

ecCodes Home

What is ecCodes

ecCodes is a package developed by ECMWF which provides an application programming interface and a set of tools for decoding and encoding messages in the following formats:

- WMO FM-92 **GRIB** [edition 1](#) and [edition 2](#)
- WMO FM-94 **BUFR** [edition 3](#) and [edition 4](#)
- WMO GTS [abbreviated header](#) (only decoding).

A useful set of [command line tools](#) provide quick access to the messages. C, Fortran 90 and Python interfaces provide access to the main ecCodes functionality.

ecCodes is an evolution of [GRIB-API](#). It is designed to provide the user with a simple set of functions to access data from several formats with a key/value approach.

For GRIB encoding and decoding, the [GRIB-API](#) functionality is provided fully in ecCodes with only minor interface and behaviour [changes](#). Interfaces for C, Fortran 90 and Python are all maintained as in GRIB-API. However, the GRIB-API Fortran 77 interface is no longer available.

In addition, a new set of functions with the prefix "codes_" is provided to operate on all the supported message formats. These functions have the same interface and behaviour as the "grib_" functions.

A selection of [GRIB-API tools](#) has been included in ecCodes ([ecCodes GRIB tools](#)), while new tools are available for the BUFR ([ecCodes BUFR tools](#)) and GTS formats. The new tools have been developed to be as similar as possible to the existing [GRIB-API tools](#) maintaining, where possible, the same options and behaviour. A significant difference compared with GRIB-API tools is that bufr_dump produces output in [JSON](#) format suitable for many web based applications.



ecCodes is now the primary GRIB encoding/decoding package used at ECMWF. GRIB-API is no longer maintained (as of December 2018). Replacing GRIB-API with ecCodes is expected to be transparent for current GRIB-API users. In particular the "grib_" functions are included in the ecCodes library. Users are strongly advised to start the migration process.



Name clashes prevent a simultaneous use of the GRIB-API and ecCodes packages. A similar name clash is also present between the existing GRIB-API tools and the new tools provided with ecCodes. However, the behaviour of the tools is exactly the same as those provided with the current version of GRIB-API.

What's new

- [Python 3 interface for ecCodes](#)
- [GRIB-API migration](#)

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Report a bug or issue

Please send an email to [software.support@ecmwf.int](mailto:support@ecmwf.int) or go to [Issues](#) if you have any suggestions for improvements or have discovered a bug with this software package.

Latest News

- [ecCodes version 2.12.5 released](#) (ecCodes)
- [ecCodes version 2.13.0 released](#) (ecCodes)
- [ecCodes version 2.12.0 released](#) (ecCodes)
- [ecCodes version 2.9.2 released](#) (ecCodes)
- [ecCodes version 2.10.0 released](#) (ecCodes)

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Releases


[Download the latest tarball](#)

Installation instructions can be found [here](#).

Normally the data needed for testing is downloaded during the "ctest" step but you can also download all the data from here:

[eccodes_test_data.tar.gz](#)

Note: Untar this into the top-level of the CMake "build" directory (not the source directory)

File	Modified 
ZIP Archive eccodes-2.13.0-Source.tar.gz	Jul 08, 2019 by Shahram Najm
ZIP Archive eccodes-2.12.5-Source.tar.gz	May 09, 2019 by Shahram Najm
ZIP Archive eccodes-2.12.0-Source.tar.gz	Feb 15, 2019 by Shahram Najm
ZIP Archive eccodes-2.10.0-Source.tar.gz	Dec 05, 2018 by Shahram Najm
ZIP Archive eccodes-2.9.2-Source.tar.gz	Nov 09, 2018 by Shahram Najm
ZIP Archive eccodes-2.9.0-Source.tar.gz	Sep 27, 2018 by Shahram Najm
ZIP Archive eccodes-2.8.2-Source.tar.gz	Aug 06, 2018 by Shahram Najm
ZIP Archive eccodes-2.8.0-Source.tar.gz	Jun 25, 2018 by Shahram Najm
ZIP Archive eccodes-2.7.3-Source.tar.gz	Apr 18, 2018 by Shahram Najm
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ZIP Archive eccodes-2.6.0-Source.tar.gz	Dec 20, 2017 by Shahram Najm
ZIP Archive eccodes-2.5.0-Source.tar.gz	Oct 03, 2017 by Shahram Najm
ZIP Archive eccodes-2.4.1-Source.tar.gz	Aug 08, 2017 by Shahram Najm
ZIP Archive eccodes-2.4.0-Source.tar.gz	Jun 29, 2017 by Shahram Najm
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ZIP Archive eccodes-2.2.0-Source.tar.gz	Mar 23, 2017 by Shahram Najm
ZIP Archive eccodes-2.1.0-Source.tar.gz	Jan 30, 2017 by Shahram Najm
ZIP Archive eccodes-2.0.2-Source.tar.gz	Nov 22, 2016 by Shahram Najm
ZIP Archive eccodes-2.0.0-Source.tar.gz First non-beta version	Oct 20, 2016 by Shahram Najm
ZIP Archive eccodes-0.16.0-Source.tar.gz	Jun 28, 2016 by Shahram Najm
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