

NavView User Guide – 22 JSON Exchange

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22. JSON EXCHANGE

22.1 OVERVIEW

Shared JSON is an output from NavView that sends vehicle position updates to a cloudbased 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

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

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

FIGURE 22-1 PUBLISHED VEHICLE DATA

22.3 CONFIGURING JSON

The configuration is accessed from the Setup ribbon.

Taxa A	Home	View Setup									
A A A A A	Manage	Horizontal CRS	\$; Calculations	S Exclusion Zones	Alarms	() Time Sync	- Vehicles	Tiles 3D	SON (📕 Beacons	Setup
-	Remote	J- Vertical CRS	3 Guidance Calculations	Backgrounds	▲ Alerts	Devices	Connections	Color Maps	Con	Charad ISON	Inchistor
3	Workspace1 *	Configuration	Watch Regions	GIS GIS	a Simulations	🛥 AIS	File DTMs	Metwork Services	Con	igure snared JSOF	a publisher
-	Workspaces Project		Configure						Beacons	Video	

FIGURE 22-2 JSON PUBLISHER - SETUP RIBBON



Onfig Shared	ISON	_		\times
Enable				
Url				
Group				
Api key				
Publish interval	15.0 s			
Max age	1800.0 s			
Vessel Positions				
Id Source				
		Ok	Ca	incel

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 cloudbased 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,"Elevati on":0,"Pitch":0,"Roll":0,"Heading":180},{"Id":"UHD69","Timestamp":1597489078.43,"Easting":25151 71.129,"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

Shared JSON Status				\times
Timestamp				
Content				
Response				
			C	ose

FIGURE 22-6 JSON STATUS WINDOW