

# COREMEDIA CONTENT CLOUD

## Release Notes



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# 1. Preface

This manual contains the release notes for all *CoreMedia Content Cloud* releases. You will find the latest version of this manual at the following URL: <https://documentation.coremedia.com/cmcc-10/release-notes>.

# 1.1 Audience

This manual is intended for everyone interested in the detailed changes between *Core-Media Content Cloud* releases. It is specifically intended for developers and operators who want to update their CoreMedia system.

## 1.2 Typographic Conventions

This manual contains different fonts and types in order to label different elements. The following table lists typographic conventions for this documentation:

Element	Typographic format	Example
Source code	Courier new	<code>cm systeminfo</code>
Command line entries		
Parameter and values		
Menu names and entries	Bold, linked with	Open the menu entry <b>Format Normal</b>
Field names	Italic	Enter in the field <i>Heading</i>
CoreMedia Components		The <i>CoreMedia Component</i>
Entries	In quotation marks	Enter "On"
(Simultaneously) pressed keys	Bracketed in "<>", linked with "+"	Press the keys <Ctrl>+<A>
Emphasis	Italic	It is <i>not</i> saved
Buttons	Bold, with square brackets	Click on the <b>[OK]</b> button
Glossary entry	>>-shaped icon	>> LDAP
Code lines in code examples which continue in the next line	\	<code>cm systeminfo \ -u user</code>

Table 1.1. Typographic conventions

## 2. Overview

*CoreMedia Content Cloud* releases have one of the following types:

- **Advanced Maintenance Pack (AMP)** contain mostly bug fixes and minor improvements. AMPs are kept free of breaking changes, meaning that projects usually have only minor upgrade work to carry out, for example merging and regression testing.
- **Advanced Enhancement Pack (AEP)** also contain bug fixes and improvements. But they also include new features and enhancements, which might be breaking. Therefore, projects are often required to carry out upgrade tasks.

The very first AEP release of a new major version (for example, CoreMedia CMS 9) that is available to all customers, is also called the **General Availability (GA)** release.

The release overview site at <https://releases.coremedia.com/cmcc-10/overview/archive.html> provides an overview of all available release versions of *CoreMedia Content Cloud*.

Subscribe to the help center at <https://support.coremedia.com/hc/en-us/sections/360005297394-CoreMedia-Content-Cloud-Self-Managed> to receive notifications about release and product announcements.

The release notes of *CoreMedia Content Cloud* are sorted by the main modules of the CoreMedia system. Each section bundles details about a number of technical components as shown in the following table:

- **CoreMedia Core:** All changes related to the CoreMedia core components.
  - Content Server
  - Workflow Server
  - Content Application Engine (CAE)
  - Content Feeder
  - Importer
  - Site Manager
  - Search Engine
  - Command Line Tools
- **CoreMedia Studio:** All changes related to *CoreMedia Studio*
- **CoreMedia Elastic Social:** All changes related to Elastic Social
- **CoreMedia Adaptive Personalization:** All changes related to Adaptive Personalization
- **CoreMedia Frontend:** All changes related to the CoreMedia Frontend Workspace.

*Release types*

*Available releases*

*Helpcenter*

*Module organization*

Templates

Bricks

Themes

- **CoreMedia Headless Server:** All changes related to CoreMedia Headless Server
- **CoreMedia Workspace:** All changes related to the CoreMedia Workspace.
- **CoreMedia Deployment:** All changes related to the CoreMedia Deployment.
- **Miscellaneous:** All changes which cannot be assigned to a specific module.



# 3. Software License Agreement Changes

This notice is to inform you of some important changes to our software license agreement, beginning with the general availability of CoreMedia Content Cloud version 10 (CMCC 10).

CMCC 10 introduces new software add-on components that require a separate license, specifically:

- CoreMedia Content Hub
- CoreMedia Experience Feedback Hub
- CoreMedia Commerce Hub

The following components require a license for CoreMedia Commerce Hub:

- CoreMedia Connector for Salesforce Commerce Cloud
- CoreMedia Connector for SAP Commerce Cloud
- CoreMedia Connector for HCL Commerce
- CoreMedia Marketing Automation Hub

The following components require a license for CoreMedia Commerce Hub:

- CoreMedia Connector for Salesforce Marketing Cloud

For more details, see the file marked Schedule 1 Product Specification CMCC.

CoreMedia plans to release more Hubs and Connectors in the future and reserves the right to amend the software license agreement with regards to these new components and connectors.

## Existing Customers

Existing CoreMedia customers may be entitled to the Commerce Hub component and connector at no additional cost. Additional connectors may need to be licensed.

A license for the first three adapters for the components Content Hub and Experience Feedback Hub is included in your existing software license agreement; additional connectors will require a license upgrade.

## Software License Agreement Changes |

For full details regarding your contract please contact your CoreMedia account manager.

## 4. Release Information

This chapter contains all release notes for CoreMedia Content Cloud ordered by release version. Each release version shows the changes to its predecessor. Each subsection provides the following information:

- Notable highlights of the release.
- Breaking changes, which require action on your side. The necessary steps are described later in the upgrade section of this document.
- Changes and improvements that introduce new features or change behavior. These usually do not require any action.
- The issues that are fixed with this release.

## 4.1 Release 2010.3

The release contains:

- Breaking changes: 4
- Changes and improvements: 23
- Bugfixes: 117

Only issues which contain release notes are shown in this document. So, the numbers in the list above can be higher than the number of issues presented in the subsections.

### 4.1.1 Breaking Changes

#### CoreMedia Core

##### Unauthorized Live Rule Removal

`com.coremedia.cap.content.authorization.AccessControl` provides some methods for rule removal. If you try to remove a rule for a content group without having the SUPERVISE right, the methods fail with an exception. However, for rules of live groups, the methods failed silently. Now, they throw exceptions in this case too. This means that code using these methods will fail upon such errors, where it used to continue before. If you still want your code to continue in case of such errors, wrap these calls in try-catch blocks.

*[CMS-18214]*

#### CoreMedia Content Application Engine

##### Fixed default/initial http cache control configuration and documentation

Default/initial HTTP cache control configurations regarding and documentation have been fixed and harmonized.

Follow [Section "Fixed default/initial http cache control configuration and documentation" \[60\]](#) for upgrade information.

*[CMS-18869]*

## CoreMedia Headless Server

Headless did not respond with JSON properties and proper HTTP response code when requesting via a non existing site filter

Headless responds now with a real json response and the correct content type 'application/json'. As this bugfix changes the behaviour, this update is considered potentially breaking. Customers should check their client application whether they rely on the old behaviour.

[CMS-18620]

## Miscellaneous

Third-Party Update: hibernate-validator

`hibernate-validator` library has been updated to version 6.1.7-FINAL to avoid a security vulnerability of the previous used version 5.4.3-FINAL (CVE-2020-10693). The library is mainly used for URL validation in Studio Server but might also be used in project code. Unfortunately, there is no CVE-fix available for the previous 5.4.x release so that we had to upgrade to a newer major version which is considered a small breaking change. Please review your custom code carefully and check if you are still compatible with this version update.

[CMS-19099]

## 4.1.2 Changes and Improvements

### CoreMedia Core

Runlevel based health indicator added to the content-server application

A runlevel based health indicator has been added to the content-server application. The endpoint is available at `:8081/actuator/health/runlevel`. The indicator will be set to:

- UP if the runlevel is `ONLINE` or `MAINTENANCE`
- DOWN, if the runlevel is `ADMINISTRATION` or `OFFLINE`

[CMS-18871]

### Third-Party Update: Apache Tika and Transitive Dependencies

Apache Tika has been updated to version 1.25. As part of this change, the following transitive dependencies of Apache Tika have been updated to match versions used by Tika. Some of these updates fix known security vulnerabilities: CVE-2020-28052 (Bouncy Castle), CVE-2020-8908 (Guava), CVE-2020-13956 (Http Client).

#### Updated dependencies:

- com.google.guava:guava: 30.0-jre
- com.rometools:rome: 1.15.0
- commons-codec:commons-codec: 1.15
- commons-io:commons-io: 2.8.0
- jakarta.xml.bind:jakarta.xml.bind-api: 2.3.3
- org.apache.commons:commons-lang3: 3.11
- org.apache.httpcomponents:httpclient: 4.5.13
- org.apache.httpcomponents:httpmime: 4.5.13
- org.apache.pdfbox:pdfbox: 2.0.21
- org.apache.tika:tika-core: 1.25
- org.apache.tika:tika-parsers: 1.25
- org.bouncycastle:bcmail-jdk15on: 1.67
- org.bouncycastle:bcpkix-jdk15on: 1.67
- org.bouncycastle:bcprov-jdk15on: 1.67
- org.glassfish.jaxb:jaxb-runtime: 2.3.3
- org.ow2.asm:asm: 9.0

If you use the libraries in project code, please check their respective release notes for changes and upgrade information. No changes were necessary in the CoreMedia Blueprint for these updates.

[CMS-18720]

### Runlevel actuator endpoint added

The content-server application now has a runlevel endpoint to get the current runlevel or change the runlevel. The endpoint is available at `:8081/actuator/endpoint` and can be enabled by setting the property `management.endpoint.runlevel.enabled=true`. The endpoint is disabled by default. To change the runlevel you can send a HTTP POST request i.e.

```
/usr/bin/curl -X POST \  
-H "Content-Type: application/json" \  
-d '{"runlevel": "MAINTENANCE", "gracePeriod": 30}' \  
\
```

```
http://localhost:8081/actuator/runlevel
```

The runlevels are:

- ONLINE
- MAINTENANCE
- ADMINISTRATION
- OFFLINE

[CMS-18578]

## CoreMedia Content Application Engine

### Smooth migration from legacy to current hash generating strategy.

Since the existing `DefaultSecureHashCodeGeneratorStrategy` used for securing blob transformation was considered vulnerable to possible DoS attacks, a new default `MD5SecureHashCodeGeneratorStrategy` was introduced with version 10.2007.

The new `MD5SecureHashCodeGeneratorStrategy` won't match hashes created by the former `DefaultSecureHashCodeGeneratorStrategy`. Cached URLs would cause a HTTP 403 [forbidden] status code. Therefore CoreMedia now provides a smooth migration path by using a strategy which will accept hashes created by both, the `DefaultSecureHashCodeGeneratorStrategy` and the `MD5SecureHashCodeGeneratorStrategy`. New hashes will be created using the new `MD5SecureHashCodeGeneratorStrategy`.

The migration mode may be enabled by setting `cae.hashing.migration-mode=true`.

[CMS-18868]

### Runlevel based health indicator added to the Spring-Boot health actuator

A runlevel based health indicator has been added to all repository clients. The indicator will be available at `:8081/actuator/health/uapiconnectionreadiness`. The indicator will be set to:

- UP if the connection is available
- DOWN if the connection is disrupted
- DOWN if the connection will be unavailable
- DOWN if the connection is unavailable

Because the indicator will be DOWN if the connection will be unavailable because of a runlevel change with a grace period, this endpoint can be used in a Kubernetes environment as a readiness probe to make sure a repository client such as the CAE or the Headless-Server will be removed from the Service endpoints and won't receive traffic.

With this change the existing `:8081/actuator/health/repositoryhealth` check has been renamed to `:8081/actuator/health/uapiconnectionhealth`.

[CMS-18579]

## CoreMedia Studio Client

### Display number of folder items in library for folders with less than 50 items

When selecting a folder in the library the number of items was only shown if there were more than 49. This restriction has been removed so the number of items is now always shown. For this a new resource bundle key `CollectionView_number_of_items_in_selected_folder_singular` has been added.

[CMS-18550]

## CoreMedia Headless Server

### Headless Server now collecting cache metrics

The headless server is now collecting cache metrics for monitoring purposes.

[CMS-19062]

## 4.1.3 Fixed Issues

### Fixed type error when aborting a workflow

Fixed a type error when a workflow was aborted in Studio.

```
Uncaught TypeError: this$.backToListHandler$2G1D is not a function
```

[CMS-19133]

### Fix StackoverflowError in Studio Server when starting sync workflow

Fixed a bug that caused a StackoverflowError in the Studio Server when a synchronization workflow was started for content with illegal cyclic master link structures.



[CMS-19119]

### Third-Party Update: Spring Security

Spring Security has been updated to version 5.2.9.RELEASE to avoid a security vulnerability of the previous version [CVE-2021-22112].

[CMS-19098]

### Third-Party Update: Tomcat

Tomcat has been updated to version 9.0.43 to avoid security vulnerabilities of the previous version [CVE-2020-17527, CVE-2021-25122, CVE-2021-25329].

[CMS-19082]

### Third-Party Update: Jetty

Jetty has been updated to version 9.4.38.v20210224 to avoid a security vulnerability of the previous version [CVE-2020-27223].

[CMS-19081]

### "Content Creation" settings not always taken into account for "Create New Content" Dialog

Due to a race condition the "Content Creation" Settings document wasn't always taken into account when suggestion a folder for the "Create New Content" dialog. This has been fixed now.

[CMS-19079]

### Update of Mongo Java Driver

The thirdparty dependencies org.mongodb:mongodb-driver-legacy, org.mongodb:mongodb-driver-core and org.mongodb:bson have been updated from version 4.1.0 to 4.2.2.

[CMS-19077]

### Usage of legacy theme descriptor no longer causes error in theme build

If you were still using a theme descriptor instead of the new (and recommended) theme configuration a recent upgrade of our third party tools caused the theme build to fail. This has been fixed now.

[CMS-19020]

### Library no longer creates new folder when changing directories

The bug happened when changing into a different directory from the list or thumbnail view of the library and immediately double clicking or pressing "return" depending on the number of content items that need to be loaded before the new directory is displayed. This has now been fixed.

[CMS-19014]

### Fixed QuickCreate Dialog Error

Fixed JS error in QuickCreate dialog that occurred when the default name was applied.

[CMS-19005]

### Third-Party Update: Netty

Netty has been updated to version 4.1.59.Final to avoid a security vulnerability of the previous version [CVE-2021-21290].

[CMS-18996]

### Fixed Taxonomy Renaming

Fixed problem that taxonomy documents have not been renamed on change according to their *value* property.

[CMS-18987]

### Cache eviction problem fixed in PageByPathAdapter

The related cache for the PageByPathAdapter was not evicted correctly, which may have caused memory problem.

[CMS-18966]

### Embedded Blobs in RichText: Fixed Race-Condition Regarding Lock-Symbol

Due to timing issues you may have observed a lock-symbol representing an embedded Blob in RichText Property Fields in CoreMedia Studio for Blobs which are readable.

This was due to a timing issue, which has been fixed now.

[CMS-18945]

### Pagegrid Editor shows no parent although a parent exists

Deleted parents are now correctly filtered in Studio Client when calculating the parent for a placement. `ChildrenLinkListContentTreeRelation` now uses the first content from the incoming links ("referrers") that `isInProduction() == true`.

[CMS-18926]

### Custom RichText Style Classes: Fixed Possible Button-State Problems

This issue refers to *Adding Custom RichText Style Classes* as described in Studio Developer Manual: Having configured style-classes which are contained in others, you may have observed invalid button states in the toolbar of the RichText Property Field in CoreMedia Studio.

Example: If you have two classes `color-black` and `background-color-black`, you may have observed the state of `color-black` to be enabled, while only `background-color-black` got selected before.

This has been fixed now.

[CMS-18899]

### Updated frontend dependencies

Frontend Workspace dependencies were upgraded to prevent a jest issue on mac OS.

[CMS-18888]

### Underscore in folder name is no longer taken into account for properties files

Building the frontend workspace has led to problems regarding the file name of resource bundles if one of the folders has contained an underscore. This has been fixed now.

[CMS-18852]

### Replacing deprecated configuration of Spring Boot

The Spring Boot configuration `server.use-forward-headers=true` was replaced by `server.forward-headers-strategy=native`.

[CMS-18840]

### Prefetch Configuration Fix

A bug in the lookup of content type specific prefetch configuration was fixed. The `PrefetchConfigContentTypeDispatcher` could have wrongly reported no content type specific prefetch configuration due to parallel/unsynchronized access to `PrefetchConfigContentTypeDispatcher#configuredContentTypes`. With the fix, the lookup of prefetch settings now also uses more modern Settings API.

[CMS-18836]

### Fixed bug that required exact case in LDAP user name for login

Fixed the bug that prevented LDAP users to log in with a user name that differed in case. It's now possible again to log in with a name that differs in case, if the LDAP user provider ignores case when returning a user for some name. Note, that the login for built-in users always requires exact case.

[CMS-18825]

### Fixed CAE Feeder Application Start Delay

Fixed a bug that caused a long startup phase for the CAE Feeder.

[CMS-18823]

### Third-Party Update: Checker Framework

The Checker Framework has been updated to version 3.7.1.

The Checker Framework can be used to verify usage of personal data during compilation as described in the Blueprint Developer Manual, section "Handling Personal Data". The new version is required for this to work with Java 11 versions above 11.0.6.

[CMS-18794]

### Fixed Disabled ComboBox And Checkout On Tab Reuse

We fixed a bug where ComboBoxes were disabled after Studio tab reuse (sometimes even a document checkout happened).

[CMS-18793]

### Fixed Non-Disappearing LoadMask on Studio Tab Reuse

We fixed a bug where a load mask stayed forever over an opened document if this document's name contained HTML-encoded characters.

[CMS-18792]

### Fixed suppression of gRPC exceptions and prevented empty cache objects in catalog service

In previous versions, all types of gRPC status exceptions in the catalog service were caught and only logged with *debug* messages. This led to empty catalog objects being cached.

When catalog objects cannot be found now, no empty objects are cached anymore and an *info* message is logged. All other exceptions are not caught.

[CMS-18789]

### The Studio Tab Reuse Default Limit Can Now be Overridden in Studio Plugins

We fixed a bug where the Studio tab reuse default limit (`ReusableDocumentFormTab-sPlugin`) could not be overridden in Studio plugins following the `BlueprintFormsStudioPlugin`.

[CMS-18785]

### User Changes MongoDB Performance

The *User Changes App*, the *Studio Server*, and the *Workflow Server* make better use of MongoDB indices when CapList instances like "My Edited Content" are persisted in MongoDB. This improves the performance, and will reduce the MongoDB server load, especially if many such lists are stored in MongoDB.

[CMS-18759]

### Third-Party Update: Jackson Databind

Jackson Databind has been updated to version 2.10.5.1 to avoid a security vulnerability of the previous version (CVE-2020-25649).

[CMS-18754]

### Third-Party Update: Hibernate Core

Hibernate Core has been updated to version 5.4.27.Final to avoid a security vulnerability of the previous version (CVE-2020-25638).

[CMS-18752]

### Third-Party Update: Groovy

Groovy has been updated to version 2.4.21 to avoid a security vulnerability of the previous version (CVE-2020-17521).

[CMS-18751]

### Multi-Site: Enhance Robustness For Restricted Permission Scenarios

In previous releases the CoreMedia Multi-Site feature failed if in a given sites-structure any of the master-sites was unreadable by the current user. Most obvious symptom: In Studio this user with restricted permissions is unable to select a preferred site.

This has been fixed within `Site#getMasterSite()` which will now return `null` for unreadable master sites.

[CMS-18724]

### Struct Editor: Blobs can now also be uploaded to Blob[-List]-Properties within Struct Lists

When using the upload blob dialog of the `Struct Editor` blob (list) properties nested within Struct lists are now properly handled. Before the fix the upload was just ignored.

[CMS-18719]

### Fixed favicon image file upload error

Studio failed to upload favicon image files with mime types `image/x-icon` and `image/vnd.microsoft.icon`. This is fixed now.

[CMS-18717]

### Ignore actuator paths for CSRF prevention

The actuator paths (with pattern `/actuator/*`) are now ignored for CSRF prevention to allow write operations on actuators (like setting log levels).

[CMS-18711]

### Make InternalLinkWindow component more robust

The component `InternalLinkWindow` in Studio was not robust enough to handle missing values for the attribute `'_xlink:show'` in richtext. Now the default link type 'replace' is used.

[CMS-18708]

### Fix warning which occurred during Studio Server Start

A warning (including a Stacktrace) was logged during the Start of Studio Server *Failed to find Liquibase changeSet file for file* . This has been fixed

[CMS-18707]

### Columns of the user grid can now be resized

The columns of the user grid found inside the User Manager can now be resized.

[CMS-18673]

### CodeResourceHandler now respects 'cae.single-node' for single Resources

`com.coremedia.blueprint.cae.handlers.CodeResourceHandler#contentResource` did not set the `Cache-Control` header correctly. A Blueprint CAE node configured with `cae.single-node=false` which is unable to serve the requested version of a resource now sends `Cache-Control: no-store` along with the outdated version of the resource.

[CMS-18636]

### XML Importer

The `Xmlexporter`'s `DifferencingTransformer` supports struct properties now.

[CMS-18619]

### Made TaxonomyResource Bean a Singleton

The `TaxonomyResource` bean was configured to be a prototype. It is now a singleton bean.

[CMS-18570]

### Fixed Local Start for CAE Feeder

Fixed the bug that the `CAE Feeder` could not be started locally for development from an IntelliJ IDEA run configuration.

[CMS-18564]

### Fixed Solr hostname and port disclosure with malicious REST request

It was possible to create a manipulated bad Studio search request which produces an internal server error with an error message text produced by Solr containing the hostname and port. This error is caught now.

[CMS-18530]

### Metadata for type and interface extensions

Metadata information can now be added for type and interface extensions.

[CMS-18521]

### Fixed missing 0 value in slider tip in position menu of advanced teasers

The vertical slider in the position menu of advanced teasers didn't show a 0 value in its tip, only void . This is fixed now.

[CMS-18457]

### Make DifferencesWindow component scrollable

With too many differences the differences window did cut off entries outside the window view. This is fixed now.

[CMS-18412]

### Configurable Limit for "My Edited Content"

The new Spring property "userchanges.max-length" for the *User Changes App* can be used to configure the maximum length of users' "My Edited Content" lists for automatic update by the *User Changes App* . If the maximum has been reached, no further edited contents will be added to the list by the *User Changes App* . The default is unlimited ( `Integer#MAX_VALUE` ) to keep the existing behavior, for backwards-compatibility.

It is recommended to configure a maximum that can still be handled by editors, and is a lot lower than the maximum number of contents that can be stored in a MongoDB document. The latter depends on the length of stored document IDs but can be estimated to something around 600.000 contents.

Also, the performance of the User Changes App has been improved when it needs to process many repository changes.

[CMS-18409]

### Replicator state health indicator added to the Replication Servers

The replication server has now a health indicator added to reflect the state of the replication process. The indicator is available at `:8081/actuator/replicator` . The indicator will be set to:

- UP if the replication process is working
- DOWN if the replication process is not working

In addition the indicator can switch to DOWN if the event lag between master-live-server and the replicator exceeds a threshold. The threshold can be configured using the property `management.health.replicator.uncompleted-events-threshold` . The threshold can be disabled by setting it to `-1` , which is the default.

The indicator itself is disabled by default in the `coremedia/content-server` image as the image is also being used for content-management-server and master-live-server. In the docker-compose development setup the indicator has been enabled using the environment variable `MANAGEMENT_HEALTH_REPLICATOR_ENABLED` .

[CMS-18230]

### Fixed Blueprint GuidCookieHandler

GuidCookieHandler, which is responsible to set a cookie to recognize a returning anonymous customer, reads GUID value from Cookie now instead of ThreadLocal, which led to not recognizing customers in some cases, i.e. after sending a Customer Review, the newly created Customer Review was not shown without multiple reloads.

[CMS-18159]

### DeadLinkValidator returns multiple issues per content property

The DeadLinkValidator returned only the first issue for a given content property to validate. Now the validator has a property `maxIssues` with a default value of 20 for the maximum number of returned issues per content property. So if a content has a linklist property with 20 deleted content references, all 20 issues are returned in the default case.

[CMS-18042]

### Fixed RSA key handling of Blueprint Elastic Social GuidCookieHandler

Fixed a bug in the code dealing with the private RSA key for the signed GUID served by `com.coremedia.blueprint.elastic.social.cae.guid.GuidCookieHandler` that caused OpenJDK newer than 11.0.6 to reject the configured private key if it wasn't created by the CAE itself.

[CMS-17311]

### Show image upload errors

An image upload could have failed without showing any error message in the Studio. This is fixed now. A message box appears with an error text.

[CMS-17301]

### Make BindPlugin robust against write errors

In rare situations when trying to write a value to an invalid struct, the BindPlugin received an AS error which was not caught and caused the whole Studio to be unusable. A reload was required. This is fixed now. The BindPlugin catches the error and reports it to the console.

[CMS-17198]

### Fixed calculation of cardinality in ContentLinkListWrapper

If a struct entry did not exist the cardinality of the property was calculated as "-1". This has been fixed now so. For non existing struct properties the cardinality of link lists is now `int.MAX_INT`.

[CMS-15845]



### Fixed Lookup of ViewTypes

Fixed issue with attribute *paths* of the *ViewTypeSelectorForm*. This attribute allows to set fix loop paths for view type but included other folders of the type hierarchy anyway. The type hierarchy and the corresponding folder lookup is ignored now again.

[CMS-15167]

### Ordered and unordered list can be both selected in richtext toolbar (overflow menu)

Button events in the `RichTextPropertyField` are now passed to the containing toolbar. States between toolbar buttons and corresponding checkboxes in the toolbar overflow menu are now synced correctly.

[CMS-12955]

### Fixed Translation Auto Merge for Deleted Content

Fixed the bug that Studio showed a warning about a merge conflict for a translation workflow, if a content item was deleted and removed from a link list in the master site.

[CMS-12430]

## 4.2 Release 2010.2

The release contains:

- Breaking changes: 2
- Changes and improvements: 17
- Bugfixes: 30

Only issues which contain release notes are shown in this document. So, the numbers in the list above can be higher than the number of issues presented in the subsections.

### 4.2.1 Breaking Changes

#### CoreMedia Core

##### Fixed: Contents May Have Been Removed from Translation Workflow for No Obvious Reason

**Context:** The content property `ignoreUpdates`, which is used for synchronized sites, to block receiving updates from master, accidentally made it to nested derived sites, which, as one possible effect prevented contents in derived sites from receiving any updates via translation. This is true for any workflows using `FilteredDerivedContentsAction`.

Follow [Section "Fixed: Contents May Have Been Removed from Translation Workflow for No Obvious Reason" \[62\]](#) for upgrade information.

*[CMS-18511]*

#### CoreMedia Content Application Engine

##### Single and bulk resource patterns and TTLs for cache control in live CAE have been fixed

The single resources pattern for the cache control configuration in live CAE didn't have any effect because of too many escape characters in the pattern. This has now been fixed. Furthermore, the bulk resource pattern has been improved to not mix up with the single resource pattern, and both cache TTL values for these pattern have been increased to 365 days. Please be aware that with this AMP release the cache control TTLs might change, if you use the default settings.

[CMS-18368]

## 4.2.2 Changes and Improvements

### CoreMedia Studio

#### Added config option `richTextMode` to `TeaserOverlayPropertyFieldBase`

When the new option `richTextMode` is set to `false` (the default) in class `com.coremedia.cms.editor.sdk.premular.fields.teaser.TeaserOverlayPropertyFieldBase` the class works as before, that is no richtext editing is possible when no style is selected in the style chooser. Otherwise richtext editing is always possible and the toolbar buttons are enabled.

[CMS-14243]

### CoreMedia Studio Client

#### Checkin and Revert are now available in the Context Menu of the Translation Tree

The Context menu of the `TranslationTree` now provides two additional options that allow a `checkin` and `revert` of the selected elements.

[CMS-18377]

#### Fixed accessibility issues for richtext area and taxonomies

To support screen readers like JAWS the following issues have been fixed:

1. The `contenteditable` attribute of a richtext area always has value `true`. If the component is read-only, making changes is not possible.
2. Taxonomy tags have an additional `aria-label` attribute containing the taxonomy path.
3. Taxonomy search only shows tag suggestions which are not already selected.

[CMS-18340]

### CoreMedia Headless Server

#### Localized variants via site filtered endpoints are configurable

The concept of a site filtered GraphQL endpoint prevents, that related content objects of a filtered content, not belonging to that site, can be retrieved over that endpoint. This

behaviour may become unhandy for some special cases, e.g. localized variants or derived sites.

In order to overcome this limitation, the new configuration property '`caas.site-filter-config-properties.excluded-field-names`' was introduced. The property takes a collection of field names and defaults to "`localizedVariant`", "`localizedVariants`" and "`derivedSites`".

The default configuration now permits, that localized contents belonging to a related site can be retrieved, although a site filter is used. If necessary, additional fields, e.g. 'pictures' can be added, if linked pictures belong to another site.

See the Deployment Manual for details.

[CMS-18221]

## Miscellaneous

### Third-Party Update: PostgreSQL Driver

The PostgreSQL driver has been updated to version 42.2.18.

[CMS-18585]

### rootApp configuration in studio-resources pom.xml now uses groupId

The groupId "`com.coremedia.blueprint`" was hard coded for the rootApp configuration in the pom.xml of studio-resources. The groupId is now set via `$\{project.groupId\}`.

[CMS-18540]

### PostgreSQL 13.0 Support

CMCC now supports PostgreSQL 13.0.

[CMS-17660]

### MySQL 8.0 Support

CMCC now supports MySQL 8.0. The name **System** became a reserved word in MySQL 8. Therefore if you refer to the table **System** you need to use backticks (``System``).

[CMS-11229]

## 4.2.3 Fixed Issues

### Fixed CVE-2020-15250 for JUnit < 4.13.1

Fixed security issue regarding JUnit Rule `TemporaryFolder` by updating to JUnit 4.13.1.

For details see: [TemporaryFolder on unix-like systems does not limit access to created files - Advisory - junit-team/junit4](#)

[CMS-18630]

### CVE-2020-27216: Jetty Updated to 9.4.35

Jetty has been updated to 9.4.35.v20201120 to address [CVE-2020-27216](#) [Creation of Temporary File With Insecure Permissions].

All Jetty artifacts managed by `org.eclipse.jetty:jetty-bom` are affected, including:

- `org.eclipse.jetty.http2.http2-client`
- `org.eclipse.jetty.http2.http2-common`
- `org.eclipse.jetty.jetty-client`
- `org.eclipse.jetty.jetty-server`
- `org.eclipse.jetty.jetty-servlet`
- `org.eclipse.jetty.jetty-util`

[CMS-18629]

### Fixed Dataview Initialization for Autowired Dependencies

Dataviews did not receive autowired dependencies of the origin class if the original content bean was replaced with an extended content bean class. Only customizations of the Blueprint which both extended `CMQueryListImpl` and replaced the original `"contentBeanFactory:CMQueryList"` content bean were affected by this bug.

[CMS-18615]

### Fixed Solr Core Creation in Docker Setup

Fixed a bug in the script for the creation of Solr cores at a Solr Slave server in `apps/solr/docker/solr/src/docker/bin/config.sh`.

[CMS-18614]

### XLIFF-Export: Fixed Possible CapTranslateItemException for Master without Derived

In previous CMCC releases you may have experienced a `CapTranslateItemException` like:

```
CapTranslateItemException: Master aspect does not have any matching derived target contents
```

As for actions like `FilteredDerivedContentAction` it is a common approach removing derived target contents from a translation process, the behavior got changed in that way, that this state is ignored. Thus, for a given master without derived targets, no translation item, and as a result no XLIFF file will be generated.

[CMS-18523]

### ArrayStoreException when querying settings fixed

When querying for settings in a content object, an `ArrayStoreException` occurred, when using the 'paths' query parameter with nested path lists.

[CMS-18520]

### Editorial Comments: Support for multiple hibernate data sources

A bug has been fixed which prevented to define a custom hibernate connection next to the editorial comments hibernate connection. All beans of hibernate, jpa and liquibase for editorial comments are now injected by name instead of type.

[CMS-18418]

### Liquibase not executed with every Studio-Server startup anymore

The database migration tool Liquibase was executed with every start of a Studio Server instance. When the start of the Studio Server was interrupted during the execution of Liquibase, it was possible that a lock on the database remained, which had to be removed manually.

Now Liquibase will only be executed when the database needs to be migrated. If the database is up to date, Liquibase will not run.

[CMS-18387]

### Customize Annotation not working in CaasConfig

The `@Customize` annotation was not executed. Therefore the the Spring bean "content-SegmentStrategyMap" was not customized correctly and the related map was empty.

[CMS-18321]

### Content Hub: details request respects that entity might be null

The request `/details` of the Content Hub rest service assumed that an entity is always available when details are requested. Now the request delivers an error when the entity can't be found.

[CMS-18298]

### TransformedBlobHandler sends uncacheable response if blob hash does not match

TransformedBlobHandler sends uncacheable response if blob hash does not match. The TransformedBlobHandler uses `HandlerBase#isSingleNode` and the external configuration option `cae.single-node` to control this behavior.

[CMS-18048]

### Made CAE SameSite Cookie strategy configurable

The config options prefixed `cae.cookie` control the CAE's behavior when sending cookies. It is now possible to configure the value of the `SameSite` attribute and whether or not to force all cookies to `Secure` and `HttpOnly`.

[CMS-17573]

### XLIFF-Import: Fixed possible `IllegalArgumentException` for Struct Lists

If you had exported Struct entries of type `List<Struct>` with the option `EMPTY_IGNORE` enabled, you may have experienced an `IllegalArgumentException` like *a list of length 1 was entered at position 2, which does not exist*.

This has been fixed.

[CMS-17572]

### Fixed type error "Cannot read property 'parentNode' of null"

When to-dos in a project in Studio are filtered for a selected day and when the 'Show all to-dos' button is clicked, the type error mentioned above appears. This has been fixed now.

[CMS-17215]

### Error in CKDialogBase

- Throwing NPE fixed
- Event behavioral change to support validation by typing
- Url field shows validation

[CMS-16095]

### Avoid clear text passwords in SAP OAuth2 Calls in commerce adapter

User and userGroup that can be passed to the preview token service are configurable. By default the property `hybris.previewTokenUser` is set to "anonymous". If you do not

want any user to be passed for preview tickets, just configure `hybris.previewTokenUser` and leave it blank.

[CMS-15815]

### Fixed CAE Feeder bug that caused missing changes

Fixed a bug in the *CAE Feeder* that caused some updates to be ignored in rare cases. The workaround for this bug was to restart the *CAE Feeder* application, which caused it to replay these missing updates. With this bug fix, this isn't necessary anymore.

Furthermore, a related bug was fixed that some documents were re-indexed after re-starting the *CAE Feeder*, even though the documents were already up to date. This also happened in rare cases only.

[CMS-14695]

### DatePropertyField is now editable by typing

A bug has been fixed where the `DatePropertyField` prevented users from edit the date by typing because the field directly wrote the new value even if the value is invalid. This lead to a bad request and the value was resetted to its original valid value.

[CMS-13886]



## 4.3 Release 2010.1

### Highlights in this Release

- Tools to transfer Content UUIDs between different environments
- SAP Commerce Cloud 2005 support
- Integration of commercetools via Commerce Hub Adapter
- Headless Server personalization and other optimizations
- Override default usernames with meaningful display names and emails
- Improved tag selection dialog
- AWS S3 now available as Contentserver media storage
- HTTP/2 now supported in Docker Deployments



The release contains:

- Breaking changes: 30
- Changes and improvements: 82
- Bugfixes: 180

Only issues which contain release notes are shown in this document. So, the numbers in the list above can be higher than the number of issues presented in the subsections.

### 4.3.1 Breaking Changes

#### CoreMedia Core

##### Content Server Database Change

When the *Content Server* starts the first time after upgrading from version 2004 or 2007, it will automatically adapt database tables and remove existing unique constraints for the `versionUuid` column of all document type tables. For Microsoft SQL Server and IBM DB2, and when upgrading from 2007.1, wrong unique constraints are also removed from the `uuid` column of tables `CmUsers` and `CmGroups`.

Follow [Section "Content Server Database Change" \[65\]](#) for upgrade information.

[CMS-18049]

### Update of mongo-java-driver

The mongo-java-driver 3.11.2 has been updated to mongodb-driver-legacy 4.1.0 and mongodb-driver-core 4.1.0. This change required breaking changes as several classes and methods have been deprecated.

Follow [Section "Update of mongo-java-driver" \[65\]](#) for upgrade information.

[CMS-17590]

### Fix for possible false calculation of Dependent Content for Synchronization-Workflow

When you use the Synchronization workflow from version 2007.1, it is necessary to reupload the `synchronization.xml`, to ensure that dependent content is calculated correctly for synchronization. Also the class `DefaultStartSynchronizationWorkflowFormBase` was adapted to ensure that values of additional workflow fields, implementing the `IAdditionalWorkflowDisplayField Mixin` are passed to the Synchronization workflow (the Translation workflow is not affected by this).

[CMS-17933]

### Corba over SSL

The SSL encryption of CORBA traffic was broken, so that a configured SSL port just served unencrypted data, equivalent to the clear text port. This has been fixed now.

[CMS-17723]

### Publisher monitoring

The JMX monitoring interface records failed publications due to an unavailable *Master Live Server* as failed publications now. Previously, such publications were not counted at all.

[CMS-16763]

### translate.xliff.export.excludeContentName defaults to true

Because translating content names may harm your system, the default for `translate.xliff.export.excludeContentName` has been changed from `false` to `true`. Having this, content names will by default not be part of your XLIFF anymore.

Follow [Section "translate.xliff.export.excludeContentName defaults to true" \[66\]](#) for upgrade information.

[CMS-16730]

### Localization Workflows: Automatic merge of Annotated LinkLists

In translation workflows, annotated LinkLists (`CMTeaser#targets` and `CMCollection#extendedItems`) were **not** merged automatically in previous releases, which lead to problems in derived content. Reason was, that the properties have been marked as "translatable" in the document type definition (`blueprint-doctypes.xml`). Now the "translatable" attribute has been removed to enable the automatic merge, and the improved merge algorithm for struct lists is configured for translation and synchronization workflows. To enable translation of the property `CMTeaser#targets.links.callToActionCustomText`, it is configured as "translatable expression". Note that the changed merge algorithm implicates a different merge behaviour for synchronization workflows.

*[CMS-16514]*

### cm serverimport: No Suppressed Errors Anymore

Previously, `cm serverimport` may have ignored errors on import silently unless you set the `--halt` option. Now, you will always get a warning on any error.

Follow [Section "cm serverimport: No Suppressed Errors Anymore" \[67\]](#) for upgrade information.

*[CMS-11155]*

## CoreMedia Studio

### Fixed Lazy Loading and Content Hiding in Repository View of the Library

The user preference "Show Products and Categories as Content" has been fixed. In addition to this, the lazy loading for the repository tree view has been fixed too.

Follow [Section "Fixed Lazy Loading and Content Hiding in Repository View of the Library" \[68\]](#) for upgrade information.

*[CMS-14533]*

## CoreMedia Studio Client

### Jangaroo Version Updates

To use the new feature of *lazy singletons*, Studio Client uses a new version of Jangaroo. Support for lazy singletons has been added to the run-time (in `jangaroo-libs` 4.0.52), which is fully compatible. The compiler (in `jangaroo-tools` 4.0.72) supports the new annotation `Lazy`, which is also not a breaking change. For details, see [J00-152](#). Note that the update also contains a number of [fixes and improvements](#) regarding type-checking, which may reveal type errors in ActionScript/MXML code. So in the unlikely

case that after the update, you encounter compile errors in Studio Client, please consult the above issues to fix those type errors in your code.

*[CMS-18179]*

### Moved classes `SitesService`, `Site`, `SiteModel`

The following public API Actionsript classes have been moved into the new module 'studio-client.multi-site-models'. They are now in the package 'com.coremedia.cms.studio.multisite.models.sites'. Otherwise, they kept their signature and behave as before.

Follow [Section "Moved classes SitesService, Site, SiteModel" \[69\]](#) for upgrade information.

*[CMS-18057]*

### New method in `IAdditionalWorkflowDisplayFieldMixin`

The new `remoteValidationCallback` method must be implemented by all `Fields`, implementing the `IAdditionalWorkflowDisplayFieldMixin`. The method `remoteValidationCallback` will be called after every workflow validation and allows the `Field` to adapt its validation state according to the returned workflow issues.

*[CMS-17575]*

### `WorkflowDateTimeField` can adapt validation state according to `WorkflowIssues`

The `WorkflowDateTime` field has a new property `issueKeysForValidationState`, which can be used to pass issue keys to the field. When a workflow validation produces issues with the severity warn or error and an issue key matches a value from the `issueKeysForValidationState`, the field will adapt its validation state.

*[CMS-17911]*

### `StartWorkflowFormBase` was adapted

The `StartWorkflowFormBase` now has a `StartWorkflowFormState` that can be used to pass the initial contents to the `Form`.

*[CMS-17843]*

## CoreMedia Workspace

### Activate HTTP2 (h2c) for studio-client container

With this change, the nginx webserver serving the static files of the studio-client application, will accept only http2 requests. In order to accept HTTP/1.1 you need to set the environment variable `PROTOCOL` to an empty value.

Follow [Section "Activate HTTP2 \(h2c\) for studio-client container" \[70\]](#) for upgrade information.

*[CMS-13480]*

## CoreMedia Frontend Workspace

### Updated Frontend Dependencies

The `frontend-maven-plugin` used in the frontend workspace has been updated to version 1.10.3. The frontend dependencies, have been updated to the latest versions and node.js to latest LTS version 14.15.0.

Follow [Section "Updated Frontend Dependencies" \[70\]](#) for upgrade information.

*[CMS-18481]*

### Product availability calculation

Product availability calculation has been changed in 2007.1 to no longer be based on the (deprecated) `Product#isAvailable`. The logic however did not cover the old default if no availability service was provided for the commerce integration. If this was the case the old implementation did return "true" while the implementation in 2007.1 did return "false". This was not intended, so we changed the logic back to return "true".

*[CMS-17979]*

## CoreMedia Deployment

### S3 media store configuration changed

The configuration of the media store `S3Store`, which maintains blobs in AWS S3, has changed. If you use a custom `S3Store` media store with an empty value for `storeDir`, no prefix for the blob path in the S3 bucket is applied now. The `S3Store` used to prepend an unnecessary `/` in this case. If you configure the `S3Store` by defining the property `cap.server.blobstore.s3.bucketname`, the default value for `cap.server.blobstore.s3.rootdir` is now an empty string and not `blobstore/file` as before.

Follow [Section "S3 media store configuration changed" \[71\]](#) for upgrade information.

*[CMS-16139]*

## CoreMedia Commerce Hub

### Use WCS adapter profiles with version specific configurations in compose file

Since version `1.3.14`, the `commerce-adapter-wcs` provides Spring profiles for the WCS/HCL versions that are supported. These profiles configure the suitable URLs that are required to connect to the WCS/HCL Commerce system. The environment variables that are passed to the `commerce-adapter-wcs` application have been changed in the

Docker Compose `commerce-adapter-wcs.yml` file to using these version profiles. The variables that are configured by the version profiles have been removed from the `commerce-adapter-wcs.yml`. If desired, it is still possible to set all properties in the `commerce-adapter-wcs.yml`.

*[CMS-18162]*

## CoreMedia Connector for HCL Commerce

### Removed deprecated API concerning product availability

The following deprecated methods of `com.coremedia.livecontext.ecommerce.catalog.Product` have been removed:

Follow [Section "Removed deprecated API concerning product availability" \[72\]](#) for upgrade information.

*[CMS-17790]*

## CoreMedia Connector for SAP Commerce Cloud

### SAP Commerce Cloud 2005 Support

SAP Commerce Cloud 2005 is supported now.

Follow [Section "SAP Commerce Cloud 2005 Support" \[73\]](#) for upgrade information.

*[CMS-17799]*

## CoreMedia Headless Server

### AssetSearchService in commerce extension now uses a dedicated SearchResultFactory

AssetSearchService in commerce extension now uses a dedicated SearchResultFactory. Furthermore the factory uses a default caching time of 300 seconds (=5 minutes). The caching time is configurable by the config parameter 'caas.commerce.assetsearchservice.cache.seconds'. The change is considered breaking as the caching time was previously set by 'caas.querylist.search.cache.seconds', which may contain a different value than the new default of 300 seconds.

Follow [Section "AssetSearchService in commerce extension now uses a dedicated SearchResultFactory" \[73\]](#) for upgrade information.

*[CMS-18188]*

### Update of graphql-java

The dependency `com.graphql-java:graphql-java` has been updated to version 15.0 and corresponding `com.graphql-java:graphql-java-spring-webmvc` to version 2.0. With the `graphql-java` update, non-standard scalars need to be defined explicitly now. For more breaking changes that may affect custom code, see release notes of `graphql-java`.

*[CMS-17662]*

### Set row limit for AssetSearchService with correct config value

Previously the row limit of the commerce `AssetSearchService`, used for linked objects on commerce objects, was set with a wrong config parameter. This is fixed, introducing a dedicated new config parameter: `'caas.commerce.assetsearchservice.limit'`. The default is `-1` = unlimited.

Follow [Section "Set row limit for AssetSearchService with correct config value" \[74\]](#) for upgrade information.

*[CMS-18158]*

### Headless now always sends JSON body with JSON properties and proper HTTP response code

Depending on the useragent, Headless Server sends the default Spring mvc white label error page, in case of invalid requests, for example, missing query. Headless Server now makes sure to always send a JSON body with dedicated JSON properties and the proper HTTP response code.

Follow [Section "Headless now always sends JSON body with JSON properties and proper HTTP response code" \[74\]](#) for upgrade information.

*[CMS-18039]*

## Miscellaneous

### Spring ConfigurationProperties for UserProvider

Spring ConfigurationProperties for UserProvider

Follow [Section "Spring ConfigurationProperties for UserProvider" \[75\]](#) for upgrade information.

*[CMS-16842]*

### Removed default image transformations

Since the first release of CoreMedia Content Cloud, `TransformImageService.getTransformations()` adds a fallback configuration (defined in Spring configuration `mediatransform.xml`) to the list of available transformations. If an image transformation is not defined in the `responsiveImageSettings`

settings content of the site then the corresponding default is applied. The `mediatransform.xml` included some default image transformations, which were overwritten in the Blueprint Demo sites. However, these defaults apply to new sites too even if these sites use completely different crops. This could lead to undesired results and for this reason we removed the default image transformations in `mediatransform.xml`.

Follow [Section "Removed default image transformations" \[76\]](#) for upgrade information.

*[CMS-16800]*

### Global image variants will be loaded when no site is available

The `TransformImageService` didn't find any image variant in the content repository if no site for the given content can be resolved. To resolve the global image variants as a fallback the interface `VariantsStructResolver` has been extended by the method `getGlobalVariants()` which returns the global variants from `"/Settings/Options/Settings/Responsive Image Settings"`.

*[CMS-18202]*

### Update Maven-Surefire-/Failsafe-Plugin to 3.0.0-M5 and test libraries

`maven-surefire-plugin` and `maven-failsafe-plugin` have been updated to 3.0.0-M5. This fixed a bug, that tests which failed within the setup phase of a test instance were not marked as failed.

Follow [Section "Update Maven-Surefire-/Failsafe-Plugin to 3.0.0-M5 and test libraries" \[77\]](#) for upgrade information.

*[CMS-17989]*

## 4.3.2 Changes and Improvements

### CoreMedia Core

#### Extended API for Implementations of `CommandLineClient`

CoreMedia introduced several extensions to assist implementing custom implementations of `CommandLineClient` and related.

- Some basic tool-handling moved from `CommandLineClient` to new parent class `com.coremedia.cmdline.BaseCommandLineClient`. This base client for example skips adding parameters for login credentials.



- **Automatic Synopsis:** Introduced `isAutoUsage ()` (default: `false`) which signals, that any options added will be automatically added to the command synopsis.
- `-?`, `--help`: Introduced methods for automatically handling usage options (default: `-?`, `--help`), which, when enabled and given, will print usage information and quit the tool immediately:
  - `understandsUsage ()` which defaults to return `false`. Override to enable usage options.
  - `addUsageOptions (Options)` which adds usage options.
  - `parseCommandLineHelp (CommandLine)` which parses usage options.
  - `printExplicitUsage (CommandLine)` called when `parseCommandLineHelp` recognized a help-parameter. Defaults to calling `getUsage ()` but may be customized to output other or additional information, based on the command line options passed to this method.

[CMS-18408]

### Import blob from generic URL in `cm serverimport`

The command line tool `cm serverimport` can import blobs with an arbitrary `href` attribute now. The container URL is retrieved and its content is persisted in the *Content Server*. This makes it easier to generate files for `cm serverimport` that reference preexisting blobs.

[CMS-18379]

### Third-Party Update: Apache Solr 8.6.3

Apache Solr has been updated to version 8.6.3, which fixes security vulnerability CVE-2020-13957.

For detailed changes of Apache Solr have a look at [https://lucene.apache.org/solr/8\\_6\\_3/changes/Changes.html](https://lucene.apache.org/solr/8_6_3/changes/Changes.html).

[CMS-18355]

### Third-Party Update: Apache Solr 8.6.2

Apache Solr has been updated to version 8.6.2, which fixes security vulnerability CVE-2020-13941.

For detailed changes of Apache Solr have a look at [https://lucene.apache.org/solr/8\\_6\\_2/changes/Changes.html](https://lucene.apache.org/solr/8_6_2/changes/Changes.html).

[CMS-18248]

### UUID Support for `dump-/restoreusers`

The command-line tools `dumpusers` and `restoreusers` are now able to store and restore UUIDs of built-in users and groups. For `dumpusers` you may toggle UUID

output via `\-\-include-uuids`. `restoreusers` will automatically respect the UUIDs when creating built-in users, unless `--skip-uuids` is given.

An additional option `\-\-force-uuids` for `restoreusers` will force changing UUIDs of already existing built-in users. Use this option with care.

For details and restrictions see Content Server Manual, Section *Configuration and Operation / Server Utility Programs / Operation*.

[CMS-17546]

### cm serverexport/-import: Supporting Content-UUIDs

To be able to transfer new contents between CMS deployments while keeping their Universally Unique Identifiers (UUIDs) synchronized, you may now optionally export contents via `cm serverexport` including their Content-UUIDs. To do so add `--include-uuids` to your command-line.

`cm serverimport` will recognize the UUIDs and will apply the Content-UUIDs to newly created contents. You may opt-out from this behavior by running `cm serverimport` with option `--skip-uuids`.

For details and limitations see Content-Server-Manual, section "Serverimport/Serverexport" in "Configuration and Operation".

**Upgrade Notes:** Unless you opt-in to exporting Content-UUIDs the behaviors of `serverexport` and `serverimport` have not changed.

[CMS-17139]

### Introducing Content-UUID-Migration Tooling

CoreMedia introduced three command-line tools, which are meant to support customers using multi-environment deployment like development and production, to synchronize UUIDs of documents. While for daily use, `serverexport` and `serverimport` have been extended before supporting export and import of content-UUIDs, these tools are meant to assist those, which had servers since before introducing UUIDs for contents.

The new tools will synchronize UUIDs of contents in two environments which share the same path and type.

#### Usage Example:

```
dev$ cm content-uuid-export -u <user> ... --output export.csv
prod$ cm generate-content-uuid-map ... --input export.csv --output merge.csv
prod$ cm content-uuid-import ... --input merge.csv
```

For details see usage information of tools provided with `--help` or have a look at the documentation of Server Utility Programs (Operation) in *Content Server Manual*, section *Content-UUID-Migration*.

[CMS-17000]

### Command line tools support REPOSITORY\_PASSWORD variable

Instead of providing the password to a command line tool using the `-p` option, you can alternatively set the environment variable `REPOSITORY_PASSWORD` now. The command line argument still takes precedence.

This avoids possible leaks of the password through the shell history or the process list. Do not set the password variable globally in an interactive shell, because it might then leak to other processes that are also started in the shell.

[CMS-14445]

### Serverexport now also exports timezone id

Until now serverexport did only export the timezone offset (e.g. +0200) and missed to export the timezone id (e.g. Europe/Berlin). As the timezone id is displayed in Studio forms a serverexport and reimport caused that the date was displayed wrong.

In the exported xml a date field looked like this:

```
<extDisplayedDate format="dd.MM.yyyy HH:mm:ss Z">27.06.2019 00:00:00 -0400</extDisplayedDate>
```

and has changed to:

```
<extDisplayedDate format="dd.MM.yyyy HH:mm:ss Z VV">27.06.2019 00:00:00 -0400 America/New_York</extDisplayedDate>
```

The behavior hasn't changed. Xml content files with dates in old format can still be imported but may cause a wrong displayed date in studio forms.

Affects the fields `extDisplayedDate` as well as `validFrom` / `validTo` from the default document type model.

[CMS-11665]

## CoreMedia Content Application Engine

### Cache capacities and timeouts can now be configured via common properties

Cache capacities and timeouts can now be configured via common properties. use

- `cache.capacities.<cacheIdentifier>`
- `cache.timeout-seconds.<cacheIdentifier>`

The following properties have been deprecated in favour of the new approach

- `aspect.cache.capacity`
- `assumesIdentity.cache.capacity`
- `cachekeysize.java.lang.object`
- `cae.viewdispatcher.cache.size`
- `com.coremedia.transform.loadedImageCacheCapacity`
- `contentBeanBackedPageGridPlacement.cache.capacity`
- `searchTermExternalReferenceResolver.cacheCapacity`
- `editorial.comments.data.cache.comments-cache-size`
- `editorial.comments.data.cache.qualifiers-cache-size`
- `editorial.comments.data.cache.threads-cache-size`
- `page.cache.capacity`
- `pageGridImpl.cache.capacity`
- `searchTermExternalReferenceResolver.cacheTime`

[CMS-13112]

### CMProduct ContentStringPropertyIndex Performance

Studio and CAE do not load deleted CMProduct contents anymore during startup for the `productCode` in-memory index (`ContentStringPropertyIndex`). This improves startup performance if there are lots of deleted CMProduct contents.

[CMS-12311]

## CoreMedia Studio

### New Preview Url Service Public API

Version 2007.1 introduced the content based multi preview configuration for Studio. Starting with 2007.2 the underlying implementation is available as a public API. Currently, the API is only used by Studio but the API is not limited to the usage in Studio. The API is available as a dependency and offers the possibility to develop custom so called `PreviewProviders` to be used in Studio or e.g. to implement a specialized external preview URL service as a standalone (micro-)service.

[CMS-17262]

## CoreMedia Studio Client

### Added 'taxonomyLinkListWrapper' config parameter for Taxonomy Link Lists

Added the new optional config parameter *taxonomyLinkListWrapper* for the component *TaxonomyLinkListPropertyField* so that it may be re-used outside Studio formular components.

[CMS-18195]

### Moved components and classes, new deprecations

In preparation for *Studio Apps* some classes which are not part of the Public API have been moved. Public-API classes have been deprecated and can be replaced with the mentioned replacements.

The following classes have been moved to a new module

Class: `CurrentWorkflowTaskInfoLabel.mxml`

- Previous package: `com.coremedia.cms.editor.controlroom.workflow`
- Newpackage: `com.coremedia.cms.studio.workflow.components`
- Newmavenmodule: `com.coremedia.cms:studio-client.workflow-ext-components`

Class: `CurrentWorkflowTaskInfoLabelBase.as`

- Previous package: `com.coremedia.cms.editor.controlroom.workflow`
- Newpackage: `com.coremedia.cms.studio.workflow.components`
- Newmavenmodule: `com.coremedia.cms:studio-client.workflow-ext-components`

Class: `WorkflowLocalizationUtils.as`

- New Classname: `ProcessDefinitionLocalizationUtils.as`
- Previous package: `com.coremedia.cms.editor.controlroom.workflow`
- Newpackage: `com.coremedia.cms.studio.workflow.components`
- Newmavenmodule: `com.coremedia.cms:studio-client.workflow-ext-components`

Class: `UIBehaviour.as`

- Previous package: `com.coremedia.cms.editor.sdk.util`
- New package: `com.coremedia.ui.util`
- New maven module: `com.coremedia.ui.toolkit:ui-components`

Class: `ProcessDefinitions.properties`

- Previous package: `com.coremedia.cms.editor`
- New package: `com.coremedia.cms.studio.workflow.components`
- New maven module: `com.coremedia.cms:studio-client.workflow-ext-components`

### Deprecations

Deprecated: `com.coremedia.cms.editor.sdk.premular.CollapsiblePanel.mxml`

- Replacement: `com.coremedia.ui.components.panel.CollapsiblePanel.mxml`
- Replacement Maven Module: `com.coremedia.ui.toolkit:ui-components`

Deprecated: `com.coremedia.cms.editor.sdk.premular.CollapsiblePanelBase.as`

- Replacement: `com.coremedia.ui.components.panel.CollapsiblePanelBase.as`
- Replacement Maven Module: `com.coremedia.ui.toolkit:ui-components`

Deprecated: `com.coremedia.cms.editor.sdk.premular.CollapsibleFormPanel.mxml`

- Replacement: `com.coremedia.ui.components.panel.CollapsibleFormPanel.mxml`
- Replacement Maven Module: `com.coremedia.ui.toolkit:ui-components`

[CMS-17908]

### New Warning Dialog for Localization Issues

When the user tries to start a localization workflow and there are localization warnings, a warning dialog appears to inform the user of the unresolved issues. The user can choose whether to continue or cancel the workflow. The dialog will not appear anymore when the 'Do not show again' checkbox is selected. In the Studio user preferences on

the 'Studio' tab the user can reset the hidden dialogs by pressing on the 'Show dialog messages again' button.

[CMS-17079]

### ShowIssuesPlugin: Limit Tooltip Entries

In tooltips, the `ShowIssuesPlugin` now limits the amount of displayed issues to 5 (per issues type).

[CMS-16200]

## CoreMedia Studio Server

### Security-Update of google-oauth library from 1.19 to 1.31.1

Due to a OWASP security warning the Google OAuth Library `com.google.oauth-client:google-oauth-client` was updated from V1.19 to the suggested version 1.31.1

<http://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2020-7692>

The transitive relationships of OAuth also made the update of the `google-libraries` `com.google.api-client:google-api-client` (1.19 to 1.30.6) and `com.google.http-client:google-http-client` (1.19 to 1.36.0) necessary.

This update is considered non-breaking but customers relying on these libraries in potential custom extensions should check the corresponding functionality.

[CMS-17896]

## CoreMedia Frontend Workspace

### Third-Party Update: copy-webpack-plugin has been updated

In the package `theme-utils` the `copy-webpack-plugin` has been updated to version 6.0.3 from 5.1.1 to avoid security issues of previous versions.

If you use a custom `copy-webpack-plugin` in project code, please check the respective release notes for changes and upgrade information. See <https://github.com/webpack-contrib/copy-webpack-plugin/releases>

[CMS-17955]

## CoreMedia Commerce Hub

### Default SAP Commerce Cloud Adapter changed to version 1.2.1

SAP Commerce Cloud 2005 is supported.

[CMS-18149]

### Default Salesforce Commerce Adapter changed to version 1.2.0

- SFCC-33: Product Variation Groups found by search are displayed as variants and not as products.
- Usage of `adapter.base.version` 1.4.5

[CMS-18148]

### Default HCL Commerce Adapter changed to version 1.3.13

There are more options to read the category for a product. The new config property `"wcs.alwaysUseMasterCategory"` (default is false) can be used to change into a mode where the current catalog does not matter when choosing the category for a product. In this case the category from the master catalog is chosen.

If another new config property `"wcs.categoryValidationEnabled"` (default is false) is set to `"true"` each category for a products is being validated before it is returned. Only categories that can be loaded in the context of the current catalog are accepted.

[CMS-18146]

### gRPC timeouts (deadlines) can be configured

A timeout (called deadline in gRPC) for calling the commerce adapter can be set in the gRPC clients (e.g. CAE/Studio). This helps to use the commerce adapter in a productive scenario, e.g. behind a load balancer. The default value is 60 seconds. After this timeout, the client no longer expects an answer and cancels the call.

[CMS-17962]

## CoreMedia Headless Server

### New query root: metadata

A new query root `metadata` was added to the Headless Server. See the Headless Server manual for details.

[CMS-17434]



### Retrieve Personalized Content via Headless Server

The Headless Server supports retrieval of personalization rules stored in personalized content [CMSSelectionRules] now. See the documentation for details.

[CMS-13122]

## Miscellaneous

### Third-Party Update: PostgreSQL Driver

The PostgreSQL driver has been updated to version 42.2.16.

[CMS-18285]

### The Livecontext IBM extension has been deprecated

The Livecontext IBM extension as part of the legacy Blueprint commerce integration and has been deprecated in favour of the Commerce Hub integration. Please refer to the deprecation section in the Supported Environments manual for more details. Furthermore the features B2B support, workspaces, push support and commerce cache invalidation are not supported by the Commerce Hub architecture. It will be removed or changed in the future.

[CMS-18277]

### The base image for all spring-boot applications has been updated

The update to 2.2.1 includes the latest java patch update and a small fix to improve the usability of the endpoint chains together with the management-tools image.

[CMS-18184]

### The Docker base image for MySQL has been updated

The base image for MySQL in the docker-compose development system has been updated from 5.7.28 to 5.7.31.

[CMS-18182]

### Removed Search Manual Section "CAE Feeder for API Use"

The Search Manual's outdated section "Searching for CAE Content Beans | CAE Feeder for API Use" has been removed. It covered a rare use case where the public API was used to implement a custom application for updating the search engine programmatically. We assume that this functionality is not needed anymore, or could be better solved with Solr API itself. The API is still there and can be used, but the use case is not highlighted in the documentation anymore. Please get in touch with CoreMedia Support, if you are using this functionality and need help during the upgrade.

[CMS-17963]

### Add ignoredDependencies configuration to ModularOneRepoEnforcerRule

With the update of `coremedia-enforcer-rules` to `1.2.1`, dependencies can now be excluded from the `ModularOneRepoEnforcerRule` by adding an `ignoredDependencies` element to the rule, which works the same way as in the `maven-dependency-plugin`. The filter syntax is: `groupId:artifactId:type:version` where each pattern segment is optional and supports full and partial `*` wildcards. An empty pattern segment is treated as an implicit wildcard.

[CMS-17939]

### CMCC now supports PostgreSQL 9.6 on Azure

PostgreSQL 9.6 on Azure was successfully tested and is now supported for CMCC 10. As Azure adds a postfix to the database username, you need to set a new DB connection property.

- For Content and Workflow Server (as well as the command line tools) you need to additionally set the property `sql.store.login-user-name=<username>@<your domain>`.

NOTE : The `<username>` needs to be equal to the name, set in the property `sql.store.user=<username>`.

- For the CAE Feeder and the `cm_resetcaefeeder` command line tool, set the property `jdbc.login-user-name=<username>@<your domain>`, in addition to `jdbc.user=<username>`
- For the Studio Server you need to set the property `editorial.comments.db.username=<username>@<your domain>` and `editorial.comments.db.schema=<schemaname>`

[CMS-17912]

### Update Traefik to 1.7.26

Traefik has been updated to 1.7.26.

[CMS-16330]

### java-application-base container image source published

The source to build the `java-application-base` image has been published as a `GitHub repository` at <https://github.com/coremedia-contributions/docker.java-application-base>.

Furthermore, the image build process has been enhanced to build images based on:

- `openjdk (jdk|jre)`
- `amazon corretto`
- `adoptopenjdk (jdk|jre)`

[CMS-16091]

### Changed Configuration Properties for Search And Feeder

Some configuration properties for the Solr connection and for Feeder applications have been renamed as part of an initiative to use Spring Boot's type-safe `Configuration Properties`. The old property names all still work as before but some have been deprecated. It's not required to change your configuration now. If possible, we recommend to migrate to the new property names.

Applications that use Solr to search for editorial content like Studio should specify the name of the 'studio' collection with property `solr.content.collection` instead of `solr.collection.content`.

Applications that use Solr for the web-site search like the CAE should specify the name of the 'preview' or 'live' collection with property `solr.cae.collection` instead of `solr.collection.cae`.

See sections 'Content Feeder Renamed Properties' and 'CAE Feeder Renamed Properties' in the reference chapter of the Search Manual for old and new property names for Feeder applications.

Note, that the old properties `feeder.sendIdleDelay`, `feeder.sendMaxDelay`, `feeder.retrySendIdleDelay`, and `feeder.retrySendMaxDelay` take a value in seconds for the Content Feeder, but a value in milliseconds for the CAE Feeder. This hasn't changed. The new properties `feeder.batch.send-idle-delay`, `feeder.batch.send-max-delay`, `feeder.batch.retry-send-idle-delay`, and `feeder.batch.retry-send-max-delay` take milliseconds for both Content Feeder and CAE Feeder (if the value does not specify a different Spring Boot duration unit like 's').

[CMS-13111]

### Configuration properties have changed.

The following properties are deprecated. The usage of their replacements is encouraged.

#### Deprecated Property -> Replacement

- `blueprint.sitemap.cae.port` -> `cae.sitemap.cae-port`
- `blueprint.sitemap.period` -> `cae.sitemap.period-minutes`
- `blueprint.sitemap.protocol` -> `cae.sitemap.protocol`
- `blueprint.sitemap.target.root` -> `cae.sitemap.target-root`
- `contentbeans.merge-code-resources` -> `cae.merge-code-resources`
- `coremedia.blueprint.project.directory` -> `themes.project-directory`
- `keep.https.after.logout` -> `elastic.social.keep-https-after-logout`

[CMS-13104]

## 4.3.3 Fixed Issues

### Fixed asset collection download

Added missing CsrfToken in the download portal for downloading the asset collection as zip file.

[CMS-18477]

### Workaround Solr bug that leads to unhealthy Solr Server after index creation

Added a workaround for Solr bug <https://issues.apache.org/jira/browse/SOLR-14969> . In rare cases, the bug could cause the Solr server to become unhealthy, when Elastic Social search indices were created in Solr, for example when a new Elastic Social tenant was created. Only a restart of the Solr server helped in such a case. The newly introduced workaround avoids this problem.

[CMS-18366]

### Third-Party Update: Apache Ant 1.10.9

Apache Ant has been updated to version 1.10.9, which fixes security vulnerability CVE-2020-11979.

[CMS-18365]

### Prevent duplicate URLs for preview allow list and connect sources

Previously the automatically generated connect sources and allowed preview urls may have contained many duplicates, if they were identical in all provider setting documents. This led to a problem while loading the studio, because the corresponding http header became too large. This fix filters the list for duplicate entries.

[CMS-18345]

### Adding ID to all PageGrid related Elements

These ids are required when trying to cache a PageGrid, a PageGridRow or a PageGrid-Placement using apollo-client.

[CMS-18313]

### Updated to latest Spring Framework 5.2.9, Spring Boot 2.2.10, and others

The following third party libraries have been updated to fix [CVE-2020-5421](#) :

- Spring Boot 2.2.10.RELEASE
- Spring Framework 5.2.9.RELEASE
- Spring Security 5.2.6.RELEASE
- Apache Tomcat 9.0.38

- Micrometer 1.3.14
- Jetty 9.4.31.v20200723
- Byte Buddy 1.10.14
- Jakarta Servlet 4.0.4
- Netty 4.1.52.Final
- Caffeine 2.8.5
- Jackson 2.10.5
- Hibernate 5.4.21.Final
- Mysql 8.0.21
- Aspectjweaver 1.9.6

[CMS-18305]

### Content Server Flag `useStrictWorkflow` No Longer Prevents Withdraw Operations In Studio

We fixed a bug where the content server flag `useStrictWorkflow` prevented place approvals in Studio (e.g. withdraw) whereas it should only prevent version approvals.

[CMS-18300]

### Fixed CAE Feeder to Index Correct Navigation Path

Fixed a bug in the *CAE Feeder* that the Solr index field `navigationpath` was not correctly set after withdrawal and re-publication.

[CMS-18278]

### Resolve dependency on `examples-thirdparty-bom`

Fixed dependencies of module `examples.blueprint`.

[CMS-18265]

### `cm restoreusers`: Exit Code `!= 0` on Failure

If there any error is detected while restoring users, the tool `cm restoreusers` will now exit with an exit code different to 0 (zero).

[CMS-18225]

### StructPropertyField Can Deal With Sub-Structs and Studio Tab Reuse

We fixed a bug where the StructPropertyField took on wrong values on Studio tab-reuse when the StructPropertyField pointed to a sub-struct of a first-level document property.

[CMS-18219]

### Richtext transformation ignored superscript elements

The richtext transformation rule to parse superscript elements `<sup>` contained a bug which led to the situation, that superscript elements were ignored completely and the contained subelements and characters were ignored also. The rule was fixed.

[CMS-18216]

### Catalog types moved to extension headless-server-catalog

The catalog types [CMProduct, CMProductImpl] have moved to extension headless-server-catalog. Now these types are only available, if extension catalog is activated. Before, the types were always present, what lead to an error, when extension catalog was deactivated.

[CMS-18212]

### Quote parameter in management-tools endpoint chain

In order to run the management tools with parameters containing spaces, such as content paths, all scripts part of the chain must quote their parameters on the exec call.

If for example one wants to use the serverexport tool with a path containing a space this works now also as a part of the chain.

```
docker run --rm coremedia/management-tools \
  tools/bin/cm serverexport -u admin -p admin \
  "/Sites/Chef Corp"
```

[CMS-18185]

### Library catalog tree fixed when categories have multiple parents

In some catalogs it is possible to put a category to multiple places within the catalog tree. That led to a broken tree. The unique parent of the catalog object defines the home of such a category. If there are more occurrences of that category in the tree it is shown as a link.

[CMS-18169]

### Added error message for misconfigured TaxonomyCondition editors

The *TaxonomyCondition* editor required the config parameter *taxonomyId* . If not set, the taxonomy selection dialog simply remains empty. We have added an exception with a corresponding message in that case.

[CMS-18167]

### 'SiteService' in Documentation is wrong

Replaced siteService with sitesService .

[CMS-18150]

### Removed erroneous warning about missing cache capacity for `java.lang.Object`

`DataClientConfiguration` occasionally logged the following warning:

```
Cache configuration seems to be missing. Setting capacity of java.lang.Object to 10 to avoid stack overflow errors due to recomputation.
```

The code issuing this warning was run while initializing beans without considering cache capacity configuration applied by independent beans such as `commonCacheCapacityConfigurer` defined in `bpbase-uapi-cache-services.xml`. Hence, the warning was removed from `DataClientConfiguration`.

[CMS-18142]

### Snakeyaml has been updated to version 1.26

The dependency `org.yaml:snakeyaml` has been updated from 1.13 to 1.26 for the headless-server and from 1.25 to 1.26 for studio (editorial comments). This fixes a security vulnerability which was present in former versions of this library.

[CMS-18138]

### Fixed missing dependency when running headless without live context

In case of running headless without the live context extension "lc-asset" a dependency was missing, preventing the headless to start correctly.

[CMS-18029]

### UAPI Reconnect

In some cases the UAPI was not able to reconnect after a Content Server restart because of HTTP response caching issues. This has been fixed.

[CMS-17996]

### Commerce adapter connection log is more helpful

If a commerce client (Studio or CAE) tries to connect to a commerce adapter the message says "Commerce adapter not available" is more helpful. It names the specific endpoint that cannot be reached.

[CMS-17978]

### Fixed Taxonomy Name Escaping

Fixed issue where taxonomy node names were rendered with escaped characters inside the taxonomy manager.

[CMS-17953]

### LanguageId deprecated in favor for new properly named property 'locale'

The content schema of Headless Server contained the property 'languageId' but was not mapped properly to a property in content objects, thus delivering always null. The

property is now deprecated in favor for the newly introduced property 'locale', which maps to the corresponding property of localized content objects. Additionally the now deprecated property 'languageId' was mapped to 'locale' in order to fix the always null issue.

[CMS-17936]

### Third-Party Update: Tomcat

Tomcat has been updated to version 9.0.37 to avoid security issues of the previous version [CVE-2020-13934, CVE-2020-13935].

[CMS-17901]

### WorkflowDateTimePropertyField also offers remotelssuesCallback

The WorkflowDateTimePropertyField also offers a new property remotelssuesCallback of type function, that can be used to react to issues produce by the field itself

[CMS-17889]

### Studio Link Suggestions Exclude Deleted Content

Fixed a bug that deleted content appeared in the list of suggested contents for a link list field in Studio. Deleted content is excluded now.

[CMS-17856]

### Third-Party Update: Jetty

Jetty has been updated to version 9.4.30 to avoid a security issue of the previous version [CVE-2019-17638].

[CMS-17836]

### Fixed Creation of Taxonomy Root Nodes

Fixed issue where root nodes of type 'CMLocTaxonomy' have been created as 'CMTaxonomy' documents.

[CMS-17830]

### Bugfix for possible escalation in translation workflows that have multiple target sites

The `DerivedContentsResult` was enhanced, so it guarantees only versions of unique content are stored and used in a translation workflow. Before, it was possible that two different version of the same content would be stored in the `masterContentObjects` variable which led to an escalation of the workflow.

This bug could only occur for translation workflows that had `createWorkflowPerTargetSite` set to false.

[CMS-17826]



### Updated Upload Settings Documentation and Mime Type Mapping

The documentation of the Upload Settings has been updated according to the implementation. Additionally, the usage of the settings `mimeTypeToMarkupPropertyMappings` and `mimeTypeToBlobPropertyMappings` has been updated so that the primary type of a mime-type is sufficient to configure these mappings.

[CMS-17809]

### Fixed Accidental Bookmark Deletion

Fixed issue where bookmarks have been deleted when the Studio tab is closed before they have been loaded.

[CMS-17804]

### Headless supporting queries for localized variants of content objects

Starting with version 2010.1 headless features the ability to query for localized content objects of any localizable content and derived sites of a site object. With the new abilities it is now possible to develop more generic clients, e.g. being able to bootstrap a client for all derived sites or to crosslink to localized contents.

[CMS-17797]

### Studio may leave database lock when interrupted during startup

Should the startup of a Studio-Server instance be interrupted, it is possible that a lock is left on the database schema `cm_editorial_comments`. In this case it is necessary to remove the lock manually, either by performing the following SQL Statement:

```
UPDATE DATABASECHANGELOGLOCK SET LOCKED=0, LOCKGRANTED=null, LOCKEDBY=null
where ID=1;
```

or

use liquibase to do so: "liquibase releaseLocks"

[see: <https://docs.liquibase.com/concepts/basic/databasechangeloglock-table.html>]

It is also possible to disable Liquibase with the configuration `editorial_comments.liquibase.enabled=false`. However this means that it is necessary to apply the database changesets manually after an upgrade. This is possible by activating liquibase for at least one startup of a Studio-Server, or to run liquibase manually [<https://docs.liquibase.com/tools-integrations/cli/home.html>].

Example of liquibase.properties file for command line tool (Mysql-Setup):

```
changeLogFile=db/changelog/db.changelog-editorial-comments.xml
username=cm_editorial_comments
password=cm_editorial_comments
driver=com.mysql.cj.jdbc.Driver
```

```
url=jdbc:mysql://localhost:3306/cm_editorial_comments?useUnicode=yes&characterEncoding=UTF-8
classPath=patlibMySQLDriver>mysql-connector-java-8.0.20.jar;patlib_editorial_comments-dta-jar-editorial_comments-dta-1-APPSOL.jar
```

[CMS-17784]

### Configuration property studio.security.autoLogout.delay renamed to studio.autoLogout.delay

Due to conflicts with StudioSecurityConfigurationProperties the property studio.security.autoLogout.delay in StudioConfigurationProperties was renamed to studio.autoLogout.delay.

[CMS-17731]

### Improve Taxonomy Change Plugin

The mechanism to detect changes of taxonomy properties within in the taxonomy manager has been improved. The *TaxonomyChangePlugin* provides the additional String property *properties* which supports a comma separated value with the names of the taxonomy properties which should be observed. The property is optional and should only be used when property editors of Taxonomy forms are working on Structs.

Additionally, the class *TaxonomyNode.as* has the new boolean field `_AUTO_COMMIT_` now. This allows to disable the "auto-commit" of the taxonomy manager completely. In this case, we recommend to use the Control Room for detecting and publishing changed content.

[CMS-17707]

### Security problem in CORBA protocol fixed

It used to be possible to guess the object ids of objects remotely accessible through CORBA when the start time of the servers was known or, in the case of the IBM JDK, even without knowing the start time. This allowed the unauthorized access to methods that did not require the session to be passed as an argument. Session objects already used secure ids, so that most methods were not affected.

This has been fixed. Object ids contain a secure random identifier now.

By setting the system property `com.coremedia.corba.server.use-insecure-oids=true` or by setting the environment variable `COM_COREMEDIA_CORBA_SERVER_USE_INSECURE_OIDS=true`, the bugfix can be disabled in case the generation of random numbers leads to a serious performance degradation. These are stop-gap flags, only, and you should fix the configuration of `SecureRandom` eventually.

[CMS-17667]

### Fixed Library Dragging Issue

Fixed the possibility to move the Studio library out of the browser window.

[CMS-17602]

### Fixed MIME-type Detection for Calendar Files

MIME-type detection for Outlook calendar files (\*.ics) has been fixed to return "text/calendar" instead of "text/html".

[CMS-17529]

### Translation Auto-Merge Keeps Order of Link Lists

Fixed a bug in the auto-merge functionality of translation workflows, which sometimes caused a wrong order of contents when changes from a placement link list were merged to a derived content.

[CMS-17515]

### Fixed TooManySeachResultsException

The given exception has been raised when Studio's user manager is working on a large amount of users or groups. We have introduced the new Spring property *studio.usermanager.minSearchCharacters* which determines the amount of characters to input until a search request against the user provider is triggered. The default value is *0*, which means that all users and groups are lazy loaded by the Studio, therefore also requested by the user provider.

[CMS-17404]

### Serverexport now checks if base directory is writable

`cm serverexport` now checks if the base directory is writable. If not it will fail early, as no content can be exported.

[CMS-17399]

### Enhanced "Delete Content Type" description

The description of the "Deleting Content Types" section in the Content Server Manual has been enhanced.

[CMS-16851]

### Fix loadbalancing in Chef deployment with multiple CAEs

When the Chef deployment was configured to install multiple CAEs on a single node for loadbalancing purposes, the servlet context was missing in the proxy balancer config.

[CMS-16807]

### Autofill in browsers now finds correct field types

Two autofill behaviours have been fixed.

- When the user wanted to input a password in the change password dialog while library was open the search of the library was focused when autofill was used. Now the fields

are detected directly and support the autocompletion for `current-password` and `new-password`

- Chrome detected the StatefulDateField as an address field and suggested to put in addresses. Now chrome does not suggest addresses in this field.

[CMS-16773]

### Multisite-validation-tools: Changed Error Code for Translation Settings

On validation of a TranslationSettings document with the multi-site-validation-tools, the error MS\_VALIDATION\_4000 (Invalid property value) was returned, if the translation strategy is invalid. This error has changed to MS\_VALIDATION\_4022 (Invalid translation settings property value).

[CMS-16646]

### Copy mysql configuration files in Dockerfile using mysql user

To prevent access rights conflicts in some environments, the configuration files should be copied using the mysql user.

[CMS-16538]

### MySQL Deployment in Chef used deprecated configuration syntax

Since MySQL 5.7, the correct syntax uses underscores `_` instead of hyphens `-`.

[CMS-16408]

### Fixed a bug which caused an error upon content server start after adding a new observed property

After adding a new observed property to a doctype (and the restart of the server) and creating a document of the doctype with a value for the new observed property the second restart of the server caused an exception:

```
hox.corem.exceptions.RepositoryError: ERROR: duplicate key value violates unique constraint "pk_observedvalues"
```

The bug is now fixed.

[CMS-15090]

### Fixed recursion in ReplaceltemsPlugin

Setting recursive="true" in the ReplaceltemsPlugin was broken and has been fixed. However we do not recommend to use the recursive flag. Instead use the NestedRulesPlugin for deeper replacements.

[CMS-13931]

### Add substitution model attribute for FTL Spring bind

Substitution model attributes can now also be used with the `<@spring.bind />` macro in Freemarker templates.

[CMS-12747]

### Solr cookbook in Chef deployment fails to update

The home directory of the solr user can only be changed to the new solr installation directory, when the service is stopped. With Chef you can model this by using the `:before` timing on a stop notification to the service resource.

[CMS-12223]

### Sort results in UAPI queries

It is possible to sort by parent folder id, place approval date and place approver in UAPI queries now.

[CMS-11314]

# 5. Upgrade Information

This chapter contains all information relevant for an upgrade to the specific release.

## 5.1 Upgrade to 2010.3

This section describes the necessary upgrade steps for an upgrade from the previous release. Also read [Chapter 4, Release Information \[8\]](#) to get an overview of the new features that require no immediate action on your site.

### 5.1.1 CoreMedia Core

#### Unauthorized Live Rule Removal

`com.coremedia.cap.content.authorization.AccessControl` provides some methods for rule removal. If you try to remove a rule for a content group without having the SUPERVISE right, the methods fail with an exception. However, for rules of live groups, the methods failed silently. Now, they throw exceptions in this case too. This means that code using these methods will fail upon such errors, where it used to continue before. If you still want your code to continue in case of such errors, wrap these calls in try-catch blocks.

[CMS-18214]

### 5.1.2 CoreMedia Content Application Engine

#### Fixed default/initial http cache control configuration and documentation

Default/initial HTTP cache control configurations regarding and documentation have been fixed and harmonized.

```
cae.cache-control.for-type.cmlinkable.max-age=1m  
cae.cache-control.for-type.object.max-age=1m
```

Since CMS-17307 default cache control TTLs were set to 1 day which was inconsistent to the documentation and JavaDoc. Also, 1 day was much too high as a default.

Please review carefully to avoid unwanted side effects.

[CMS-18869]

## 5.1.3 CoreMedia Headless Server

### Headless did not respond with JSON properties and proper HTTP response code when requesting via a non existing site filter

Headless responds now with a real json response and the correct content type 'application/json'. As this bugfix changes the behaviour, this update is considered potentially breaking. Customers should check their client application whether they rely on the old behaviour.

[CMS-18620]

## 5.1.4 Miscellaneous

### Third-Party Update: hibernate-validator

`hibernate-validator` library has been updated to version 6.1.7-FINAL to avoid a security vulnerability of the previous used version 5.4.3-FINAL (CVE-2020-10693). The library is mainly used for URL validation in Studio Server but might also be used in project code. Unfortunately, there is no CVE-fix available for the previous 5.4.x release so that we had to upgrade to a newer major version which is considered a small breaking change. Please review your custom code carefully and check if you are still compatible with this version update.

[CMS-19099]



## 5.2 Upgrade to 2010.2

This section describes the necessary upgrade steps for an upgrade from the previous release. Also read [Chapter 4, Release Information \[8\]](#) to get an overview of the new features that require no immediate action on your site.

### 5.2.1 CoreMedia Core

#### Fixed: Contents May Have Been Removed from Translation Workflow for No Obvious Reason

**Context:** The content property `ignoreUpdates`, which is used for synchronized sites, to block receiving updates from master, accidentally made it to nested derived sites, which, as one possible effect prevented contents in derived sites from receiving any updates via translation. This is true for any workflows using `FilteredDerivedContentsAction`.

**Main Change:**

**Translation Workflow:** Introduced option `ignoreContentStateIgnoreUpdates` to `translation.xml`, configured for `FilterDerivedContentsAction` and `AutoMergeTranslationAction`. If set, and set to true, it will trigger ignoring a state `ignoreUpdates` which may have accidentally propagated from synchronized parent sites.

**Additional Changes:**

**ContentObjectSiteAspect (cap-multisite):** Introduced new method `isIgnoreUpdates()`. This should be used in favor of `getIgnoreUpdates()`. `getIgnoreUpdates()` will be deprecated as of 2101.1.

**Ignore Updates from Master (Property: `ignoreUpdates`) not propagated anymore to derived sites:** Along with this update, the property `ignoreUpdates` is not propagated anymore to derived sites. Thus, if you set to ignore updates from master for a synchronized site S, a site S' derived from Site S will not automatically ignore updates from S, as it did before.

This straightens the behavior, that auto-merge strategies already ignored this property before, thus changing the property value in Site S and applying it to already existing Site S' never made it to S'.

### Upgrade Notes:

- If you are not using synchronized sites, no upgrade steps are required.
- If you don't use the `ignoreUpdates` flag for synchronized contents, no upgrade steps are required.
- If you have a setup like a synchronized master site with derived sites, which shall receive translations, it is strongly recommended, updating your `translation` workflow definitions (thus, not synchronization workflow) adding `ignoreContentStateIgnoreUpdates` as follows:

```
<AutomatedTask name="GetDerivedContents" ...>
  <!-- ... -->
  <Action
    class="com.coremedia.translate.workflow.FilterDerivedContentsAction"
    masterContentObjectsVariable="masterContentObjects"
    derivedContentsVariable="derivedContents"
    ignoreContentStateIgnoreUpdates="true"
  />
  <!-- ... -->
</AutomatedTask>

<!--
  You may need to update several occurrences of
  AutoMergeTranslationAction in your workflow.
-->
<UserTask name="Translate..." ...>
  <!-- ... -->
  <EntryAction
    class="com.coremedia.translate.workflow.AutoMergeTranslationAction"
    derivedContentsVariable="derivedContents"
    ...
    ignoreContentStateIgnoreUpdates="true"
  />
  <!-- ... -->
</UserTask>
```

If not applying these upgrade steps, you may experience contents in synchronized sites, which you will never be able to translate to any nested derived sites. They will be removed as target documents without notice.

### Alternative Upgrade Notes:

As alternative to updating the translation workflow definition, you may set `ignoreUpdates` to false for any contents especially in sites which shall receive translations. A UAPI client is required, as the default Blueprint UI does not provide access to this property in translation sites, yet.

### Additional Upgrade Notes for Nested Synchronized Sites

If you happen to have synchronized sites, which are (direct or indirect) childs of a synchronized master site, you may want to check if the state of any `ignoreUpdates` flags, which are set to values different to 0 (thus: interpreted as boolean `true`). You may experience contents, where this flag accidentally ignores updates from master.

[CMS-18511]

## 5.2.2 CoreMedia Content Application Engine

### Single and bulk resource patterns and TTLs for cache control in live CAE have been fixed

The single resources pattern for the cache control configuration in live CAE didn't have any effect because of too many escape characters in the pattern. This has now been fixed. Furthermore, the bulk resource pattern has been improved to not mix up with the single resource pattern, and both cache TTL values for these pattern have been increased to 365 days. Please be aware that with this AMP release the cache control TTLs might change, if you use the default settings.

[CMS-18368]

## 5.3 Upgrade to 2010.1

This section describes the necessary upgrade steps for an upgrade from the previous release. Also read [Chapter 4, Release Information \[8\]](#) to get an overview of the new features that require no immediate action on your site.

### 5.3.1 CoreMedia Core

#### Content Server Database Change

When the *Content Server* starts the first time after upgrading from version 2004 or 2007, it will automatically adapt database tables and remove existing unique constraints for the `versionUuid` column of all document type tables. For Microsoft SQL Server and IBM DB2, and when upgrading from 2007.1, wrong unique constraints are also removed from the `uuid` column of tables `CmUsers` and `CmGroups`.

The constraints are replaced with plain database indices. The database constraints were originally introduced with 2004.1 and 2007.1 but are not helpful and can cause problems. This also fixes a bug for SQL Server and DB2 databases, that the Content Server is unable to import an Active Directory user, if the user account has been disabled and re-enabled again in Active Directory.

Note, that it is not possible to start a Content Server of a previous release on the database after the new Content Server has adapted the database tables. You should always make a backup of the Content Server database before upgrading. This is even more important for this change.

[CMS-18049]

#### Update of mongo-java-driver

The `mongo-java-driver` 3.11.2 has been updated to `mongodb-driver-legacy` 4.1.0 and `mongodb-driver-core` 4.1.0. This change required breaking changes as several classes and methods have been deprecated.

Breaking changes are not propagated to CoreMedia public API, but if custom implementations make direct use of MongoDB API, changes may be required.

[CMS-17590]

## Fix for possible false calculation of Dependent Content for Synchronization-Workflow

When you use the Synchronization workflow from version 2007.1, it is necessary to reupload the `synchronization.xml`, to ensure that dependent content is calculated correctly for synchronization. Also the class `DefaultStartSynchronizationWorkflowFormBase` was adapted to ensure that values of additional workflow fields, implementing the `IAdditionalWorkflowDisplayField Mixin` are passed to the Synchronization workflow (the Translation workflow is not affected by this).

[CMS-17933]

## Corba over SSL

The SSL encryption of CORBA traffic was broken, so that a configured SSL port just served unencrypted data, equivalent to the clear text port. This has been fixed now.

[CMS-17723]

## Publisher monitoring

The JMX monitoring interface records failed publications due to an unavailable *Master Live Server* as failed publications now. Previously, such publications were not counted at all.

[CMS-16763]

## `translate.xliff.export.excludeContentName` defaults to true

Because translating content names may harm your system, the default for `translate.xliff.export.excludeContentName` has been changed from `false` to `true`. Having this, content names will by default not be part of your XLIFF anymore.

For details on possible impact setting `excludeContentName` to `false`, consult the *Blueprint Developer Manual*, section *Translation Workflow/Translation Workflow Properties*.

To restore the old behavior, adapt for example `application.properties` in `studio-server-app` accordingly.

It is recommended, if you export XLIFF as part of your workflows, to adapt the workflow-server configuration accordingly.

[CMS-16730]

## Localization Workflows: Automatic merge of Annotated LinkLists

In translation workflows, annotated LinkLists (`CMTeaser#targets` and `CMCollection#extendedItems`) were **not** merged automatically in previous releases, which lead to problems in derived content. Reason was, that the properties have been marked as "translatable" in the document type definition (`blueprint-doctypes.xml`). Now the "translatable" attribute has been removed to enable the automatic merge, and the improved merge algorithm for struct lists is configured for translation and synchronization workflows. To enable translation of the property `CMTeaser#targets.links.callToActionCustomText`, it is configured as "translatable expression". Note that the changed merge algorithm implicates a different merge behaviour for synchronization workflows.

[CMS-16514]

## cm serverimport: No Suppressed Errors Anymore

Previously, `cm serverimport` may have ignored errors on import silently unless you set the `--halt` option. Now, you will always get a warning on any error.

Note, that it is still recommended using the `--halt` option by default, as you may otherwise get undesired states.

[CMS-11155]

## 5.3.2 CoreMedia Studio

### Fixed Lazy Loading and Content Hiding in Repository View of the Library

The user preference "Show Products and Categories as Content" has been fixed. In addition to this, the lazy loading for the repository tree view has been fixed too.

In order to fix the lazy loading problem, the interface *TreeFilter.as* has been removed from the product. It was used by the plugin *RegisterLibraryTreeFilter* which also has different configuration attributes now. An example usage can be found in the file *CatalogStudioPlugin.mxml* of the Blueprint. Instead of passing a *TreeFilter* instance, the plugin simply takes an absolute or site-relative path as input parameter. This path is then hidden from the user.

[CMS-14533]

## 5.3.3 CoreMedia Studio Client

### Jangaroo Version Updates

To use the new feature of *lazy singletons*, Studio Client uses a new version of Jangaroo. Support for lazy singletons has been added to the run-time (in `jangaroo-libs 4.0.52`), which is fully compatible. The compiler (in `jangaroo-tools 4.0.72`) supports the new annotation `Lazy`, which is also not a breaking change. For details, see [J00-152](#). Note that the update also contains a number of **fixes and improvements** regarding type-checking, which may reveal type errors in ActionScript/MXML code. So in the unlikely case that after the update, you encounter compile errors in Studio Client, please consult the above issues to fix those type errors in your code.

[CMS-18179]

## Moved classes SitesService, Site, SiteModel

The following public API Actionscript classes have been moved into the new module 'studio-client.multi-site-models'. They are now in the package 'com.coremedia.cms.studio.multisite.models.sites'. Otherwise, they kept their signature and behave as before.

- SitesService
- Site
- SiteModel

To access the sitesService, you can still use the EditorContext. However, it is recommended to use the new global constant 'com.coremedia.cms.studio.multisite.models.sites.global.sitesService'.

[CMS-18057]

## New method in IAdditionalWorkflowDisplayFieldMixin

The new `remoteValidationCallback` method must be implemented by all Fields, implementing the `IAdditionalWorkflowDisplayFieldMixin`. The method `remoteValidationCallback` will be called after every workflow validation and allows the Field to adapt its validation state according to the returned workflow issues.

[CMS-17575]

## WorkflowDateTimeField can adapt validation state according to WorkflowIssues

The `WorkflowDateTimeField` has a new property `issueKeysForValidationState`, which can be used to pass issue keys to the field. When a workflow validation produces issues with the severity warn or error and an issue key matches a value from the `issueKeysForValidationState`, the field will adapt its validation state.

[CMS-17911]



## StartWorkflowFormBase was adapted

The `StartWorkflowFormBase` .as now has a `StartWorkflowFormState` that can be used to pass the initial contents to the Form.

[CMS-17843]

## 5.3.4 CoreMedia Workspace

### Activate HTTP2 (h2c) for studio-client container

With this change, the nginx webserver serving the static files of the studio-client application, will accept only http2 requests. In order to accept HTTP/1.1 you need to set the environment variable `PROTOCOL` to an empty value.

Nginx cannot serve both protocols on the same port by upgrading the protocol during the handshake, therefore we need to tell Traefik to directly speak h2c by setting the label `traefik.protocol: h2c` on the container. Any healthcheck to this container using `cUrl` needs to set `--http2-prior-knowledge` on its requests.

To make this healthcheck work, the underlying nginx base image had to be updated to `1.19.2`.

To accept the environment variable in its configuration, the `default.conf` file is now a template as described in the DockerHub [nginx](#) image description.

[CMS-13480]

## 5.3.5 CoreMedia Frontend Workspace

### Updated Frontend Dependencies

The `frontend-maven-plugin` used in the frontend workspace has been updated to version 1.10.3. The frontend dependencies, have been updated to the latest versions and node.js to latest LTS version 14.15.0.

Update steps:

If you are working with the Frontend Workspace we recommend to also upgrade your local installation of node.js to 14.15.0 and yarn to 1.22.5.

[CMS-18481]

## Product availability calculation

Product availability calculation has been changed in 2007.1 to no longer be based on the (deprecated) `Product#isAvailable`. The logic however did not cover the old default if no availability service was provided for the commerce integration. If this was the case the old implementation did return "true" while the implementation in 2007.1 did return "false". This was not intended, so we changed the logic back to return "true".

[CMS-17979]

## 5.3.6 CoreMedia Deployment

### S3 media store configuration changed

The configuration of the media store `S3Store`, which maintains blobs in AWS S3, has changed. If you use a custom `S3Store` media store with an empty value for `storeDir`, no prefix for the blob path in the S3 bucket is applied now. The `S3Store` used to prepend an unnecessary `/` in this case. If you configure the `S3Store` by defining the property `cap.server.blobstore.s3.bucketname`, the default value for `cap.server.blobstore.s3.rootdir` is now an empty string and not `blobstore/file` as before.

If you use the `S3Store` explicitly and have configured an empty value for `storeDir`, change the value to `/`, so that the server expects the blobs in their old position.

If you configure the `S3Store` by defining the property `cap.server.blobstore.s3.bucketname` and do not set the property `cap.server.blobstore.s3.rootdir` so far, set `cap.server.blobstore.s3.rootdir` to `blobstore/file`, so that the server expects the blobs in their old position.

If you configure the `S3Store` by defining the property `cap.server.blobstore.s3.bucketname` and set the property `cap.server.blobstore.s3.rootdir` to the empty string, change `cap.server.blobstore.s3.rootdir` to `/`, so that the server expects the blobs in their old position.

[CMS-16139]

## 5.3.7 CoreMedia Commerce Hub

### Use WCS adapter profiles with version specific configurations in compose file

Since version `1.3.14`, the `commerce-adapter-wcs` provides Spring profiles for the WCS/HCL versions that are supported. These profiles configure the suitable URLs that are required to connect to the WCS/HCL Commerce system. The environment variables that are passed to the `commerce-adapter-wcs` application have been changed in the Docker Compose `commerce-adapter-wcs.yml` file to using these version profiles. The variables that are configured by the version profiles have been removed from the `commerce-adapter-wcs.yml`. If desired, it is still possible to set all properties in the `commerce-adapter-wcs.yml`.

[CMS-18162]

## 5.3.8 CoreMedia Connector for HCL Commerce

### Removed deprecated API concerning product availability

The following deprecated methods of `com.coremedia.livecontext.ecommerce.catalog.Product` have been removed:

- `isAvailable`
- `getTotalStockCount`
- `getAvailabilityMap`

The following deprecated classes have been removed:

- `com.coremedia.livecontext.product.ProductAvailabilityHandler`
- `com.coremedia.livecontext.product.ProductAvailabilityDynamicIncludePredicate`

The following deprecated properties have been removed from product related types in `schema.graphql` and `commerce-schema.graphql` :

- `available`
- `totalStockCount`

The following deprecated templates contained in example brick "fragment-scenario" have been removed:

- `Product.availabilityFragment.ftl`
- `ProductVariant.availabilityFragment.ftl`

[CMS-17790]

## 5.3.9 CoreMedia Connector for SAP Commerce Cloud

### SAP Commerce Cloud 2005 Support

SAP Commerce Cloud 2005 is supported now.

To connect to SAP Commerce Cloud 1905, the `commerce-adapter-hybris` must be started with Spring profile `hybris-1905` activated.

[CMS-17799]

## 5.3.10 CoreMedia Headless Server

### AssetSearchService in commerce extension now uses a dedicated SearchResultFactory

`AssetSearchService` in commerce extension now uses a dedicated `SearchResultFactory`. Furthermore the factory uses a default caching time of 300 seconds (=5 minutes). The caching time is configurable by the config parameter '`caas.commerce.assetsearchservice.cache.seconds`'. The change is considered breaking as the caching time was previously set by '`caas.querylist.search.cache.seconds`', which may contain a different value than the new default of 300 seconds.

Additional bugfix: The caching time of 'caas.querylist.search.cache.seconds' was used by the common SearchResultFactory and 'caas.search.cache.seconds' by QueryList-SearchResultFactory, meaning they were mixed up. The usages are now fixed.

[CMS-18188]

## Update of graphql-java

The dependency com.graphql-java:graphql-java has been updated to version 15.0 and corresponding com.graphql-java:graphql-java-spring-webmvc to version 2.0. With the graphql-java update, non-standard scalars need to be defined explicitly now. For more breaking changes that may affect custom code, see release notes of graphql-java.

[CMS-17662]

## Set row limit for AssetSearchService with correct config value

Previously the row limit of the commerce AssetSearchService, used for linked objects on commerce objects, was set with a wrong config parameter. This is fixed, introducing a dedicated new config parameter: 'caas.commerce.assetsearchservice.limit'. The default is -1 = unlimited.

This fix is considered potentially breaking! The wrongly used config value was 'caas.search.cache.seconds' with a default of -1. In case, this config parameter was set to a positive value, the new default of the new config value might change the behaviour for the size of the result set of linked objects of commerce objects.

[CMS-18158]

## Headless now always sends JSON body with JSON properties and proper HTTP response code

Depending on the useragent, Headless Server sends the default Spring mvc white label error page, in case of invalid requests, for example, missing query. Headless Server now makes sure to always send a JSON body with dedicated JSON properties and the proper HTTP response code.

Because this update introduces changes on the protocol layer between the Headless Server and any client, this update is considered potentially breaking.

[CMS-18039]

## 5.3.11 Miscellaneous

### Spring ConfigurationProperties for UserProvider

Spring ConfigurationProperties for UserProvider

The configuration for `UserProviders` used to reside in a separate file, typically named `jndi-\*.properties`. Now, the configuration has been migrated to `Spring ConfigurationProperties`, which simplifies deployment. The content-server configuration already had a (List-valued) subgroup `cap.server.ldap` with two properties, `provider-class` and `properties`. `cap.server.ldap` has been renamed to `cap.server.userproviders` and features all the options you know from the old `jndi-\*.properties` files, or from the property name constants in `LdapUserProvider`. Thus, you can configure a `UserProvider` completely in one place. The minimal configuration for a standard `ActiveDirectoryUserProvider` looks like this now:

```
cap.server.userproviders[0].provider-class=com.coremedia.ldap.ad.ActiveDirectoryUserProvider
cap.server.userproviders[0].java.naming.security.principal=CN=Administrator,CN=Users,DC=acme,DC=com
cap.server.userproviders[0].java.naming.security.credentials=secret
cap.server.userproviders[0].ldap.host=activedirectory.acme.com
cap.server.userproviders[0].ldap.base-distinguished-names[0]=CN=Users,DC=acme,DC=com
```

As you can see from the prefix, the properties have been renamed, and the property name constants in `LdapUserProvider` have been deleted. See the `ConfigurationProperties` class `com.coremedia.ldap.LdapUserProviderConfigurationProperties` for the new property names (you will easily recognize them), and `com.coremedia.ldap.JndiConfigurationProperties` for the supported `java.naming` properties.

Moreover, there is a generic Map-valued property `cap.server.userproviders#.properties` which can be used for (custom) properties that are not modeled explicitly by the `ConfigurationProperties` classes. In particular, you can use this Map to set additional `java.naming` properties that are not covered by `com.coremedia.ldap.JndiConfigurationProperties`, and the `LdapUserProvider` will propagate them to the JNDI framework. In `application.properties` notation, it would look like this:

```
cap.server.userproviders[0].properties[java.naming.language]=en
```

`IdapUserProvider` and some subclasses had a constructor that took the `jndi-\*.properties` file as argument. These constructors have been deleted. They have never been used anyway, and they do not make sense any longer, since we abandoned the `jndi-\*.properties` files. If you have overridden this constructor in your own `UserProvider`, just delete it. Only the (implicit) `NoArg` constructor is used. The signature of `UserProvider#initialize` has changed: The argument used to be the `jndi-\*.properties` file URL, now it is the `Map` of generic properties mentioned above.

[CMS-16842]

## Removed default image transformations

Since the first release of CoreMedia Content Cloud, `TransformImageService.getTransformations()` adds a fallback configuration (defined in Spring configuration `mediatransform.xml`) to the list of available transformations. If an image transformation is not defined in the `responsiveImageSettings` settings content of the site then the corresponding default is applied. The `mediatransform.xml` included some default image transformations, which were overwritten in the Blueprint Demo sites. However, these defaults apply to new sites too even if these sites use completely different crops. This could lead to undesired results and for this reason we removed the default image transformations in `mediatransform.xml`.

**Update steps:** If your sites depend on the Blueprint's default image transformations defined in `mediatransform.xml`, either keep the global defaults or add them to each site. For all other projects, nothing has to be done.

[CMS-16800]

## Global image variants will be loaded when no site is available

The `TransformImageService` didn't find any image variant in the content repository if no site for the given content can be resolved. To resolve the global image variants as a fallback the interface `VariantsStructResolver` has been extended by the method `getGlobalVariants()` which returns the global variants from `"/Settings/Options/Settings/Responsive Image Settings"`.

[CMS-18202]

## Update Maven-Surefire-/Failsafe-Plugin to 3.0.0-M5 and test libraries

`maven-surefire-plugin` and `maven-failsafe-plugin` have been updated to 3.0.0-M5. This fixed a bug, that tests which failed within the setup phase of a test instance were not marked as failed.

Thus, after upgrade, you may experience tests, which fail afterwards. This typically signals tests, which were silently ignored before this update. We stumbled across such an issue within Spring based tests, where required beans were missing in the test context.

While doing the Maven plugin updates, we also updated testing libraries especially because JUnit and Surefire/Failsafe have a strong interaction. The following libraries have been updated to the given versions:

- JUnit Jupiter (aka JUnit 5; API, Params, Engines): 5.7.0-RC1
- JUnit 4: 4.13
- Mockito (Core and JUnit Jupiter extension): 3.5.7
- AssertJ: 3.14.0

**One additional learning from the migration:** Depending on your build process you may experience classes not being found when executing `maven-failsafe-plugin`. This is due to a change in the behavior of the default of the `<classesDirectory>` configuration which clashes with some repackage-JAR mechanisms. If you experience class loading issues after upgrade, you may want to consider a workaround we used, which is explicitly setting `<classesDirectory>`:

```
<configuration>
  <classesDirectory>${project.build.outputDirectory}</classesDirectory>
</configuration>
```

[CMS-17989]



# 6. Support

*Support, Newsgroups*

## Online Support

Use our Online Support to submit a support ticket, track your submitted tickets or receive access to our forums. You can access our Online Support at:

<http://support.coremedia.com>

## Access to online services

Partners and Support customers will need to register an account with CoreMedia in order to access the Online Support. Just send us an email and we will send you your login details:

[support@coremedia.com](mailto:support@coremedia.com)

If you have any other questions or comments, please contact:

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[www.coremedia.com](http://www.coremedia.com)

Our Support employees are available to take your support call weekdays between 9 a.m. and 6 p.m.

Our manuals are continuously reviewed and revised in order to reflect new developments and insights gained from the day-to-day use of CoreMedia systems.

*Documentation*

If you have comments or questions about our manuals,

- please email your inquiry to [documentation@coremedia.com](mailto:documentation@coremedia.com)
- or fax it to 040-325587 999.

Please provide all necessary information in your support request to ensure that our Support team can efficiently help you with your issue.

CoreMedia systems are distributed systems that have a rather complex structure. This includes databases, hardware, operating systems, drivers, virtual machines, class libraries, customized code etc. in many different combinations. That's why CoreMedia needs detailed information about the environment for a support case. In order to track down your problem, provide the following information:

*Support request*

- Which CoreMedia component(s) did the problem occur with (incl. release number)?
- Which database is in use (version, drivers)?
- Which operating system(s) is/are in use?
- Which Java environment is in use?
- Which customizations have been implemented?
- a full description of the problem (as detailed as possible)
- Can the error be reproduced? If yes, give a description please.
- How are the security settings (firewall)?

In addition, log files are the most valuable source of information.

To put it in a nutshell, CoreMedia needs:

*Support checklist*

1. a person in charge (ideally, the CoreMedia system administrator)
2. extensive and sufficient system specifications
3. detailed error description
4. log files for the affected component(s)
5. if required, system files

An essential feature for the CoreMedia system administration is the output log of Java processes and CoreMedia components. They're often the only source of information for error tracking and solving. All protocolling services should run at the highest log level that is possible in the system context. For a fast breakdown, you should be logging at debug level. The location where component log output is written is specified in its `<appName>-logback.xml` file.

*Log files*

### Which Log File?

Mostly at least two CoreMedia components are involved in errors. In most cases, the *Content Server* log files together with the log file from the client. If you are able locate the problem exactly, solving the problem becomes much easier.

### Where do I Find the Log Files?

By default, log files can be found in the CoreMedia component's installation directory in `/var/logs` or for web applications in the `logs/` directory of the servlet container. See Section 2.8.1, "Service and Logfile Names" in *Deployment Manual* for the default names of the logfiles and Section 4.7, "Logging" in *Operations Basics* for details.