

Importing Pumps and Valves as Points

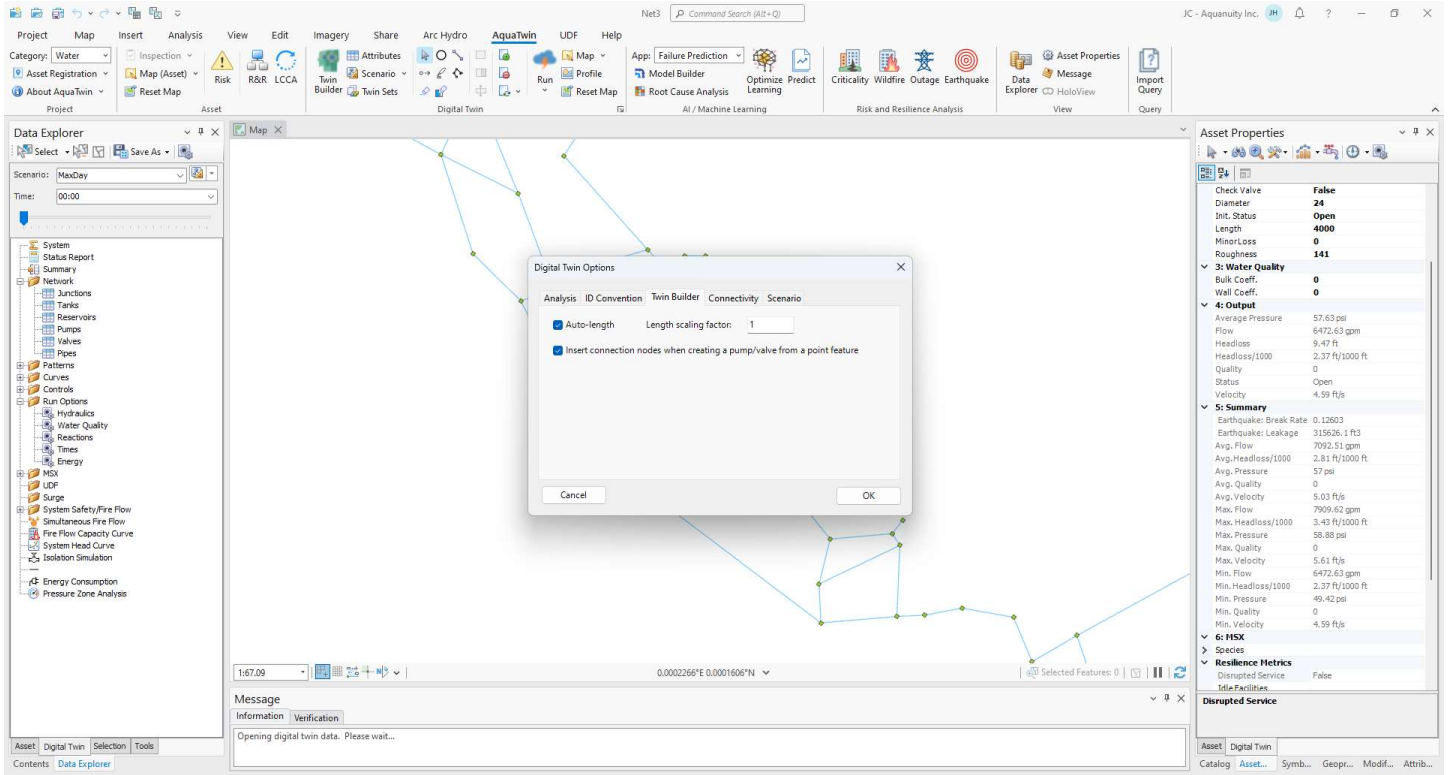


Figure 1: Digital Twin options to import points as links.

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Overview

In AquaTwin Water/Sewer, pumps and valves are represented as links. Many users, however, have their pumps and valves stored as points in their GIS systems. This document outlines the workflow for importing these pumps and valves as points from GIS and automatically converting them into links in AquaTwin Water/Sewer.

Prerequisites

1. Bring the pumps/valves point feature class into the map.
2. The Pipes/Conduits need to already be split at the point where the pump/valve point is located. If the Pipes/Conduits are not already split:
 - a. Import the pumps/valves as junctions via the [Import Center](#).
 - b. Select those imported junctions using an ArcGIS selection.
 - c. Use a Select by Location to select the Pipes/Conduits intersecting the selected junctions (pumps/valves).
 - d. Run the [Split Pipes](#) tool to split the selected Pipes/Conduits at the pumps/valves location.
 - e. Delete ([Manual Editing](#)) out the junctions via an ArcGIS selection that represent the pumps/valves.

Fix Pump/Valve Directions

For the import process to work correctly, the Pipes/Conduits on either side of the point feature class need to have the same direction. The Verify Pump/Valve Direction tool can identify and select pipes that are going in opposite directions at the pump/valve point feature class.

Once selected, using the Fix Pump/Valve Direction will correct the directions and the Pipes/Conduits will be in the same direction.

Required Settings

In the [Digital Twin Options](#) go to the Twin Builder options, and toggle on *Insert connection nodes when creating a pump/valve from a point feature* (**Figure 2**).

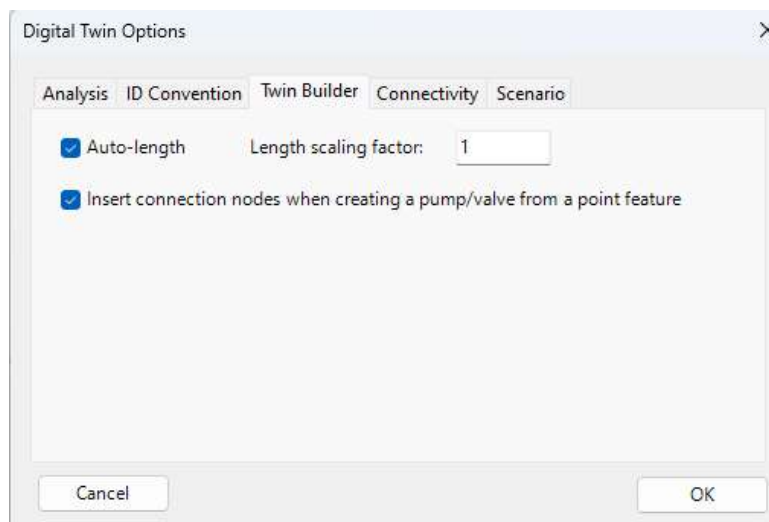


Figure 2: Required setting for importing pumps and valves as points.

In the [Import Center](#) options, check the conversion option that applies (**Figure 3**).

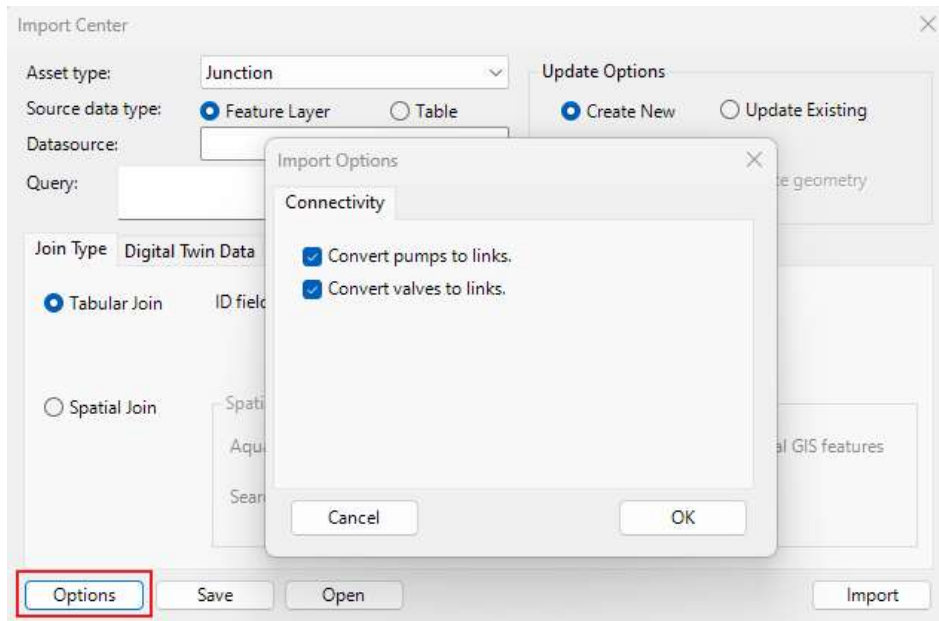


Figure 3: Options in Import Center to convert points to links.

Remaining Steps

Once the model prerequisites and correct settings are applied, simply choose the Asset type to be either pumps or valves in the [Import Center](#), and the Data source to be the pumps/valve point feature class and click *Import*. A pump/valve will be added as a link in the model with the specified Asset ID of the point pump/valve feature class.

Two new nodes will be added (**Figure 4**) and will be named *AssetID_UN* and *AssetID_DN* representing the upstream and downstream nodes of the pump/valve.



Figure 4: Result of importing pumps/valves as nodes in AquaTwin.

