

Command Reference: Scale()

Scale time series data values by a constant value

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The `Scale()` command scales each non-missing value in the specified time series. The value to use for scaling can be specified as a constant, monthly values, or special values that indicate to scale by the number of days in the month.

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

Scale() Command Editor

The command syntax is as follows:

```
Scale (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 modified.AllTS – all time series before the command.EnsembleID – all time series in the ensemble will be modified.FirstMatchingTSID – the first time series that matches the TSID (single TSID or TSID with wildcards) will be	AllTS

Parameter	Description	Default
	modified. <ul style="list-style-type: none"> LastMatchingTSID – the last time series that matches the TSID (single TSID or TSID with wildcards) will be modified. SelectedTS – the time series are those selected with the SelectTimeSeries() command. 	
TSID	The time series identifier or alias for the time series to be modified, using the * wildcard character to match multiple time series.	Required if TSList=*TSID
EnsembleID	The ensemble to be modified, if processing an ensemble.	Required if TSList=EnsembleID
ScaleValue	One of the following: <ul style="list-style-type: none"> The numerical value to scale to the time series. DaysInMonth to indicate a scale of the number of days in the month. DaysInMonthInverse to indicate a scale of the inverse of the number of days in the month. 	None – must be specified.
MonthValues	Monthly scale values, the first being for January.	Use ScaleValue.
AnalysisStart	The date/time to start analyzing data.	Full period is analyzed.
AnalysisEnd	The date/time to end analyzing data.	Full period is analyzed.
NewUnits	New data units for the resulting time series.	Do not change the units.

The following example scales a precipitation time series from the State of Colorado's HydroBase by a factor of 3.5:

```
# 1458 - CENTER 4 SSW
1458.NOAA.Precip.Month~HydroBase
Scale(TSList=AllMatchingTSID,TSID="1458.NOAA.Precip.Month",ScaleValue=3.5)
```

The following example scales a monthly streamflow time series with units of ACFT (volume per month) in order to convert the data to average CFS flow values (note that two scale commands are required because the DaysInMonthInverse value cannot currently be combined with a numerical value in one command). See also the ConvertDataUnits() command for simple units conversions.

```
# 06754000 - SOUTH PLATTE RIVER NEAR KERSEY
06754000.DWR.Streamflow.Month~HydroBase
Scale(TSList=AllMatchingTSID,TSID="06754000.DWR.Streamflow.Month",
      ScaleValue=.5042)
Scale(TSList=AllMatchingTSID,TSID="06754000.DWR.Streamflow.Month",
      ScaleValue=DaysInMonthInverse,NewUnits="CFS")
06754000.DWR.Streamflow.Month~HydroBase
```