



FirstSpirit™

Unlock Your Content

Release Notes

FirstSpirit™ 2020-03

Status	RELEASED
Department	FS-Core
Copyright	2020 e-Spirit AG
File name	Releasenotes_2020_03_EN

e-Spirit AG

Stockholmer Allee 24
44269 Dortmund | Germany

T +49 231 . 477 77-0
F +49 231 . 477 77-499

info@e-Spirit.com
www.e-Spirit.com

e-Spirit

Table of contents

1	Administration.....	6
1.1	FirstSpirit is currently not compatible with Tomcat 10.....	6
1.2	ServerManager: Deleting template sets.....	6
2	ContentCreator.....	7
2.1	New ContentCreator: Rollout for all customers.....	7
2.2	Project selection.....	9
3	FirstSpirit Content Experience Tools (CXT).....	10
3.1	Latest module versions.....	10
3.2	Markdown: Creating links using "DataAccessPlugins".....	11
4	Module Development, Scripts, API.....	17
4.1	DAP: New aspect "UrlSupporting" for URL generation.....	17
4.2	New Aspect "FormReferenceContaining" (provide a form element's model reference).....	18
5	Security.....	19
5.1	Apache Tomcat AJP: Vulnerability (Ghostcat)	19
6	System.....	20
6.1	Updates to integrated third-party software.....	20
6.2	FirstSpirit server: New control files for Windows and Linux.....	21



7 Template development..... 23

7.1 Extended output options for snippets..... 23

8 Deprecations.....26

9 Overview..... 28



10 Categories.....32

- 10.1 Workflow..... 32
- 10.2 ContentCreator..... 32
- 10.3 Data Access Plug-In..... 33
- 10.4 Input Components..... 34
- 10.5 Developer..... 34
- 10.6 FirstSpirit Content Experience Tools (CXT).....35
- 10.7 FirstSpirit Omnichannel Manager.....36
- 10.8 FirstSpirit home page..... 36
- 10.9 FirstSpirit Administrator..... 37
- 10.10 FirstSpirit API..... 38
- 10.11 FragmentCreator..... 38
- 10.12 Integrated software.....39
- 10.13 Java..... 39
- 10.14 Launcher.....40
- 10.15 Media..... 40
- 10.16 Media Store..... 40
- 10.17 Module development..... 41
- 10.18 Modules..... 41
- 10.19 Project switch..... 41
- 10.20 Editor..... 41



10.21	Snippets.....	43
10.22	Server Administrator.....	43
10.23	ServerManager.....	44
10.24	Security.....	44
10.25	SiteArchitect.....	45
10.26	Languages.....	45
10.27	Template Store.....	45
10.28	Template Development.....	46
10.29	Web server.....	46



1 Administration

1.1 FirstSpirit is currently not compatible with Tomcat 10

Apache Tomcat can be used as an external web server with FirstSpirit, and can be operated either on the same host as the FirstSpirit server or on its own dedicated host (standalone / remote).

FirstSpirit is currently compatible with the following Tomcat versions:

- Apache Tomcat 9.0.31 or higher
- Apache Tomcat 8.5.51 or higher

With the release of the milestone 1 version of Tomcat 10 on 20.02.2020, there was a change from Java EE to Jakarta EE (see <http://tomcat.apache.org/>).

This changed the namespace (package) for all implemented APIs from `javax.*` to `jakarta.*`. This change requires extensive adjustments to the FirstSpirit web applications (FirstSpirit Start Page, ContentCreator, etc.) to enable migration from Tomcat 9.0 and lower to Tomcat 10 and higher.

At the current time FirstSpirit is incompatible with Tomcat 10 and the use of a Tomcat version higher than 9.0 is also not recommended.

1.2 ServerManager: Deleting template sets

Template sets (e.g., “Intranet”, “RSS feed”) are defined for the project from the presentation channels (e.g., “json”, “html”). Template sets for a project are created and edited via “FirstSpirit ServerManager / Project properties / Template sets”.

Template sets can now be removed from the project via “FirstSpirit ServerManager / Project properties / Template sets / Delete” (previously it was only possible to deactivate them). To prevent accidental deletion, an additional dialog box is shown before deletion (“Do you really want to delete this template set?”).



The deletion of a template set cannot be undone!



If a template set is accidentally removed from a project, please contact our [Technical Support](#) team immediately to restore the template set.

For more information on template sets, see the [Documentation for administrators](#).

2 ContentCreator

2.1 New ContentCreator: Rollout for all customers

The design and technical basis of FirstSpirit ContentCreator were revised:

- With **FirstSpirit 2020-01**, the revised ContentCreator was officially released for use. Since this point, all customers have been able to use the revised design of the ContentCreator as long as the appropriate settings have been configured accordingly in server/project settings.
- With **FirstSpirit 2020-02**, the “new” ContentCreator was automatically rolled out to all cloud customers.

With the **current release**, the “new” ContentCreator is now automatically used **for all** projects started with ContentCreator (for cloud **and** on-premises customers).

If necessary, the customer can switch back to the “original” ContentCreator for a project by deactivating the checkbox “Use new design” on the “ContentCreator” tab in FirstSpirit ServerManager, under “Server properties / Web applications” or “Project properties / Web components”. See also *FirstSpirit Manual for Administrators*, [FirstSpirit ServerManager / Server properties / Web applications](#) or [FirstSpirit ServerManager / Project properties / Web components](#).

With FirstSpirit 2020-07, we are planning to remove the “old” ContentCreator design, so we recommend that customers start to use the “new” ContentCreator for all projects as soon as possible.

Why and how was the ContentCreator redesigned? – Check out our blog for a glimpse behind the scenes of the design and development process for the new ContentCreator: www.e-spirit.com/us/blog/contentcreator_redesign.html.

Interactive help and documentation

As part of the redesign, we incorporated more help messages and tips into the standard ContentCreator interface to help users understand the changes. These messages can be switched off in a message dialog (“Deactivate all tips”).



Large-scale updates were made to the user documentation for ContentCreator and the documentation for developers (“FirstSpirit Online Documentation” (ODFS)) based on the new design; other documentation will follow. In some places, the interfaces shown in the documentation do not match the interface in the new design and may differ from the version of ContentCreator you are using.

Information on using the new FirstSpirit ContentCreator

- Up to and including FirstSpirit 2020-01, the **Pluggability** option had to be set to “Active” for unrestricted use of the new FirstSpirit ContentCreator. Since the rollout of FirstSpirit 2020-02, pluggability is force-enabled for the new FirstSpirit ContentCreator. This means that if the new FirstSpirit ContentCreator is used, the system automatically activates pluggability mode (log entry: `WARN 03.02.2020 15:58:20.902 (de.espirit.firstspirit.server.module.WebServerManagerImpl): Force enabled pluggability for 'fs5webedit' in project '-1'.`). This has no effect on the interface itself; the option “Pluggability” may still show as being set to “Inactive” even though the option is activated.

For further information on the option “Pluggability”, see also *FirstSpirit Manual for Administrators*, page [Web applications](#) or [Web components](#).

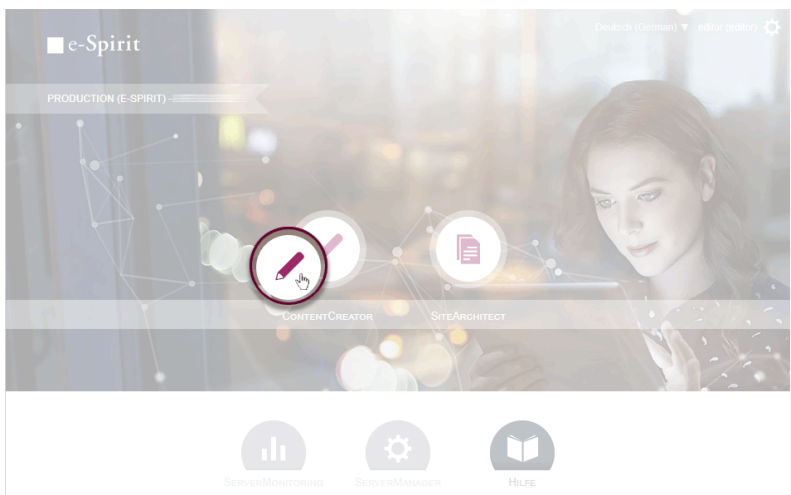
- The change in technologies used for the ContentCreator (“MicroApp Framework”) increases the resource and **system requirements**. This is particularly noticeable during the currently ongoing transition period, in which the “new” and the “old” versions of ContentCreator can be run in parallel.
 - For this reason, you should check and, if necessary, increase **resources**, in particular for the application server (e.g., Apache Tomcat) and specifically the **hard drive capacity** and **Java Heap**.
 - Where possible, ContentCreator should be used as a **global web application**. ContentCreator should only be run as its own project instance (“projectlocal”) where it is absolutely necessary to do so.
 - If Apache Tomcat is used as the application server, we recommend that Apache Tomcat is **restarted** after each update.
- If “Jetty Web Server” is used as a web server, you must use at least FirstSpirit version 2019-12.



2.2 Project selection

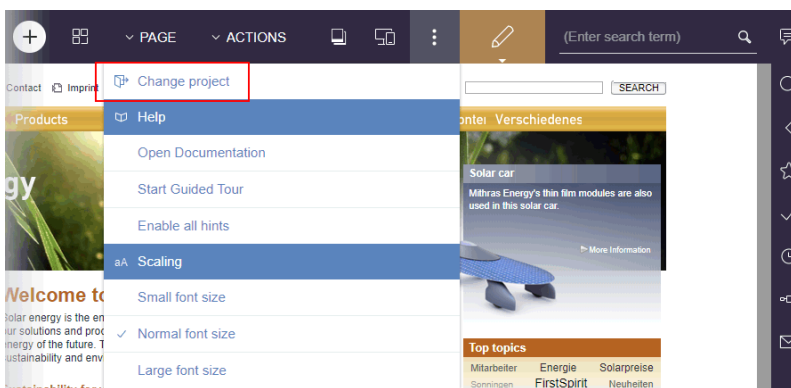
With the current release, the handling of project selection has been improved.:

If only **one project** is available to the editor on a server, this project is started directly when ContentCreator is started via the FirstSpirit start page using the following icon:



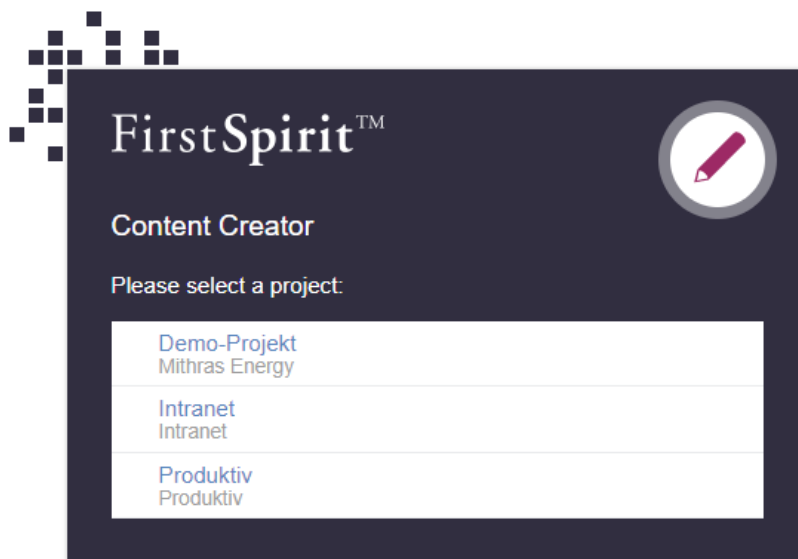
The project selection dialog is no longer displayed.

If **several projects** are available to the editor on a server, he can now easily switch between the projects using the new function “Change project” in the “Further functions” menu (3 points):



This function logs off the user and opens the project selection dialog from which the user can select the desired project for editing (via ContentCreator):





3 FirstSpirit Content Experience Tools (CXT)

3.1 Latest module versions

FirstSpirit 2020-03 supports the following module versions for “FirstSpirit Content Experience Tools”:

Module / file name	Version number
FirstSpirit CXT DAP Bridge	1.26
<code>dataservice-[version].fsm</code>	
FirstSpirit CXT FragmentCreator	2.1
<code>fragment-creator-[version].fsm</code>	
FirstSpirit Fragment DAP	1.22
<code>fragmentdap-[version].fsm</code>	
FirstSpirit Media DAP	1.22*
<code>mediadap-[version].fsm</code>	
FirstSpirit Markdown Editor	1.19*
<code>markdown-editor-[version].fsm</code>	
FirstSpirit Tagging Editor	1.19
<code>tagging-editor-[version].fsm</code>	
FirstSpirit CXT FragmentCreator - CaaS Integration	1.18
<code>caas-integration-[version].fsm</code>	



* These modules require FirstSpirit 2020-03 or higher from this version.

3.2 Markdown: Creating links using "DataAccessPlugins"

Formatted texts are entered in the FragmentCreator using the input component *FS_MARKDOWN*.

Example syntax:

```
<FS_MARKDOWN name="text" useLanguages="no">
  <LANGINFOS>
    <LANGINFO lang="*" label="Content"/>
    <LANGINFO lang="DE" label="Inhalt"/>
  </LANGINFOS>
</FS_MARKDOWN>
```

Up to now, when using the markdown editor “Quill” (see file *web.xml*, parameter *markdownEditorType*, vau: *quill* or empty), it was possible to link text in addition to formatting, using the icon



As of the current release, further referencing options can be made available via this icon. To do this, a corresponding *DataAccessPlugin* (DAP) must be specified, via which the references are made available in the project. This *DataAccessPlugin* must implement the interface *UrlSupporting* (FirstSpirit Developer API, package *de.espirit.firstspirit.client.plugin.dataaccess.aspects*, also new with FirstSpirit 2020-03, see Chapter 5.2: “DAP: New aspect 'UrlSupporting' for URL generation”).

Currently, for example, the “Media Data Access Plugin” can be connected, which is included in the standard scope of delivery of the MicroApp Framework / FirstSpirit Content Experience Tools. With this plugin, images and files of other formats can be referenced in the Markdown Editor.

Example syntax FS_MARKDOWN



```
<FS_MARKDOWN name="text" useLanguages="no">
  <DATALINKSOURCES>
    <DATALINKSOURCE name="files" mode="file"
      plugin="FirstSpiritMediaAccess/Connector">
      <LANGINFOS>
        <LANGINFO lang="*" label="Files"/>
        <LANGINFO lang="DE" label="Dateien"/>
      </LANGINFOS>
    </DATALINKSOURCE>
    <DATALINKSOURCE name="pictures" mode="picture"
      plugin="FirstSpiritMediaAccess/Connector">
      <LANGINFOS>
        <LANGINFO lang="*" label="Pictures"/>
        <LANGINFO lang="DE" label="Bilder"/>
      </LANGINFOS>
    </DATALINKSOURCE>
  </DATALINKSOURCES>
  <LANGINFOS>
    <LANGINFO lang="*" label="Content"/>
    <LANGINFO lang="DE" label="Inhalt"/>
  </LANGINFOS>
</FS_MARKDOWN>
```

Referencing in the Markdown Editor is enabled by specifying the tag

```
DATALINKSOURCES
```

Definition of the *DataAccessPlugin* to be used

Which *DataAccessPlugin* should be available for referencing in the respective Markdown component is determined by the mandatory tag

```
DATALINKSOURCE
```

The following mandatory attributes are required:

```
name
plugin
```



`name` is a component-wide unique identifier for the reference type. You can use this identifier to access the value stored for the reference type in the output / in JSON.

Via the attribute `plugin` the desired *DataAccessPlugin*, for the “Media Data Access Plugin” for example

```
plugin="FirstSpiritMediaAccess/Connector"
```

You can also specify several different *DataAccessPlugins*.

Use the `label` attribute to implement a language-dependent label for the *DataAccessPlugin* in the list of referencing types to be selected in the markdown editor.

Configuration of the selection (via “Media Data Access Plugin”)

Using the optional attribute

```
mode
```

you can restrict when using the “Media Data Access Plugin” (analogous to the definition in FS_INDEX with “Media Data Access Plugin”) whether only images (`mode="picture"`) or only files of other formats (`mode="file"`) should be selectable. By default (without specifying `mode`) all element types can be selected as reference.

By default, when using the “Media Data Access Plugin”, a selection of references from the **entire** media management of the **local** project can be made.

The selection can be limited to special folders by specifying the tags `PROJECT` and `FOLDER`. The reference name of the desired folder is specified via the `uid` attribute, for example

```
<PROJECT>
  <FOLDER uid="contact"/>
</PROJECT>
```

If media should be selected from a remote project, this can also be defined via the `PROJECT` tag. The mandatory parameter `remote` must be used to specify the symbolic project name of the remote project, for example

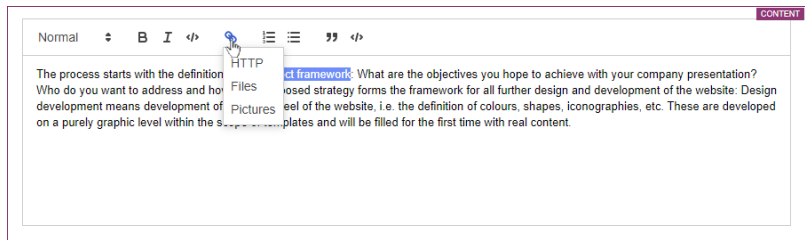
```
<PROJECT remote="media">
```



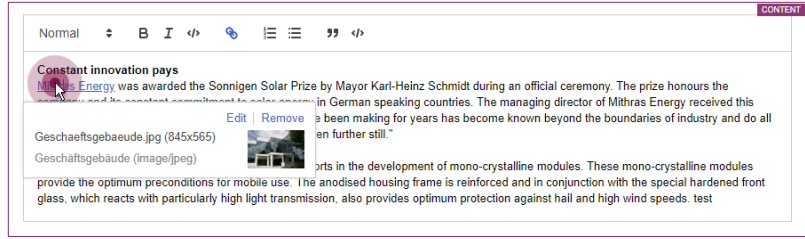
Example syntax:

```
...  
<DATA LINKSOURCES>  
  <DATA LINKSOURCE name="pictures" mode="picture"  
    plugin="FirstSpiritMediaAccess/Connector">  
    <LANGINFOS>  
      <LANGINFO lang="*" label="Pictures"/>  
      <LANGINFO lang="DE" label="Bilder"/>  
    </LANGINFOS>  
    <PROJECT>  
      <FOLDER uid="contact"/>  
    </PROJECT>  
  </DATA LINKSOURCE>  
</DATA LINKSOURCES>  
...
```

Appearance in FragmentCreator



Inserting a link



Inline view of an image referencing

Output / JSON

The JSON output of the Markdown Editor has been extended accordingly:

Attribute dataLinks: This attribute is included in JSON output whenever there is a reference in the Markdown component via *DataAccessPlugin*.

The link or reference is mapped using a special link schema that is used internally:

```
dap://{linkSource}/{objectId}
```

- `dap://`: URI schema/protocol
- `{linkSource}`: Identifier of the DAP configuration in the Markdown component (attribute name in the `DATALINKSOURCE` tag)
- `{objectId}`: Identifier of the DAP object selected by the editor

The values in curly brackets are URL-encoded. An example of a resolved version could look like this:

```
[link text](dap://pictures/id1234)
```

Where `[link text]` is the text in the Markdown component that is linked.

Attributes identifier, url, value: These attributes in the `dap` object come from the implementation of the *DataAccessPlugin* used:

- `identifier`: Identifier of the DAP object selected by the editor
- `url`: resolved URL of the DAP object selected by the editor
- `value`: JSON output that the *DataAccessPlugin* provides for the DAP object selected by the editor

Attributes htmlExt, markdownExt, textExt: If one of the DAP links contained in the Markdown Editor can be converted to an external URL due to the implementation of the *DataAccessPlugin* used, these attributes are created in addition to the attributes used for internal representation without the suffix `Ext`. In the case of media, an external URL can then be a URL under which the image can be viewed and/or downloaded, for example.

Example JSON output of a Markdown component:



```
{
  "html": "<p><a href=\"dap://linkSource/id1234\">link text</a></p>\n",
  "markdown": "[link text](dap://linkSource/id1234)",
  "text": "\"link text\" (dap://linkSource/id1234)",
  "htmlExt": "<p><a href=\"#1234\">link text</a></p>\n",
  "markdownExt": "[link text](#1234)",
  "textExt": "\"link text\" (#1234)",
  "dataLinks": {
    "dap://linkSource/id1234": {
      "identifier": "id1234",
      "url": "#1234",
      "value": {
        "store": "mediastore",
        "id": 1234
      }
    }
  }
}
```

Access in the template

The access to contents with resolved references can be done for example via the generated JSON:

```
$CMS_VALUE(json(#this).get("markdown").get("value").get("htmlExt"))$
```



For the markdown editor “SimpleMDE” no referencing via *DataAccessPlugin* is currently supported.

Further information

- [Markdown Editor](#) module
- Configuration of the input component [FS_MARKDOWN](#)
- General information about [JSON output](#)



4 Module Development, Scripts, API

4.1 DAP: New aspect "UrlSupporting" for URL generation

You can use the input component FS_INDEX to connect external components or modules that are to make data available to the input component. The data is made available using "DataAccessPlugins". This data can then be selected (that is, referenced) using FS_INDEX. Function and appearance of "DataAccessPlugins" depends to a great extent on the individual implementation of the plug-in. The implementation of a "DataAccessPlugin" uses the packages `de.espirit.firstspirit.client.plugin.dataaccess` and `de.espirit.firstspirit.client.plugin.dataaccess.aspects` of the FirstSpirit Developer API and others.

With the current release the package `de.espirit.firstspirit.client.plugin.dataaccess.aspects` has been extended by the aspect `UrlSupporting`.

This can be used to determine a URL string for an object that originates from a "DataAccessPlugin". For this purpose, an `UrlGenerationContext` is passed (new interface with this name in the same package). Among other things, this context grants access to the URL creator (provider) to be used, the language and the status of the object (released or not released).

The JSON generation of the FS_INDEX input component and its entries was extended by an attribute `url` (if the DAP implements this aspect):

```
{
  "identifier": "...",
  "fsType": "...",
  "value": {...},
  "valueSchema": {...},
  "url": "..."
}
```

For a medium from the "Media Data Access Plugin" (Media DAP), the value could be

```
"/media/Solar_panel.png"
```

An exemplary use of the new aspect could look like this:



```
final UrlSupporting<T> urlSupporting = dapSession.getAspect(UrlSupporting.TYPE);
if (urlSupporting != null) {
    UrlGenerationContext context = UrlGenerationContext.builder().from
        (jsonOrGenerationContext).create();
    Optional<String> dapObjectUrl = urlSupporting.getUrl(context, dapObject);
}
```

Note: If an error occurs when generating the URL in the DAP (e.g. `java.lang.NullPointerException`), this is only recorded in the log as a warning and there will be no JSON output.

Example “Media Data Access Plugin” (Media DAP)

With FirstSpirit 2020-03, the new aspect has been incorporated into the “Media Data Access Plugin” (Media DAP) module, which is included in the standard scope of delivery of the MicroApp Framework / FirstSpirit Content Experience Tools. This plugin can be used to reference images and files of other formats in the Markdown Editor. See also Chapter 3.2: “Markdown: Creating links using 'DataAccessPlugins'”.

4.2 New Aspect "FormReferenceContaining" (provide a form element's model reference)

The (entered) values of FirstSpirit input components can contain references to other objects (so-called “value references”).

An input component of type `FS_INDEX` (with `DatasetDataAccessPlugin`), for example, holds references to all datasets that are referenced via this input component.

Aside from these value references an input component can hold further references regarding the input component's GOM representation (FirstSpirit GUI Object Model (GOM)) (so-called “model references”). For an input component of type `FS_INDEX` (with `DatasetDataAccessPlugin`), for example, this is the reference to the desired table template (that is defined in the `TEMPLATE` tag under the template's form tab).

An input component developer can now provide the form element's (e.g. input component's) model references via the aspect `FormReferenceContaining`, with the method `List<Reference> collectFormReferences(F formElement)` (FirstSpirit Developer API, package `de.espirit.firstspirit.client.access.editor`).



The value references of a form element can be provided, with the aspect `ReferenceContaining<T>` (FirstSpirit Developer API, package `de.espirit.firstspirit.client.access.editor`), just like before.

5 Security

5.1 Apache Tomcat AJP: Vulnerability (Ghostcat)

A Chinese security company has discovered a vulnerability in the binary communication protocol Apache JServ Protocol (AJP) used by Tomcat. This vulnerability has been named “Ghostcat” and is referenced as [CVE-2020-1938](#).

The following Tomcat version series, which have been recommended by e-Spirit to date, are also demonstrably affected:

- Apache Tomcat 8.x before version 8.5.51 and
- Apache Tomcat 9.x before version 9.0.31

! The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31 see below). Furthermore, we recommend checking the AJP Connector configuration in each installation and adjusting it if necessary, as the AJP Connector was activated by default in the `server.xml` configuration file before the above-mentioned versions.

In the meantime, Apache Tomcat versions 8.5.51 and 9.0.31 have been released, which are considered secure and fix the underlying configuration problem in the default configuration.

With these versions, the default behavior of the AJP Connector has changed:

- By default, the AJP Connector only listens to the loopback address (previously all).
- Additionally, a secret must now be specified for the connection. (If required, the secret obligation can also be altered) by the parameter `secretRequired`.

Please consult the Apache Tomcat migration guide for the necessary adjustments:



- for **version 8.5** or
- for **version 9.0**

Further information can also be found in the Ghostcat notes of the individual Linux distributions, e.g. for RHEL: access.redhat.com/solutions/4851251

6 System

6.1 Updates to integrated third-party software

The following internal software has been updated in the latest FirstSpirit release:

Java

The JRE, which is used as standard to run FirstSpirit SiteArchitect and ServerManager, was updated from **version 11.0.5** to **version 11.0.6**.

This is the Java version recommended by e-Spirit. When using the “FirstSpirit Launcher JRE” module, this is the “Default” configuration point.

The Java versions in the “FirstSpirit Launcher JRE” module were updated: AdoptOpenJDK 13.0.1 to version 13.0.2, AdoptOpenJDK 8u232 to version 8u242 (“outdated”).

Install4j (used for FirstSpirit Launcher)

Updated from **version 8.0.2** to **version 8.0.4**.

ASM (library for analyzing and modifying Java byte code)

Updated from **version 7.2** to **version 7.3.1**.

Apache FOP (Formatting Objects Processor)

Via the module fs-fop.fsm (for the output of FirstSpirit content in PDF format).

Updated from **version 2.2** to **version 2.4**.



Pack200 removed (jar packing tool)

The Pack200 compression of jar files transferred from the server to the user's computer when the FirstSpirit desktop applications are launched was expanded in preparation for upcoming Java 14 support. If the FirstSpirit desktop applications are still started via Java Web Start, the uncompressed jars are now transferred. (The Java Web Start function is still present in Oracle Java 8 but has been removed in Oracle Java 11. OpenJDK does not offer a comparable technology).

Java Service Wrapper (configuration and monitoring of FirstSpirit Java VM)

Updated from **version 3.5.39** to **version 3.5.42**.

Note: When the FirstSpirit server is updated (auto-update, in-place upgrade), the Java Service Wrapper files are not automatically updated. The Java Service Wrapper can be updated via the tar gzip update archive (file fs-update-5.2.*.tar.gz) as described in the FirstSpirit installation instructions.

Additional documentation:

- on [Java Service Wrapper \(manual for administrators\)](#)
- on [Updating the Java Service Wrapper \(installation instructions\)](#)

6.2 FirstSpirit server: New control files for Windows and Linux

Java and the Java Service Wrapper are prerequisites for operating a FirstSpirit server. The Java Service Wrapper and corresponding control files are provided by e-Spirit via:

- the installation archive (for new installations) or
- the update archive (for existing installations)

Both archives can be downloaded (for access data, please contact [Technical Support](#)).

The control files for Windows and Linux operating systems, which are included in both archives, have been enhanced by two new control files, with the current FirstSpirit release.

The new control files support a range of functions that were not available in the previous control files (including `install` under Linux). The scope of functions of the new control files can be called via the



integrated help (Usage, Command syntax, Commands) in the command line, for example via the call `fs-server` (under Linux):

```
test@fs_example:~$ fs-server
Usage: /home/fs_example/firstspirit/bin/fs-server [ console | start | stop | restart |
        condrestart | status | install | installstart | remove | dump ]
Commands:
  console      Launch in the current console.
  start        Start in the background as a daemon process.
  stop         Stop if running as a daemon or in another console.
  restart      Stop if running and then start.
  condrestart  Restart only if already running.
  status       Query the current status.
  install      Install to start automatically when system boots.
  installstart Install and start running as a daemon process.
  remove       Uninstall.
  dump         Request a Java thread dump if running.
```

This new development's result can be tested as part of an Early Access Program (EAP) starting with FirstSpirit 2020-03. An early, constructive feedback helps us to identify problems faster and more easily, thus allowing us to add missing functionality. For feedback please consult our Technical Support (for partners) or your designated Account Manager (for customers).



Since these new control files are still in the EAP phase, we do not recommend using them in production environments.

Control files in the installation archive or in the update archive:

- new: `fs-server` (for Linux)
- new: `fs-server.bat` (for Windows)
- `fs5` (for Linux)
- `fs5.cmd` (for Windows)

Prerequisite for using the new control files:



An update of the Tanuki Java Service Wrapper to version 3.5.42 is necessary.

Further documentation:

- [Updating the FirstSpirit backend](#)
- [Installing via install archive](#)
- [Controlling the FirstSpirit Server in Unix operating systems](#)
- [Controlling the FirstSpirit Server in Windows operating systems](#)

7 Template development

7.1 Extended output options for snippets

At many points in the FirstSpirit clients the presentation of objects (pages, sections, datasets, media, etc.) can be influenced, for example in search result lists, reports, selection dialogs, etc. The so-called “Snippets” are used for this. The configuration is done on the “Snippet” tab of the respective template, for media on the “Snippet” tab of the metadata template selected for the project.

As of the current release, the output options for snippets have been extended. For example, the display name or the UID of the desired element can be output. For this purpose, you can now use the variable

```
#item
```

in the fields “Label” and “Extract” on the “Snippet” tab.

It returns the respective tree element. Object-specific methods from the interface `IDProvider` (FirstSpirit Access API, package `de.espirit.firstspirit.access.store`) can in turn be applied to this.

Examples

```
#item.getDisplayName(#language)
```

Outputs the display name of the respective object in the respective language.



```
#item.Uid
```

Outputs the UID of the respective object.

Example

```
#item.getDisplayName(#language)  
"[UID:" + " " + italic(#item.getUid) + "]"
```

For **datasets**, the use of `#item.getDisplayName()` is not allowed, as this will output the snippet itself. Instead, the default value for the snippet will be displayed (data source name and ID of the dataset, separated by a # character. For example, the GID of a dataset can be specified using

```
#item.getEntity().getGid()
```

Furthermore, `#item` is not available in the data type **Card**.

For **media** (snippets of the Metadata Template) the following variables are additionally available:

- *#medium*: provides information on the medium in XML format (**PICTURE** or **FILE**)
- *#mediumtype*: identifies whether the medium is an image or a file (**PICTURE** or **FILE**)
- *#extension*: identifies the file extension
- *#filename*: identifies the file name
- *#filesize*: determines the file size in bytes
- *#mimetype*: identifies the MIME type
- *#resolution*: determines the dimensions of the image in pixels (only for **PICTURE**)

Example

Label:

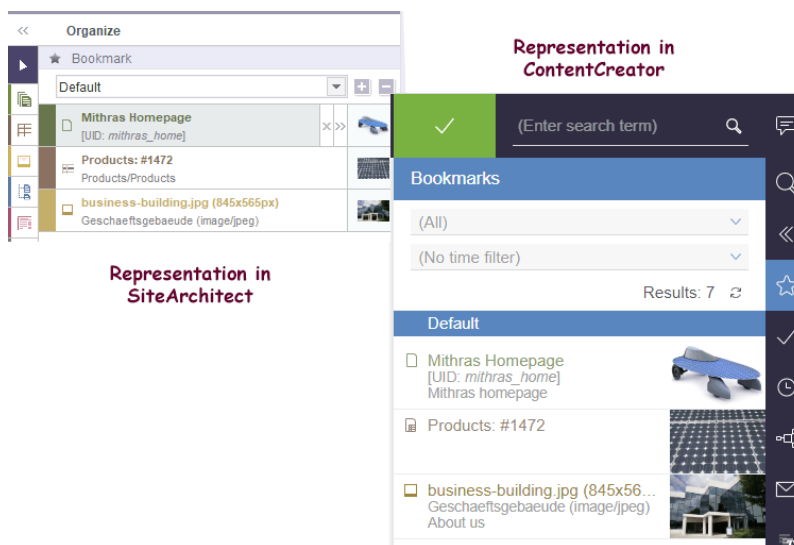



```
#filename + "." + #extension + if(#mediumtype == "Picture", "(" + #resolution
+ "px)", "")
```

Extract:

```
#item.displayName(#item.project.masterLanguage) + "(" + #mimetype + ")"
```

Gives as title the file name with file extension and the resolution of the selected medium, as text extract the display name and the MIME type.



! In exceptional cases, for example when creating objects, #item is not available and a warning of the type `java.lang.UnsupportedOperationException` or `java.lang.RuntimeException` will be logged ("Expression failed"). This should be taken into account during template development.

For further information about snippets please see *FirstSpirit Online Documentation*, <https://docs.e-spirit.com/odfs/template-develo/snippets/index.html>.



8 Deprecations

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

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

Functionality	Deprecated as of	Will be removed/ Was removed as of
Input component FS_LIST	5.2R3	January 2020
Input component CMS_INPUT_CONTENTAREALIST	5.2R3	
Input component CMS_INPUT_CONTENTLIST	5.2R3	
Input component CMS_INPUT_FILE	5.2R3	
Input component CMS_INPUT_LINKLIST	5.2R3	
Input component CMS_INPUT_OBJECTCHOOSER	5.2R3	
Input component CMS_INPUT_PAGEREF	5.2R3	
Input component CMS_INPUT_PICTURE	5.2R3	
Input component CMS_INPUT_TABLIST	5.2R3	
FirstSpirit Developer API: de.espirit.firstspirit.agency.GroupsAgent	5.2R15	
FirstSpirit Access API: delete (de.espirit.firstspirit.access.AccessUtil)	5.2R18	
Windows installation program	2018-06	June 2020
FirstSpirit Access API: release (de.espirit.firstspirit.access.AccessUtil)	2018-06	



Functionality	Deprecated as of	Will be removed/ Was removed as of
FirstSpirit Developer API: getLastLoginAsDate (de.espirit.firstspirit.agency.UserStatisticsAgent)	2018-07	
FirstSpirit Developer API: remainingDurationOfCurrentStageInMillis (de.espirit.firstspirit.server.MaintenanceModelInfo)	2018-07	
FirstSpirit Developer API: getStartingTimeOfStageAsDate (de.espirit.firstspirit.server.MaintenanceModelInfo)	2018-07	
FirstSpirit Access API: getSelectedWebserverConfiguration (de.espirit.firstspirit.access.serverConfiguration)	2018-10	
FirstSpirit Access API: setSelectedWebserverConfiguration (de.espirit.firstspirit.access.serverConfiguration)	2018-10	
FirstSpirit Access API: getSelectedWebServer (de.espirit.firstspirit.access.project.Project)	2018-10	
FirstSpirit Access API: setSelectedWebServer (de.espirit.firstspirit.access.project.Project)	2018-10	
FirstSpirit Developer API: getLostAndFoundStoreNodes(); (de.espirit.firstspirit.feature.FeatureInstallResult)	2018-10	
FirstSpirit Developer API: getDeletedStoreNodes(); (de.espirit.firstspirit.feature.FeatureInstallResult)	2018-10	
FirstSpirit Access API: de.espirit.firstspirit.access.store.Previewable	2019-01	
Java 8 support for FirstSpirit	2019-05	June 2020
WebSphere Application Server support for FirstSpirit	2019-05	
Legacy mode for the FirstSpirit server and module development	2019-06	
Java Web Start support for FirstSpirit	2019-10	June 2020



Functionality	Deprecated as of	Will be removed/ Was removed as of
FirstSpirit ContentCreator (old design / old technology)	2019-11	July 2020
Mithras Energy demo project	2020-02	June 2020

9 Overview

ID	Description	Categories
CORE-3312	<p>Via “FirstSpirit ServerManager / Project properties / Template sets / Delete”, you can now delete template sets for a project. This action cannot be undone.</p> <p>Further information can be found in chapter “Administration: ServerManager: Deleting template sets”.</p>	FirstSpirit Administrator, ServerManager, Template Store
CORE-10498 CORE-11555	<p>The output options for snippets have been extended (<code>#item</code> and others).</p> <p>Further information can be found in chapter “Template development: Extended output options for snippets”.</p>	Developer, Editor, FirstSpirit API, Snippets
CORE-11516	<p>When copying elements using the <code>AccessUtil.copyStoreElement</code> method, contents were not copied in rare cases.</p>	Developer, FirstSpirit API
CORE-11522	<p>An error was fixed that could cause folder structures from the file system not to be transferred to the FirstSpirit Media Store when using the Media Import Wizard.</p>	Media Store, SiteArchitect
CORE-11772 CORE-11786	<p>Internal software has been updated in the latest FirstSpirit release.</p> <p>Further information can be found in chapter “System: Updates to integrated third-party software”.</p>	FirstSpirit Administrator, Integrated software, Java, Launcher, Modules
CORE-11808 CXT-652	<p>New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects.</p> <p>Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect “UrlSupporting” for URL generation”.</p>	Data Access Plug-In, Developer, Editor, FirstSpirit Content Experience Tools (CXT), FragmentCreator, Media



ID	Description	Categories
CORE-11857	<p>An input component developer can now provide the form element's (e.g. input component's) model references via the aspect <code>FormReferenceContaining</code>, with the method <code>List<Reference> collectFormReferences(FormElement)</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor</code>).</p> <p>Further information can be found in chapter "Module Development, Scripts, API: New Aspect "FormReferenceContaining" (provide a form element's model reference)".</p>	Developer, FirstSpirit API, Template Development
CORE-11859	<p>During start-up of a FirstSpirit server, information about the current runlevel is provided. An error has been fixed, which caused the runlevel of the FirstSpirit server to be incorrect (after a restart) when using an external web server, unless the external web server was also restarted. This error had no effect on the functionality of the web applications. Now the correct runlevel is reached at the latest 15 minutes after starting the FirstSpirit server.</p>	Server Administrator, Web server
CORE-11878	<p>A potential memory leak in ContentCreator has been fixed.</p>	ContentCreator, FirstSpirit Administrator
CORE-11919	<p>The control files for Windows and Linux operating systems have been enhanced with the current FirstSpirit release. The new control files support a range of functions that were not available in the previous control files (including <code>install</code> under Linux). This new development's result can be tested as part of an Early Access Program (EAP). The use in productive environments is not recommended at this time.</p> <p>Further information can be found in chapter "System: FirstSpirit server: New control files for Windows and Linux".</p>	Launcher, Server Administrator
CORE-11932	<p>Rollout of the new ContentCreator for all customers</p> <p>Further information can be found in chapter "ContentCreator: New ContentCreator: Rollout for all customers".</p>	ContentCreator, Editor, FirstSpirit Administrator, Modules, ServerManager



ID	Description	Categories
CORE-11992	<p>A vulnerability has been discovered in the Apache JServ Protocol (AJP) binary communication protocol used by Tomcat (Ghostcat CVE-2020-1938). The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31). We also recommend checking the AJP Connector configuration in each installation and adjusting it if necessary, as the AJP Connector was activated by default in the <code>server.xml</code> configuration file before the above-mentioned versions.</p> <p>Further information can be found in chapter “Security: Apache Tomcat AJP: Vulnerability (Ghostcat) ”.</p>	FirstSpirit Administrator, Security, Server Administrator, Web server
CORE-11993	<p>Due to the change from Java EE to Jakarta EE and the associated change of namespace (package) in Tomcat 10, FirstSpirit is currently not compatible with Tomcat 10.</p> <p>Further information can be found in chapter “Administration: FirstSpirit is currently not compatible with Tomcat 10”.</p>	FirstSpirit Administrator, Server Administrator, Web server
CXT-652 CORE-11808	<p>As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i>.</p> <p>Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using “DataAccessPlugins””.</p>	Data Access Plug-In, Developer, Editor, FirstSpirit Content Experience Tools (CXT), FragmentCreator, Media
CXT-742	<p>Content from the FragmentCreator can also be edited in the ContentCreator if configured accordingly. Modifications are now visible in the preview directly when the corresponding form is closed, not only after a manual update of the preview page.</p>	ContentCreator, Editor, FirstSpirit Content Experience Tools (CXT), FragmentCreator
CXT-1224	<p>With the current release the information on the current project, the FirstSpirit version used, and the FirstSpirit license can be copied again in the new ContentCreator using the “Copy to clipboard” icon. Previously an error message of the type <code>UncaughtTypeError</code> could occur when using Google Chrome.</p>	ContentCreator, Developer, Editor



ID	Description	Categories
CXT-1245	<p>With the current release, the handling of project selection has been improved.</p> <p>Further information can be found in chapter “ContentCreator: Project selection”.</p>	ContentCreator, Editor, FirstSpirit home page, Project switch
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.	Editor, FirstSpirit Administrator, FirstSpirit Content Experience Tools (CXT), FragmentCreator, Security
CXT-1296	In rare cases, pages that were newly created in the ContentCreator were not displayed directly in the preview.	ContentCreator, Editor
CXT-1300	<code>WE_API.Common.getDisplayLanguage()</code> (interface <code>Common</code> , package <code>de.espirit.firstspirit.webedit.client.api</code> , FirstSpirit Developer API) now also returns the display language in the new ContentCreator (instead of previously <i>undefined</i>).	ContentCreator, Developer, Languages
CXT-1301	The language display in the new ContentCreator has been corrected (interface language).	ContentCreator, Developer, Editor, Workflow
CXT-1302 CXT-803 CXT-1297	<p>The input component <code>CMS_INPUT_DATE</code> is used to enter the date and/or time.</p> <p>Display and persistence in the FragmentCreator now work correctly. For example, the <code>mode</code> is now correctly taken into account and the selected time is now also displayed.</p>	Developer, Editor, FirstSpirit Content Experience Tools (CXT), FragmentCreator, Input Components
CXT-1308	Improved behavior of the new ContentCreator when using modules with incompatible libraries.	ContentCreator, Developer, FirstSpirit API, Module development



ID	Description	Categories
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.	Developer, FirstSpirit Administrator, FirstSpirit Content Experience Tools (CXT), FragmentCreator, Modules
CXT-1359	An error in the browser “Chromium” in combination with FirstSpirit Omnichannel Manager could lead to drag-and-drop not being possible in the new ContentCreator (e.g. when moving menu levels via “ACTIONS / Edit navigation”).	ContentCreator, Editor, FirstSpirit Omnichannel Manager

10 Categories

10.1 Workflow

ID	Description
CXT-1301	The language display in the new ContentCreator has been corrected (interface language).

10.2 ContentCreator

ID	Description
CORE-11878	A potential memory leak in ContentCreator has been fixed.
CORE-11932	Rollout of the new ContentCreator for all customers Further information can be found in chapter “ContentCreator: New ContentCreator: Rollout for all customers”.
CXT-742	Content from the FragmentCreator can also be edited in the ContentCreator if configured accordingly. Modifications are now visible in the preview directly when the corresponding form is closed, not only after a manual update of the preview page.
CXT-1224	With the current release the information on the current project, the FirstSpirit version used, and the FirstSpirit license can be copied again in the new ContentCreator using the “Copy to



ID	Description
	clipboard” icon. Previously an error message of the type <code>UncaughtTypeError</code> could occur when using Google Chrome.
CXT-1245	With the current release, the handling of project selection has been improved. Further information can be found in chapter “ContentCreator: Project selection”.
CXT-1296	In rare cases, pages that were newly created in the ContentCreator were not displayed directly in the preview.
CXT-1300	<code>WE_API.Common.getDisplayLanguage()</code> (interface <code>Common</code> , package <code>de.espirit.firstspirit.webedit.client.api</code> , FirstSpirit Developer API) now also returns the display language in the new ContentCreator (instead of previously <i>undefined</i>).
CXT-1301	The language display in the new ContentCreator has been corrected (interface <code>language</code>).
CXT-1308	Improved behavior of the new ContentCreator when using modules with incompatible libraries.
CXT-1359	An error in the browser “Chromium” in combination with FirstSpirit Omnichannel Manager could lead to drag-and-drop not being possible in the new ContentCreator (e.g. when moving menu levels via “ACTIONS / Edit navigation”).

10.3 Data Access Plug-In

ID	Description
CORE-11808 CXT-652	New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects. Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect "UrlSupporting" for URL generation”.
CXT-652 CORE-11808	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> . Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using "DataAccessPlugins””.



10.4 Input Components

ID	Description
CXT-1302	The input component CMS_INPUT_DATE is used to enter the date and/or time.
CXT-803	Display and persistence in the FragmentCreator now work correctly. For example, the <code>mode</code> is now correctly taken into account and the selected time is now also displayed.
CXT-1297	

10.5 Developer

ID	Description
CORE-10498	The output options for snippets have been extended (<code>#item</code> and others).
CORE-11555	Further information can be found in chapter "Template development: Extended output options for snippets".
CORE-11516	When copying elements using the <code>AccessUtil.copyStoreElement</code> method, contents were not copied in rare cases.
CORE-11808	New interface <code>UrlSupporting</code> for "DataAccessPlugins", which can be used to generate URLs for data objects.
CXT-652	Further information can be found in chapter "Module Development, Scripts, API: DAP: New aspect "UrlSupporting" for URL generation".
CORE-11857	An input component developer can now provide the form element's (e.g. input component's) model references via the aspect <code>FormReferenceContaining</code> , with the method <code>List<Reference> collectFormReferences(F formElement)</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor</code>).
	Further information can be found in chapter "Module Development, Scripts, API: New Aspect "FormReferenceContaining" (provide a form element's model reference)".
CXT-652	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> .
CORE-11808	Further information can be found in chapter "FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using "DataAccessPlugins"".



ID	Description
CXT-1224	With the current release the information on the current project, the FirstSpirit version used, and the FirstSpirit license can be copied again in the new ContentCreator using the “Copy to clipboard” icon. Previously an error message of the type <code>UncaughtTypeError</code> could occur when using Google Chrome.
CXT-1300	<code>WE_API.Common.getDisplayLanguage()</code> (interface <code>Common</code> , package <code>de.espirit.firstspirit.webedit.client.api</code> , FirstSpirit Developer API) now also returns the display language in the new ContentCreator (instead of previously <i>undefined</i>).
CXT-1301	The language display in the new ContentCreator has been corrected (interface language).
CXT-1302	The input component <code>CMS_INPUT_DATE</code> is used to enter the date and/or time.
CXT-803 CXT-1297	Display and persistence in the FragmentCreator now work correctly. For example, the <code>mode</code> is now correctly taken into account and the selected time is now also displayed.
CXT-1308	Improved behavior of the new ContentCreator when using modules with incompatible libraries.
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.

10.6 FirstSpirit Content Experience Tools (CXT)

ID	Description
CORE-11808 CXT-652	New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects. Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect “UrlSupporting” for URL generation”.
CXT-652 CORE-11808	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> . Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using “DataAccessPlugins””.



ID	Description
CXT-742	Content from the FragmentCreator can also be edited in the ContentCreator if configured accordingly. Modifications are now visible in the preview directly when the corresponding form is closed, not only after a manual update of the preview page.
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.
CXT-1302	The input component CMS_INPUT_DATE is used to enter the date and/or time.
CXT-803 CXT-1297	Display and persistence in the FragmentCreator now work correctly. For example, the mode is now correctly taken into account and the selected time is now also displayed.
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.

10.7 FirstSpirit Omnichannel Manager

ID	Description
CXT-1359	An error in the browser “Chromium” in combination with FirstSpirit Omnichannel Manager could lead to drag-and-drop not being possible in the new ContentCreator (e.g. when moving menu levels via “ACTIONS / Edit navigation”).

10.8 FirstSpirit home page

ID	Description
CXT-1245	With the current release, the handling of project selection has been improved. Further information can be found in chapter “ContentCreator: Project selection”.



10.9 FirstSpirit Administrator

ID	Description
CORE-3312	<p>Via “FirstSpirit ServerManager / Project properties / Template sets / Delete”, you can now delete template sets for a project. This action cannot be undone.</p> <p>Further information can be found in chapter “Administration: ServerManager: Deleting template sets”.</p>
CORE-11772 CORE-11786	<p>Internal software has been updated in the latest FirstSpirit release.</p> <p>Further information can be found in chapter “System: Updates to integrated third-party software”.</p>
CORE-11878	A potential memory leak in ContentCreator has been fixed.
CORE-11932	<p>Rollout of the new ContentCreator for all customers</p> <p>Further information can be found in chapter “ContentCreator: New ContentCreator: Rollout for all customers”.</p>
CORE-11992	<p>A vulnerability has been discovered in the Apache JServ Protocol (AJP) binary communication protocol used by Tomcat (Ghostcat CVE-2020-1938). The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31). We also recommend checking the AJP Connector configuration in each installation and adjusting it if necessary, as the AJP Connector was activated by default in the <code>server.xml</code> configuration file before the above-mentioned versions.</p> <p>Further information can be found in chapter “Security: Apache Tomcat AJP: Vulnerability (Ghostcat)”.</p>
CORE-11993	<p>Due to the change from Java EE to Jakarta EE and the associated change of namespace (package) in Tomcat 10, FirstSpirit is currently not compatible with Tomcat 10.</p> <p>Further information can be found in chapter “Administration: FirstSpirit is currently not compatible with Tomcat 10”.</p>
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions



ID	Description
	Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.

10.10 FirstSpirit API

ID	Description
CORE-10498	The output options for snippets have been extended (<code>#item</code> and others).
CORE-11555	Further information can be found in chapter “Template development: Extended output options for snippets”.
CORE-11516	When copying elements using the <code>AccessUtil.copyStoreElement</code> method, contents were not copied in rare cases.
CORE-11857	An input component developer can now provide the form element's (e.g. input component's) model references via the aspect <code>FormReferenceContaining</code> , with the method <code>List<Reference> collectFormReferences(F formElement)</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor</code>). Further information can be found in chapter “Module Development, Scripts, API: New Aspect “FormReferenceContaining” (provide a form element's model reference)”.
CXT-1308	Improved behavior of the new <code>ContentCreator</code> when using modules with incompatible libraries.

10.11 FragmentCreator

ID	Description
CORE-11808	New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects.
CXT-652	Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect “UrlSupporting” for URL generation”.
CXT-652	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> .
CORE-11808	



ID	Description
	Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using "DataAccessPlugins"”.
CXT-742	Content from the FragmentCreator can also be edited in the ContentCreator if configured accordingly. Modifications are now visible in the preview directly when the corresponding form is closed, not only after a manual update of the preview page.
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.
CXT-1302	The input component CMS_INPUT_DATE is used to enter the date and/or time.
CXT-803 CXT-1297	Display and persistence in the FragmentCreator now work correctly. For example, the mode is now correctly taken into account and the selected time is now also displayed.
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.

10.12 Integrated software

ID	Description
CORE-11772	Internal software has been updated in the latest FirstSpirit release.
CORE-11786	Further information can be found in chapter “System: Updates to integrated third-party software”.

10.13 Java

ID	Description
CORE-11772	Internal software has been updated in the latest FirstSpirit release.
CORE-11786	Further information can be found in chapter “System: Updates to integrated third-party software”.



10.14 Launcher

ID	Description
CORE-11772	Internal software has been updated in the latest FirstSpirit release.
CORE-11786	Further information can be found in chapter “System: Updates to integrated third-party software”.
CORE-11919	<p>The control files for Windows and Linux operating systems have been enhanced with the current FirstSpirit release. The new control files support a range of functions that were not available in the previous control files (including <code>install</code> under Linux). This new development's result can be tested as part of an Early Access Program (EAP). The use in productive environments is not recommended at this time.</p> <p>Further information can be found in chapter “System: FirstSpirit server: New control files for Windows and Linux”.</p>

10.15 Media

ID	Description
CORE-11808	New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects.
CXT-652	Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect "UrlSupporting" for URL generation”.
CXT-652	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> .
CORE-11808	Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using "DataAccessPlugins””.

10.16 Media Store

ID	Description
CORE-11522	An error was fixed that could cause folder structures from the file system not to be transferred to the FirstSpirit Media Store when using the Media Import Wizard.



10.17 Module development

ID	Description
CXT-1308	Improved behavior of the new ContentCreator when using modules with incompatible libraries.

10.18 Modules

ID	Description
CORE-11772	Internal software has been updated in the latest FirstSpirit release.
CORE-11786	Further information can be found in chapter “System: Updates to integrated third-party software”.
CORE-11932	Rollout of the new ContentCreator for all customers
	Further information can be found in chapter “ContentCreator: New ContentCreator: Rollout for all customers”.
CXT-1334	FirstSpirit Content Experience Tools: Latest module versions
	Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Latest module versions”.

10.19 Project switch

ID	Description
CXT-1245	With the current release, the handling of project selection has been improved.
	Further information can be found in chapter “ContentCreator: Project selection”.

10.20 Editor

ID	Description
CORE-10498	The output options for snippets have been extended (#item and others).
CORE-11555	



ID	Description
	Further information can be found in chapter “Template development: Extended output options for snippets”.
CORE-11808 CXT-652	New interface <code>UrlSupporting</code> for “DataAccessPlugins”, which can be used to generate URLs for data objects. Further information can be found in chapter “Module Development, Scripts, API: DAP: New aspect "UrlSupporting" for URL generation”.
CORE-11932	Rollout of the new ContentCreator for all customers Further information can be found in chapter “ContentCreator: New ContentCreator: Rollout for all customers”.
CXT-652 CORE-11808	As of the current release, project-specific referencing options can be made available in the markdown editor <i>Quill</i> . Further information can be found in chapter “FirstSpirit Content Experience Tools (CXT): Markdown: Creating links using "DataAccessPlugins””.
CXT-742	Content from the FragmentCreator can also be edited in the ContentCreator if configured accordingly. Modifications are now visible in the preview directly when the corresponding form is closed, not only after a manual update of the preview page.
CXT-1224	With the current release the information on the current project, the FirstSpirit version used, and the FirstSpirit license can be copied again in the new ContentCreator using the “Copy to clipboard” icon. Previously an error message of the type <code>UncaughtTypeError</code> could occur when using Google Chrome.
CXT-1245	With the current release, the handling of project selection has been improved. Further information can be found in chapter “ContentCreator: Project selection”.
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.
CXT-1296	In rare cases, pages that were newly created in the ContentCreator were not displayed directly in the preview.
CXT-1301	The language display in the new ContentCreator has been corrected (interface language).
CXT-1302 CXT-803	The input component <code>CMS_INPUT_DATE</code> is used to enter the date and/or time.



ID	Description
CXT-1297	Display and persistence in the FragmentCreator now work correctly. For example, the <code>mode</code> is now correctly taken into account and the selected time is now also displayed.
CXT-1359	An error in the browser “Chromium” in combination with FirstSpirit Omnichannel Manager could lead to drag-and-drop not being possible in the new ContentCreator (e.g. when moving menu levels via “ACTIONS / Edit navigation”).

10.21 Snippets

ID	Description
CORE-10498	The output options for snippets have been extended (<code>#item</code> and others).
CORE-11555	Further information can be found in chapter “Template development: Extended output options for snippets”.

10.22 Server Administrator

ID	Description
CORE-11859	During start-up of a FirstSpirit server, information about the current runlevel is provided. An error has been fixed, which caused the runlevel of the FirstSpirit server to be incorrect (after a restart) when using an external web server, unless the external web server was also restarted. This error had no effect on the functionality of the web applications. Now the correct runlevel is reached at the latest 15 minutes after starting the FirstSpirit server.
CORE-11919	<p>The control files for Windows and Linux operating systems have been enhanced with the current FirstSpirit release. The new control files support a range of functions that were not available in the previous control files (including <code>install</code> under Linux). This new development's result can be tested as part of an Early Access Program (EAP). The use in productive environments is not recommended at this time.</p> <p>Further information can be found in chapter “System: FirstSpirit server: New control files for Windows and Linux”.</p>
CORE-11992	A vulnerability has been discovered in the Apache JServ Protocol (AJP) binary communication protocol used by Tomcat (Ghostcat CVE-2020-1938). The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31). We



ID	Description
	<p>also recommend checking the AJP Connector configuration in each installation and adjusting it if necessary, as the AJP Connector was activated by default in the <code>server.xml</code> configuration file before the above-mentioned versions.</p> <p>Further information can be found in chapter “Security: Apache Tomcat AJP: Vulnerability (Ghostcat)”.</p>
CORE-11993	<p>Due to the change from Java EE to Jakarta EE and the associated change of namespace (package) in Tomcat 10, FirstSpirit is currently not compatible with Tomcat 10.</p> <p>Further information can be found in chapter “Administration: FirstSpirit is currently not compatible with Tomcat 10”.</p>

10.23 ServerManager

ID	Description
CORE-3312	<p>Via “FirstSpirit ServerManager / Project properties / Template sets / Delete”, you can now delete template sets for a project. This action cannot be undone.</p> <p>Further information can be found in chapter “Administration: ServerManager: Deleting template sets”.</p>
CORE-11932	<p>Rollout of the new ContentCreator for all customers</p> <p>Further information can be found in chapter “ContentCreator: New ContentCreator: Rollout for all customers”.</p>

10.24 Security

ID	Description
CORE-11992	<p>A vulnerability has been discovered in the Apache JServ Protocol (AJP) binary communication protocol used by Tomcat (Ghostcat CVE-2020-1938). The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31). We also recommend checking the AJP Connector configuration in each installation and adjusting it</p>



ID	Description
	<p>if necessary, as the AJP Connector was activated by default in the <code>server.xml</code> configuration file before the above-mentioned versions.</p> <p>Further information can be found in chapter “Security: Apache Tomcat AJP: Vulnerability (Ghostcat)”.</p>
CXT-1290	The security of the MicroApp Framework and the FragmentCreator has been increased, particularly with regard to cross-site request forgery attacks.

10.25 SiteArchitect

ID	Description
CORE-11522	An error was fixed that could cause folder structures from the file system not to be transferred to the FirstSpirit Media Store when using the Media Import Wizard.

10.26 Languages

ID	Description
CXT-1300	<code>WE_API.Common.getDisplayLanguage()</code> (interface <code>Common</code> , package <code>de.espirit.firstspirit.webedit.client.api</code> , FirstSpirit Developer API) now also returns the display language in the new ContentCreator (instead of previously <i>undefined</i>).

10.27 Template Store

ID	Description
CORE-3312	<p>Via “FirstSpirit ServerManager / Project properties / Template sets / Delete”, you can now delete template sets for a project. This action cannot be undone.</p> <p>Further information can be found in chapter “Administration: ServerManager: Deleting template sets”.</p>



10.28 Template Development

ID	Description
CORE-11857	<p>An input component developer can now provide the form element's (e.g. input component's) model references via the aspect <code>FormReferenceContaining</code>, with the method <code>List<Reference> collectFormReferences(F formElement)</code> (FirstSpirit Developer API, package <code>de.espirit.firstspirit.client.access.editor</code>).</p> <p>Further information can be found in chapter "Module Development, Scripts, API: New Aspect "FormReferenceContaining" (provide a form element's model reference)".</p>

10.29 Web server

ID	Description
CORE-11859	<p>During start-up of a FirstSpirit server, information about the current runlevel is provided. An error has been fixed, which caused the runlevel of the FirstSpirit server to be incorrect (after a restart) when using an external web server, unless the external web server was also restarted. This error had no effect on the functionality of the web applications. Now the correct runlevel is reached at the latest 15 minutes after starting the FirstSpirit server.</p>
CORE-11992	<p>A vulnerability has been discovered in the Apache JServ Protocol (AJP) binary communication protocol used by Tomcat (Ghostcat CVE-2020-1938). The vulnerability is classified as critical. e-Spirit therefore recommends a prompt update to a secure Tomcat version (8.5.51 or 9.0.31). We also recommend checking the AJP Connector configuration in each installation and adjusting it if necessary, as the AJP Connector was activated by default in the <code>server.xml</code> configuration file before the above-mentioned versions.</p> <p>Further information can be found in chapter "Security: Apache Tomcat AJP: Vulnerability (Ghostcat)".</p>
CORE-11993	<p>Due to the change from Java EE to Jakarta EE and the associated change of namespace (package) in Tomcat 10, FirstSpirit is currently not compatible with Tomcat 10.</p> <p>Further information can be found in chapter "Administration: FirstSpirit is currently not compatible with Tomcat 10".</p>

