Optimizer Simulation Transformations

When running an Optimizer simulation in X25 Analytics, you might want to apply transformations to the simulation's event and/or location lists. Transformations are hypothetical data changes that apply only to the snapshot data in the context of the simulation and are not carried over to 25Live.

You can apply specific transformations when creating an Optimizer list. Each transformation can be applied to a given list only once. Most transformations have options that must be configured, as described in the tables below.

To Add or Edit List Transformations

1. Navigate to Transforms

- In X25 Analytics, select **Transforms** from the left sidebar under the **Projects** tab.

2. Select a List to Transform

- Use the **List Mode** dropdown to choose to manage event or location lists.
- **Select** the list you want to edit.
- Click **Apply Transformation** from the buttons on the top.

3. Make a Transformation Selections

- In the Edit Transforms window that appears, **select** the desired transformation from the dropdown.
- Click the **+ button** to add the selected transformation to the list.
- **Expand** the transformation window by clicking the down arrow to the right of its name.
- Set the options for the transformation.

Image: Alter Enrollment transformation example.

ℹ️ **Note: Section Occurrences That Deviate From Your Meeting Pattern May Be Lost**

If a section or event has occurrences within a profile that deviate from its standard meeting pattern, those deviations will not be preserved during the transformation of the meeting pattern.

For example, suppose a section meets MWF from 10 AM to 11 AM, from 8/26 to 12/6, and also includes an additional occurrence on Tuesday, 8/27. If there is a time map with a source of 10 AM to 11 AM MWF and a destination of 9 AM to 10 AM MWF, this section would meet the criteria for that source. Therefore, if that mapping is selected in a Meeting Pattern transform within Modeling, this section would be included. However, after the transformation, the occurrence on Tuesday, 8/27, would be lost; since it falls outside the standard pattern, it will not be preserved in the mapping process.

This applies to any occurrence-specific time changes as well (for example, if one occurrence met from 1 PM to 2 PM in the above scenario). The Meeting Pattern transform effectively "flattens" occurrence-specific nuances to ensure that the transformed section adheres to the selected pattern.

4. Save

- Click **Done** when finished.

Event List Transformations

Transformation	Options	Effect

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Meeting Pattern	Select from the list of predefined time mappings	Alters the start time, end time, and days of the week of every class in the list according to the mappings in the list. Options include:
		
		• Specify the start date and end date of the time mapping
		   ○ By default, X25 will use the earliest start date and the latest end date of the snapshot
		
		• Decide whether the mapping starts on Monday of the section's first week or the date of the first occurrence of the section
		   ○ Monday is the default value
		
		• Decide whether the mapping ends before the Sunday of the section's last week or before the date of the last occurrence of the section
		   ○ Sunday is the default value
		
		Note: When the selected start date of mapping is after the section's first occurrence, the mapping will start from the selected start date of mapping. When the selected end date of mapping is before the section's last occurrence, the mapping will end before the selected end date of mapping.

Remove Assignments	None	Removes any location assignments of the classes (from 25Live data) prior to the Optimizer run. If your snapshot includes a term that has already been fully scheduled in 25Live, it's likely you'll use this transformation on every event list you create. Otherwise, there's nothing for the Optimizer to place!
Add Preferences	Select from a list of location features	Adds selected location feature preferences to all classes in the list. These are treated as requirements for placement by the Optimizer.
Remove Preferences	Select from a list of location features	Removes selected location feature preferences from all classes in the list, if they are present.
Alter Headcount	• Increase or decrease • Value • Percent or attendees	Adjusts the headcount of every class in the list by a fixed value or a percentage.

Transformation	Options	Effect
Bind Back to Back	• Enrollment variation • Max minutes between	Treats classes with the same instructor as if they are bound (requiring the same location assignment). Ignores classes if there is too much time between them or if their headcounts differ too much. Multiple bindings are supported, such as 3 events bound with each other.

Location List Transformations

Transformation	Options	Effect
Alter Capacity	• Increase or decrease • Value • Percent or seats	Adjusts the capacity of every location in the list by a fixed value or a percentage.
Alter Partitions	Select from a list of location partitions	Sets the partition of each location in the list to the selection.
Add Features	Select from the list of location features	Adds selected location features to all locations in the list.
Remove Features	Select from a list of location features	Removes selected location features from all locations in the list if they are present.
Alter Fill Ratios	• Increase, decrease, or set • Value	Adjusts the fill ratio by a fixed value or sets it to that value for all locations in the list. Classes will not be placed in a location if their seat utilization would be lower than the location's fill ratio.