Geo Location Dashboard Widget

> The **Geo Location Widget** provides an interactive Google Map view on the dashboard to plot geocoded operational data. Its primary purpose is to help administrators visually monitor real-time spatial trends—such as active violation locations and License Plate Recognition (LPR) reads—across parking facilities. This article is intended for OperationsCommander (OPSCOM) administrators.

Setup and Configuration

The Geo Location widget is built directly into the dashboard framework.

- **Admin Side:** Administrators must have system role permissions enabled to edit dashboards (dashboard_edit_any or ownership of the target dashboard).
- **Data Sources:** The map supports visual plotting for two underlying data sources:
  - **Violation Stats:** Displays spatial distribution of issued parking tickets.
  - **LPR Stats:** Plots License Plate Recognition camera reads and scan locations.

Using this Feature

Administrators can use the following instructions to add and configure a Geo Location widget on any customizable dashboard workspace.

Adding the Geo Location Widget

1. Open your target dashboard and toggle the **Edit Mode** switch in the top toolbar to **On**.
2. Click the **+ Add Widget** button to open the widget selection gallery.
3. Select **Geo Location Widget** from the available widget options.

Configuring Map Data and Filters

1. Locate the newly placed **Geo Location Widget** tile on your grid and click the gear icon (**Settings**) in its header bar.
2. Enter a custom title in the **Widget Name** field.
3. Select a **Data Source** from the drop-down menu (**Violation Stats** or **LPR Stats**).
4. Select the **Display Settings** tab to configure map visualization parameters (such as cluster displays or default time ranges).
5. Select the **Filter Settings** tab to refine the underlying data:
   - **Permit Type:** Filter displayed map points by specific permit classifications or leave set to **All**.
   - **Camera Type:** Specify entry, exit, monitor, or patrol camera types (available when *LPR Stats* is selected).
   - **Bounding Coordinates:** Enter numerical thresholds into **Min Latitude**, **Max Latitude**, **Min Longitude**, and **Max Longitude** to restrict the rendered map area to a specific geographic bounding box.
6. Click **Save** to apply the configuration and render the map data.

Available Controls and Display Modes

Map Layer Controls (On Map)

- **Map View:** Standard graphical street map mode provided by Google Maps, ideal for identifying lot boundaries and street layouts.
- **Satellite View:** High-resolution aerial satellite imagery, useful for pinpointing precise vehicle or enforcement locations within open lots.
- **Point Clustering:** Groups dense clusters of nearby location points into summarized numerical circles (e.g., orange numeric markers) to keep the map readable and optimize performance.

Widget Header Toolbar

- **Refresh (circular arrow icon):** Manually updates the widget data to query and load the latest geocoded records.
- **Download Raw CSV (green tray/arrow icon):** Exports the raw underlying location data and coordinates currently plotted on the map into a downloadable .csv spreadsheet file.
- **Settings (gear icon):** Opens the configuration modal to edit the widget title, data source, display settings, and filters.
- **Duplicate (double box icon):** Creates an exact clone of the widget tile with matching settings on your active dashboard grid.
- **Delete (trash can icon):** Removes the widget tile from the active dashboard.

Best Practices and Considerations

- **Restrict Bounding Box Coordinates:** For large organizations or multi-campus deployments, set **Latitude** and **Longitude** minimums and maximums under **Filter Settings** to lock a specific map widget to a single sub-campus or facility.

- **Optimal Time Ranges:** Configure map data to load relative windows (such as *Last 4 to 8 Hours*) in **Display Settings**. This avoids cluttering the map with stale historical data and maintains high rendering speed for enforcement monitoring.
- **Combine with List Widgets:** Place a Geo Location map widget adjacent to a **List Widget** configured with the exact same data source (*Violation Stats* or *LPR Stats*). This setup gives staff simultaneous access to spatial pin visualizers alongside tabular record drill-downs.

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