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# Command Reference: WriteTimeSeriesToExcelFormatted()

**Write one or more time series to a Microsoft Excel workbook file using layout**

Version 11.00.00, 2015-03-11

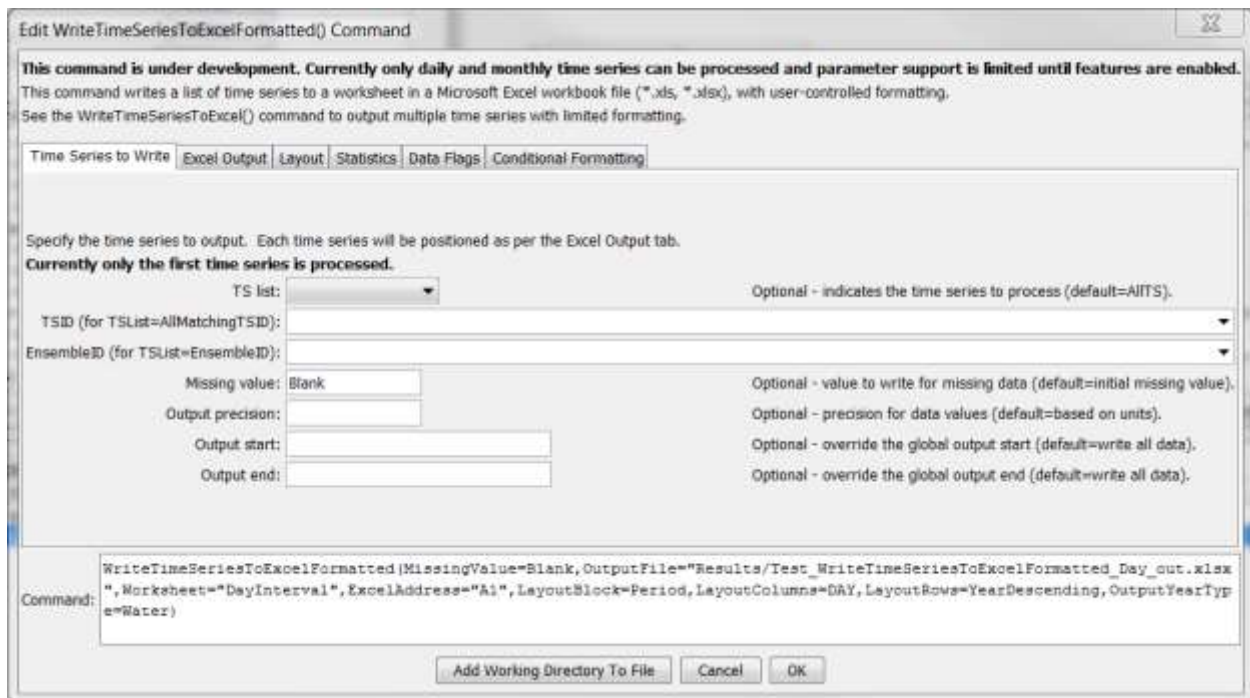
**This command is under development.**

The `WriteTimeSeriesToExcelFormatted()` command writes one or more time series to an Excel workbook with control over the output layout. The following functionality is provided:

- Time series are written in blocks (see `WriteTimeSeriesToExcel()` for simple column output).
- The worksheet and position in worksheet can be specified.
- The output can be created or appended.
- Options are provided to select how the blocks of data are oriented.

TSTool uses the Apache POI software (<http://poi.apache.org>) to read/write the Excel file and consequently functionality is constrained by the features of that software package.

The following figures illustrate the dialog used to edit the command and the syntax for the command.



WriteTimeSeriesToExcelFormatted\_TimeSeries

**WriteTimeSeriesToExcelFormatted() Command Editor Showing Time Series Parameters**

**Time Series to Write** | **Excel Output** | Layout | Statistics | Data Flags | Conditional Formatting

Currently a single time series can be output. In the future features will be enabled to match each time series with a worksheet or subset. Each time series will be output in a block of cells with the upper left indicated by the address information. The worksheet will be created if it does not exist. Time series properties can be used to specify the worksheet name using syntax \${Property}. It is recommended that the location of the Excel file be specified using a path relative to the working directory. The working directory is: C:\owf-gitrepos\cdss-app-tstool-test\test\regression\commands\general\WriteTimeSeriesToExcelFormatted

Output (workbook) file:

Append?:  Optional - whether to append to Excel file (default=False or True if open).

Worksheet:  Optional - worksheet name (default=first sheet).

Specify the address for a contiguous block of cells the in Excel worksheet

by Excel Address ☒ by Named Range ☐ by Table Name

Excel address:  Excel cell block address in format A1 or A1:B2.

Keep file open?:  Optional - keep Excel file open? (default=False).

WriteTimeSeriesToExcelFormatted\_Output

### WriteTimeSeriesToExcel() Command Editor for Excel Output Parameters

**Time Series to Write** | **Excel Output** | **Layout** | Statistics | Data Flags | Conditional Formatting

Each time series is formatted by specifying a layout block (chunk of data) and then the layout of that block of data by columns and rows. Initial functionality has been implemented to generate raster graphs for daily and monthly data using conditional formatting. February 29 of non-leap years in daily and smaller interval time series is set to blank.

Layout block:  Required - output block content.

Layout columns:  Required - time slice of each column.

Layout rows:  Required - time slice of each row.

Output year type:  Optional - output year type (default=Calendar).

Column labels:  Optional - format for column labels.

Row labels:  Optional - format for row labels.

WriteTimeSeriesToExcelFormatted\_Layout

### WriteTimeSeriesToExcel() Command Editor for Layout Parameters

**Time Series to Write** | **Excel Output** | **Layout** | **Statistics** | Data Flags | Conditional Formatting

**Statistics features are currently not enabled.**

The block of data can optionally also have statistics on the right-most columns or bottom-most rows.

Column statistics:  Optional - built-in statistics to include at bottom of each column.

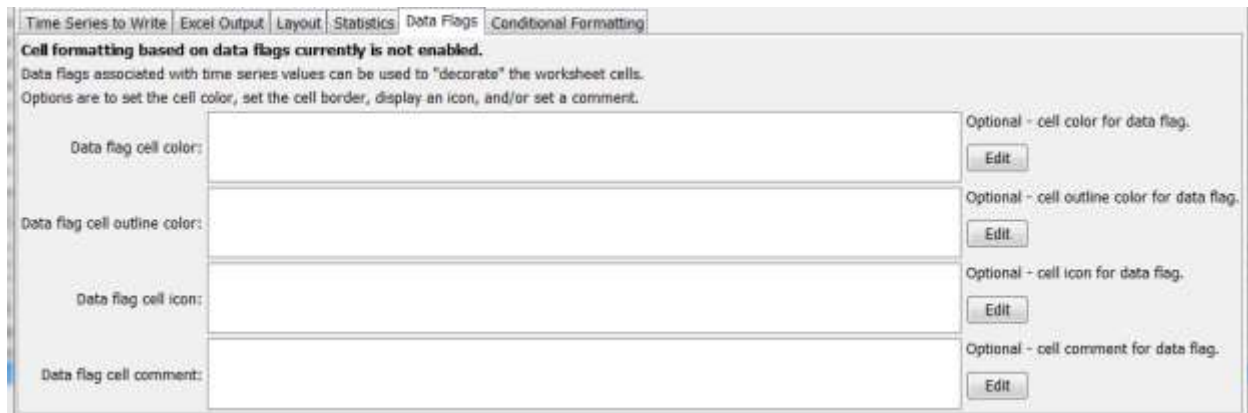
Column statistic formulas:  Optional - statistic formulas to include at bottom of each column.

Row statistics:  Optional - built-in statistics to include to right of each row.

Row statistic formulas:  Optional - statistic formulas to include to right of each row.

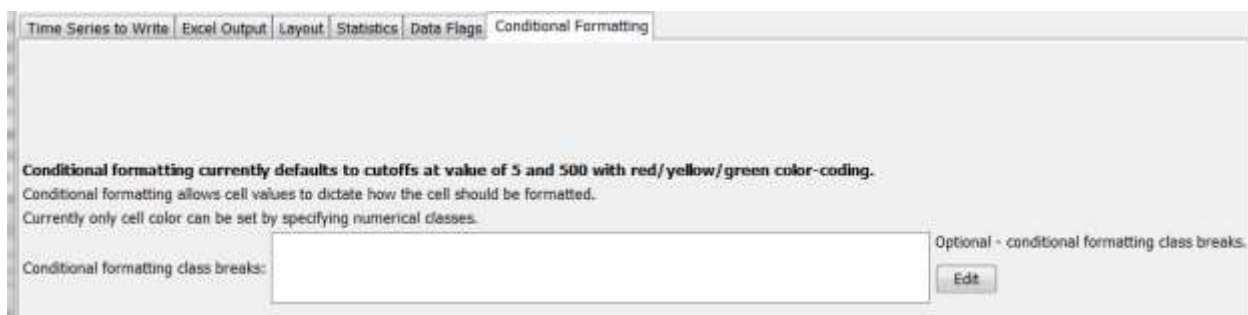
WriteTimeSeriesToExcelFormatted\_Statistics

### WriteTimeSeriesToExcel() Command Editor for Statistics Parameters



WriteTimeSeriesToExcelFormatted\_DataFlags

### WriteTimeSeriesToExcel() Command Editor for Data Flag Parameters



WriteTimeSeriesToExcelFormatted\_Conditional

### WriteTimeSeriesToExcel() Command Editor for Conditional Formatting Parameters

The command syntax is as follows:

```
WriteTimeSeriesToExcelFormatted(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"> <li>AllMatchingTSID – all time series that match the TSID (single TSID or TSID with wildcards) will be processed.</li> <li>AllTS – all time series before the command.</li> <li>EnsembleID – all time series in the ensemble will be processed.</li> <li>FirstMatchingTSID – the first time series that matches the TSID (single TSID or TSID with wildcards) will be processed.</li> <li>LastMatchingTSID – the last time series that matches the TSID (single TSID or TSID with wildcards) will be processed.</li> <li>SelectedTS – the time series are those selected with the SelectTimeSeries() command.</li> </ul>	AllTS

Parameter	Description	Default
TSID	The time series identifier or alias for the time series to be processed, using the * wildcard character to match multiple time series.	Required if TSList=*TSID.
EnsembleID	The ensemble to be processed, if processing an ensemble.	Required if TSList=EnsembleID.
MissingValue	Value to write to Excel for missing data values, can be literal Blank to output blank cell.	Original missing value.
Precision	The number of digits after the decimal for data values.	Determine from units.
OutputStart	The date/time for the start of the output.	Use the global output period.
OutputEnd	The date/time for the end of the output.	Use the global output period.
OutputFile	The name of the Excel workbook file (*.xls or *.xlsx) to write, as an absolute path or relative to the command file location. If the Excel file does not exist it will be created.	None – must be specified.
Append	Indicate whether the sheet being written should be appended to an existing workbook.	False – create a new workbook.
Worksheet	The name of the worksheet in the workbook to write. If the worksheet does not exist it will be created.	Write to the first worksheet.
ExcelAddress	Indicates the block of cells to write, using Excel address notation (e.g., A1:D10).	Must specify address using one of available address parameters.
Excel NamedRange	Indicates the block of cells to write, using an Excel named range.	Must specify address using one of available address parameters.
Excel TableName	Indicates the block of cells to write, using an Excel named range.	Must specify address using one of available address parameters.
KeepOpen	Indicate whether to keep the Excel file open (True) or close after creating (False). Keeping the file open will increase performance because later commands will not need to reread the workbook. Make sure to close the file in the last Excel command.	False
LayoutBlock	Indicate data blocks for output: <ul style="list-style-type: none"> <li>Period – time series period of record is output as a block</li> <li>Year – year of data is output in a block</li> </ul>	None – must be specified.
LayoutColumns	For the output block, indicate what columns contain: <ul style="list-style-type: none"> <li>Day – one day per column</li> <li>Month – one month per column</li> <li>Year – one year per column</li> </ul>	None – must be specified.
LayoutRows	For the output block, indicate what rows contain: <ul style="list-style-type: none"> <li>YearAscending – year, with earliest at top</li> </ul>	None – must be specified.

Parameter	Description	Default
	<ul style="list-style-type: none"><li>YearDescending – year, with most recent at top</li></ul>	
Output YearType	The output year type, which controls the start and end dates for the output.	Calendar

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