

2020 Joint LACE Data Assimilation & DaskIT Working Days – SAPP exercise
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The exercise is prepared on beaufix.

1-Build ecmwf bufr library:

- `cd /home/gmap/mrmn/cengizy/DASKIT`
- `tar -xvf bufrdc_000409_update.tar.gz`
- `cd bufrdc_000409`
- `./build_library` ##choose:
`ifort/64bits_reals//home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/lib`
- `./install`
- `cd /home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/lib`
- `ln -sf libbufrR64.a libbufr.a`
- bufr library path: `/home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/lib`
- bufrtables path:`/home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/bufrtables`

2-Create BATOR:

(Thanks to Eoin Whelan for `bator_decodbufr_mod.F90` and `param.cfg`)

- `/home/gmap/mrpm/khatib/public/bin/gmkpack.6.6.8/util/gmkpack -f`
`/home/mf/dp/marp/martinezs/packs -r cy43t2 -b bf -v 10 -u BATOR_SAPP -l IMPI512IFC1601`
`-o 2y -g cy -e .pack -p bator`
- Change the path of bufr library in `ics_bator`:
`-L/home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/lib -lbufr`
- Copy the modified version of `bator_decodbufr_mod.F90` to pack:
`cp /home/gmap/mrmn/cengizy/DASKIT/bator_decodbufr_mod.F90_eoin_sapp`
`/home/gmap/mrmn/cengizy/pack/BATOR_SAPP/src/local/odb/pandor/module/bator_decodbufr`
`_mod.F90`
NOTE:The source code modification is necessary due to old synop template (307005).

- Add -DOLDBUFR flag in IMPI512IFC1601.BFX file:
cd /home/gmap/mrmn/cengizy/pack/BATOR_SAPP/.gmkfile
Add -DOLDBUFR flag to MACROS_FRT line
- Submit ics_bator and create bator binary:
sbatch ics_bator

3-Create MANDALAY:

- /home/gmap/mrpm/khatib/public/bin/gmkpack.6.6.8/util/gmkpack -f
/home/mf/dp/marp/martinezs/packs -r cy43t2 -b bf -v 10 -u BATOR_SAPP -I IMPI512IFC1601
-o 2y -g cy -e .pack -p mandalay
- Add mandalay.sql file to pack:
odb/ddl/ECMA/mandalay.sql
- Submit ics_mandalay:
sbatch ics_mandalay

4-Run bator_merge and mandalay scripts:

(Thanks to Maria Monteiro and Alena Trojakova for the scripts.)

- Path of scripts : /home/gmap/mrmn/cengizy/DASKIT/scr
Path of obs : /home/gmap/mrmn/cengizy/DASKIT/obs/2020081800
Path of namelist and constant files: /home/gmap/mrmn/cengizy/DASKIT/nam
Path of log files : /home/gmap/mrmn/cengizy/DASKIT/log
- In bator_merge script:
 - Use ecmwf bufrtables
export BUFR_TABLES=/home/gmap/mrmn/cengizy/DASKIT/bufrdc_000409/bufrtables/
 - Use sapp observation syno.20200818.17.buf and namel_lamflag_sapp for TURKEY domain.
 - Use param.cfg_sapp created for sapp observation and BATOR.sapp binary.
NOTE: param.cfg_sapp_307007 is also available to be able decode more of 307007 template observation.
- Run bator_merge script:
sbatch bator_merge
- To be able to read ECMA odb run mandalay script:
sbatch Mandalay
- And check content of fic_odb.lst file.