Gnash quick reference

Gnash

Gnash is an application written by the Authority that allows users to extract data from a binary storage file that contains a processed version of the raw meter data provided to the Authority.

This document is a quick reference to commands used to extract data from the CDS using the Gnash interface.

The reference assumes that the files contained on the Centralised Dataset DVD distributed by the Authority have been unzipped onto the user's local hard drive. See the ReadMe.txt file in the root directory of the DVD for additional help on extracting the Gnash data files.

Other CDS documentation:

ReadMe.txt in the \CentralisedDataset\HalfHourly directory
CDSDataExtractionTutorial.pdf, also in the \CentralisedDataset\HalfHourly directory

Open the gnash interface

Gnash is run from the Gnash.exe executable file found in the \CentralisedDataset\HalfHourly\ directory. This can either be run from the Windows File Manger (double clicking on the file will run it) or by setting up a desktop shortcut to the executable file and running that.

Close the gnash interface

Leave the input line in Gnash blank and press enter (or type **stop** if the option 'set stoponblank' is set to true - see below).

Setup

There are a number of property settings in Windows that can be set by right clicking the Gnash window header bar and selecting "properties" from the drop down menu.

The screen buffer size "height" and "width" in the layout tab can be set to a higher number to retain more of the Gnash output in the window. The size of the window itself can also be set in the same tab

To speed up the re-typing of longer commands in Gnash, the up-arrow key can be used to bring up previous commands for editing (this feature may not be available in early versions of Windows).

To paste or copy data to and from the Gnash window use the windows **Edit** command by right clicking on the Gnash window header bar. To copy data you need to 'mark' it first, then copy it.

Reviewing output results

Gnash stores meter data in kW and kVar units for active and reactive data respectively.

Price information is stored in $/MWh units.

To help with reviewing results, each text command and its resulting output in the Gnash window is also written to the file ***Gnash.Trail.txt*** in the ***HalfHourly*** directory. (Warning – this file is overwritten whenever you reopen the Gnash interface.)

If output is written to an existing file using the ***dump*** or other output command, the new output will overwrite all existing content unless you ***set FileOutputStyle = "Append".***

Common commands / symbols

~

Wild card character

@

Regularly used expressions or summaries can be stored and run from text files using the @ command.

Example: @***Regions.txt*** (to execute the various ***calculate*** commands to produce regional totals that are contained in the Regions.txt file).

Calculate

Series can be added together (or have other calculations applied to them) by using the ***calculate*** command. This command creates a new variable that can be used in subsequent calculations.

Example: Create a new series called SUM.NORTHISTHMUS

```
calculate SUM.NORTHISTHMUS = NI.ALBANY + NI.BREAMBAY
+ NI.DARGAVILLE + NI.HENDERSON + NI.HEPBURN.AUCKLAND
+ NI.HEPBURN.WAITEMATA + NI.KENSINGTON + NI.KAIKOHE
+ NI.KAITAIA + NI.MARSDEN + NI.MAUNGATAPERE +
NI.MAUNGATUROTO + NI.SILVERDALE.EXPORT +
NI.WELLSFORD
```

Dump

Exports data in a comma delimited text format to a specified file.

Examples:

```
Dump ni.~ FOR 1/4/84 – 31/12/90 TO ni8490bag.csv
Dump ni.kaitaia~ to test.csv
Dump ni.kaitaia~ for 2006 to test.csv
```

Extrema

Find the extreme limits for values and their time period. Note: use ***set extremalimit*** to set to the number of extremes you require.

Example: `extrema ty.total for 2008`

For

Examples of searching for data by date or time period (normally appearing as part of a larger command e.g. stats ni.kaitaia.33kv FOR…….)

```
FOR 7/8/90                A single day.
FOR 7/8/90-8/9/91
FOR 2001                  For 1/1/2001 – 31/12/2001.
FOR 1990-1995             For 1/1/1990 – 31/12/1995.
```

Functions

Show a list of the functions available in Gnash.

Hide or ***Unhide***

To hide or unhide series, or groups of series.

Example: `Hide ~bid`

Names

Lists the series names contained in Gnash that include the specified search string.

Examples:

```
NAMES SI~
NAMES NI.~.Reactive
NAMES ni.kaitaia~
NAMES ni.kait~
```

Set

Sets Gnash property setting to true, false or a value.

Examples: `set FieldWidth = 9` *(Allow nine spaces for numbers)*
`set StopOnBlank = f` *(Requires 'stop' to be typed to exit Gnash)*

Stats

The **stats** command can be used to examine the data in each series at a high level.

`stats ty.total` (*outputs results to the Gnash window)*
`stats ni.kaitaia~ to test.csv` *(sends the results to the file test.csv)*

When

Logical expression based on any known variables, run names and functions applied, for each day in a datespan.

Examples:
DUMP *namelist* FOR *datespan* WHEN DayClassCode(DAY) < 6 TO *filename*

Dealing with null data

Mergeadd

Used to merge together datasets without discarding values in periods where data is absent in some series. *Note: use commas in this command.*

Example:

```
calculate SUM.NORTHISTHMUS = mergeadd(NI.ALBANY,
NI.BREAMBAY, NI.DARGAVILLE, NI.HENDERSON,
NI.HEPBURN.AUCKLAND, NI.HEPBURN.WAITEMATA, NI.KENSINGTON,
NI.KAIKOHE, NI.KAITAIA, NI.MARSDEN, NI.MAUNGATAPERE,
NI.MAUNGATUROTO, NI.SILVERDALE.EXPORT, NI.WELLSFORD)
```

Presence

The ***presence*** command provides a visual description of the existence of data in a specified series for a given time period.

Example: `presence sum.northisthmus for 2004`

Zpad

This function will take an individual series and pad the series with zeroes where data does not exist.

Example:

```
calculate sum.NorthIsthmus = NI.ALBANY + NI.BREAMBAY +
NI.DARGAVILLE + NI.HENDERSON +  NI.HEPBURN.AUCKLAND +
zpad(NI.HEPBURN.WAITEMATA) + NI.KENSINGTON + NI.KAIKOHE +
NI.KAITAIA + zpad(NI.MARSDEN) + NI.MAUNGATAPERE +
NI.MAUNGATUROTO + zpad(NI.SILVERDALE.EXPORT) +
NI.WELLSFORD
```