

Command Reference: FillHistMonthAverage()

Fill missing time series data using historical monthly average data

Version 11.03.07, 2015-06-24

The `FillHistMonthAverage()` command fills missing data in monthly time series with the average monthly values. The average values are computed using the available data period (or specified averaging period – see the `SetAveragePeriod()` command) immediately after the time series is read and are then applied when this command is encountered.

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

Edit FillHistMonthAverage() Command

Fill monthly time series with historical monthly averages.
Historical averages are computed immediately after reading the data and therefore do not include filled values.
Some commands that set data include a `RecalcLimits` parameter that will recalculate the limits.
Only monthly time series can be processed.

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

TSID (for TSList=AllMatchingTSID):

Fill start: Optional - default is full period.

Fill end: Optional - default is full period.

Fill flag: Optional - string to indicate filled values (use "auto" for MonAvg).

Fill flag description: Optional - description for fill flag.

Command: `FillHistMonthAverage (TSList=AllMatchingTSID,TSID="ts1",FillStart="2001-01",FillEnd="2005-11",FillFlag="A",FillFlagDesc="Description for A")`

FillHistMonthAverage

FillHistMonthAverage() Command Editor

The command syntax is as follows:

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

Command Parameters

Parameter	Description	Default
TSList	Indicate how to determine the list of time series to process, one of: <ul style="list-style-type: none">AllMatchingTSID – process time series that have identifiers matching the TSID parameter.AllTS – process all the time series.FirstMatchingTSID – process the first time series that has an identifier matching the TSID parameter.LastMatchingTSID – process the last time series that has an identifier matching the TSID parameter.	None – must be specified.

Parameter	Description	Default
	<ul style="list-style-type: none"> SelectedTS – process the time series that are selected (see <code>SelectTimeSeries()</code>). 	
TSID	Used if <code>TSList=AllMatchingTSID</code> to indicate the time series identifier or alias for the time series to be filled. Specify * to match all time series or use a wildcard for one or more identifier parts. Can be specified using processor <code>\${Property}</code> .	Required if <code>TSList=AllMatchingTSID</code> .
FillStart	Date/time indicating the start of filling, using a precision appropriate for the time series, or <code>OutputStart</code> . Can be specified using processor <code>\${Property}</code> .	Fill the entire time series.
FillEnd	Date/time indicating the end of filling, using a precision appropriate for the time series, or <code>OutputEnd</code> . Can be specified using processor <code>\${Property}</code> .	Fill the entire time series.
FillFlag	If specified, data flags will be enabled for the time series and each filled value will be tagged with the specified string. The flag can then be used later to label graphs, etc. The flag will be appended to existing flags if necessary. Use <code>Auto</code> to use a flag with the month abbreviation + Avg. Can be specified using processor <code>\${Property}</code> .	No flag is assigned.
FillFlag Desc	Description for the fill flag, used in reports. Can be specified using processor <code>\${Property}</code> .	Automatically generated.

The following command files fill a time series from the State of Colorado's HydroBase:

```
# 0125 - ALAMOSA
0125.NOAA.Precip.Month~HydroBase
FillHistMonthAverage (TSList=AllMatchingTSID,TSID="0125.NOAA.Precip.Month"
,
FillFlag="H")
```

```
0125.NOAA.Precip.Month~HydroBase
FillHistMonthAverage (TSList=AllMatchingTSID,TSID="019*",FillFlag="H")
```

Time series data limits for the averages are printed to the log file, similar to the following examples (note that the period for averaging is always shown and may be different than the output period).

Status: Historic averages for time series follow...										
Time series: 0125.NOAA.Precip.Month (IN)										
Monthly limits for period 1948-08 to 1949-12 are:										
Month	Min	MinDate	Max	MaxDate	Sum	# Miss.	% Miss.	# Not Miss.	% Not Miss.	Mean
Jan	0.2	1949-01	0.2	1949-01	0.2	0	0.00	1	100.00	0.2
Feb	0.1	1949-02	0.1	1949-02	0.1	0	0.00	1	100.00	0.1
Mar	0.1	1949-03	0.1	1949-03	0.1	0	0.00	1	100.00	0.1
Apr	-999.0		-999.0		-999.0	1	100.00	0	0.00	-999.0
May	-999.0		-999.0		-999.0	1	100.00	0	0.00	-999.0
Jun	0.7	1949-06	0.7	1949-06	0.7	0	0.00	1	100.00	0.7
Jul	1.5	1949-07	1.5	1949-07	1.5	0	0.00	1	100.00	1.5
Aug	0.7	1948-08	0.8	1948-08	1.5	0	0.00	2	100.00	0.8
Sep	0.1	1948-09	1.1	1949-09	1.2	0	0.00	2	100.00	0.6
Oct	0.1	1949-10	0.5	1948-10	0.7	0	0.00	2	100.00	0.3
Nov	0.0	1949-11	0.8	1948-11	0.8	0	0.00	2	100.00	0.4
Dec	0.0	1949-12	0.2	1948-12	0.2	0	0.00	2	100.00	0.1
Period	0.0	1949-11	1.5	1949-07	6.9	2	11.76	15	88.24	0.5