
netCDF Support for In-Memory Files

Dr. Dennis Heimbigner
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The NC_DISKLESS MODE FLAG

- New nc_open/nc_create mode flag:
 - ▣ NC_DISKLESS
 - Setting NC_DISKLESS causes netCDF to create the file only in memory
 - Unless otherwise specified, the in-memory file will be destroyed when nc_close is called
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NC_DISKLESS With nc_create()

- Can be used with netcdf-3 and netcdf-4
 - NC_DISKLESS flag only
 - Create in memory
 - Destroy on nc_close
 - File path is ignored
 - (NC_DISKLESS+NC_WRITE)
 - Create in memory
 - At nc_close, store contents in the file whose path was specified in the nc_create call
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NC_DISKLESS with nc_open()

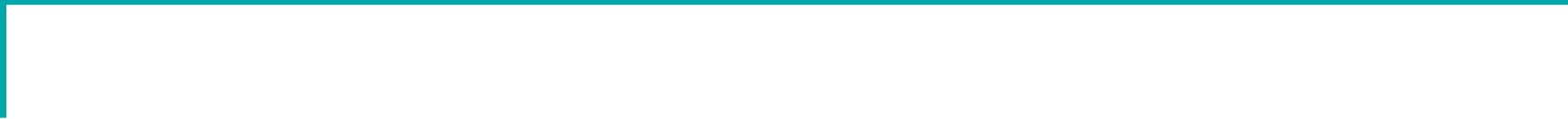
- Can be used with netcdf-3 only
 - NC_DISKLESS flag only
 - Read into memory
 - Destroy on nc_close (but leave disk file unchanged)
 - (NC_DISKLESS+NC_WRITE)
 - Read into memory
 - At nc_close, store contents back into the file
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Performance Note(s)

- If NC_DISKLESS is going to be used for creating a large classic (netcdf-3) file
 - Use `nc__create()` and specify an appropriately large value of the *initialsz* parameter
 - This avoids too many in-memory heap reallocations
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Uses

- Temporary files
 - Re-organizing existing files
 - Performance (when in-memory access is significantly faster than disk access)
 - If you discover a new use case for `NC_DISKLESS`, let me know
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Questions?

