

# ODB API Home

## What is ODB API?



Please note that ODB API is provided as **beta** version and some of its functions and tools can be changed prior to the first full release.

**ODB API** is a software developed at ECMWF for encoding and processing of observational data. It includes a SQL filtering and statistics engine, command line tools and [APIs](#) for [C/C++](#), [Fortran](#) and [Python](#). ODB API works with data format used in ECMWF [observational feedback archive](#). Development of ODB API has been partially funded by the Met Office.

## Where is ODB API used?

### ECMWF

- COPE (Continuous Observation Processing Environment) and BUFR2ODB converter use ODB API to encode/decode observation data
- [Observational feedback archive](#) uses ODB API and its data format to encode data, build index (MARS server) and (optionally) filter retrieved data on the fly (MARS client)
- ECMWF Researchers use ODB API command line tools and Python or Fortran bindings to examine observational feedback data archived by their experiments in MARS
- ODB API is used by ECMWF visualisation software, [Metview](#) and [Magics](#), to decode and filter observational feedback data
- OBSTAT uses ODB API to compute statistics of observational feedback data

### ECMWF Copernicus Department

- [Copernicus Climate Change Service \(C3S\)](#) uses ODB API to encode historical observational data, which is then used as input of their global reanalysis
- ODB API is also used to compute statistics of observational feedback data produced by C3S reanalysis

### MetOffice and Unified Model community

- [Unified Model \(UM\) Community](#), lead by the Met Office, uses ODB API as part of their [Observation Processing System \(OPS\)](#). UM Community includes: UK MetOffice, India Meteorological Department, Korean Meteorological Administration, Australian Bureau of Meteorology and Naval Research Laboratory.

### HIRLAM

- [HIRLAM](#) community uses ODB API as part of their cooperation with ECMWF on the development of COPE system.

### What's new

- [DDL for defining metadata and associating SQL tables with files](#)
- [Generate CREATE TABLE describing file's metadata](#)
- [New API for C/C++, Fortran and Python](#)

### Quick Links

- [Download](#)
- [Installation](#)
- [Examples](#)
- [Documentation](#)
- [ODB Governance](#)
- [Known issues](#)
- [History of changes](#)

### Report a bug or issue

Please send an email to [software.support@ecmwf.int](mailto:software.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

- [ODB API 0.18.0 released](#)
- [ODB API 0.17.6 released](#)
- [ODB API 0.17.4 released](#)
- [ODB API 0.17.3 released](#)
- [ODB API 0.17.2 released](#)

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## Releases

- [Change history](#)
- Source code

File	Modified
ZIP Archive odb_api_bundle-0.18.1-Source.tar.gz	Dec 05, 2018 by Simon Smart
ZIP Archive odb_api_bundle-0.18.0-Source.tar.gz	Jun 22, 2018 by Simon Smart
ZIP Archive odb_api_bundle-0.17.6-Source.tar.gz	Jan 04, 2018 by Simon Smart
ZIP Archive odb_api_bundle-0.17.4-Source.tar.gz	Oct 31, 2017 by Simon Smart
ZIP Archive odb_api_bundle-0.17.3-Source.tar.gz	Sept 29, 2017 by Simon Smart

<a href="#">ZIP Archive odb_api_bundle-0.17.1-Source.tar.gz</a>	Jul 05, 2017 by Simon Smart
<a href="#">ZIP Archive odb_api_bundle-0.17.0-Source.tar.gz</a>	May 23, 2017 by Simon Smart
<a href="#">ZIP Archive odb_api_bundle-0.16.2-Source.tar.gz</a>	Mar 24, 2017 by mak
<a href="#">ZIP Archive odb_api_bundle-0.16.1-Source.tar.gz</a>	Jan 27, 2017 by mak
<a href="#">ZIP Archive odb_api_bundle-0.16.0-Source.tar.gz</a>	Nov 23, 2016 by mak

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