

OVERVIEW

Data in Arius segments can be fully independent of other segments in the file or it can be calculated as the sum or difference of data in one or multiple other segments in the same Arius file. An object that is typically an input field in a normal segment can behave in one of three ways in a calculated segment:

- be derived based on a formula to add and/or subtract data from other segments
- be set equal to the data from one specific segment
- remain an input field, not relying on any other segments

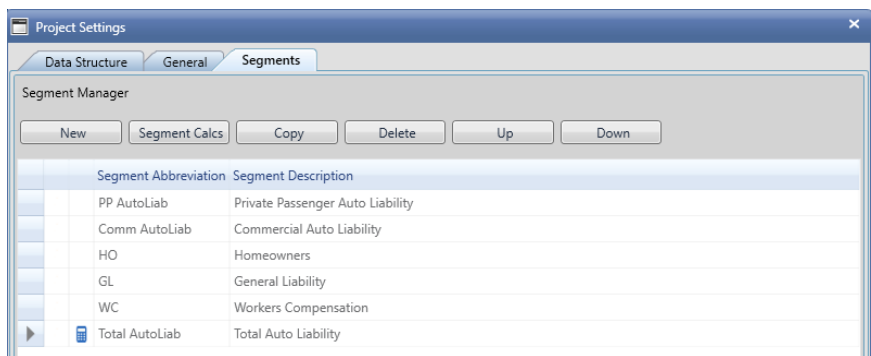
Objects that are typically an input field and would have the options above in a calculated segment include input arrays, selected development factors, selected ultimates, and other entered assumptions and selections.

For example, a Ceded segment could get its balances from a Gross segment minus a Net segment. In a Workers Comp file, the segments Medical, Indemnity, and Expense could all get their premiums from the premium objects in the Medical segment (essentially all sharing the same premium amounts) while each segment maintains its own separate loss amount objects. In a file with a Personal Auto Liability segment and a Commercial Auto Liability segment, a calculated segment Total Auto Liability could sum the data objects from the Personal and Commercial segments.

CREATING A CALCULATED SEGMENT

All segments, including calculated segments, are created in PROJECT SETTINGS | SEGMENTS from the Home ribbon. In this example, we will create a segment Total Auto Liability that is the sum of the Private Passenger and Commercial Auto Liability segments.

1. Click **New** to add a new row in the list of segments.
2. Enter the new segment abbreviation and a description. In our example, this is Total Auto Liability.



3. Click the **Segment Calcs** button to open the Calculated Segment window.
4. For this example click on the drop-down arrow to the left of PP AutoLiab and Comm AutoLiab and choose "+".
 - Note the resulting Segment Formula for Total Auto Liability in the middle of the window.

Calculated Segment Total AutoLiab

☒ Enable calculations

Select segments to add or subtract

Operation	Segment Abbreviation
+	PP AutoLiab
+	Comm AutoLiab
	HO
	GL
	WC

Segment Formula

+ "PP AutoLiab" + "Comm AutoLiab"

Apply formula to specific tables

Set rules for calculating table(s)

Category	Id	Name	Formula
Inputs	1	Case ALAE Reserves	Segment formula
Inputs	2	Case and IBNR ALAE Reserves	Segment formula
Inputs	3	Case and IBNR Loss Reserves	Segment formula
Inputs	4	Case Loss Reserves	Segment formula
Inputs	5	Closed Claims	Segment formula
Inputs	6	Closed Claims with Payments	Segment formula
Inputs	7	Exposures	Segment formula

OK Cancel

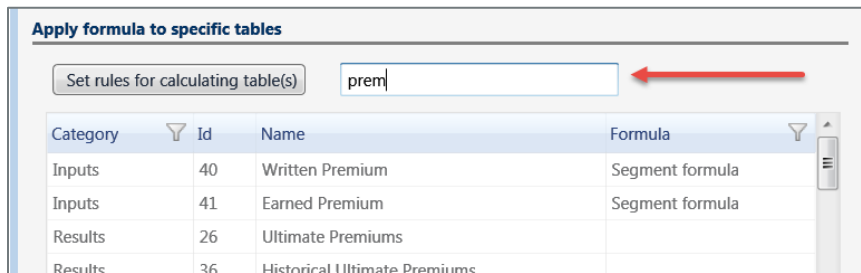
- The lower section of this window shows all the input objects in the new segment, which you can set to remain an input, be equal to values from one segment, or be equal to the sum and/or difference of other segments.
5. Scroll through the list of objects, noting the Formula column.
- The system-provided input objects will default to the Segment formula. This means that in the Total AutoLiab segment, all the data input objects will be the sum of the PP AutoLiab and Comm AutoLiab objects. For example, the Paid Loss data input triangle in the Total AutoLiab segment will be a sum of the PP AutoLiab Paid Loss triangle and the Comm AutoLiab Paid Loss triangle.

CHANGING HOW AN OBJECT IS CALCULATED IN A CALCULATED SEGMENT

For this example, let's say we have an Arius project file with the segments Workers Compensation Medical (WC Med) and Workers Compensation Indemnity (WC Indem). We create a third calculated segment Total Workers Compensation (Total WC). We have fully stated premiums in the Earned Premium and Written Premium objects for both the WC Indem and the WC Med segments. We created our third segment for Total WC as the sum of the WC Med and the WC Indem segments. In this case, we don't want the Earned Premium or Written Premium objects in the Total WC segment to be calculated as the sum of WC Med and WC Indem premiums because this would likely result in an

overstatement of total premiums. To avoid this, we can set a rule for the Earned Premium and Written Premium objects in the calculated segment Total WC specifying that Earned and Written Premium will come from the WC Med segment alone.

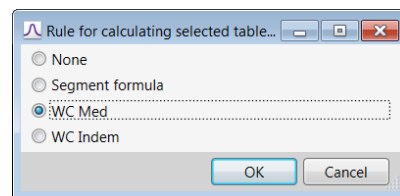
1. Scroll to the Inputs objects in the Category column.
2. Click on the Written Premium and Earned Premium objects to select them. Multiple rows can be selected using CTRL or SHIFT.
3. Click on the **Set rules for calculating table(s)** button.



Note:

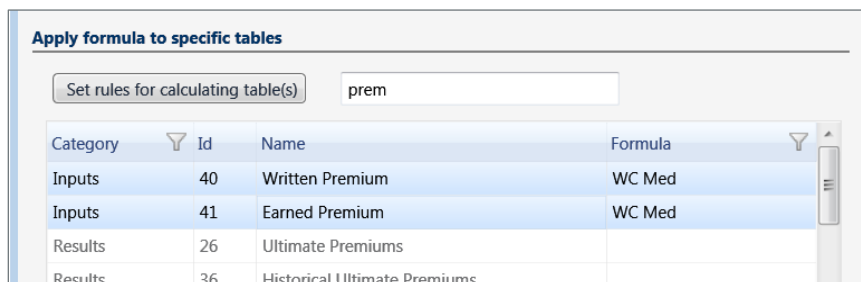
It's often quicker to use the filter box to assist in finding an object in the list.

4. Choose if you would like these objects to be calculated using the segment calculation formula, equal to a specific segment, or choose **None** to indicate that no calculation is to be applied to these objects (so you can enter data into them like any other data entry table).



5. Select WC Med and click **OK**.

Note that the segment named WC Med is now shown in the Formula column for the Written Premium and Earned Premium objects.

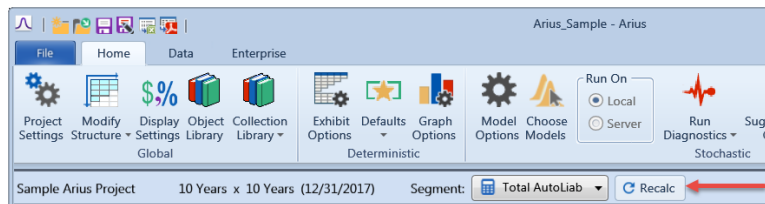


6. Click **OK** in the Calculated Segment window to apply these calculations to your new segment.
 - Note that while you are viewing an individual table in a calculated segment, you have the ability to change the formula settings directly within that table by clicking on the blue Calculated Segment icon.

RECALCULATING SEGMENTS

Arius automatically updates all calculations between segments most anytime such recalculations are necessary. Examples include when you open a file, when you produce reports, and when you switch from one segment being the active segment to another.

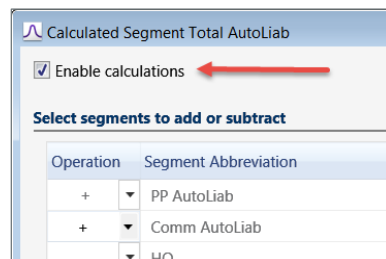
There may be rare occasions when you want to force recalculations among segments, and Arius provides a button for that below the Home ribbon. One potential example is when you have tables from more than one segment open on the screen, the calculated segment is not the active one, and you change a value in one of the segments that should affect the calculated segment's totals. While switching active segments to the calculated one will recalculate all values, if you do not change active segments but are merely watching the tables' values, you may need to manually recalculate totals.



Note that you do not need to use the Recalc button in normally-calculated segments. The Recalc button is only used for Calculated segments, which are easily identified by the blue calculator icon beside the segment name (or in the corresponding table icons).

TURNING CALCULATIONS ON AND OFF

It is possible to turn the calculations for a calculated segment on and off by clicking the **Enable calculations** box found at the top of the Calculated Segment window.



When calculations are enabled for a calculated segment, data in objects which are calculated by the inter-segment relationships cannot be directly modified and will have a shaded background. For situations where it is desirable to modify or update this calculated data, uncheck the **Enable calculations** box.

After a calculated segment is created and populated with data, unclicking **Enable calculations** will maintain all of the data in the calculated segment's calculated objects but these objects will no longer be shaded and will be accessible for entry or modification. It is possible to enable calculations for this segment again but the previous segment calculation formula and rules for calculating tables are not remembered and must be re-entered.

This can provide a handy way to fill data into segments in certain situations, letting the segment calculations do the work of initially filling the appropriate objects, and then turning off the calculations so you can continue to manually update the file.