LTR-2.2.0

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December 3, 2012

Download:

- http (Login required; email schmitt <at> ucar <dot> edu for an account)
  - LTR-2_2_0.tar.gz md5 checksum: 968512b8bcb6fe134d2c452611b7e833
- SVN (login required) https://proxy.subversion.ucar.edu/cism_MODELS/tags/LTR-para/LTR-2_2_0
- Upgrade instructions:
  - Install InterComm-2.0
  - Extract the code to `LTR-2_2_0`
  - copy your `Make.$MACHINE` file into `LTR-2_2_0/env/` and make the following edits:
    - Search for `INTERCOMM` and set it to the InterComm-2.0 installation path.
    - Add `INTERCOMM_MPMD=PNMPI`
  - MakeItSo has changed in several ways:
    - The makeItSo.config format has changed. To prepare a model run, we recommend one of two options:
      - Run makeItSo.py in command-line mode to generate a new config file, job scripts and inputs
      - See the example config files in the subdirectories at `LTR-2_2_0/test/` for the updated format.
    - Environment configurations have changed. If you have a custom environment, work with Peter Schmitt (e-mail: schmitt <at> ucar <dot> edu) to update your environment. The environment configuration has been updated for the following machines:
      - bluefire.ucar.edu
      - discovery.dartmouth.edu
      - gauss.byu.edu
      - gosset.byu.edu
      - hilo1.ccmc.gsfc.nasa.gov
      - janus login.rc.colorado.edu
      - kraken.nics.tennessee.edu
      - stic.rice.edu
      - wjet.rdhpcs.noaa.gov
      - yellowstone.ucar.edu
  - Update environment variables (these may be set in your login scripts (eg. `/.bashrc`, `/.bash_profile`, etc.). For the bash shell, you should run:

    ```
    export LTRROOT=/path/to/LTR-2_2_0
    export PYTHONPATH=$LTRROOT/misc/pyLTR:$PYTHONPATH
    export PATH=$LTRROOT/misc/pyLTR/scripts:$LTRROOT/misc/python:$PATH
    ```

    For the C-shell, run:

    ```
    setenv LTRROOT /path/to/LTR-2_2_0
    setenv PYTHONPATH $LTRROOT/misc/pyLTR:$PYTHONPATH
    setenv PATH $LTRROOT/misc/pyLTR/scripts:$LTRROOT/misc/python:$PATH
    ```

  - Follow the compile instructions to build the latest version of code.

Change log

Note in our attempt to follow Semantic Version Numbers, this is a minor update to the coupled models: backwards-compatible functionality (InterComm-2.0 coupling) is introduced. PVM and InterComm-1.6 are now deprecated. Technically, this update is not fully backwards compatible, as the MakeItSo.config format has changed. However, the model output should be consistent from LTR-2.1.x.

- Repository revision: r2147
- Changelog:
  - Coupled models use InterComm 2.0. This deprecates PVM and all job scripts. We use MPI and PNMPI for all inter-model communication.
  - New: Python Tools for LTR (pyLTR) are distributed with the source code. This includes scripts and libraries to
    - process Solar Wind files from CDAweb
    - generate routine analysis of model output (eg. time series plots, polar plot plots, etc.).
  - New: CMIT runs execute the TIEGCM in parallel resulting in better load balancing and improved CMIT execution time performance.

- Bug fixes
- There are lots more changes. For a complete list, see the LTR-2.2.0 roadmap.