Release Notes

BOI FreeDa 4.0.0

31.01.2024

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1 Introduction: The BOI FreeDa product family

Free Your Database: BOI FreeDa

BOI FreeDa is the standardized solution for the audit-proof maintenance of your database content by users without database know-how - from BOI. User-friendly, process-oriented, secure!

BOI FreeDa is available in three editions with additional functionalities:

1. **BOI FreeDa direct** offers direct maintenance of tables, all changes are immediately activated in the database.

2. **BOI FreeDa Table Edition** also offers the option of table maintenance processes, thus separating data storage in the database from data processing for the duration of the entire maintenance process. It also offers table checks and the connection to external systems. Customer-specific functions can be implemented via BOI FreeDa scripts.

3. **BOI FreeDa Workflow Edition** also offers the implementation of individual maintenance workflows, the support of bi-temporal database formats, multi-client capability and the maintenance of sub-tables and orders.

BOI FreeDa Staging is an add-on product to our BOI FreeDa product family. BOI FreeDa Staging extends table maintenance with the option of staging processes.

	direct	Table	Workflow
One interface for the most common RDB • Db2, Oracle, Microsoft SQL Server, MySQL, PostgreSQL, Informix and MariaDB via JDBC	✓	✓	✓
Intuitive table editing • Table editor incl. comprehensive maintenance and import/export-functions	✓	✓	✓
Editing unit • Table • Partial table and table packages	✓	✓	✓ ✓
Editing process • NoCheck (direct editing) • SelfCheck, SingleCheck, DoubleCheck • Individual maintenance workflows	✓	✓ ✓	✓ ✓ ✓
Checks • Automatic BOI FreeDa checks • Customized table checks	✓	✓ ✓	✓ ✓
Connection to customer systems • Authorization and authentication		✓	✓
Data organization • Multi-client capability			✓
Logging • Data changes and settings	✓	✓	✓
Scripting • Scripts for BOI FreeDa processes • Customized maintenance scripts • Customized menu functions	✓	✓ ✓	✓ ✓ ✓
Parent-Child • Parent-child connections			✓
Temporal data formats • Support of bi-temporal data formats			✓
BOI FreeDa Add-Ons • BOI FreeDa Staging • BOI FreeDa ERP Connect		✓ ✓	✓ ✓

2 General information about the release

BOI FreeDa 4.0.0 will be released on **31.1.2024**.

The maintenance of this release ends on **January 31, 2028**.

The installation is carried out using a Docker image or alternatively on Linux or Windows. The corresponding installation manuals can be found in the customer portal on our website. These also contain important information on compatibilities and minimum requirements.

Information on new features and improvements to existing functions can be found in chapters 3 and 4.

Customer requests result in entries in our BOI FreeDa Error / Change Request - Change List. This can also be found on the customer portal of our website.

3 New Features

Note: the new features generally apply to all BOI FreeDa products. If they only apply to one or more specific BOI FreeDa products, the chapter is marked with the symbol for the edition or for the add-on. In addition, the chapter headings are color-coded for easier differentiation: orange for BOI FreeDa main products and blue for the BOI FreeDa Add-On Staging.

Table Edition:　　　⊓　　　Workflow Edition: ∿　　　Staging Add-on: ⟶

3.1 Referential integrity, RI editor, associative editor

Parent-child relationships between tables can now be defined in BOI FreeDa. BOI FreeDa checks compliance with the rules and therefore data integrity when editing the table data and at the end of the editing process. Any errors are therefore detected at an early stage, long before the data is activated in the database. However, it is always possible to save the data between even if there are still errors.
If parent-child relationships are defined, BOI FreeDa offers the possible values of the parent table in a selection dialog when editing the data of a child table. The dialog supports single and multi-column relationships and allows filtering within the offered values.

The convenient maintenance of so-called associative tables - these are tables in which keys from two tables are linked to form an overall key - can now be managed in BOI FreeDa with the integrated "Assoc Editor". This special editor allows key values to be linked by selection and mouse clicks, without the need for manual text input.

3.2 Enhancements to the audit log

The following actions are now also noted in the revision log:

- Manual release of a table lock
- Creating and deleting table checks

Table statuses can now be reactivated from the table history of the revision log as a new status that is currently being processed.

The BOI FreeDa system was also prepared for the future outsourcing of the revision log including saved table statuses for archiving purposes.

3.3 BOI FreeDa Staging

BOI FreeDa Staging enables the secure transfer of tables from one environment to the next ("staging") in clearly defined processes, right up to the production environment.

Staging is a sequence of individual processes that relate to either data maintenance or transfer from one environment to the next. The table must run through these processes in order to be activated in the final stage (usually the production environment).
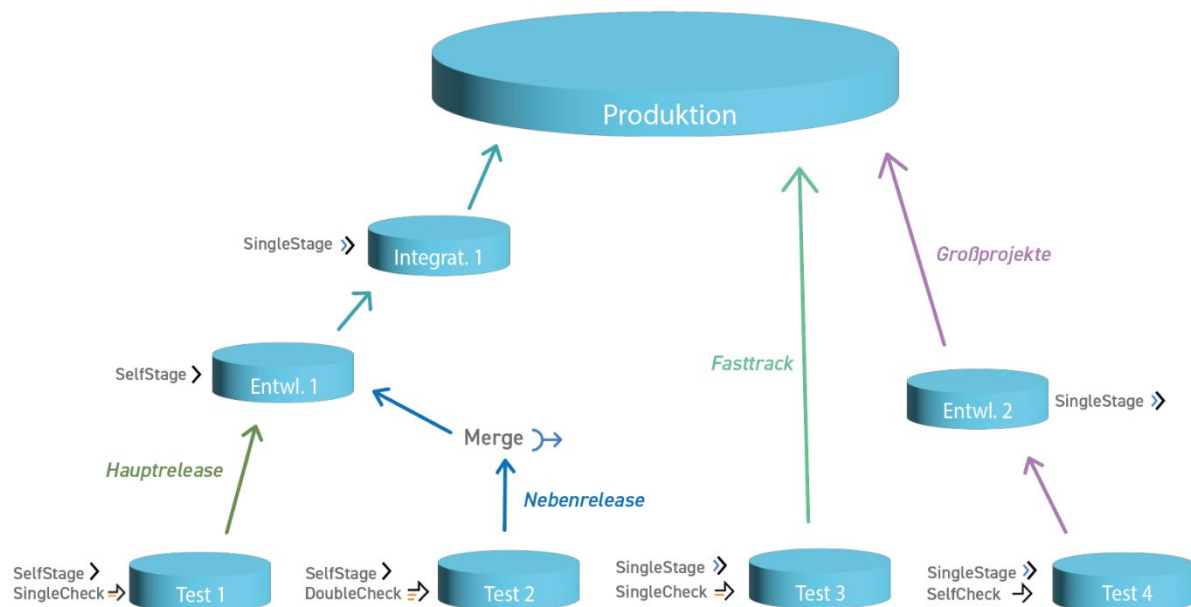
The sequence of stages (environments) is defined for this purpose. BOI FreeDa maintenance processes can be defined for each of the stages so that you can also edit these tables in the stage. In these cases, you can maintain the tables as usual with BOI FreeDa and use all maintenance functionalities such as (e.g. maintenance process, authorizations, ...). For each of these stages, you also define how staging is to take place in the next stage.

Depending on the type of staging process, BOI FreeDa Staging offers several processes - similar to table maintenance in BOI FreeDa - and various controls and rules are defined so that the tables can be used in production without errors and in an audit-proof manner.

You can get an overview of the staging processes in StagingNAVI. There you will find all the tables that are assigned to a staging process and can see all the information at a glance. You control the staging processes via the process stepper. As in BOI FreeDa table maintenance, you move the table backwards or forwards using the arrows to move it to the previous/next status.

BOI FreeDa Staging has been seamlessly integrated into the BOI FreeDa user interface.

If you are interested in BOI FreeDa Staging, please contact us.

3.4 Maintenance of TABEX tables in BOI FreeDa

TABEX4 can be connected **directly** to BOI FreeDa so that tables from TABEX4 databases can be displayed, edited and saved back to the database in the same way as relational databases with BOI FreeDa. For this connection, a system design for integration that is not limited to TABEX4 was developed and implemented for TABEX4.

In addition, the new release of BOI FreeDa also enables the maintenance of tables from TABEX4 and other legacy data management systems that have been **migrated** to relational databases. The system design used was implemented for TABEX4 tables, but is not limited to these. TABEX4 migration utilities and BOI FreeDa script functions are available to carry out the migration.

Migrated TABEX4 tables can be loaded into SHS data spaces in the same way as the original TABEX4 tables and thus made available for application access without loss. Nothing changes for the accessing applications. BOI provides a special data space comparison function to check the bit equality of the data.

TABEX4 tables, both from directly connected TABEX4 databases and migrated tables, retain their typical TABEX4 properties such as versioning, column attributes and key definitions. When maintaining data with BOI FreeDa, these are taken into account as far as sensible and possible.

4 Improvements and Additions

4.1 Performance improvement in the "Data" admin function

Depending on the number of tables in a database schema, the dialog to add or remove tables from BOI FreeDa could take some time, additionally no loading spinner was displayed.
We have improved the performance of this function. In the test, listing approx. 1000 tables **now takes 0.252 sec instead of 6.475 sec**, which is approx. **25 times** faster.
 If the dialog setup still takes longer, a loading spinner is now displayed.

4.2 User profile and password

The functions for editing your own profile data and the admin functions for user administration have been improved and expanded.
It is now possible to define user-dependent database login data instead of a single "technical user" per database connection.

There is now a "Forgot password" function in the login dialog. Password changes and all changes to the user data result in an e-mail being sent to the user e-mail address stored for control purposes.

4.3 Customized functions

In the new release of BOI FreeDa, the prerequisites have been created to be able to add customer-specific functions. Dialogs with customer-specific functions can be called up from the user interface under "My functions". This is only possible in the Workflow Edition. In both the Workflow Edition and the Table Edition, customer-specific scripts can be defined as so-called "exits": BOI FreeDa then calls the scripts automatically at the required points in the maintenance process.

4.4 Technical table checks

Technical checks of table data can now be created and edited directly in BOI FreeDa. The syntax of the table checks has been converted to the **Java** language; checks are therefore structured like Java if statements.
Complex test logic, e.g. existing test logic of legacy systems and TABEX4 can be integrated in the form of external Java test programs.
The table checks can be called up at any time during table maintenance via an icon. The checks are always carried out automatically before a table is transferred to the next status of the maintenance process.

4.5 Switch between the NAVIs: Tabs instead of buttons

To make it easier to switch between the NAVIs, the NAVIs are now offered as **tabs.**

4.6 Housekeeping and correction functions

Additional, internal correction functions for incorrect lock entries, status entries and configurations have been implemented so that manual intervention by an administrator is no longer required in the event of certain inconsistencies.

Changes to the structure of tables in the relational database can now be communicated to the BOI FreeDa system using a new script function *restartTableHistory.* BOI FreeDa notes the reset in the revision log and subsequently avoids attempts to compare table statuses in the new structure with those in the old structure, to overwrite etc.

4.7 Support and license

In the event of an error, a **system record** can now be generated for support requests. BOI employees may request this system record from you when processing a ticket.

Click on "more information" in the error message, copy the encrypted text displayed with the button provided and send the text to the BOI FreeDa Support Team. If you would like to view the unencrypted content of the system record, BOI can provide you with a tool for this purpose.

4.8 Security measures and pentests

A pen test was carried out for release 3.0.0 in February 2023. All findings were fixed for release 4.0.0.

4.9 Help

We now use a different theme for the help system. This has simplified navigation and made the pages clearer.

4.10 Usability

For the new release of BOI, the usability of the BOI FreeDa user interface for users and administration has been improved, including: Table favorites, table comparison switch, multiple filtering like in MS Excel®, set column width and save setting, color improvements, consistent display of a loading spinner, etc.

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Convincing Quality

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High-performance and ultra-fast.

Company-wide use for all databases and operating systems.

Efficient Service

Over 45 years of experience.

Excellent, dedicated team.

One-stop consulting, technology and implementation.

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