NavView User Guide – 22 JSON Exchange

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4D Nav, LLC

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01	A	Initial release	SW	GAW	GAW	May 24, 2024

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22. JSON EXCHANGE

22.1 OVERVIEW

Shared JSON is an output from NavView that sends vehicle position updates to a cloud-based service for integration into third-party applications requiring real-time updates. The data is published in JSON format for ease of integration.

The cloud-based service is configured and managed by 4D Nav. For more information, please contact 4D Nav support.

22.2 PUBLISHED DATA

The data is published in JSON format and includes the following fields.

Field	Data Type	Description
Id	string	Unique vessel Id in group
Timestamp	double	Posix timestamp in seconds from Jan 1, 1970
Easting	double	Vehicle easting in the working CRS
Northing	double	Vehicle northing in the working CRS
Elevation	double	Vehicle northing in the working CRS
Heading	double	Vehicle heading in degrees
Pitch	double	Vehicle pitch in degrees
Roll	double	Vehicle roll in degrees

FIGURE 22-1 PUBLISHED VEHICLE DATA

22.3 CONFIGURING JSON

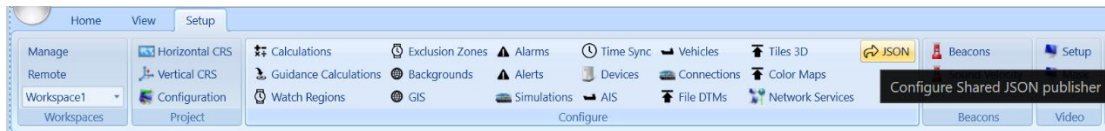The configuration is accessed from the Setup ribbon.

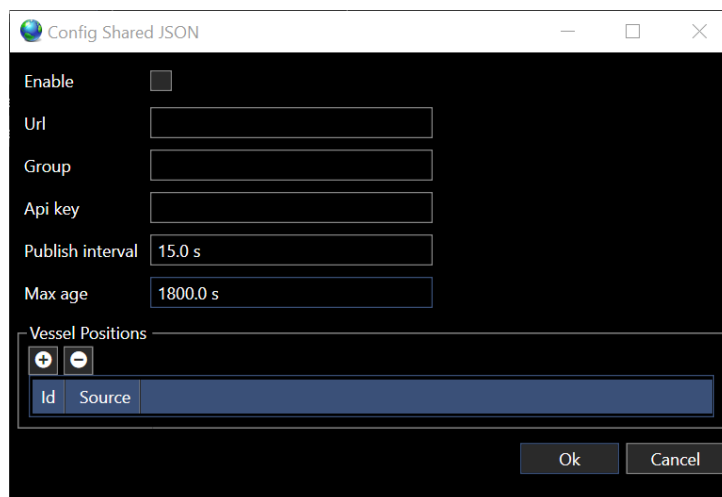FIGURE 22-2 JSON PUBLISHER - SETUP RIBBON

FIGURE 22-3 CONFIG SHARED JSON DIALOG

- **Enable :** Check box to enable JSON publishing
- **Url:** The publishing URL provided by 4D Nav
- **Group:** The group identifier used to uniquely identify this set of published data. This value must be unique when publishing data from multiple NavView systems
- **Api Key:** API key supplied by 4D Nav. This is required to publish data to the cloud-based service
- **Publish interval:** The interval between publishing events. Data is published to the service on this interval
- **Max age:** The maximum age of the individual vehicle positions. If the vehicle position age is greater than this value, it is not published to the cloud-based service
- **Vessel Positions**: Use the + and – button to configure which vessels are published to the cloud-based service, see Figure 22-4
  - **Id:** Each selected vessel must have a unique Id which is used to uniquely identify the vessel in each group. The ID is automatically assigned to each vehicle position, this can be edited
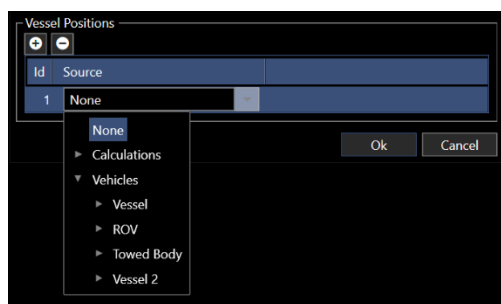 - **Source:** Select from the NavView list of available body state providers, e.g. Calculations and Vehicles.

FIGURE 22-4 VESSEL POSITIONS SELECTION

The following is an example of vehicle data in JSON format.

[{"Id":"WA","Timestamp":1597489078.345,"Easting":2515157.053,"Northing":9862735.187,"Elevation":0,"Pitch":0,"Roll":0,"Heading":180},{"Id":"UHD69","Timestamp":1597489078.43,"Easting":2515171.129,"Northing":9862787.026,"Elevation":-4905.84,"Pitch":0,"Roll":0,"Heading":200},{"Id":"UHD68","Timestamp":1597489078.386,"Easting":2515009.678,"Northing":9862930.898,"Elevation":-4779.528,"Pitch":0,"Roll":0,"Heading":172}]

22.4   MONITORING JSON

The monitoring view for this operation is accessed from the View Ribbon, see Figure 22-5. The resulting window displays the timestamp of the data published, what was published and what the target application replied with, see Figure 22-6.
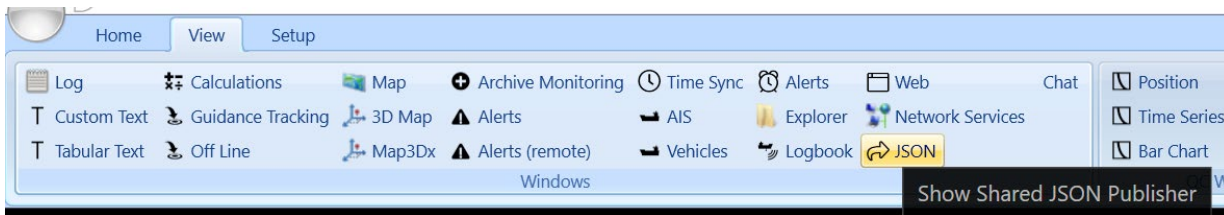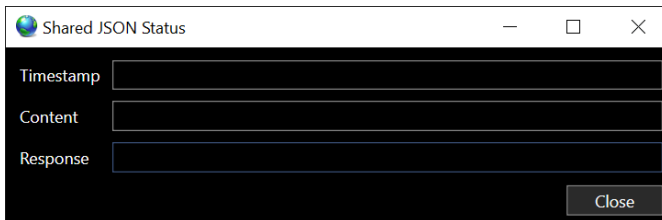

FIGURE 22-5 JSON STATUS - VIEW RIBBON

FIGURE 22-6 JSON STATUS WINDOW