

Tool Name: nagg

Syntax:

```
nagg -h  
nagg [-n number] [-t list | -l file] [-g criterion] [-S] [-  
A seconds] [-d directory] [-O origin] [-D domain] INPUT...
```

Purpose:

nagg is NPP granule aggregation and packaging utility.

Description:

The command line utility nagg is the NPP granule aggregation utility for grouping NPP data record granules into aggregate and package files.

Aggregates include time contiguous, and gap-filled series of the same type of granules together in the same file. Packages include different, but related type granule aggregates with same temporal and spatial extent together in the same file.

Input parameter INPUT is a list of one or more files.

Output of nagg is a file or set of files named according to the NPP file naming convention. Output files are alignment with the bucket boundary as defined in the Control Book. Fill granules are added when there are no granules available for "slots" in a bucket. Leading and trailing fill granules are not generated for the first and last output files respectively. Therefore, first and last output files may be partial files that consist of fewer granules than requested.

The default behavior of nagg is to aggregate corresponding Geolocation granules in external Geolocation file whose name is in the input file's N_GEO_Ref attribute, producing output Geolocation files with granules that correspond to those of the primary product. Nagg will fail if the specified input Geolocation file is unavailable. This behavior can be overridden with the "-g no" command option, which directs nagg to not use or look for Geolocation input granules or files and to not produce Geolocation output granules or files.

Geolocation file names can be approximate such that only the beginning parts up to creation date are matched. E.g., if the sensor data file defines its geolocation file as: "GMTCO_npp_d20100906_t0701368_e0703013_b00004_c20111024161933653314_noaa_ops.h5", the tool will accept any file matching the following pattern and will use the one with the latest creation timestamp.

GMTCO_npp_d20100906_t0701368_e0703013_b00004_c*.h5

The "-g strict" command option will enforce that the external Geolocation file name must exactly match the N_GEO_Ref value.

nagg is non-destructive. It will not overwrite existing files.

Limits defined:

| | | |
|-----------------------|------|--------------------------------------|
| NAGG_Granule_info_max | 7000 | Maximum number of granules managed |
| NAGG_Product_list_max | 30 | Maximum number of products requested |
| NAGG_inputfiles_Max | 100 | Maximum number of input files |
| NAGG_outputfiles_max | 30 | Maximum number of output files |

See the NPP Aggregation Tool Components document Appendix 2 for a complete list of size definitions in the nagg tool.

Other considerations:

1. nagg can deaggregate files by setting `-n 1` and operating on aggregate files.
2. nagg can aggregate files by setting `-n N` and operating on a directory of single granule files.
3. nagg can reaggregate by setting `-n N` to a number different from the number of granules in the input files.

Options and Parameters:

`-n N, --number=N`

The number of granules in each aggregate file; must be greater than zero. If not specified, default is 1 (single granule files).

`-t list, --type=list`

list specifies a comma separated list of NPP record type mnemonics. Unless `-s` is specified, the granule types will be packaged together. Types must be compatible to be packaged together. (Use `-h` to list valid package groupings). If `-t` is not specified, `-g <product>` must be given to aggregate only the Geolocation product granules.

`-g criterion, --geolocation=criterion`

criterion is the criterion for searching the Geolocation granules

no | 0: aggregate product files without Geolocation input or output

yes | 1: allow approximate matching of Geolocation input filenames (default)

strict | 2: require exact matching of geolocation input filenames

`<product>`: aggregate Geolocation product `<product>` only. This excludes the use of `-t`.

`-l file`

(To be supported in future implementation.)

Package like the example *file* in number or type list. Options on the command line override the example. If both `-l` and `-t` are omitted, then the first NPP data product file encountered will be used as the example file.

`-A seconds`

(To be supported in future implementation.)

The number of seconds in each aggregate file. Aggregation Size is a fixed number of granules per file equal to seconds divided by the period of the granule rounded up to the next integer number of granules

If `-l`, `-t`, `-n` and `-A` are omitted, then the first NPP data product file encountered will be used to determine the `-t` list and `-n` number.

`-S, --simple`

Simple aggregates are produced. Each type is packaged separately. Default is not set, that is, all types including geolocation products are packaged in one file.

`-d directory, --directory=directory`

(To be supported in future implementation.)

Directory where the output files should be placed. Default is present working directory.

`-O origin`

The origin identifier, a four-character string in the output filename. Only the first four characters will be used. If less than four characters, the origin will be pre-pended with the character "X". Default is "XXXX".

`-D domain`

The domain identifier, a three-character string in the output filename. Only the first three characters will be used. If less than three characters, the origin will be pre-pended with the character "x". Default is "XXX".

`-h, --help`

Prints command syntax; also lists valid types and packaging groupings.

Exit Status:

0 Succeeded.

>0 An error occurred.

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