
Command Reference: processTSProduct()

Process a time series product file to produce output

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The `processTSProduct()` command is used to streamline creation of time series data products. These products are described in time series product description (*.tsp) files, which are typically created by using the **Save...Time Series Product** choice in graph windows (future enhancements may allow creation of text products from summary or table views). See the **TSView Time Series Viewing Tools Appendix** for more information about time series products. For example, the following sequence of actions can be used to define and use time series product description files:

1. Use TSTool and interactively select time series using the main window. The time series identifiers and/or aliases will be referenced in the time series product.
2. Interactively view a graph (e.g., **Results...Graph – Line**) and edit its properties by right clicking on the graph and selecting the **Properties** choice (e.g., set titles and legend properties).
3. Save the graph as a time series product from the graph window using the **Save...Time Series Product** choice. Typically the product is saved in a location close to the commands file. An example time series product file is as follows:

```
[Product]

ProductType = "Graph"

[SubProduct 1]

GraphType = "Line"
MainTitleString = "Streamflow (Monthly Total)"

[Data 1.1]

TSID = "08223000.DWR.Streamflow.Month~HydroBase"

[Data 1.2]

TSID = "08220500.DWR.Streamflow.Month~HydroBase"
```

4. Add a `processTSProduct()` command to the original commands to allow the product to be created automatically. Select the time series product file created in the previous step.
5. Save the commands in a file (e.g., named *stations.TSTool*) so that they can be run again. The commands file and time series product definition files must be used consistently (e.g., the time series identifiers and directory paths must be consistent).

The following dialog is used to edit the `processTSPProduct()` command and illustrates the command syntax. The path to the file can be absolute or relative to the working directory. The **Browse** button can be used to select the time series product description file (if a relative path is desired, delete the leading path after the select or use the **Remove Working Directory from TSP** button).

Edit processTSPProduct() Command

Time series product definition files (typically named *.tsp) contain properties for graphs or other data products.
A product can be processed in a script, resulting in viewable graphs or image files.
If the working directory has been specified, the file path can be specified as relative.
The working directory is: J:\CDSS\develop\Apps\TSTool\test\Commands\processTSPProduct
If View is true, the products must be interactively saved to files (the output file is ignored).
The output file extension indicates the output format (only .jpg and .png are supported).

TS product file (TSP):

Run mode: Indicates when products should be processed.

View: Display product (default=True).

Output file:

Command:

```
processTSPProduct(TSPProductFile="example.tsp",RunMode=GUIAndBatch,View=True)
```

processTSPProduct

processTSPProduct() Command Editor

The command syntax is as follows:

```
processTSProduct (param=value, ...)
```

Command Parameters

Parameter	Description	Default
TSProductFile	The time series product file to process. The path to the file can be absolute or relative to the working directory. The Browse button can be used to select the file to write (if a relative path is desired, delete the leading path after the select).	None – must be specified.
RunMode	Indicate the run mode to process the product, one of: <ul style="list-style-type: none"> BatchOnly – indicates that the product should only be processed in batch mode. GUIOnly – indicates that the product should only be processed when the TSTool GUI is used (useful when Preview is set to Preview). GUIAndBatch – indicates that the product should be processed in batch and GUI mode. 	None – must be specified.
View	Indicates whether the output should be previewed interactively, one of: <ul style="list-style-type: none"> True – display the graph. False – do not display the graph (specify the output file instead to automate image creation). 	None – must be specified.
OutputFile	The absolute or relative path to an output file. Use this parameter with View=False to automate image processing. If the filename ends in “jpg”, a JPEG image file will be produced. If the filename ends in “png”, a PNG file will be produced.	If specified, an image file will be created.

A sample commands file is as follows:

```
processTSProduct (TSProductFile="example.tsp",RunMode=GUIAndBatch,View=True)
```

After using the above dialog to edit the command, the time series product can be processed from TSTool as follows:

1. Open the commands file, in this case containing the above commands file.

2. Process the commands using **Run All Commands**. The graph will be displayed for review.

Alternatively, run TSTool in batch mode by specifying an output file (and optionally changing the RunMode parameter to BatchOnly) using:

```
tstool -commands commands.TSTool
```

The working directory will be set to the directory for the commands file and output will be relative to that directory.