

BExIS 2.7.0 Release Notes 03.07.2015

With this release again a number of new features, improvements and bug fixes have been implemented. Among them are the following:

Data Attributes and Variables can now have constraints. For example, a user may specify a range of accepted values (e.g. 0 – 100) or a list of valid terms for a given Variable.

Units can now contain a dimension specification (e.g. Length, Mass, Time) which provides a formal description for unit conversion.

Variables can have individual units of the same dimension (e.g. mm, cm, m, km) independent from their corresponding Data Attribute. Thus reusing Data Attributes is more flexible now.

Another new feature is available for dataset maintenance allowing data managers to check versions of a dataset and to virtually or physically remove datasets from the system. This feature is part of the new System Administration Module, which also contains the former Security Module.

In order to improve usability the system now features an Online Help for each module that is accessible within the application.

Besides those new features the performance has been improved in some parts, e.g. when viewing large primary data.

I. Software Information

- Name: BExIS
- Version: 2.7.0
- Application Type: Web Application
- Platform: Windows

II. License Agreement

The contents included in this software are licensed to you, the end user. Your use of BExIS software is subject to the terms of an End User License Agreement (EULA) accompanying the software and located in the \License subdirectory. You must read and accept the terms of the EULA before you access or use BExIS software. If you do not agree to the terms of the EULA, you are not authorized to use BExIS software.

III. System Requirements

- Operating System: Windows Server 2003 or 2008. For personal or small installations the software is able to run on Windows 7 too
- Application Server: IIS 7.0 +. For IIS settings see the installation manual
- DBMS:

- IBM DB2 Express C 10 (version 10.1.2) 32 or 64 bits. BExIS has not been tested on other versions!
- PostgreSQL: (version 9.3) 32 or 64 bits. BExIS has not been tested on other versions!
- Dependencies
 - .NET Framework 4.0, created by Microsoft
 - ASP.NET MVC 3.0, created by Microsoft
 - Lucene.Net 3.0.3, created by Lucene.Net Community
 - Lucene.Net Contrib 3.0.3, created by Lucene.Net Community
 - SharpZipLib 0.86.0, created by ICSHarpCode
 - NHibernate 4.0.3.4000 created by NHibernate Community
 - Telerik MVC Extensions 2012.3.1018, created by Telerik
 - Unity Application Block 2.1.505.2, created by Microsoft
- Disk Space:
 - The Software: 20-30 MB
 - The Workspace: 10 MB and more, based on the number of modules and the amount of data

IV. Installation

To install the software, please follow the instructions in the Install_Manual_BPP270.pdf.

V. System Functionality

The software consists of two main types of components; 1) core components that include Data Lifecycle Management (DLM), Web Interfaces, Security and some other internally used ones. 2) A collection of coherent features and use-cases bundled as modules so that each module is designed around one or a small set of steps of the DLM workflow i.e., Data Submission, Quality Control/ Assurance, Data Publication and so on.

a) General Application Features

General Application features are available in the entire application and across all modules.

Existing Features

- NA

New Features

- Online Help for each module now available within the application.

Changed/ Enhanced Features

- NA

Dropped Features

- NA

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- NA

b) Data Discovery Module

The main purpose of this module is to enable users to search for data available within the system. The module executes user defined queries against the metadata and primary data and provides advanced features such as facets, keywords, categories, filters, grouping, and sorting. Depending on individual user permissions the system provides access to full metadata records, the underlying data structure and the primary data.

Existing Features

- **Discover data using metadata dimensions (aspects, facets) and attributes (version 2.0.0)**
- **Configure search module through a user interface (version 2.1.0)**
- **Primary data search (version 2.4.0)**
- **mapping Lucene fields to multiple Metadata Nodes in the Search Component Manager (version 2.5.0)**
- **The homepage contains a list of accessible dataset (version 2.6.0)**

New Features

- NA

Changed/ Enhanced Features

- Performance of Show primary data has been improved considerably when viewing large datasets.

Dropped Features

- NA

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- Facets do not act as expected when names contain special characters (e.g. “-“).

c) Data Collection Module

The purpose of the data collection module is to allow users to submit data alongside with metadata. The module processes the data in accordance with its data/metadata structure rules to find any inconsistencies and communicates with the user to overcome the issues. The module may also notify or trigger other internal services such as the search indexing engine to make the dataset ready for discovery. Based on the settings of the associated research context/ plan, datasets get versioned.

Existing Features

- **Uploading an Excel file (version 2.1.0)**

- **Uploading a delimited file (CSV, TSV), (version 2.2.0)**
- **Adding data to an existing dataset (version 2.2.0)**
- **Create Structured Dataset (version 2.3.0)**
- **Create Unstructured Dataset (version 2.4.0)**
- **Push big files to server (version 2.4.0)**
- **Importing metadata schemas via XSD files (version 2.6.0)**
- **The Create Dataset Wizard has been changed to cope with varying metadata structures. (version 2.6.0)**

New Features

- NA

Changed/ Enhanced Features

- Importing data to a dataset includes validation against the constraints specified in the Data Attributes, associated to the data structure that is used by the dataset.

Dropped Features

- NA

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- Empty rows within or at the end of Excel or CSV files lead to validation errors and should be removed (by the user) before adding (i.e. uploading) data to a dataset.

d) Data Planning Module

The purpose of the data planning module is to manage (create, edit, delete) data and metadata structures, data attributes (variables), units, data types and their relations. The aim is to foster reuse and data integration while retaining flexibility.

A conceptual model showing the connection and relationship between the different terms and entities is available at: <http://fusion.cs.uni-jena.de/bppCM/index.htm>

Existing Features

- **Data structure manager (version 2.1.0)**
- **Data attribute manager (version 2.1.0)**
- **Data type manager (version 2.1.0)**
- **Unit manager (version 2.1.0)**
- **Unstructured data structures (version 2.4.0)**
- **Create copy of a data structure (version 2.5.1)**
- **Creating units without a data type assigned to it is no longer possible (version 2.6.0)**
- **In data type creation, more information is provided on available system types (version 2.6.0)**

- **In-line editing for name and description of a data structure (version 2.6.0)**

New Features

- Data Attributes and Variables can now have constraints (e.g. list of domain values, data ranges, and patterns as regular expressions).
- Units can now contain a dimension specification (e.g. Length, Mass, Time).
- Variables can have individual units of the same dimension (e.g. mm, cm, m, km) independent from their corresponding Data Attribute.

Changed/ Enhanced Features

- The header in downloaded Excel Templates is now locked to avoid accidental editing, which causes errors in the upload process later on.

Dropped Features

- NA

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- If macros are disabled in Excel, the downloaded Excel template is not being validated in Excel. This also leads to the issue that only the first row is being imported when submitting a dataset to BExIS using such a template.

e) Data Dissemination Module

The main purpose of this module is to provide users with access to primary data and metadata managed by the system. In the future this module shall also provide support for publishing, orchestrating and harvesting data of the system by external resources.

Existing Features

- **Primary data download as Microsoft Excel file** (version 2.2.0)
- **Primary data download as comma or tab separated file (CSV)** (version 2.4.0)
- **Download of unstructured data (single file, multiple files in ZIP)** (version 2.4.0)
- **Export of metadata from an internal representation into XML files** (version 2.5.0)

New Features

- NA

Changed/ Enhanced Features

- NA

Dropped Features

- Due to a performance issue with large datasets, the customized download (introduced in version 2.4.0) using filters, sorting and column selection has been disabled. Download of the full dataset is still available.

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- NA

f) System Administration Module (former name: Security Module)

The System Administration Module (SAM) provides functions for dataset maintenance, system configuration and authentication and authorization management. It is typically only accessible to system administrators or data managers.

Existing Features

- **User self-registration** (version 2.1.0)
- **Users and roles management for an administrator** (version 2.1.0)
- **Feature security** (version 2.2.0)
- **Dataset Security** (version 2.4.0)
- **Sign-On with existing credentials from an external authentication provider (LDAP Service)** (version 2.5.0)
- **System features and datasets can be made publicly accessible without authentication** (version 2.6.0)
- **passwords can be changed by users or administrators** (version 2.6.0)
- **administrators are able to approve, block, or unlock users** (version 2.6.0)
- **Sessions are properly timed out and users are logged off after a given time and informed** (version 2.6.1)

New Features

- Delete/Purge Datasets
- Show versions of a dataset

Changed/ Enhanced Features

- Inheritance of feature permissions for groups and users has been changed slightly to be more intuitive.
- Internal refactoring: the security module is now part of the System Administration Module.

Dropped Features

- NA

Fixed Issues

- NA

Breaking Changes

- NA

Known Issues

- NA

VI. Contact

Help desk:

- Website: <http://fusion.cs.uni-jena.de/bexis>
- Email address: bexis-support@uni-jena.de
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