

ODABA Releases TODBMS and Tools 17.1.0

ODABA is a Terminology-Oriented Database Management System (TODBMS) based on standards for object-oriented databases (ODMG 2003). In contrast to other databases that are focused on big data processing, ODABA stands for smart data processing, i.e. it is intended to be used for complex problems and complex data structures in combination with complex processing rules.

The latest version of ODABA has been released on Sunday, November 8th, 2020. With ODABA 17.1.0 a version with extended application features and extended client/server support has been provided. For Windows users, a DevStudio 2017 compiled version is released in addition for 32 and 64 bit. For Linux users, GCC 6 is supported.

We do not deliver anymore .msi files for Windows installations, since ODABA does not need any kind of registration in the Windows registry. Instead, binary installations for Windows are delivered as 32 and 64 bit versions compiled with MS VS2010 and VS2017.

More details are described in change logs and in notices delivered with the development databases (ODE tools: **Objects/Notices**). Notices delivered with the databases also contain a list of open topics planned for next releases. Notices are stored separately for basic functions (**sos.dev**), database kernel (**opa.dev**), GUI framework (**gui.dev**) and ODE tools (**ode.dev**).



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Detailed changes (ODABA)

This version provides several new database features. Also the behavior of some features have been improved. Several bugs have been removed. Removed bugs are reported in the change log.

ODABA Database kernel (base)

Several ODABA components have been improved or provide extended features:

Database features

Several extensions and bug fixes have been provided for client/server (especially replication server) and email support.

- Memo fields as auto-selection fields
Memo properties behave similar to auto-selection fields. Now, `Property::isAutoSelection` returns **true** for memo fields.
- Data transfer between client and server
Functions for receiving and sending (binary) files from and to server have been improved including also functionality for unpacking packed (.ozi, .zip) data.
- Client/server functions
Client/server functions have been reviewed and several inconsistencies and bugs have been removed focusing on replication server. Moreover, the `Client::loadFile` function determines the unpack method from file extension.
In order to check access handles passed internally to the server, the server may perform a handle check in order to prevent the server from crashing when passing invalid access handles.
- Key check option
The CheckDB utility now supports an additional options for activating key checks. Also, the check type option 'I' has been changed to 'T'.
- Repair and check Property functions
Repair functions have been added (`repairKey`, `repairIndex`, `repairCollection`) and existing repair and check `Property` functions now return a string with error information (`checkCollection`).

Event handling:

- OSI-interface for event handlers
In order to be able to overload event handler default functions in OSI context classes, missing OSI interfaces have been provided. Now, all database handler functions may be overloaded in OSI context classes.

String handling and conversion:

- Detecting end of file
So far, reading a file, the end of file was determined by returning an empty string. Since this is not always safe, now read functions return an EOF value, which may be checked with `String::isEOF`.
- String search function
A function providing the first occurrence of a string (`String::firstOf`) has been provided.

Sending / receiving Emails:

- Sending multiple mails
In order to send a mail to several receivers without creating the message all the time, the receiver may be replaced in the message.
- Checking receiver
Some problems with generated mail messages have been corrected and additional functions for sending emails have been provided.

Some errors within the resource (storage) management have been removed.

ODABA Application Program Interface (base/opa)

Several extensions and some minor changes have been made on API functionality. Change status has following meaning:

- new - New function, class, enumeration or enumerator
- updated - Function has been updated
- expanded - Functions with same name but different parameter lists have been added
- removed - Function has been removed from interface
- osi - Function has been added to OSI interface

Interface changes:

Basic classes (namespace `odaba`)

- **Property**
 - `executeTemplate` (new, osi)
 - `isAutoSelection` (updated)
 - `checkCollection` (updated)
 - `repairCollection` (new, osi)
 - `repairKey` (new, osi)
 - `repairIndex` (new, osi)
 - `insertGlobal` (new, osi, implementation without parameter)
- **String**
 - `isEOF` (new, osi)
 - `firstOf` (new, osi)

Service classes (namespace `odaba::utils`)

- **Email**
 - `checkReceiverDomain` (new, osi)
 - `replaceReceiverName` (new, osi)

More details are described in ODABA online documentation: **Reference documentation/ODABA Application Program Interface.** .

ODABA Script Interface OSI

OSI interfaces have been provided for all new (or changed) interface functions.

Open Document Support

Document generation:

- Table templates
In order to generate tables in descending order, a `__descending` parameter may be defined in and passed to table templates.

Detailed changes (ODE and GUI framework)

Some bugs in managing GUI resources have been removed. Support for formatted data input has been provided and some extensions have been made in ODE tools.

GUI Framework (gui)

Bug fixes have been made

Internal features

- Data format specification
In order to limit data input to restricted character sets, input data format may be defined by regular expression, mask or value range. For fields with numeric data source, a regular expression is defined checking data while inputting. This may be overwritten by user defined rules defined in the data source **Data Format**.

ODE tools (ode)

Some improvements have been made in different tools and components.

All ODE-Tools

- Reset cascading selection
Action has been removed (did not work before).
- Associate data function
The `ControlContext::associateData` function now return **true** (for OK) and **false** in case of Cancel.

Designer

- Data format
Data format specifications in data source for field have been activated. Input fields may be restricted by defining masks, patterns (regular expressions) or ranges (min/max).

Components

- MailSender
A new application component class (`MailSender`, OSI) has been provided for sending emails from within an application.

ODABA GUI Application Program Interface (gui/ode)

Following changes made on context and resource class interface functions. Change status has following meaning:

- new - New function, class, enumeration or enumerator
- updated - Function has been updated
- expanded - Functions with same name but different parameter lists have been added
- removed - Function has been removed from interface
- osi - Function has been added to OSI interface

Context classes

- `ControlContext`
 - `associateData` (updated)

Resource classes

No changes made for resource classes.

ODABA Documentation

The documentation tree has been extended by adding new function descriptions and extended utility documentation.

Installing ODABA

ODABA, including applications and libraries, is available for free under Open Source licenses (GPL). ODABA runs on various hardware configurations, operating systems and works on many desktop environments. ODABA can be obtained as source code distribution and in various binary formats from <http://sourceforge.net/downloads/odaba/>.

Several features require third party components, which have to be installed before installing ODABA. When the corresponding libraries are not available, one may install ODABA, but the features referenced below will not work.

- libzip - required for LibreOffice document generation
- zlib - required for data compression and database backup and restore)
- curl - required for enhanced email support)
- hunspell - required for spell check in ODE tools, like terminus
- libmicrohttp - required for OHTTTPServer(D)
- Qt4 or Qt5 - for running the ODABA GUI framework

Using optimizing compiler GCC 6, this pointer checks must not be optimized. Use `-fno-delete-null-pointer-checks` option when using GCC optimizing compiler.

Previous Releases

With the release of ODABA 17.1.0 we declare the end of live for all previous released ODABA versions less than version 16.0.0. Bug fixes on 16.x.x version are provided on demand.

System model has been changed slightly, but no version upgrade is required.

System Requirements

In order to get the most out of this release, we recommend to use a recent computer with at least 1 GB of memory and 2 GHz CPU or better. In order to install the binaries, about 250 MB are required. Installing sources requires about 300 MB. 120 MB are required in addition, when installing the documentation locally.

About RUN-Software

RUN-Software develops database management system ODABA and tools since 1994. Besides general and particular software solutions, RUN-Software publishes theoretical works about database theory and terminology in connection with data modeling.

See also: www.run-software.com