

Using the Migrate Calibration Points tool

Adding intermediate Calibration Points to looped routes

The requirements for routes with loops have changed from ArcMap to ArcGIS Pro. In ArcMap, a loop was defined by a minimum of two Calibration Points which meet at the beginning and end of the loop. In ArcGIS Pro, loops are defined by at least four Calibration Points with one at the start of the loop, one at the end, and two intermediate Calibration Points in the loop body. This rule applies to all routes with loop portions including barbells, alphas, lollipops, and infinities—all of these route shapes require at least two Calibration Points in the loop portion.



1. A loop in ArcMap



2. A lollipop in ArcMap

Because of this redefinition, Esri has developed a Python tool that can be executed in ArcGIS Pro which will add intermediate Calibration Points to loops from ArcMap that do not currently have them. This tool, called Migrate Calibration Points, is designed to be run only once as part of the migration for users moving from ArcMap to ArcGIS Pro. Please refer to the ArcMap to ArcGIS Pro migration whitepaper for more information.

IMPORTANT: This tool will only add Calibration Points to loops and lollipops. Alphas, infinities, and other complex shapes with loops that were not supported in ArcMap can have Calibration Points generated at the expected locations using the Generate Calibration Points geoprocessing tool within the Location Referencing toolbox in Pro.

Updating z-values on Calibration Points

ArcGIS Pro has expanded 3D capabilities that Roads and Highways utilizes. In order to ensure that routes are correctly calibrated in 3D, Calibration Points must have x, y, and z-values. Because z-values were not applied to some Calibration Points in ArcMap, this tool also updates Calibration Points that do not have z-values for their associated location on the network. This tool will not change any calibration on the routes or apply any event behaviors associated with point or line events on a route.

Usage Notes

- The Network Feature Class parameter is used as the source location referencing method for calculating the measure values to update the calibration point feature class.
- The Calibration Point Feature Class parameter is must be in the same LRS as the Network Feature Class parameter.
- The Network Feature Class and Calibration Point Feature Class parameters must be in a controller dataset. You must run Modify LRS to convert your ArcMap LRS to the ArcGIS Pro LRS schema before running this tool.
- The Feature Dataset name and the LRS name should match in order for this tool to run. If the names are different, you can either:
 - Change the name of the feature dataset, then run the Migrate Calibration Points tool. Once the tool completes, the feature dataset name can be changed back to the original name.
 - Change the LRS name using the Modify LRS geoprocessing tool.
- Routes that contain looped section require a minimum of two calibration points within the loop (excluding loop endpoints). Calibration points will be added to each loop to meet this condition.
- Added calibrations points will not change the calibration of the route.
- Added calibrations points will not result in changes to event behaviors.

Tool Parameters

- Network Feature Class: The input LRS Network feature class.
- Calibration Point Feature Class: The input LRS Calibration Point feature class.
NOTE: The above parameters only accept feature classes from a geodatabase, not a feature layer instance or a layer from a feature service.