

ODABA Releases TODBMS and Tools 13.1.1

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 the Terminology-Oriented Database Management System (TODBMS) ODABA has been released on Monday, July 25th, 2016. The new version ODABA 13.1.1 provides some new features on different interfaces

Tools have been improved concerning documentation management and documentation generation. Also OSI debug features have been improved. Finally, XML support for accessing XML files via property handle has been provided.

ODABA functionality as well as ODABAGUI API have been extended and several bugs have been detected and removed.

Finally, several bugs have been detected and removed. More details are described in change logs and in notices delivered with the development databases (ODE tools: **Object/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**).

Detailed changes (ODABA)

Features for supporting automated tests have been provided (test framework), as well as debug and trace features for OSI applications. In order to improve safety for production systems, ODABA also provides a mirror technology which maintains a database mirror. Moreover, improved unit tests for the ODABA API have been provided with in the released ODABA test framework.

ODABA Database kernel (base)

This version provides several changes and extensions for the kernel functionality:

- Data exchange

Data exchange allows defining string delimiters or field separators for external files (csv., xml). Moreover, an option allows requesting quotes for all string values in external files (export).

- File support
Parameters passed to CopyRecursive changed.
- XML support
Extended XML support has been provided for activating CML property handles.
- Character sets for BNF definitions
BNF definitions support defining character sets as terminal symbols.

ODABA Application Program Interface (base/opa)

Focus for this release was extending features for different interfaces. Besides, several bug-fixes have been made. Most important extensions are:

Service classes

- **File functions**
Several new functions have been added for external file support.
- **XML support**
Extended support has been provided for reading and writing XML data via property handles. Moreover, heuristic XML schema import is provided for XML files, which derives ODABA schema definitions for accessing XML files from XML data.

Interface extensions:

Property : : save

The save function behaves differently (no exception when not being selected) and store events are generated, only, when instance had been updated.

- **Database**
 - resourceDatabase (new)
- **Property**
 - copyData (updated)
 - save (updated)
- **TypeContext**
 - canCreate (new)
 - canDelete (new)
 - canInsert (new)
 - canRemove (new)
 - canRename (new)
 - canUpdate (new)

Service function extensions (odaba::utils):

- **File**
 - fileName (new)
 - extension(new)
 - tryErase (new)
 - tryEraseDirectory (new)

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

ODABA Script Interface OSI

In order to make OSI script debugging more efficient, automatic reload detection at run time is supported:

- Reload functions

In order to improve debugging OSI functions, updated functions will be reloaded immediately when being changed in the resource database (does not work for external code stored in file system). `OSI_RELOAD` option has to be set in this case. This allows correcting OSI errors on the fly without restarting the application.

Detailed changes (ODE and GUI framework)

Some changes and improvements have been made on existing tools. Besides, some minor bugs have been removed, which are reported in the change log.

GUI Framework (gui)

The GUI framework kernel had been changed slightly. Following changes have been made:

- Accessing regions
In order to access top regions in a tree control, region functions have been added to ControlHandle.
- Action-Log
Several internal feature extensions have been made to action log features. Especially, the action log data area has been extended to 16 KBytes.
- Context menus options
Context menu options now also support the "USER" option.
- Query permission
Support for querying permission for any kind of action has been provided.
- Error messages on console
Instead of a message box, error messages are written to console when `CONSOLE_APPLICATION` is set to YES.

ODE tools (ode)

Several minor extensions and bug-fixes have been made. Most important extensions are:

- Limit output area
Since the output area in GUI tools becomes slowly when many lines are written the number of lines can be limited. When exceeding the maximum, older lines are cut.
- Highlight relationships and references in OSI code.
- Reusing documentation topics
In order to share/copy documentation topics, several features have been provided in the resource documentation dialog.
- Generate .NET documentation file (XML documentation)
Document templates have been provided for generating XML documentation for .NET applications. Moreover, XML documentation has been provided for ODABA GUI interface.

ODABA GUI Application Program Interface (gui/ode)

Additional functions in GUI context interface have been provided

- Exception for line functions

Line functions throw an exception when no line is attached. The constructor and the attach() function do not throw an exception anymore but return an empty line in case of error.

- **Layout**
 - font (updated)
- **Region**
 - removeRegion (updated)
- **Cell**
 - layout (updated)
 - text (updated)
 - setProperty (updated)
 - resetLayout (updated)
 - setLayout (updated)
 - isValid (new)
- **ControlContext**
 - removeRegion (new)
 - addRegion (new)
- **ActionItem**
 - isValid (new)
- **GUIBaseContext**
 - confirmAction (new)

ODABA Documentation

Documentation has been updated. Documentation for new features has been provided.

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

Previous Releases

When running ODABA 11.x.x or higher, no upgrade is necessary. When still using ODABA 10.x.x, resource databases and databases referring to ODABA system data types need to be upgraded. Details about how to call a database upgrade are described in the readme file for the ODABA 11.0.0 installation.

With the release of ODABA 13.0.0 we declare the end of live for all previous released ODABA versions. Bug fixes on 12.3.x version are provided on demand.

Important: Running databases with ODABA 13 in write or update mode will upgrade the database header automatically. After upgrading the header, the database cannot be used with ODABA 12 or older. In order to suppress automatic upgrade, the system upgrade option has to be passed when opening the database of the option (environment variable) SYSTEM_UPGRADE has to be set to "true".

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 100 MB are required. Installing sources requires about 50 MB. 80 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