FirstSpirit™ Unlock Your Content

FirstSpirit™ Release Notes
FirstSpirit™ Version 5.2 Release 19

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e-Spirit

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1 FirstSpirit product update 2018

The following sections outline the latest developments relating to relevant third party components being used in FirstSpirit or to support Oracle Java.

2 Oracle Berkeley DB

Oracle Berkeley DB is used in FirstSpirit as a repository for saving content data. Until now, versions 3 and 5 have been in use and running reliably and stably for many years. However, in order to benefit from performance advantages, to remain at the forefront of technical development, and last but not least, for security reasons, plans are in place to update the internal Berkeley DB to version 7 in the near future.

FirstSpirit uses Berkeley DB on the one hand for the repositories for the individual projects ("project repositories"), as well as for storing system data ("internal repositories", for example registry, archiving database, access control database). Both places where these are used are affected by an update to version 7 and must be handled accordingly on existing FirstSpirit servers: from a technical point of view, to do this the data stored in the Berkeley DBs must be converted into the new data format. This is normally carried out in a few seconds.

Since FirstSpirit version 5.2R18, individual project repositories can also be converted to version 7 as part of the Early Access Program ("EAP").

FirstSpirit version 5.2R19 provides a conversion tool (also as part of the Early Access Program ("EAP")), that can be used for the simple conversion of all data stored in existing FirstSpirit servers with just a few commands ("project repositories" and "internal repositories"). For more details, see the "Conversion of the Oracle Berkeley DB (EAP)" chapter.

Berkeley 7 is not compatible with Java 7. The FirstSpirit Server therefore requires at least Java 8 in order to use Berkeley 7.

Compatibility of FirstSpirit versions

An official release of Berkeley version 7 is intended for FirstSpirit version 5.2R20 or R21 (April/May 2018). Following a transitional period, during which Berkeley versions 3, 5, and 7 will be able to be used in parallel on FirstSpirit servers, it is planned – for reasons relating to maintainability – to only offer version 7 and to withdraw support for versions 3 and 5 from around the end of 2018. After this point in time, FirstSpirit servers which are still running version 3 and/or 5 will then no longer start. Consequently,

a server-wide switch to version 7 must be completed by this date. Switching from version 3 or 5 to 7 at the earliest possible opportunity is therefore recommended.

Following a conversion to Berkeley version 7, a FirstSpirit downgrade to versions earlier than version 5.2R18 will no longer be possible. A downgrade to FirstSpirit version 5.2R18 is possible, however.

For downgrading servers which have not been converted yet, the file `fs-berkeleydb7.fsm` should be manually deleted from the `../data/modules` sub-directory.

3   Oracle Java

Release Plan for Oracle 9, 10 and 11

FirstSpirit is currently released for use with Oracle Java 7 and Oracle Java 8.

Since FirstSpirit version 5.2R18 (February 2018), Oracle Java 9 is supported as part of the Early Access Program (EAP). Work is currently in progress on support for Oracle Java 10 (in accordance with the new version scheme: 18.3); at present FirstSpirit does not run on Oracle Java 10 however.

In the interest of the customer, FirstSpirit supports Long-Term-Support (LTS) versions as a priority. In the case of Oracle Java, it is planned to support at least the current Java version and the last LTS version up to the end of public updates for Oracle ("End of Public Updates"). Variants that do not have LTS status will no longer be officially supported by FirstSpirit following the end of public updates. This means that for these versions, no further tests on compatibility with FirstSpirit and no measures to resolve any problems arising will be undertaken. For the Java Release Plan from Oracle, see also http://www.oracle.com/technetwork/java/eol-135779.html.

Summary of the currently supported Java versions (as at March 2018):

- Java 8 (last LTS version)

- Java 9 ((EAP), current Java version)

- In addition, Java 7

The next LTS version is Oracle Java 11 (18.9 LTS), which is set to be released in September 2018 by Oracle. For FirstSpirit, support for this version is planned from the third quarter of 2018. Version 8 will be supported by FirstSpirit up to the end of Oracle public support (at least January 2019).

FirstSpirit and Oracle Java 9+

The use of Oracle Java 9 with FirstSpirit is currently still in EAP status (Early Access Program). A prompt release is sought, but some minor problems have arisen in the use of Java 9 in test operation. These will soon be rectified in coming releases.

The move to the use of Java 9 (both at e-Spirit and with customers) is central, as on the one hand the difference from Java 8 is relatively great from a technical point of view, but on the other hand Java 9 has only be supported by Oracle since very recently. The move from Java 9 to Java 10 and 11 is likely to have fewer implications from a technical standpoint, however, meaning the change from Java 9 to Java 10 or 11 will not be as involved. Problems arising when using Java 9 will very likely also occur with a change from Java 8 to Java 10 or 11.

In general, features in EAP status will already have reached a level of maturity where it can and should be used by customers. However, it should initially be used on test systems and potential problems notified to e-Spirit promptly. Customer feedback is actively encouraged.

The following technical restrictions are currently known relating to the use of Oracle Java 9 (and higher where applicable):

- The third-party component used in FirstSpirit, **Beanshell**, is not yet fully compatible with Java 9. This means that some Beanshell scripts run with errors in FirstSpirit with Java 9. This is currently considered by e-Spirit to be preventing for the approval of Java 9. As soon as a Beanshell update is available, it will undergo intensive testing with a view to reassessment for approval (we suspect that Java 10 will have been released by then).
  Current workaround:
  The problem can be circumvented in Microsoft Windows making the parameter setting `--illegal-access=warn` in the Java Control Panel ("Start / Configure Java") for the corresponding Java version ("Desktop settings" tab):
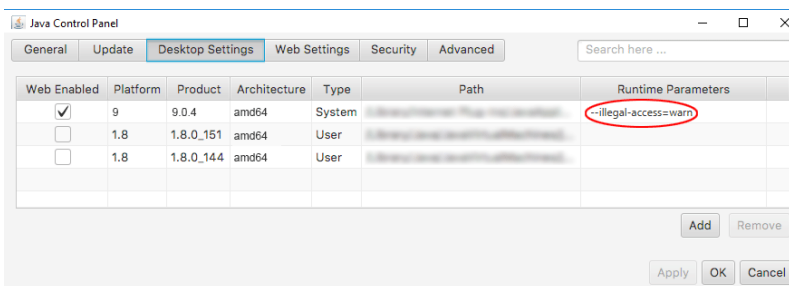
(Note: Multiple parameters can be specified separately using a semicolon.)

▪ Oracle does not offer Java 9 in more than one **32 bit** variant, i.e. when using Oracle Java 9, FirstSpirit can now only be run on 64 bit platforms or with 64 bit applications. The option to run FirstSpirit under 32 bit will be discontinued in the medium-term.

▪ Due to advanced security checks in Java 9, **delays** arise when using this Java version, in particular on launching on the client side and when first running functionalities that have been loaded afterwards.

▪ The **Windows Installer** cannot be used under Java 9. If a new FirstSpirit Windows Server is to be operated under Java 9, an installation should first be carried out using the Windows Installer under Java 8 and then a migration to Java 9 carried out (for more details, see FirstSpirit Release Notes on version 5.2R18).

▪ The Oracle Java Runtime Environment (**JRE**) that is required to launch the FirstSpirit SiteArchitect, is potentially not compatible between versions 8 and 9. A change from Java 9 back to 8 requires a number of manual configuration modifications. In Windows, the FirstSpirit Launcher permits a simpler change back to Java 8.

▪ The "Keep temporary files on my computer" option for Java Web Start must be selected under Oracle Java 9 so that FirstSpirit SiteArchitect and FirstSpirit ServerManager can be launched. Under Oracle Java 8 this could also be deselected. Therefore, we recommend checking this setting when changing to Oracle Java 9 (tab "Web settings / Settings for temporary files").
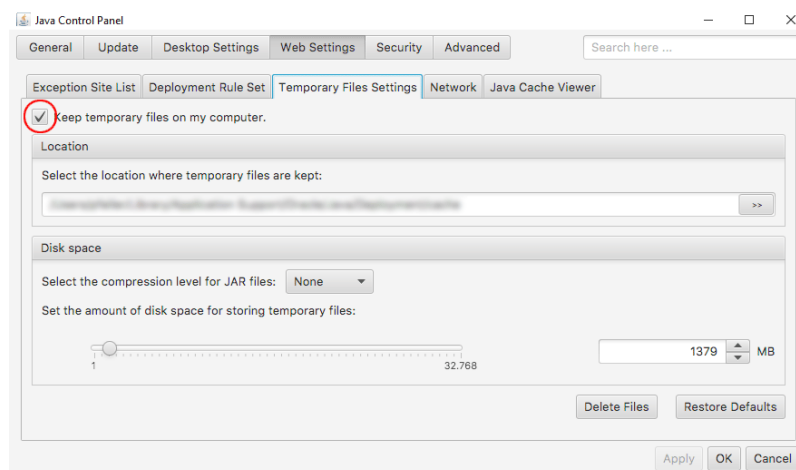
▪ The parameters of the wrapper files `fs-wrapper-j#.include.conf` cannot be edited like the default wrapper file `fs-wrapper.conf` via the **FirstSpirit ServerMonitoring**. However, the file can be edited in the file system.

- It is not currently possible to copy any text from the integrated preview in the FirstSpirit SiteArchitect using a keyboard shortcut `Ctrl` + `C`. Alternatively, the context menu in the integrated preview can be used.

- Operating system-specific **third party applications** in the AppCenter of the FirstSpirit SiteArchitect will no longer be supported from Oracle Java 9 (exception: the browser integration).

- The Jetty web server integrated into FirstSpirit will not run under Oracle Java 9. The "fs-jetty.fsm" (EAP) module can be used instead.

4   Administration / Modules

4.1   HTTPS Support for the Module "Eclipse Jetty" (EAP)

With FirstSpirit version 5.2R13 the new module providing the servlet container Eclipse Jetty has been introduced. Support for servers running in legacy mode was added with 5.2R18 in context of the Early Access Program. In order to ease the migration from using the internal Jetty server to using the Jetty module, the current version of FirstSpirit adds support for encrypted connections (HTTPS).
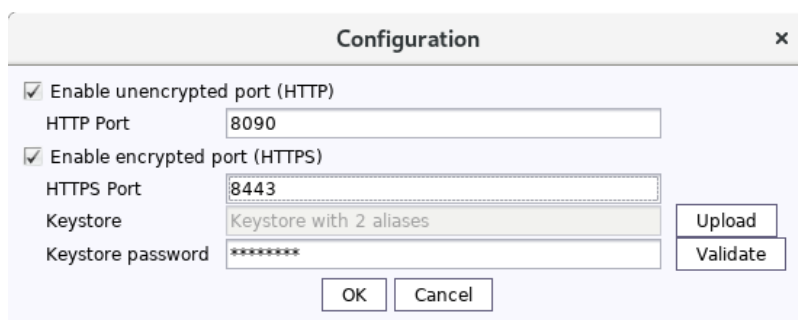
Creating encrypted connections requires a keystore in JKS format. This can be uploaded using the configuration dialog of the JettyService ("FirstSpirit ServerManager / Server Properties / Modules / FirstSpirit Jetty Server / JettyService").

After uploading the keystore and entering the corresponding password, a click on the button "Validate" checks the entered configuration. When successful, the number of detected aliases is displayed.

A restart of the JettyService is required in order to apply the new configuration.

5   Administration

5.1   Conversion of the Oracle Berkeley DB (EAP)

The latest version of FirstSpirit provides a conversion tool (currently still the Early Access Program ("EAP")) that can be used for the simple conversion of all data stored in Berkeley DBs on existing FirstSpirit servers to Berkeley DB 7 format by entering just a few commands in the command line ("project repositories" and "internal repositories"). The exact procedure is described in the section "Recommended procedure for a conversion to Berkeley DB "7. As server-level data also has to be converted, a conversion of this nature can only be performed when the FirstSpirit Server is offline in order to prevent any loss of data. A conversion will generally be completed in a short time. Only in exceptional cases may it take up to several hours; for example, in the event of very large and/or numerous projects. To make it easier for customers to calculate appropriate maintenance windows, plans are underway to publish comparison values relating to project size and conversion duration in future release notes. These values will have been established from conversions that have already been performed in production conditions.

Berkeley 7 is not compatible with Java 7. The FirstSpirit Server therefore requires at least Java 8 in order to use Berkeley 7.

Compatibility of FirstSpirit versions

An official release of Berkeley version 7 is intended for FirstSpirit version 5.2R20 or R21 (April/May 2018). Following a transitional period, during which Berkeley versions 3, 5, and 7 will be able to be used in parallel on FirstSpirit servers, it is planned – for reasons relating to maintainability – to only offer version 7 and to withdraw support for versions 3 and 5 from around the end of 2018. After this point in time, FirstSpirit servers which are still running version 3 and/or 5 will then no longer start. Consequently,

a server-wide switch to version 7 must be completed by this date. Switching from version 3 or 5 to 7 at the earliest possible opportunity is therefore recommended.

Following a conversion to Berkeley version 7, a FirstSpirit downgrade to versions earlier than version 5.2R18 will no longer be possible. A downgrade to FirstSpirit version 5.2R18 is possible, however. After a downgrade, the file `fs-berkeleydb7.fsm` should be manually deleted from the `../data/modules` sub-directory.

Using the conversion tool

The "BerkeleyUtil" conversion tool is a command line tool that can be used to convert all data from the project repositories and internal repositories of a FirstSpirit server to Berkeley DB 7 format. The tool is contained in the `fs-server.jar` file and is rolled out to the "bin" directory when the server is started.

Prerequisites:

- Oracle Java: min. version 8

- The tool is only permitted to be used once the corresponding FirstSpirit server has been powered down.

- Sufficient memory space: Three times the memory space of the biggest database that is being converted will potentially be required temporarily.

Call and options:

```
java -jar BerkeleyUtil.jar COMMAND [OPTION]... PATH
```

First `-jar` must be used to specify the path under which the `BerkeleyUtil.jar` file is located on the FirstSpirit server, by default in the "bin" directory, e.g.

```
java -jar firstspirit/bin/BerkeleyUtil.jar
```

The following commands can be used for the COMMAND placeholder:

- `-c, --convert`: converts all uses below the specified directory (see PATH below) to Berkeley DB version 7 (complete FirstSpirit server)
  - `--convert-acl`: converts all ACL databases to Berkeley DB 7

- ▪ `--convert-project`: converts all project repositories to Berkeley DB 7

- ▪ `--convert-server`: converts all internal repositories to Berkeley DB 7

- ▪ `-d, --dump`: repairs the desired repository as a copy (standard mode I)

- ▪ `-h, --help`: display of the help

- ▪ `-l, --list`: lists the names, version, and path of all repositories on the server

- ▪ `-r, --recover`: attempts to restore the desired repository (standard mode II)

- ▪ `-R, --RECOVER`: attempts to restore the desired repository (with advanced error corrections)

- ▪ `-t, --verify`: checks the desired repository

The commands cannot be combined, i.e. each command requires a separate call.

Important: The commands `-d`, `-r` or `-R` should only be used following a prior analysis. Please contact Technical Support for support issues.

The following `OPTION` can be used:

`--dump-dir <directory>`: For the conversion or recovery of a repository, a copy is first created that is then imported. This call can be used to specify a directory in which the temporary copy is to be created.

`PATH` must be used to specify the path to the directory to be taken into account by the tool, e.g.

- ▪ to the root directory of the FirstSpirit server: `/firstspirit`

- ▪ to a directory of a Berkeley DB on the FirstSpirit server, e.g. `/firstspirit/data/projects/project_123/repository` (repository of a project), `/firstspirit/data/projects/project_123/registry` (registry of a project)

Example call:

```
java -jar firstspirit/bin/BerkeleyUtil.jar -l firstspirit
```

This call lists all Berkeley databases of the FirstSpirit server installed in the "firstspirit" directory and displays its versions.

Recommended procedure for a conversion to Berkeley DB 7

1) It is recommended to test the conversion to version 7 for one (small test) project first which uses the Berkeley DB in version 5, via switching the version in FirstSpirit ServerManager in the project settings, "Repository" section, "Backend" dropdown list. When the conversion was successful (= the project can be opened and edited in FirstSpirit SiteArchitect), you can proceed with step 2).

2) The FirstSpirit server must be powered down for a conversion via the conversion tool. For this reason, a conversion should be carried out during a maintenance interval.

3) Migrate the entire FirstSpirit server to version 7.
To do this, run the following example call (modified to the path of the root directory of the FirstSpirit server):

```
java -jar -Xmx#m firstspirit/bin/BerkeleyUtil.jar -c /firstspirit
```

The conversion process should be started with sufficient memory. As a rule of thumb, `-Xmx#m` should be used with the same value as defined for the `wrapper.java.maxmemory` for the FirstSpirit server (see *FirstSpirit Manual for Administrators*).

Important: The conversion process can take some time depending on the size and number of the repositories present on the FirstSpirit server (a maximum of a few hours). The conversion should not be canceled during this time as this could cause data loss and inconsistencies! In the event of canceling the process there is no rollback, and manual intervention will be required. Please contact Technical Support.

4) If the conversion was completed successfully, a corresponding message is output in the log, e.g.

```
<timestamp> [INFO Bdb7Convert] BerkeleyDB version 7 conversion successful,
    marker file written: firstspirit/data/server/berkeleydb.7
```

5) The following parameter must be entered in the `fs-wrapper.conf` file:

```
-DBerkeleyDB7=1
```

6) The FirstSpirit server can then be started and used as normal.

Troubleshooting

If a conversion is not completed successfully, a corresponding message is output in the log, e.g.,

```
<timestamp> [WARN Bdb7Convert] BerkeleyDB version 7 marker file not written,
    1 errors during the conversion process.
```

In this case, running the conversion again can resolve the issue.

If this is not successful, please contact Technical Support. The same applies if a conversion process had to be canceled. Message in the log on server start:

```
FATAL <timestamp> (de.espirit.firstspirit.server.ServerManagerImpl):
    Incomplete BerkeleyDB version 7 conversion detected
```

For assistance from Technical Support, please have the log file from the last execution of the conversion tool to hand.

5.2   Schedule Tasks: Option "Execute even in case of error" is turned off by default

In FirstSpirit, schedule tasks are used to automate actions pertaining to the administration of projects (e.g. generation or publication) so that they are executed at defined, planned times. Each schedule task can consist of several actions which are executed in a specified order, e.g.:
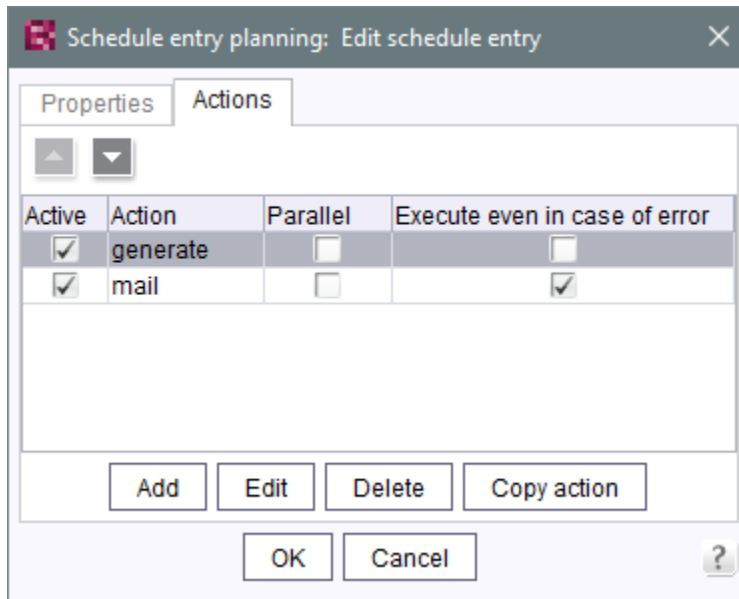
For each action, the option "Execute even in case of error" specifies if this action should be executed if its preceding execution was erroneous. For actions that are newly added to a schedule task, this option is now turned off by default; if a newly added action should be executed after the preceding execution resulted in an error, the checkbox of this option must be checked. Until now, the checkbox was checked by default for newly added actions.

For further information, see *FirstSpirit Manual for Administrators*, chapter "FirstSpirit ServerManager / Schedule entry planning", specifically the page "Add schedule entry (Actions tab)".

6 ContentCreator

6.1 FS_CATALOG: New Entry Form Is Opened Immediately

The input component for catalog lists (FS_CATALOG) allows creation and maintenance of content lists. The entries of such a list may be sections or links.
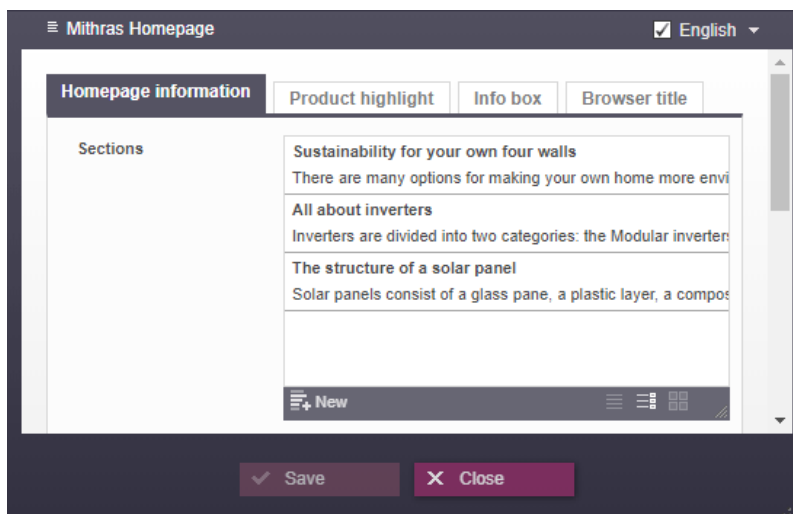
Clicking the button "New" (and selecting the desired template, if necessary)

previously only resulted in the addition of the new entry to the catalog list. Now, the form associated with the new entry is opened immediately so that the editor may directly input the desired content.

For further information, see *FirstSpirit Manual for Editors (ContentCreator)*, "Editing the preview page / Standard input elements / Catalog lists (FS_CATALOG)".

7 Input components

7.1 FS_LIST, FS_INDEX, FS_CATALOG: Optimization of Multi-Language Display

The input components FS_LIST, FS_INDEX, and FS_CATALOG may be used to create lists of entries which are based on section or link templates or contain datasets. In these ("outer") components, the contents of inner components are used as labels to display the inner components. For FS_CATALOG and FS_INDEX, the definition in the tab "Snippet" of the associated templates is used; for FS_LIST, the value of the inner input component or the configuration via the tag *LABELS / LABEL* is used. Example FS_CATALOG:
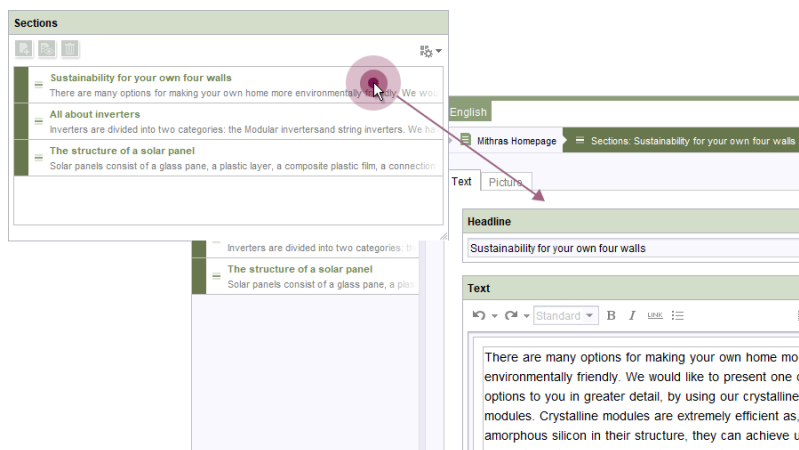
- **outside:** label "Sections"

- **inside:** label "Sustainability for your own four walls | There are many options..." etc.

In projects with multiple project languages (also known as "content languages"), depending on the input component's configuration, the contents may be language-dependent (= different content/values in different languages, `useLanguages="yes"`).

As of the current version of FirstSpirit, labels of inner components will always be displayed in the language that is chosen via the language tab, independently of the setting in the menu "View / Preferred display language". Thus, in a language tab *EN*, contents will always be displayed in the language *EN*. Previously, the display language (e.g. *DE*) was used in some cases.

8   Module Development, Scripts, API

8.1   Interface "DatasetProvider": Creating a new dataset

The new method `createDataset()` in the interface `DatasetProvider` (package `de.espir-it.firstspirit.access.store.contentstore`, FirstSpirit Access API) a new dataset can now be directly created within a data source (interface `Content2`) as well as in a database (interface `Tabletemplate`). Until now, a detour via a corresponding entity was necessary.

8.2 Interface "PasswordAgent": encrypt passwords through the API

FirstSpirit version 5.2R16 already introduced optionally encrypted passwords in FirstSpirit configuration files (see *FirstSpirit Manual for Administrators*, chapter "FirstSpirit Server configuration / Configuration files (FirstSpirit Server) / FirstSpirit Server (fs-server.conf) / Password encryption". Now a new API is introduced to provide this capability to module developers (to encrypt module passwords).

The API can be accessed through an agent `de.espirit.firstspirit.agency.PasswordAgent` (FirstSpirit Developer API).

9 SiteArchitect / ContentCreator

9.1 Different Validation Behavior for Different Languages

FirstSpirit SiteArchitect and ContentCreator notify the user of invalid content in input components. This invalid content may be due to infractions of rules that were specified by a template developer, an empty input component for which the attribute `allowEmpty="no"` is specified, or invalid references (such as use of a FirstSpirit object, e.g. a media element or a page reference, which has been deleted in the meantime). If an input component in the page, section, or dataset being edited is missing content or contains invalid content, it either cannot be saved (`scope="SAVE"`) and/or cannot be released (`scope="RELEASE"`), or a notification message specified by a template developer will be shown (`scope="INFO"`).

As of the current version of FirstSpirit, this validation may be deactivated for one or several project languages via the option "Validate language" found in the properties of the project in question (FirstSpirit ServerManager / project properties / page "Languages"):
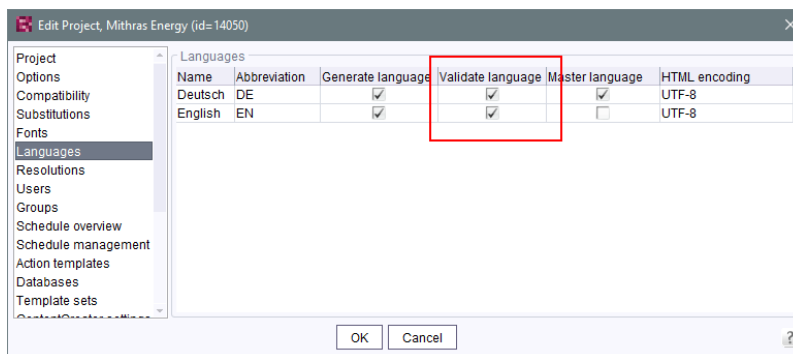
By default, the option is active for each project language, i.e. contents in that language will be validated in the associated project. If the option is deactivated for a language, contents in that language will no longer be validated. A page, section, or dataset can thus be saved and/or released although (valid) content does not exist in every language. This enables implementation of different validation behaviors for different languages.

If the option is reactivated, contents that do not adhere to the rules must first be modified in order to release or save the element.

Using the API, this option may be activated or deactivated via the method `setIgnoreValidation()` of the interface `Language` (package `de.espirit.firstspirit.access`, FirstSpirit Access API).

Note: This change also introduces modifications to internal classes. This can result in problems when establishing connections if the FirstSpirit Server is running a version >= 5.2R19 and another component (e.g., Tomcat web server) is still running a version < 5.2R19. In this case, the counterpart (in this case Tomcat with web apps) must be updated.

For further information, see

- *Documentation for FirstSpirit SiteArchitect*, "General operation / Invalid entries" and "FirstSpirit SiteArchitect / The menu bar / Search"

- *FirstSpirit Manual for Editors (ContentCreator)*, "Editing a preview page / Working with dialogs / Editing window / Rule violations"

- *FirstSpirit Manual for Administrators*, "FirstSpirit ServerManager / Project properties / Languages"

- *FirstSpirit Online Documentation*, "Template development / Rules"

9.2 Rebrush for FirstSpirit graphical user interfaces

As part of the revision of the design of the graphic user interface of FirstSpirit, which began in FirstSpirit version 5.2R17, improvements and further optimizations were made with the current FirstSpirit version. For example, the titles of input components (parameter `label`) are now displayed in capital letters in the SiteArchitect for better clarity in forms. If default values are defined for an input component, this is visualized by the addition of "(Default value)" in the title.

10   SiteArchitect / ServerManager

10.1   Configuration of the FirstSpirit start page

There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. These settings include:

- Configuration of the start page: primary / secondary applications

- Configuration of the visibility of standard applications

- Connection settings: show standard applications (only visible for server administrators)

- Project specific configuration (restrictions) of permitted applications

ServerManager / Server properties / Start page

For further customization of the FirstSpirit start page, it is now possible to configure the primary and secondary applications on the start page in addition to configuring quick start entries.
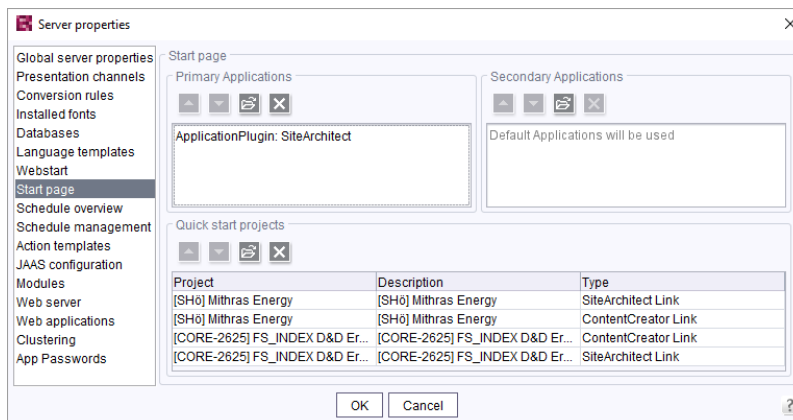
Primary Applications: Here you can configure the upper row with the large white icons for the area "Start applications" on the start page. If no application is selected for this row, the standard applications are displayed..

Secondary Applications: Here you can configure the lower row with the small black icons for the area "Start applications" on the start page. If no application is selected for this row, the standard applications are displayed.

The following applies to both areas: You can add your own applications. As soon as an application has been selected for the list, all (other) standard applications (if desired) must be listed individually.

ServerManager / Server properties / Modules

Via the module / component configuration the visibility of the standard applications for different groups can now be configured.
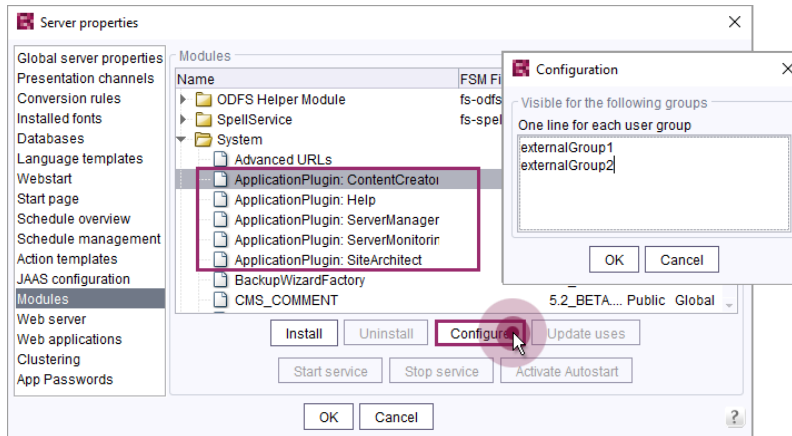
Here you can enter names of external groups whose users can see the applications. The names of the groups are to be defined like in the fs-server.conf properties "externalServerAdminGroup" and "externalLauncherGroup". If the group is empty, all users can see the corresponding application.

For more information on "External groups", confer to *FirstSpirit Manual for Administrators*, "FirstSpirit ServerManager / Project properties / Groups".

Connection Settings

For the server administrator, an additional option has been added to the connection settings..

This option is given to the server administrator for security purposes, if he/she has blocked himself/ herself access due to an unfavourable configuration. If the **Show default applications** option is active, only the standard applications in the previous configuration of their visibility are displayed.

This option does not affect the configuration of the visibility of standard applications.
For example, the server administrator cannot see an application even when the option is active, if it was excluded from visibility by a group definition.

ServerManager / Project properties / Applications
The settings made in the server properties can be restricted by configuring the allowed applications in a project-specific way.
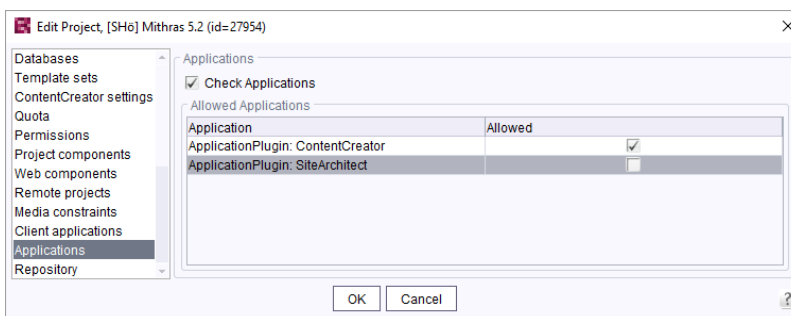
The configuration affects

- the project selection dialog;

- the quickstart entries;

- the list of recently opened projects.

11   System

11.1   Integrated Software

With the current FirstSpirit version, the following, internally used software has been updated:

- **Java Development Kit** ("JDK", included in FirstSpirit Launcher)
  Update from version 8u131 to 8u161

12   Deprecations

For e-Spirit, an important goal in software development is to avoid introducing incompatibilities and migration expenditures related to updating from one FirstSpirit release to the next as much as possible or to compensate for these within the software. FirstSpirit updates should generally be deployable with little effort or able to be carried out in a fully automated fashion.

However - not least in order to ensure maintainability and to future-proof the software - e-Spirit cannot fully avoid replacing existing functionality with new mechanisms. In the future, functionality that will be removed from the software will be listed in this section, including the date at which time the functionality will be removed.

Functionality	Deprecated as of	Will be removed/ Was removed as of
Oracle Java 7 Support	5.2R15	June 2018
FirstSpirit Developer API: de.espirit.firstspirit.agency.GroupsAgent	5.2R15	May 2018
Integrated preview for content (Mozilla Firefox, v3 and v15)	5.2R18	August 2018
Integrated preview for content (Internet Explorer old)	5.2R18	May 2018
Integrated Jetty	5.2R18	August 2018
Operating-system specific third-party applications in the AppCenter of the FirstSpirit SiteArchitect (exception: browser Integration)	5.2R19	September 2018

13   Overview

ID	Description	Categories
156047	In rare cases some selection dialogues were rendered incorrectly.	SiteArchitect

ID	Description	Categories
179075	In the input component FS_CATALOG, clicking the button "New" (and selecting the desired template, if necessary) now opens the form associated with the new entry so that the editor may directly input the desired content. Further information can be found in chapter "ContentCreator: FS_CATALOG: New Entry Form Is Opened Immediately".	ContentCreator, Editor, Input Components
179156	Optimized editing of contents of the input component CMS_INPUT_DOM within FS_LIST using InEdit functionality.	ContentCreator
185206	In rare cases the output of normalized content from CMS_INPUT_DOM was incorrect.	Developer
186868	When moving the mouse pointer within a report, an unnecessary amount of log output was generated.	SiteArchitect
189489	Improved notifications of upload hooks when they are used to create media.	Media Store
194156	When previewing entries of the input component FS_INDEX, the "Refresh" button in the main toolbar was erroneously deactivated.	SiteArchitect
198355	Erroneous behavior could arise after deleting an entry of the input component FS_CATALOG.	SiteArchitect
198508	Improvements of the LiveEdit functionality.	ContentCreator
198826	Selecting a link in the integrated preview now reliably opens up the desired presentation channel.	SiteArchitect
202049	In the input component FS_INDEX, improved the consideration of parameters from external data access plugins during auto-completion.	Template Development
202897	The display of search results containing quoted HTML code was optimized.	ContentCreator
203249	When copying objects from a package in the destination project errors could occur, when the subscription was not marked as "changeable".	Corporate Content

ID	Description	Categories
203760	Optimized display of inner, multi-language forms in FS_LIST, FS_INDEX, and FS_CATALOG. Further information can be found in chapter "Input components: FS_LIST, FS_INDEX, FS_CATALOG: Optimization of Multi-Language Display".	Editor, Languages, SiteArchitect
204026	Improved refreshing of detail views (content projection page).	ContentCreator
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".	Developer, Dynamic Forms, Editor, FirstSpirit API, Languages, Server-Manager
204594	Integrity checking of Jar files on FirstSpirit startup was improved.	Server Administrator
204764	Improved status display for released pages.	ContentCreator
204795	Erroneous behavior could arise when changing action settings while the associated server schedule task was running.	ServerManager
205289	Erroneous behavior could arise when streams were used in a service.	Module development
205556	The latest version of FirstSpirit provides a conversion tool (currently still the Early Access Program ("EAP")) that can be used for the simple conversion of all data stored in Berkeley DBs on existing FirstSpirit servers to Berkeley DB 7 format by entering just a few commands in the command line ("project repositories" and "internal repositories"). Further information can be found in chapter "Administration: Conversion of the Oracle Berkeley DB (EAP)".	FirstSpirit Administrator, Integrated software, Repository
205727	In some rare cases, URLs created with the `RenderingAgent` for media from the same project and from remote projects were not correct.	Generation, Template Development
205728	Erroneous behavior could occur when using the ContentCreator JavaScript API in combination with the RenderingAgent and the fsbutton(...) function.	ContentCreator, FirstSpirit API, Template Development

ID	Description	Categories
206061 205256 206060 206951	Rebrush for FirstSpirit graphical user interfaces: improvements and optimizations. Further information can be found in chapter "SiteArchitect / Content-Creator: Rebrush for FirstSpirit graphical user interfaces".	ContentCreator, FirstSpirit home page, SiteArchitect
206115	For files whose MIME type cannot be recognized (e. g. files with the file extension "rfa" or "oft"), the file extension "doc" was mistakenly used. In the FirstSpirit configuration file "fs-server.conf", corresponding MIME types can be defined for certain file types (e. g. "mime.types.ad-ditional=application/octet-stream:rfa; application/octet-stream:oft"), in case automatic detection is not possible. Temporarily, this information was not correctly taken into account when importing into the media management system.	Generation
206156	New API for password encryption Further information can be found in chapter "Module Development, Scripts, API: Interface "PasswordAgent": encrypt passwords through the API".	FirstSpirit API, FirstSpirit Administrator, Security
206289	When deleting sections no new version (entry in the version history) was created, erroneously.	ContentCreator
206299	There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. Further information can be found in chapter "SiteArchitect / Server-Manager: Configuration of the FirstSpirit start page".	FirstSpirit Administrator, FirstSpirit home page, Server Administrator, ServerManager
206326	Improved initialization of remote logging for web applications when using an external Jetty web server or the Jetty module.	Server Administrator
206363	When using Microsoft Internet Explorer 11, displaying EasyEdit buttons could have been erroneous.	ContentCreator

ID	Description	Categories
206508	New method `createDataset()` in the interface `Dataset-Provider` (package `de.espirit.firstspirit.access.store.contentstore`, FirstSpirit Access API) Further information can be found in chapter "Module Development, Scripts, API: Interface "DatasetProvider": Creating a new dataset".	Content Store, Developer, FirstSpirit API
206555	The module providing the web server "Eclipse Jetty" (currently in the Early Access Program ("EAP")) now supports encrypted connections via HTTPS. Configuration of the required keystore is done by using the configuration dialog of the module in ServerManager. Further information can be found in chapter "Administration / Modules: HTTPS Support for the Module "Eclipse Jetty" (EAP)".	FirstSpirit Administrator, Modules
206613	Deletion of the search index (`~firstSpirit\data\projects\project_123\index`) when executing the schedule "Rebuild search index" has been modified.	FirstSpirit Administrator, ServerManager, Tasks
206634	The editing of nested data in content projections has been improved. Moreover, when creating list entries in FS_CATALOG, FS_INDEX or FS_LIST (with type DATABASE or INLINE) via so called "NewListEntryExecutables" (`de.espirit.firstspirit.webedit.server.executables.NewListEntryExecutable`, see also *FirstSpirit Online Documentation*, "Template development / ContentCreator / Functional scope"), the corresponding preview page will be refreshed (instead of showing the preview page which is defined for the related table template).	ContentCreator
206802	Optimized evaluation of restrictions when searching in the selection dialog of an input component (e.g. FS_REFERENCE).	ContentCreator
206839	For new actions, the option "Execute even in case of error" is turned off by default. Further information can be found in chapter "Administration: Schedule Tasks: Option "Execute even in case of error" is turned off by default".	FirstSpirit Administrator, ServerManager, Tasks
206876	The display of the FirstSpirit startpage in Microsoft Internet Explorer 10 has been improved.	FirstSpirit home page

ID	Description	Categories
206903	Adjusted cluster configuration (files `fs-wrapper.slave.conf` and `fs-wrapper.isolated.slave.conf`) for Java 9.	Clustering, FirstSpirit Administrator
206949	The display in Microsoft Internet Explorer 10 has been improved.	ContentCreator
207009	An error could occur in the ContentCreator when using the module "FirstSpirit Security".	FirstSpirit Administrator, Modules
207267	Fixed a problem with the possible use of illegal filenames in the repository back-end under Windows.	FirstSpirit Administrator, Repository
207420	In the current FirstSpirit version, updated internally used software.\n\nFurther information can be found in chapter "System: Integrated Software".	Integrated software
207501	Elements of the `WebeditStatusNotePlugin` may have been displayed incorrectly when activating Multi Perspective Preview (MPP).	ContentCreator
207573	The option "All permissions" for modules is better accounted for.	Isolated mode (BETA)

14 Categories

14.1 Clustering

ID	Description
206903	Adjusted cluster configuration (files `fs-wrapper.slave.conf` and `fs-wrapper.isolated.slave.conf`) for Java 9.

14.2 Content Store

ID	Description
206508	New method `createDataset()` in the interface `DatasetProvider` (package `de.espirit.firstspirit.access.store.contentstore`, FirstSpirit Access API)

ID	Description
	Further information can be found in chapter "Module Development, Scripts, API: Interface "Dataset-Provider": Creating a new dataset".

14.3   ContentCreator

ID	Description
179075	In the input component FS_CATALOG, clicking the button "New" (and selecting the desired template, if necessary) now opens the form associated with the new entry so that the editor may directly input the desired content. Further information can be found in chapter "ContentCreator: FS_CATALOG: New Entry Form Is Opened Immediately".
179156	Optimized editing of contents of the input component CMS_INPUT_DOM within FS_LIST using InEdit functionality.
198508	Improvements of the LiveEdit functionality.
202897	The display of search results containing quoted HTML code was optimized.
204026	Improved refreshing of detail views (content projection page).
204764	Improved status display for released pages.
205728	Erroneous behavior could occur when using the ContentCreator JavaScript API in combination with the RenderingAgent and the fsbutton(...) function.
206061 205256 206060 206951	Rebrush for FirstSpirit graphical user interfaces: improvements and optimizations. Further information can be found in chapter "SiteArchitect / ContentCreator: Rebrush for FirstSpirit graphical user interfaces".
206289	When deleting sections no new version (entry in the version history) was created, erroneously.
206363	When using Microsoft Internet Explorer 11, displaying EasyEdit buttons could have been erroneous.
206634	The editing of nested data in content projections has been improved. Moreover, when creating list entries in FS_CATALOG, FS_INDEX or FS_LIST (with type DATABASE or INLINE) via so called "NewListEntryExecutables" (`de.espirit.firstspir-it.webedit.server.executables.NewListEntryExecutable`, see also *FirstSpirit Online*

ID	Description
	Documentation, "Template development / ContentCreator / Functional scope"), the corresponding preview page will be refreshed (instead of showing the preview page which is defined for the related table template).
206802	Optimized evaluation of restrictions when searching in the selection dialog of an input component (e.g. FS_REFERENCE).
206949	The display in Microsoft Internet Explorer 10 has been improved.
207501	Elements of the `WebeditStatusNotePlugin` may have been displayed incorrectly when activating Multi Perspective Preview (MPP).

14.4 Corporate Content

ID	Description
203249	When copying objects from a package in the destination project errors could occur, when the subscription was not marked as "changeable".

14.5 Developer

ID	Description
185206	In rare cases the output of normalized content from CMS_INPUT_DOM was incorrect.
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".
206508	New method `createDataset()` in the interface `DatasetProvider` (package `de.espir-it.firstspirit.access.store.contentstore`, FirstSpirit Access API) Further information can be found in chapter "Module Development, Scripts, API: Interface "Dataset-Provider": Creating a new dataset".

14.6   Dynamic Forms

ID	Description
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".

14.7   Editor

ID	Description
179075	In the input component FS_CATALOG, clicking the button "New" (and selecting the desired template, if necessary) now opens the form associated with the new entry so that the editor may directly input the desired content. Further information can be found in chapter "ContentCreator: FS_CATALOG: New Entry Form Is Opened Immediately".
203760	Optimized display of inner, multi-language forms in FS_LIST, FS_INDEX, and FS_CATALOG. Further information can be found in chapter "Input components: FS_LIST, FS_INDEX, FS_CATALOG: Optimization of Multi-Language Display".
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".

14.8   FirstSpirit API

ID	Description
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".

ID	Description
205728	Erroneous behavior could occur when using the ContentCreator JavaScript API in combination with the RenderingAgent and the fsbutton(...) function.
206156	New API for password encryption Further information can be found in chapter "Module Development, Scripts, API: Interface "PasswordAgent": encrypt passwords through the API".
206508	New method `createDataset()` in the interface `DatasetProvider` (package `de.espir-it.firstspirit.access.store.contentstore`, FirstSpirit Access API) Further information can be found in chapter "Module Development, Scripts, API: Interface "Dataset-Provider": Creating a new dataset".

14.9   FirstSpirit Administrator

ID	Description
205556	The latest version of FirstSpirit provides a conversion tool (currently still the Early Access Program ("EAP")) that can be used for the simple conversion of all data stored in Berkeley DBs on existing FirstSpirit servers to Berkeley DB 7 format by entering just a few commands in the command line ("project repositories" and "internal repositories"). Further information can be found in chapter "Administration: Conversion of the Oracle Berkeley DB (EAP)".
206156	New API for password encryption Further information can be found in chapter "Module Development, Scripts, API: Interface "PasswordAgent": encrypt passwords through the API".
206299	There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. Further information can be found in chapter "SiteArchitect / ServerManager: Configuration of the FirstSpirit start page".
206555	The module providing the web server "Eclipse Jetty" (currently in the Early Access Program ("EAP")) now supports encrypted connections via HTTPS. Configuration of the required keystore is done by using the configuration dialog of the module in ServerManager.

ID	Description
	Further information can be found in chapter "Administration / Modules: HTTPS Support for the Module "Eclipse Jetty" (EAP)".
206613	Deletion of the search index (`~firstSpirit\data\projects\project_123\index`) when executing the schedule "Rebuild search index" has been modified.
206839	For new actions, the option "Execute even in case of error" is turned off by default. Further information can be found in chapter "Administration: Schedule Tasks: Option "Execute even in case of error" is turned off by default".
206903	Adjusted cluster configuration (files `fs-wrapper.slave.conf` and `fs-wrapper.isolated.slave.conf`) for Java 9.
207009	An error could occur in the ContentCreator when using the module "FirstSpirit Security".
207267	Fixed a problem with the possible use of illegal filenames in the repository back-end under Windows.

14.10 FirstSpirit home page

ID	Description
206061 205256 206060 206951	Rebrush for FirstSpirit graphical user interfaces: improvements and optimizations. Further information can be found in chapter "SiteArchitect / ContentCreator: Rebrush for FirstSpirit graphical user interfaces".
206299	There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. Further information can be found in chapter "SiteArchitect / ServerManager: Configuration of the FirstSpirit start page".
206876	The display of the FirstSpirit startpage in Microsoft Internet Explorer 10 has been improved.

14.11 Generation

ID	Description
205727	In some rare cases, URLs created with the `RenderingAgent` for media from the same project and from remote projects were not correct.
206115	For files whose MIME type cannot be recognized (e. g. files with the file extension "rfa" or "oft"), the file extension "doc" was mistakenly used. In the FirstSpirit configuration file "fs-server.conf", corresponding MIME types can be defined for certain file types (e. g. "mime.types.additional=application/octet-stream:rfa; application/octet-stream:oft"), in case automatic detection is not possible. Temporarily, this information was not correctly taken into account when importing into the media management system.

14.12 Input Components

ID	Description
179075	In the input component FS_CATALOG, clicking the button "New" (and selecting the desired template, if necessary) now opens the form associated with the new entry so that the editor may directly input the desired content.

Further information can be found in chapter "ContentCreator: FS_CATALOG: New Entry Form Is Opened Immediately". |

14.13 Integrated software

ID	Description
205556	The latest version of FirstSpirit provides a conversion tool (currently still the Early Access Program ("EAP")) that can be used for the simple conversion of all data stored in Berkeley DBs on existing FirstSpirit servers to Berkeley DB 7 format by entering just a few commands in the command line ("project repositories" and "internal repositories").

Further information can be found in chapter "Administration: Conversion of the Oracle Berkeley DB (EAP)". |
| 207420 | In the current FirstSpirit version, updated internally used software. |

ID	Description
	Further information can be found in chapter "System: Integrated Software".

14.14 Isolated mode (BETA)

ID	Description
207573	The option "All permissions" for modules is better accounted for.

14.15 Languages

ID	Description
203760	Optimized display of inner, multi-language forms in FS_LIST, FS_INDEX, and FS_CATALOG. Further information can be found in chapter "Input components: FS_LIST, FS_INDEX, FS_CATALOG: Optimization of Multi-Language Display".
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".

14.16 Media Store

ID	Description
189489	Improved notifications of upload hooks when they are used to create media.

14.17 Module development

ID	Description
205289	Erroneous behavior could arise when streams were used in a service.

14.18 Modules

ID	Description
206555	The module providing the web server "Eclipse Jetty" (currently in the Early Access Program ("EAP")) now supports encrypted connections via HTTPS. Configuration of the required keystore is done by using the configuration dialog of the module in ServerManager. Further information can be found in chapter "Administration / Modules: HTTPS Support for the Module "Eclipse Jetty" (EAP)".
207009	An error could occur in the ContentCreator when using the module "FirstSpirit Security".

14.19 Repository

ID	Description
205556	The latest version of FirstSpirit provides a conversion tool (currently still the Early Access Program ("EAP")) that can be used for the simple conversion of all data stored in Berkeley DBs on existing FirstSpirit servers to Berkeley DB 7 format by entering just a few commands in the command line ("project repositories" and "internal repositories"). Further information can be found in chapter "Administration: Conversion of the Oracle Berkeley DB (EAP)".
207267	Fixed a problem with the possible use of illegal filenames in the repository back-end under Windows.

14.20 Security

ID	Description
206156	New API for password encryption Further information can be found in chapter "Module Development, Scripts, API: Interface "PasswordAgent": encrypt passwords through the API".

14.21 Server Administrator

ID	Description
204594	Integrity checking of Jar files on FirstSpirit startup was improved.
206299	There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. Further information can be found in chapter "SiteArchitect / ServerManager: Configuration of the FirstSpirit start page".
206326	Improved initialization of remote logging for web applications when using an external Jetty web server or the Jetty module.

14.22 ServerManager

ID	Description
204544	Different validation behavior for different languages. Further information can be found in chapter "SiteArchitect / ContentCreator: Different Validation Behavior for Different Languages".
204795	Erroneous behavior could arise when changing action settings while the associated server schedule task was running.
206299	There are now additional setting options for the FirstSpirit start page. Applications can be shown or hidden via groups / permissions on the start page. Further information can be found in chapter "SiteArchitect / ServerManager: Configuration of the FirstSpirit start page".
206613	Deletion of the search index (`~firstSpirit\data\projects\project_123\index`) when executing the schedule "Rebuild search index" has been modified.
206839	For new actions, the option "Execute even in case of error" is turned off by default. Further information can be found in chapter "Administration: Schedule Tasks: Option "Execute even in case of error" is turned off by default".

14.23 SiteArchitect

ID	Description
156047	In rare cases some selection dialogues were rendered incorrectly.
186868	When moving the mouse pointer within a report, an unnecessary amount of log output was generated.
194156	When previewing entries of the input component FS_INDEX, the "Refresh" button in the main toolbar was erroneously deactivated.
198355	Erroneous behavior could arise after deleting an entry of the input component FS_CATALOG.
198826	Selecting a link in the integrated preview now reliably opens up the desired presentation channel.
203760	Optimized display of inner, multi-language forms in FS_LIST, FS_INDEX, and FS_CATALOG. Further information can be found in chapter "Input components: FS_LIST, FS_INDEX, FS_CATALOG: Optimization of Multi-Language Display".
206061 205256 206060 206951	Rebrush for FirstSpirit graphical user interfaces: improvements and optimizations. Further information can be found in chapter "SiteArchitect / ContentCreator: Rebrush for FirstSpirit graphical user interfaces".

14.24 Tasks

ID	Description
206613	Deletion of the search index (`~firstSpirit\data\projects\project_123\index`) when executing the schedule "Rebuild search index" has been modified.
206839	For new actions, the option "Execute even in case of error" is turned off by default. Further information can be found in chapter "Administration: Schedule Tasks: Option "Execute even in case of error" is turned off by default".

14.25 Template Development

ID	Description
202049	In the input component FS_INDEX, improved the consideration of parameters from external data access plugins during auto-completion.
205727	In some rare cases, URLs created with the `RenderingAgent` for media from the same project and from remote projects were not correct.
205728	Erroneous behavior could occur when using the ContentCreator JavaScript API in combination with the RenderingAgent and the fsbutton(...) function.