Line 1206 Descr	GetUserDefinedFee function that refers to the User Defined Fee Tables under <i>Tables and Fees</i> setting.
	374	Fees Line 1206 Borr	
1207	1640	Fees Line 1207 Descr	GetUserDefinedFee function that refers to the User Defined Fee Tables under <i>Tables and Fees</i> setting.
	1641	Fees Line 1207 Borr	
1208	1643	Fees Line 1208 Descr	GetUserDefinedFee function that refers to the User Defined Fee Tables under <i>Tables and Fees</i> setting.
	1644	Fees Line 1208 Borr	

11. Global DDM Settings

Global DDM Settings (previously called *Data Population Timing Settings*) allow you to configure when DDM rules trigger and when they stop triggering. When the rules trigger, active Field Rules and Fee Rules are applied to the loan file. When the Field Rules and Fee Rules are applied to a loan file, only the scenarios that are active under each active rule are considered. As explained earlier, when a rule is executed, the first active scenario where the loan data matches with the condition in the scenario is the one picked for execution.

Global DDM Settings

Configure when the DDM rules apply on a loan. Set the start condition and the stop condition.

Start applying Dynamic Data Management Rules

When the loan is created or saved

When the user modifies any of the following fields.

Field ID	Description	# Scenarios Referenced

Stop applying Dynamic Data Management Rules

The settings below are default settings that apply when a new DDM Fee rule or Field rule is created. You may override these default settings within each rule.

After Initial Loan Estimate is sent
The DDM Rules will stop firing after Initial Loan Estimate is sent and Field ID 3152 is set.

When the condition below is met

Close

11.1. When do DDM rules trigger?

1. By default, DDM rules will apply on a **Loan Save** or **Loan Create** event (i.e., when an existing loan file is updated and then saved, or when the loan is created by importing a loan file). User will not be able to modify this option.

Note: *DDM rules run whenever the loan is saved. Unlike a field trigger, there is no change required in a triggering field to trigger DDM. This ensures your data is always accurate. If a user overrides a field that was populated by DDM and the loan was subsequently saved, the rule will ensure that it is populated back with the value set in the rule. This means that if you expect exceptions to the rule that requires manual overrides, those exception conditions should be set as part of the rule. Alternatively, you can set a custom field such as CX.FEEOVERRIDE flag as part of the exception workflow and use that custom field as a pre-condition in the rule. This will ensure that the DDM rule does not fire for this exception workflow.*

2. In addition to loan save, you may choose to trigger DDM rules on a **Field Change** event, specifically when the user modifies a field. Click the **Add** icon in the *Fields* table to manage your list of impacted fields. Once you add a field, you will have reference to the number of active and inactive scenarios under which this field is being referenced.

Note: We recommend that you use this prudently and not have many fields configured here. If there are key use cases where the user cannot wait until the next loan save to see the impact of the automation, determine the critical trigger fields for those use cases. Then add those fields here. Examples of such critical fields such as loan type, loan program, subject property state / zip etc. Please keep in mind that when the user modifies any of these fields added here in the application and tabs out, the DDM rules run and hence the user will see a performance impact.

11.2. When do DDM rules stop triggering?

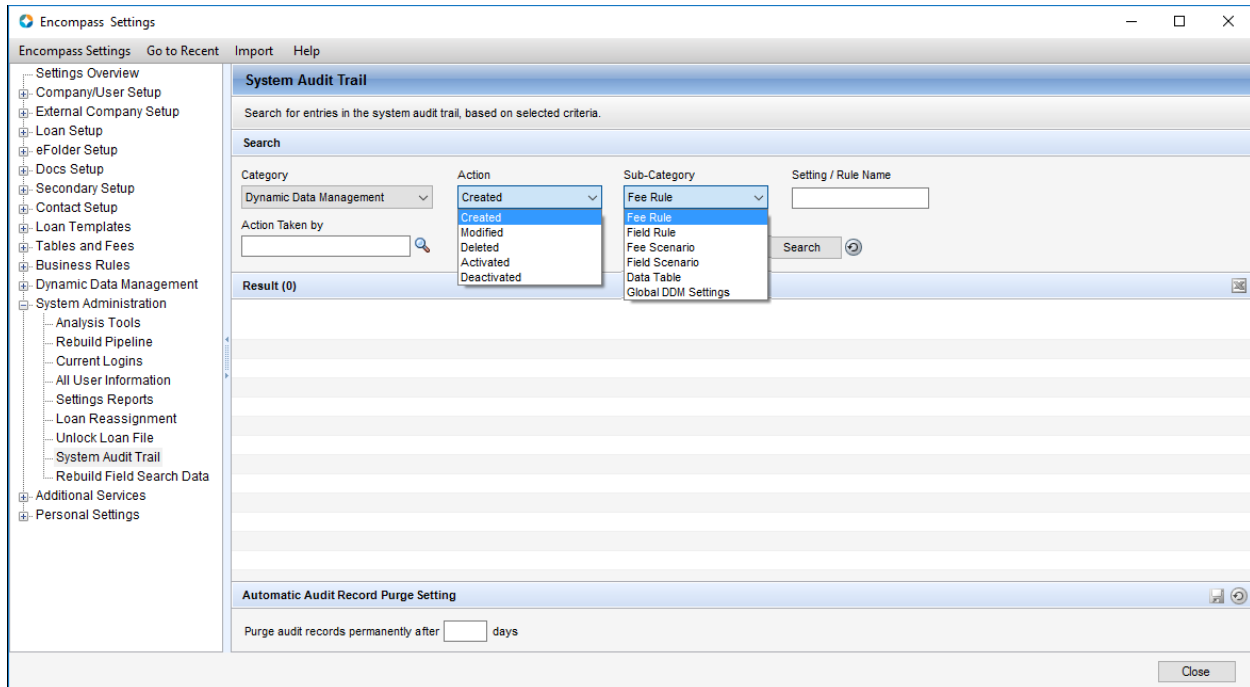
Global DDM Settings also enable users to define a default global condition on when DDM rules should stop auto-populating the data in a loan file. For example, you may have a stop condition that says [2626] = "Correspondent" which will ensure that DDM rules do not fire on correspondent channel loans.

Be sure to check the Stop condition at the rule level and at the Global DDM Settings. This is a "global" stop condition that is applied to all rules. For your rule to work, it must pass the stop condition at the global level and the stop condition at the rule level. Your rule may not have a stop condition but if the global stop condition gate is not passed, it will not get executed. If you have a rule level stop condition, the loan must pass through that rule level stop condition gate as well. Only when it passes through both these stop condition gates (global and rule level), will the rule be executed. If your global condition is really not globally applicable to all of your rules, then remove that, and apply it at the rule level rather than at the global level.

12. System Audit Trail

Users with access to System Audit Trail setting (Encompass Settings> System Administration) can review the timeline of changes made using the Dynamic Data Management Category in the System Audit Trail. On selecting the Dynamic Data Management Category, you can search based on:

- Fee Rule
- Field Rule
- Fee Scenarios
- Field Scenario
- Data Tables
- Global DDM Settings



1. When you update Settings for Fee Rule, Field Rule using *Rule Settings* option, the timeline of those changes will reflect in the System Audit Trail including a display of text under *Additional Information* column. Otherwise, no text will display in *Additional Information*.
2. When user views results for Fee Rule activation details, system will display the associated Fee Scenario in the *Scenario Name* column. This indicates the scenario that caused the activation of the Fee Rule.
3. When user views results for Fee Rule, Field Rule deactivated details, system will display a scenario name in the *Scenario Name* column. This scenario name is the last scenario that caused the rule to become *Inactive*.

13. Analysis Tools

- When a user performs a field search, and if the field is included in any of the DDM Fee Rules, Field Rules, Data Tables, Encompass will display the DDM rule, Data Table as part of the search result. This provides you visibility on other business rules that exist on that trigger field. We recommend that you use this to ensure that there are no conflicts between field triggers and DDM scenarios
- At this time, user will not have the capability to access a DDM rule through Analysis tools.

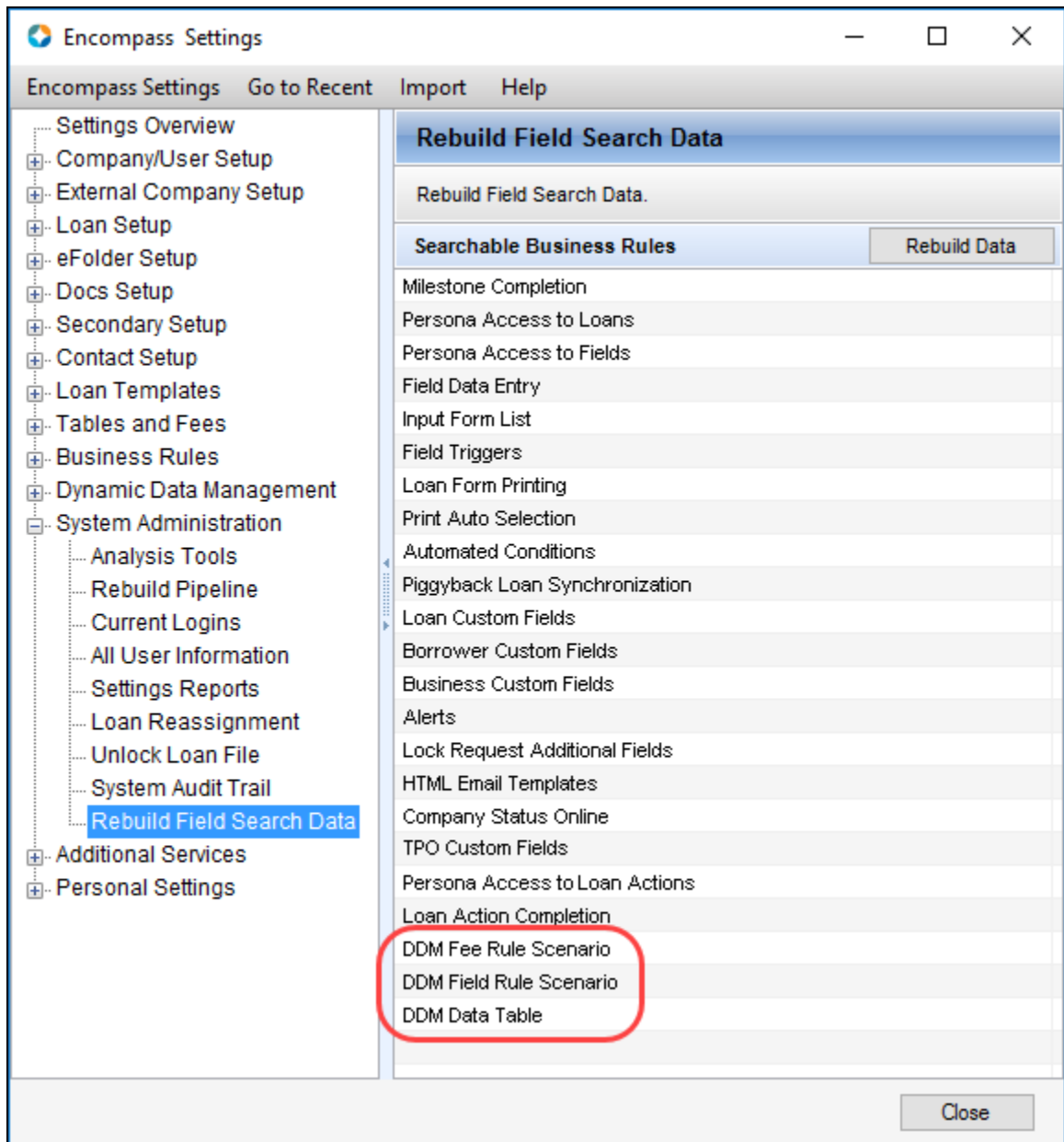
Analysis Tools

Use this tool to search for input fields and locate the areas in Encompass Settings where the fields are used including business rules and alerts.

Search Field IDs	Results: Field ID 1172 (STRING)		
	Name	Type	Status
<div style="text-align: right; margin-bottom: 5px;">Clear All</div> <input style="width: 100%;" type="text" value="1172"/> <div style="text-align: center; margin: 2px 0;">and</div> <input style="width: 100%;" type="text" value="Search Field ID"/> <div style="text-align: center; margin: 2px 0;">and</div> <input style="width: 100%;" type="text" value="Search Field ID"/> <div style="text-align: right; margin-top: 5px;"><input type="button" value="Search"/></div>		Show All	Show All ▼
	EBS-7856_BRAutomation	Field Triggers	Inactive
	Copy of DoNotdelete_Disclosures_TPOActions	Field Triggers	Inactive
	EBSQAL_LoanType	Loan Action Completion	Inactive
	VAMIFirst	DDM Data Table	Inactive
	VAMISecond	DDM Data Table	Inactive
Search History For Current Session	801g - Lender Fee	DDM Fee Rule Scenario	Active
<input style="width: 100%;" type="text" value="1172"/>	902 - MI	DDM Fee Rule Scenario	Active
	801b Application Fees	DDM Fee Rule Scenario	Active
	APR	DDM Data Table	Inactive
	Appraisal Fee	DDM Fee Rule Scenario	Inactive
	Appraisal Fee	Field Triggers	Inactive

14. Rebuild Field Search Data

- When a DDM rule, DDM Data Table is created, Encompass will update the Field Search Tool as part of the create/update process.
- Additional options for DDM Fee Rule, Field Rule and Data Table have been added to the Rebuild Field Search Data function to provide user the ability to Rebuild Data.



15. DDM Diagnostics

DDM Diagnostics helps you troubleshoot when your DDM rule is not working as expected. Authorized users such as Encompass administrators can enable and disable DDM Diagnostics from the Encompass Help Menu. For more information on the diagnostics report, see [Appendix B: Troubleshooting](#).

16. Appendix A: FAQs

Use this section to refer to frequently asked DDM-related questions.

1. What is Dynamic Data Management?

Dynamic Data Management (DDM) is a scenarios-based rule engine that ensures that the values for any fee or field is automatically populated for various loan scenarios as defined by the administrator.

2. I can currently use templates and field triggers to update field values. How is DDM different?

DDM is easier to organize and maintain. It helps overcome the challenges associated with maintaining hundreds of closing cost templates.

With DDM, you can control the order of operations and ensure that the right field value is populated for the right scenario. This provides enhanced control on your automated field population.

3. What are the benefits of DDM?

As an administrator, it provides better visibility and makes it easier to maintain the rules. It opens more possibilities for automation. For an end user, it is about minimizing data entry and having accurate/consistent data in the loan. Origination cost and time are reduced with the automation.

4. What are some of the features that make DDM easier to organize and maintain?

Look-up table: Create a look-up table to look-up a value for a fee or a field based on multiple variables. The variable can be any field in Encompass. For example, you may create a look-up table for Appraisal fee based on subject property state, county, zip code, number of units, and property type. This look-up table can then be used while defining the DDM scenario for the appraisal fee. Using a look-up table eliminates complex advanced code and makes it easier to maintain the rule as changes happen.

Effective date: Provide an effective date on which a scenario will take effect. This comes in very handy when making changes to a rule after it has been activated in production.

Clearing field values: DDM provides an easy to clear loan field values. This is very useful when we need to clear fee values for certain loan scenarios.

Stop condition: In addition to defining the conditions and an effective date, set a condition for when the rule should stop firing. For example, you may not want some of the rules to fire on closed loans or on correspondent loans.

5. What are the top use cases for DDM?

The following two categories of use cases are the most recommended for DDM:

- Migrating field triggers that run advanced code, update the value of one or more fields, and, copy new value into one or more fields – Triggers that run advanced code are one of the best instances where DDM can be implemented since DDM helps eliminate advanced code with Data Tables, provides advanced visibility into and easier maintenance of the rule.
- Moving fees from closing cost templates—High-maintenance lender fees such as Underwriting, or Processing fees are the best ones to target since using DDM eliminates the challenge of updating hundreds of closing cost templates when these fees change.

For more details on these use cases, see [Top Use Cases for Dynamic Data Management](#).

6. Is Ellie Mae planning to retire field triggers and / or Closing Cost templates?

No. There is no plan to retire field triggers or closing cost templates.

DDM, Business Rule Field Triggers, and Closing Cost Templates can all be used, but it is strongly recommended that overlapping rules / templates are not included in multiple places since they may conflict with each other.

7. Does DDM eliminate the need to click the GetMI button for FHA and VA loans?

Yes. By creating a rule in DDM, MI factors can be applied automatically for FHA and VA loans, as loan parameters change. When using DDM to automate the population of MI, there would be no need for your users to click the Get MI button for FHA and VA loans.

Note: *You must download the latest FHA and VA MI tables from the Encompass Settings> Tables and Fees > [MI Tables](#). It is important that you keep these tables updated as Ellie Mae makes periodic updates so that the rule continues to populate accurate values. Also, the rules documented in this User Guide are provided as examples only. Consult your Compliance/Operations department for exceptions where you do not want the rule to apply and accordingly include conditions so that the rule bypasses these exceptions. Such exceptions should continue to be handled by your manual workflow. In the absence of conditions in your rule to exclude these exceptions, your manual overrides will be replaced by what the rule automates.*

8. When do DDM rules run?

By default, DDM rules run when an existing loan file is updated and then saved, or when a loan is created by importing a loan file.

9. Do DDM rules run when SDK or API creates or updates a loan?

Yes, DDM rules run when your custom application built using SDK or API creates or updates a loan.

10. Do DDM rules work on Connect products?

Yes, DDM is designed to work on Connect products in addition to SmartClient. The rules work when a loan is created / updated and not before the loan creation.

For example, DDM rules run:

- On Consumer Connect, when an application is submitted, and a loan is created or when an incomplete application is converted to a loan

NOTE: *When the closing costs are displayed to the user prior to the application submission, DDM rules do not apply yet.*

- On TPO Connect, when a loan is registered and submitted / saved
- On Loan Officer Connect when a loan is created or saved

DDM is an example where the benefit of Ellie Mae's next generation technology is available now. SmartClient uses the execution engine that the next generation Connect products use. While SmartClient executes this on the client side, the Connect products execute it on the server side.

11. Can DDM rules run on a field change in addition to loan save?

Yes, you can configure DDM to run when a user modifies a field. However, we recommend that you use this prudently and not have many fields configured. If there are key use cases where the user cannot wait until the next loan save to see the impact of the automation, determine the critical trigger fields for those use cases. Then add those fields in the [Global DDM Settings](#).

Examples of such critical fields are loan type, loan program, subject property state / zip and so on.

NOTE: *When your user modifies any of the fields, added in DDM settings, and tabs out, the DDM rules run and there may be a perceived performance impact.*

12. What is the performance impact of DDM?

With DDM, the rules run by default when a loan is created or saved. The user may see a small increase in time during loan create or loan save for the benefit of a lot of fields being automated. In addition, they have a better user experience when they enter data in the application as any field triggers you may have had previously to automate are now handled via DDM.

In an internal performance testing environment, with a data set that included 100 Fee Rules and 10 fields rules, 60 Data Tables, 500+ scenarios, and close to 10,000 field values being updated, we did not see a substantial impact. The create loan operation results in an up to 15% increase in time while the update loan had an impact of up to 10%.

13. Does DDM update fields that are restricted by persona access to fields business rule?

Yes. Even if a field is View Only / Disabled or Hidden, DDM rules will update the field.

With field triggers, you may be using an "IgnoreValidations" in the Advanced Code to ignore these persona access restrictions. There is no need to use such syntax with DDM.

14. If there is a conflict between a field trigger and a DDM rule, what will win?

In most cases, DDM will win. A field trigger runs on field change while DDM runs when an existing loan file is updated and then saved, or when a loan is created by importing a loan file. Given that DDM runs later, DDM will override what the trigger defines for the field. Even if you configure DDM to run on a field change (when the user modifies a field), DDM runs after the field trigger in the order of operations and hence, DDM rule will prevail.

If your DDM rule also updated the trigger field of the corresponding field trigger that causes the conflict, then the field trigger will run after the DDM rule. That is the scenario where the field trigger will prevail over DDM.

The system has checks and balances to ensure there is no endless loop because of conflicting field triggers and DDM rules.

15. What are some of the best practices to follow when creating and activating a DDM rule?

- Use the [Analysis Tools](#) for visibility on whether you have field trigger business rules on the same trigger fields that you have for the DDM rule you are creating or activating. Ensure there is no conflict. If there is overlap, and the DDM rule is replacing a field trigger, deactivate the field trigger.
- Create the rule in your lower environment and test it before promoting to your production environment.
- Make sure you have sequenced the scenarios and the Data Table rows correctly. With DDM, you can control the order of execution. For a rule, DDM starts running from the scenario on top to the scenario at the bottom. The first scenario where the loan data matches with the condition in the scenario is the one picked for execution. It is important to have the scenario with the most stringent condition at the top while keeping the one that is the least stringent at the bottom. This ordering applies to Data Table rows as well.
- Even when you have two scenarios that are mutually exclusive and hence, the order is irrelevant, it makes sense to have the scenario that is more common (meaning more loans will meet the scenario criteria) above the one that is less common.

16. How do I transfer a DDM rule from a lower environment to the production environment?

You can export a rule from the lower environment and import it in the production / environment. The export / import is for one rule at a time. When the rule is exported / imported, all the scenarios in that rule get exported / imported. It is important to ensure that the target environment has the dependencies created before you import the rule. For example, if your rule refers to a Data Table or a custom field, ensure that these exist in the target environment before importing. The import process validates these dependencies and alerts you if dependencies are missing. See [Export and Import of Fee Rules, Field Rules](#).

17. What is the order of operations between a Field Rule and a Fee Rule in DDM?

The Field Rules run before the Fee Rules.

18. The DDM Fee Rule set a fee amount. However, my Loan Officer had to manually override that amount to match a competitive scenario? Will the DDM Fee Rule override this manual update when the loan is saved subsequently? How do I prevent that from happening?

Yes, DDM will override the manual update. One way you can handle this is by having a workflow for handling the competitive scenario exception. You can set a custom field such as CX.FEEOVERRIDE flag as part of this exception workflow. As part of the DDM rule, use that custom field as a pre-condition and this will ensure that the DDM rule does not fire for this exception workflow.

19. DDM gives me the flexibility to organize with Scenarios or build the same logic with Data Tables. Should I create a gigantic Data Table that is referred to by just one scenario at the rule? Or should I create smaller tables with multiple scenarios at the rule level?

It's recommended to have smaller tables and more scenarios built into the rule as opposed to a very large table with just one scenario with no pre-conditions for the scenario. It also gives better visibility to the administrator on how the rule is organized and makes it easier to main the tables.

Let's consider an example table has a total of 30k rows. May be the split up is – 10,000 rows for FHA, 10,000 rows for VA, 10,000 rows for USDA. Essentially there is nothing different in the Data Table for each of these 10k rows except for the loan type. There are two ways to construct the rule –

Option A - One scenario only. No scenario condition at all. Reference to the 30K table

Option B - 3 scenarios with a scenario condition based on loan type referring to 3 different Data Tables based on loan type

The recommended way is Option B. With Option B, even if you include the Loan Type as a column in the Data Table, we recommend that you put a scenario condition for the Loan Type. It will minimize the need for the system to reference the table, thereby optimizing performance.

20. I expected a DDM rule to update a field but it is not doing it. How do I troubleshoot?

With the SmartClient, you can turn on a Dynamic Data Management Diagnostics mode and determine what specific rule and scenario fired for the loan. For more information, see [Appendix B: Troubleshooting](#).

21. In Consumer Connect administration portal, I can configure a closing cost template to use when an application is submitted. If I have a DDM rule that sets the same fees will that override what is in the template?

Yes, the DDM rule will override what the template sets.

17. Appendix B: Troubleshooting

Use this section to identify potential challenges and implement recommended solutions as applicable.

17.1. Basic Troubleshooting

Here are the steps to follow to troubleshoot and debug DDM rules and confirm that the rules are configured correctly in the Encompass Admin Settings.

17.1.1. Check if your scenarios are active

The first step in troubleshooting DDM is making sure that your DDM scenario is activated. When you create a scenario, it is inactive by default and you must explicitly activate it.

To Activate a DDM Scenario:

1. Go to Encompass Settings> Dynamic Data Management> Field Rules/Fee Rules.
2. Open the DDM rule, and confirm if the scenario is set to active. To activate a scenario, click the **Activate** button. Only *Active* scenarios will be validated when DDM is executed.

The screenshot displays the 'Add/Edit Fee Scenario' window. At the top, there is a table titled 'Scenarios for Line 801a' with columns: Order, Fee Scenario Name, Effective Date, Condition, Stop Condition, Channel, Status, Last Modified By, and Last Modified Date & Time. The table contains three rows, with the second and third rows highlighted in blue. The 'Status' column for the second and third rows is 'Inactive', and these cells are circled in red. Above the table, there is an 'Activate' button, also circled in red. Below the table is the 'FHA Details' configuration panel, which includes fields for 'Fee Scenario Name' (FHA), 'Channels this fee scenario applies to' (with checkboxes for No channel selected, Banked - Retail, Banked - Wholesale, Brokered, and Correspondent), 'Conditions for the fee scenario' (with radio buttons for 'No - Always apply this rule' and 'Yes - Apply this rule only if'), and 'Advanced Conditions' (set to '[1172] = "FHA"'). There are also dropdowns for 'Effective Date for the fee scenario' and 'Criteria', and a 'Date' field. A 'Notes/Comments' text area is at the bottom right. The window has 'Save' and 'Close' buttons at the bottom right.

Order	Fee Scenario Name	Effective Date	Condition	Stop Condition	Channel	Status	Last Modified By	Last Modified Date & Time
1	Conventional		[1172] = "Convent	Initial LE Sent	No channel select	Active	admin (Admin User)	09/13/2018 01:36 PM
2	FHA		[1172] = "FHA"	Initial LE Sent	No channel select	Inactive	admin (Admin User)	09/13/2018 01:36 PM
3	Other		[1172] = "Other"	Initial LE Sent	No channel select	Inactive	admin (Admin User)	09/13/2018 01:36 PM

17.1.2. Validate the Stop condition

Be sure to check the Stop condition at the rule level and at the Global DDM Settings. This is a “global” stop condition that is applied to all rules. For your rule to work, it must pass the stop condition at the global level and the stop condition at the rule level. Your rule may not have a stop condition but if the global stop condition gate is not passed, it will not get executed. If you have a rule level stop condition, the loan must pass through that rule level stop condition gate as well. Only when it passes through both these stop condition gates (global and rule level), will the rule be executed. If your global condition is really not globally applicable to all of your rules, then, remove that and apply it at the rule level rather than at the global level.

17.1.3. Evaluate if your scenarios and Data Table rows are sequenced right

DDM enables you to control the order of operations within your scenarios. When the rule executes, it goes from top to bottom in your scenario list and picks the first scenario that meets the loan data. It is important that you have your scenario with the most stringent conditions on top and the least stringent conditions at the bottom.

This sequencing applies to your Data Table rows as well. Place the Data Table row that has the data for the most variables at the top of the list. Keep the row that is generic and that has the least data for the variables at the bottom.

It may be helpful to review the order in which the scenarios are executed. The order of execution applies to both the order of the DDM scenarios and the order of scenarios within Data Tables. The system will pick the data row that first satisfies the condition. This makes ordering of data rows a very important exercise. Ensure that the most stringent data conditions are listed at the top, while the broader conditions are arranged at the bottom.

17.1.4. Do not rely on order of operations within a rule

If you set multiple field values in your rule, do not rely on the value of one field from that rule to drive the value of another field in the same rule. While it may work in some cases, there is no guarantee that it will always be followed. The sequence of operations between fields in the same rule is non-deterministic and does not go by the order in which the fields are listed in the rule. The same holds good for rules within the same category—there is no guarantee that a Fee Rule line 804 will run before Fee Rule for line 820. Between Fee Rules and Field Rules, Field Rules are executed first.

17.1.5. Troubleshoot MI Tables

MI rule not working

If you have set up the MI rule as instructed and it is not working, first verify if you have downloaded the MI tables from Encompass Settings> Tables and Fees> [MI Tables](#).

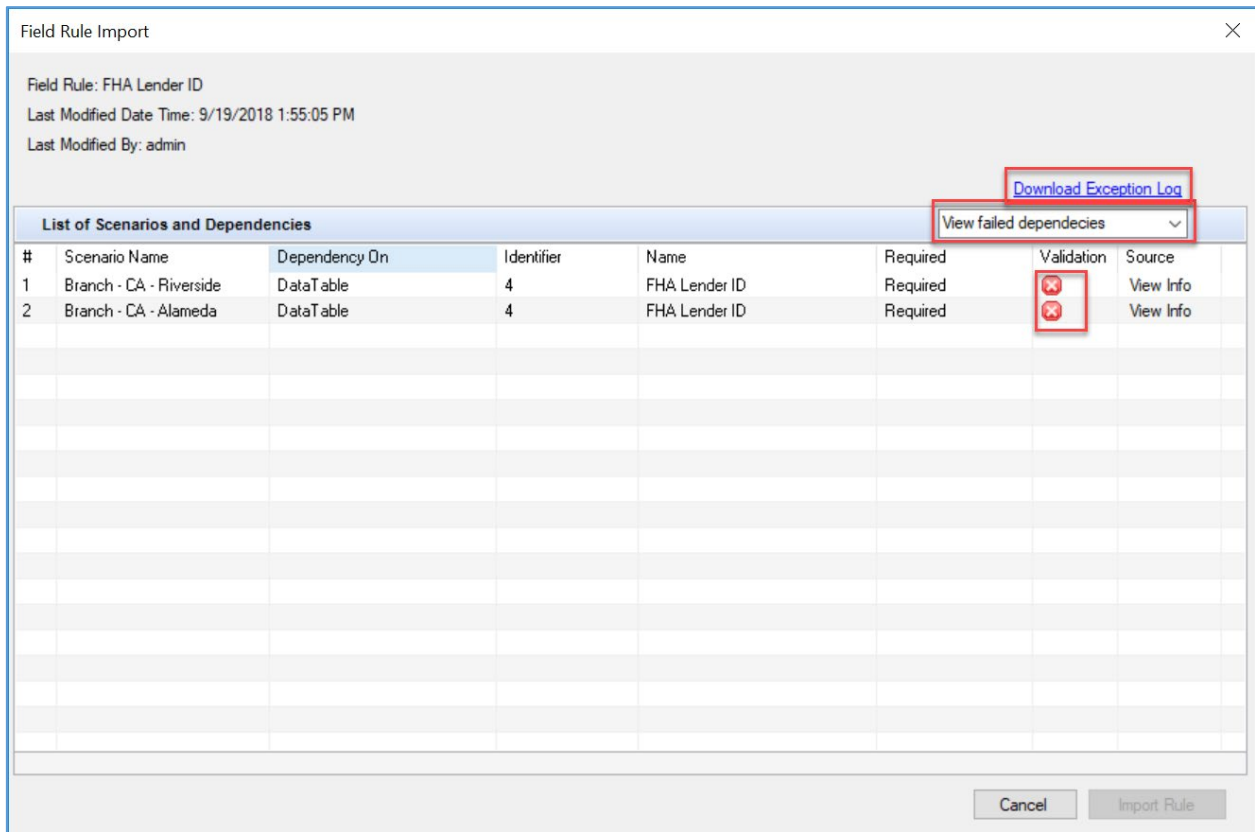
NOTE: MI rule is for FHA and VA loans only.

I have overridden the system-calculated amounts for MI but the manual overrides are not being applied

If you overridden the amount paid in cash or manually overridden some fields for exceptions such as two veterans on the same loan with split eligibility, see [Eliminating the GetMI Click for FHA and VA Loans](#) on how to configure the rule to bypass such exceptions.

17.1.6. Importing Rules

When importing a DDM Field Rule or Fee Rule in SmartClient, the import wizard provides a view of all the exceptions and you can also download the exception logs in the case of an error.



When you click the **Download Exception Log** link, you can download the .txt file with all the details of the failed dependencies.

17.2. Diagnostic Troubleshooting

If you have verified all the above and still are not sure why the rule is not working as expected, the Dynamic Data Management Diagnostics Mode provides you further insight.

17.2.1. SmartClient – DDM Diagnostics Mode

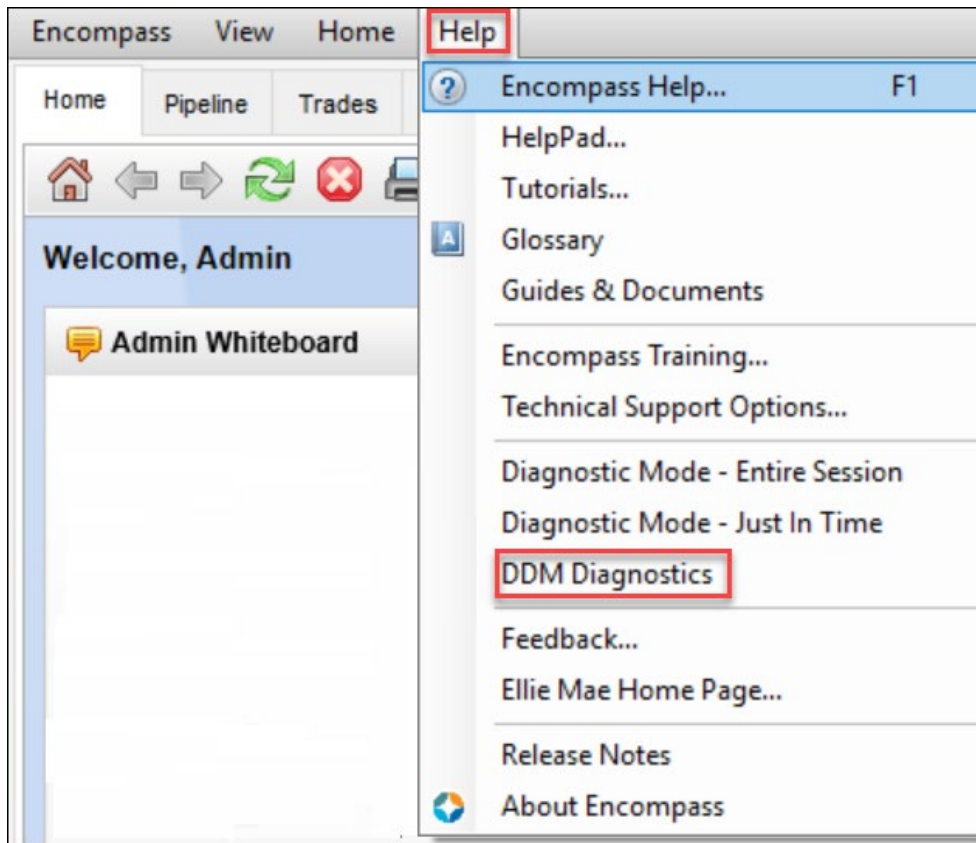
A new Diagnostic Mode for DDM captures DDM logging when DDM Diagnostics Mode is turned on. When this option is chosen, the DDM execution details are made available in a log file for an admin to retrieve.

17.2.2. How to turn on/off DDM Diagnostics Mode

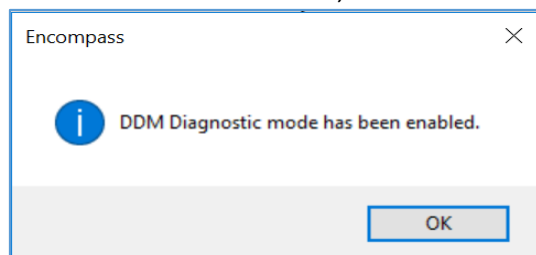
An administrative user or a user with Persona rights to *Diagnostic Mode* can enable DDM Diagnostics.

To Enable DDM Diagnostics:

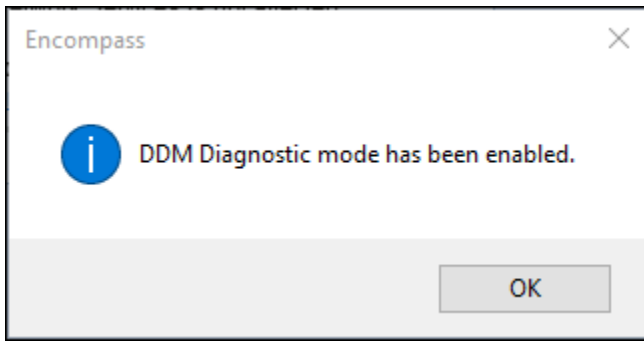
1. Go to the Encompass Help Menu and click **DDM Diagnostics**.



2. In the confirmation window, click **OK**.



- o DDM Diagnostics now appears on the Help menu as enabled.
3. To turn off DDM Diagnostics, go back to the Help menu and select **DDM Diagnostics**. You will now be presented with a message that DDM diagnostics has been disabled.



17.2.3. DDM Diagnostic Logs

The diagnostic logs will include the following information:

- The final advanced code generated from DDM tables

```
[09/12/18 12:10:56.7186] DDM_DIAGNOSTICS_DETAIL {004} (Generated AdvCode for DataTable : Product APR):
.....
'DataTable: Product APR
.....
Try
'Aggregated conditions
  Dim conditionPass As Boolean
  Dim dtRowOrder As Integer = -1
  If Not conditionPass AndAlso ( _
    (String.Compare([1172], "Conventional", True) = 0) _
    AndAlso (String.Compare([19], "Purchase", True) = 0) _
    AndAlso (String.Compare([1041], "Attached", True) = 0) _
    AndAlso (String.Compare([MORNET.X40], "StreamlineWithAppraisal", True) = 0) _
    AndAlso ([1109] <= 800000) _
    AndAlso ([1771] < 20) _
    AndAlso (String.Compare([420], "FirstLien", True) = 0) _
    AndAlso ([3042] = #*****#) _
    AndAlso ([3432] = #*****#) _
  ) Then
    conditionPass = True
    dtRowOrder = 0
  End If
  If Not conditionPass AndAlso ( _
    (String.Compare([1172], "FHA", True) = 0) _
    AndAlso (String.Compare([19], "NoCash-Out Refinance", True) = 0) _
    AndAlso (String.Compare([1041], "ManufacturedHousing", True) = 0) _
    AndAlso (String.Compare([MORNET.X40], "StreamlineWithoutAppraisal", True) = 0) _
    AndAlso ([1109] <= 800000) _
    AndAlso ([1771] < 20) _
    AndAlso (String.Compare([420], "SecondLien", True) = 0) _
    AndAlso ([3042] = #*****#) _
    AndAlso ([3432] = #*****#) _
  ) Then
    conditionPass = True
  End If
```

- The final Advanced code generated from DDM rules, including Fee and Field Rules

```
'Line/Group: Product_801a Origination Fees
.....
Try
Dim runAlways_801a As Boolean = True
Dim byPass_801a As Boolean
Dim conditionPass_801a As Boolean

    bypass_801a = [DDM:BYPASS_LE]

conditionPass_801a = False
If Not byPass_801a Then
    'Aggregated conditions
    Dim feeRuleOrder As Integer = -1
    If Not conditionPass_801a AndAlso _
        ( True ) AndAlso ( _
            (Match([2626], "", "Banked - Retail", "Correspondent") >= 0) _
            AndAlso ([1172] = "Conventional" ) _
        ) Then
        conditionPass_801a = True
        feeRuleOrder = 1
    End If
    If Not conditionPass_801a AndAlso _
        ( True ) AndAlso ( _
            (Match([2626], "", "Banked - Retail", "Correspondent") >= 0) _
            AndAlso ([1172] = "FHA" ) _
        ) Then
        conditionPass_801a = True
        feeRuleOrder = 2
    End If
    If Not conditionPass_801a AndAlso _
        ( True ) AndAlso ( _
            (Match([2626], "", "Banked - Retail", "Correspondent") >= 0) _
            AndAlso ([1172] = "Other" ) _
        ) Then
        conditionPass_801a = True
    End If
End If
```

- When field value is changed, including:
 - The original value before change
 - The new value we set to field
 - The rule name that changes this field
 - The scenario name that changes this field
 - The rule type (either Fee Rule or Field Rule)
 - Field Lock status from rule (lock is on or off from rule, if the rule overrides a calculated field)

The information will be saved to Encompass.log file. Use this log file for SmartClient users to troubleshoot any DDM issue.

This DDM diagnostic mode is different than “debug” mode. The debug mode will write information to the log file, but the DDM diagnostic mode is specific to DDM and will only write DDM related information to the log file.

17.3. Additional DDM Support

If after having worked through the steps above, you are still unable to find a resolution, go to the Encompass Resource Center> Encompass Administration and enter a case for Customer Support with the following information:

- A copy of the diagnostic log file
- Export file of the rule
- DDM table csv export
- Exception logs, if any, or other relevant screenshots