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# Command Reference: CreateEnsemble()

## Create a new ensemble from a time series

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The `CreateEnsemble()` command creates an ensemble by splitting up a time series into traces. For example, a historical time series can be split into 1-year traces that are shifted to start in the current year.

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

**Edit CreateEnsemble() command**

Create an ensemble of time series traces from a time series.  
Each trace will start on the reference date and will be as long as specified.  
Each trace will have the properties of the original time series with unique sequence numbers.  
Specify the period to limit the number of traces generated from the original time series.  
Specify the reference date using standard date formats to a precision appropriate for the data.  
If shifted, each trace will start on the reference date (use to align time series for display and analysis).  
If NOT shifted, each trace will start on the reference date, but year will vary with the data.

Time series from which to create traces:

Period to read:  to

Ensemble ID:  Required identifier for ensemble.

Ensemble name:  Optional name for output.

Trace length:  Default=1 Year.

Reference date:  Default=Jan 1 of first year.

Shift data how?:  Default=NoShift

Command: 

```
CreateEnsemble(TSID="09019500.USGS.Streamflow.Day",TraceLength=1Year,EnsembleID="Ensemble_1",EnsembleName="Test Ensemble",ReferenceDate="2008-01-01",ShiftDataHow=ShiftToReference)
```

CreateEnsemble

### CreateEnsemble() Command Editor

The command syntax is as follows:

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

### Command Parameters

Parameter	Description	Default
TSID	The time series identifier or alias for the time series used to create the ensemble.	None – must be specified.
InputStart	The date/time to start transferring data from the time series.	Use all data.
InputEnd	The date/time to end transferring data from the time series.	Use all data.
EnsembleID	The new ensemble identifier.	None – must be specified.
EnsembleName	The name for the new ensemble.	Blank.
TraceLength	An interval for the trace length (e.g., 1Year, #Month or, #Day).	1Year
ReferenceDate	The reference date indicates the starting date for each trace and should be left blank (resulting in a default of January 1 of the current year), or set to January 1 of a year of interest (use the format 01/01/YYYY or YYYY-MM-DD). Each trace can optionally be shifted (see ShiftDataHow).	January 1 of the first year in the source time series.
ShiftDataHow	Indicates whether the traces should be shifted. Possible values are: <ul style="list-style-type: none"> <li>ShiftToReference – each trace will be shifted to the reference date, resulting in overlapping time series.</li> <li>NoShift – plotting the traces will result in a total line that matches the original time series, except that each trace can be manipulated individually.</li> </ul>	NoShift

A sample commands file to read a time series from the State of Colorado's HydroBase and create an ensemble from the time series is as follows:

```
# 09019500 - COLORADO RIVER NEAR GRANBY
09019500.USGS.Streamflow.Day~HydroBase
CreateEnsemble(TSID="09019500.USGS.Streamflow.Day",
  TraceLength=1Year,EnsembleID="Ensemble_1",EnsembleName="Test
  Ensemble",ReferenceDate="2008-01-01",ShiftDataHow=ShiftToReference)
```