Command Reference: For()

Start a block of commands as part of a "for" loop

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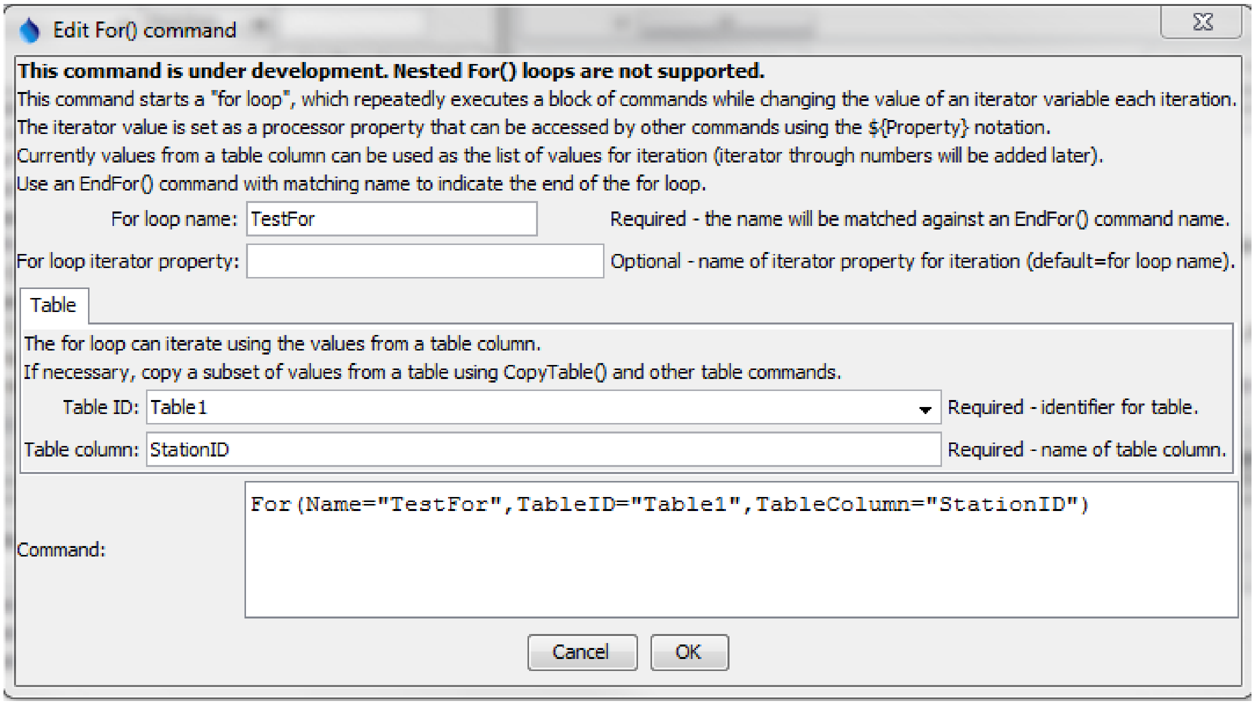
This command is under development.

The `For()` command iterates through a block of commands between `For()` and matching `EndFor()` commands. A processor property is set to the value of the iteration property. Looping is useful in particular in cases where a single data property is being changed for a block of commands. This command is an alternative to implementing loops in templates (see `ExpandTemplateFile()`), in particular for straightforward command logic. Currently `For()` commands can only iterate over a list of values from a table column but in the future the ability to loop over a list of numbers or other data will be enabled. `For()` commands currently cannot be nested, but this capability is planned for the future.

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



This command is under development. Nested For() loops are not supported.

This command starts a "for loop", which repeatedly executes a block of commands while changing the value of an iterator variable each iteration.

The iterator value is set as a processor property that can be accessed by other commands using the ${Property} notation.

Currently values from a table column can be used as the list of values for iteration (iterator through numbers will be added later).

Use an EndFor() command with matching name to indicate the end of the for loop.

For loop name: TestFor — Required - the name will be matched against an EndFor() command name.

For loop iterator property: — Optional - name of iterator property for iteration (default=for loop name).

The for loop can iterate using the values from a table column.

If necessary, copy a subset of values from a table using CopyTable() and other table commands.

Table ID: Table1 — Required - identifier for table.

Table column: StationID — Required - name of table column.

Command:

```
For(Name="TestFor",TableID="Table1",TableColumn="StationID")
```

For_Table

For() Command Editor

The command syntax is as follows:

```
For(Parameter=Value,…)
```

Command Parameters

Parameter	Description	Default
`Name`	The name of the "for" loop, which will be matched with the name of an `EndFor()` command to indicate the block of commands in the loop.	None – must be specified.

Parameter	Description	Default
`IteratorProperty`	The processor property that will be set to the iterator property. The object type will depend on that used to provide the iteration property list. For example, if a column of strings from a table is used for iteration, the property will contain a string.	Same as `Name`.
`TableID`	The table identifier, when specifying the iterator as a column from a table.	None – must be specified.
`TableColumn`	The table column name, when specifying the iterator as a column from a table.	None – must be specified.

The following example illustrates a simple `For()` and `EndFor()` usage. In this example the `StationID` column in the input table is used to provide the list of values to iterate over. The following input table is a delimited file but could come from another source:

```
# Test table data for For() command tests
"Count","Val","StationID","Basin"
1,1.0,Station1,Basin1
2,2.0,Station2,Basin2
3,3.0,Station3,Basin3
4,4.0,Station4,Basin4
```

The following command file reads the above input table, iterates over the `StationID` column, and creates a simple output file:

```
ReadTableFromDelimitedFile(TableID="Table1",InputFile="Data\testtable.csv")
RemoveFile(InputFile="Results/Test_For_TableString_out.txt",IfNotFound=Ignore)
For(Name="TestFor",TableID="Table1",TableColumn="StationID")
WritePropertiesToFile(OutputFile="Results/Test_For_TableString_out.txt",
    IncludeProperty="TestFor",WriteMode=Append,FileFormat=NameTypeValue)
EndFor(Name="TestFor")
```

The resulting output file is as follows:

```
TestFor="Station1"
TestFor="Station2"
TestFor="Station3"
TestFor="Station4"
```