
EC-Earth 3.0.1

Release Notes



Introduction

EC-Earth 3.0.1 is a release update that introduces a number of bugfixes and technical improvements to the previous release EC-Earth 3.0. There are no major scientific features added in this version.

The EC-Earth 3.0.1 source code can be downloaded from the Subversion repository at the URL:

<https://svn.ec-earth.org/ecearth3/tags/3.0.1>

For a more detailed description of how to get started with EC-Earth 3, please refer to the EC-Earth 3 Development Portal at

<https://dev.ec-earth.org>

Note that access to the Development Portal is based on individual user accounts, which can be generated for EC-Earth partners that have signed the Letter of Intent and an agreement with ECMWF. If you need to sign these documents, please contact ecearth@ecmwf.int. Once this is done, contact the Development Portals administrators (uwe.fladrich@smhi.se for the time being).

Usage of EC-Earth 3.0.1 at ECMWF

The EC-Earth 3.0.1 port for the IBM Power 6/7 systems at the ECMWF (c1a, c2a) is located in a separate branch (same as in earlier versions). Please check out the code from the Subversion repository using the URL:

<https://svn.ec-earth.org/ecearth3/tags/3.0.1-ecmwf>

More ECMWF-specific instructions are found on the Wiki at the Development Portal.

List of Bugfixes

IFS

- Some temporary arrays were not correctly indexed with KIDIA:KFDIA
- Correction of a radiation bug reported by Alessio Bozzo (ECMWF); SW absorption of molecular oxygen was missing
- Include version 2 bugfix to avoid negative humidity in H-Tessel

NEMO

- Initialise allocatable arrays to zero to avoid crashes on some platforms

OASIS

- Change flux correction value for run-off

List of Technical Improvements

IFS

- Make reading of ice temperature optional in IFS atmosphere-only runs
- Additional diagnostics (sfc momentum flux) when LBUD23=TRUE
- Reset accumulated tendencies and budgets when LRSACC=TRUE
- Add NCMIP5FIXYR to NAERAD namelist
- Using LOPT_SCALAR=TRUE in NAMCT0 in order simplify domain decomposition
- Put postins/ppt files under version control
- ppt file names use 6 placeholders for days (instead of 4) to allow for long runs
- Changing the default for CMIP5 forcings and volcanic aerosols to TRUE

NEMO

- Add option for getting NEMO output at every time step even when the time step is shorter than 1 hour (i.e. with ORCA025)

OASIS

- Add flux correction variable for solar radiation

List of New Configurations

- High-resolution NEMO configuration: ORCA025L75 (tested coupled as T511L91-ORCA025L75-LIM3)
- NEMO standalone configuration
- Added platforms:
 - pc-gcc-openmpi (general PC-like platform)
 - MareNostrum III, BSC, Spain
 - Triolith, NSC, Sweden

Detailed List of Changes

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r1013 | ufla | 2012-10-22 10:17:43 +0200 (Mon, 22 Oct 2012) | 2 lines
Adding --list-platforms/-l switch to ec-conf (issue #48).
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r1026 | ufla | 2012-11-14 10:01:17 +0100 (Wed, 14 Nov 2012) | 3 lines
Bugfix as suggested by Camiel: Some temporary arrays where not correctly
indexed with KIDIA:KFDIA.
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r1028 | klausred | 2012-11-16 11:42:14 +0100 (Fri, 16 Nov 2012) | 3 lines
Add option for getting NEMO output at every timestep even when
the timestep is shorter than 1 hour (i.e. with ORCA025)
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r1050 | ufla | 2012-11-29 10:20:54 +0100 (Thu, 29 Nov 2012) | 2 lines

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Correcting defaults for ECEARTH_SRC_DIR.

r1074 | klausred | 2013-01-08 11:45:18 +0100 (Tue, 08 Jan 2013) | 3 lines
IFS: correction of a radiation bug reported by Alessio Bozzo (ECMWF),
SW absorption of molecular oxygen was missing.

r1086 | martin.evaldsson | 2013-01-11 14:43:41 +0100 (Fri, 11 Jan 2013) | 1 line
Bug fix ec-conf: the <Properties>-tag was not handled correct + updated xml d
tabase files to be consistent with the xml print function

r1126 | klausred | 2013-02-22 21:56:45 +0100 (Fri, 22 Feb 2013) | 2 lines
IFS: bugfix from v2 to avoid negative humidity in H-Tessel

r1128 | ufla | 2013-02-26 13:18:52 +0100 (Tue, 26 Feb 2013) | 7 lines
Merging branches/development/ufla/nemo-init-alloc
This adds a cppkey-controlled (key_init_alloc_zero, key_init_alloc_huge or
none) initialisation to ALLOCATE calls in the NEMO code and addresses issue
#40.
The default setting is key_init_alloc_zero, which initialises all allocatable
variables in NEMO to zero.

r1129 | ufla | 2013-02-26 13:23:57 +0100 (Tue, 26 Feb 2013) | 3 lines
Using LOPT_SCALAR=TRUE in NAMCT0 and removing NPRTR{V,W}.
This addresses issue #76.

r1130 | ufla | 2013-02-26 13:33:27 +0100 (Tue, 26 Feb 2013) | 2 lines
Adding pc-gcc-openmpi (pc-openmpi) platform to build (run) configuration.

r1139 | ufla | 2013-03-11 13:53:22 +0100 (Mon, 11 Mar 2013) | 3 lines
Change output descriptors (I3 to I4) for min/max indices to allow valid output
for big grids.

r1141 | ufla | 2013-03-13 10:04:24 +0100 (Wed, 13 Mar 2013) | 6 lines
Small improvements for the rebuild_nemo utility:
- use FFLAGS and LDFLAGS in Makefile (more flexible and standard)
- add support for multile NetCDF libraries in Makefile
- Add comma to Fortran namelist syntax (rebuild_nemo script)
- Make script_dir in rebuild_nemo script recognise links etc.

r1144 | ufla | 2013-03-20 11:34:58 +0100 (Wed, 20 Mar 2013) | 4 lines
Implementing ORCA025L75 to be used in the highres configuration:
- Add NEMO namelist tested for ORCA025L75
- Modify cpp keys appropriately

r1145 | ufla | 2013-03-20 14:03:03 +0100 (Wed, 20 Mar 2013) | 6 lines
Add support for MareNostrum3, BSC.
Following platforms are available:
- config-build.xml: MareNostrum3-intel-intelmpi, MareNostrum3-intel-openmpi
- config-run.xml: marenostrum3

r1146 | ufla | 2013-03-20 14:03:49 +0100 (Wed, 20 Mar 2013) | 2 lines
Add ocean.output to FilesToCopy.

r1147 | ufla | 2013-03-20 14:28:29 +0100 (Wed, 20 Mar 2013) | 9 lines
Move postins/ppt files and dirlist to runtime/ctrl (addresses issue #65)
Merge changes from branch add-postins-to-ctrl, which
- Put the ppt files under runtime/ctrl and thereby under SVN control
- Have the run scripts copy the ppt files to the run directory and create the
appropriate links
- Increase the number of placeholders for days in the ppt file names from 4 to
6 to allow for long runs

r1148 | ufla | 2013-03-20 14:48:16 +0100 (Wed, 20 Mar 2013) | 5 lines
Make reading of ice temperature optional in IFS atm-only runs
This copies r1016+r1143 from the atm-only-without-sea-ice-temp branch to the
trunk.

r1149 | ufla | 2013-03-20 14:51:13 +0100 (Wed, 20 Mar 2013) | 5 lines
Additional diagnostics (sfc momentum flux) when LBUD23=TRUE
Reset accumulated tendencies and budgets when LRSACC=TRUE
This copies r1045 from the atm-only-without-sea-ice-temp branch.

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r1150 | ufla | 2013-03-21 13:49:50 +0100 (Thu, 21 Mar 2013) | 2 lines
Remove filesToRename (this is done in run*.sh)
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r1153 | ufla | 2013-03-25 10:02:22 +0100 (Mon, 25 Mar 2013) | 2 lines
Adding support for the triolith platform (NSC, Linköping, Sweden).
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r1158 | ufla | 2013-03-25 14:35:53 +0100 (Mon, 25 Mar 2013) | 2 lines
Merging development/nemo-standalone
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r1159 | klausred | 2013-03-25 14:44:58 +0100 (Mon, 25 Mar 2013) | 2 lines
IFS: add NCMIP5FIXYR to NAERAD namelist
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r1161 | klausred | 2013-03-25 15:00:23 +0100 (Mon, 25 Mar 2013) | 2 lines
OASIS: flux correction for RUNOFF and SOLAR RADIATION
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r1165 | ufla | 2013-03-26 13:20:33 +0100 (Tue, 26 Mar 2013) | 2 lines
Changing the default for CMIP5 forcings and volcanic aerosols to TRUE
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r1166 | ufla | 2013-03-26 13:35:01 +0100 (Tue, 26 Mar 2013) | 2 lines
Changing default optimisation from 00 to 02 on krypton platform.
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r1169 | ufla | 2013-03-27 13:04:53 +0100 (Wed, 27 Mar 2013) | 4 lines
Changing default for INI_DATA_DIR in krypton platform.
This is a copy of r1168, which was accidently committed to
branches/maintenance/3.0.
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r1170 | ufla | 2013-03-28 08:27:34 +0100 (Thu, 28 Mar 2013) | 2 lines
Adding release notes to doc directory.
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r1171 | ufla | 2013-03-28 08:54:38 +0100 (Thu, 28 Mar 2013) | 2 lines
Minor updates to compiling-and-running-short-guide (for 3.0.1).
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