

Cluster Orders Into Zones Plugin

This sample plugin clusters the orders for the current day into zones, and assigns a zone to each route for the day. It is useful for learning how to create a command which accesses schedules and orders, creates zones, and modifies routes for the current day. The file *ClusterOrdersIntoZonesCmd.cs* contains the code for creating the command, and *ConvexPolygon.cs* contains the logic for creating a bounding convex polygon from a collection of points.

Installation:

1. Copy the plugin DLL (*ClusterOrdersIntoZonesPlugin.dll*) into the ArcLogistics install directory.

Usage:

1. A button called *Cluster Orders Into Zones* appears on the *Tasks* widget of the *Optimize and Edit* action panel of the *Schedule* tab.
2. Import or add some orders for the current day. The plugin is intended to work with a large number of orders.
3. On clicking *Cluster Orders Into Zones*, the plugin clusters the orders into as many spatial clusters as there are routes on the current day. It then creates soft zones around each cluster, and adds them to the project. Finally it assigns one unused zone to each route for the day.
4. To visualize the zones, check on *Zones* from the *Map Layers* menu of the *Map* view. A zone will not be created for a cluster having less than three orders.

Customization:

1. Open the Visual Studio project *ClusterOrdersIntoZonesPlugin*.
2. Modify references and project settings if needed.
3. Modify the code in the *Execute* method to change plugin behavior. It contains logic for counting orders and routes for the current day, performing spatial clustering on the orders, creating zones around each cluster and adding them to the project and a route. You may also want to modify the clustering methods to change clustering behavior.
4. It may also be useful to change some of the other functions or properties, such as *Title* and *Tooltip*.
5. Rebuild the project to obtain the new dll.
6. Copy the dll into the install directory, and run ArcLogistics to check the results.