
Command Reference:

WriteTimeSeriesToGeoJSON()

Write time series to a GeoJSON format file

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The `WriteTimeSeriesToGeoJSON()` command writes time series to a GeoJSON file, which is a spatial data format that can be viewed in geographic information system (GIS) software and other visualization tools. See: <http://geojson.org/geojson-spec.html>

The time series must have properties for longitude and latitude or Well Known Text (WKT) geometry string. See: http://en.wikipedia.org/wiki/Well-known_text

Currently only point and polygon data can be processed but in the future support for well-known text for other geometry types will be added. A future enhancement of this command will allow the geometry feature data to be read from other spatial formats.

The following dialog is used to edit the command and illustrates the syntax of the command.

Edit WriteTimeSeriesToGeoJSON() Command

Write time series to a GeoJSON file, for use in spatial data processing and visualization.
Longitude, latitude, elevation, and other GeoJSON values are taken from time series properties.
The working directory is: C:\owf-gitrepos\cdss-app-tstool-test\test\regression\commands\general\WriteTimeSeriesToGeoJSON

TS list: Optional - indicates the time series to process (default=AllTS).

TSID (for TSList=AllMatchingTSID):

EnsembleID (for TSList=EnsembleID):

GeoJSON file to write: Results/Test_WriteTimeSeriesToGeoJSON_Day_LonLat_out.json

Append?: Optional - append content to file? (default=False).

Point Data | Geometry Data | Properties | JavaScript | Inserts

If the time series are associated with a point layer, then spatial information can be specified from time series properties (below).
Otherwise, specify shape data using parameters in the Geometry Data tab.

Longitude (X) property: longitude Required - time series property containing longitude.

Latitude (Y) property: latitude Required - time series property containing latitude.

Elevation (Z) property: Optional - time series property containing elevation (default=X,Y).

Command: WriteTimeSeriesToGeoJSON(OutputFile="Results/Test_WriteTimeSeriesToGeoJSON_Day_LonLat_out.json",LongitudeProperty="longitude",LatitudeProperty="latitude")

WriteTimeSeriesToGeoJSON

WriteTimeSeriesToGeoJSON() Command Editor for Point Data Parameters

The following figure illustrates the command syntax for layers specified with a WKT geometry property.

Point Data Geometry Data Properties JavaScript Inserts

Geometry (shape) data can be specified using Well Known Text (WKT) strings in a time series property. Currently only POINT and POLYGON geometry are recognized but support for other geometry types will be added in the future. Coordinates in the WKT strings must be geographic (longitude and latitude decimal degrees).

WKT geometry property: Optional - time series property WKT geometry.

WriteTimeSeriesToGeoJSON_WKT

WriteTimeSeriesToGeoJSON() Command Editor for WKT Geometry Data Parameters

The following figure illustrates the command syntax for specifying time series properties to include as properties in the GeoJSON output.

Point Data Geometry Data Properties JavaScript Inserts

Specify time series properties to be output in the GeoJSON feature "properties" list.

Include properties: Optional - properties to include (default=include all).

Exclude properties: Optional - properties to exclude (default=exclude none).

WriteTimeSeriesToGeoJSON_Properties

WriteTimeSeriesToGeoJSON() Command Editor for Property Parameters

The following figure illustrates the command syntax for specifying the JavaScript variable for the output.

Point Data Geometry Data Properties JavaScript Inserts

The default is to output GeoJSON in a format similar to the following:

```
{
  "type": "FeatureCollection",
  "features": [
    {
      "type": "Feature",
      "properties": {
      }
      "geometry": {
        "type": "Point",
        "coordinates": [-105.89194, 38.99333]
      }
    }, { repeat for each feature },...
  ]
}
```

The entire output will correspond to one JavaScript object. However, if a JavaScript variable is specified, the object will be assigned to a JavaScript variable. This allows direct use of the file in a website

JavaScript variable: Optional - JavaScript variable for GeoJSON object (default=none).

WriteTimeSeriesToGeoJSON_JavaScriptVar

WriteTimeSeriesToGeoJSON() Command Editor for JavaScript Parameters

The following figure illustrates the command syntax for specifying inserts around the GeoJSON content.

Specify text to insert before and after the GeoJSON. For example, use the following to initialize the object in an array:
 prepend: `var stationData = []; stationData['Org1'] =`
 append: `;`

Prepend text: Optional - text to prepend before GeoJSON object (default=none).
 Append text: Optional - text to append after GeoJSON object (default=none).

WriteTimeSeriesToGeoJSON_Inserts

WriteTimeSeriesToGeoJSON() Command Editor for Text Insert Parameters

The command syntax is as follows:

```
WriteTimeSeriesToGeoJSON (Parameter=Value, ...)
```

Command Parameters

| Parameter | Description | Default |
|------------|---|--------------------------------|
| TSList | Indicates the list of time series to be processed, one of: <ul style="list-style-type: none"> AllMatchingTSID – all time series that match the TSID (single TSID or TSID with wildcards) will be processed. AllTS – all time series before the command. EnsembleID – all time series in the ensemble will be processed. FirstMatchingTSID – the first time series that matches the TSID (single TSID or TSID with wildcards) will be processed. LastMatchingTSID – the last time series that matches the TSID (single TSID or TSID with wildcards) will be processed. SelectedTS – the time series are those selected with the <code>SelectTimeSeries()</code> command. | AllTS |
| TSID | The time series identifier or alias for the time series to be processed, using the * wildcard character to match multiple time series. Can be specified using <code>\${Property}</code> . | Required if TSList=*TSID. |
| EnsembleID | The ensemble to be processed, if processing an ensemble. Can be specified using <code>\${Property}</code> . | Required if TSList=EnsembleID. |
| OutputFile | The GeoJSON output file. The path to the file can be absolute or relative to the working directory (command file location). Global properties can be | None – must be specified. |

| Parameter | Description | Default |
|----------------------|--|--|
| | used to specify the filename, using the <code>\${Property}</code> syntax. | |
| Append | Indicate whether to append the GeoJSON content to the output file, True or False. | False |
| Longitude Property | The name of the time series property containing the longitude to use for the GeoJSON. Can be specified using <code>\${Property}</code> . | Required unless WKT geometry is specified. |
| Latitude Property | The name of the time series property containing the latitude to use for the GeoJSON. Can be specified using <code>\${Property}</code> . | Required unless WKT geometry is specified. |
| Elevation Property | The name of the time series property containing the elevation to use for the GeoJSON. Can be specified using <code>\${Property}</code> . | Omitted |
| WKTGeometry Property | The name of the time series property that contains Well Known Text (WKT) geometry strings. Can be specified using <code>\${Property}</code> . | Will use point data properties |
| IncludeColumns | List of comma-separated time series property names to include as feature properties, using * for wildcard. Can be specified using <code>\${Property}</code> . | Include all columns. |
| ExcludeColumns | List of comma-separated time series property names to exclude as feature properties. Can be specified using <code>\${Property}</code> . | Exclude no columns. |
| JavaScriptVar | Name of JavaScript variable to assign object to in output. This parameter will be ignored if PrependText or AppendText are specified. Can be specified using <code>\${Property}</code> . | Output GeoJSON object surrounded by { }. |
| PrependText | Provide text to insert before the GeoJSON object, for example to provide custom JavaScript. Can be specified using <code>\${Property}</code> notation. | No insert. |
| AppendText | Provide text to append after the GeoJSON object, for example to provide custom JavaScript. Can be specified using <code>\${Property}</code> notation. | No insert. |