



FirstSpirit™

Unlock Your Content

FirstSpirit™ Release Notes

FirstSpirit™ Version 5.2 Release 7

Version	5.2.717
Status	RELEASED
Date	2017-03-31
Department	FS-Core
Copyright	2017 e-Spirit AG
File name	Releasenotes_5.2.717_EN

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1 System requirements

FirstSpirit aims to support the very latest browsers, databases, and operating systems. The following products and versions have been released for use with the current version of FirstSpirit.

Operating systems:

Reference operating system for the clients is now

- Microsoft Windows 10

Furthermore, in addition to Ubuntu 12.04 LTS, the latest FirstSpirit version also passively supports

- Ubuntu 16.04 LTS

as an operating system for both the FirstSpirit Server and the FirstSpirit Clients SiteArchitect and Server-Manager.

For more information, see the *FirstSpirit Technical Data Sheet*.

2 Incompatibilities with specific Java versions

FirstSpirit is always released for a main version of a JDK. For FirstSpirit version 5.2R7, for example, this is Oracle Java 7 and 8. JDK updates are regularly issued as part of JDK bug fixes. These updates are checked for compatibility with FirstSpirit as part of quality assurance. In very rare cases, bugs in the JDK that cannot be bypassed by programming may cause incompatibilities. These bugs are not related to FirstSpirit.



Due to a bug that occurs when checking the signature of Jar files in older Java versions, Java **7u76** or higher must be used for FirstSpirit version 5.2R7 and above.

FirstSpirit SiteArchitect and ServerManager, for example, will not start with defective Java versions.

For more information on which Java versions can be used, see the *FirstSpirit Technical Data Sheet*.



3 Administration

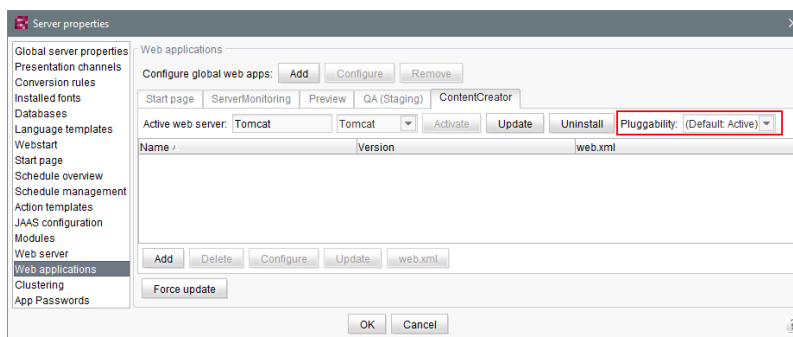
3.1 Apache Tomcat / Java Servlet Specification 3.0: Disabling Pluggability features

“Pluggability” features were introduced with version 3.0 of the Java Servlet Specification. These enable the `web.xml` modularization or the configuration of components via Java annotations. However, the latter function requires that all classes must be scanned for annotations when the web application is deployed (and implicitly each time the application server is started). As this process can take a long time, FirstSpirit can disable pluggability features globally or for individual web applications starting with the current FirstSpirit version.

Global configuration is carried out in the server configuration via the `WEBAPP_ENABLE_PLUGGABILITY_FEATURES_DEFAULT` parameter within the file `fs-server.conf`. Possible values are:

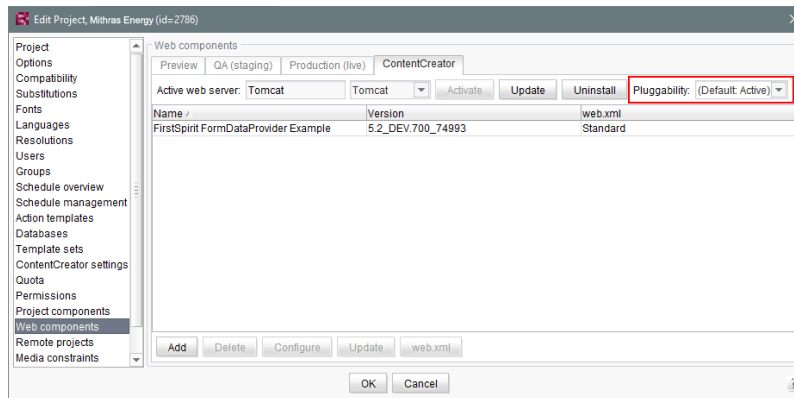
- `true`: Pluggability features are activated, Java classes are scanned for annotations during deployment. This is the default value.
- `false`: Pluggability features are deactivated, Java classes are not scanned.

Configuration for individual web applications is carried out via the “Pluggability” selection field, either for the global web applications (FirstSpirit ServerManager, “Server properties / Web applications”)



or for the web components of a project (FirstSpirit ServerManager, “Project properties / Web components”)





For more information please see *FirstSpirit Manual for Administrators*,

- Chapter “Area: Web Applications”
- Chapter “Configuring web applications”
- Chapter “Web components”

and the official page about the [Java Servlet 3.0 Specification](#).



If the pluggability features are deactivated manually within the `web.xml`, for example by specifying an `<absolute-ordering>` element, and if the pluggability features have been **deactivated** by means of the new functionality which is described here, this can lead to conflicts. In this case, please remove the manual configuration (from the `web.xml`) or change the pluggability setting of the respective web application/s to “active” using the above described possibilities.

3.2 Caching of preview files

When a preview is requested, the previewed page may be cached such that, at a later time, further preview requests for this page may be displayed more quickly.

Multi Perspective Preview (MPP) allows previews of pages as they would look at future dates. These previews were previously also cached by default. As of the current FirstSpirit version, caching of these future previews may now be deactivated globally as needed.



Configuration of this caching behavior is carried out in the configuration file `fs-server.conf` using the new parameter `preview.enableTemporalPreviewCache`:

- **true**: Preview pages will be cached. This potentially creates many files, enabling previews for previously viewed pages to load faster. (Default value)
- **false**: Preview pages will **not** be cached. This causes all relevant files to be created anew upon a preview request. This potentially causes more load but creates fewer files in the cache directory.

Use of **true** is recommended if editors are able to request previews for pages as they would look at future dates via the MPP timeline.

Until now, due to the previous caching implementation, it was possible that previews of pages representing future states were not always up-to-date or correct. This erroneous behavior was also corrected in this context.

For further information about MPP, see

- *FirstSpirit SiteArchitect / FirstSpirit AppCenter / Integrated preview / Multi Perspective Preview (→Documentation FirstSpirit SiteArchitect)*
- *Template development / JavaScript APIs / Multi Perspective Preview (→FirstSpirit Online Documentation)*

For further information about the new parameter `preview.enableTemporalPreviewCache`, see *FirstSpirit Manual for Administrators*, chapter “Area: Preview”.

3.3 Logging in "fs-server.log" (NoRouteToHostException)

Due to a change regarding the communication between multiple FirstSpirit servers in a network, an increased logging in the log file `fs-server.log` like

```
INFO 15.03.2016 10:46:23.550 (org.apache.http.impl.execchain.RetryExec): I/O
exception (java.net.NoRouteToHostException) caught when processing request to
{}->http://testserver:8000: No route to host
```



may happen, e.g. when a FirstSpirit server is not reachable (“http://testserver:8000” in the example above).

These entries can be suppressed with the newly implemented parameter `log4j.logger.org.apache.http.impl.execchain.RetryExec` in the file `fs-logging.conf`. The parameter has to be set to **WARN** in order to increase the log level:

```
log4j.logger.org.apache.http.impl.execchain.RetryExec=WARN
```

With FirstSpirit servers running the current FirstSpirit version the parameter will be set by default. For existing FirstSpirit servers upgraded to the current FirstSpirit version, the parameter has to be added manually to the file `fs-logging.conf` (in the subdirectory `conf` of the FirstSpirit server).

For more information regarding the file `fs-logging.conf` please see *FirstSpirit Manual for Administrators*, Chapter “Logging configuration (fs-logging.conf)”.

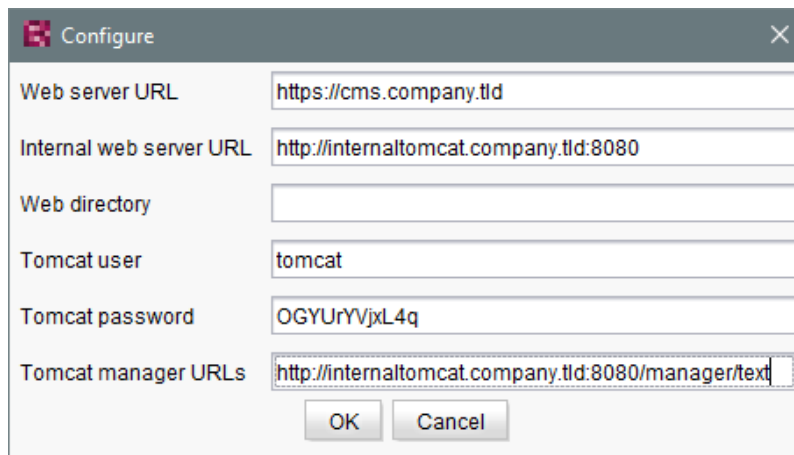
3.4 Updating web applications on external web servers

FirstSpirit may be operated with external web servers (e.g. Apache Tomcat), for example in order to use special server-side implementations such as PHP or ASP.

During each start-up phase, the FirstSpirit server checks if the version of each web application rolled out to an external web server is up-to-date. If this is not the case, the FirstSpirit server updates the web application. Generally, the check if a web application is up-to-date is possible with the previous web server configuration (via the “Web server URL”, see illustration below). In some cases, however, this check is not possible via this URL, such that the web applications would be updated during each start-up phase of the FirstSpirit server. In these cases, from the current FirstSpirit version onwards, the internal web server URL of the web server may be configured for each web server (ServerManager / Server properties / area “Web server”, field “Internal web server URL”).

E.g. for the type “Tomcat”:





Web server URL	https://cms.company.tld
Internal web server URL	http://internaltomcat.company.tld:8080
Web directory	
Tomcat user	tomcat
Tomcat password	OGYUrYVjxL4q
Tomcat manager URLs	http://internaltomcat.company.tld:8080/manager/text

Notes: The URL will only be used if the web directory is not set (field “Web directory”). The field “Internal web server URL” is not evaluated for web servers of the type “External” at the moment.

In this context, a method `getInternalURL` has been added to the interface `WebServer` (FirstSpirit Developer API, package `de.espirit.firstspirit.module`). This method provides the URL that is set for a web server in the field “Internal web server URL”.

For further information about use and configuration of web servers, see *FirstSpirit Manual for Administrators*:

- “Web server configuration (fs-webapp.xml)”
- “Integration into an external web server”
- “Web server”

4 ContentCreator

4.1 Deletion of bookmarks and master copies

Frequently used elements may be bookmarked in FirstSpirit to enable easy access. In ContentCreator, an element is bookmarked by using the following button in the toolbar:



Bookmarked elements are then shown in the report area.

Here, bookmarked elements may also be set as master copies so that new elements may quickly be created based on the data of such frequently used elements. A bookmark may be set as a master copy by using the following button:



For sections, this button is also available within the section's toolbar in the preview.

If an element (e.g. a section) that is bookmarked as a master copy is deleted, the current FirstSpirit version will now show a confirmation dialog with the following note:

“The element 'xyz' is a master copy, would you like to delete it anyway?”

If the user clicks OK, the section and its associated master copy bookmark in the report area will be deleted.

Furthermore, elements which are bookmarked can now be deleted without errors in all cases.

For further information, see *FirstSpirit Manual for Editors (ContentCreator)*, “Report area / Bookmarks”.

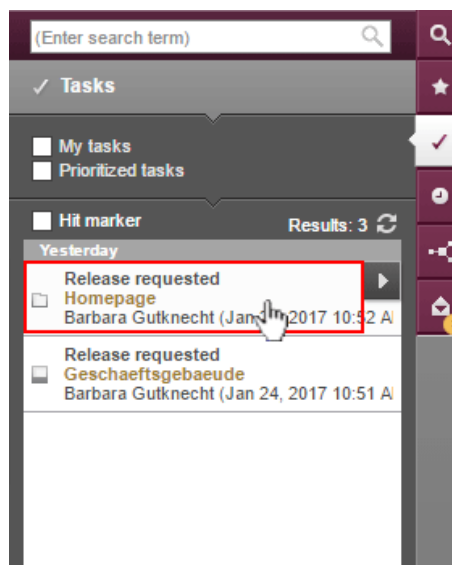
4.2 Identification of user interface elements

As of the current FirstSpirit version, user interface (UI) elements in ContentCreator (e.g. menus “Contents”, “Media”, and “Actions”; menu entries; input components; and report parameters) are identified in HTML. This supports better identification of these elements, e.g. for UI tests.

4.3 Workflows on media and media folder elements

In the report area, the report “Tasks” shows the tasks that are available to the current user. In addition to media elements, as of the current FirstSpirit version, this report also displays media folder elements that are in a workflow:





Clicking on a media folder entry will open the dialog “Manage media”.

In order to advance media and media folder elements in a workflow, use the following button:



Clicking the button will open a drop-down menu that shows the available next steps in the workflow. Clicking on an entry in that menu (e.g. “check release”) will open the dialog to set information for the next workflow step.

For further information, see *FirstSpirit Manual for Editors (ContentCreator)*, chapter “Report area / Tasks”.

5 External Synchronization

5.1 Deletion of obsolete files and additional logging

In the course of expanding and optimizing the feature set of the FirstSpirit functionality “External Synchronization”, as of the current FirstSpirit version, the default value of the method `setDeleteObsoleteFiles(boolean enable)` of the interface `ExportOperation` (FirstSpirit Developer API, package `de.espirit.firstspirit.store.access.nexport.operations`) has been changed from `false` to `true`.



Example

Initial situation in the project:

```
PageStore
|-- PageFolder 'A'
`-- PageFolder 'B'
```

1. Export: Export of 'A'

In the synchronization directory, the following structure will be created:

```
Synchronization Directory
|-- .FirstSpirit
|   |-- ...
|-- PageStore
|   |-- 'A'
|       |-- StoreElement.xml
|       |-- ...
```

2. Export: Export of 'B' ('A' is not included in the export set)

In the synchronization directory, the files previously created for 'A' will be deleted. The file structure will subsequently look as follows:

```
Synchronization Directory
|-- .FirstSpirit
|   |-- ...
|-- PageStore
|   |-- 'B'
|       |-- StoreElement.xml
|       |-- ...
```

If the files for 'A' should be retained, both elements ('A' and 'B') must be added to the **ExportOperation** and exported via this operation:

2a) Export of 'A' and 'B'

The file structure will subsequently look as follows:



```

Synchronization Directory
|-- .FirstSpirit
|   |-- ...
|-- PageStore
|   |-- 'A'
|       |-- StoreElement.xml
|       |-- ...
|   |-- 'B'
|       |-- StoreElement.xml
|       |-- ...

```

(Generally, during use of the functionality “External Synchronization”, only files will be removed that have been created by this functionality.)

Previously, such files were retained by default. This potentially led to the retention in the file system of files associated with elements that have been deleted in FirstSpirit. Existing scripts may require modification.

In this context, **export logging** has been expanded to help better identify which parameters were set for an export. Now, the following parameters and their set values will be output via INFO logging:

- `deleteObsoleteFiles` (method `setDeleteObsoleteFiles(true|false)`)
- `exportRelease` (method `setExportRelease(true|false)`)
- `exportParents` (method `setExportParentElements(true|false)`)
- `exportChildren` (method `setExportChildElements(true|false)`)

Example (all in one line):

```

ExportParameters = { deleteObsoleteFiles=false, exportRelease=true,
exportParents=true, exportChildren=true, [...] }

```

6 Input components

6.1 FS_INDEX: Emptiness check with ".isEmpty"

The input component `FS_INDEX` *Template development / Template syntax / Data types / IndexAccessor* (→*FirstSpirit Online Documentation*).



Within output channel definitions, accessing the value set of an FS_INDEX input component returns an object of type **IndexAccessor**.

As of the current FirstSpirit version, the data type **IndexAccessor** includes a new implementation of the method `.isEmpty()` (in Bean syntax: `.isEmpty`). This method may be used to check whether or not the FS_INDEX input component contains entries.



- If the input component contains at least one entry, the method returns **false**.
- If the input component does not contain any entries, the method returns **true**.

Example:

```
$CMS_VALUE(fs_index.isEmpty)$
```

Previously, this method always returned **false**.

For further information, see *Template development / Template syntax / Data types / IndexAccessor* (→*FirstSpirit Online Documentation*).



7 Module Development, Scripts, API

7.1 ContentCreator: Detection of the user interface language ("Locale") selected by the current user

FirstSpirit supports a multi-language concept that pervades all aspects of FirstSpirit. This concept differentiates between:

- **User interface language (also called "Locale"):** This language is selected via the combobox on the FirstSpirit Start Page. It specifies the language commonly used in the user interface, such as that of menu labels, dialog texts and content that is not maintained in a language-dependent fashion by editors and template developers in a project. Currently, FirstSpirit supports the user interface languages German, English, French, Spanish, Russian, Italian, and Dutch.
- **Project language:** Project developers specify in which languages editorial content may be entered (via "input components"). As a rule, this content will then be output on a web page in the various language variants of a page. A language selection control may be used to switch to another language of the web page. The project language may differ from the selected user interface language: FirstSpirit does not provide Portuguese as a user interface language, but Portuguese-language content can of course be maintained within FirstSpirit.
- **Editorial language:** An editorial language (also called "display language") may be used by project developers to influence the display of input elements and other objects in ContentCreator. Such editorial languages are used for labels of input components, tool tips, and elements of a selection list ("combobox"), among others.

As of the current FirstSpirit version, it is possible to detect the user interface language of ContentCreator, selected by the current user, via the method `getLocale()` of the FirstSpirit Developer API interfaces

- `WebeditUiAgent` (package `de.espirit.firstspirit.webedit`):
`de.espirit.firstspirit.webedit.WebeditUiAgent.getLocale()`
- `Common` (package `de.espirit.firstspirit.webedit.client.api`):
`WE_API.Common.getLocale()`

For further information, see *Template development / JavaScript APIs / ContentCreator / Common Functionality* (→*FirstSpirit Online Documentation*).



7.2 ContentCreator: Modify view of the dialog "Manage media" (de.espirit.firstspirit.webedit.plugin.media)

By using the package `de.espirit.firstspirit.webedit.plugin.media` (FirstSpirit Developer API) it is possible to implement project-specific extensions for the dialog "Manage media" in the ContentCreator.

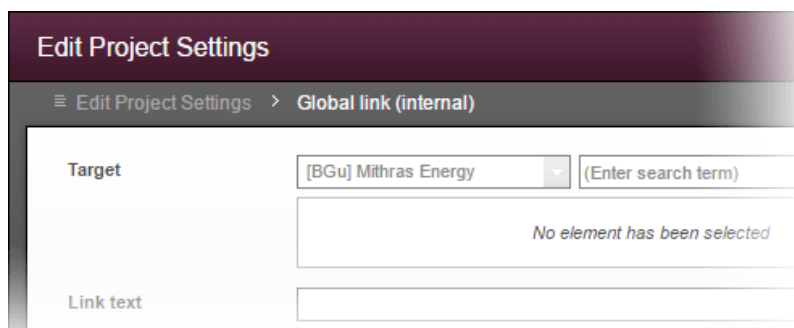
The new methods in the interface `MediaManagementContext`

- `refresh()` it is possible to refresh the view of the dialog (e.g. when a new medium has been added)
- `show(MediaFolder folder)` it is possible to display a specific folder.

7.3 ContentCreator: Use of "setTitle" for a dialog's main title

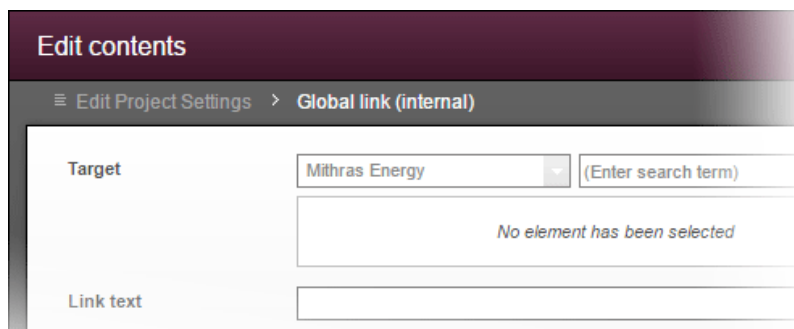
The interface `ShowFormDialogOperation` (package `de.espirit.firstspirit.ui.operations`, FirstSpirit Developer API) allows creation and configuration of project-specific dialogs for both SiteArchitect and ContentCreator.

In ContentCreator, the title text that may be set for such a dialog via the method `setTitle(String title)` is now also used for the dialog's main title (berry-colored background), e.g.



Previously, the title text was only used in the dialog's secondary labeling (grey background), and the main title text could not be influenced:





The screenshot shows a web interface titled "Edit contents" for a "Global link (internal)". It features two main input sections: "Target" and "Link text". The "Target" section includes a dropdown menu with "Mithras Energy" selected, a search input field with the placeholder "(Enter search term)", and a message below stating "No element has been selected". The "Link text" section is a simple text input field.

7.4 Identification of server mode (isolated vs. legacy)

The interface `ServerInformationAgent` (FirstSpirit Access API, package `de.espirit.firstspirit.agency`) provides version information about the FirstSpirit server. The `VersionInfo` object returned by the agent now provides information about the currently active server mode (“Legacy” or “Isolated”). This information may be obtained via the new method `getMode()`:

- **LEGACY:** The FirstSpirit server is running in legacy mode.
- **ISOLATED:** The FirstSpirit server is running in isolated mode.

For further information, see *Isolated mode [Beta]* (→*Manual for Module Developers*).

7.5 Repairing broken references (rebuildReferences)

Dependencies, also called “references”, exist between many FirstSpirit elements. These can be displayed via what is known as a “relation graph” (“Extras / Display dependencies” in the context menu or keyboard shortcut `Ctrl+R` on the required node in SiteArchitect). A distinction is made between “incoming” and “outgoing” references.

The `rebuildReferences(IDProvider)` method (FirstSpirit Developer API, interface `ProjectReferencesAgent`, `de.espirit.firstspirit.agency` package) can be used to repair “broken” references (which are restored or removed).

More inconsistencies (broken references) can now be repaired with the current FirstSpirit version than was possible in earlier FirstSpirit versions. If the references in question are “broken incoming” references, `rebuildReferences` may have to be called up for both the affected elements.



7.6 Triggering a preview update via API (SiteArchitect and Content-Creator)

In order to make changes to data visible in the preview (SiteArchitect and ContentCreator), an update of the preview must be triggered. Generally, this happens automatically upon saving forms, sections, pages, datasets, etc.

As of the current FirstSpirit version, it is also possible to trigger a preview update via API for actions and changes that do not affect content-relevant data (e.g. changes made from within a workflow). In the past, preview updates could already be triggered in ContentCreator via `WE_API.Preview.reload()`.

In both SiteArchitect and ContentCreator, an update of the preview may now be triggered via the newly-implemented interface `PreviewOperation` (package `de.espirit.firstspirit.ui.operations`, FirstSpirit Developer API).

- The method `perform()` triggers a reload of the currently displayed preview.
- Using the method `setElement(IDProvider element)`, an ID of an element may be supplied for which the preview should be updated (page reference, page, section, dataset, medium, etc.). If the supplied element cannot be displayed in the preview, an error message indicating this will be output (“The element 'xyz' cannot be displayed in the preview.”).

Sample script to trigger a preview update for a page reference (ID 866948):

```
import de.espirit.firstspirit.agency.OperationAgent;
import de.espirit.firstspirit.ui.operations.PreviewOperation;
import de.espirit.firstspirit.agency.StoreAgent;
import de.espirit.firstspirit.access.store.Store;
// -- fetch element from site store
storeAgt = context.requireSpecialist(StoreAgent.TYPE);
sitestore = storeAgt.getStore(Store.Type.SITESTORE);
element = sitestore.getStoreElement(866948);
print(element);
// -- load and perform preview operation with element
operationAgt = context.requireSpecialist(OperationAgent.TYPE);
operation = operationAgt.getOperation(PreviewOperation.TYPE);
operation.setElement(element);
operation.perform();
```

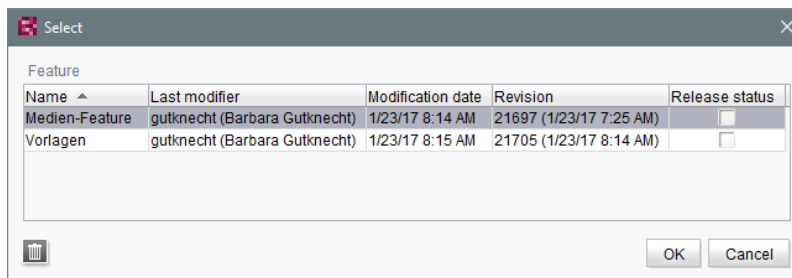


8 Modules: Corporate Content

8.1 ContentTransport: Archival of deleted feature collections

The functionality “FirstSpirit ContentTransport” enables transport of project contents from a source project into a target project. The desired contents are bundled or collected into so-called “features”.

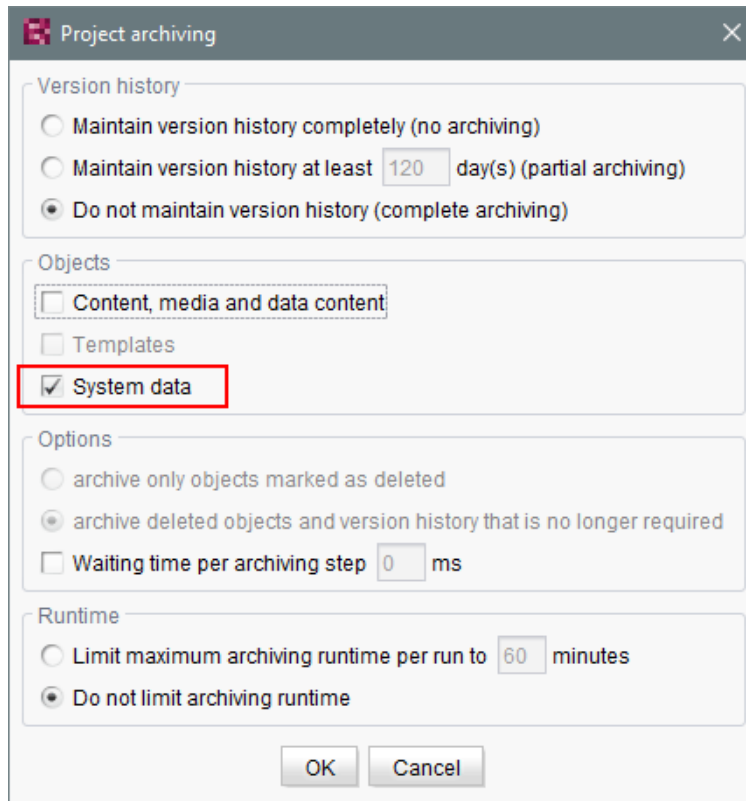
Features in the dialog “Create or load a feature” / “Load feature from server” / “Choose”



may be deleted from the server using the “Delete” icon:



As of the current FirstSpirit version, these deleted features may be archived and thus removed from the FirstSpirit repository via the schedule action “Archive old project states”. To do so, activate the option “System data” in the schedule action:



The most recent revision will not be deleted.

For further information, see

- Module documentation for “FirstSpirit CorporateContent”, chapter “Creating or loading a feature”
- *FirstSpirit Manual for Administrators*, chapter “Archive old project states”

8.2 ContentTransport: Deleting feature collections

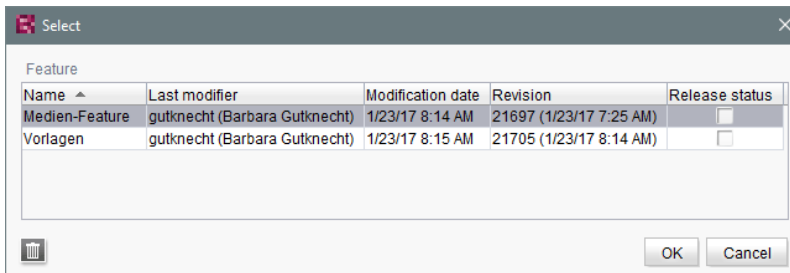
The functionality “FirstSpirit ContentTransport” enables transport of project contents from a source project into a target project. The desired content is collected into so-called “Features”. Via the button “Save feature”



such a feature may be stored on the server.



In order to simplify the selection of a feature, the “Select” dialog (reached via “Create or load a feature / Load feature from server”) has been improved:



The dialog now allows sorting by column and provides detailed information about a feature in a tool-tip.

Furthermore, in order to improve readability of the feature list, features that were once stored on the server but are no longer needed may now be deleted from the server. Via the button “Delete”



the selected feature or features may be deleted following a confirmation request. Selection of multiple features is possible.

Deletion of feature collections is final and cannot be undone.

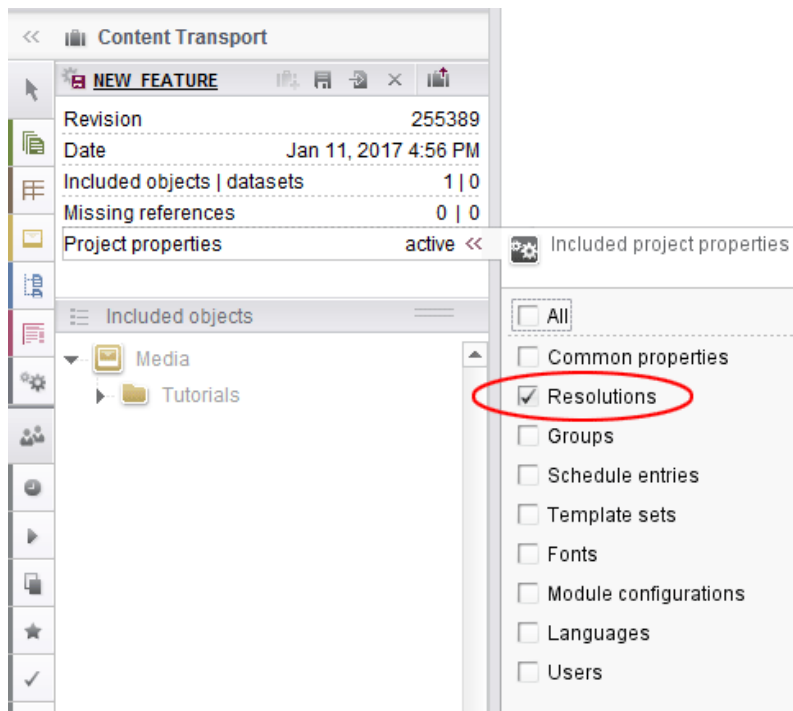
For further information, see Module documentation for “FirstSpirit CorporateContent”, chapter “Content Transport / Creating or loading a feature”.

8.3 Multisite Management: Export of image resolutions

The multisite management functionalities “FirstSpirit ContentTransport” and “External Synchronization” enable transport of project contents as well as of project properties, e.g. languages, resolutions, etc.

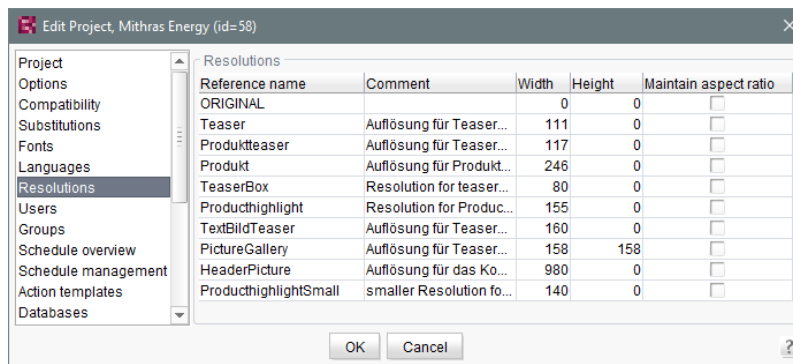
If resolutions are transported from a source project into a target project using ContentTransport or External Synchronization, e.g.





the order of resolutions in the target project now matches their order in the source project.

Display in ServerManager, area “Resolutions”:



Display in the Media store of SiteArchitect:



Resolution	File type	Dimensions	File size
Original Resolution	jpg	845 x 565 Pixel	155 KByte
Teaser-Pictures Homepage (111*X)			0 KByte
Teaser-Picture product pages (117*X)			0 KByte
Products (246*X)			0 KByte
Teaser-Pictures Teaser-Box(80*X)			0 KByte
Product Highlight (155*X)			0 KByte
Text/Picture Section (160*X)			0 KByte
Picture Gallery (158*158)			0 KByte
Header Picture (980*X)			0 KByte
Product Highlight small (140*X)			0 KByte

Previously, resolutions were ordered by reference name after export/import.

In order to apply the new behavior, a new export must be made.

For further information, see

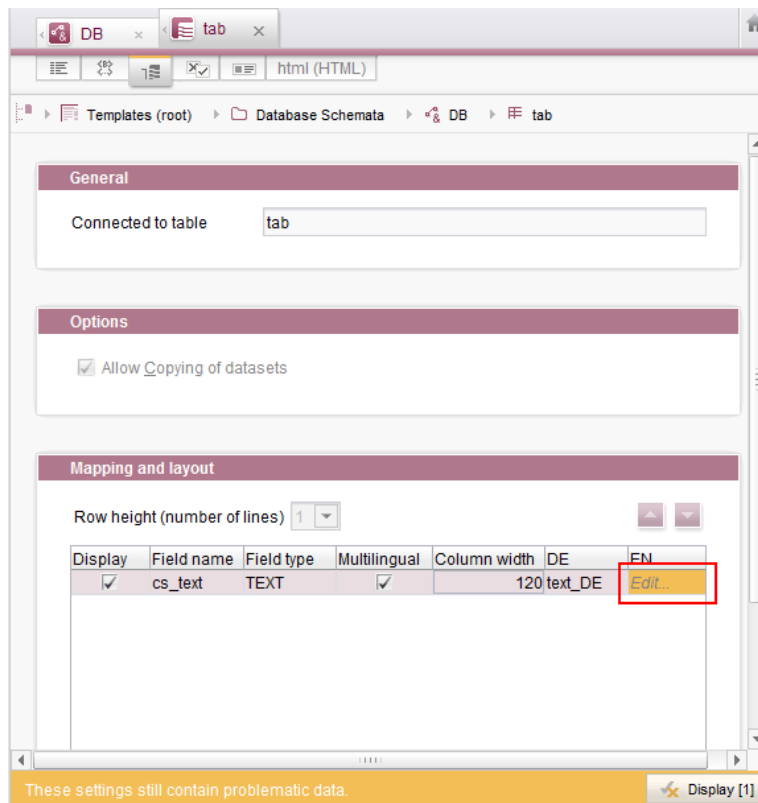
- Module documentation for “FirstSpirit CorporateContent”
- *FirstSpirit Manual for Administrators*, chapter “Resolutions”

8.4 Multisite Management: Transport of table templates into projects with different language counts

The multisite management functionalities “FirstSpirit ContentTransport” and “External Synchronization” enable transport of project contents and project properties from a source project into a target project.

If a table template is transported from a source project into a target project which is configured with a different set of languages, the columns of languages that are not present in the source will be removed in the target project. Until now, this also caused removal of the mapping for these additional, non-present languages in the target project, e.g.

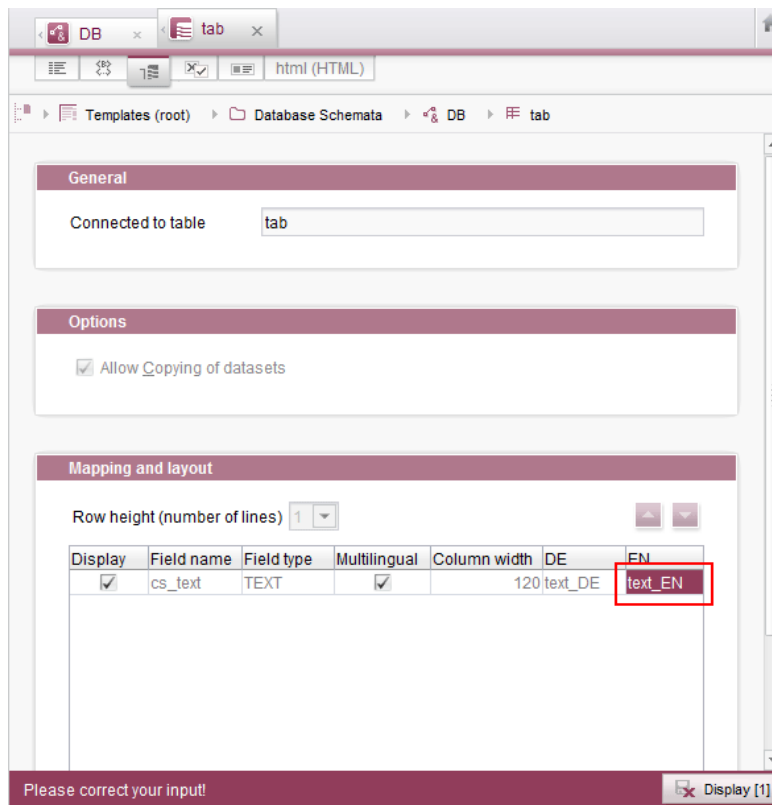




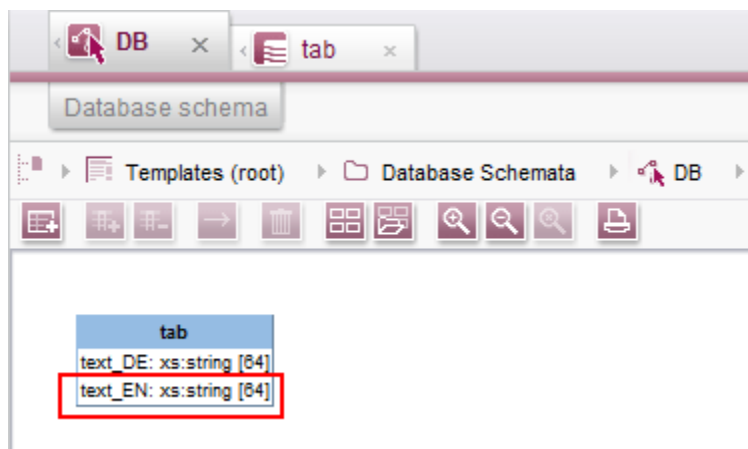
In this case, the mapping had to be adjusted manually if the missing language column was added to the database schema in the target project.

As of the current FirstSpirit version, the mapping will be preserved. In the “Mapping” tab, the missing language column will be visualized with a red highlight after import into the target project:





In order to restore the mapping, it is now sufficient to create the missing language column anew in the database schema, e.g.:



The mapping will then be adjusted automatically.



9 SiteArchitect / ServerManager

9.1 Client Logging

Logging enables FirstSpirit developers and administrators to identify and correct issues. It happens at various places of FirstSpirit, e.g. log messages for actions on the server will be stored in the file `fs-server.log`, log messages for schedules in the file `fs-schedule.*.log` et cetera.

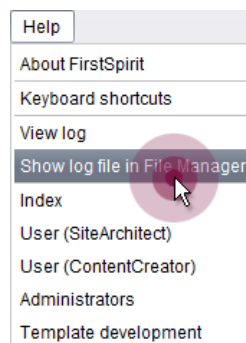
As of the current FirstSpirit version, log messages of SiteArchitect and ServerManager will be stored separately for each started client in a file in the user home directory of the respective user's client workstation in addition to the file `fs-clients.log` (in the directory `log` in the base directory of the FirstSpirit server, only used for exceptions).

- SiteArchitect: `.firstspirit*/logs/SiteArchitect*.log`
- ServerManager: `.firstspirit*/logs/ServerManager*.log`

The filename contains the client name (e.g. SiteArchitect or ServerManager) and a timestamp of the point of time when the client has been started, e.g.

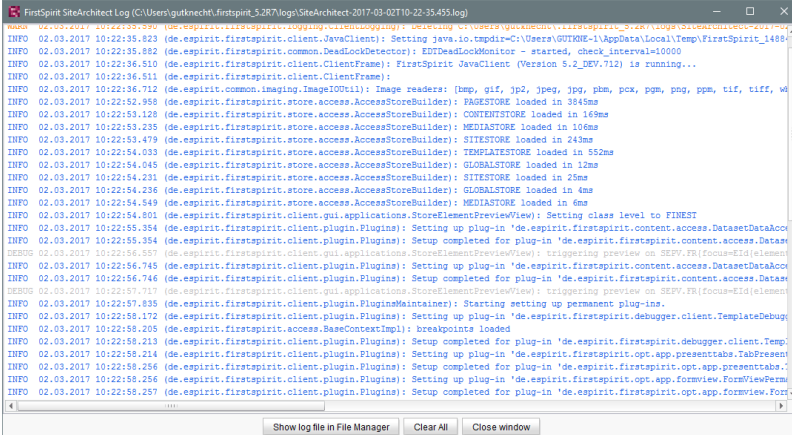
```
siteArchitect-2017-02-28T13-55-40.067.log
```

Log messages generated by SiteArchitect and ServerManager are therefore now better suited to be sent or uploaded. In order to indicate which log file belongs to which client, the menu “Help” can be used to identify it. The menu entry “Show log file in File Manager”



opens the local storage directory. The file with the current logging will be selected. The timestamp as part of the file name helps to identify the log messages of previously closed clients in the storage directory. Log files will be stored up to a total number of 100 files or until all files have reached a combined size of 100 MB. If one of those limits is reached, the oldest log files will be deleted one by one.

With the menu entry “View log” in the menu “Help” it is possible to display the current logging in a separate window:



Log messages are displayed in different colors for each log level in order to improve clarity. By using the button “Clear All” it is possible to clear the log window. This does not affect the contents of the log file.

10 SiteArchitect

10.1 Code completion optimizations

Code completion is available on the “Form” and “Rules” tabs, as well as on the template set tabs.

The **Ctrl** + **Space** key combination opens a window of the available tags, parameters, and, if applicable, values.

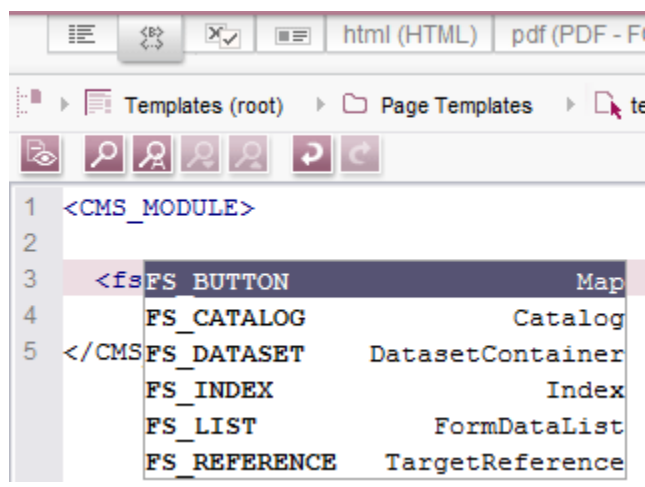
- On the “Form” tab, code completion can be used to insert input components together with their minimum configuration and all available parameters and associated values.
- On the “Rules” tab, all available tags and parameters can be shown and inserted, according to their hierarchy.



- On the template set tabs, all available instructions in their corresponding syntax, identifiers of input components defined on the “Form” tab, and methods can be inserted.

Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version:

Whereas in the past, the suggestions shown for tag and parameter names were **case-sensitive**, now case is irrelevant for code completion. For example, if the text `<fs` has already been entered on the “Form” tab, pressing `Ctrl + Space` will show the following suggestions:



`<FS` must have been entered previously.

Instead of tags which code completion would close with `/>`, now open tags are generated, which make it easy to generate and work with internal tags.

Example **before 5.2R7**:

```

<FS_INDEX ...>
...
  <SOURCE name="" />
</FS_INDEX>

```

Example **with 5.2R7 or higher**:



```
<FS_INDEX ...>
...
  <SOURCE name="">
  </SOURCE>
</FS_INDEX>
```

Once saved, `<SOURCE name="..."> ... </SOURCE>` is truncated to `<SOURCE name="..." />` again.

Furthermore, code completion can now be used to finish the **closing tags** of an element too, if completion is required for such a tag (i.e., one that starts with `</`). The next superordinate opening tag is always closed during this process.

For more information, see *Advanced topics / Input assistance* (→*FirstSpirit Online Documentation*).

10.2 Integrated preview: Updated third-party software

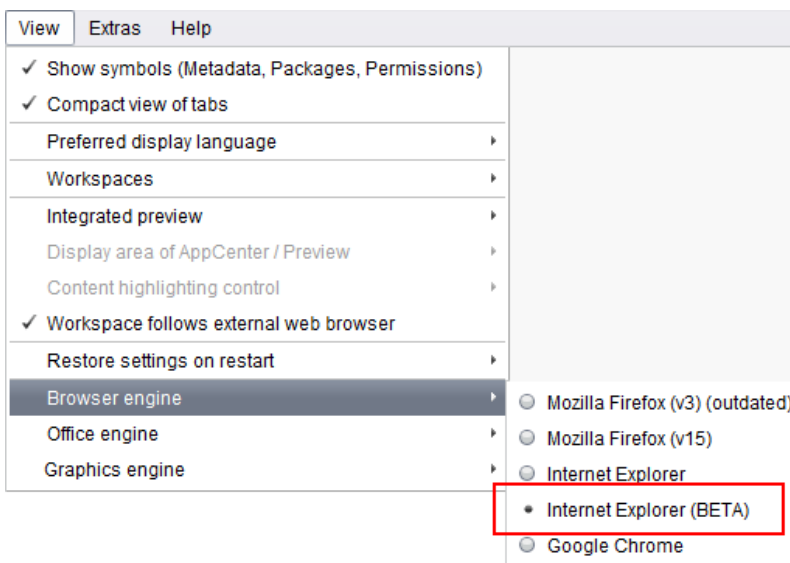
The integrated preview in FirstSpirit SiteArchitect (menu entries “View / Integrated preview” and “View / Browser engine”) is based upon third-party software:

The browser engine “JxBrowser”, used to integrate “Google Chrome”, has been updated from version 4.9.5 to version 6.12.

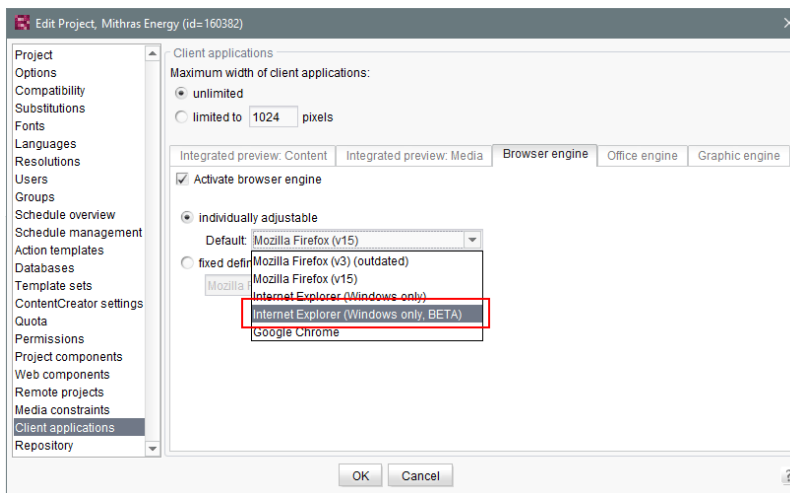
In order to integrate “Internet Explorer”, another browser engine has been implemented (“JExplorer”, version 3.4) which is intended to ensure better stability when using Internet Explorer for integrated preview. However, use of this browser engine is not yet officially released and is currently in a BETA phase.

In SiteArchitect, this browser engine may be selected via the menu entry “View / Browser engine / Internet Explorer (BETA)”:





In project properties (“FirstSpirit ServerManager / Project properties / Client applications”, tab “Browser engine”), project developers may define if this browser engine should be preselected or fixed for users of this project, e.g.



For further information, see

- *FirstSpirit SiteArchitect / The menu bar / View / Browser engine (→Documentation FirstSpirit SiteArchitect)*
- *FirstSpirit Manual for Administrators, chapter “Browser engine”*



11 System

11.1 Signing with SHA-256

Previously, FirstSpirit JAR files were signed using SHA-1. Oracle is planning to cease support of SHA-1 in the JDK version lines 6, 7, and 8 in April 2017 (see <https://www.java.com/en/jre-jdk-cryptoroadmap.html>).

Due to this reason, as of the current FirstSpirit version, signing is now carried out using SHA-256.

Starting in April 2017, if an existing FirstSpirit installation should be used with a newer Java version which no longer supports SHA-1, an update to the current FirstSpirit version is required as well in order to continue using FirstSpirit with Oracle JDKs.

For further information, see [FirstSpirit Community](#).

If you have further questions about this topic, please contact e-Spirit's Technical Support team via <https://help.e-spirit.com>.

12 Overview

ID	Description	Categories
120150	<p>Optimized the dialog “Select” for features which were stored on the server via the button “Save feature”. It is now possible to delete a stored feature.</p> <p>Further information can be found in chapter “Modules: Corporate Content: ContentTransport: Deleting feature collections”.</p>	Content Transport
133908	<p>In SiteArchitect and ContentCreator, an update of the preview may be triggered via the newly-implemented interface <code>PreviewOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code>, FirstSpirit Developer API).</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Triggering a preview update via API (SiteArchitect and ContentCreator)”.</p>	ContentCreator, FirstSpirit API, SiteArchitect



ID	Description	Categories
150087	<p>For improved consistency, the title text that may be set for a dialog via the method <code>setTitle(String title)</code> of the interface <code>ShowFormDialogOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code>, FirstSpirit Developer API) is now also used for the dialog's main title.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Use of "setTitle" for a dialog's main title”.</p>	ContentCreator, FirstSpirit API
158656	<p>So called “Pluggability” features (Java Servlet Specification 3.0) can be disabled starting with the current FirstSpirit version.</p> <p>Further information can be found in chapter “Administration: Apache Tomcat / Java Servlet Specification 3.0: Disabling Pluggability features”.</p>	FirstSpirit Administrator, ServerManager
169853	<p>As of the current FirstSpirit version, the software used internally for integrated preview has been updated.</p> <p>Further information can be found in chapter “SiteArchitect: Integrated preview: Updated third-party software”.</p>	Integrated software, Preview, SiteArchitect
171040	Improved visualization of changes in version comparison.	SiteArchitect, Version history
171819	When using Oracle databases, archiving datasets could cause erroneous behavior.	Archiving
174427	<p>As of the current FirstSpirit version, signing of FirstSpirit JAR files is carried out using SHA-256.</p> <p>Further information can be found in chapter “System: Signing with SHA-256”.</p>	FirstSpirit Administrator
175662	Optimized interaction pattern when executing workflows with automatic actions on multiple objects.	SiteArchitect, Workflow



ID	Description	Categories
176253	<p>Log messages generated by SiteArchitect and ServerManager will now be stored in separate files on the client workstation of the respective user. Additionally, the current logging may be observed in a separate log window.</p> <p>Further information can be found in chapter “SiteArchitect / Server-Manager: Client Logging”.</p>	Developer, SiteArchitect, Webstart
179202	<p>Optimized default contents of a rule definition after creation of a new template.</p> <p>The editor now initially contains opening and closing <RULES> tags.</p>	Dynamic Forms, Template Development
179938	<p>The interface <code>MediaManagementContext</code> in the package <code>de.espirit.firstspirit.webedit.plugin.media</code> (FirstSpirit Developer API) has been extended with new methods.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Modify view of the dialog "Manage media" (de.espirit.firstspirit.webedit.plugin.media)”.</p>	ContentCreator, Developer, FirstSpirit API, Media Store
182179	<p>Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version.</p> <p>Further information can be found in chapter “SiteArchitect: Code completion optimizations”.</p>	Developer, Dynamic Forms, SiteArchitect, Template Development, Template Store
182789	<p>Project exports were erroneously not considered during clean-up of the backup directory.</p>	Backup
183465	<p>Creating a query may have failed after creating a database schema from an external Oracle database with a BLOB column.</p>	Database
184104	<p>Workflows on media and media folder elements can now be advanced in the report area under “Tasks”.</p> <p>Further information can be found in chapter “ContentCreator: Workflows on media and media folder elements”.</p>	ContentCreator, Media Store, Workflow
184407	<p>Improved evaluation of parameters passed in connection settings when starting the FirstSpirit Launcher.</p>	Launcher



ID	Description	Categories
185584	When using the module “OfficeConnect”, copy-and-paste operations from a browser or an Excel sheet would also transfer meta information into the input component CMS_INPUT_DOM.	Editor, Input Components, SiteArchitect
185626	By using the newly implemented parameter <code>log4j.logger.org.apache.http.impl.execchain.RetryExec</code> in the file <code>fs-logging.conf</code> it is possible to suppress unwanted “NoRouteToHostException”. Further information can be found in chapter “Administration: Logging in “fs-server.log” (NoRouteToHostException)”.	FirstSpirit Administrator
186917	In rare cases, erroneous behavior could occur when opening the selection dialog in the input component FS_REFERENCE.	Input Components, SiteArchitect
187137	The new parameter <code>preview.enableTemporalPreviewCache</code> (in the configuration file <code>fs-server.conf</code>) may be used to affect caching for preview pages. Further information can be found in chapter “Administration: Caching of preview files”.	FirstSpirit Administrator, Preview
187469	Optimized list formatting in the input component CMS_INPUT_DOM.	ContentCreator
188373	Optimized form updates when using rules to display or hide input components.	Dynamic Forms, SiteArchitect
188440	If a duplicated conversion of entities using <code>.convert</code> or <code>.convert2</code> has been prevented, a warn message will now be added to the generation log.	Developer, Template Development
188445	As of the current FirstSpirit version, it is possible to detect the user interface language of ContentCreator that was selected by the current user. Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Detection of the user interface language (“Locale”) selected by the current user”.	ContentCreator, Developer, FirstSpirit API
189318	Use of certain data types in an Oracle database could lead to erroneous behavior related to sorting in data sources.	Content Store, Database, Editor, SiteArchitect



ID	Description	Categories
189535	In the input component FS_DATASET with <code>mode="dialog"</code> , saving after switching between languages could lead to erroneous behavior.	Input Components, SiteArchitect
189635	Modified log output for the report "Project History" when starting ContentCreator.	ContentCreator
190052	<code>ProjectReferencesAgent.rebuildReferences(IDProvider)</code> now repairs more broken references. Further information can be found in chapter "Module Development, Scripts, API: Repairing broken references (rebuildReferences)".	FirstSpirit API
191363	In the input component CMS_INPUT_DOM with active spell check, erroneous behavior could occur.	ContentCreator
191874	In the input component CMS_INPUT_DATE, input via keyboard could cause erroneous behavior.	ContentCreator
192456	When copying sections, the original order was erroneously not observed.	Page Store, SiteArchitect
192462	Erroneous behavior could occur when using the functionality "LiveEdit".	ContentCreator
192701	The display has been improved when comparing versions of metadata.	SiteArchitect
192721	Uninstalling a defective module may have failed.	ServerManager
192763	Optimized logging for project components during server start-up.	Isolated mode (BETA)
192943	Corrected information about libraries in system web app components.	Isolated mode (BETA)
193207	For newly-created sections, toggling the option "Include this section in the output" was erroneously not observed during rule evaluation if the page was already in edit mode.	Dynamic Forms
193594	Optimized rule evaluation for option-based input components (e.g. CMS_INPUT_COMBOBOX) whose values are sourced from a database.	ContentCreator, Dynamic Forms
193684	When using a nested FS_CATALOG input component, erroneous display could occur in the edit/"snippet" view.	Input Components, SiteArchitect



ID	Description	Categories
193689	After updating a module via server properties in ServerManager, the version of a web application associated with that module will now be displayed correctly in project properties.	Isolated mode (BETA)
193885	When using multiple monitors, the position of SiteArchitect was erroneously not considered when displaying confirmation dialogs.	SiteArchitect
193911	Improved observation of restrictions in the input component FS_REFERENCE when multiple remote connections to the own project are used.	Input Components, SiteArchitect
193930	In very rare cases, using code completion in the form could cause erroneous behavior.	Template Development
193976	In the selection dialog, optimized loading behavior of the preview image.	SiteArchitect
194184	Optimized detection of incompatible module resources.	Isolated mode (BETA)
194190	Deregistering a cluster slave server from the cluster master server via ServerManager could temporarily lead to the deregistered slave server no longer restarting automatically.	Server Administrator, ServerManager
194349	Improved display logic for workflows in the status bar.	SiteArchitect, Workflow
194362	During archiving, inbound references are now also considered.	Archiving
194367	Optimized loading of action groups of Menuitem-sPlugin (interface <code>JavaClientEditorialToolbarItemsPlugin</code> , package <code>de.espirit.firstspirit.client.plugin</code>).	SiteArchitect
194369	Modified logging during FirstSpirit server start-up for the case that web applications are running on an external Tomcat.	FirstSpirit Administrator
194421	When creating a database schema from an external database, problems in accessing foreign key columns could occur.	Database
194524	Erroneous behavior could occur when using the methods <code>hasGui()</code> and <code>getGui(Frame)</code> of the interface <code>Configuration</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.module</code>).	Developer, Modules
194589	Optimized performance of loading data sources with datasets which contain an input component of type FS_INDEX.	Performance, SiteArchitect



ID	Description	Categories
194616	Improved rules evaluation in the input component CMS_INPUT_LINK.	Dynamic Forms, SiteArchitect
194689	A confirmation dialog now warns a user if an element is about to be deleted which is still bookmarked as a master copy. Further information can be found in chapter “ContentCreator: Deletion of bookmarks and master copies”.	Bookmarks, Content-Creator, Editor
194719	Optimized performance of loading the data source overview with datasets whose forms contain an FS_INDEX input component with many referenced datasets.	Content Store, Input Components, SiteArchitect
194780	If an FS_INDEX input component does not contain any entries, the new method <code>.isEmpty()</code> returns <code>true</code> . Further information can be found in chapter “Input components: FS_INDEX: Emptiness check with <code>.isEmpty()</code> ”.	Input Components, Template Development
194838	Improved the display of web components in project properties.	ServerManager
194853	In the input component CMS_INPUT_DOM, corrected copying of links between different languages.	ContentCreator
194862	Optimized notification about rule infractions related to subforms of the input component FS_LIST.	Dynamic Forms, SiteArchitect
195010	The <code>VersionInfo</code> object returned by the interface <code>ServerInformationAgent</code> (FirstSpirit Access API, package <code>de.espirit.firstspirit.agency</code>) now provides information about the currently active server mode (“Legacy” or “Isolated”). Further information can be found in chapter “Module Development, Scripts, API: Identification of server mode (isolated vs. legacy)”.	Developer, FirstSpirit API, Isolated mode (BETA), Module development
195014	Optimized the order of (image) resolutions which are transported from a source project into a target project using FirstSpirit ContentTransport or External Synchronization. Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Export of image resolutions”.	Content Transport, External synchronization



ID	Description	Categories
195024	In external synchronization, unnecessary updates are now avoided during import.	External synchronization
195054	Enhanced logging in the module “FirstSpirit DynamicPersonalization”.	Modules
195163	Identical resources have been consolidated when using more than one project-specific web component.	Modules, Server Administrator
195195	Improved consideration of authorized users during mail dispatch in workflows.	Workflow
195216	From the current FirstSpirit version onwards, an internal web server URL may be configured for web server. Further information can be found in chapter “Administration: Updating web applications on external web servers”.	FirstSpirit Administrator, ServerManager
195277	Improved stability in integrated preview when using the browser engine “Internet Explorer”.	Preview, SiteArchitect
195314	Optimized status detection for the menu entry “View” / “Display area of AppCenter / Preview”.	SiteArchitect
195471	Optimized performance of saving datasets whose forms contain an FS_LIST input component (type DATABASE) with many referenced datasets.	SiteArchitect
195482	Corrected the return value of the statement <code>\$CMS_REF(. . .)\$</code> when using the optional parameter <code>abs : 2</code> .	Developer, Template Development
195523	The update process of global web applications when updating the FirstSpirit server has been improved.	Server Administrator
195526	During import, certain specific circumstances could lead to elements in the external file system being mistakenly deleted if, previously, local changes were made in the target project that differed from the exported state.	External synchronization
195538	Performance improvements related to the Page Content store when saving a page with many sections.	SiteArchitect
195542	A defective display of the menu bar in ContentCreator could occur after deleting a table template in SiteArchitect	ContentCreator



ID	Description	Categories
195581	In very rare cases, using the input component FS_INDEX within a language-dependent FS_CATALOG input component could cause erroneous behavior.	ContentCreator
195588	Improved identification of invalid references in the input component FS_LIST (type DATABASE).	Input Components, SiteArchitect
195603	Improved display of the results of a query in the query template.	SiteArchitect, Template Store
195642	In certain circumstances, switching between languages in the workspace area could lead to erroneous behavior.	SiteArchitect
195692	In rare cases, setting focus on an object could lead to an erroneous state of action buttons.	SiteArchitect
195707	Optimized performance of calculating the page preview with many database-based input components of type CMS_INPUT_COMBOBOX.	Performance, Preview
195823	In image galleries (input component FS_LIST, type DATABASE with <MEDIAMODE> tag), a manually created sort order of entries was erroneously not observed.	Input Components, SiteArchitect
195947	As of the current FirstSpirit version, user interface elements in ContentCreator (e.g. menus “Contents”, “Media”, and “Actions”; menu entries; input components; and report parameters) are identified in HTML. Further information can be found in chapter “ContentCreator: Identification of user interface elements”.	ContentCreator, Developer, FirstSpirit API
195999	Optimized transport of table templates into a target project with a different language set. Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Transport of table templates into projects with different language counts”.	Content Transport, SiteArchitect, Table templates
196034	In SiteArchitect running on macOS, use of the input component FS_LIST could lead to limited operability of SiteArchitect.	Input Components, SiteArchitect



ID	Description	Categories
196122	The detection of CSS mapping files (*.css.map) during an upload with drag and drop has been improved.	Media Store, SiteArchitect
196245	Deleted features may now be removed from the FirstSpirit repository via an archival schedule action. Further information can be found in chapter “Modules: Corporate Content: ContentTransport: Archival of deleted feature collections”.	Content Transport
196290	In rare cases, the tag “style” could be stored multiple times when saving format templates.	Developer
196326	Corrected version information about standard components of the system module.	Server Administrator
196370	Improved Java compatibility during FirstSpirit installation on Linux.	FirstSpirit Administrator
196387	In “Online Documentation for FirstSpirit” (ODFS), improved display of the version information “Available since” for API methods of data types.	Developer
196420	Optimized highlighting and editing of values in the input component FS_INDEX.	ContentCreator
196430	Improved error message when uploading images with unmet criteria.	FirstSpirit API
196442	When using external logic in dynamic forms, setting a value in the input component CMS_INPUT_TEXT could cause erroneous behavior.	Dynamic Forms, Template Development
196444	Improvements related to the Template Wizard.	Template Wizard
196496	Optimized the method <code>reload(Element)</code> (JavaScript API, JavaScript object: <code>top.WE_API.Preview</code>), which is used to update part of a document.	ContentCreator
196545	Erroneous behavior could occur when the “pluggability” feature (Java Servlet Specification 3.0) was deactivated.	FirstSpirit Administrator
196612	In the input component CMS_INPUT_DOMTABLE, saving links could lead to erroneous behavior.	ContentCreator
196753	Improved initialization of the class loader in SiteArchitect.	Isolated mode (BETA)
196763	Improved display of keyboard shortcuts in tool tips.	SiteArchitect



ID	Description	Categories
196874	In non-Webstart environments (Launcher), the menu entry “Switch Projects” was erroneously active.	SiteArchitect
196892	During generation an erroneous display could happen rarely when using the Tomcat web server.	ContentCreator
197585	Invocation of the context menu item “Corporate Content / Rebind original” on a format template could cause erroneous behavior.	Corporate Content, FirstSpirit Administrator, SiteArchitect, Template Store
197715	When editing media elements with the file name extension “config”, saving the element erroneously led to the extension being changed.	Media Store, SiteArchitect
197729	For new installations of FirstSpirit, the Jetty option “ForwardedRequestCustomizer” for evaluating information regarding reverse proxies will now be set by default.	Server Administrator
197873	In rare cases, erroneous behavior could occur when iterating through the objects of the interface <code>Index</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor.lists</code>).	Developer, FirstSpirit API
198068	Erroneous behavior could occur when editing a language-dependent input component FS_CATALOG within a language-dependent input component FS_LIST (type DATABASE).	ContentCreator
198337	<p>Changed the default value of the method <code>setDeleteObsoleteFiles(boolean enable)</code> of the interface <code>ExportOperation</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.store.access.nexport.operation</code>) from <code>false</code> to <code>true</code> and implemented additional log output.</p> <p>Further information can be found in chapter “External Synchronization: Deletion of obsolete files and additional logging”.</p>	Developer, External synchronization, FirstSpirit API



ID	Description	Categories
198375	The method <code>getProblems</code> of the <code>ImportOperation.Result</code> interface (FirstSpirit Developer API, <code>de.espirit.firstspirit.store.access.nexport.operatic</code>) can be used to output problems that occurred during an import. If, during the process of distributed development, two developers create new elements with the same “UID”, the GID (“Global ID”) of the element will be updated. So far, this update has had the log level “Warning” and was part of the log output of <code>getProblems</code> . The log level was changed to “Info” with the current FirstSpirit version. For this reason, this log message will no more appear in <code>getProblems</code> of the result (<code>ImportOperation.Result</code>).	Developer, External synchronization
198432	Erroneous behavior could occur when editing links in an input component <code>CMS_INPUT_DOM</code> which is contained within the form of an <code>FS_LIST</code> entry.	SiteArchitect
198609	In the functionality “External Synchronization”, exporting unmodified entities erroneously led to the associated metadata files being written anew.	External synchronization

13 Categories

13.1 Archiving

ID	Description
171819	When using Oracle databases, archiving datasets could cause erroneous behavior.
194362	During archiving, inbound references are now also considered.

13.2 Backup

ID	Description
182789	Project exports were erroneously not considered during clean-up of the backup directory.



13.3 Bookmarks

ID	Description
194689	<p>A confirmation dialog now warns a user if an element is about to be deleted which is still bookmarked as a master copy.</p> <p>Further information can be found in chapter “ContentCreator: Deletion of bookmarks and master copies”.</p>

13.4 Content Store

ID	Description
189318	Use of certain data types in an Oracle database could lead to erroneous behavior related to sorting in data sources.
194719	Optimized performance of loading the data source overview with datasets whose forms contain an FS_INDEX input component with many referenced datasets.

13.5 Content Transport

ID	Description
120150	<p>Optimized the dialog “Select” for features which were stored on the server via the button “Save feature”. It is now possible to delete a stored feature.</p> <p>Further information can be found in chapter “Modules: Corporate Content: ContentTransport: Deleting feature collections”.</p>
195014	<p>Optimized the order of (image) resolutions which are transported from a source project into a target project using FirstSpirit ContentTransport or External Synchronization.</p> <p>Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Export of image resolutions”.</p>
195999	Optimized transport of table templates into a target project with a different language set.



ID	Description
	Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Transport of table templates into projects with different language counts”.
196245	Deleted features may now be removed from the FirstSpirit repository via an archival schedule action. Further information can be found in chapter “Modules: Corporate Content: ContentTransport: Archival of deleted feature collections”.

13.6 ContentCreator

ID	Description
133908	In SiteArchitect and ContentCreator, an update of the preview may be triggered via the newly-implemented interface <code>PreviewOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code> , FirstSpirit Developer API). Further information can be found in chapter “Module Development, Scripts, API: Triggering a preview update via API (SiteArchitect and ContentCreator)”.
150087	For improved consistency, the title text that may be set for a dialog via the method <code>setTitle(String title)</code> of the interface <code>ShowFormDialogOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code> , FirstSpirit Developer API) is now also used for the dialog's main title. Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Use of "setTitle" for a dialog's main title”.
179938	The interface <code>MediaManagementContext</code> in the package <code>de.espirit.firstspirit.webedit.plugin.media</code> (FirstSpirit Developer API) has been extended with new methods. Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Modify view of the dialog "Manage media" (<code>de.espirit.firstspirit.webedit.plugin.media</code>)”.
184104	Workflows on media and media folder elements can now be advanced in the report area under “Tasks”.



ID	Description
	Further information can be found in chapter “ContentCreator: Workflows on media and media folder elements”.
187469	Optimized list formatting in the input component CMS_INPUT_DOM.
188445	<p>As of the current FirstSpirit version, it is possible to detect the user interface language of ContentCreator that was selected by the current user.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Detection of the user interface language ("Locale") selected by the current user”.</p>
189635	Modified log output for the report “Project History” when starting ContentCreator.
191363	In the input component CMS_INPUT_DOM with active spell check, erroneous behavior could occur.
191874	In the input component CMS_INPUT_DATE, input via keyboard could cause erroneous behavior.
192462	Erroneous behavior could occur when using the functionality “LiveEdit”.
193594	Optimized rule evaluation for option-based input components (e.g. CMS_INPUT_COMBOBOX) whose values are sourced from a database.
194689	<p>A confirmation dialog now warns a user if an element is about to be deleted which is still bookmarked as a master copy.</p> <p>Further information can be found in chapter “ContentCreator: Deletion of bookmarks and master copies”.</p>
194853	In the input component CMS_INPUT_DOM, corrected copying of links between different languages.
195542	A defective display of the menu bar in ContentCreator could occur after deleting a table template in SiteArchitect
195581	In very rare cases, using the input component FS_INDEX within a language-dependent FS_CATALOG input component could cause erroneous behavior.
195947	<p>As of the current FirstSpirit version, user interface elements in ContentCreator (e.g. menus “Contents”, “Media”, and “Actions”; menu entries; input components; and report parameters) are identified in HTML.</p> <p>Further information can be found in chapter “ContentCreator: Identification of user interface elements”.</p>



ID	Description
196420	Optimized highlighting and editing of values in the input component FS_INDEX.
196496	Optimized the method <code>reload(Element)</code> (JavaScript API, JavaScript object: <code>top.WE_API.Preview</code>), which is used to update part of a document.
196612	In the input component CMS_INPUT_DOMTABLE, saving links could lead to erroneous behavior.
196892	During generation an erroneous display could happen rarely when using the Tomcat web server.
198068	Erroneous behavior could occur when editing a language-dependent input component FS_CATALOG within a language-dependent input component FS_LIST (type DATABASE).

13.7 Corporate Content

ID	Description
197585	Invocation of the context menu item “Corporate Content / Rebind original” on a format template could cause erroneous behavior.

13.8 Database

ID	Description
183465	Creating a query may have failed after creating a database schema from an external Oracle database with a BLOB column.
189318	Use of certain data types in an Oracle database could lead to erroneous behavior related to sorting in data sources.
194421	When creating a database schema from an external database, problems in accessing foreign key columns could occur.



13.9 Developer

ID	Description
176253	<p>Log messages generated by SiteArchitect and ServerManager will now be stored in separate files on the client workstation of the respective user. Additionally, the current logging may be observed in a separate log window.</p> <p>Further information can be found in chapter “SiteArchitect / ServerManager: Client Logging”.</p>
179938	<p>The interface <code>MediaManagementContext</code> in the package <code>de.espirit.firstspirit.webedit.plugin.media</code> (FirstSpirit Developer API) has been extended with new methods.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Modify view of the dialog "Manage media" (<code>de.espirit.firstspirit.webedit.plugin.media</code>)”.</p>
182179	<p>Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version.</p> <p>Further information can be found in chapter “SiteArchitect: Code completion optimizations”.</p>
188440	<p>If a duplicated conversion of entities using <code>.convert</code> or <code>.convert2</code> has been prevented, a warn message will now be added to the generation log.</p>
188445	<p>As of the current FirstSpirit version, it is possible to detect the user interface language of ContentCreator that was selected by the current user.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Detection of the user interface language ("Locale") selected by the current user”.</p>
194524	<p>Erroneous behavior could occur when using the methods <code>hasGui()</code> and <code>getGui(Frame)</code> of the interface <code>Configuration</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.module</code>).</p>
195010	<p>The <code>VersionInfo</code> object returned by the interface <code>ServerInformationAgent</code> (FirstSpirit Access API, package <code>de.espirit.firstspirit.agency</code>) now provides information about the currently active server mode (“Legacy” or “Isolated”).</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Identification of server mode (isolated vs. legacy)”.</p>



ID	Description
195482	Corrected the return value of the statement <code>\$CMS_REF(. . .)\$</code> when using the optional parameter <code>abs : 2</code> .
195947	<p>As of the current FirstSpirit version, user interface elements in ContentCreator (e.g. menus “Contents”, “Media”, and “Actions”; menu entries; input components; and report parameters) are identified in HTML.</p> <p>Further information can be found in chapter “ContentCreator: Identification of user interface elements”.</p>
196290	In rare cases, the tag “style” could be stored multiple times when saving format templates.
196387	In “Online Documentation for FirstSpirit” (ODFS), improved display of the version information “Available since” for API methods of data types.
197873	In rare cases, erroneous behavior could occur when iterating through the objects of the interface <code>Index</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor.lists</code>).
198337	<p>Changed the default value of the method <code>setDeleteObsoleteFiles(boolean enable)</code> of the interface <code>ExportOperation</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.store.access.nexport.operations</code>) from <code>false</code> to <code>true</code> and implemented additional log output.</p> <p>Further information can be found in chapter “External Synchronization: Deletion of obsolete files and additional logging”.</p>
198375	<p>The method <code>getProblems</code> of the <code>ImportOperation.Result</code> interface (FirstSpirit Developer API, <code>de.espirit.firstspirit.store.access.nexport.operations</code>) can be used to output problems that occurred during an import.</p> <p>If, during the process of distributed development, two developers create new elements with the same “UID”, the GID (“Global ID”) of the element will be updated</p> <p>So far, this update has had the log level “Warning” and was part of the log output of <code>getProblems</code>. The log level was changed to “Info” with the current FirstSpirit version. For this reason, this log message will no more appear in <code>getProblems</code> of the result (<code>ImportOperation.Result</code>).</p>



13.10 Dynamic Forms

ID	Description
179202	Optimized default contents of a rule definition after creation of a new template. The editor now initially contains opening and closing <RULES> tags.
182179	Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version. Further information can be found in chapter “SiteArchitect: Code completion optimizations”.
188373	Optimized form updates when using rules to display or hide input components.
193207	For newly-created sections, toggling the option “Include this section in the output” was erroneously not observed during rule evaluation if the page was already in edit mode.
193594	Optimized rule evaluation for option-based input components (e.g. CMS_INPUT_COMBOBOX) whose values are sourced from a database.
194616	Improved rules evaluation in the input component CMS_INPUT_LINK.
194862	Optimized notification about rule infractions related to subforms of the input component FS_LIST.
196442	When using external logic in dynamic forms, setting a value in the input component CMS_INPUT_TEXT could cause erroneous behavior.

13.11 Editor

ID	Description
185584	When using the module “OfficeConnect”, copy-and-paste operations from a browser or an Excel sheet would also transfer meta information into the input component CMS_INPUT_DOM.
189318	Use of certain data types in an Oracle database could lead to erroneous behavior related to sorting in data sources.
194689	A confirmation dialog now warns a user if an element is about to be deleted which is still bookmarked as a master copy. Further information can be found in chapter “ContentCreator: Deletion of bookmarks and master copies”.



13.12 External synchronization

ID	Description
195014	<p>Optimized the order of (image) resolutions which are transported from a source project into a target project using FirstSpirit ContentTransport or External Synchronization.</p> <p>Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Export of image resolutions”.</p>
195024	<p>In external synchronization, unnecessary updates are now avoided during import.</p>
195526	<p>During import, certain specific circumstances could lead to elements in the external file system being mistakenly deleted if, previously, local changes were made in the target project that differed from the exported state.</p>
198337	<p>Changed the default value of the method <code>setDeleteObsoleteFiles(boolean enable)</code> of the interface <code>ExportOperation</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.store.access.nexport.operations</code>) from <code>false</code> to <code>true</code> and implemented additional log output.</p> <p>Further information can be found in chapter “External Synchronization: Deletion of obsolete files and additional logging”.</p>
198375	<p>The method <code>getProblems</code> of the <code>ImportOperation.Result</code> interface (FirstSpirit Developer API, <code>de.espirit.firstspirit.store.access.nexport.operations</code>) can be used to output problems that occurred during an import.</p> <p>If, during the process of distributed development, two developers create new elements with the same “UID”, the GID (“Global ID”) of the element will be updated</p> <p>So far, this update has had the log level “Warning” and was part of the log output of <code>getProblems</code>. The log level was changed to “Info” with the current FirstSpirit version. For this reason, this log message will no more appear in <code>getProblems</code> of the result (<code>ImportOperation.Result</code>).</p>
198609	<p>In the functionality “External Synchronization”, exporting unmodified entities erroneously led to the associated metadata files being written anew.</p>



13.13 FirstSpirit API

ID	Description
133908	<p>In SiteArchitect and ContentCreator, an update of the preview may be triggered via the newly-implemented interface <code>PreviewOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code>, FirstSpirit Developer API).</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Triggering a preview update via API (SiteArchitect and ContentCreator)”.</p>
150087	<p>For improved consistency, the title text that may be set for a dialog via the method <code>setTitle(String title)</code> of the interface <code>ShowFormDialogOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code>, FirstSpirit Developer API) is now also used for the dialog's main title.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Use of “setTitle” for a dialog's main title”.</p>
179938	<p>The interface <code>MediaManagementContext</code> in the package <code>de.espirit.firstspirit.webedit.plugin.media</code> (FirstSpirit Developer API) has been extended with new methods.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Modify view of the dialog “Manage media” (<code>de.espirit.firstspirit.webedit.plugin.media</code>)”.</p>
188445	<p>As of the current FirstSpirit version, it is possible to detect the user interface language of ContentCreator that was selected by the current user.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Detection of the user interface language (“Locale”) selected by the current user”.</p>
190052	<p><code>ProjectReferencesAgent.rebuildReferences(IDProvider)</code> now repairs more broken references.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Repairing broken references (<code>rebuildReferences</code>)”.</p>
195010	<p>The <code>VersionInfo</code> object returned by the interface <code>ServerInformationAgent</code> (FirstSpirit Access API, package <code>de.espirit.firstspirit.agency</code>) now provides information about the currently active server mode (“Legacy” or “Isolated”).</p>



ID	Description
	Further information can be found in chapter “Module Development, Scripts, API: Identification of server mode (isolated vs. legacy)”.
195947	<p>As of the current FirstSpirit version, user interface elements in ContentCreator (e.g. menus “Contents”, “Media”, and “Actions”; menu entries; input components; and report parameters) are identified in HTML.</p> <p>Further information can be found in chapter “ContentCreator: Identification of user interface elements”.</p>
196430	Improved error message when uploading images with unmet criteria.
197873	In rare cases, erroneous behavior could occur when iterating through the objects of the interface <code>Index</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor.lists</code>).
198337	<p>Changed the default value of the method <code>setDeleteObsoleteFiles(boolean enable)</code> of the interface <code>ExportOperation</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.store.access.nexport.operations</code>) from <code>false</code> to <code>true</code> and implemented additional log output.</p> <p>Further information can be found in chapter “External Synchronization: Deletion of obsolete files and additional logging”.</p>

13.14 FirstSpirit Administrator

ID	Description
158656	<p>So called “Pluggability” features (Java Servlet Specification 3.0) can be disabled starting with the current FirstSpirit version.</p> <p>Further information can be found in chapter “Administration: Apache Tomcat / Java Servlet Specification 3.0: Disabling Pluggability features”.</p>
174427	<p>As of the current FirstSpirit version, signing of FirstSpirit JAR files is carried out using SHA-256.</p> <p>Further information can be found in chapter “System: Signing with SHA-256”.</p>



ID	Description
185626	<p>By using the newly implemented parameter <code>log4j.logger.org.apache.http.impl.execchain.RetryExec</code> in the file <code>fs-logging.conf</code> it is possible to suppress unwanted “NoRouteToHostExceptions”.</p> <p>Further information can be found in chapter “Administration: Logging in “fs-server.log” (NoRouteToHostException)”.</p>
187137	<p>The new parameter <code>preview.enableTemporalPreviewCache</code> (in the configuration file <code>fs-server.conf</code>) may be used to affect caching for preview pages.</p> <p>Further information can be found in chapter “Administration: Caching of preview files”.</p>
194369	Modified logging during FirstSpirit server start-up for the case that web applications are running on an external Tomcat.
195216	<p>From the current FirstSpirit version onwards, an internal web server URL may be configured for web server.</p> <p>Further information can be found in chapter “Administration: Updating web applications on external web servers”.</p>
196370	Improved Java compatibility during FirstSpirit installation on Linux.
196545	Erroneous behavior could occur when the “pluggability” feature (Java Servlet Specification 3.0) was deactivated.
197585	Invocation of the context menu item “Corporate Content / Rebind original” on a format template could cause erroneous behavior.

13.15 Input Components

ID	Description
185584	When using the module “OfficeConnect”, copy-and-paste operations from a browser or an Excel sheet would also transfer meta information into the input component CMS_INPUT_DOM.
186917	In rare cases, erroneous behavior could occur when opening the selection dialog in the input component FS_REFERENCE.
189535	In the input component FS_DATASET with <code>mode="dialog"</code> , saving after switching between languages could lead to erroneous behavior.



ID	Description
193684	When using a nested FS_CATALOG input component, erroneous display could occur in the edit/"snippet" view.
193911	Improved observation of restrictions in the input component FS_REFERENCE when multiple remote connections to the own project are used.
194719	Optimized performance of loading the data source overview with datasets whose forms contain an FS_INDEX input component with many referenced datasets.
194780	If an FS_INDEX input component does not contain any entries, the new method <code>.isEmpty()</code> returns <code>true</code> . Further information can be found in chapter "Input components: FS_INDEX: Emptiness check with ".isEmpty"".
195588	Improved identification of invalid references in the input component FS_LIST (type DATABASE).
195823	In image galleries (input component FS_LIST, type DATABASE with <MEDIAMODE> tag), a manually created sort order of entries was erroneously not observed.
196034	In SiteArchitect running on macOS, use of the input component FS_LIST could lead to limited operability of SiteArchitect.

13.16 Integrated software

ID	Description
169853	As of the current FirstSpirit version, the software used internally for integrated preview has been updated. Further information can be found in chapter "SiteArchitect: Integrated preview: Updated third-party software".

13.17 Isolated mode (BETA)

ID	Description
192763	Optimized logging for project components during server start-up.



ID	Description
192943	Corrected information about libraries in system web app components.
193689	After updating a module via server properties in ServerManager, the version of a web application associated with that module will now be displayed correctly in project properties.
194184	Optimized detection of incompatible module resources.
195010	<p>The <code>versionInfo</code> object returned by the interface <code>ServerInformationAgent</code> (FirstSpirit Access API, package <code>de.espirit.firstspirit.agency</code>) now provides information about the currently active server mode (“Legacy” or “Isolated”).</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Identification of server mode (isolated vs. legacy)”.</p>
196753	Improved initialization of the class loader in SiteArchitect.

13.18 Launcher

ID	Description
184407	Improved evaluation of parameters passed in connection settings when starting the FirstSpirit Launcher.

13.19 Media Store

ID	Description
179938	<p>The interface <code>MediaManagementContext</code> in the package <code>de.espirit.firstspirit.webedit.plugin.media</code> (FirstSpirit Developer API) has been extended with new methods.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: ContentCreator: Modify view of the dialog “Manage media” (de.espirit.firstspirit.webedit.plugin.media)”.</p>
184104	Workflows on media and media folder elements can now be advanced in the report area under “Tasks”.



ID	Description
	Further information can be found in chapter “ContentCreator: Workflows on media and media folder elements”.
196122	The detection of CSS mapping files (<code>*.css.map</code>) during an upload with drag and drop has been improved.
197715	When editing media elements with the file name extension “config”, saving the element erroneously led to the extension being changed.

13.20 Module development

ID	Description
195010	The <code>VersionInfo</code> object returned by the interface <code>ServerInformationAgent</code> (FirstSpirit Access API, package <code>de.espirit.firstspirit.agency</code>) now provides information about the currently active server mode (“Legacy” or “Isolated”).
	Further information can be found in chapter “Module Development, Scripts, API: Identification of server mode (isolated vs. legacy)”.

13.21 Modules

ID	Description
194524	Erroneous behavior could occur when using the methods <code>hasGui()</code> and <code>getGui(Frame)</code> of the interface <code>Configuration</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.module</code>).
195054	Enhanced logging in the module “FirstSpirit DynamicPersonalization”.
195163	Identical resources have been consolidated when using more than one project-specific web component.



13.22 Page Store

ID	Description
192456	When copying sections, the original order was erroneously not observed.

13.23 Performance

ID	Description
194589	Optimized performance of loading data sources with datasets which contain an input component of type FS_INDEX.
195707	Optimized performance of calculating the page preview with many database-based input components of type CMS_INPUT_COMBOBOX.

13.24 Preview

ID	Description
169853	As of the current FirstSpirit version, the software used internally for integrated preview has been updated. Further information can be found in chapter “SiteArchitect: Integrated preview: Updated third-party software”.
187137	The new parameter <code>preview.enableTemporalPreviewCache</code> (in the configuration file <code>fs-server.conf</code>) may be used to affect caching for preview pages. Further information can be found in chapter “Administration: Caching of preview files”.
195277	Improved stability in integrated preview when using the browser engine “Internet Explorer”.
195707	Optimized performance of calculating the page preview with many database-based input components of type CMS_INPUT_COMBOBOX.



13.25 Server Administrator

ID	Description
194190	Deregistering a cluster slave server from the cluster master server via ServerManager could temporarily lead to the deregistered slave server no longer restarting automatically.
195163	Identical resources have been consolidated when using more than one project-specific web component.
195523	The update process of global web applications when updating the FirstSpirit server has been improved.
196326	Corrected version information about standard components of the system module.
197729	For new installations of FirstSpirit, the Jetty option “ForwardedRequestCustomizer” for evaluating information regarding reverse proxies will now be set by default.

13.26 ServerManager

ID	Description
158656	<p>So called “Pluggability” features (Java Servlet Specification 3.0) can be disabled starting with the current FirstSpirit version.</p> <p>Further information can be found in chapter “Administration: Apache Tomcat / Java Servlet Specification 3.0: Disabling Pluggability features”.</p>
192721	Uninstalling a defective module may have failed.
194190	Deregistering a cluster slave server from the cluster master server via ServerManager could temporarily lead to the deregistered slave server no longer restarting automatically.
194838	Improved the display of web components in project properties.
195216	<p>From the current FirstSpirit version onwards, an internal web server URL may be configured for web server.</p> <p>Further information can be found in chapter “Administration: Updating web applications on external web servers”.</p>



13.27 SiteArchitect

ID	Description
133908	<p>In SiteArchitect and ContentCreator, an update of the preview may be triggered via the newly-implemented interface <code>PreviewOperation</code> (package <code>de.espirit.firstspirit.ui.operations</code>, FirstSpirit Developer API).</p> <p>Further information can be found in chapter “Module Development, Scripts, API: Triggering a preview update via API (SiteArchitect and ContentCreator)”.</p>
169853	<p>As of the current FirstSpirit version, the software used internally for integrated preview has been updated.</p> <p>Further information can be found in chapter “SiteArchitect: Integrated preview: Updated third-party software”.</p>
171040	Improved visualization of changes in version comparison.
175662	Optimized interaction pattern when executing workflows with automatic actions on multiple objects.
176253	<p>Log messages generated by SiteArchitect and ServerManager will now be stored in separate files on the client workstation of the respective user. Additionally, the current logging may be observed in a separate log window.</p> <p>Further information can be found in chapter “SiteArchitect / ServerManager: Client Logging”.</p>
182179	<p>Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version.</p> <p>Further information can be found in chapter “SiteArchitect: Code completion optimizations”.</p>
185584	When using the module “OfficeConnect”, copy-and-paste operations from a browser or an Excel sheet would also transfer meta information into the input component <code>CMS_INPUT_DOM</code> .
186917	In rare cases, erroneous behavior could occur when opening the selection dialog in the input component <code>FS_REFERENCE</code> .
188373	Optimized form updates when using rules to display or hide input components.
189318	Use of certain data types in an Oracle database could lead to erroneous behavior related to sorting in data sources.
189535	In the input component <code>FS_DATASET</code> with <code>mode="dialog"</code> , saving after switching between languages could lead to erroneous behavior.



ID	Description
192456	When copying sections, the original order was erroneously not observed.
192701	The display has been improved when comparing versions of metadata.
193684	When using a nested FS_CATALOG input component, erroneous display could occur in the edit/"snippet" view.
193885	When using multiple monitors, the position of SiteArchitect was erroneously not considered when displaying confirmation dialogs.
193911	Improved observation of restrictions in the input component FS_REFERENCE when multiple remote connections to the own project are used.
193976	In the selection dialog, optimized loading behavior of the preview image.
194349	Improved display logic for workflows in the status bar.
194367	Optimized loading of action groups of MenuItemsPlugin (interface <code>JavaClientEditorialToolBarItemsPlugin</code> , package <code>de.espirit.firstspirit.client.plugin</code>).
194589	Optimized performance of loading data sources with datasets which contain an input component of type FS_INDEX.
194616	Improved rules evaluation in the input component CMS_INPUT_LINK.
194719	Optimized performance of loading the data source overview with datasets whose forms contain an FS_INDEX input component with many referenced datasets.
194862	Optimized notification about rule infractions related to subforms of the input component FS_LIST.
195277	Improved stability in integrated preview when using the browser engine "Internet Explorer".
195314	Optimized status detection for the menu entry "View" / "Display area of AppCenter / Preview".
195471	Optimized performance of saving datasets whose forms contain an FS_LIST input component (type DATABASE) with many referenced datasets.
195538	Performance improvements related to the Page Content store when saving a page with many sections.
195588	Improved identification of invalid references in the input component FS_LIST (type DATABASE).
195603	Improved display of the results of a query in the query template.
195642	In certain circumstances, switching between languages in the workspace area could lead to erroneous behavior.



ID	Description
195692	In rare cases, setting focus on an object could lead to an erroneous state of action buttons.
195823	In image galleries (input component FS_LIST, type DATABASE with <MEDIAMODE> tag), a manually created sort order of entries was erroneously not observed.
195999	Optimized transport of table templates into a target project with a different language set. Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Transport of table templates into projects with different language counts”.
196034	In SiteArchitect running on macOS, use of the input component FS_LIST could lead to limited operability of SiteArchitect.
196122	The detection of CSS mapping files (*.css.map) during an upload with drag and drop has been improved.
196763	Improved display of keyboard shortcuts in tool tips.
196874	In non-Webstart environments (Launcher), the menu entry “Switch Projects” was erroneously active.
197585	Invocation of the context menu item “Corporate Content / Rebind original” on a format template could cause erroneous behavior.
197715	When editing media elements with the file name extension “config”, saving the element erroneously led to the extension being changed.
198432	Erroneous behavior could occur when editing links in an input component CMS_INPUT_DOM which is contained within the form of an FS_LIST entry.

13.28 Table templates

ID	Description
195999	Optimized transport of table templates into a target project with a different language set. Further information can be found in chapter “Modules: Corporate Content: Multisite Management: Transport of table templates into projects with different language counts”.



13.29 Template Development

ID	Description
179202	Optimized default contents of a rule definition after creation of a new template. The editor now initially contains opening and closing <code><RULES></code> tags.
182179	Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version. Further information can be found in chapter “SiteArchitect: Code completion optimizations”.
188440	If a duplicated conversion of entities using <code>.convert</code> or <code>.convert2</code> has been prevented, a warn message will now be added to the generation log.
193930	In very rare cases, using code completion in the form could cause erroneous behavior.
194780	If an FS_INDEX input component does not contain any entries, the new method <code>.isEmpty()</code> returns <code>true</code> . Further information can be found in chapter “Input components: FS_INDEX: Emptiness check with <code>.isEmpty()</code> ”.
195482	Corrected the return value of the statement <code>\$CMS_REF(...)\$</code> when using the optional parameter <code>abs:2</code> .
196442	When using external logic in dynamic forms, setting a value in the input component <code>CMS_INPUT_TEXT</code> could cause erroneous behavior.

13.30 Template Store

ID	Description
182179	Some optimizations have been made to the “Form” and “Rules” tabs for the purpose of code completion in the latest FirstSpirit version. Further information can be found in chapter “SiteArchitect: Code completion optimizations”.
195603	Improved display of the results of a query in the query template.
197585	Invocation of the context menu item “Corporate Content / Rebind original” on a format template could cause erroneous behavior.



13.31 Template Wizard

ID	Description
196444	Improvements related to the Template Wizard.

13.32 Version history

ID	Description
171040	Improved visualization of changes in version comparison.

13.33 Webstart

ID	Description
176253	Log messages generated by SiteArchitect and ServerManager will now be stored in separate files on the client workstation of the respective user. Additionally, the current logging may be observed in a separate log window. Further information can be found in chapter “SiteArchitect / ServerManager: Client Logging”.

13.34 Workflow

ID	Description
175662	Optimized interaction pattern when executing workflows with automatic actions on multiple objects.
184104	Workflows on media and media folder elements can now be advanced in the report area under “Tasks”. Further information can be found in chapter “ContentCreator: Workflows on media and media folder elements”.
194349	Improved display logic for workflows in the status bar.
195195	Improved consideration of authorized users during mail dispatch in workflows.

