GETARCHARR_TO_CNT

GETARCHARR_TO_CNT action

Function

Reading a value block of specified historical values within given time interval.

Declaration

```
 GETARCHARR_TO_CNT archIdent, _retCNTHandle, pageSize, timeFromIdent_TmA,
timeToIdent_TmA, stepIdent_Int, maxValsIdent_Int, statusIdent_Int[,
archivInstance_Int]
```

Parameters

archIdent	in	Reference to one value of historical value, reference to object or item identifier of Structured variable type object (*note:* values of object or item must be archived). **Warning:** If the parameter is the reference to an object archived several times, there is not specified which one of the historical objects is to be used.
retCNTHandle	out	Variable which will contain the identifier of data container after the successful loading.
pageSize	out	Required size of one page.
timeFromItemIdent_TmA	n	Identifier of *AbsTime* type for the interval beginning.
timeToItemIdent_TmA	in	Identifier of *AbsTime* type for the interval end.
stepIdent	in	Identifier of *Int* type - time step for the resampling of values in the archive. For resampling details, see Resampling note.
maxValsIdent_Int	in	Maximal number of values. If more values is in the required interval, they will be trimmed and the action returns the warning _ERR_MORE_DATA in the identifier *statusIdent_Int.*
statusIdent_Int	out	Action success.
archivInstance_Int	in	Optional identifier of *Int* type - identification of archive instance. If the parameter is not defined, the value 0 will replace it.

Description

The action reads values of the historical value *archIdent* within the time interval from `timeFromIdent_TmA` to `timeToIdent_TmA` with the steps `stepIdent_Int` (given in seconds). Maximal number of values is given by the identifier `maxValsIdent_Int`.
For resampling details, see Resampling note.

It arranges the read archival values to so-called pages, each of them containing upto *pageSize* values. Individual pages are put into data container, which is created by action internally. Identifier (integer value) is given through return parameter *retCNTHandle*. The user is responsible for deleting of container.
This action creates a container every time the non-zero number of values were read (the values were read even if *statusIdent_Int* had been set to the value *_ERR_MORE_DATA*).

Data container crated by GETARCHARR_TO_CNT action contains the values on the individual pages and in memory-optimal structure that is why this action is more suitable if it works with bulk data.
The pages are identified by integral value starting 1. The calling of CNT_GETNR action detects the number of pages.
CNT_FIND action accesses to the pages. The output parameter *_value* must be a local structured variable (the action changes the size as necessary).
If it consists of one column, it will be filled by values (with time stamp).
If it consists of two columns, the first one will be filled by values (with time stamp) and the second one by archival flags.
If it consists of more columns, they will not be initialized.
CNT_DESTROY action clears the container.

Other *CNT_** actions are disabled for the container made this way. Otherwise it causes the run-time error *_ERR_INVALID_HANDLE*.

The parameter *stepIdent_Int* defines the oversampling (in seconds) of read values. If it is equal to 0, reading is not to be oversampled.

If the parameter *archIdent* is the reference to an object of Historical value type, the action performance is described above. If the parameter is the reference to an object (not of Historical value type) or a structured variable item that is not of ***Object*** type, the system is attempting to find an object of Historical value type that archives values of the object (item).
If the parameter *archIdent* is the reference to a structured variable item that is of ***Object*** type, the item "points" to an object in the system. If the object is of Historical value type, the action will read data from it. If it is not, the system is attempting to find an object of Historical value type that archives values of the object.

The return code `statusIdent_Int` can get one of the following values:

- _ERR_TRANS_ABORT
- _ERR_TRANS_ERROR
- _ERR_TRANS_IGNORED
- _ERR_NO_ERROR
- _ERR_NO_DATA - no data within given interval
- _ERR_MORE_DATA - more data than `maxValsIdent_Int` within given interval
- *_ERR_OBJECT_IS_NOT_IN_ARCHIVE*

The error _ERR_MORE_DATA has only informative character and the required number of data is available.

The value of the parameter `stepIdent_Int` specifies resampling interval (in seconds). Value of 0 means that the read values are not to be resampled.

Value of parameter *archivInstance_Int* defines the instance of archive which executes the request. If the parameter is not defined (or the value is 0), the active instance of archive will execute the request.

Example

The following example demonstrates the applying of actions GETARCHARR and GETARCHARR_TO_CNT:
E.GetArch, H.SingleStorage, SD.ArchVal, SD.ArchValOne, SD.ArchValOneBool

Related pages:

Script actions
GETARCHARR action