Command Reference: TimeSeriesToTable()

Copy one or more time series into a table

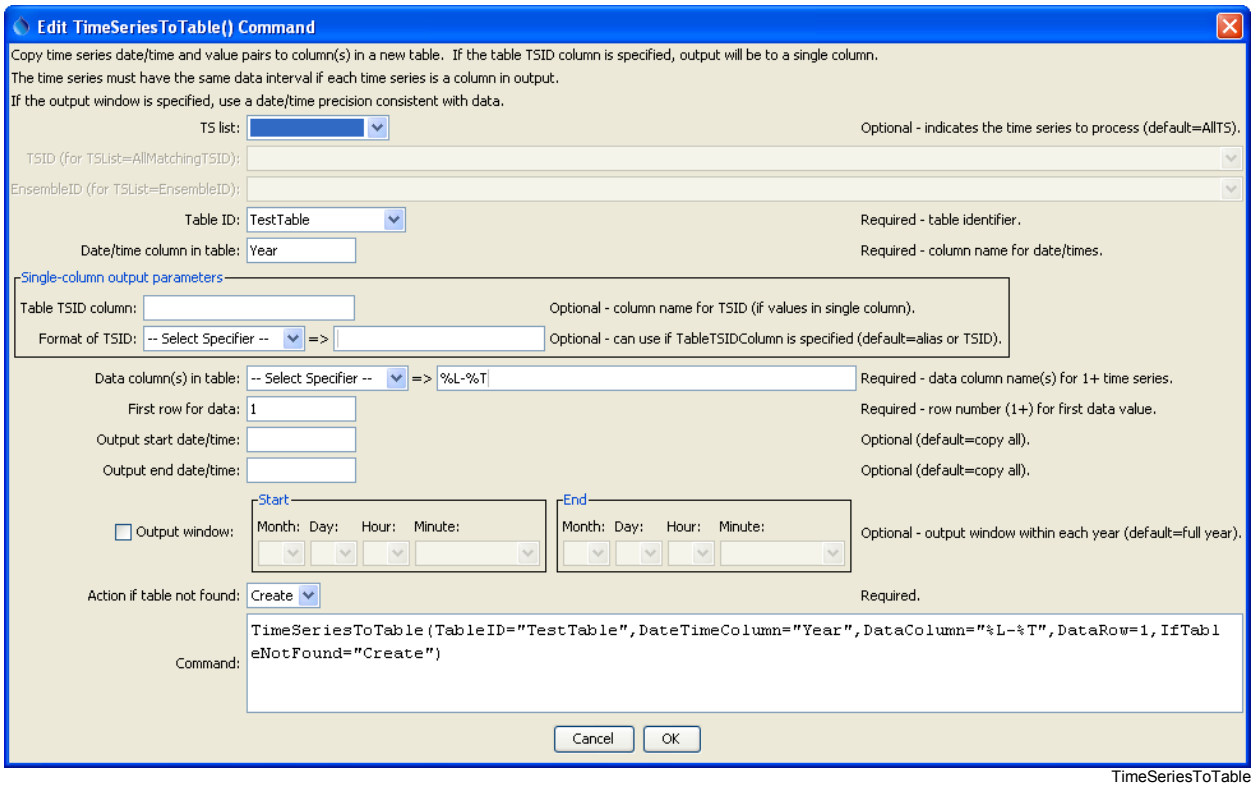
Version 10.12.00, 2012-08-24

The `TimeSeriesToTable()` command copies one or more time series into a table. This command is useful when performing table analysis processing and outputting table formats (e.g., with the `WriteTableToDelimitedFile()` command). The command can be configured to output one of two table forms:

- Each time series in a separate column, with shared date/time column:
  - The time series must be regular interval (no irregular interval time series) and the intervals must match in order to allow alignment of the date/times.
  - Do not specify the `TableTSIDColumn` or `TableTSIDFormat` parameters.
- All time series values in a single column (useful for converting time series to a stream of data for loading into a database)
  - Any interval is allowed although mixing time series of varying precision is discouraged.
  - Specify the `TableTSIDColumn` and optionally `TableTSIDFormat` parameters.

Currently the command can only be used to create a new table but in the future the command is envisioned to write into an existing table.

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



TimeSeriesToTable

TimeSeriesToTable() Command Editor

The command syntax is as follows:

```
TimeSeriesToTable(Parameter=Value,…)
```

Command Parameters

Parameter	Description	Default
TSList	Indicates the list of time series to be processed, one of: • AllMatchingTSID – all time series that match the TSID (single TSID or TSID with wildcards). • AllTS – all time series before the command. • EnsembleID – all time series in the ensemble. • FirstMatchingTSID – the first time series that matches the TSID (single TSID or TSID with wildcards). • LastMatchingTSID – the last time series that matches the TSID (single TSID or TSID with wildcards). • SelectedTS – the time series are those selected with the SelectTimeSeries() command.	AllTS
TSID	The time series identifier or alias for the time series to be modified, using the * wildcard character to match multiple time series.	Required when TSList=*TSID
EnsembleID	The ensemble to be modified, if processing an ensemble.	Required when TSList=EnsembleID.
TableID	The identifier for the table to copy data into (or the identifier for the new table to create if IfTableNotFound=Create).	None – must be specified.
DateTimeColumn	The table column name to receive date/time information.	None – must be specified.
TableTSIDColumn	The name of the column in the table for time series identifier information. The format of the identifier can be specified using the TableTSIDFormat parameter.	Optional – if specified will indicate single-column output.
TableTSIDFormat	Indicates how to format the time series identifier that is inserted in the column specified by the TableTSIDColumn parameter.	Optional – if not specified the alias or full TSID will be used.

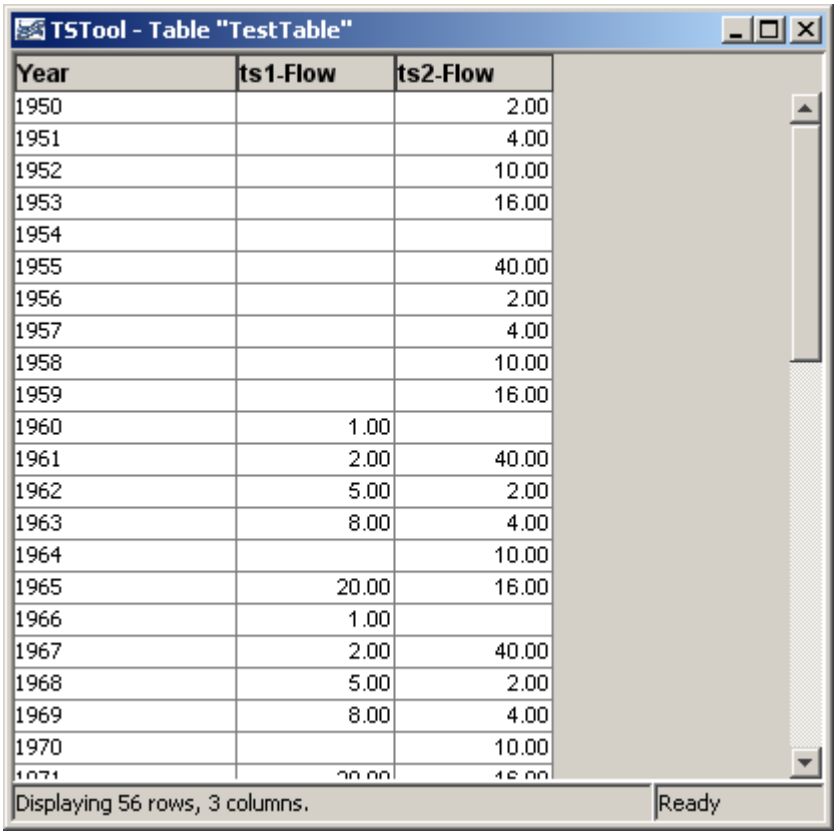
Parameter	Description	Default
DataColumn	The data column name(s) to receive time series data. This parameter may in the future allow multiple names separated by a delimiter. However, multiple names are currently supported by using time series property format specifiers, available in a list of choices. These specifiers are consistent with other commands and the legend formatter in the graphing tool. If a literal string is specified with multi-column output, names for columns 2+ will be generated by adding a sequential number to DataColumn.	None – must be specified.
DataRow1	First table row for data (1+), where the row number is data only (column names are not considered a data row).	None – must be specified.
OutputStart	The starting date/time for the copy.	Available period.
OutputEnd	The ending date/time for the copy.	Available period.
OutputWindowStart	The calendar date/time for the output start within each year. Specify using the format MM, MM-DD, MM-DD hh, or MM-DD hh:mm, consistent with the time series interval precision. A year of 2000 will be used internally to parse the date/time. Use this parameter to limit data processing within the year, for example to output only a single month or a season.	Output the full year.
OutputWindowEnd	Specify date/time for the output end within each year. See OutputWindowStart for details.	Output the full year.
IfTableNotFound	Indicate action if the table identifier is not matched, one of: • Create – create a new table • Warn – warn that the table was not matched	Warn

A sample command file is as follows (this command file is used to verify the command during testing):

```
# Test copying annual time series to a table, and also create the table
StartLog(LogFile="Results/Test_TimeSeriesToTable_Year_Create.TSTool.log")
RemoveFile(InputFile="Results/Test_TimeSeriesToTable_Year_Create_out.csv",
    IfNotFound=Ignore)
NewPatternTimeSeries(Alias="ts1",NewTSID="ts1..Flow.Year",SetStart="1960",
    SetEnd="2000",Units="ACFT",PatternValues="1,2,5,8,,20")
NewPatternTimeSeries(Alias="ts2",NewTSID="ts2..Flow.Year",SetStart="1950",
    SetEnd="2005",Units="ACFT",PatternValues="2,4,10,16,,40")
TimeSeriesToTable(TableID=TestTable,DateTimeColumn=Year,DataColumn=%L-%T,
```

```
    DataRow=1,IfTableNotFound="Create")
# Generate the results.
WriteTableToDelimitedFile(TableID="TestTable",
    OutputFile="Results\Test_TimeSeriesToTable_Year_Create_out.csv")
# Uncomment the following to recreate expected results
# WriteTableToDelimitedFile(TableID="TestTable",
#    OutputFile="ExpectedResults\Test_TimeSeriesToTable_Year_Create_out.csv")
CompareFiles(InputFile1="ExpectedResults/Test_TimeSeriesToTable_Year_Create_out.csv",
    InputFile2="Results/Test_TimeSeriesToTable_Year_Create_out.csv",IfDifferent=Warn)
```

The resulting table will be listed in the ***Tables*** area of the TSTool interface and clicking on the `TestTable` identifier will display the table similar to the following:



Year	ts1-Flow	ts2-Flow
1950		2.00
1951		4.00
1952		10.00
1953		16.00
1954		
1955		40.00
1956		2.00
1957		4.00
1958		10.00
1959		16.00
1960	1.00	
1961	2.00	40.00
1962	5.00	2.00
1963	8.00	4.00
1964		10.00
1965	20.00	16.00
1966	1.00	
1967	2.00	40.00
1968	5.00	2.00
1969	8.00	4.00
1970		10.00
1971	20.00	16.00

TimeSeriesToTable2