COREMEDIA CONTENT CLOUD

Release Notes

COREMEDIA

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.core-media.com/cmcc-12/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 Command line entries Parameter and values	Courier new	`cm systeminfo`
Menu names and entries	Bold, linked with |	Open the menu entry **Format|Normal**
Field names CoreMedia Components	Italic	Enter in the field *Heading* The *CoreMedia Component*
Entries	In quotation marks	Enter "On"
(Simultaneously) pressed keys	Bracketed in "<>", linked with "+"	Press the keys <Ctrl>+<A>
Emphasis	Italic	It is *not* saved
Buttons	Bold, with square brackets	Click on the **[OK]** button
Glossary entry	>>-shaped icon	>> LDAP
Code lines in code examples which continue in the next line	\	`cm systeminfo \` `-u user`

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.

Release types

The release overview site at https://releases.coremedia.com/cmcc-12/overview/archive.html provides an overview of all available release versions of *CoreMedia Content Cloud*.

Available releases

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.

Helpcenter

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:

Module organization

- **CoreMedia Core:** All changes related to the CoreMedia core components.

    Content Server
    Workflow Server
    Content Application Engine (CAE)
    Content Feeder
    Importer (Deprecated)
    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.

    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 2506.0.2

The release contains:

- Breaking changes: 2
- Changes and improvements: 23
- Bugfixes: 43

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.

Release date: 2025-11-10

Breaking Changes

- CMS-28866: Updated mssql-jdbc to fix CVE
- CMS-28515: Removed redundant dependency management from blueprint parent POMs

Changes and Improvements

- CMS-28582: Third-Party Update: Apache Tika 3.2.3
- CMS-28519: Updated Project Dependencies
- CMS-28554: Fixed SSRF vulnerability in CodeResourceHandler
- CMS-28416: Improved Shortcuts Description
- CMS-28704: New property for placements in Headless Servers Content-Schema
- CMS-28828: Deprecated methods in UriComponentsHelper
- CMS-28559: Updated MySQL Driver
- CMS-28523: Deprecated unused remainders in workflow API

Bugfixes

- CMS-25759: Extended Output of cm dump Tool for Workflow Processes
- CMS-28699: Fixed Workflow Sidebar Footer
- CMS-28417: Fixed Annotated LinkList Textfields
- CMS-28369: Fixes: Link Balloon closes on content with multiple richtext editors when opening the library/control room

- CMS-28254: Fixed Miscellaneous Aria Roles and Labels
- CMS-27485: Fixed: CKEditor drag&drop imports contents from other systems (e.g. Content-Hub, Commerce) to the site root folder.
- CMS-27053: BoundRadioGroup DefaultValue Warning
- CMS-24059: Fixed Connection Recovering
- CMS-28685: CKEditor5: Link-Balloon layout issue has been fixed
- CMS-25282: Fixed Order of Uploaded JSON Settings
- CMS-28592: Fix Blueprint SearchConstants Value
- CMS-28574: Studio Multi-Preview can Change or Disappear Depending on User Permissions

4.1.1 Breaking Changes

CoreMedia Core

Updated mssql-jdbc to fix CVE

`com.microsoft.sqlserver:mssql-jdbc` has been updated to `10.2.4.jre11` to fix CVE-2025-59250.

Follow Section "Updated mssql-jdbc to fix CVE" [421] for upgrade information.

[CMS-28866]

Miscellaneous

Removed redundant dependency management from blueprint parent POMs

Imports for Spring dependencies have been removed from the `dependencyManage ment` sections from the `blueprint-parent` POMs.

Follow Section "Removed redundant dependency management from blueprint parent POMs" [421] for upgrade information.

[CMS-28515]

4.1.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Apache Tika 3.2.3

Apache Tika has been updated to version 3.2.3. As part of this change, transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Tika 3.2.2
- jsoup 1.21.2

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-28582]

Updated Project Dependencies

Updated several dependency and plugin versions:

- Angus Activation → 2.0.3
- Angus Mail → 2.0.5
- Apache HttpComponents Client 5 → 5.5.1
- AssertJ → 3.27.6
- Bouncy Castle Java → 1.82
- Byte Buddy → 1.17.8
- ClassMate → 1.7.1
- Commons Lang → 3.19.0
- Commons Text → 1.14.0
- Error Prone → 2.43.0
- Google Analytics Data Client for Java → 0.89.0
- Google API Common for Java → 2.54.0
- Google API Extensions for Java → 2.71.0
- Google Auth Library for Java → 1.40.0
- Google HTTP Client Library for Java → 2.0.2
- GraphQL Java → 24.3
- GraphQL Java DataLoader → 5.0.3
- gRPC-Java → 1.76.0

- Gson → 2.13.2
- Guava → 33.5.0-jre
- Hibernate ORM → 6.6.33.Final
- Jackson → 2.20.0
- JUnit Jupiter → 5.14.0
- Logback → 1.5.20
- Micrometer → 1.15.5
- Mockito → 5.20.0
- Netty → 4.1.128.Final
- Protobuf Maven Plugin → 3.10.2
- Protocol Buffers for Java → 4.33.0
- Reactor Project BOM → 2024.0.11
- SnakeYAML → 2.5
- Spring Boot → 3.5.7
- Spring Data BOM → 2025.0.5
- Spring for GraphQL → 1.4.3
- Spring Framework → 6.2.12
- Spring Security → 6.5.6
- Tomcat → 10.1.48
- Vavr → 0.10.7

[CMS-28519]

CoreMedia Content Application Engine

Fixed SSRF vulnaribility in CodeResourceHandler

Static files other than below the CAE root could be retrieved by manipulating the passed path.

[CMS-28554]

CoreMedia Studio Client

Improved Shortcuts Description

Improved shortcut description "Show opened tabs menu".

[CMS-28416]

CoreMedia Headless Server

New property for placements in Headless Servers Content-Schema

The GraphQL interface `PageGridPlacement` in the content schema was extended by the boolean property `editable`.

Since this is a new property the code change is considered non-breaking.

[CMS-28704]

Miscellaneous

Deprecated methods in UriComponentsHelper

Several methods in `com.coremedia.objectserver.web.links.UriComponentsHelper` have been deprecated. They will be removed with releases 2512.0.0 and 2406.3.0.

Deprecated methods:

- `appendOrOverride(UriComponents, UriComponents)`
- `appendOrOverride(UriComponents,        UriComponents, boolean)`
- `override(UriComponents, UriComponents)`
- `prependPath(String, UriComponents)`
- `prependPath(UriComponents, UriComponents)`
- `prependPath2(String, UriComponents)`

A new method `append(UriComponents, UriComponents)` has been added. It replaces the `appendOrOverride` methods in the new releases.

[CMS-28828]

Updated MySQL Driver

Updated MySQL driver to `com.mysql:mysql-connector-j:9.4.0`

[CMS-28559]

Deprecated unused remainders in workflow API

Unused remainders in the workflow API have been deprecated and marked for removal in CMCC-13.

Several workflow classes that are unused since the removal of the site-manager (with CMCC-12) have been deprecated and will be removed with CMCC-13. This affects the classes in the following packages:

- `com.coremedia.workflow`
- `com.coremedia.workflow.common.util`
- `com.coremedia.workflow.worklist`

[CMS-28523]

4.1.3 Fixed Issues

CoreMedia Core

Extended Output of cm dump Tool for Workflow Processes

The `cm dump` and the `cm processes --verbose` command-line tools were extended to output more data about workflow processes. The output now includes "task states", "task escalation exceptions", and "task warnings". This can be helpful to analyze the current state of a running workflow, including errors that happened during the execution of a workflow task.

Previously, such information was only written if these tools were used to dump the workflow tasks itself, for example if `cm dump` was called with a task id, `cm dump --verbose` was used to dump a process, or with `cm processes --very-verbose`.

[CMS-25759]

CoreMedia Studio Client

Fixed Workflow Sidebar Footer

Fixed issue that the workflow sidebar footer toolbar was not displayed for users, that do not read permissions for a workflow.

[CMS-28699]

Fixed Annotated LinkList Textfields

Fixed issue that the text of an INPUT field within an annotated link list was not selectable via mouse.

This issue has been fixed for Firefox now too.

[CMS-28417]

Fixes: Link Balloon closes on content with multiple richtext editors when opening the library/control room

When the Richtext-Editor, which has a CKEditor5RichTextPropertyFieldDelegatePlugin, looses focus, then the delegated value is applied. Which causes the Link Balloon to close. If the value would not change, avoid applying the value.

[CMS-28369]

Fixed Miscellaneous Aria Roles and Labels

- Added aria label for the user menu.
- Added aria labels for the user menu items.
- Added aria labels for direct input fields (everywhere, e.g. also projects and struct editor).
- Added aria labels for column headers, telling the users what the name of the column is they are sorting.
- Fixed aria label for the collapsible filter panels. The titles have been set properly so that the aria label of the expand/collapse button contains the name of the panel now.

[CMS-28254]

Fixed: CKEditor drag&drop imports contents from other systems (e.g. Content-Hub, Commerce) to the site root folder.

When drag&drop from e.g. Content-Hub, Commerce to a CKEditor contents were imported to the site root folder. Now the contents are imported to the same folder as the edited content item.

(CMS-27485)

BoundRadioGroup DefaultValue Warning

The component BoundRadioGroup is logging a warning now, in case no default value has been set. If this value is not set, the change event handling might not work properly and does not result into content updates.

(CMS-27053)

Fixed Connection Recovering

The connection error handling of the Studio client has been improved so that erroneous requests that failed because of connection issues can recover.

(CMS-24059)

CoreMedia Studio Server

CKEditor5: Link-Balloon layout issue has been fixed

A layout issue where the content-link button would take too much space and move the "Insert/Update" button out of the balloon (especially with German language) has been fixed.

(CMS-28685)

Fixed Order of Uploaded JSON Settings

When uploading a JSON file to Studio the order of the entries is preserved now.

(CMS-25282)

Miscellaneous

Fix Blueprint SearchConstants Value

Fixed   Blueprint   constant   `com.coremedia.blue`
`print.cae.search.SearchConstants.FIELDS#CREATION_DATE`
to lower-case value `creationdate` as used in the Solr schema.

[CMS-28592]

Studio Multi-Preview can Change or Disappear Depending on User Permissions

Multi-Preview settings retrieval failed to use the correct read permissions. This can lead to changing or even disappearing Multipreviews in Studio, depending on the permissions.

This behavior was fixed so that a consistent settings retrieval using the correct read permissions is guaranteed.

[CMS-28574]

4.2 Release 2506.0.1

The release contains:

- Breaking changes: 1
- Changes and improvements: 24
- Bugfixes: 53

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.

Release date: 2025-09-08

Breaking Changes

- CMS-28213: Content hub adapters are no longer delivered as bundled plugins

Changes and Improvements

- CMS-28431: Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies
- CMS-28186: Updated Project Dependencies
- CMS-22696: Fixed Single-Selection Mode for the Taxonomy Chooser
- CMS-28251: Deprecation of Workflow Client Methods
- CMS-28158: Deprecation of Generic Analytics Connectors
- CMS-28032: Configurable Cache Duration for Outdated Transformed Blobs
- CMS-28006: JUnit Jupiter: Updated to 5.13.2
- CMS-27839: Third-Party Update: commons-io 2.19.0
- CMS-23359: LdapUserProvider Connection Improvements

Bugfixes

- CMS-25566: Fixed Bug In Integrated Workflow Conversion With PostgreSQL
- CMS-28288: Fixed Parameter Resolution of Dynamic Includes
- CMS-28160: Fixed JMX issue with CAE startup
- CMS-27938: Default configuration of cache-control headers fixed
- CMS-16789: Removed duplicate of `userVariant`

- CMS-28259: Fixed Miscellaneous Aria Roles and Labels
- CMS-28258: Repository Tree Accessibility
- CMS-28257: Fixed Widget Button Tooltips
- CMS-28252: Fixed HTML "lang" Attribute
- CMS-28250: Tooltips are now activated on Focus
- CMS-28243: Welcome Widget is now accessible
- CMS-28239: Fixed Library Column Accessibility
- CMS-28238: Fixed Library Context Menu Accessibility
- CMS-28133: Added Missing QuickCreate Parameters
- CMS-26035: Fixed Miscellaneous Struct Editor Issues
- CMS-25975: Workflows in ControlRoom inbox are now correctly displayed
- CMS-28336: Fixed Search by Path in Studio Folder Chooser
- CMS-28337: Headless responds to HTTP-Head over REST now as in CM11
- CMS-28203: Richtext headings are resolved with inline handlers
- CMS-28100: Category parameter is taken for augmented products
- CMS-18211: Changed the logic for the metric com.coremedia.Store.Connected

4.2.1 Breaking Changes

Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

4.2.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies

Apache Tika has been updated to version 3.2.2. As part of this change, transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.14.1
- Apache Commons IO 2.20.0
- Apache Commons Lang3 3.18.0
- Apache Mime4J 0.8.13
- Apache PDFBox 3.0.5
- Apache Tika 3.2.2
- ASM 9.8
- jsoup 1.21.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-28431]

Updated Project Dependencies

Updated several dependency and plugin versions:

- Angus Mail → 2.0.4
- AssertJ → 3.27.4
- Byte Buddy → 1.17.7
- Commons CLI → 1.10.0
- Commons Compress → 1.28.0
- Commons Text → 1.14.0
- CoreMedia Adapter for HCL Commerce → 3.0.14
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.16
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.14
- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.16
- Enterprise Security API → 2.7.0.0
- Error Prone → 2.41.0

- Google Analytics Data Client for Java → 0.83.0
- Google API Common for Java → 2.53.0
- Google API Extensions for Java → 2.70.0
- Google Auth Library for Java → 1.38.0
- Google HTTP Client Library for Java → 1.47.1
- GraphQL Java → 24.2
- gRPC-Java → 1.75.0
- Hibernate ORM → 6.6.27.Final
- Hibernate Validator → 8.0.3.Final
- Jackson → 2.19.2
- jsoup → 1.21.2
- Micrometer → 1.15.2
- Mockito → 5.19.0
- Netty → 4.1.124.Final
- Protobuf Maven Plugin → 3.8.1
- Protocol Buffers for Java → 4.32.0
- Reactor Project BOM → 2024.0.8
- Spring Boot → 3.5.5
- Spring Data BOM → 2025.0.3
- Spring for GraphQL → 1.4.1
- Spring Framework → 6.2.10
- Spring Security → 6.5.3
- Tomcat → 10.1.44

[CMS-28186]

CoreMedia Studio Server

Fixed Single-Selection Mode for the Taxonomy Chooser

The single-selection mode that is available for the taxonomy chooser component has been fixed. In addition to that, the *singleSelection* configuration option is autmatically derived from the *maxCardinality* flag of the taxonomy link list. So when the *maxCardinality* is set to *1* for the *TaxonomyLinkListPropertyField*, the dialog switches to single-selection too.

[CMS-22696]

Miscellaneous

Deprecation of Workflow Client Methods

Multiple constants and methods in Workflow Client have been deprecated.

The legacy Workflow Client properties file configuration setup has been deprecated. It will be replaced by a Spring approach in a future release. In preparation for this, multiple methods and constants in `com.coremedia.workflow.WfClient` have been deprecated.

- `com.coremedia.workflow.WfClient.ACTION_LISTENER`
- `com.coremedia.workflow.WfClient.CONNECTOR`
- `com.coremedia.workflow.WfClient.DIRECTORY_SERVICE`
- `com.coremedia.workflow.WfClient.DOMAIN`
- `com.coremedia.workflow.WfClient.IORURL`
- `com.coremedia.workflow.WfClient.OBJECT_REPOSITORY`
- `com.coremedia.workflow.WfClient.PASSWORD`
- `com.coremedia.workflow.WfClient.SERVER_IOR`
- `com.coremedia.workflow.WfClient.SERVER_URL`
- `com.coremedia.workflow.WfClient.SERVICE`
- `com.coremedia.workflow.WfClient.SERVICE_INDICATOR`
- `com.coremedia.workflow.WfClient.USER`
- `com.coremedia.workflow.WfClient#getProperty(String, String)`
- `com.coremedia.workflow.WfClient#getRequiredProperty(String)`
- `com.coremedia.workflow.WfClient#load(String)`
- `com.coremedia.workflow.WfClient#setProperty(String, String)`

Other deprecations without a replacement:

- `com.coremedia.workflow.WfClient#addCallLevelUpdateListener(com.coremedia.workflow.WfCallLevelUpdateListener)`
- `com.coremedia.workflow.WfClient#addSessionListener(com.coremedia.workflow.WfSessionListener)`
- `com.coremedia.workflow.WfClient#connect(hox.corem.corba.Session)`
- `com.coremedia.workflow.WfClient#disconnect(com.coremedia.workflow.WfSession)`
- `com.coremedia.workflow.WfClient#getAdminController`

- `com.coremedia.workflow.WfClient#getLog`
- `com.coremedia.workflow.WfClient#removeCallLevelUpdateL istener(com.coremedia.workflow.WfCallLevelUpdateListen er)`
- `com.coremedia.workflow.WfClient#removeSessionListen er(com.coremedia.workflow.WfSessionListener)`

[CMS-28251]

Deprecation of Generic Analytics Connectors

The integration of Analytics Connectors based on Elastic Core is deprecated, i.e. extension `es-alx` and parts of extension `alx`, including the analytics doctypes. Functionality for website tracking will still be available.

Deprecated features:

- Top N Lists including
  - Analytics doctypes: `CMALXBaseList (abstract)`, `CMALXPageList` and `CMALXEventList`
  - Contentbean implementations
  - Studio configuration forms
- Retrieval tasks and persistence based on the `ModelService` (module `bpbase-es-alx-common`)
- Studio: generic configuration, performance widgets, deep links

These features are discontinued and will be replaced by an integrated solution.

[CMS-28158]

Configurable Cache Duration for Outdated Transformed Blobs

Added a new configuration property `delivery.outdated-transformed-blob-cache-duration` to control how long outdated or yet unknown transformed blobs are to be cached in a multi-CAE scenario (`cae.single-node=false`). Before this fix, CAE send a cache-control header with `max-age` of 0 seconds. This value is now configurable. Consider that a yet unknown cache should not be cached for long because the CDN should ideally cache the correct transformed blob for a given URL. The cases to cover are that (1) either a more up-to-date CAE generated the link and the CAE answering the request for the transformed blob does not yet know about the updated blob and (2) a client has stored a very old version of a transformed blob URL for which the blob data is no longer cached by the CDN. A CAE cannot distinguish between these two cases but serves the currently (either outdated or newer) known transformed blob. The new configuration property allows projects to optimize for scenario (1) or (2) by setting a (1) short duration or (2) a long duration.

Configuration example:

```
# Set cache duration to 1 hour
delivery.outdated-transformed-blob-cache-duration=1h
```

Upgrade Information

[CMS-28032]

JUnit Jupiter: Updated to 5.13.2

JUnit Jupiter has been updated to 5.13.2. Note, that this release introduces deprecations, for example, for `ArgumentsProvider` so that you should implement another signature of `provideArguments`.

For details, see the corresponding release notes: JUnit 5 Release Notes.

[CMS-28006]

Third-Party Update: commons-io 2.19.0

Apache Commons IO has been updated to 2.19.0.

[CMS-27839]

LdapUserProvider Connection Improvements

LDAP roundtrips ere executed with a timeout now, in order to avoid blocked threads in case of certain problems. The timeout [`ldap.timeout`] as well as the maximum number of connections [`ldap.max-connections`] is configurable now. However, the default values are supposed to be suitable for most projects, and there should be no need to change them unless concrete problems occur. There is another new configuration property `ldap.referral-throw-handling` to control the details of referral handling. It is still experimental, because the details concerning referrals depend on the particular setup of the LDAP servers, and this has not yet been tested exhaustively. But if you encounter problems with the default behaviour, you should give it a try.

See `com.coremedia.ldap.LdapUserProviderConfigurationProperties` for details.

[CMS-23359]

4.2.3 Fixed Issues

CoreMedia Core

Fixed Bug In Integrated Workflow Conversion With PostgreSQL

Integrated workflow conversion (enabled in the workflow-server with `workflow.server.enable-workflow-converter=true`) has been fixed for PostgreSQL.

[CMS-25566]

CoreMedia Content Application Engine

Fixed Parameter Resolution of Dynamic Includes

When using dynamic includes on the Preview CAE the parameters (required to serve personalized content) were lost. This bug has been fixed so that parameter resolution for dynamic includes functions properly on Preview CAE.

[CMS-28288]

Fixed JMX issue with CAE startup

In rare cases the CAE didn't start up the application context due to an issue with anonymous LinkFormatter instantiation in JMX configuration.

[CMS-28160]

Default configuration of cache-control headers fixed

In Live CAE the default configuration of cache-control headers for css and javascript URLs contained an incorrect pattern. This led to exceptions in the log and the values could not be read.

[CMS-27938]

Removed duplicate of `userVariant`

The query parameter `userVariant` was added twice in a redirect (e.g. the preview call in studio preview). This has been cleaned up and the `userVariant` is now only added once.

[CMS-16789]

CoreMedia Studio Client

Fixed Miscellaneous Aria Roles and Labels

- Improved the aria label for the type icon column by adding role "img" and an aria label.
- Added aria labels for the image editors rotation actions.
- Fixed preview options toolbar aria label.
- Fixed toolbar overflow button label.
- Changed the header toolbar aria label from Kopf to Site Auswahl, Guides, Info-Center und Benutzermenü.
- Added aria role "button" and aria label for the close button of work area tabs.

[CMS-28259]

Repository Tree Accessibility

The aria role of repository tree items has been changed to "treeitem".

[CMS-28258]

Fixed Widget Button Tooltips

The "Edit" button for dashboard widget has been fixed so that the tooltip adepts depending on its mode. This includes the aria label too.

[CMS-28257]

Fixed HTML "lang" Attribute

The "lang" attribute is now set to the "html" element instead of the "body" element where it belongs according to w3c standards.

[CMS-28252]

Tooltips are now activated on Focus

For better accessibility, the tooltips are now not only shown on a mouse hover but also on keyboard focus.

[CMS-28250]

Welcome Widget is now accessible

The links in the welcome widget on Dashboard can be navigated to via keyboard and activated pressing the enter button.

[CMS-28243]

Fixed Library Column Accessibility

The accessibility for columns inside the library (and other grid components) has been fixed: If a column is sortable, the sort order can be toggled via key navigation (Enter key).

[CMS-28239]

Fixed Library Context Menu Accessibility

The accessibility for the context menu in the library has been fixed. The context menu can now be opened via the keyboard shortcut CTRL+Enter.

[CMS-28238]

Added Missing QuickCreate Parameters

Added missing parameters from the *QuickCreateAction* to the the *QuickCreateLinkList-Menu* so that all configuration possibilities are available there too.

[CMS-28133]

Fixed Miscellaneous Struct Editor Issues

- Fixed issue that the markup editor for did not show values or did show values for other markup fields or did not save these.
- Fixed errors that happened for markup lists.
- Fixed the error that when a property editor dialog was opened for a struct property (e.g. markup or date fields) and the node was cut or deleted, the dialog remained open.

[CMS-26035]

Workflows in ControlRoom inbox are now correctly displayed

When several workflow are created at the same time (e.g., a translation is triggered against multiple target languages), then there are several workflows with the same creation date. When completing one of them it could remain in the inbox even after it is completed. Now the malbehavior is fixed.

[CMS-25975]

CoreMedia Studio Server

Fixed Search by Path in Studio Folder Chooser

Fixed a bug that made it impossible to search by path for folders in the folder chooser, for example to find the target folder in the create new document dialog.

[CMS-28336]

CoreMedia Headless Server

Headless responds to HTTP-Head over REST now as in CM11

In CMCC 11 (2310), Headless Server responded to HEAD requests over the REST-API with 200 and 404 as long as JSLT was enabled (which is the default).

With the introduction of Spring-GraphQL, the HTTP transport layer was redefined by Spring. As a consequence, its basic implementation was only able to respond to POST requests. The ability to respond to GET requests was add by CoreMedia but support for HEAD requests was omitted, as such requests to a GraphQL endpoint are neither covered by the GraphQL-over-HTTP spec, nor does it make sense to respond to a HEAD request on a plain GraphQL endpoint.

Nevertheless, supporting HEAD requests makes sense for the REST-API and in CMCC 11 (2310), Headless Server responded with 200 or 404 to a HEAD request as long as JSLT was enabled. Note that the response was always 200, when JSLT was disabled.

This changed behavior was now reestablished for CMCC 12.

Also note that HEAD requests to the REST-API are not recommended and you should strive for solutions avoiding HEAD requests!

Upgrade Information

[CMS-28337]

Richtext headings are resolved with inline handlers

Before, links to content in richtext headlines were not resolved via GraphQL in fields `text`, `textReferencedContent` and `textAsTree`. The content links are resolved correctly now together with other inline elements, by adding the inline handlers to the headline context.

[CMS-28203]

Miscellaneous

Category parameter is taken for augmented products

If you have an augmented product and set some alternative placements and if the product is contained in multiple categories (e.g. beside the primary category it is also part of the e.g. "newarrivals-mens" category). If the PDP fragment is called with such an additional category parameter (not the primary category id) it is taken for augmentation (and not the primary category of the product).

[CMS-28100]

Changed the logic for the metric com.coremedia.Store.Connected

Changed the logic for the metric `com.coremedia.Store.Connected` to monitor the open connections to the database. This ensures that the state changes when the last connection is closed due to an error instead of waiting for a future connection request to encounter an error. Requires the number of minumum open connections to be set to at least 1 (`sql.pool.minConnections`). This is enforced by the code - values below 1 will be ignored and the minumum will be set to 1. As the server must open at least one connection to work, this won't change its operation. Relies on the connection validator to discover broken connections. If a more timely detection of connection issues is required, reduce the values of the properties `sql.pool.validatorInterval` and `sql.pool.validatorTimeout`.

[CMS-18211]

4.3 Release 2506.0.0

The release contains:

- Breaking changes: 44
- Changes and improvements: 175
- Bugfixes: 212

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.

Release date: 2025-07-11

Breaking Changes

- CMS-27867: Matured cm jshell for Automation
- CMS-27819: Content Feeder Configuration Changes and Deprecations
- CMS-27560: Removal of Deprecated Content Server Code
- CMS-27558: Removal of Deprecated Code
- CMS-27543: CAE Feeder Configuration Changes and Deprecations
- CMS-27489: New Options -g/--grpc-endpoint and --http-base-uri for Command Line Tools
- CMS-27206: CAE Feeder Option to Inherit Indexed Valid Time From Navigation Contexts
- CMS-27056: Fix Studio Search Filter "Last Edited By"
- CMS-26952: Enhanced translate.xliff.import.ignorableWhitespaceRegex
- CMS-25528: Package 'hox.configuration' removed from public API
- CMS-23764: New Method in ServerImportBuilder
- CMS-20282: Case-insensitive User and Group Search
- CMS-379: Removal of license property "workflow"
- CMS-28098: Configured limit for part count in multipart/form-data requests
- CMS-27414: Optimized Blob Link Building
- CMS-27252: Freemarker: make class resolver configurable
- CMS-26015: Avoid Auto-wiring on Spring Beans with Scope "Prototype"
- CMS-25644: Generalized CORS properties for delivery applications
- CMS-27964: Public API changes for studio-client packages

- CMS-27671: Upgraded @jangaroo/ext-ts to 2.1.0
- CMS-27377: CoreMedia CKEditor5 Plugins updated to Version 23.0.0
- CMS-27362: Removed ExtJS Workflow App
- CMS-27076: CKEditor5 updated to version 45.2.0
- CMS-26960: Changed LinkList Thumbnails
- CMS-25815: RichTextPropertyFields is now capable of handling StructSubBeans
- CMS-22940: Improve Internal Studio Protocol for Better Performance
- CMS-22454: Build-In Workflows Now Utilize workflowPlugins Registry
- CMS-27624: Maturing Struct "translatable" Configuration
- CMS-27561: Removed Deprecated Public API Classes
- CMS-26996: Configuration of ProjectDefaultPictureResolver has moved
- CMS-23134: Replace Liquibase for editorial-comments
- CMS-11041: Changed shortcuts to increase and decrease window and dialog sizes
- CMS-28033: Add missing support for table attributes in rich text transformation
- CMS-27689: Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses
- CMS-23704: Deleted Deprecated Blueprint Commerce Augmentation Queries from HLS Schema
- CMS-27724: Corba ORB JMX MBeans Removed to Save Heap Memory
- CMS-27313: Third-Party Update: Spring Boot and Related Dependencies
- CMS-27232: Removal of Deprecated Public API Classes
- CMS-27158: Modernized log implementation in publisher classes
- CMS-27141: Removed Support for Filter Expressions in Log Configurations
- CMS-26982: Removed version management for jmeter-maven-plugin
- CMS-26977: Header Toolbar Revamp
- CMS-25871: Changed UserProvider Setup Policy
- CMS-24826: Custom Workflow API Changes

Changes and Improvements

- CMS-28272: Deprecation of Workflow Client Methods
- CMS-28048: Updated postgresql driver
- CMS-27955: Third-Party Update: OpenCSV
- CMS-27951: Deprecation: Workflow JAR Upload

- CMS-27870: Deprecation of XML Importer
- CMS-27868: Fix Content Feeder Background Issue Feeding
- CMS-27627: Deprecated Blueprint CAE Feeder Classes ValidFromPropertyConverter and ValidToPropertyConverter
- CMS-27400: Deprecation: Public API for Custom Proactive Engine Application
- CMS-27224: Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"
- CMS-27223: Options for Command Line Tools
- CMS-27021: Updated Maven dependencies and plugins
- CMS-26000: Update of MongoDB Java driver to 5.3.1
- CMS-25951: Deprecation: Java API Package com.coremedia.cap.server.search
- CMS-25920: Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies
- CMS-25393: New Content Server license information metric
- CMS-21621: CAE Feeder IndexVerifier Configuration
- CMS-13739: Multi-Site Manual: Restructuring Sites and Changing Site Type
- CMS-28020: Reduced category loading in fragment calls
- CMS-25571: Parameter Appending Link Transformers May Skip Transformation for Bean Types
- CMS-27630: Third-Party Update: pnpm to version 10
- CMS-27162: Third-Party Update: Upgraded Node.js to 22 LTS
- CMS-27159: Changed Content Type Selector Filter Options
- CMS-27001: Added option to hide the "All" entry in the "New" content items menu
- CMS-25982: Make library column resizer more visible
- CMS-25190: Enabled AMAsset Thumbnail Previews
- CMS-23493: Introduced Search Limit for External Domains
- CMS-19609: Richtext-Editor (CKEditor 5): Link URL Inputfield supports Content-Search
- CMS-19538: Warning before publication workflow is fixed
- CMS-15544: Fixed WidgetType Example
- CMS-15183: Added SiteAwareVisibilityPlugin Documentation
- CMS-27156: Configured gRPC ports in application and deployment configurations
- CMS-28106: Commerce Hub Property Deprecation
- CMS-26990: Updated Commerce Client ClientProduct#getCategories
- CMS-27519: Enhanced documentation around Sitemap generation

- CMS-26913: Enhanced Multi-Site Manual Section "Designing Locales"
- CMS-16427: Updated Device Slider Documentation
- CMS-27662: Preparation for gRPC: New Mandatory Properties
- CMS-27504: Supported: MySQL 8.4 on Amazon RDS
- CMS-27503: Supported: PostgreSQL 16 on Azure
- CMS-27308: Support MySQL 8.4.
- CMS-27306: Support Oracle Database 23ai
- CMS-27299: Support PostgreSQL 16
- CMS-27253: Third-Party Update: Apache Solr 9.8.0
- CMS-25708: Deprecation of Google Analytics Connectors
- CMS-25670: MongoDB Persistence for Editorial Features has been Deprecated
- CMS-25656: Migration Support for Editorial Services from Elastic to SQL Persistence
- CMS-25505: Added Escalation Info to Nagbar
- CMS-23960: Supported: PostgreSQL 16 on Amazon RDS
- CMS-23842: Removal of deprecated Commerce Capability Constants
- CMS-18494: Smart Validation for Segment in Commerce Pages

Bugfixes

- CMS-27896: Fix Workflow Action Attribute ignoreErrors
- CMS-27723: Fatal Error on Replication and UAPI Clients for "Old" Published Content
- CMS-27570: Workflow Action Conditional Execution
- CMS-27209: Fix CAE Feeder DataSource Configuration
- CMS-27190: Fixed CAE Feeder JMX Metric LatestIndexing
- CMS-27181: Content Server Unresponsive after Database Failover Recovery
- CMS-27126: Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section
- CMS-27003: RichTextCorrectionConverter: Multiple corrected attributes ArrayIndex-OutOfBounds exception fixed
- CMS-26920: CMS Catalog loads products via observed property
- CMS-26904: Fixed Content Feeder to Set Correct Metadata after Content Withdrawal
- CMS-25907: Fixed Content Feeder to Detect Cycles in CMS Catalog Categories
- CMS-25632: Additional Information on Blob Sharing Configuration Options
- CMS-23141: Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows
- CMS-28021: Mega menus should now render much faster in CAE (Salesforce and Hybris)

- CMS-27638: Eliminated Race Condition on Computation of Image Transformations
- CMS-27473: CAE - development with local resources fixed
- CMS-27431: SiteFilter pattern matching for /service/search/{site} fixed for CAE
- CMS-26930: Fixed: Dynamic Template loading
- CMS-28023: Fixed Preview Date Selector Dialog
- CMS-27709: Aligned Labels for Translation Statuses
- CMS-27500: Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"
- CMS-27466: Studio Client Container Image now Respects sigterm and sigint Signals
- CMS-27361: Added Overflow for Struct Editor and Pagegrid Toolbars
- CMS-27354: Initialization of StudioStartupPlugin may now Return a Promise
- CMS-27257: Fixed Height of Start Workflow Dialog
- CMS-27250: Removed AS Documentation References
- CMS-27233: Removed Outdated Documentation about ExtJS Browser Plugin
- CMS-27216: Fixed Mouse Selection for Annotated Link Lists
- CMS-27193: Preventing of Superfluous Augmentation Requests
- CMS-27149: Fixed Job Service Event Handling
- CMS-27148: Fixed: Inconsistent tab focus when opening documents via links in CkEditor
- CMS-27096: Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)
- CMS-27047: Fixed Locale Switcher Endless Loading
- CMS-26968: Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests
- CMS-26944: Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.
- CMS-25606: Fixed "RemoteItemsPlugin" Logging
- CMS-25556: Fixed German translation for "Add Bookmark" Menu Item
- CMS-25394: The Sencha Ext fonts are now loaded
- CMS-25367: Some improvements in Accessibility
- CMS-25339: Theme Updates for GenericDocumentForm
- CMS-25171: Fixed External Link Validator
- CMS-24907: Studio Client: Umlauts are not always displayed with colons
- CMS-24181: Docked Library JavaScript Errors

- CMS-24129: CKEditor5 Cursor Issue Fixed
- CMS-23901: The BBCode RichText Editor Renders Additional bbcode Tags
- CMS-23717: Improved UploadSettings Documentation
- CMS-23480: Fixed "Open In Tab" Toolbar Action
- CMS-20791: Fixed Device Slider Hiding
- CMS-19047: Added Documentation for ComboBoxes and Tab-Reuse
- CMS-18773: Adding Missing Asset Sorting
- CMS-18223: Fixed Lazy Loading in Library
- CMS-18052: Scroll bar overlaps checkboxes when selecting target locales for translation on Mac
- CMS-9208: Translation State Widget Robustness Enhanced
- CMS-27775: Fixed Potential Cache Deadlock in LoadedImageCacheKey
- CMS-27684: StudioInMemoryAutoConfiguration is deprecated
- CMS-27420: Fixed: Problem with Focus in RichtextField
- CMS-27338: Fixed Bug - Special Characters in Commerce IDs
- CMS-27059: Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors
- CMS-27046: PublicationContentStateValidator now uses connectionSession
- CMS-27045: ConfigurableDeadLinkValidator is configurable now
- CMS-25296: Fixed CommerceContentTypesPictureResolver for empty URLs
- CMS-11873: The link suggester field is now reset
- CMS-8538: New deprecation: CMMedia#getCaption
- CMS-27521: Scripts "set-blueprint-groupId.sh", "set-blueprint-version.sh" and "download-plugins.sh" Now Work on macOS
- CMS-25685: Fixed a bug with code splitting feature not working in certain setups
- CMS-28156: Update to latest minor version of Spring-GraphQL and GraphiQL 5.0
- CMS-27931: Fixed Regression: Non-trivial server context path for REST request was ignored
- CMS-27811: Exception handling by DataFetcherExceptionResolverAdapter
- CMS-27635: HeadlessServer now also supports type conversion of path segments used as GraphQL input variables
- CMS-27168: Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type
- CMS-27128: Apollo Federation Support

- CMS-26978: Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer
- CMS-28208: Fixed ContentHub Issue with duplicate beans
- CMS-27975: Application SBOMs are optionally added to the Spring-Boot actuator
- CMS-27941: cm sql Fixed
- CMS-27865: The link and button to open workflow from then nagbar
- CMS-27815: Fixed UrlValidator
- CMS-27646: Fixed Method ContentSiteAspect#setMasterVersion
- CMS-27599: Fixed: Added receiveDraggedItemsToService to index.ts
- CMS-27457: Fixed QuickCreate Dialog "skipInitializers" Flag
- CMS-27244: MongoDbHealthIndicator has been Changed to use the hello-command
- CMS-26018: Fixed Filtering of Searchable Content Types
- CMS-24169: Update Documentation on CAE Spring Security

4.3.1 Breaking Changes

CoreMedia Core

Matured cm jshell for Automation

We matured the Java JShell-wrapper `cm jshell`. Main purpose of the adaptations is to pave paths for using `cm jshell` in automation scenarios.

Follow Section "Matured cm jshell for Automation" [424] for upgrade information.

[CMS-27867]

Content Feeder Configuration Changes and Deprecations

Content Feeder configuration properties for indexing blob properties have changed in this release, and may require adapting your configuration.

Follow Section "Content Feeder Configuration Changes and Deprecations" [427] for upgrade information.

[CMS-27819]

Removal of Deprecated Content Server Code

The following deprecated classes and methods have been removed:

- `com.coremedia.ldap.OrganizationalUnit`

- `hox.corem.server.media.S3Store`
  - Note: `hox.corem.server.media.S3BlobStore` handles encryption differently. It uses the buckets default method. If you want to keep the behavior of the removed class, you need to set the encryption mode to AES256 explicitly via `cap.server.blobstore.s3.encryption-mode=AES256`.
- `com.coremedia.ldap.LdapUserProvider.defaultLdapProperty(Properties, String, String)`
- `com.coremedia.ldap.LdapUserProvider.getExpirationSeconds()`
- `com.coremedia.ldap.LdapUserProvider.tokenize(String, String)`
- `com.coremedia.ldap.UserProvider.getExpirationSeconds()`
- `hox.corem.server.media.CompoundMediaStoreSelector.addSelector(MediaStoreSelector)`
- `hox.corem.server.media.CompoundMediaStoreSelector.setSelectors(List)`
- `hox.corem.server.media.CompoundMediaStoreSelector()`
- `hox.corem.server.media.UploadContextImpl(MimeType, int, String, String, String, boolean)`

Follow Section "Removal of Deprecated Content Server Code" [427] for upgrade information.

[CMS-27560]

Removal of Deprecated Code

The following classes, methods and fields were removed:

- `com.coremedia.translate.workflow.ValidateTranslationParametersAction.Parameters.targetSiteId` [use field `ValidateTranslationParametersAction.Parameters.targetSiteIds` instead]
- `com.coremedia.translate.workflow.GetDerivedContentsAction.Parameters.getTargetSite()` [use `GetDerivedContentsAction.Parameters.getTargetSiteIds()` and `SitesService.getSite(java.lang.String)` instead]
- `com.coremedia.translate.workflow.ListDiff.elementEqual(T, T)` [instead of overriding this method, pass an equality predicate to the constructor]
- `com.coremedia.translate.workflow.ValidateTranslationParametersAction.Parameters(User, List<ContentObject>, String)` [use other constructor instead]

Follow Section "Removal of Deprecated Code" [428] for upgrade information.

[CMS-27558]

CAE Feeder Configuration Changes and Deprecations

Multiple changes were made to CAE Feeder configuration properties, its defaults and related Java API. This includes changes for configuring indexed blob values and properties by name, that may require adapting your configuration. Other changes deprecate existing configuration properties or API, and introduce suggested replacements. For the latter, it is not necessary but still recommended to switch to new properties and API. Deprecated properties and API will be removed in future releases.

Follow Section "CAE Feeder Configuration Changes and Deprecations" [429] for upgrade information.

[CMS-27543]

New Options -g/--grpc-endpoint and --http-base-uri for Command Line Tools

The options `- grpc-endpoint` (short: `-g`) and `-http-base-uri` have been added to the command line tools. These have been applied to `com.coremedia.cm dline.CommandLineClient`, so that your custom command line clients may inherit them, too.

The command line option `--grpc-endpoint <ENDPOINT>` has been added to support a gRPC-based Unified API Connection. The `ENDPOINT` has the format `HOSTNAME:PORT[,HOSTNAME:PORT]*`.

Follow Section "New Options -g/--grpc-endpoint and --http-base-uri for Command Line Tools" [432] for upgrade information.

[CMS-27489]

CAE Feeder Option to Inherit Indexed Valid Time From Navigation Contexts

The *CAE Feeder* can now be configured to feed index fields `validfrom` and `validto` not only based on a CMLinkable's own `validFrom` and `validTo` fields, but by also taking `validFrom` and `validTo` fields of its navigation contexts into account. If enabled and after corresponding content has been re-indexed, then website search will not return CMLinkable hits anymore if their page was marked as invalid for the current time. This new behavior can be enabled with Blueprint configuration property `caefeed er.valid-time.inherit-from-navigation=true` (default is false). The default behavior is the same as before, but changes in the *CAE Feeder* Spring configuration may require adjustments for project customizations.

- Previously, feeding `validfrom` and `validto` index fields was configured in Blueprint Spring configuration `apps/cae-feeder/modules/search/cae feeder-blueprint-component/src/main/resources/META-INF/coremedia/caefeeder.xml` using `BeanPropertyFeedableEle mentMapping` elements. This has been replaced with the configuration of a newly introduced dedicated `ValidTimeFeedablePopulator` in `com.core media.blueprint.caefeeder.config.CaeFeederBlueprintAu toConfiguration`. If needed, you can still keep custom alternative logic for

feeding the valid time using a `BeanPropertyFeedableElementMapping`.
The `ValidTimeFeedablePopulator` runs afterward and doesn't do anything,
if `validfrom` or `validto` elements are already set in the `Feedable`.

- The Spring bean `navigationPathKeyFactory` that was used in Blueprint
`caefeeder.xml` has been replaced with bean `navigationPathContents`
`Function`. If you called method `TreePathKeyFactory#getPath(Con`
`tent)` of the `navigationPathKeyFactory` bean in custom code, then
you can replace such usages by calling the `Function#apply(Content)`
method of the new `navigationPathContentsFunction` bean. For details,
see also the API documentation of `com.coremedia.blueprint.base.cae`
`feeder.navigation.CaeFeederNavigationConfiguration#nav`
`igationPathContentsFunction`.

- Public API interface `com.coremedia.cap.feeder.MutableFeedable`
got a new default method `setDateElement(String, java.time.In`
`stant, Map)` that works like existing methods but supports values of new type
`java.time.Instant`.

- Note, that if you enable property `caefeeder.valid-time.inherit-from-`
`navigation=true` to feed an existing index, then contents need to be re-indexed
before changes will become effective for them. Also, automatic re-indexing of many
contents may happen once, if `validFrom` or `validTo` is already set at transitive
navigation contents and the *CAE Feeder* is re-indexing other content below that
navigation.

- For more details on feeding valid time, have a look at the CAE Feeder Java API docu-
mentation in packages `com.coremedia.blueprint.base.caefeeder`
and `com.coremedia.blueprint.base.caefeeder.navigation`.

[CMS-27206]

Fix Studio Search Filter "Last Edited By"

Fixed a bug in the Studio Search Filter "Last Edited By", that caused a content item to
not show up as edited by the current user, if its latest modification was a publication
that destroyed old intermediate versions. The fix will become effective for newly indexed
content items, or after changes were made to content items. The Solr field 'editor' was
changed as part of the fix.

Follow Section "Fix Studio Search Filter "Last Edited By"" [433] for upgrade information.

[CMS-27056]

Enhanced translate.xliff.import.ignorableWhitespaceRegex

The pattern `translate.xliff.import.ignorableWhitespaceRegex`
is meant to match those strings, that translators may perceive as empty (and thus,
won't provide a translation for).

Follow Section "Enhanced translate.xliff.import.ignorableWhitespaceRegex" [434] for
upgrade information.

[CMS-26952]

Package 'hox.configuration' removed from public API

The deprecated classes and interfaces of package hox.configuration have been removed without replacement. Use Spring's external configuration API instead.

[CMS-25528]

New Method in ServerImportBuilder

Some internal mime type utilities have been abandoned in favor of the `com.core media.mimetype.MimeTypeService`. The `serverimport` tool needs the `MimeTypeService` now, and therefore the `com.coremedia.cap.serv er.importexport.base.importer.ServerImportBuilder` has been enhanced with a new method `withMimeTypeService`. The `MimeTypeService` is mandatory for `serverimport`. If you use the `ServerImportBuilder`, you must set a `MimeTypeService`, otherwise the `ServerImportBuilder` fails to build the `ServerImport`. In the unlikely case that you have implemented the `ServerImportBuilder` interface, you must implement the new method.

[CMS-23764]

Case-insensitive User and Group Search

The default of the content server configuration option `cap.server.case-sensitive-member-search` has been changed to `false`. This makes the user and group search in the Studio's User Manager app case-insensitive.

Follow Section "Case-insensitive User and Group Search" [435] for upgrade information.

[CMS-20282]

Removal of license property "workflow"

The content server license property "workflow" was always enabled. As it does not license any additional features, it has been removed from future licenses.

[CMS-379]

CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Follow Section "Configured limit for part count in multipart/form-data requests" [436] for upgrade information.

[CMS-28098]

Optimized Blob Link Building

Starting with CMCC 2401.1, blob links of the Blueprint CAE (generated by `com.core media.blueprint.cae.handlers.TransformedBlobHandler#buildLink`) are sensitive to responsive image settings. Therefore, building the link requires a transformation incl. streaming the original blob each time, because the settings may have changed. This turned out to be a severe performance issue, so we reverted this behaviour.

Follow Section "Optimized Blob Link Building" [436] for upgrade information.

[CMS-27414]

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://freemarker.apache.org/docs/api/freemarker/template/Configuration.html and https://freemarker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

Avoid Auto-wiring on Spring Beans with Scope "Prototype"

A bug in the Spring framework may lead to problems with initialization of members annotated with `@Autowired` when it comes to beans of scope *prototype*. Content beans (or any Spring bean with scope *prototype*, for that matter) should thus not use autowired members. Auto-wiring on *prototype* beans in the Blueprint has been exchanged by explicit dependency injection.

Follow Section "Avoid Auto-wiring on Spring Beans with Scope "Prototype"" [437] for upgrade information.

[CMS-26015]

Generalized CORS properties for delivery applications

The CORS configuration properties for the CoreMedia delivery applications have been generalized.

Follow Section "Generalized CORS properties for delivery applications" [438] for upgrade information.

[CMS-25644]

CoreMedia Studio Client

Public API changes for studio-client packages

The following changes to Public API packages have been made:

Package @coremedia/studio-client.base-models

- Deprecations
  - The module `TimeZones_properties` has been deprecated. Use the new timeZoneLocalizationRegistry to add localization for time zones instead.

Package @coremedia/studio-client.cap-base-models

- Changes
  - Member `svgIcon` of `IContentTypeLocalization`is now `string | URL` was `string`.
  - `getPreferencesState` of `PostUploadPreferences}}`now returns a `{{Promise<boolean | undefined>`, in addition to this the type has been sharpened, reflecting that it can also return `undefined` (which it could before but it was not stated)
- Deprecations
  - The import for types `ILocalization` and `ILocalizationWithIcon` have been deprecated. Please import the types now from `@coremedia/studio-client.base-models`

Follow Section "Public API changes for studio-client packages" [438] for upgrade information.

[CMS-27964]

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

Follow Section "Upgraded @jangaroo/ext-ts to 2.1.0" [440] for upgrade information.

[CMS-27671]

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

Removed ExtJS Workflow App

Public API changes (ExtJS)

With the removal of the ExtJS Workflow App the following ExtJS components and plugins have been removed. Neither of the classes were in use by the content app so if you have still used any of these classes this might just be dead code.

Package @coremedia/studio-client.ext.control-room-editor-components:

- Removal
  - AddInboxDetailFormPlugin
  - AddProcessDetailFormPlugin
  - AddFinishedProcessFormPlugin
  - WorkflowDateDisplayField
  - WorkflowTextDisplayField
  - WorkflowForm / WorkflowFormBase
  - DefaultPublicationWorkflowDetailForm / DefaultPublicationWorkflowDetailFormBase
  - DefaultPublicationWorkflowInfoForm / DefaultPublicationWorkflowInfoFormBase
  - DefaultTranslationWorkflowDetailForm / DefaultTranslationWorkflowDetailFormBase
  - DefaultTranslationWorkflowInfoForm / DefaultTranslationWorkflowFormBase
  - EmbedWorkflowObjectFromContentAppAction
  - WorkflowObjectFromContentAppAction
- Removed the following config from AddWorkflowPlugin, AddPublicationWorkflowPlugin and AddTranslationWorkflowPlugin
  - inboxForm
  - pendingForm
  - finishedForm
- The module "PublicationWorkflowConstants" is now deprecated. Utilize the PublicationWorkflowConstants class of "@coremedia/studio-client.workflow-models" instead.

Package @coremedia/studio-client.ext.workflow-components:

- Removed method "errorIssueExists" from WorkflowIssuesUtil

Package @coremedia/studio-client.workflow-services-api

- Removed WorkflowRouteKeys

(CMS-27362)

CKEditor5 updated to version 45.2.0

CKEditor5 has been updated to version 45.2.0 and comes with updated versions of CoreMedia's CKEditor5 plugins. The update includes 2 major changes:

- Icons are no longer imported as a single `icons` class, but need to be imported separately.

- The link balloon of the CKEditor's link plugin has been re-implemented completely and now consists of a `ToolbarView` instead of the `LinkActionsView`. CoreMedia's link plugin extension has also been updated to still be compatible.

Follow Section "CKEditor5 updated to version 45.2.0" [442] for upgrade information.

[CMS-27076]

Changed LinkList Thumbnails

The LinkList component of Studio has the content type icon as an overlay in the lower right corner now. This icon replaces the type icon column which has been removed from all Blueprint usages. The former thumnail column (without type icon) is still available, but has been deprecated. In addition to that, the distance between the thumbnail and the content item name has been increased to make the view more appealing.

[CMS-26960]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

Improve Internal Studio Protocol for Better Performance

The internal protocol between Studio Client and Studio Server has been improved to provide better performance for getting the repository path (and thus the site) of a content item. Among other scenarios, this reduces the time to open the Locale Switcher of a document with many localized variants substantially, even with a cold cache. Instead of one request for each transitive parent folder, now, the whole path is retrieved with one request. This protocol change is compatible with the public Studio Client API contract. However, in rare cases, where code relies on certain `Content` `RemoteBean`s to already be loaded as a side-effect of a prior `getPath()` operation, the changed behavior can lead to errors. Please review and test your Studio Client customizations thoroughly.

[CMS-22940]

Build-In Workflows Now Utilize workflowPlugins Registry

Built-In Workflows Studio Client Side

The CoreMedia built-in workflows (two-step publication, direct publication, translation, synchronization) are now all configured / added on the Studio Client side via the `workflowPlugins` registry, just as for custom workflows. This happens in the core, so the addition of "translation" and "synchronization" workflows has been deleted from the `ControlRoomStudioPlugin` in the Blueprint. However, it is still possible to override / customize built-in workflows the same way as before, using AddPublication-WorkflowPlugin or AddTranslatrionWorkflowPlugin if needed.

[CMS-22454]

CoreMedia Studio Server

Maturing Struct "translatable" Configuration

As part of the correction of a configuration known as `translateXliffTranslatableExpressions` that has not worked (with default Blueprint configuration) for CoreMedia Studio since version CMCC v11.2307.1, the configuration itself has been significantly simplified and the configuration eventually fixed.

Follow Section "Maturing Struct "translatable" Configuration" [444] for upgrade information.

[CMS-27624]

Removed Deprecated Public API Classes

Deleted following classes without replacement:

- com.coremedia.collaboration.project.rest.picture.ProjectPictureStrategy
- com.coremedia.rest.cap.workflow.pictures.WorkflowPictureStrategy

[CMS-27561]

Configuration of ProjectDefaultPictureResolver has moved

The configuration of class `ProjectDefaultPictureResolver` and the class itself have moved from module `com.coremedia.blueprint:es-controlroom-studio` to module `com.coremedia.blueprint:studio-blueprint-component`.

Follow Section "Configuration of ProjectDefaultPictureResolver has moved" [446] for upgrade information.

[CMS-26996]

Replace Liquibase for editorial-comments

Liquibase has been replaced by our own database management tool that we also use for other features. The update is executed automatically and the Liquibase changelog tables are removed. This means that you cannot start an older version of the studio-server anymore on a updated database. Please make sure to backup your data before the update.

Follow Section "Replace Liquibase for editorial-comments" [447] for upgrade information.

[CMS-23134]

Changed shortcuts to increase and decrease window and dialog sizes

The shortcut to increase and decrease the size of dialogs and windows within Studio has been changed from *STRG/CMD+ALT+N/M* to *STRG/CMD+ALT+8/9* .

[CMS-11041]

CoreMedia Headless Server

Add missing support for table attributes in rich text transformation

The rich text transformation lacked support for several attributes for tables, like `colspan` and `rowspan`.

Follow Section "Add missing support for table attributes in rich text transformation" [447] for upgrade information.

[CMS-28033]

Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses

Starting with 2404 (the introduction of Spring-GraphQL-Library), GraphQL responses of JSLT transformed persisted queries did not pass through potential GraphQL error messages.

Follow Section "Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses" [448] for upgrade information.

[CMS-27689]

Deleted Deprecated Blueprint Commerce Augmentation Queries from HLS Schema

The following queries have been removed from Headless Server Schema:

```
commerce/productAugmentationBySite
commerce/productAugmentationByStore
commerce/categoryAugmentationBySite
commerce/categoryAugmentationByStore
commerce/augmentationForCommerceIdBySite
```

Follow Section "Deleted Deprecated Blueprint Commerce Augmentation Queries from HLS Schema" [449] for upgrade information.

[CMS-23704]

Miscellaneous

Corba ORB JMX MBeans Removed to Save Heap Memory

JMX MBeans under prefix "com.sun.corba" have been removed to work around a bug in the JMX support of the ORB, which consumes a large amount of heap memory for each application: https://github.com/eclipse-ee4j/orb/issues/5 . To this end, the Maven de-

pendency `org.glassfish.gmbal:gmbal` has been replaced with `org.glassfish.gmbal:gmbal-api-only`.

Follow Section "Corba ORB JMX MBeans Removed to Save Heap Memory" [449] for upgrade information.

[CMS-27724]

Third-Party Update: Spring Boot and Related Dependencies

Spring Boot and Spring Security as well as several other dependencies have been updated.

- Spring Boot → 3.5.0
- Spring Security → 6.5.0

For details on the changes in Spring Boot 3.5 release, see https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-3.5.0-Release-Notes. For other updated dependencies, view the release notes of "Updated Maven Dependencies and Plugins".

Follow Section "Third-Party Update: Spring Boot and Related Dependencies" [450] for upgrade information.

[CMS-27313]

Removal of Deprecated Public API Classes

The following deprecated classes have been removed:

- `com.coremedia.workflow.common.util.WorkflowPublication Result`
- `hox.corem.common.CalendarWrapper` - Use `java.text.SimpleD ateFormat` for formatting dates and times instead.
- `hox.corem.publisher.ResultItem`
- `hox.corem.publisher.PublicationResult`

[CMS-27232]

Modernized log implementation in publisher classes

The log implementation in publisher classes has been modernized.

Follow Section "Modernized log implementation in publisher classes" [451] for upgrade information.

[CMS-27158]

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Documentation.

[CMS-27141]

Removed version management for jmeter-maven-plugin

Version management for `jmeter-maven-plugin` was removed.

Follow Section "Removed version management for jmeter-maven-plugin" [451] for upgrade information.

[CMS-26982]

Header Toolbar Revamp

The header toolbar has been reorganized. The revamp contains the following changes:

- The library, control room and quick search buttons have been moved from the right side to the left.
- The upload button has been removed from the dashboard and added to the header toolbar directly.
- The bookmarks have been moved into the new header toolbar menu "Open". This menu contain additional menu items for the control room and library too.
- All separators have been removed from the header toolbar. Since these and the buttons might have been used as reference for adding other elements, this change is considered breaking.
- The saved searches have been moved into the new header toolbar menu "Open".

[CMS-26977]

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

Follow Section "Changed UserProvider Setup Policy" [453] for upgrade information.

[CMS-25871]

Custom Workflow API Changes

While the Workflow App has been replaced by a new implementation based on React instead of ExtJs, the API for custom workflows has largely been kept unchanged.

Follow Section "Custom Workflow API Changes" [453] for upgrade information.

[CMS-24826]

4.3.2 Changes and Improvements

CoreMedia Core

Deprecation of Workflow Client Methods

Multiple constants and methods in Workflow Client have been deprecated.

The legacy Workflow Client properties file configuration setup has been deprecated. It will be replaced by a Spring approach in a future release. In preparation for this, multiple methods and constants in `com.coremedia.workflow.WfClient` have been deprecated.

- `com.coremedia.workflow.WfClient.ACTION_LISTENER`
- `com.coremedia.workflow.WfClient.CONNECTOR`
- `com.coremedia.workflow.WfClient.DIRECTORY_SERVICE`
- `com.coremedia.workflow.WfClient.DOMAIN`
- `com.coremedia.workflow.WfClient.IORURL`
- `com.coremedia.workflow.WfClient.OBJECT_REPOSITORY`
- `com.coremedia.workflow.WfClient.PASSWORD`
- `com.coremedia.workflow.WfClient.SERVER_IOR`
- `com.coremedia.workflow.WfClient.SERVER_URL`
- `com.coremedia.workflow.WfClient.SERVICE`
- `com.coremedia.workflow.WfClient.SERVICE_INDICATOR`
- `com.coremedia.workflow.WfClient.USER`
- `com.coremedia.workflow.WfClient#getProperty(String, String)`
- `com.coremedia.workflow.WfClient#getRequiredProperty(String)`
- `com.coremedia.workflow.WfClient#load(String)`
- `com.coremedia.workflow.WfClient#setProperty(String, String)`

Other deprecations without a replacement:

- `com.coremedia.workflow.WfClient#addCallLevelUpdateListener(com.coremedia.workflow.WfCallLevelUpdateListener)`
- `com.coremedia.workflow.WfClient#addSessionListener(com.coremedia.workflow.WfSessionListener)`

- `com.coremedia.workflow.WfClient#connect(hox.corem.corba.Session)`
- `com.coremedia.workflow.WfClient#disconnect(com.coremedia.workflow.WfSession)`
- `com.coremedia.workflow.WfClient#getAdminController`
- `com.coremedia.workflow.WfClient#getLog`
- `com.coremedia.workflow.WfClient#removeCallLevelUpdateListener(com.coremedia.workflow.WfCallLevelUpdateListener)`
- `com.coremedia.workflow.WfClient#removeSessionListener(com.coremedia.workflow.WfSessionListener)`

[CMS-28272]

Updated postgresql driver

Updated `org.postgresql:postgresql` to `42.7.7`

[CMS-28048]

Third-Party Update: OpenCSV

OpenCSV has been updated to version 5.11.1. This includes an update of transitive dependency commons-beanutils to version 1.11.0 and avoids potential security issue CVE-2025-48734.

[CMS-27955]

Deprecation: Workflow JAR Upload

The feature to upload a JAR file of classes with a workflow process definition has been deprecated and should not be used anymore. This avoids potential problems with storing executable code in the database. With different versions of custom code in the database, it can become hard to track which code is actually used in production, and to detect and fix security issues in all variants of uploaded custom code. Furthermore, in case attackers have gained write access to the database, they could use this feature to execute code in the *Workflow Server*. If unused, it is therefore recommended to disable the usage of uploaded classes by setting the newly introduced configuration property `workflow.server.use-uploaded-jar` to `false`. Required classes should be added to the *Workflow Server* classpath instead.

The *Workflow Server* does not automatically remove previously uploaded JAR files from the database, if `workflow.server.use-uploaded-jar` is set to `false`. In case of unexpected problems with workflows that still need previously uploaded JAR files, it is possible to enable JAR file usage again by setting the property back to `true`.

As part of this change, the corresponding options `j` and `-jar` of the `cm upload` tool have been deprecated.

The following Java API methods have been deprecated as well, and should not be used anymore:

- `com.coremedia.cap.workflow.WorkflowRepository#create ProcessDefinition(byte[], byte[])`
- `com.coremedia.cap.workflow.ProcessDefinition#getPro cessClasses()`
- `com.coremedia.workflow.WfObjectRepository#createPro cess(byte[], byte[])`
- `com.coremedia.workflow.WfProcess#getProcessClasses()`

[CMS-27951]

Deprecation of XML Importer

The XML Importer has been deprecated for removal. As a replacement, a custom Unified API client, the Ingest Service for CoreMedia Content Cloud Service or the serverimport tool should be used.

The XML Importer will be removed in the next major release.

[CMS-27870]

Fix Content Feeder Background Issue Feeding

Fixed a bug in the Content Feeder that content issues were not indexed in the background.

[CMS-27868]

Deprecated Blueprint CAE Feeder Classes ValidFromPropertyConverter and ValidToPropertyConverter

Blueprint *CAE Feeder* classes `ValidFromPropertyConverter` and `ValidTo PropertyConverter` of package `com.coremedia.blueprint.caefeed er` have been deprecated and will be removed in a future release. Their usage in `apps/cae-feeder/modules/extensions/am/am-caefeeder-component/src/main/resources/META-INF/coremedia/am-caefeeder.xml` has been replaced with the functionally equivalent configuration of a default value.

[CMS-27627]

Deprecation: Public API for Custom Proactive Engine Application

Custom Proactive Engine / Persistent Cache applications will not be supported anymore in the next major version CMCC 13 (2512.0.0). Proactive Engine and Persistent Cache are internal technical components of the *CAE Feeder*. They should not be used in custom applications anymore and may not work as before in future release CMCC 13. Consequently, parts of the public Java API have been deprecated.

The following classes and interfaces have been deprecated now for removal in CMCC 13. There is no known use case to keep that API for customization in the CAE Feeder.

- `com.coremedia.cap.persistentcache.InvalidationEvent`
- `com.coremedia.cap.persistentcache.InvalidationListener`
- `com.coremedia.cap.persistentcache.ProcessingCallback`
- `com.coremedia.cap.persistentcache.ProcessingCallbackBase`
- `com.coremedia.cap.persistentcache.example.HelloPersistentCacheKey`
- `com.coremedia.cap.persistentcache.example.HelloPersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.BaseReceiver`
- `com.coremedia.cap.persistentcache.proactive.IllegalStateTransitionException`
- `com.coremedia.cap.persistentcache.proactive.KeyManager`
- `com.coremedia.cap.persistentcache.proactive.KeyPrefixFilteringReceiver`
- `com.coremedia.cap.persistentcache.proactive.Receiver`
- `com.coremedia.cap.persistentcache.proactive.TriggerBase`
- `com.coremedia.cap.persistentcache.proactive.content.ContentAwarePersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.content.ContentBeanEvaluator`
- `com.coremedia.cap.persistentcache.proactive.content.ContentEvaluator`
- `com.coremedia.cap.persistentcache.proactive.content.ContentPersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.content.ContentTrigger`
- `com.coremedia.cap.persistentcache.proactive.example.LoggingReceiver`
- `com.coremedia.cap.persistentcache.proactive.example.PathContentEvaluator`

The following interface of package `com.coremedia.cap.persistent cache.proactive.content` has been deprecated with replacement:

- `ContentTrigger.ContentCollection` - use `ContentSelection` instead

The following methods of package `com.coremedia.cap.persistent cache.proactive.content` have been deprecated with replacement:

- `ContentSelector.start(ContentTrigger.ContentCollec tion)` - use method `start(ContentSelection)` instead.
- `PathAndTypeContentSelector.start(ContentTrigger.Con tentCollection)` - use method `start(ContentSelection)` instead.

The methods `startEvaluators` and `stopEvaluators` of class `com.coremedia.cap.persistentcache.proactive.ProactiveEn gineManagement` have been deprecated. JMX operations of MBean `Proact iveEngine` with the same name should not be used anymore. They don't have any effect for the *CAE Feeder*.

[CMS-27400]

Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"

The Content Server can now be configured to perform retries on database transactions in case of connection loss due to "Zero-Downtime Patching" on Amazon Aurora (MySQL only).

To configure the Content Servers for retries, use these properties:

- *sql.pool.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *sql.pool.retry-delay*: wait given time before retrying (*Duration*; default: 15 seconds).
- *sql.pool.max-retries*: maximum number of retries (default: 15).

To configure the Workflow Server for retries, use these properties:

- *workflow.server.tx.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *workflow.server.tx.retry-on-connection-loss-delay*: wait given time before retrying on database connection loss (*Duration*; default: 15 seconds).

Retries on a single Workflow Server database transaction are limited to 15 times.

Set the delay values and retries (see above) large enough to cover prolonged database unavailability during failover.

Make sure to set DNS caching on your system to a very short time (probably shorter than *.retry-delay*) to allow for refreshed hostname resolution before the next attempt on a previously failing database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

(CMS-27224)

Options for Command Line Tools

With the update to `org.apache.commons.cli.DefaultParser`, the handling of command line options has become stricter.

To allow backwards compatible configuration, several long options have been added explicitly. In these cases, only the long options are documented, but the short options will still work, e.g., `--bloburl` can be passed as `-bloburl`. This fallback behavior is part of `commons-cli` and may change in the future.

Generally, the usage of a long option should be preferred over the use of a short option, i.e. prefer `--url` over `-url`, while the latter one will still work for now.

The following changes are introduced:

- serverimport: long option `--bloburl`
- serverexport: long options `- bloburl`, `blobsizelimit`, `cut`, `pretty` and `-encoding` (as an enhancement for existing `-enc`)

(CMS-27223)

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.14
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.13
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.15
- CoreMedia Adapter for HCL Commerce → 3.0.13
- Apache HttpComponents Client 5 → 5.5
- AspectJ → 1.9.24
- AssertJ → 3.27.3
- Awaitility → 4.3.0
- Bouncy Castle Java → 1.81
- Byte Buddy → 1.17.6

- Caffeine → 3.2.0
- Commons Codec → 1.18.0
- Commons Collections → 4.5.0
- Commons Exec → 1.5.0
- Commons Pool → 2.12.1
- Commons Text → 1.13.1
- Enterprise Security API → 2.6.2.0
- Error Prone → 2.38.0
- FreeMarker → 2.3.34
- Google Analytics Data Client for Java → 0.75.0
- Google API Common for Java → 2.50.2
- Google API Extensions for Java → 2.67.2
- Google Auth Library for Java → 1.37.0
- Google HTTP Client Library for Java → 1.47.0
- Google OAuth Client Library for Java → 1.39.0
- GraphQL Java → 24.1
- GraphQL Java DataLoader → 5.0.0
- gRPC-Java → 1.73.0
- Gson → 2.13.1
- Guava → 33.4.8-jre
- Hibernate ORM → 6.6.18.Final
- Hibernate Validator → 8.0.2.Final
- Jackson → 2.19.1
- Jakarta Validation API → 3.1.1
- Javassist → 3.30.2-GA
- JBoss Logging → 3.6.1.Final
- Jib Maven Plugin → 3.4.6
- JSON-Java → 20250517
- JUnit Jupiter → 5.12.2
- Logback → 1.5.18
- Micrometer → 1.15.1
- Mockito → 5.18.0
- Netty → 4.1.122.Final
- Plugin Framework for Java → 3.13.0
- Protobuf Maven Plugin → 3.4.2
- Protocol Buffers for Java → 4.31.1
- Reactor Project BOM → 2024.0.7
- SLF4J → 2.0.17
- SnakeYAML → 2.4
- Spring Boot → 3.5.3
- Spring Data BOM → 2025.0.1
- Spring Framework → 6.2.8
- Spring for GraphQL → 1.4.0
- Spring Security → 6.5.1
- Tomcat → 10.1.42

[CMS-27021]

Update of MongoDB Java driver to 5.3.1

The third-party dependencies `org.mongodb:mongodb-driver-legacy`, `org.mongodb:mongodb-driver-core` and `org.mongodb:bson` have been updated from version 4.11.1 to 5.3.1.

No breaking change was required for CoreMedia code, but custom code using MongoDB API may need to be adapted.

[CMS-26000]

Deprecation: Java API Package com.coremedia.cap.server.search

Interfaces and classes of package `com.coremedia.cap.server.search` have been deprecated in the Java API and should not be used anymore. This includes the *Content Server* `SearchService` interface and some related classes that are listed below. They were introduced long time ago for integrating alternative search engines for the *Site Manager*. The use case does not exist anymore, because the *Site Manager* has been removed from the product with *CMCC 12*. Internally, this interface is still used in the *Content Server* to implement search functionality for the *Unified API.* However, the now deprecated interface should not be used anymore to customize the implementation of search functionality. In most cases, applications should rather communicate directly with a search engine anyway, and not use the less flexible and less performant *Unified API* SearchService abstraction.

Note, that there are multiple `SearchService` interfaces in different packages of the Java API. This deprecation only affects package `com.coremedia.cap.server.search`.

The following classes and interfaces have been deprecated:

- `com.coremedia.cap.server.search.SearchContext`
- `com.coremedia.cap.server.search.SearchException`
- `com.coremedia.cap.server.search.SearchService`
- `com.coremedia.cap.server.search.SearchServiceResult`

[CMS-25951]

Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies

Apache Tika has been updated to version 3.1.0. As part of this change, the following transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.13.0
- Apache Commons IO 2.18.0
- Apache Log4J API 2.24.3
- Apache Mime4J 0.8.12
- Apache PDFBox 3.0.4
- Apache POI 5.4.1
- Apache Tika 3.1.0
- Apache XMLBeans 5.3.0
- ASM 9.7.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-25920]

New Content Server license information metric

Metrics providing information on the used Content Server license are now available. Details are documented in the Operation Basics Manual.

The following new metrics are now available:

- coremedia.server.license.timestamp.seconds
- coremedia.server.license.properties
- coremedia.server.license.users

[CMS-25393]

CAE Feeder IndexVerifier Configuration

The new CAE Feeder configuration property `caefeeder.index-verifier.enabled` can be used to disable the check that the configured database and search engine index were initialized by the same CAE Feeder instance.

[CMS-21621]

Multi-Site Manual: Restructuring Sites and Changing Site Type

The Multi-Site manual now contains two new sections:

- Changing Site Type (synchronization and translation) and
- Changing the Site Hierarchy

Both address sensible topics in the lifetime of a multi-site setup, that should be carefully planned and tested.

[CMS-13739]

CoreMedia Content Application Engine

Reduced category loading in fragment calls

There is a new configuration flag in CAE `cae.livecontext.categories.lazy-loading:false` that can be used to enable a "lazy category loading mode" in the CAE. If set to "true" no categories will be loaded during a fragment call (at least for pure augmentation). This also prevents the validation of the entire category path. This mode certainly results in less load for a CAE (when cache misses are expected), but you should be sure that the categories can be loaded during request processing.

[CMS-28020]

Parameter Appending Link Transformers May Skip Transformation for Bean Types

The configuration property `cae.link-transformer.params-appender.skip-for-type` has been added that allows deployments to skip link transformation by parameter appending link transformers for configurable bean types. The configuration property is a map indexed by the lowercase version of the transformer bean name and the values of the map are a collection of fully-qualified classes for which the transformation should be skipped.

Example:

```
cae.link-transformer.params-appender.skip-for-type.previewdateappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMCSS,com.coremedia.blueprint.common.contentbeans.CMImage,
com.coremedia.blueprint.common.contentbeans.CMJavaScript,com.coremedia.blueprint.common.contentbeans.CMTheme

cae.link-transformer.params-appender.skip-for-type.developermodeappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMExternalLink
```

The configuration is applicable to beans of the following link transformer implementations:

- `com.coremedia.livecontext.fragment.links.transformers.FragmentParamsAppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewDateAppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewParametersAppendingLinkTransformer`
- `com.coremedia.objectserver.web.links.ParameterAppendingLinkTransformer`

[CMS-25571]

CoreMedia Studio Client

Third-Party Update: pnpm to version 10

All packages in frontend workspace and in studio-client require at least pnpm 10.11.0. Please take note of the list of changes here https://github.com/pnpm/pnpm/re-leases/tag/v10.0.0

In order to upgrade pnpm to 10.x use the following command:

```
npm install -g pnpm@10
```

[CMS-27630]

Third-Party Update: Upgraded Node.js to 22 LTS

Since October 2024 the new LTS of Node.js is v22. All workspaces were adjusted accordingly.

[CMS-27162]

Changed Content Type Selector Filter Options

When inputting a filter value for the Content Type selector combo-box, any matches are shown now, not only type names that start with the given input.

[CMS-27159]

Added option to hide the "All" entry in the "New" content items menu

The appearance of the menu has not changed. But if Studio should not allow to create all type of content items, the "All" menu entry can be hidden from the "New" content items menu by setting the *NewContentMenu.ALL_NEW_CONTENT_MENU_ITEMS* to false in order to hide it.

[CMS-27001]

Make library column resizer more visible

The "Adjust column width" function is much easier to find and handle in the column header of the library.

[CMS-25982]

Enabled AMAsset Thumbnail Previews

Enabled the thumbnail previews for the document formulars of *AMAsset* and *AMPictureAsset*.

[CMS-25190]

Introduced Search Limit for External Domains

The search result size for search on external user domains has been limited to 10 by default. The value is configurable via the spring property *studio.usermanager.externalDomainSearchLimit*.

[CMS-23493]

Richtext-Editor (CKEditor 5): Link URL Inputfield supports Content-Search

CKEditor 5 Content Search: When typing into the URL InputField within the Link-Balloon, a Content search is triggered and a dropdown shows the corresponding Contents.

[CMS-19609]

Warning before publication workflow is fixed

When starting a publication workflow on contents with warning now shows correct warning messages.

[CMS-19538]

CoreMedia Studio Server

Fixed WidgetType Example

Fixed WidgetType example in the documentation where the wrong id attribute was used.

[CMS-15544]

Added SiteAwareVisibilityPlugin Documentation

Added an example for the "SiteAwareVisibilityPlugin" and moved the documentation from the CoreMedia manual to the "Studio Developer" manual.

[CMS-15183]

CoreMedia Deployment

Configured gRPC ports in application and deployment configurations

New port configurations for the gRPC communication between the CMS services have been added to the application properties and the default Docker Compose configuration.

The default gRPC server port is always `6565`.

The exposed gRPC server ports for local development and for the default Docker Compose deployment are:

- `40165`: Content Management Server
- `40265`: Master Live Server
- `40365`: Workflow Server
- `42065`: Replication Live Server

[CMS-27156]

CoreMedia Commerce Hub

Commerce Hub Property Deprecation

The property `commerce.hub.data.endpoints` as well as the `endpoint` property of the `commerce` settings struct, represented by Java method `com.coremedia.blueprint.base.livecontext.client.settings.CommerceSettings#getEndpoint` have been deprecated.

As a replacement, use the `endpointName` of the `commerce` settings struct (respectively `com.coremedia.blueprint.base.livecontext.client.settings.CommerceSettings#getEndpointName`) to configure the Commerce Hub connection.

It is recommended to use a symbolic name *without* token replacement because the token replacement feature of the `endpointName` String will also be removed in the future.

[CMS-28106]

Updated Commerce Client ClientProduct#getCategories

The commerce client now might return multiple Categories when calling Client-Product#getCategories.

[CMS-26990]

CoreMedia Documentation

Enhanced documentation around Sitemap generation

The chapter about sitemap in the Blueprint Developer Manual now mentions the requirement for the configuration to be part of the Spring management application context.

[CMS-27519]

Enhanced Multi-Site Manual Section "Designing Locales"

Knowing, that designing locales (and, thus, corresponding language tags) for your multi-site experience may sometimes get challenging, we enhanced the section "Designing Locales" within the Multi-Site Manual:

- For clarity, the reference to Locale.Builder got merged with the section "Defining Valid Language Tags". The Locale.Builder is meant as a possible assistive tool, to create a custom locale, that as well matches your needs (like a good display name in CoreMedia Studio) as well as being valid.
- A new subsection "Example: The Global Site Locale" got added, that matches typical solutions for multi-site hierarchies having a so-called "abstract master site". Given that you want to have a nicely distinguishable name for that site, the section describes two viable solutions for customized locales.

We also added a reference to a possible viable alternative to custom locales, which is using the "World" region 001 (zero-zero-one), such as in language tag `en-001` represented by your JDK as "English (world)".

[CMS-26913]

Updated Device Slider Documentation

Added hint to the documentation about configuring the preview device slider in Studio from the generated preview settings.

[CMS-16427]

Miscellaneous

Preparation for gRPC: New Mandatory Properties

In preparation of replacement of the CORBA protocol by gRPC, new properties for all CMS components are required when using gRPC:

- `repository.http-base-uri` must be defined for all UAPI clients and servers. It points to the server from/to which blob data is read or written. Typically, this is equal to the already defined IOR URL without the trailing path segment `/ior`. Look for definition of `repository.url` or `cap.client.server.url` and modify its value to set a system property `repository.http-base-uri`.
- For the XML Importer, `import.http-base-uri` must be defined. Use the instructions above to do this in the XML Importer's configuration file.
- Some command line tools need to be given a command line argument `--http-base-uri` according to the instructions above.
- The publisher must be configured with a property `publisher.target[x].http-base-uri` for each target. Make this correspond to the target's `ior-url`.

The Blueprint workspace is already equipped with all necessary properties. You may use those as examples on how to configure custom components and adjust your deployment.

[CMS-27662]

Supported: MySQL 8.4 on Amazon RDS

MySQL 8.4 on Amazon RDS has been added as a supported environment.

[CMS-27504]

Supported: PostgreSQL 16 on Azure

PostgreSQL 16 on Azure has been added as a supported environment.

[CMS-27503]

Support MySQL 8.4.

We now also support MySQL 8.4. No code change was required.

MySQL 8.4 replaces MySQL 8.0 as default for the Blueprint docker compose setup in the `global/deployment/docker`.

`mysql-connector-j` has also been updated to the latest version (9.2.0).

Support for MySQL 8.0 will be removed in future versions.

Please see https://dev.mysql.com/doc/refman/8.4/en/mysql-nutshell.html and https://dev.mysql.com/doc/refman/8.4/en/upgrading.html for more information on changes and upgrading.

(CMS-27308)

Support Oracle Database 23ai

We now also support Oracle Database 23ai.

The oracle driver `com.oracle.database.jdbc:ojdbc11` has also been updated to the latest version (`23.7.0.25.01`).

Further, `io.hypersistence:hypersistence-utils-hibernate-63` has been updated to the latest version (`3.9.9`).

When starting the applications against Oracle 23ai, a small schema update takes place that changes the type of a column in the `notifications` table to use Oracle's new JSON type. Existing data is migrated automatically.

Support for Oracle Database 19c will be removed in future versions.

Please see https://docs.oracle.com/en/database/oracle/oracle-database/23/index.html for more information about versions and upgrading.

(CMS-27306)

Support PostgreSQL 16

We now also support PostgreSQL 16. No code change was required.

`org.postgresql:postgresql` has also been updated to the latest version (42.7.5).

Support for PostgreSQL 13 will be removed in future versions.

Please see https://www.postgresql.org/support/versioning/ for more information about versions and upgrading.

[CMS-27299]

Third-Party Update: Apache Solr 9.8.0

Apache Solr has been updated to version 9.8.0. The new version fixes security vulnerability CVE-2025-24814.

A new coremedia/solr-base Docker image with tag 2.5-cm-9.8.0 has been released, which also provides a fix for leader/follower replication with enabled basic authentication. It adds the environment variable `SOLR_LEADER_BASIC_AUTH` for configuring basic authentication credentials. Starting with previous release Solr 9.7.0, credentials that are included in the `SOLR_LEADER_URL` environment variable are not used anymore.

See https://solr.apache.org/docs/9_8_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-8 for a list of changes in Solr.

[CMS-27253]

Deprecation of Google Analytics Connectors

The integration of Google Analytics Connectors in Studio is deprecated together with the persistence based on the Elastic Core (ModelService). This includes extensions es-alx/es-alx-google, es-alx/es-alx-retrieval-component and module bpbase-es-alx-common. These features are discontinued and will be replaced by an integrated solution.

Update: Functionality for website tracking will still be available.

[CMS-25708]

MongoDB Persistence for Editorial Features has been Deprecated

MongoDB persistence for CapLists (My Edited Content and Workflow Lists), Notifications, and Projects/To-Dos will be removed in a future release. Please use SQL persistence instead.

Currently MongoDB persistence is still the technical default, but this will be replaced with the SQL persistence in a future release.

Find details how to enable the SQL persistence layer in the CoreMedia Blueprint Developer Manual in section "Blueprint Workspace for Developers/Configuring the Workspace".

[CMS-25670]

Migration Support for Editorial Services from Elastic to SQL Persistence

With CMCC v12.2412.0.0 we introduced support for an SQL based persistence in favor of the MongoDB based persistence for these features:

- My Edited Content
- Workflow Lists (Running, Completed Workflows; technically referred to as "Pending" and "Archived").
- Notifications
- Projects/To-Dos
- Workflow Archive

Find details how to enable the SQL persistence layer in the CoreMedia Blueprint Developer Manual in section "Blueprint Workspace for Developers/Configuring the Workspace".

Migration Support: With CMCC v12.2506.0.0 it is now possible to migrate existing data for these features from Elastic (MongoDB or In Memory) to the new SQL persistence, except for Notifications which will not be migrated.

(CMS-25656)

Added Escalation Info to Nagbar

Workflows escalations are shown in the overview and inside the nagbar of the workflow details view.

(CMS-25505)

Supported: PostgreSQL 16 on Amazon RDS

PostgreSQL 16 on Amazon RDS has been added as a supported environment.

(CMS-23960)

Removal of deprecated Commerce Capability Constants

The following deprecated commerce capability constants in `com.coremedia.blue print.base.livecontext.client.data.Capability` were removed:

- `MULTIPLE_CATALOGS`
- `PRICE_SERVICE`
- `LINKS`
- `LINKS_CONTENT_LED`

(CMS-23842)

Smart Validation for Segment in Commerce Pages

In commerce-related page types (Augmented Category, Augmented Product and Augmented Page) the segment is typically not used, at least when it is a commerce-led scenario. In such a case the segment is not used to build an URL (but it is a Storefront URL). Therefore, the segment does not need to be validated. Only in a hybrid scenario (when the settings "livecontext.policy.commerce-category-links", "livecontext.policy.commerce-product-links" or "livecontext.policy.commerce-page-links" are "true") the validation is done for these page types.

[CMS-18494]

4.3.3 Fixed Issues

CoreMedia Core

Fix Workflow Action Attribute ignoreErrors

Fixed a bug in the handling of the attribute `ignoreErrors=true` in workflow definitions for actions `ApproveResource`, `PublishResources`, and others. Previously, client action timeout errors were never ignored and always caused task escalation. This has been fixed, so that timeouts don't cause an escalated task anymore if `ignoreErrors` is set to `true`.

[CMS-27896]

Fatal Error on Replication and UAPI Clients for "Old" Published Content

With release CMCC 12 2412.0, a bug was introduced that could lead to failure of content replication on "empty" Replication Live Servers. Furthermore, custom UAPI clients attached to Master Live or Replication Live Servers may have received wrong content and version UUIDs ("`00000000-0000-0000-0000-000000000000`"). This may also affect customized UAPI clients that depend on content or version UUIDs. CoreMedia CMS standard clients (CAE Feeder, CAE, and Headless Server) are not affected, if not customized.

The bug is in effect, if you

- run release CMCC 12 2412.0.0 to 2412.0.2, and
- content was published previously with a release prior to CMCC 11 2210.1 (resulting in a `versionUuid` or `contentUuid` of `null` on Master Live Server).

For workarounds and content cleanup, see https://documentation.core-media.com/known-issues/?filter=cmcc#important-info-for-customers-migrating-to-cmcc-2412.0.

[CMS-27723]

Workflow Action Conditional Execution

Fixed the bug, that `<Condition>` elements could not be used in workflow definitions for conditional execution of custom workflow actions.

[CMS-27570]

Fix CAE Feeder DataSource Configuration

Fixed a bug in the *CAE Feeder* that caused startup errors if the data source was configured with new `caefeeder.datasource` properties, and custom Spring configuration files were added [`META-INF/coremedia/component-xyz.xml`]. The bug did not occur with deprecated but still usable configuration properties that start with prefix `jdbc`.

[CMS-27209]

Fixed CAE Feeder JMX Metric LatestIndexing

Fixed a bug in the CAE Feeder that the JMX metric 'LatestIndexing' was not updated if Feedables are created without 'freshness' information.

[CMS-27190]

Content Server Unresponsive after Database Failover Recovery

Content Servers can automatically recover from a database failover when settings *sql.pool.retry-on-connection-loss* and *sql.pool.retry-on-read-only-db* are set to *true*. However, a bug led to high load on Content Servers after such a failover recovery which could leave the system unresponsive. This is fixed now.

[CMS-27181]

Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section

Fixed a bug in the CAE Feeder page grid feeding, that comma-separated values configured in `corporate.search.pageGrid.excludedSections` were not correctly parsed, and placement sections were not excluded from feeding as configured.

[CMS-27126]

RichTextCorrectionConverter: Multiple corrected attributes ArrayIndexOutOfBounds exception fixed

In `RichTextCorrectionConverter` an ArrayIndexOutOfBounds exception was thrown when multiple attributes were adapted. This has been fixed and works now as expected.

[CMS-27003]

CMS Catalog loads products via observed property

Before, the CMS Catalog (catalog extension) has loaded products (CMProduct) by product code via an index (ContentStringPropertyIndex). This was not performing well for a large number of products leading to increased startup time of the CAE.

Now the lookup of CMProducts by productCode is performed via the ObservedProperty-Service. The property CMProduct#productCode is marked as observed property in the doctype definition catalog-doctypes.xml. The Content Server will automatically adapt database tables for the observed property change, this might take some time for a large number of CMProducts.

The class ContentStringPropertyIndex.java is deprecated now together with the class CacheableContentStringPropertyIndex.java.

[CMS-26920]

Fixed Content Feeder to Set Correct Metadata after Content Withdrawal

Fixed a bug in the Content Feeder which could have led to wrong values in Solr index fields "ispublished", "isapproved", and "istobewithdrawn" after a content was withdrawn from publication. These Solr index fields were not used in the default product, but projects may have relied on correct values.

[CMS-26904]

Fixed Content Feeder to Detect Cycles in CMS Catalog Categories

Fixed a bug in the Content Feeder to not run into a StackOverflowError, if there is a cycle in children links of CMCategory content items.

[CMS-25907]

Additional Information on Blob Sharing Configuration Options

New blob sharing configuration options for Content Servers have been documented recently [*sql.store.generate-blob-ids* and *sql.store.read-only-media-store-names*]. These are currently *only* to be used with integration of the *Image Transformation Service* and *Blob Service* and must not be used in projects otherwise. An additional note in the documentation makes this restriction clear now.

[CMS-25632]

Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows

Fixed a bug in the Workflow Server action 'RegisterPendingProcess', which ignored temporary exceptions like communication problems to MongoDB or the SQL database when adding a workflow to a user's list of pending workflows. As a consequence, the workflow would also not appear in the list of finished workflows The action now retries until the workflow was added successfully.

[CMS-23141]

CoreMedia Content Application Engine

Mega menus should now render much faster in CAE [Salesforce and Hybris]

When building links to commerce categories we avoid the loading of the commerce items, at least for Salesforce and Hybris. Unfortunately, it is still necessary for HCL, because links can only be build using technical IDs which must be requested from the commerce system. It should speed up loading of mega menus considerably, at least if a lot of Commerce items are not in the CAE cache.

[CMS-28021]

Eliminated Race Condition on Computation of Image Transformations

A race condition could lead to wrong computation of image transformations, affecting hash computation and potentially other functionality during processing of transformed images. This has been eliminated now.

[CMS-27638]

CAE - development with local resources fixed

When the CAE started with using local resources the following bugs occurred and have been fixed:

- resource integrity for css resources were calculated wrong.
- chunkPathById.js was stored in the wrong place.

[CMS-27473]

SiteFilter pattern matching for /service/search/{site} fixed for CAE

In the `cae.site.patterns` property the {{/service/search/

{site}

}} had an unintended `}` at the end and therefore did not match. Now it matches. The bug had no impact as a fallback resolved the site from the path in another way if no pattern matched.

[CMS-27431]

Fixed: Dynamic Template loading

Dynamic templates were not loaded in CM12 as configured in the CAEConfig settings (the setting "viewRepositoryNames" for a Page). This was due to an incorrectly injected ResourceLoader. With the fix, the correct instance of a CompoundResourceLoader is injected.

[CMS-26930]

CoreMedia Studio Client

Fixed Preview Date Selector Dialog

Fixed the width of the preview date selector dialog so that the reset button is also visible when the German localization is selected.

[CMS-28023]

Aligned Labels for Translation Statuses

The translation status labels of the locale switcher and the derived content items list has been streamlined to be less confusing for the user.

[CMS-27709]

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

[CMS-27500]

Studio Client Container Image now Respects sigterm and sigint Signals

due to a misconfiguration in the entrypoint script of the studio-client, the nginx process of the container did not receive sigint and sigterm signals and therefore did not shut down as required but was killed by the container runtime after it hit the configured graceful shutdown timeout.

[CMS-27466]

Added Overflow for Struct Editor and Pagegrid Toolbars

The overflow option of these toolbars were not enabled. Buttons are now shown in a drop down on overflow again.

[CMS-27361]

Initialization of StudioStartupPlugin may now Return a Promise

This allows asynchronous initialization of a StudioStartupPlugin when needed.

[CMS-27354]

Fixed Height of Start Workflow Dialog

The minimum height of the Start Publication Workflow has been fixed so that it fits for FullHD screens with 150% scaling too.

[CMS-27257]

Removed AS Documentation References

Removed reference to ASDoc documentation and replaced it with TSDoc.

[CMS-27250]

Removed Outdated Documentation about ExtJS Browser Plugin

Removed outdated documentation about ExtJS browser plugin for debugging which is no longer available.

[CMS-27233]

Fixed Mouse Selection for Annotated Link Lists

For annotated link list that use an input field as annotation widget, the text of this field can now be selected via mouse too. The selection does not trigger the drag and drop of the whole row anymore.

[CMS-27216]

Preventing of Superfluous Augmentation Requests

The studio-client and studio-server application are now more robust in detecting whether a product or category is already augmented. Superfluous augmentation request are now prevented when a catalog item is augmented and dropped inside a richtext field.

[CMS-27193]

Fixed Job Service Event Handling

Fixed issue that when a job is immediately successful, it was not properly finished.

[CMS-27149]

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

[CMS-27148]

Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)

Fixed: After editing (in CKEditor) a richtext property bound to a Struct property the cursor jumps to front (Firefox Windows only)

[CMS-27096]

Fixed Locale Switcher Endless Loading

Depending on the permissions of the user, the locale switcher might not have recovered from the loading state. The stability has been improved here. In case the user can only "see" one site, a label with the locale is shown now (instead of the whole locale switcher menu).

[CMS-27047]

Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests

We fixed a bug for the Studio multi-preview where in the case of a previewUrlServicePreviewProvider the preview URL was obtained many times, effectively making the preview unusable for possibly minutes.

[CMS-26968]

Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.

There was an issue while dropping contents into the RichText editor. The editor's link balloon would close on the first drag attempt. This issue is now fixed.

[CMS-26944]

Fixed "RemoteItemsPlugin" Logging

The logging of the "RemoveItemsPlugin" has been fixed so that no error is logged anymore even when the replacement was successful.

[CMS-25606]

Fixed German translation for "Add Bookmark" Menu Item

Fixed German translation for "Add Bookmark" Menu Item

[CMS-25556]

The Sencha Ext fonts are now loaded

Sencha specific icons font packages are now loaded when using the blueprint workspace.

[CMS-25394]

Some improvements in Accessibility

The list list property field has now the correct aria label even if it is not a single field in a property field group. The derived content list has now an aria label and role.

[CMS-25367]

Theme Updates for GenericDocumentForm

Missing theme updates for GenericDocumentForm added.

[CMS-25339]

Fixed External Link Validator

When URLs are pasted into Studio input fields (e.g. from Word or Excel documents), these may contain invalid characters that are not visible. The URL validator has been improved so that these characters are detected now and indicate an error in the Studio for the corresponding input field.

[CMS-25171]

Studio Client: Umlauts are not always displayed with colons

Possible cutoff umlauts on cards header component in forms is fixed.

[CMS-24907]

Docked Library JavaScript Errors

In docked mode, the library breadcrumb can cause various JavaScript errors. The error shown here has already been fixed in a previous version. But additional errors are thrown for the same situation. These errors are not completely fixed, but have converted into warnings and are handled now, so that it is less likely they render the Studio UI unusable.

[CMS-24181]

CKEditor5 Cursor Issue Fixed

An issue with the CKEditor5 cursor when used with struct properties has been fixed.

[CMS-24129]

The BBCode RichText Editor Renders Additional bbcode Tags

The BBCode RichText editor now comes with additional plugins that allow to display certain bbcode tags inside the editor. The editor now displays italic [i], underlined [u] and strikethrough [s] text, as well as lists [list] and headings [h1]...[h6].

[CMS-23901]

Improved UploadSettings Documentation

Added additional note about where properties from the *UploadSettings* content item are used.

[CMS-23717]

Fixed "Open In Tab" Toolbar Action

The action was not properly refreshed when content was deleted or restored.

[CMS-23480]

Fixed Device Slider Hiding

When no device information can be read from the preview, the device slider is hiding now instead of staying with the latest values from another preview.

[CMS-20791]

Added Documentation for ComboBoxes and Tab-Reuse

Added documentation about how to implement stores for ComboBoxes, so that these work for reused tabs too.

[CMS-19047]

Adding Missing Asset Sorting

The asset integration into the Studio library was missing a ColumnSorter, so that only the "Name" column was sortable. This sorter has been added now, so that other columns can be used for sorting too.

[CMS-18773]

Fixed Lazy Loading in Library

Fixed issue that sometimes empty rows where showing in the library.

[CMS-18223]

Scroll bar overlaps checkboxes when selecting target locales for translation on Mac

Already done: Now the whole dialog is scrollable instead of only the locale ist.

[CMS-18052]

Translation State Widget Robustness Enhanced

The Translation State Dashboard Widget may have struggled reporting translation states for derived sites, whose site IDs contained space characters (a "Contact Your System Administrator" message was shown).

This has been fixed.

[CMS-9208]

CoreMedia Studio Server

Fixed Potential Cache Deadlock in LoadedImageCacheKey

Fixed a bug in the LoadedImageCacheKey that could cause a deadlock in the Studio Server.

[CMS-27775]

StudioInMemoryAutoConfiguration is deprecated

The auto configuration class StudioInMemoryAutoConfiguration in module studio-blueprint-component is deprecated. Please apply custom configuration to StudioBlueprintAutoConfiguration or a custom configuration class instead.

[CMS-27684]

Fixed: Problem with Focus in RichtextField

Fixed: When focussing a RichtextField, then clicking away in external app and then clicking again in the same RichtextField, no focus event was fired. The effect was, that changes made to the text (e.g. pasting text from an external app) were not saved. The reason was that in that case the delegation mode was still active.

[CMS-27420]

Fixed Bug - Special Characters in Commerce IDs

A bug which prevented special characters, such as '%' or '/' in commerce IDs, has been fixed. However, it is not recommended using such characters in IDs.

[CMS-27338]

Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors

A bug in settingsUploadInterceptor where the content type on the interceptor was falsely set to CMArticle has been resolved. The content type for the interceptor is CMDownload again.

[CMS-27059]

PublicationContentStateValidator now uses connectionSession

The `PublicationContentStateValidator` now uses the `connectionSession` for running the validators to be able to validate content that the current user might not have permissions for.

[CMS-27046]

ConfigurableDeadLinkValidator is configurable now

The ConfigurableDeadLinkValidator (that validates dead links to deleted or destroyed documents) is configurable now. The excludedProperties config prop `configurable-dead-link-validator.excluded-properties` can be used to exclude properties from validation. The single validator operates on type Document and excludes by default the "placement" property.

[CMS-27045]

Fixed CommerceContentTypesPictureResolver for empty URLs

Fixed CommerceContentTypesPictureResolver so that `Optional.empty()` is returned for empty commerce URLs.

[CMS-25296]

The link suggester field is now reset

When changing the content tab the suggestion text is now reset so that it isn't from other forms.

[CMS-11873]

New deprecation: CMMedia#getCaption

The method `CMMedia#getCaption` is unused for a while and is confusing because the Studio property field `caption` is stored in the property `teaserText` of `CMTeasable`. The method `CMMedia#getCaption` will be removed, use `CMTeasable#getTeaserText` instead.

[CMS-8538]

CoreMedia Workspace

Scripts "set-blueprint-groupId.sh", "set-blueprint-version.sh" and "download-plugins.sh" Now Work on macOS

Scripts `set-blueprint-groupId.sh`, `set-blueprint-version.sh`, and `download-plugins.sh` have been adjusted to work on macOS without installation of additional tools, too. Group ID and version replacements now explicitly

create temporary backup files that are deleted again automatically by the scripts after-wards.

[CMS-27521]

CoreMedia Frontend Workspace

Fixed a bug with code splitting feature not working in certain setups

Fixed an issue with getChunkPathById.js were an invalid url is generated and requested in certain CAE setups.

[CMS-25685]

CoreMedia Headless Server

Update to latest minor version of Spring-GraphQL and GraphiQL 5.0

Due to an update in the publishing policy of GraphiQL, spring-graphql library could not deliver graphiql correctly. This was fixed by updating Spring-GraphlQL to the correspond-ing latest minor version:

CMS 2506.0: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 esm.sh [was 4.0.0 via esm.sh] CMS 2412.0: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh [was via unpkg.com] CMS 2406.2: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 via esm.sh [was 4.0.0 via esm.sh] CMS 2416.1: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh [was via unpkg.com]

[CMS-28156]

Fixed Regression: Non-trivial server context path for REST request was ignored

A non-trivial server context path, e.g. '/customContextPrefix' was not working anymore with REST requests. That regression was now fixed.

[CMS-27931]

Exception handling by DataFetcherExceptionResolverAdapter

To resolve exceptions to GraphQL errors, a `DataFetcherExceptionResolverAdapter` has been added which resolves implementations of `RuntimeExcep`

tion to `ErrorType.DataFetchingError`. Specific exceptions and corresponding `ErrorTypes` can be configured via configuration property `caas.exceptionErrorMap`. Exceptions are resolved via configuration for the most specific super class.

[CMS-27811]

HeadlessServer now also supports type conversion of path segments used as GraphQL input variables

Previously, HeadlessServer converted HTTP request parameters into the necessary type for a GraphQL input variables only. With this fix type conversion is now also supported for path segments of the HTTP request path.

[CMS-27635]

Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type

HeadlessServer overwrote the fetch expression when a GraphQL type used the @inherit directive with two or more types, which also implemented GraphQL interfaces. The problem was fixed.

[CMS-27168]

Apollo Federation Support

HeadlessServer now comes with Apollo Federation Support for GraphQL. To enable Federation Support, simply add the library `com.apollographql.federation:federation-graphql-java-support:5.0.0` to your maven dependencies with scope `runtime`:

```
<dependency>
  <groupId>com.apollographql.federation</groupId>
  <artifactId>federation-graphql-java-support</artifactId>
  <scope>runtime</scope>
</dependency>
```

During server start, the library will be detected and federation support will be enabled. The log will show an additional info level message, that federation support is active.

[CMS-27128]

Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer

Richtext transformation did not filter invalid, embedded content links. The problem was fixed invoking the filter predicates during richtext transformation.

The changes made new constructors in the public API necessary. For backward compatibility, the former constructors were kept in the code as legacy constructors but marked deprecated for removal. It is highly recommended not to use the deprecated constructor anymore and instead update existing custom code to use the new constructors. Also be aware, using the old constructors will work but will also keep the old, wrong behavior!

[CMS-26978]

Miscellaneous

Fixed ContentHub Issue with duplicate beans

An issue has been fixed regarding the `BaseFileSystemConfiguration` in the `ContentHubAdapter`. You do not need to import the `BaseFileSystemConfiguration` class anymore, as the `ContentHubMimeTypeService` bean is now available automatically if your Adapter lives in the Blueprint. If it lives in a Plugin, you can access `ContentHubMimeTypeService` via the new `ContentHubBeansForPluginsConfiguration`.

[CMS-28208]

Application SBOMs are optionally added to the Spring-Boot actuator

Application SBOMs are now optionally added to the Spring-Boot actuator. This prevents an error where the application would not start if the SBOM was missing, e.g. when building was disabled by setting the 'skipSboms=true' switch for the Maven build.

[CMS-27975]

cm sql Fixed

`cm sql` failed to start with a `NullPointerException` when trying to build the UI.

This has been fixed.

[CMS-27941]

The link and button to open workflow from then nagbar

The link and button to open the associated workflow from the nagbar of a document opens now the workflow in the sidebar or in the full workflow app in dependency of the user preference "Show Content App split view to display workflows.".

[CMS-27865]

Fixed UrlValidator

The UrlValidator complained about URLs containing "%" characters. URL validation has been fixed to properly deal with URL encoding.

[CMS-27815]

Fixed Method ContentSiteAspect#setMasterVersion

Fixed a bug that caused a StackOverflowError when calling `com.core media.cap.multisite.ContentSiteAspect#setMasterVersion` with a null argument.

[CMS-27646]

Fixed: Added receiveDraggedItemsToService to index.ts

Fixed: Added receiveDraggedItemsToService to index.ts

[CMS-27599]

Fixed QuickCreate Dialog "skipInitializers" Flag

The configuration flag "skipInitializers" is no longer ignored when content is created through the Quick-Create dialog.

[CMS-27457]

MongoDbHealthIndicator has been Changed to use the hello-command

The `MongoDbHealthIndicator` has been changed to use the `hello`-command instead of creating a new `MongoClient` every time. This prevents unnecessary creation of ConnectionPools and Connections to the MongoDb Server Nodes.

[CMS-27244]

Fixed Filtering of Searchable Content Types

When filtering searchable content types in the library there used to be duplicates for some content types. That's now fixed.

[CMS-26018]

Update Documentation on CAE Spring Security

The CAE Developer Manual - Spring Security section now contains a paragraph about User Authentication configuration and hints towards necessary actions in case the Elastic Social extension was disabled.

[CMS-24169]

4.4 Release 2412.0.4

The release contains:

- Breaking changes: 2
- Changes and improvements: 32
- Bugfixes: 67

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.

Release date: 2025-09-08

Breaking Changes

- CMS-28098: Configured limit for part count in multipart/form-data requests
- CMS-28213: Content hub adapters are no longer delivered as bundled plugins

Changes and Improvements

- CMS-28431: Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies
- CMS-27955: Third-Party Update: OpenCSV
- CMS-27868: Fix Content Feeder Background Issue Feeding
- CMS-27838: Updated Project Dependencies
- CMS-28020: Reduced category loading in fragment calls
- CMS-28158: Deprecation of Generic Analytics Connectors
- CMS-28032: Configurable Cache Duration for Outdated Transformed Blobs
- CMS-28006: JUnit Jupiter: Updated to 5.13.2
- CMS-27839: Third-Party Update: commons-io 2.19.0
- CMS-23359: LdapUserProvider Connection Improvements

Bugfixes

- CMS-27896: Fix Workflow Action Attribute ignoreErrors
- CMS-27570: Workflow Action Conditional Execution
- CMS-28288: Fixed Parameter Resolution of Dynamic Includes

- CMS-28160: Fixed JMX issue with CAE startup
- CMS-28021: Mega menus should now render much faster in CAE (Salesforce and Hybris)
- CMS-27938: Default configuration of cache-control headers fixed
- CMS-16789: Removed duplicate of `userVariant`
- CMS-28259: Fixed Miscellaneous Aria Roles and Labels
- CMS-28258: Repository Tree Accessibility
- CMS-28257: Fixed Widget Button Tooltips
- CMS-28252: Fixed HTML "lang" Attribute
- CMS-28250: Tooltips are now activated on Focus
- CMS-28243: Welcome Widget is now accessible
- CMS-28239: Fixed Library Column Accessibility
- CMS-28238: Fixed Library Context Menu Accessibility
- CMS-28133: Added Missing QuickCreate Parameters
- CMS-28023: Fixed Preview Date Selector Dialog
- CMS-26035: Fixed Miscellaneous Struct Editor Issues
- CMS-25975: Workflows in ControlRoom inbox are now correctly displayed
- CMS-28336: Fixed Search by Path in Studio Folder Chooser
- CMS-28337: Headless responds to HTTP-Head over REST now as in CM11
- CMS-28203: Richtext headings are resolved with inline handlers
- CMS-28156: Update to latest minor version of Spring-GraphQL and GraphiQL 5.0
- CMS-27931: Fixed Regression: Non-trivial server context path for REST request was ignored
- CMS-27811: Exception handling by DataFetcherExceptionResolverAdapter
- CMS-28208: Fixed ContentHub Issue with duplicate beans
- CMS-28100: Category parameter is taken for augmented products
- CMS-27975: Application SBOMs are optionally added to the Spring-Boot actuator
- CMS-27941: cm sql Fixed
- CMS-27815: Fixed UrlValidator
- CMS-18211: Changed the logic for the metric com.coremedia.Store.Connected

4.4.1 Breaking Changes

CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Follow Section "Configured limit for part count in multipart/form-data requests" [459] for upgrade information.

[CMS-28098]

Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

4.4.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies

Apache Tika has been updated to version 3.2.2. As part of this change, transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.14.1
- Apache Commons IO 2.20.0
- Apache Commons Lang3 3.18.0
- Apache Mime4J 0.8.13

- Apache PDFBox 3.0.5
- Apache Tika 3.2.2
- ASM 9.8
- jsoup 1.21.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-28431]

Third-Party Update: OpenCSV

OpenCSV has been updated to version 5.11.1. This includes an update of transitive dependency commons-beanutils to version 1.11.0 and avoids potential security issue CVE-2025-48734.

[CMS-27955]

Fix Content Feeder Background Issue Feeding

Fixed a bug in the Content Feeder that content issues were not indexed in the background.

[CMS-27868]

Updated Project Dependencies

Updated several dependency and plugin versions:

- Angus Mail → 2.0.4
- Apache HttpComponents Client 5 → 5.5
- AssertJ → 3.27.4
- Bouncy Castle Java → 1.81
- Byte Buddy → 1.17.7
- Commons CLI → 1.10.0
- Commons Codec → 1.19.0
- Commons Compress → 1.28.0
- Commons Exec → 1.5.0
- CoreMedia Adapter for HCL Commerce → 3.0.14
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.16
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.14
- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.16
- Enterprise Security API → 2.7.0.0
- Error Prone → 2.41.0
- Google Analytics Data Client for Java → 0.83.0

- Google API Common for Java → 2.53.0
- Google API Extensions for Java → 2.70.0
- Google Auth Library for Java → 1.38.0
- Google HTTP Client Library for Java → 1.47.1
- gRPC-Java → 1.75.0
- Hibernate ORM → 6.6.27.Final
- Hibernate Validator → 8.0.3.Final
- Jackson → 2.19.2
- Jib Maven Plugin → 3.4.6
- JSON-Java → 20250517
- jsoup → 1.21.2
- JUnit Jupiter → 5.13.4
- Micrometer → 1.14.9
- Mockito → 5.19.0
- Netty → 4.1.124.Final
- Protocol Buffers for Java → 4.32.0
- Reactor Project BOM → 2024.0.8
- Spring Boot → 3.4.9
- Spring Data BOM → 2024.1.9
- Spring for GraphQL → 1.3.6
- Spring Framework → 6.2.10
- Spring Security → 6.4.9
- Tomcat → 10.1.44

[CMS-27838]

CoreMedia Content Application Engine

Reduced category loading in fragment calls

There is a new configuration flag in CAE `cae.livecontext.categories.lazy-loading:false` that can be used to enable a "lazy category loading mode" in the CAE. If set to "true" no categories will be loaded during a fragment call (at least for pure augmentation). This also prevents the validation of the entire category path. This mode certainly results in less load for a CAE (when cache misses are expected), but you should be sure that the categories can be loaded during request processing.

[CMS-28020]

Miscellaneous

Deprecation of Generic Analytics Connectors

The integration of Analytics Connectors based on Elastic Core is deprecated, i.e. extension `es-alx` and parts of extension `alx`, including the analytics doctypes. Functionality for website tracking will still be available.

Deprecated features:

- Top N Lists including
  - Analytics doctypes: `CMALXBaseList (abstract)`, `CMALXPageList` and `CMALXEventList`
  - Contentbean implementations
  - Studio configuration forms
- Retrieval tasks and persistence based on the `ModelService` (module `bpbase-es-alx-common`)
- Studio: generic configuration, performance widgets, deep links

These features are discontinued and will be replaced by an integrated solution.

(CMS-28158)

Configurable Cache Duration for Outdated Transformed Blobs

Added a new configuration property `delivery.outdated-transformed-blob-cache-duration` to control how long outdated or yet unknown transformed blobs are to be cached in a multi-CAE scenario (`cae.single-node=false`). Before this fix, CAE send a cache-control header with `max-age` of 0 seconds. This value is now configurable. Consider that a yet unknown cache should not be cached for long because the CDN should ideally cache the correct transformed blob for a given URL. The cases to cover are that (1) either a more up-to-date CAE generated the link and the CAE answering the request for the transformed blob does not yet know about the updated blob and (2) a client has stored a very old version of a transformed blob URL for which the blob data is no longer cached by the CDN. A CAE cannot distinguish between these two cases but serves the currently (either outdated or newer) known transformed blob. The new configuration property allows projects to optimize for scenario (1) or (2) by setting a (1) short duration or (2) a long duration.

Configuration example:

```
# Set cache duration to 1 hour
delivery.outdated-transformed-blob-cache-duration=1h
```

Upgrade Information

[CMS-28032]

JUnit Jupiter: Updated to 5.13.2

JUnit Jupiter has been updated to 5.13.2. Note, that this release introduces deprecations, for example, for `ArgumentsProvider` so that you should implement another signature of `provideArguments`.

For details, see the corresponding release notes: JUnit 5 Release Notes.

[CMS-28006]

Third-Party Update: commons-io 2.19.0

Apache Commons IO has been updated to 2.19.0.

[CMS-27839]

LdapUserProvider Connection Improvements

LDAP roundtrips ere executed with a timeout now, in order to avoid blocked threads in case of certain problems. The timeout [`ldap.timeout`] as well as the maximum number of connections [`ldap.max-connections`] is configurable now. However, the default values are supposed to be suitable for most projects, and there should be no need to change them unless concrete problems occur. There is another new configuration property `ldap.referral-throw-handling` to control the details of referral handling. It is still experimental, because the details concerning referrals depend on the particular setup of the LDAP servers, and this has not yet been tested exhaustively. But if you encounter problems with the default behaviour, you should give it a try.

See `com.coremedia.ldap.LdapUserProviderConfigurationProperties` for details.

[CMS-23359]

4.4.3 Fixed Issues

CoreMedia Core

Fix Workflow Action Attribute ignoreErrors

Fixed a bug in the handling of the attribute `ignoreErrors=true` in workflow definitions for actions `ApproveResource`, `PublishResources`, and others. Previously, client action timeout errors were never ignored and always caused task escalation. This has been fixed, so that timeouts don't cause an escalated task anymore if `ignoreErrors` is set to `true`.

[CMS-27896]

Workflow Action Conditional Execution

Fixed the bug, that `<Condition>` elements could not be used in workflow definitions for conditional execution of custom workflow actions.

[CMS-27570]

CoreMedia Content Application Engine

Fixed Parameter Resolution of Dynamic Includes

When using dynamic includes on the Preview CAE the parameters (required to serve personalized content) were lost. This bug has been fixed so that parameter resolution for dynamic includes functions properly on Preview CAE.

[CMS-28288]

Fixed JMX issue with CAE startup

In rare cases the CAE didn't start up the application context due to an issue with anonymous LinkFormatter instantiation in JMX configuration.

[CMS-28160]

Mega menus should now render much faster in CAE (Salesforce and Hybris)

When building links to commerce categories we avoid the loading of the commerce items, at least for Salesforce and Hybris. Unfortunately, it is still necessary for HCL, because links can only be build using technical IDs which must be requested from the commerce system. It should speed up loading of mega menus considerably, at least if a lot of Commerce items are not in the CAE cache.

[CMS-28021]

Default configuration of cache-control headers fixed

In Live CAE the default configuration of cache-control headers for css and javascript URLs contained an incorrect pattern. This led to exceptions in the log and the values could not be read.

[CMS-27938]

Removed duplicate of `userVariant`

The query parameter `userVariant` was added twice in a redirect (e.g. the preview call in studio preview). This has been cleaned up and the `userVariant` is now only added once.

[CMS-16789]

CoreMedia Studio Client

Fixed Miscellaneous Aria Roles and Labels

- Improved the aria label for the type icon column by adding role "img" and an aria label.
- Added aria labels for the image editors rotation actions.
- Fixed preview options toolbar aria label.
- Fixed toolbar overflow button label.
- Changed the header toolbar aria label from Kopf to Site Auswahl, Guides, Info-Center und Benutzermenü.
- Added aria role "button" and aria label for the close button of work area tabs.

[CMS-28259]

Repository Tree Accessibility

The aria role of repository tree items has been changed to "treeitem".

[CMS-28258]

Fixed Widget Button Tooltips

The "Edit" button for dashboard widget has been fixed so that the tooltip adepts depending on its mode. This includes the aria label too.

[CMS-28257]

Fixed HTML "lang" Attribute

The "lang" attribute is now set to the "html" element instead of the "body" element where it belongs according to w3c standards.

[CMS-28252]

Tooltips are now activated on Focus

For better accessibility, the tooltips are now not only shown on a mouse hover but also on keyboard focus.

[CMS-28250]

Welcome Widget is now accessible

The links in the welcome widget on Dashboard can be navigated to via keyboard and activated pressing the enter button.

[CMS-28243]

Fixed Library Column Accessibility

The accessibility for columns inside the library (and other grid components) has been fixed: If a column is sortable, the sort order can be toggled via key navigation (Enter key).

[CMS-28239]

Fixed Library Context Menu Accessibility

The accessibility for the context menu in the library has been fixed. The context menu can now be opened via the keyboard shortcut CTRL+Enter.

[CMS-28238]

Added Missing QuickCreate Parameters

Added missing parameters from the *QuickCreateAction* to the the *QuickCreateLinkList-Menu* so that all configuration possibilities are available there too.

[CMS-28133]

Fixed Preview Date Selector Dialog

Fixed the width of the preview date selector dialog so that the reset button is also visible when the German localization is selected.

[CMS-28023]

Fixed Miscellaneous Struct Editor Issues

- Fixed issue that the markup editor for did not show values or did show values for other markup fields or did not save these.
- Fixed errors that happened for markup lists.
- Fixed the error that when a property editor dialog was opened for a struct property (e.g. markup or date fields) and the node was cut or deleted, the dialog remained open.

[CMS-26035]

Workflows in ControlRoom inbox are now correctly displayed

When several workflow are created at the same time (e.g., a translation is triggered against multiple target languages), then there are several workflows with the same creation date. When completing one of them it could remain in the inbox even after it is completed. Now the malbehavior is fixed.

[CMS-25975]

CoreMedia Studio Server

Fixed Search by Path in Studio Folder Chooser

Fixed a bug that made it impossible to search by path for folders in the folder chooser, for example to find the target folder in the create new document dialog.

[CMS-28336]

CoreMedia Headless Server

Headless responds to HTTP-Head over REST now as in CM11

In CMCC 11 (2310), Headless Server responded to HEAD requests over the REST-API with 200 and 404 as long as JSLT was enabled (which is the default).

With the introduction of Spring-GraphQL, the HTTP transport layer was redefined by Spring. As a consequence, its basic implementation was only able to respond to POST requests. The ability to respond to GET requests was add by CoreMedia but support for HEAD requests was omitted, as such requests to a GraphQL endpoint are neither covered by the GraphQL-over-HTTP spec, nor does it make sense to respond to a HEAD request on a plain GraphQL endpoint.

Nevertheless, supporting HEAD requests makes sense for the REST-API and in CMCC 11 (2310), Headless Server responded with 200 or 404 to a HEAD request as long as JSLT was enabled. Note that the response was always 200, when JSLT was disabled.

This changed behavior was now reestablished for CMCC 12.

Also note that HEAD requests to the REST-API are not recommended and you should strive for solutions avoiding HEAD requests!

Upgrade Information

[CMS-28337]

Richtext headings are resolved with inline handlers

Before, links to content in richtext headlines were not resolved via GraphQL in fields `text`, `textReferencedContent` and `textAsTree`. The content links are resolved correctly now together with other inline elements, by adding the inline handlers to the headline context.

[CMS-28203]

Update to latest minor version of Spring-GraphQL and GraphiQL 5.0

Due to an update in the publishing policy of GraphiQL, spring-graphql library could not deliver graphiql correctly. This was fixed by updating Spring-GraphlQL to the corresponding latest minor version:

CMS 2506.0: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 esm.sh (was 4.0.0 via esm.sh) CMS 2412.0: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh (was via unpkg.com) CMS 2406.2: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 via esm.sh (was 4.0.0 via esm.sh) CMS 2416.1: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh (was via unpkg.com)

[CMS-28156]

Fixed Regression: Non-trivial server context path for REST request was ignored

A non-trivial server context path, e.g. '/customContextPrefix' was not working anymore with REST requests. That regression was now fixed.

[CMS-27931]

Exception handling by DataFetcherExceptionResolverAdapter

To resolve exceptions to GraphQL errors, a `DataFetcherExceptionResolverAdapter` has been added which resolves implementations of `RuntimeException` to `ErrorType.DataFetchingError`. Specific exceptions and corresponding `ErrorTypes` can be configured via configuration property `caas.exceptionErrorMap`. Exceptions are resolved via configuration for the most specific super class.

[CMS-27811]

Miscellaneous

Fixed ContentHub Issue with duplicate beans

An issue has been fixed regarding the `BaseFileSystemConfiguration` in the `ContentHubAdapter`. You do not need to import the `BaseFileSystemConfiguration` class anymore, as the `ContentHubMimeTypeService` bean is now available automatically if your Adapter lives in the Blueprint. If it lives in a Plugin,

you can access `ContentHubMimeTypeService` via the new `ContentHub BeansForPluginsConfiguration`.

[CMS-28208]

Category parameter is taken for augmented products

If you have an augmented product and set some alternative placements and if the product is contained in multiple categories (e.g. beside the primary category it is also part of the e.g. "newarrivals-mens" category). If the PDP fragment is called with such an additional category parameter (not the primary category id) it is taken for augmentation (and not the primary category of the product).

[CMS-28100]

Application SBOMs are optionally added to the Spring-Boot actuator

Application SBOMs are now optionally added to the Spring-Boot actuator. This prevents an error where the application would not start if the SBOM was missing, e.g. when building was disabled by setting the 'skipSboms=true' switch for the Maven build.

[CMS-27975]

cm sql Fixed

`cm sql` failed to start with a `NullPointerException` when trying to build the UI.

This has been fixed.

[CMS-27941]

Fixed UrlValidator

The UrlValidator complained about URLs containing "%" characters. URL validation has been fixed to properly deal with URL encoding.

[CMS-27815]

Changed the logic for the metric com.coremedia.Store.Connected

Changed the logic for the metric `com.coremedia.Store.Connected` to monitor the open connections to the database. This ensures that the state changes when the last connection is closed due to an error instead of waiting for a future connection request to encounter an error. Requires the number of minumum open connections

to be set to at least 1 [`sql.pool.minConnections`]. This is enforced by the code - values below 1 will be ignored and the minumum will be set to 1. As the server must open at least one connection to work, this won't change its operation. Relies on the connection validator to discover broken connections. If a more timely detection of connection issues is required, reduce the values of the properties `sql.pool.validatorInterval` and `sql.pool.validatorTimeout`.

[CMS-18211]

4.5 Release 2412.0.3

The release contains:

- Breaking changes: 0
- Changes and improvements: 7
- Bugfixes: 13

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.

Release date: 2025-05-16

Breaking Changes

Changes and Improvements

- CMS-27655: Updated Maven dependencies and plugins
- CMS-27644: Case-insensitive User and Group Search
- CMS-27224: Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"
- CMS-25920: Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies
- CMS-25571: Parameter Appending Link Transformers May Skip Transformation for Bean Types
- CMS-27504: Supported: MySQL 8.4 on Amazon RDS

Bugfixes

- CMS-27723: Fatal Error on Replication and UAPI Clients for "Old" Published Content
- CMS-23141: Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows
- CMS-27775: Fixed Potential Cache Deadlock in LoadedImageCacheKey
- CMS-27338: Fixed Bug - Special Characters in Commerce IDs
- CMS-27728: Optimized Blob Link Building

4.5.1 Breaking Changes

This release contains no breaking changes

4.5.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.13
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.12
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.14
- CoreMedia Adapter for HCL Commerce → 3.0.12
- Apache HttpComponents Client 5 → 5.4.4
- AspectJ → 1.9.24
- Commons Collections → 4.5.0
- Commons Text → 1.13.1
- Error Prone → 2.38.0
- Google Analytics Data Client for Java → 0.73.0
- Google API Common for Java → 2.48.0
- Google API Extensions for Java → 2.65.0
- Google Auth Library for Java → 1.35.0
- Google HTTP Client Library for Java → 1.47.0
- GraphQL Java → 22.4
- gRPC-Java → 1.72.0
- Gson → 2.13.1
- Guava → 33.4.8-jre
- Hibernate ORM → 6.6.14.Final
- Jackson → 2.19.0
- JUnit Jupiter → 5.12.2
- Micrometer → 1.14.6
- Mockito → 5.17.0
- Netty → 4.1.121.Final
- Reactor Project BOM → 2024.0.5

- Spring Boot → 3.4.5
- Spring Data BOM → 2024.1.5
- Spring Framework → 6.2.6
- Spring for GraphQL → 1.3.5
- Tomcat → 10.1.41

(CMS-27655)

Case-insensitive User and Group Search

There is a new content server configuration option `cap.server.case-sensitive-member-search`. If set to `false`, the user and group search in the Studio's User Manager app works case-insensitively. Default is `true` (case-sensitive, backward compatible).

More generally, the option affects the UAPI methods `com.core media.cap.user.UserRepository#findUsers` and `com.core media.cap.user.UserRepository#findGroups`. If you use these methods in custom code, the current behaviour may be mandatory. In that case leave the option at its default.

(CMS-27644)

Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"

The Content Server can now be configured to perform retries on database transactions in case of connection loss due to "Zero-Downtime Patching" on Amazon Aurora (MySQL only).

To configure the Content Servers for retries, use these properties:

- *sql.pool.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *sql.pool.retry-delay*: wait given time before retrying (*Duration*; default: 15 seconds).
- *sql.pool.max-retries*: maximum number of retries (default: 15).

To configure the Workflow Server for retries, use these properties:

- *workflow.server.tx.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *workflow.server.tx.retry-on-connection-loss-delay*: wait given time before retrying on database connection loss (*Duration*; default: 15 seconds).

Retries on a single Workflow Server database transaction are limited to 15 times.

Set the delay values and retries (see above) large enough to cover prolonged database unavailability during failover.

Make sure to set DNS caching on your system to a very short time (probably shorter than *.retry-delay) to allow for refreshed hostname resolution before the next attempt on a previously failing database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

[CMS-27224]

Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies

Apache Tika has been updated to version 3.1.0. As part of this change, the following transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.13.0
- Apache Commons IO 2.18.0
- Apache Log4J API 2.24.3
- Apache Mime4J 0.8.12
- Apache PDFBox 3.0.4
- Apache POI 5.4.1
- Apache Tika 3.1.0
- Apache XMLBeans 5.3.0
- ASM 9.7.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-25920]

CoreMedia Content Application Engine

Parameter Appending Link Transformers May Skip Transformation for Bean Types

The configuration property `cae.link-transformer.params-append er.skip-for-type` has been added that allows deployments to skip link transformation by parameter appending link transformers for configurable bean types. The configuration property is a map indexed by the lowercase version of the transformer bean name and the values of the map are a collection of fully-qualified classes for which the transformation should be skipped.

Example:

```
cae.link-transformer.params-appender.skip-for-type.previewdateappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMCSS,com.coremedia.blueprint.common.contentbeans.CMImage,
com.coremedia.blueprint.common.contentbeans.CMJavaScript,com.coremedia.blueprint.common.contentbeans.CMTheme

cae.link-transformer.params-appender.skip-for-type.developermodeappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMExternalLink
```

The configuration is applicable to beans of the following link transformer implementations:

- `com.coremedia.livecontext.fragment.links.trans formers.FragmentParamsAppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewDate AppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewParametersAp pendingLinkTransformer`
- `com.coremedia.objectserver.web.links.ParameterAp pendingLinkTransformer`

[CMS-25571]

Miscellaneous

Supported: MySQL 8.4 on Amazon RDS

MySQL 8.4 on Amazon RDS has been added as a supported environment.

[CMS-27504]

4.5.3 Fixed Issues

CoreMedia Core

Fatal Error on Replication and UAPI Clients for "Old" Published Content

With release CMCC 12 2412.0, a bug was introduced that could lead to failure of content replication on "empty" Replication Live Servers. Furthermore, custom UAPI clients attached to Master Live or Replication Live Servers may have received wrong content and version UUIDs ("00000000-0000-0000-0000-000000000000"). This may

also affect customized UAPI clients that depend on content or version UUIDs. CoreMedia CMS standard clients (CAE Feeder, CAE, and Headless Server) are not affected, if not customized.

The bug is in effect, if you

- run release CMCC 12 2412.0.0 to 2412.0.2, and
- content was published previously with a release prior to CMCC 11 2210.1 (resulting in a `versionUuid` or `contentUuid` of `null` on Master Live Server).

For workarounds and content cleanup, see https://documentation.core-media.com/known-issues/?filter=cmcc#important-info-for-customers-migrating-to-cmcc-2412.0.

[CMS-27723]

Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows

Fixed a bug in the Workflow Server action 'RegisterPendingProcess', which ignored temporary exceptions like communication problems to MongoDB or the SQL database when adding a workflow to a user's list of pending workflows. As a consequence, the workflow would also not appear in the list of finished workflows The action now retries until the workflow was added successfully.

[CMS-23141]

CoreMedia Studio Server

Fixed Potential Cache Deadlock in LoadedImageCacheKey

Fixed a bug in the LoadedImageCacheKey that could cause a deadlock in the Studio Server.

[CMS-27775]

Fixed Bug - Special Characters in Commerce IDs

A bug which prevented special characters, such as '%' or '/' in commerce IDs, has been fixed. However, it is not recommended using such characters in IDs.

[CMS-27338]

Miscellaneous

Optimized Blob Link Building

Starting with CMCC 2401.1, blob links of the Blueprint CAE (generated by `com.core media.blueprint.cae.handlers.TransformedBlobHand ler#buildLink`) are sensitive to responsive image settings. Therefore, building the link requires a transformation incl. streaming the original blob each time, because the settings may have changed. This turned out to be a severe performance issue, so we reverted this behaviour.

The drawback is that changed responsive image settings are not effective immediately, but outdated images may be rendered. However, responsive image settings are not changed frequently on production systems, so this should not be an issue in practice. You can enforce up-to-date images by restarting the CAE.

There is a configuration property delivery.image-settings-aware-etags to control the behaviour. The default is `true`, which means backward compatible behaviour. However, it is recommended to set it to `false` for production systems.

[CMS-27728]

4.6 Release 2412.0.2

The release contains:

- Breaking changes: 3
- Changes and improvements: 11
- Bugfixes: 48

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.

Release date: 2025-04-24

Breaking Changes

- CMS-27671: Upgraded @jangaroo/ext-ts to 2.1.0
- CMS-27666: Patch to Fix XLIFF Download in CoreMedia Studio
- CMS-27514: Moved upcoming KIO Backend Images to container-registry.core-media.com

Changes and Improvements

- CMS-27422: Updated Maven dependencies and plugins
- CMS-25982: Make library column resizer more visible
- CMS-25190: Enabled AMAsset Thumbnail Previews
- CMS-19538: Warning before publication workflow is fixed
- CMS-27519: Enhanced documentation around Sitemap generation
- CMS-18494: Smart Validation for Segment in Commerce Pages

Bugfixes

- CMS-27190: Fixed CAE Feeder JMX Metric LatestIndexing
- CMS-27638: Eliminated Race Condition on Computation of Image Transformations
- CMS-27473: CAE - development with local resources fixed
- CMS-27431: SiteFilter pattern matching for /service/search/{site} fixed for CAE
- CMS-27500: Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

- CMS-27466: Studio Client Container Image now Respects sigterm and sigint Signals
- CMS-27361: Added Overflow for Struct Editor and Pagegrid Toolbars
- CMS-27257: Fixed Height of Start Workflow Dialog
- CMS-27250: Removed AS Documentation References
- CMS-27216: Fixed Mouse Selection for Annotated Link Lists
- CMS-27149: Fixed Job Service Event Handling
- CMS-27148: Fixed: Inconsistent tab focus when opening documents via links in CkEditor
- CMS-27047: Fixed Locale Switcher Endless Loading
- CMS-25606: Fixed "RemoteItemsPlugin" Logging
- CMS-25394: The Sencha Ext fonts are now loaded
- CMS-23480: Fixed "Open In Tab" Toolbar Action
- CMS-18223: Fixed Lazy Loading in Library
- CMS-9208: Translation State Widget Robustness Enhanced
- CMS-27420: Fixed: Problem with Focus in RichtextField
- CMS-27046: PublicationContentStateValidator now uses connectionSession
- CMS-11873: The link suggester field is now reset
- CMS-8538: New deprecation: CMMedia#getCaption
- CMS-27699: Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses
- CMS-27635: HeadlessServer now also supports type conversion of path segments used as GraphQL input variables
- CMS-27646: Fixed Method ContentSiteAspect#setMasterVersion
- CMS-27457: Fixed QuickCreate Dialog "skipInitializers" Flag
- CMS-27244: MongoDbHealthIndicator has been Changed to use the hello-command
- CMS-26018: Fixed Filtering of Searchable Content Types

4.6.1 Breaking Changes

CoreMedia Studio Client

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

Follow Section "Upgraded @jangaroo/ext-ts to 2.1.0" [462] for upgrade information.

[CMS-27671]

CoreMedia Studio Server

Patch to Fix XLIFF Download in CoreMedia Studio

If you are downloading XLIFF in CoreMedia Studio, you may have experienced (since CMCC v10.2307.1), that the feature to add nested Struct properties configured in bean `translateXliffTranslatableExpressions` did not work anymore, thus, properties like `CMLinkable.localSettings.callToActionCustomText` were not added to the resulting XLIFF export.

Follow Section "Patch to Fix XLIFF Download in CoreMedia Studio" [463] for upgrade information.

[CMS-27666]

Miscellaneous

Moved upcoming KIO Backend Images to container-registry.coremedia.com

Future docker images will be available on `container-registry.core media.com`:

Follow Section "Moved upcoming KIO Backend Images to container-registry.core-media.com" [463] for upgrade information.

[CMS-27514]

4.6.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.12
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.11
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.13
- CoreMedia Adapter for HCL Commerce → 3.0.11
- Apache HttpComponents Client 5 → 5.4.3
- AspectJ → 1.9.23
- Byte Buddy → 1.17.4
- Error Prone → 2.37.0
- Google Analytics Data Client for Java → 0.71.0
- Google API Common for Java → 2.46.1
- Google API Extensions for Java → 2.63.1
- Google Auth Library for Java → 1.33.1
- Google HTTP Client Library for Java →
- Google OAuth Client Library for Java → 1.39.0
- gRPC-Java → 1.71.0
- Guava → 33.4.6-jre
-
  Hibernate ORM → 6.6.12.Final
  JUnit Jupiter → 5.12.1

- Jackson → 2.18.3
- Jib Maven Plugin → 3.4.5
- Logback → 1.5.18
- Micrometer → 1.14.5
- Mockito → 5.16.1
- Netty → 4.1.119.Final
- Protocol Buffers for Java → 4.30.2
- Reactor Project BOM → 2024.0.4
- SLF4J → 2.0.17
- SnakeYAML → 2.4
- Spring Boot → 3.4.4

- Spring Data BOM → 2024.1.4
- Spring Framework → 6.2.5
- Spring for GraphQL → 1.3.4
- Spring Security → 6.4.3
- Tomcat → 10.1.39

[CMS-27422]

CoreMedia Studio Client

Make library column resizer more visible

The "Adjust column width" function is much easier to find and handle in the column header of the library.

[CMS-25982]

Enabled AMAsset Thumbnail Previews

Enabled the thumbnail previews for the document formulars of *AMAsset* and *AMPictureAsset*.

[CMS-25190]

Warning before publication workflow is fixed

When starting a publication workflow on contents with warning now shows correct warning messages.

[CMS-19538]

CoreMedia Documentation

Enhanced documentation around Sitemap generation

The chapter about sitemap in the Blueprint Developer Manual now mentions the requirement for the configuration to be part of the Spring management application context.

[CMS-27519]

Miscellaneous

Smart Validation for Segment in Commerce Pages

In commerce-related page types (Augmented Category, Augmented Product and Augmented Page) the segment is typically not used, at least when it is a commerce-led scenario. In such a case the segment is not used to build an URL (but it is a Storefront URL). Therefore, the segment does not need to be validated. Only in a hybrid scenario (when the settings "livecontext.policy.commerce-category-links", "livecontext.policy.commerce-product-links" or "livecontext.policy.commerce-page-links" are "true") the validation is done for these page types.

[CMS-18494]

4.6.3 Fixed Issues

CoreMedia Core

Fixed CAE Feeder JMX Metric LatestIndexing

Fixed a bug in the CAE Feeder that the JMX metric 'LatestIndexing' was not updated if Feedables are created without 'freshness' information.

[CMS-27190]

CoreMedia Content Application Engine

Eliminated Race Condition on Computation of Image Transformations

A race condition could lead to wrong computation of image transformations, affecting hash computation and potentially other functionality during processing of transformed images. This has been eliminated now.

[CMS-27638]

CAE - development with local resources fixed

When the CAE started with using local resources the following bugs occurred and have been fixed:

- resource integrity for css resources were calculated wrong.
- chunkPathById.js was stored in the wrong place.

[CMS-27473]

SiteFilter pattern matching for /service/search/{site} fixed for CAE

In the `cae.site.patterns` property the {{/service/search/

{site}

}} had an unintended `}` at the end and therefore did not match. Now it matches. The bug had no impact as a fallback resolved the site from the path in another way if no pattern matched.

[CMS-27431]

CoreMedia Studio Client

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

[CMS-27500]

Studio Client Container Image now Respects sigterm and sigint Signals

due to a misconfiguration in the entrypoint script of the studio-client, the nginx process of the container did not receive sigint and sigterm signals and therefore did not shut down as required but was killed by the container runtime after it hit the configured graceful shutdown timeout.

[CMS-27466]

Added Overflow for Struct Editor and Pagegrid Toolbars

The overflow option of these toolbars were not enabled. Buttons are now shown in a drop down on overflow again.

[CMS-27361]

Fixed Height of Start Workflow Dialog

The minimum height of the Start Publication Workflow has been fixed so that it fits for FullHD screens with 150% scaling too.

[CMS-27257]

Removed AS Documentation References

Removed reference to ASDoc documentation and replaced it with TSDoc.

[CMS-27250]

Fixed Mouse Selection for Annotated Link Lists

For annotated link list that use an input field as annotation widget, the text of this field can now be selected via mouse too. The selection does not trigger the drag and drop of the whole row anymore.

[CMS-27216]

Fixed Job Service Event Handling

Fixed issue that when a job is immediately successful, it was not properly finished.

[CMS-27149]

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

[CMS-27148]

Fixed Locale Switcher Endless Loading

Depending on the permissions of the user, the locale switcher might not have recovered from the loading state. The stability has been improved here. In case the user can only "see" one site, a label with the locale is shown now (instead of the whole locale switcher menu).

[CMS-27047]

Fixed "RemoteItemsPlugin" Logging

The logging of the "RemoveItemsPlugin" has been fixed so that no error is logged anymore even when the replacement was successful.

[CMS-25606]

The Sencha Ext fonts are now loaded

Sencha specific icons font packages are now loaded when using the blueprint workspace.

[CMS-25394]

Fixed "Open In Tab" Toolbar Action

The action was not properly refreshed when content was deleted or restored.

[CMS-23480]

Fixed Lazy Loading in Library

Fixed issue that sometimes empty rows where showing in the library.

[CMS-18223]

Translation State Widget Robustness Enhanced

The Translation State Dashboard Widget may have struggled reporting translation states for derived sites, whose site IDs contained space characters (a "Contact Your System Administrator" message was shown).

This has been fixed.

[CMS-9208]

CoreMedia Studio Server

Fixed: Problem with Focus in RichtextField

Fixed: When focussing a RichtextField, then clicking away in external app and then clicking again in the same RichtextField, no focus event was fired. The effect was, that changes made to the text (e.g. pasting text from an external app) were not saved. The reason was that in that case the delegation mode was still active.

(CMS-27420)

PublicationContentStateValidator now uses connectionSession

The `PublicationContentStateValidator` now uses the `connectionSession` for running the validators to be able to validate content that the current user might not have permissions for.

(CMS-27046)

The link suggester field is now reset

When changing the content tab the suggestion text is now reset so that it isn't from other forms.

(CMS-11873)

New deprecation: CMMedia#getCaption

The method `CMMedia#getCaption` is unused for a while and is confusing because the Studio property field `caption` is stored in the property `teaserText` of `CMTeasable`. The method `CMMedia#getCaption` will be removed, use `CMTeasable#getTeaserText` instead.

(CMS-8538)

CoreMedia Headless Server

Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses

Starting with 2404 (the introduction of Spring-GraphQL-Library), GraphQL responses of JSLT transformed persisted queries did not pass through potential GraphQL error messages.

This regression was fixed. In order not to break the current version, the fix must be enabled by an additional compatibility flag `caas.rest.error-messages-over-jslt-enabled=true|false`. To stay non-breaking within versions 2406 and 2412, the flag defaults to false!

If the flag is activated, all JSLT templates must be updated, as the JSON path of the response now includes the explicit "data" property again and the potential "errors" property of course. In effect this means, the former JSLT templates of version 2310-LTS and prior will work again.

(CMS-27699)

HeadlessServer now also supports type conversion of path segments used as GraphQL input variables

Previously, HeadlessServer converted HTTP request parameters into the necessary type for a GraphQL input variables only. With this fix type conversion is now also supported for path segments of the HTTP request path.

(CMS-27635)

Miscellaneous

Fixed Method ContentSiteAspect#setMasterVersion

Fixed a bug that caused a StackOverflowError when calling `com.core media.cap.multisite.ContentSiteAspect#setMasterVersion` with a null argument.

(CMS-27646)

Fixed QuickCreate Dialog "skipInitializers" Flag

The configuration flag "skipInitializers" is no longer ignored when content is created through the Quick-Create dialog.

[CMS-27457]

MongoDbHealthIndicator has been Changed to use the hello-command

The `MongoDbHealthIndicator` has been changed to use the `hello`-command instead of creating a new `MongoClient` every time. This prevents unnecessary creation of ConnectionPools and Connections to the MongoDb Server Nodes.

[CMS-27244]

Fixed Filtering of Searchable Content Types

When filtering searchable content types in the library there used to be duplicates for some content types. That's now fixed.

[CMS-26018]

4.7 Release 2412.0.1

The release contains:

- Breaking changes: 4
- Changes and improvements: 16
- Bugfixes: 46

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.

Release date: 2025-02-21

Breaking Changes

- CMS-27252: Freemarker: make class resolver configurable
- CMS-27377: CoreMedia CKEditor5 Plugins updated to Version 23.0.0
- CMS-25815: RichTextPropertyFields is now capable of handling StructSubBeans
- CMS-27141: Removed Support for Filter Expressions in Log Configurations

Changes and Improvements

- CMS-27223: Options for Command Line Tools
- CMS-27087: Updated Maven dependencies and plugins
- CMS-27159: Changed Content Type Selector Filter Options
- CMS-26913: Enhanced Multi-Site Manual Section "Designing Locales"
- CMS-27366: Updated Liquibase And Disabled Liquibase Analytics
- CMS-27253: Third-Party Update: Apache Solr 9.8.0
- CMS-27246: Deprecation of Public API

Bugfixes

- CMS-27209: Fix CAE Feeder DataSource Configuration
- CMS-27181: Content Server Unresponsive after Database Failover Recovery
- CMS-27126: Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section
- CMS-27003: RichTextCorrectionConverter: Multiple corrected attributes ArrayIndex-OutOfBounds exception fixed

- CMS-26904: Fixed Content Feeder to Set Correct Metadata after Content Withdrawal
- CMS-26930: Fixed: Dynamic Template loading
- CMS-27354: Initialization of StudioStartupPlugin may now Return a Promise
- CMS-27193: Preventing of Superfluous Augmentation Requests
- CMS-27096: Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)
- CMS-26968: Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests
- CMS-25556: Fixed German translation for "Add Bookmark" Menu Item
- CMS-25339: Theme Updates for GenericDocumentForm
- CMS-25171: Fixed External Link Validator
- CMS-24907: Studio Client: Umlauts are not always displayed with colons
- CMS-23901: The BBCode RichText Editor Renders Additional bbcode Tags
- CMS-27059: Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors
- CMS-27045: ConfigurableDeadLinkValidator is configurable now
- CMS-25296: Fixed CommerceContentTypesPictureResolver for empty URLs
- CMS-25685: Fixed a bug with code splitting feature not working in certain setups
- CMS-27168: Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type
- CMS-27128: Apollo Federation Support

4.7.1 Breaking Changes

CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://freemarker.apache.org/docs/api/freemarker/template/Configuration.html and https://freemarker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

CoreMedia Studio Client

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Documentation.

[CMS-27141]

4.7.2 Changes and Improvements

CoreMedia Core

Options for Command Line Tools

With the update to `org.apache.commons.cli.DefaultParser`, the handling of command line options has become stricter.

To allow backwards compatible configuration, several long options have been added explicitly. In these cases, only the long options are documented, but the short options will still work, e.g., `--bloburl` can be passed as `-bloburl`. This fallback behavior is part of `commons-cli` and may change in the future.

Generally, the usage of a long option should be preferred over the use of a short option, i.e. prefer `--url` over `-url`, while the latter one will still work for now.

The following changes are introduced:

- serverimport: long option `--bloburl`
- serverexport: long options `-bloburl`, `blobsizelimit`, `cut`, `pretty` and `-encoding` (as an enhancement for existing `-enc`)

[CMS-27223]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.11
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.10
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.12
- CoreMedia Adapter for HCL Commerce → 3.0.10
- Apache HttpComponents Client 5 → 5.4.2
- AssertJ → 3.27.3
- Bouncy Castle Java → 1.80
- Byte Buddy → 1.17.0
- Commons Codec → 1.18.0
- Commons Pool → 2.12.1
- FreeMarker → 2.3.34
- Google Analytics Data Client for Java → 0.68.0
- Google API Common for Java → 2.43.0
- Google API Extensions for Java → 2.60.0
- Google Auth Library for Java → 1.31.0
- Google HTTP Client Library for Java → 1.45.3
- Google OAuth Client Library for Java → 1.37.0
- GraphQL Java DataLoader → 3.4.0
- gRPC-Java → 1.70.0
- Gson → 2.12.1
- Guava → 33.4.0-jre
- Hibernate → 6.6.6.Final
- Hibernate Validator → 8.0.2.Final
- Jackson → 2.18.2

- Jakarta Validation API → 3.1.1
- Javassist → 3.30.2-GA
- JBoss Logging → 3.6.1.Final
- JSON-Java → 20240303 → 20250107
- JUnit Jupiter → 5.11.4
- Micrometer → 1.14.3
- Mockito → 5.15.2
- Netty → 4.1.118.Final
- Plugin Framework for Java → 3.13.0
- Protocol Buffers for Java → 4.29.3
- Reactor Project BOM → 2024.0.2
- Spring Boot → 3.4.2
- Spring Data BOM → 2024.1.2
- Spring Framework → 6.2.2
- Spring Security → 6.4.2
- Tomcat → 10.1.34

[CMS-27087]

CoreMedia Studio Client

Changed Content Type Selector Filter Options

When inputting a filter value for the Content Type selector combo-box, any matches are shown now, not only type names that start with the given input.

[CMS-27159]

CoreMedia Documentation

Enhanced Multi-Site Manual Section "Designing Locales"

Knowing, that designing locales (and, thus, corresponding language tags) for your multi-site experience may sometimes get challenging, we enhanced the section "Designing Locales" within the Multi-Site Manual:

- For clarity, the reference to Locale.Builder got merged with the section "Defining Valid Language Tags". The Locale.Builder is meant as a possible assistive tool, to create a custom locale, that as well matches your needs (like a good display name in CoreMedia Studio) as well as being valid.

- A new subsection "Example: The Global Site Locale" got added, that matches typical solutions for multi-site hierarchies having a so-called "abstract master site". Given that you want to have a nicely distinguishable name for that site, the section describes two viable solutions for customized locales.

We also added a reference to a possible viable alternative to custom locales, which is using the "World" region 001 (zero-zero-one), such as in language tag `en-001` represented by your JDK as "English (world)".

[CMS-26913]

Miscellaneous

Updated Liquibase And Disabled Liquibase Analytics

Updated `org.liquibase:liquibase-core` to 4.31.0 and disabled new opt-out sending of usage statistics introduced with 4.30.0.

To disable Liquibase analytics we now set `LIQUIBASE_ANALYTICS_ENABLED: false` in the blueprint example deployment for the studio-server in the file `default.yml`. You should consider applying this configuration to your deployment.

Note that we do not use Liquibase anymore in versions 2506.0 and later.

See:

- https://docs.liquibase.com/start/release-notes/liquibase-release-notes/liquibase-4.30.0.html
- https://docs.liquibase.com/analytics/home.html
- https://docs.liquibase.com/parameters/analytics-enabled.html

[CMS-27366]

Third-Party Update: Apache Solr 9.8.0

Apache Solr has been updated to version 9.8.0. The new version fixes security vulnerability CVE-2025-24814.

A new coremedia/solr-base Docker image with tag 2.5-cm-9.8.0 has been released, which also provides a fix for leader/follower replication with enabled basic authentication. It adds the environment variable `SOLR_LEADER_BASIC_AUTH` for configuring basic authentication credentials. Starting with previous release Solr 9.7.0, credentials that are included in the `SOLR_LEADER_URL` environment variable are not used anymore.

See https://solr.apache.org/docs/9_8_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-8 for a list of changes in Solr.

[CMS-27253]

Deprecation of Public API

The core package `hox.corem.publisher` and its containing classes `Public ationResult` and `ResultItem` have been deprecated. An in-place replacement is not available. Use Unified API instead.

[CMS-27246]

4.7.3 Fixed Issues

CoreMedia Core

Fix CAE Feeder DataSource Configuration

Fixed a bug in the *CAE Feeder* that caused startup errors if the data source was configured with new `caefeeder.datasource` properties, and custom Spring configuration files were added [`META-INF/coremedia/component-xyz.xml`]. The bug did not occur with deprecated but still usable configuration properties that start with prefix `jdbc`.

[CMS-27209]

Content Server Unresponsive after Database Failover Recovery

Content Servers can automatically recover from a database failover when settings *sql.pool.retry-on-connection-loss* and *sql.pool.retry-on-read-only-db* are set to *true*. However, a bug led to high load on Content Servers after such a failover recovery which could leave the system unresponsive. This is fixed now.

[CMS-27181]

Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section

Fixed a bug in the CAE Feeder page grid feeding, that comma-separated values configured in `corporate.search.pageGrid.excludedSections` were not correctly parsed, and placement sections were not excluded from feeding as configured.

[CMS-27126]

RichTextCorrectionConverter: Multiple corrected attributes ArrayIndexOutOfBounds exception fixed

In `RichTextCorrectionConverter` an ArrayIndexOutOfBounds exception was thrown when multiple attributes were adapted. This has been fixed and works now as expected.

[CMS-27003]

Fixed Content Feeder to Set Correct Metadata after Content Withdrawal

Fixed a bug in the Content Feeder which could have led to wrong values in Solr index fields "ispublished", "isapproved", and "istobewithdrawn" after a content was withdrawn from publication. These Solr index fields were not used in the default product, but projects may have relied on correct values.

[CMS-26904]

CoreMedia Content Application Engine

Fixed: Dynamic Template loading

Dynamic templates were not loaded in CM12 as configured in the CAEConfig settings (the setting "viewRepositoryNames" for a Page). This was due to an incorrectly injected ResourceLoader. With the fix, the correct instance of a CompoundResourceLoader is injected.

[CMS-26930]

CoreMedia Studio Client

Initialization of StudioStartupPlugin may now Return a Promise

This allows asynchronous initialization of a StudioStartupPlugin when needed.

[CMS-27354]

Preventing of Superfluous Augmentation Requests

The studio-client and studio-server application are now more robust in detecting whether a product or category is already augmented. Superfluous augmentation request are now prevented when a catalog item is augmented and dropped inside a richtext field.

[CMS-27193]

Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)

Fixed: After editing (in CKEditor) a richtext property bound to a Struct property the cursor jumps to front (Firefox Windows only)

[CMS-27096]

Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests

We fixed a bug for the Studio multi-preview where in the case of a previewUrlServicePreviewProvider the preview URL was obtained many times, effectively making the preview unusable for possibly minutes.

[CMS-26968]

Fixed German translation for "Add Bookmark" Menu Item

Fixed German translation for "Add Bookmark" Menu Item

[CMS-25556]

Theme Updates for GenericDocumentForm

Missing theme updates for GenericDocumentForm added.

[CMS-25339]

Fixed External Link Validator

When URLs are pasted into Studio input fields (e.g. from Word or Excel documents), these may contain invalid characters that are not visible. The URL validator has been improved so that these characters are detected now and indicate an error in the Studio for the corresponding input field.

[CMS-25171]

Studio Client: Umlauts are not always displayed with colons

Possible cutoff umlauts on cards header component in forms is fixed.

[CMS-24907]

The BBCode RichText Editor Renders Additional bbcode Tags

The BBCode RichText editor now comes with additional plugins that allow to display certain bbcode tags inside the editor. The editor now displays italic [i], underlined [u] and strikethrough [s] text, as well as lists [list] and headings [h1]...[h6].

[CMS-23901]

CoreMedia Studio Server

Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors

A bug in settingsUploadInterceptor where the content type on the interceptor was falsely set to CMArticle has been resolved. The content type for the interceptor is CMDownload again.

[CMS-27059]

ConfigurableDeadLinkValidator is configurable now

The ConfigurableDeadLinkValidator (that validates dead links to deleted or destroyed documents) is configurable now. The excludedProperties config prop `configurable-dead-link-validator.excluded-properties` can be used to exclude properties from validation. The single validator operates on type Document and excludes by default the "placement" property.

[CMS-27045]

Fixed CommerceContentTypesPictureResolver for empty URLs

Fixed CommerceContentTypesPictureResolver so that `Optional.empty()` is returned for empty commerce URLs.

[CMS-25296]

CoreMedia Frontend Workspace

Fixed a bug with code splitting feature not working in certain setups

Fixed an issue with getChunkPathById.js were an invalid url is generated and requested in certain CAE setups.

[CMS-25685]

CoreMedia Headless Server

Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type

HeadlessServer overwrote the fetch expression when a GraphQL type used the @inherit directive with two or more types, which also implemented GraphQL interfaces. The problem was fixed.

[CMS-27168]

Apollo Federation Support

HeadlessServer now comes with Apollo Federation Support for GraphQL. To enable Federation Support, simply add the library `com.apollographql.federa`

`tion:federation-graphql-java-support:5.0.0` to your maven dependencies with scope `runtime`:

```
<dependency>
  <groupId>com.apollographql.federation</groupId>
  <artifactId>federation-graphql-java-support</artifactId>
  <scope>runtime</scope>
</dependency>
```

During server start, the library will be detected and federation support will be enabled. The log will show an additional info level message, that federation support is active.

[CMS-27128]

4.8 Release 2412.0.0

The release contains:

- Breaking changes: 32
- Changes and improvements: 154
- Bugfixes: 186

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.

Release date: 2024-12-19

Breaking Changes

- CMS-26006: XML Converter Configuration
- CMS-25668: Configurable Site Manager Group Alternatives
- CMS-25484: bulkpublish -ab now also withdraws the base folder
- CMS-25426: Removal and Deprecation of Public API
- CMS-25319: Updated to Spring Boot 3.4 and Spring Framework 6.2
- CMS-24694: CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset
- CMS-24149: Using java.time.Duration in ConfigurationProperties for human-readable Duration Specification
- CMS-23946: Removed legacy logging configuration in Workflow-Server
- CMS-23765: Removed deprecated class `hox.corem.Corem`
- CMS-15884: Starting XML Importer in a Docker Container
- CMS-26015: Avoid Auto-wiring on Spring Beans with Scope "Prototype"
- CMS-25611: Query List with context condition sometimes contained context documents in the result
- CMS-8668: Blueprint CAE Class GenericIdToContentWrapperConverter Removed
- CMS-25787: Switched to pnpm workspace protocol
- CMS-25748: Removed usages of jangaroo-net and corresponding URI class
- CMS-25374: Moved preview related entities to cap-rest-client
- CMS-24803: studio-client container is now read-only
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- CMS-24663: Enhanced Error Messages For Not Being Able to Start Localization Workflows
- CMS-25260: Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets
- CMS-18916: Replaced node-sass with dart-sass
- CMS-24982: Changed Signature CartService#deleteCartOrderItem
- CMS-26021: Only send Cache-Control Max-Age response headers for configured URLs
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Bugfixes

- CMS-25907: Fixed Content Feeder to Detect Cycles in CMS Catalog Categories
- CMS-25773: Informative Exception for Non-Existing Markup Grammar
- CMS-25632: Additional Information on Blob Sharing Configuration Options
- CMS-25589: Documentation for cap.server.maximum-startup-delay updated
- CMS-25496: Improved Logging for Server Import
- CMS-25255: Fixed Blob Sharing ID Inconsistency
- CMS-24727: Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder
- CMS-25645: Adjustment of enable-sitemap-generation script
- CMS-25105: Added apache httpcomponents5 runtime dependency
- CMS-24695: Made TransformedBlobHandler a page handler
- CMS-24147: Adjusted *.asRichtextEmbed.ftl templates
- CMS-22836: Changed generation of RSA keys via CAE application
- CMS-26944: Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.
- CMS-25937: Added Protected Users
- CMS-25928: Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded
- CMS-25824: Content Lists In Start Workflow Forms Are Now Colorful Again
- CMS-25722: Fixed Bug That Broke Keyboard Navigation Through Document Forms
- CMS-25647: Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client
- CMS-25613: IntegerPropertyFields do not have an underline
- CMS-25570: Fixing a related teaser overlay mechanism resolved this behavior
- CMS-25403: Fix for JPEG Image Upload Failure

- CMS-25135: Added option to show home folder
- CMS-25130: Improved Acrolinx Plugin
- CMS-21746: Postprocess web manifests to customize the app menu entries
- CMS-21492: Content Hub: Delete temporary files after import
- CMS-25749: Pendo plugin v2.2.0
- CMS-25737: Fixed thumbnails for augmented commerce items
- CMS-25651: External Page validators enabled
- CMS-25553: Update of Pendo plugin to version v2.1.0
- CMS-25467: Fixed an issue with loading projects created before 2406.0.0
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- CMS-24935: Handled StackOverflowError While Resolving Default Picture (2nd Fix)
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- CMS-26978: Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer
- CMS-25610: Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception
- CMS-25435: Headless server can be run without commerce extension
- CMS-25420: HtmlFragment did not support data.sizeLong
- CMS-25335: Bugfix: Headless supports servlet context path for Persisted Queries over REST
- CMS-24243: Warning for cache configuration of Remote Links cache
- CMS-25167: Documentation
- CMS-24871: Enhanced Documentation of Spring Boot ConfigurationProperties
- CMS-25962: Fixed bug in AbsoluteUrlPrefixRuleProvider matching null
- CMS-25676: Improved Acrolinx Plugin
- CMS-25563: Normalized Extension Dependency Order
- CMS-25421: Fix ParameterAppendingLinkTransformer for opaque URLs
- CMS-25158: Consolidated And Updated Oracle Driver Dependencies
- CMS-24884: Fixed Bug in Blueprint Link Building
- CMS-24169: Update Documentation on CAE Spring Security
- CMS-24040: Fixed Cache Size Error

4.8.1 Breaking Changes

CoreMedia Core

XML Converter Configuration

Due to a bug, XML converters in the contentserver had to be configured with a duplicate `sql.store.convert` prefix, like

```
sql.store.convert.sql.store.convert.MyContentType.myXmlProperty=example.org.MyConverter
```

Follow Section "XML Converter Configuration" [467] for upgrade information.

[CMS-26006]

Configurable Site Manager Group Alternatives

A feature previously known as a kind of "fallback" has been matured. This fallback was known to take over, when the "site manager groups" field of a given site was empty.

Follow Section "Configurable Site Manager Group Alternatives" [467] for upgrade information.

[CMS-25668]

bulkpublish -ab now also withdraws the base folder

Straightened bulkpublish parameters: All operations are now including the base folder(s).

Follow Section "bulkpublish -ab now also withdraws the base folder" [469] for upgrade information.

[CMS-25484]

Removal and Deprecation of Public API

The following deprecated classes/interfaces have been removed:

- `hox.corem.common.Filter`
- `hox.corem.common.Sorter`

They were exclusively used by the Site Manager which has been removed in CMCC 12. Please switch to Unified API calls if you previously used these interfaces.

The following deprecated classes/interfaces have been removed:

- `RightsConstant`

The following classes/interfaces are now deprecated:

- `hox.corem.common.CalendarWrapper` - use `java.text.SimpleDateFormat` instead for formatting date and time.

[CMS-25426]

Updated to Spring Boot 3.4 and Spring Framework 6.2

The project has been updated to:

Spring Boot to 3.4.0 - see also Spring Boot 3. Release Notes

Spring Framework to 6.2.0 - see also Upgrading to Spring Framework 6.x

This update includes many further 3rd library updates, which are given in a separate release note. This release note is marked as a breaking change because it may require work to fix project code (blueprint customizations) to adjust to the following (or further) changes:

- URL Parsing
- Bean Overriding in Tests

Also, some plugins or extensions might break and have to be updated (e.g. CoreMedia Salesforce Marketing Cloud extension).

In many cases this update will not be breaking at all.

[CMS-25319]

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

Follow Section "CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset" [470] for upgrade information.

[CMS-24694]

Using java.time.Duration in ConfigurationProperties for human-readable Duration Specification

To be able to use human-readable duration configurations such as `1d` in favor of `86_400` given as seconds, a bunch of properties got transformed to hold `java.time.Duration` instead of `long` or `int` values denoting milliseconds, for example.

The following is a list of affected properties that benefit from this change:

- `caas`
  - `commerce.assetsearchservice.cache-seonds`
  - `search.cache`
    - `seconds`
    - `querylist-search-cache-for-seconds`
  - `strict-transport-security-header.max-age`
- `cae.sitemap.period-minutes`
- `cap.server`
  - `blob-channel-timeout`
  - `cache`
    - `group-cache-status-interval`
    - `resource-cache-status-interval`
    - `rights-cache-status-interval`
    - `user-chache-status-interval`
  - `kicense-reload-interval-millis`
  - `session-ping-interval`
  - `termination-timeout-seconds`
  - `unique-db-access-write-interval`
- `elastic.core.event-collection-ttl-sec`
- `publisher`
  - `connection-timeout-seconds`
  - `status-interval`
- `replicator.check-timeout`
- `repository.connect-retry-delay-seconds`

- `solr`
  - `connection-timeout`
  - `socket-timeout`
  - `zookeeper.client-timeout`
  - `zookeeper.connect-timeout`
- `sql`
  - `pool`
    - `check-timeout`
    - `open-timeout`
    - `reaper-interval`
    - `reaper-timeout`
    - `validator-interval`
    - `validator-timeout`
  - `store`
    - `collector`
      - `blob-preservation-period`
      - `delay`
      - `initial-delay`
      - `start-time`
    - `sgml-cache-interval-seconds`

- `workflow.server`
  - `session`
    - `reaper-timeout`
    - `timeout`
  - `termination-timeout-seconds`
  - `tx.idletimeout`
  - `uapi.session-pool.max-idle-time-ms`

The following unused properties were removed:

- `commerce.hub.data.endpoint.shutdown-timeout-millis`
- `workflow.server.sweep.delay`
- `workflow.uapi.connect-retry-delay-seconds` (use `repository.connect-retry-delay-seconds` instead)

Follow Section "Using java.time.Duration in ConfigurationProperties for human-readable Duration Specification" [471] for upgrade information.

[CMS-24149]

Removed legacy logging configuration in Workflow-Server

Legacy logging configuration in Workflow-Server has been replaced by standard slf4j class log facilities.

- All properties with the prefix `workflow.common.log` and `workflow.server.log` have been removed.
- Managed JMX attributes like `isLogClientActions` etc have been removed from `WorkflowServerManager`.
- Class `com.coremedia.workflow.common.Common` has been deleted.

[CMS-23946]

Removed deprecated class `hox.corem.Corem`

Deprecated class `hox.corem.Corem` was removed. Use Spring's external configuration instead. If `hox.corem.Corem` was used and the need to load a properties file programmatically remains, then the following code using Spring utility classes can be used as a replacement:

Follow Section "Removed deprecated class `hox.corem.Corem`" [473] for upgrade information.

[CMS-23765]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow Section "Starting XML Importer in a Docker Container" [473] for upgrade information.

[CMS-15884]

CoreMedia Content Application Engine

Avoid Auto-wiring on Spring Beans with Scope "Prototype"

A bug in the Spring framework may lead to problems with initialization of members annotated with `@Autowired` when it comes to beans of scope *prototype*. Content beans (or any Spring bean with scope *prototype*, for that matter) should thus not use autowired members. Auto-wiring on *prototype* beans in the Blueprint has been exchanged by explicit dependency injection.

Follow Section "Avoid Auto-wiring on Spring Beans with Scope "Prototype"" [473] for upgrade information.

[CMS-26015]

Query List with context condition sometimes contained context documents in the result

A query list with a context condition contained the context documents in the result, if the query list result types include pages. The query list result documents are now filtered, so that the context documents are not contained anymore. If the context documents should still be contained in the result, they can be added as fixed items.

[CMS-25611]

Blueprint CAE Class GenericIdToContentWrapperConverter Removed

Removed deprecated class `com.coremedia.blueprint.uapi.converter.GenericIdToContentWrapperConverter` without replacement.

[CMS-8668]

CoreMedia Studio Client

Switched to pnpm workspace protocol

Since pnpm 9 the usage of the workspace protocol is the default configuration in pnpm workspaces (see https://github.com/pnpm/pnpm/releases/tag/v9.0.0 - new default "false" for link-workspace-packages). While CMCC 2406.0.0 already uses pnpm 9 the releases did arrive too shortly after each other to fully adapt the studio-client workspace to this change. That's why we enabled linking of workspace packages again via an .npmrc.

Follow Section "Switched to pnpm workspace protocol" [475] for upgrade information.

[CMS-25787]

Removed usages of jangaroo-net and corresponding URI class

As the title says we removed the usage of jangaroo-net and its corresponding URI class in the studio-client to streamline the API and get rid of obsolete dependencies.

Follow Section "Removed usages of jangaroo-net and corresponding URI class" [476] for upgrade information.

[CMS-25748]

Moved preview related entities to cap-rest-client

Preview related entities have been moved from the packages "@coremedia/studio-client.client-core" and "@coremedia/studio-client.client-core-impl" to "@coremedia/studio-client.cap-rest-client" and "@coremedia/studio-client.cap-rest-client-impl".

Follow Section "Moved preview related entities to cap-rest-client" [476] for upgrade information.

[CMS-25374]

studio-client container is now read-only

The studio-client container is now read-only in the docker compose setup. The following volumes were added for the nginx and plugin setup:

- /usr/share/nginx
- /etc/nginx/conf.d
- /var/cache/nginx
- /var/run

[CMS-24803]

CoreMedia Studio Server

For Nested Synchronized Sites: Relaxed Permission Checks for Site Managers

With this release, the behavior to calculate if users are allowed to start a synchronization workflow has been slightly adapted for nested synchronized sites.

Follow Section "For Nested Synchronized Sites: Relaxed Permission Checks for Site Managers" [477] for upgrade information.

[CMS-25768]

Enhanced Error Messages For Not Being Able to Start Localization Workflows

We enhanced error messages for not being able to start a localization workflow (synchronization and/or translation) within the start localization workflow window in CoreMedia Studio.

Follow Section "Enhanced Error Messages For Not Being Able to Start Localization Workflows" [478] for upgrade information.

[CMS-24663]

CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

Follow Section "Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets" [478] for upgrade information.

[CMS-25260]

CoreMedia Frontend Workspace

Replaced node-sass with dart-sass

As node-sass has been deprecated we replaced the dependency with the new default implementation "dart-sass" which is actively maintained.

Follow Section "Replaced node-sass with dart-sass" [479] for upgrade information.

[CMS-18916]

CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

CoreMedia Headless Server

Only send Cache-Control Max-Age response headers for configured URLs

Since CM11, Headless can compute cache-control headers based on content valid from/to dates and a static configuration. Previously, the implementation computed the max-age value based on the content properties valid from/to and and the static configuration based on the request URI.

Follow Section "Only send Cache-Control Max-Age response headers for configured URLs" [480] for upgrade information.

[CMS-26021]

Miscellaneous

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

Follow Section "Changed UserProvider Setup Policy" [481] for upgrade information.

[CMS-25871]

Editorial Comments Database Change

Due to new deprecations in Hibernate and to follow best practices, we adjusted the database schema for editorial-comments.

Follow Section "Editorial Comments Database Change" [481] for upgrade information.

[CMS-25739]

Remove Groovy dependency management from blueprint parent POMs

The dependency management entries for the `org.codehaus.groovy:groovy-:2.4.21` in all `.blueprint-parent` POMs were unused and thus have been removed.

[CMS-25707]

CKEditor 5 Version Update

CKEditor 5 has been updated to 43.3.1. Find details below:

- **New Version:** 43.3.1

- **Reason:** Module structure changed: Using unified package ckeditor5.

- Migration:
  - If any imports like `"@ckeditor/ckeditor5-*"` are used, migration efforts are necessary, as only imports from "ckeditor5" are allowed
    - all other imports have to be replaced by imports from "ckeditor5"
    - or, if imports are not available, utilize workarounds like alias configurations for webpack
- Migration Hint:
  - Due to inconsistent package exports in some CKEditor5 plugins, you might be forced to create a patch and add a default export to the `package.json` of the plugin package. Please see the PNPM patch documentation to learn about how to patch packages or the CoreMedia CKEditor5 plugins workspace's `package.json` to see how the patch is applied.
- Release Notes: [Migrating to new installation methods | CKEditor5 documentation|https://ckeditor.com/docs/ckeditor5/43.3.1/updating/nim-migration/migration-to-new-installation-methods.html]

[CMS-25371]

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

Follow Section "Reverted behavioral change of BELOW folder queries in the QueryService" [482] for upgrade information.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

Removed deprecations for commons-cli

Usage of deprecated classes from dependency commons-cli:commons-cli habe been replaced. Now the DefaultParser is used for parsing input of Commandline tools. As the DefaultParser handles short and long options more strictly, existing command line calls, that worked before, may now result in errors. The command line tools should only be used as described in documentation.

[CMS-25098]

Upgraded Mockito to 5.13.0

Upgraded Mockito to 5.13.0. A small number of unit tests may have to be adjusted because mockito now checks for unused stubbings even stricter than before.

[CMS-25089]

Removed Management of Maven WAR Plugin

Configuration of the "maven-war-plugin" has been removed. If your project still builds WAR files, please manage the "maven-war-plugin" in your maven parent files.

[CMS-23945]

4.8.2 Changes and Improvements

CoreMedia Core

CAE Feeder Database Configuration Properties

The properties to configure the database for the *CAE Feeder* and the `cm resetcae feeder` command-line tool have been renamed. Old property names still work but are deprecated, and will be removed in a future release. It's not required to change your configuration now. However, if possible, we recommend to use the new property names.

- Use `caefeeder.datasource.url` instead of `jdbc.url` to configure the JDBC URL of the database.
- Use `caefeeder.datasource.username` instead of `jdbc.user` or `jdbc.login-user-name` to configure the username to log in to the database. If you were using different values for `jdbc.user` and `jdbc.login-user-name` before as was documented for PostgreSQL on Azure, then the login user name that includes the domain has to be used.
- Use `caefeeder.datasource.password` instead of `jdbc.password` for the password of the database user.

It is not necessary to set the property `jdbc.driver` with the class name of the database driver anymore, as it gets auto-detected from the JDBC URL.

Note that, this also affects the corresponding names of environment variables for these properties. For example, use `CAEFEEDER_DATASOURCE_URL` instead of `JDBC_URL`.

The *Deployment Manual* documents configuration properties for the the *CAE Feeder* in section "CoreMedia Properties Overview | Search Related Properties | CAE Feeder Properties".

[CMS-25855]

Third-Party Update: Apache Solr 9.7.0

Apache Solr has been updated to version 9.7.0. Alongside, a new coremedia/solr-base Docker image with tag 2.4-cm-9.7.0 was released. As part of this change, the following transitive dependencies of Apache Solr have been updated to match versions used by Solr:

- Apache Zookeeper 3.9.2
- Eclipse Jetty 10.0.22

See https://solr.apache.org/docs/9_7_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-7 for a list of changes in Solr. We have kept Solr schema configuration files at version 1.6 to avoid the need to re-index data.

[CMS-25831]

Updated Tomcat to mitigate CVE-2024-34750

Updated Tomcat to version 10.1.25 to mitigate CVE-2024-34750.

[CMS-25345]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.9
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.8
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.10
- CoreMedia Adapter for HCL Commerce → 3.0.8
- AssertJ → 3.26.3
- Apache HttpComponents Client 5 → 5.4.1
- Bouncy Castle Java → 1.79
- Byte Buddy → 1.15.10
- Commons CLI → 1.9.0
- Commons Codec → 1.17.1
- Commons Compress → 1.27.1

- Commons Lang → 3.17.0
- Commons Compress → 1.27.0
- Enterprise Security API → 2.6.0.0
- Error Prone → 2.36.0
- Google Analytics Data Client for Java → 0.65.0
- Google API Common for Java → 2.41.0
- Google API Extensions for Java → 2.58.0
- Google Auth Library for Java → 1.30.0
- Google HTTP Client Library for Java → 1.45.1
- GraphQL Java → 22.3
- gRPC-Java → 1.68.2
- Guava → 33.3.1-jre
- Jackson → 2.18.1
- Jib Maven Plugin → 3.4.4
- JUnit Jupiter → 5.11.3
- Logback → 1.5.12
- Micrometer → 1.14.1
- Netty → 4.1.115.Final
- Plugin Framework for Java → 3.12.1
- Protocol Buffers for Java → 4.29.0
- Reactor Project BOM → 2024.0.0
- SLF4J → 2.0.16
- SnakeYAML → 2.3
- Spring Boot → 3.4.0
- Spring Data BOM → 2024.1.0
- Spring Framework → 6.2.0
- Spring for GraphQL → 1.3.3
- Spring Security → 6.4.1
- Spring Webflow → 3.0.1
- Tomcat → 10.1.33

[CMS-25271]

Added a new configurable S3 Blob Store to increase the compatibility with alternative S3 storage solutions

Added a new configurable S3 Blob Store to increase the compatibility with alternative S3 storage solutions. The following configuration settings are available:

- `cap.server.blobstore.s3.force-path-style`: Force legacy path style URLs to pass the bucket
  Default, if not set, is `false`.

- `cap.server.blobstore.s3.encryption-mode`: Specify the server side encryption mode. Valid valu
  Default, if not set, is use the bucket's default encryption mode.

To enable the new S3 Blob Store the property `cap.server.blobstore.s3.en hanced` must be set to `true` in addition to supplying a bucket name in `cap.server.blobstore.s3.bucketname`. This explicit configuration is necessary because the default encryption mode is not backward compatible with the old blob store.

[CMS-22390]

CoreMedia Content Application Engine

Missing CORS configuration don't disable CORS protection anymore

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to CAE configuration properties.

[CMS-25375]

Add Subresource Integrity for CSS and JS links to CAE

Subresource Integrity (SRI) is a security feature that enables browsers to verify that resources they fetch are delivered without unexpected manipulation. The CAE supports SRI for JavaScript and CSS files.

All CSS and JS Freemarker templates in the blueprint are prepared and render the integrity-hash by default via a new function `cm.getIntegrityHash(self)`.

Example:

```
<#assign integrityHash="${cm.getIntegrityHash(self)}"/>
```

[CMS-6352]

CoreMedia Studio Client

Upload Dialog Post Upload Actions

An extension point for the upload dialog is now available.

Example

```
import { postUploadRegistry } from "@coremedia/studio-client.cap-base-models";

postUploadRegistry._.registerPostUploadAction({
  id: "an-action-id",
  priority: 100, // Priority to sort and execute the actions in order
  description: "descriptive text",
  infoTooltip: "tooltip", // Optional, if not set, no explanation icon will
 be rendered
  action: (content) => {
    // your custom action
  },
  isCheckedByDefault: true, // Optional, if not set, false
});
```

Furthermore, the upload dialog is now wider and contains two columns. One for selecting the files and post actions and one to display the selected files.

[CMS-25550]

Acrolinx Plugin Improvements

Added support for textareas, e.g. the HTML description field.

[CMS-25102]

Content Hub: Improved initial page load behavior for small page sizes

While using the Content Hub with small page sizes in the library lists a flickering after each loaded page was observable. The flickering has been fixed.

[CMS-22625]

CoreMedia Commerce Hub

Updated Commerce Client ClientProduct#getCategories

The commerce client now might return multiple Categories when calling Client-Product#getCategories.

[CMS-26990]

CoreMedia Headless Server

Update of springdoc to 2.6.0

The dependencies org.springdoc:springdoc-openapi-starter-webmvc-ui and org.springdoc:springdoc-openapi-starter-common have been updated to version 2.6.0.

[CMS-25725]

HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

The class LinkWriter of the richtext transformation was not able to receive AttributeTransformer by the transformation-yaml files. This is now possible.

In order to stay non-breaking, the necessary changes to add the existing **PassStyles** attribute transformer was **not** added to the default.yml transformation config.

Customer with this requirement may add this code snippet to their correspondent transformation yml files.

```
outputHandler:          !LinkWriter
 attributeTransformers:          - !PassStyles {styles: *link_styles}
```

Additionally, the referred `*link_styles` of course must be defined also (compare e.g. `*float_styles` of the ImgWriters default configuration for reference).

[CMS-25603]

Documentation for custom richtext output handler

The documentation how to add custom richtext output handler was extended and provided as example configuration in CaasConfig.java.

[CMS-23317]

Miscellaneous

The In-Memory Replacement For MongoDB-Based Services Has Been Deprecated

The In-Memory replacement for MongoDB-based services has been deprecated in favor of the new SQL replacement.

See section "SQL Replacement for MongoDB-Based Editorial Services" in the Blueprint Developer Manual.

[CMS-25904]

Deprecation of Google Analytics Connectors

The integration of Google Analytics Connectors in Studio is deprecated together with the persistence based on the Elastic Core (ModelService). This includes extensions es-alx/es-alx-google, es-alx/es-alx-retrieval-component and module bpbase-es-alx-common. These features are discontinued and will be replaced by an integrated solution.

Update: Functionality for website tracking will still be available.

[CMS-25708]

Recommended for New Installations: SQL Persistence for Editorial Services (Replacing MongoDB)

With CMCC v12.2412.0.0 we introduce support for an SQL based persistence in favor of the MongoDB based persistence for these features:

- My Edited Contents
- Workflow Lists (Running, Completed Workflows; technically referred as "Pending" and "Archived").
- Notifications
- Projects/To-Dos

Find details how to enable the SQL persistence layer in the CoreMedia Blueprint Developer Manual in section "Blueprint Workspace for Developers/Configuring the Workspace".

Recommended For New Installations: We recommend switching to the SQL based persistence for all new installations. This will spare upgrade steps for later releases.

Migration Support Pending: For existing installations, please stick to the MongoDB based persistence layer. Migration of existing data is not yet available but will be provided in subsequent releases.

[CMS-25669]

Updated Hibernate

Updated hibernate-core to 6.6.3-Final and update hypersistence-utils-hibernate-62 to hypersistence-utils-hibernate-63 version 3.8.3.

[CMS-24847]

4.8.3 Fixed Issues

CoreMedia Core

Fixed Content Feeder to Detect Cycles in CMS Catalog Categories

Fixed a bug in the Content Feeder to not run into a StackOverflowError, if there is a cycle in children links of CMCategory content items.

[CMS-25907]

Informative Exception for Non-Existing Markup Grammar

When a custom *XmlGrammar* is removed from the *Document Type Model* [`*-doc types.xml`] but documents exist in the repository which still reference the removed *XmlGrammar*, this is an inconsistent configuration. An attempt to publish such a document logs a *NullPointerException* in the *Content Management Server* and publication fails. With the change, now more detail information is logged in both *Content Management Server* and *Studio Server* if a publication is attempted.

[CMS-25773]

Additional Information on Blob Sharing Configuration Options

New blob sharing configuration options for Content Servers have been documented recently (*sql.store.generate-blob-ids* and *sql.store.read-only-media-store-names*). These are currently *only* to be used with integration of the *Image Transformation Service* and *Blob Service* and must not be used in projects otherwise. An additional note in the documentation makes this restriction clear now.

[CMS-25632]

Documentation for cap.server.maximum-startup-delay updated

The documentation for server property `cap.server.maximum-startup-delay` has been updated to reflect the configured default value. In addition the effect of this property on the server's startup has been detailed.

[CMS-25589]

Improved Logging for Server Import

Content Server tool *serverimport* did not report paths of problematic import files in all cases. Those cases have been improved to include the file's path now, too.

[CMS-25496]

Fixed Blob Sharing ID Inconsistency

If you use the RLS's blob sharing capability (`sql.store.generate-blob-ids=false`) in combination with URL blobs, blob ids may have been assigned inconsistently in the RLS repository. This is fixed now.

[CMS-25255]

Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder

Log level of some log messages in `FeedingReceiver` and `ContentTrigger` has been changed from `INFO` to `DEBUG` as they are logged very often.

[CMS-24727]

CoreMedia Content Application Engine

Adjustment of enable-sitemap-generation script

A superfluous line in the `enable-sitemap-generation` script was removed.

[CMS-25645]

Added apache httpcomponents5 runtime dependency

The `org.apache.httpcomponents.client5:httpclient5` dependency was added as a runtime dependency for `com.coremedia.blueprint:cae-sitemap`.

[CMS-25105]

Made TransformedBlobHandler a page handler

The Blueprint's{{TransformedBlobHandler}} extends `PageHandlerBase` now, and enhances the `ModelAndView` with the page model. This is necessary for the `ExposeCurrentNavigationInterceptor` to set the correct locale in the response.

[CMS-24695]

Adjusted *.asRichtextEmbed.ftl templates

With `CMS-19278` closing and opening `<p>` tags have been added to `CMTeasable.asRichtextEmbed.ftl` to avoid breaking HTML validity. Since embedded content can also be embedded inside headlines, tables, etc., this change actually broke HTML validity even more. This change also caused empty `<p>` tags surrounding embedded content, especially when embedded content was placed at the beginning of the richtext. Now these additional closing and re-opening `<p>` tags have been removed in all `*.asRichtextEmbed.ftl` templates.

[CMS-24147]

Changed generation of RSA keys via CAE application

The generation of RSA private and public keys via CAE application has changed. The keys are required for creating a signed token to identify anonymous visitors. Before, a new key pair (signCookie.publicKey and signCookie.privateKey) was created and logged,

if a value was missing or invalid. Now a new key pair can be generated via code or actuator, see documentation for details.

[CMS-22836]

CoreMedia Studio Client

Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.

There was an issue while dropping contents into the RichText editor. The editor's link balloon would close on the first drag attempt. This issue is now fixed.

[CMS-26944]

Added Protected Users

A list of protected users and groups can be defined in the application.properties from the Studio server now. The members are marked with a lock symbol and tooltiop and the deletion action is disabled then.

The CoreMedia Blueprint system users and groups are already part of these lists.

[CMS-25937]

Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded

We fixed a bug related to the WorkAreaTabBar where the layouting mechanism would run into a "maximum call stack size exceeded" error leading to a Studio freeze.

[CMS-25928]

Content Lists In Start Workflow Forms Are Now Colorful Again

The content lists in the start-workflow forms were no longer colorful since the Studio refresh for 2401. There are now, once again.

[CMS-25824]

Fixed Bug That Broke Keyboard Navigation Through Document Forms

We fixed a bug where opening the third tab of a content type (which is when tab reuse kicks in) broke the keyboard navigation through the document form (with the TAB key).

[CMS-25722]

Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client

We removed the deprecation notice for `siteIndicatorDepth` as part of the `SiteModel` in Studio Client.

As part of this change `cm validate-multisite` got extended by a new issue code:

```
MS-VALIDATION-4009 – DISCOURAGED_PROPERTY_VALUE
```

The new issue-code is reported at level `INFO` and is triggered, when using a `siteIndicatorDepth` different to `0` (zero).

Motivation

As part of `CMS-9521` we deprecated `siteIndicatorDepth` for 2001.1 and changed the default to `0` (zero) rather than `1` (one), as we got aware that many editors struggled with site indicators being hidden in the "depth" of a site – which in the end caused corrupted sites.

Nevertheless, migrating existing content from a depth 1 to depth 0 may raise considerable migration effort, as you have to move all site indicators up one level in one step (while stopping editorial work) and then republish all your sites.

Because of this, we decided to remove the deprecation notice, so that we will support site indicator depths different to `0` also on in the future. The default which ships with CoreMedia Blueprint will stick to the recommended default `0`, though.

[CMS-25647]

IntegerPropertyFields do not have an underline

Layout underline problem of IntegerPropertyField fixed.

[CMS-25613]

Fixing a related teaser overlay mechanism resolved this behavior

The behavior is resolved by fixing a related bug of the teaser overlay mechanism: The teaser overlay was not reset when the source text gets empty.

[CMS-25570]

Fix for JPEG Image Upload Failure

JPEG images which have density metadata outside allowed range (1..65535) could not be uploaded and showed an exception *javax.imageio.metadata.IIOInvalidTreeException: Xdensity attribute out of range* in Studio Server log. With the fix, the system now retries upload of the image without any metadata, effectively falling back to default values. Additional JPEG image metadata will be lost in that case.

[CMS-25403]

Added option to show home folder

A setting has been added to the user preference, that allows to show the "Home" folder as part of the library. The setting is limited to administrative users and allows to access the home folders of all users.

[CMS-25135]

Improved Acrolinx Plugin

- Added support for text area fields.
- Created updated release for 2310.

[CMS-25130]

Postprocess web manifests to customize the app menu entries

The section *Customizing Entries to the Apps Menu* in the Studio Developer manual has now a new subsection *Postprocessing App Manifests*, which describes how to use a build postprocess script to manipulate the web manifests in order to customize the app menu entries.

[CMS-21746]

Content Hub: Delete temporary files after import

The Content Hub uses temporary files while importing blobs. Those temporary files are now correctly deleted after the import.

[CMS-21492]

CoreMedia Studio Server

Pendo plugin v2.2.0

- Updated Pendo initialization process to use a dedicated endpoint for loading client configuration instead of a queued job. This avoids blocking studio-client startup during high load
- Implemented a 10-second timeout for Pendo client initialization via the dedicated endpoint, ensuring the plugin does not block studio-client startup for longer than this duration
- The default accountId has been updated to "cmcc-on-prem". This value can still be overridden through configuration

[CMS-25749]

Fixed thumbnails for augmented commerce items

If augmented commerce items (category, product) didn't have a picture url in the commerce system, the thumbnail icon couldn't displayed in CoreMedia Studio even if a picture asset has been assigned (a broken URL was rendered). This has been fixed.

[CMS-25737]

External Page validators enabled

Added two new validator beans for External Pages. External Pages must also be part of the navigation in order to function, hence the new validators check that they are not part of a cycle (recursion) and that they do not have multiple parent nodes. This has so far only been checked for Channels, Augmented Categories and Categories.

[CMS-25651]

Update of Pendo plugin to version v2.1.0

The Pendo plugin now ensures that content listener operations are no longer unnecessarily delayed. All backend tracking operations are moved to a separate thread.

[CMS-25553]

Fixed an issue with loading projects created before 2406.0.0

Projects created before 2406.0.0 did not store the "additionalProperties" property if it was empty. This lead to a NullPointerException when loading such projects which is now fixed.

[CMS-25467]

Fixed memory issue for blob loading

Fixed possible heap size exceptions when downloading blobs via the Studio REST service.

[CMS-25334]

Handled StackOverflowError While Resolving Default Picture (2nd Fix)

We fixed a bug where a StackOverflowError was thrown while resolving default pictures for cyclicly linked content items. This is the second fix for this problem as the first one was not sufficient.

[CMS-24935]

CoreMedia Elastic Social

Elastic Social Link Building Properties

Added option to the ElasticSocialLinkBuildingProperties so that the SimpleLinkFormatter must not use the current request in Studio.

[CMS-19645]

CoreMedia Commerce Hub

Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss

Under certain circumstances the commerce adapter client implementation may not have recovered from temporary connection losses to the commerce adapter. As a result of this bug, fragment requests could not derive the requested site from the given store ID and locale. The only solution was to restart the application that had run into this situation or to clear its cache via actuator or JMX. This bug has been fixed.

[CMS-25416]

CoreMedia Headless Server

Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer

Richtext transformation did not filter invalid, embedded content links. The problem was fixed invoking the filter predicates during richtext transformation.

The changes made new constructors in the public API necessary. For backward compatibility, the former constructors were kept in the code as legacy constructors but marked deprecated for removal. It is highly recommended not to use the deprecated constructor anymore and instead update existing custom code to use the new constructors. Also be aware, using the old constructors will work but will also keep the old, wrong behavior!

[CMS-26978]

Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception

When the HTML in a HTML fragment is left empty, a serverside exception was thrown by the `HtmlAdapter`. The adapter now returns null instead.

[CMS-25610]

Headless server can be run without commerce extension

There was a dependency for the headless server that could be satisfied without the commerce extension. However, this was not intentional and now the required component is also found without having the commerce extension enabled.

[CMS-25435]

HtmlFragment did not support data.sizeLong

A query for property `sizeLong` of `data` from a `CMHTML` document lead to an error, this is fixed now by adding the corresponding method ContentMarkupAdapter#get-SizeLong. The method ContentMarkupAdapter#getSize is deprecated analog to Content-BlobAdapter#getSize.

[CMS-25420]

Bugfix: Headless supports servlet context path for Persisted Queries over REST

With the introduction of Spring-GraphQL, a non-trivial servlet context path was not working for persisted queries over REST. This problem was fixed.

[CMS-25335]

Warning for cache configuration of Remote Links cache

The cache configuration for "remote-links" was erroneously configured with a specific weigher which lead to a warning. The cache is now configured without a specific weigher.

[CMS-24243]

CoreMedia Documentation

Documentation

Update Extensions Chapter

[CMS-25167]

Enhanced Documentation of Spring Boot ConfigurationProperties

We enhanced the documentation of Spring Boot `ConfigurationProperties` along with fixing some issues:

- Type information of a given property is now shorted for types from `java.base` module (such as `Map` rather than `java.util.Map`).
- Deprecated properties are now sorted along with the non-deprecated ones. This especially fixes an issue, that some deprecated properties never made it into the manuals yet.
- All properties within a table are now correctly sorted. Before, you may have seen "parts of the properties" to be not correctly sorted.
- Deprecation information is now enriched by the information as provided by `spring-configuration-metadata.json`, which is, if available, mentioning the replacement (as before), the version since when the property is deprecated and the reason for the deprecation, which may also contain more details on required upgrade steps.

[CMS-24871]

Miscellaneous

Fixed bug in AbsoluteUrlPrefixRuleProvider matching null

The `com.coremedia.blueprint.base.links.impl.AbsoluteUrlPrefixRuleProvider` now interprets the `?` as undefined value for matching `null` again.

[CMS-25962]

Improved Acrolinx Plugin

Fixes:

- Fixed issue that only property editors of the first tab of a document have been registered for Acrolinx. Note that property editors must have been rendered in order to by analyzed by Acrolinx. So select the document form tab first, the press "Check" inside the Acrolinx.
- Fixed selection issue with with textarea property editors.

[CMS-25676]

Normalized Extension Dependency Order

In recent releases, the dependencies of enabled Blueprint extensions were not correctly ordered as established by the extensions tool. This would lead to a diff when calling `extensions:sync` even without enabling or disabling any extensions. This has been corrected.

To minimize merge conflicts, you should invoke the extensions tool to normalize the dependency order in your customized Blueprint workspace, too. To that end, in your workspace root directory, simply call

```
mvn   -f   workspace-configuration/extensions   exten
sions:sync
```

and commit the resulting diff before merging the new CoreMedia Blueprint version.

[CMS-25563]

Fix ParameterAppendingLinkTransformer for opaque URLs

ParameterAppendingLinkTransformer does not modify opaque URIs like "mailto:mail@www.example.com" anymore.

[CMS-25421]

Consolidated And Updated Oracle Driver Dependencies

We now consistently use `com.oracle.database.jdbc:ojdbc11:23.4.0.24.05` as Oracle database driver. The dependency is managed in `com.coremedia.cms:common-thirdparty-bom` and added as dependency in `com.coremedia.blueprint:database-drivers`.

Previously we had different flavors and versions of the ojdbc dependency in different poms and in our documentation.

`common-thirdparty-bom` previously managed `com.oracle.database.jdbc:ojdbc8:12.2.0.1` which was also included in `database-drivers`. Additionally, `editorial-comments-data-oracle` which is used in studio-server also added a runtime dependency on `com.oracle.ojdbc:ojdbc8:19.3.0.0`

[CMS-25158]

Fixed Bug in Blueprint Link Building

Due to a bug, the Blueprint CAE built dead links to CMChannel (aka Page) contents which are not linked into the navigation hierarchy. In particular, such links occured in sitemaps. This has been fixed now, and such channels cannot be linked to any longer.

[CMS-24884]

Update Documentation on CAE Spring Security

The CAE Developer Manual - Spring Security section now contains a paragraph about User Authentication configuration and hints towards necessary actions in case the Elastic Social extension was disabled.

[CMS-24169]

Fixed Cache Size Error

An error in the UAPI cache size calculation could lead to Out-Of-Memory errors in CMS clients. This has been fixed now.

[CMS-24040]

4.9 Release 2406.2.1

The release contains:

- Breaking changes: 1
- Changes and improvements: 21
- Bugfixes: 49

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.

Release date: 2025-09-08

Breaking Changes

- CMS-28213: Content hub adapters are no longer delivered as bundled plugins

Changes and Improvements

- CMS-28431: Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies
- CMS-28161: Third-Party Update: AWS SDK for Java
- CMS-28109: Updated Project Dependencies
- CMS-28020: Reduced category loading in fragment calls
- CMS-28158: Deprecation of Generic Analytics Connectors
- CMS-28032: Configurable Cache Duration for Outdated Transformed Blobs
- CMS-27839: Third-Party Update: commons-io 2.19.0
- CMS-23359: LdapUserProvider Connection Improvements

Bugfixes

- CMS-28288: Fixed Parameter Resolution of Dynamic Includes
- CMS-28160: Fixed JMX issue with CAE startup
- CMS-27938: Default configuration of cache-control headers fixed
- CMS-16789: Removed duplicate of `userVariant`
- CMS-28259: Fixed Miscellaneous Aria Roles and Labels
- CMS-28258: Repository Tree Accessibility

- CMS-28257: Fixed Widget Button Tooltips
- CMS-28252: Fixed HTML "lang" Attribute
- CMS-28250: Tooltips are now activated on Focus
- CMS-28243: Welcome Widget is now accessible
- CMS-28239: Fixed Library Column Accessibility
- CMS-28238: Fixed Library Context Menu Accessibility
- CMS-28133: Added Missing QuickCreate Parameters
- CMS-26035: Fixed Miscellaneous Struct Editor Issues
- CMS-25975: Workflows in ControlRoom inbox are now correctly displayed
- CMS-28336: Fixed Search by Path in Studio Folder Chooser
- CMS-28337: Headless responds to HTTP-Head over REST now as in CM11
- CMS-28203: Richtext headings are resolved with inline handlers
- CMS-28156: Update to latest minor version of Spring-GraphQL and GraphiQL 5.0
- CMS-28208: Fixed ContentHub Issue with duplicate beans
- CMS-28100: Category parameter is taken for augmented products
- CMS-27941: cm sql Fixed
- CMS-18211: Changed the logic for the metric com.coremedia.Store.Connected

4.9.1 Breaking Changes

Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

4.9.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies

Apache Tika has been updated to version 3.2.2. As part of this change, transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.14.1
- Apache Commons IO 2.20.0
- Apache Commons Lang3 3.18.0
- Apache Mime4J 0.8.13
- Apache PDFBox 3.0.5
- Apache Tika 3.2.2
- ASM 9.8
- jsoup 1.21.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-28431]

Third-Party Update: AWS SDK for Java

The AWS SDK for Java has been updated to version 2.28.24 (see Changelog) to prevent security issue CVE-2025-52999 of its transitive jackson-core dependency.

[CMS-28161]

Updated Project Dependencies

Updated several dependency and plugin versions:

- Angus Mail → 2.0.4
- AssertJ → 3.27.4
- Byte Buddy → 1.17.7
- Commons CLI → 1.10.0
- Commons Codec → 1.19.0

- Commons Compress → 1.28.0
- CoreMedia Adapter for HCL Commerce → 3.0.14
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.16
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.14
- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.16
- Enterprise Security API → 2.7.0.0
- Error Prone → 2.41.0
- Google Analytics Data Client for Java → 0.83.0
- Google API Common for Java → 2.53.0
- Google API Extensions for Java → 2.70.0
- Google Auth Library for Java → 1.38.0
- Google HTTP Client Library for Java → 1.47.1
- GraphQL Java → 24.2
- GraphQL Java DataLoader → 5.0.2
- gRPC-Java → 1.75.0
- Hibernate ORM → 6.6.27.Final
- Hibernate Validator → 8.0.3.Final
- Jackson → 2.19.2
- Jib Maven Plugin → 3.4.6
- jsoup → 1.21.2
- JUnit Jupiter → 5.13.4
- Micrometer → 1.15.2
- Mockito → 5.19.0
- Netty → 4.1.124.Final
- Protocol Buffers for Java → 4.32.0
- Reactor Project BOM → 2024.0.8
- Spring Boot → 3.5.5
- Spring Data BOM → 2025.0.3
- Spring for GraphQL → 1.4.1
- Spring Framework → 6.2.10
- Spring Security → 6.5.3
- Tomcat → 10.1.44

[CMS-28109]

CoreMedia Content Application Engine

Reduced category loading in fragment calls

There is a new configuration flag in CAE `cae.livecontext.categories.lazy-loading:false` that can be used to enable a "lazy category loading mode" in the CAE. If set to "true" no categories will be loaded during a fragment call (at least for pure augmentation). This also prevents the validation of the entire category

path. This mode certainly results in less load for a CAE (when cache misses are expected), but you should be sure that the categories can be loaded during request processing.

[CMS-28020]

Miscellaneous

Deprecation of Generic Analytics Connectors

The integration of Analytics Connectors based on Elastic Core is deprecated, i.e. extension `es-alx` and parts of extension `alx`, including the analytics doctypes. Functionality for website tracking will still be available.

Deprecated features:

- Top N Lists including
  - Analytics doctypes: `CMALXBaseList (abstract)`, `CMALXPageList` and `CMALXEventList`
  - Contentbean implementations
  - Studio configuration forms
- Retrieval tasks and persistence based on the `ModelService` (module `bpbase-es-alx-common`)
- Studio: generic configuration, performance widgets, deep links

These features are discontinued and will be replaced by an integrated solution.

[CMS-28158]

Configurable Cache Duration for Outdated Transformed Blobs

Added a new configuration property `delivery.outdated-transformed-blob-cache-duration` to control how long outdated or yet unknown transformed blobs are to be cached in a multi-CAE scenario (`cae.single-node=false`). Before this fix, CAE send a cache-control header with `max-age` of 0 seconds. This value is now configurable. Consider that a yet unknown cache should not be cached for long because the CDN should ideally cache the correct transformed blob for a given URL. The cases to cover are that (1) either a more up-to-date CAE generated the link and the CAE answering the request for the transformed blob does not yet know about the updated blob and (2) a client has stored a very old version of a transformed blob URL for which the blob data is no longer cached by the CDN. A CAE cannot distinguish between these two cases but serves the currently (either outdated or newer) known transformed blob. The new configuration property allows projects to optimize for scenario (1) or (2) by setting a (1) short duration or (2) a long duration.

Configuration example:

```
# Set cache duration to 1 hour
delivery.outdated-transformed-blob-cache-duration=1h
```

Upgrade Information

[CMS-28032]

Third-Party Update: commons-io 2.19.0

Apache Commons IO has been updated to 2.19.0.

[CMS-27839]

LdapUserProvider Connection Improvements

LDAP roundtrips ere executed with a timeout now, in order to avoid blocked threads in case of certain problems. The timeout [`ldap.timeout`] as well as the maximum number of connections [`ldap.max-connections`] is configurable now. However, the default values are supposed to be suitable for most projects, and there should be no need to change them unless concrete problems occur. There is another new configuration property `ldap.referral-throw-handling` to control the details of referral handling. It is still experimental, because the details concerning referrals depend on the particular setup of the LDAP servers, and this has not yet been tested exhaustively. But if you encounter problems with the default behaviour, you should give it a try.

See `com.coremedia.ldap.LdapUserProviderConfigurationProperties` for details.

[CMS-23359]

4.9.3 Fixed Issues

CoreMedia Content Application Engine

Fixed Parameter Resolution of Dynamic Includes

When using dynamic includes on the Preview CAE the parameters [required to serve personalized content] were lost. This bug has been fixed so that parameter resolution for dynamic includes functions properly on Preview CAE.

[CMS-28288]

Fixed JMX issue with CAE startup

In rare cases the CAE didn't start up the application context due to an issue with anonymous LinkFormatter instantiation in JMX configuration.

[CMS-28160]

Default configuration of cache-control headers fixed

In Live CAE the default configuration of cache-control headers for css and javascript URLs contained an incorrect pattern. This led to exceptions in the log and the values could not be read.

[CMS-27938]

Removed duplicate of `userVariant`

The query parameter `userVariant` was added twice in a redirect (e.g. the preview call in studio preview). This has been cleaned up and the `userVariant` is now only added once.

[CMS-16789]

CoreMedia Studio Client

Fixed Miscellaneous Aria Roles and Labels

- Improved the aria label for the type icon column by adding role "img" and an aria label.
- Added aria labels for the image editors rotation actions.
- Fixed preview options toolbar aria label.
- Fixed toolbar overflow button label.
- Changed the header toolbar aria label from Kopf to Site Auswahl, Guides, Info-Center und Benutzermenü.
- Added aria role "button" and aria label for the close button of work area tabs.

[CMS-28259]

Repository Tree Accessibility

The aria role of repository tree items has been changed to "treeitem".

[CMS-28258]

Fixed Widget Button Tooltips

The "Edit" button for dashboard widget has been fixed so that the tooltip adepts depending on its mode. This includes the aria label too.

[CMS-28257]

Fixed HTML "lang" Attribute

The "lang" attribute is now set to the "html" element instead of the "body" element where it belongs according to w3c standards.

[CMS-28252]

Tooltips are now activated on Focus

For better accessibility, the tooltips are now not only shown on a mouse hover but also on keyboard focus.

[CMS-28250]

Welcome Widget is now accessible

The links in the welcome widget on Dashboard can be navigated to via keyboard and activated pressing the enter button.

[CMS-28243]

Fixed Library Column Accessibility

The accessibility for columns inside the library (and other grid components) has been fixed: If a column is sortable, the sort order can be toggled via key navigation (Enter key).

[CMS-28239]

Fixed Library Context Menu Accessibility

The accessibility for the context menu in the library has been fixed. The context menu can now be opened via the keyboard shortcut CTRL+Enter.

[CMS-28238]

Added Missing QuickCreate Parameters

Added missing parameters from the *QuickCreateAction* to the the *QuickCreateLinkList-Menu* so that all configuration possibilities are available there too.

[CMS-28133]

Fixed Miscellaneous Struct Editor Issues

- Fixed issue that the markup editor for did not show values or did show values for other markup fields or did not save these.
- Fixed errors that happened for markup lists.
- Fixed the error that when a property editor dialog was opened for a struct property (e.g. markup or date fields) and the node was cut or deleted, the dialog remained open.

[CMS-26035]

Workflows in ControlRoom inbox are now correctly displayed

When several workflow are created at the same time (e.g., a translation is triggered against multiple target languages), then there are several workflows with the same creation date. When completing one of them it could remain in the inbox even after it is completed. Now the malbehavior is fixed.

[CMS-25975]

CoreMedia Studio Server

Fixed Search by Path in Studio Folder Chooser

Fixed a bug that made it impossible to search by path for folders in the folder chooser, for example to find the target folder in the create new document dialog.

[CMS-28336]

CoreMedia Headless Server

Headless responds to HTTP-Head over REST now as in CM11

In CMCC 11 (2310), Headless Server responded to HEAD requests over the REST-API with 200 and 404 as long as JSLT was enabled (which is the default).

With the introduction of Spring-GraphQL, the HTTP transport layer was redefined by Spring. As a consequence, its basic implementation was only able to respond to POST requests. The ability to respond to GET requests was add by CoreMedia but support for HEAD requests was omitted, as such requests to a GraphQL endpoint are neither covered by the GraphQL-over-HTTP spec, nor does it make sense to respond to a HEAD request on a plain GraphQL endpoint.

Nevertheless, supporting HEAD requests makes sense for the REST-API and in CMCC 11 (2310), Headless Server responded with 200 or 404 to a HEAD request as long as JSLT was enabled. Note that the response was always 200, when JSLT was disabled.

This changed behavior was now reestablished for CMCC 12.

Also note that HEAD requests to the REST-API are not recommended and you should strive for solutions avoiding HEAD requests!

Upgrade Information

(CMS-28337)

Richtext headings are resolved with inline handlers

Before, links to content in richtext headlines were not resolved via GraphQL in fields `text`, `textReferencedContent` and `textAsTree`. The content links are resolved correctly now together with other inline elements, by adding the inline handlers to the headline context.

(CMS-28203)

Update to latest minor version of Spring-GraphQL and GraphiQL 5.0

Due to an update in the publishing policy of GraphiQL, spring-graphql library could not deliver graphiql correctly. This was fixed by updating Spring-GraphlQL to the corresponding latest minor version:

CMS 2506.0: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 esm.sh (was 4.0.0 via esm.sh) CMS 2412.0: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh (was via unpkg.com) CMS 2406.2: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 via esm.sh

[was 4.0.0 via esm.sh] CMS 2416.1: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh [was via unpkg.com]

[CMS-28156]

Miscellaneous

Fixed ContentHub Issue with duplicate beans

An issue has been fixed regarding the `BaseFileSystemConfiguration` in the `ContentHubAdapter`. You do not need to import the `BaseFileSystemConfiguration` class anymore, as the `ContentHubMimeTypeService` bean is now available automatically if your Adapter lives in the Blueprint. If it lives in a Plugin, you can access `ContentHubMimeTypeService` via the new `ContentHubBeansForPluginsConfiguration`.

[CMS-28208]

Category parameter is taken for augmented products

If you have an augmented product and set some alternative placements and if the product is contained in multiple categories [e.g. beside the primary category it is also part of the e.g. "newarrivals-mens" category]. If the PDP fragment is called with such an additional category parameter [not the primary category id] it is taken for augmentation [and not the primary category of the product].

[CMS-28100]

cm sql Fixed

`cm sql` failed to start with a `NullPointerException` when trying to build the UI.

This has been fixed.

[CMS-27941]

Changed the logic for the metric com.coremedia.Store.Connected

Changed the logic for the metric `com.coremedia.Store.Connected` to monitor the open connections to the database. This ensures that the state changes when the last connection is closed due to an error instead of waiting for a future connection request to encounter an error. Requires the number of minumum open connections

to be set to at least 1 [`sql.pool.minConnections`]. This is enforced by the code - values below 1 will be ignored and the minumum will be set to 1. As the server must open at least one connection to work, this won't change its operation. Relies on the connection validator to discover broken connections. If a more timely detection of connection issues is required, reduce the values of the properties `sql.pool.validatorInterval` and `sql.pool.validatorTimeout`.

[CMS-18211]

4.10 Release 2406.2.0

The release contains:

- Breaking changes: 7
- Changes and improvements: 19
- Bugfixes: 16

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.

Release date: 2025-07-04

Breaking Changes

- CMS-27056: Fix Studio Search Filter "Last Edited By"
- CMS-28098: Configured limit for part count in multipart/form-data requests
- CMS-27076: CKEditor5 updated to version 45.2.0
- CMS-22940: Improve Internal Studio Protocol for Better Performance
- CMS-27164: Replaced node-sass with dart-sass
- CMS-27749: Corba ORB JMX MBeans Removed to Save Heap Memory
- CMS-27313: Third-Party Update: Spring Boot and Related Dependencies

Changes and Improvements

- CMS-28048: Updated postgresql driver
- CMS-27955: Third-Party Update: OpenCSV
- CMS-27951: Deprecation: Workflow JAR Upload
- CMS-27868: Fix Content Feeder Background Issue Feeding
- CMS-27859: Updated Maven dependencies and plugins
- CMS-27400: Deprecation: Public API for Custom Proactive Engine Application
- CMS-25951: Deprecation: Java API Package com.coremedia.cap.server.search
- CMS-27630: Third-Party Update: pnpm to version 10
- CMS-27162: Third-Party Update: Upgraded Node.js to 22 LTS

Bugfixes

- CMS-27896: Fix Workflow Action Attribute ignoreErrors
- CMS-27570: Workflow Action Conditional Execution
- CMS-28021: Mega menus should now render much faster in CAE (Salesforce and Hybris)
- CMS-28023: Fixed Preview Date Selector Dialog
- CMS-27931: Fixed Regression: Non-trivial server context path for REST request was ignored
- CMS-27811: Exception handling by DataFetcherExceptionResolverAdapter
- CMS-27975: Application SBOMs are optionally added to the Spring-Boot actuator
- CMS-27815: Fixed UrlValidator

4.10.1 Breaking Changes

CoreMedia Core

Fix Studio Search Filter "Last Edited By"

Fixed a bug in the Studio Search Filter "Last Edited By", that caused a content item to not show up as edited by the current user, if its latest modification was a publication that destroyed old intermediate versions. The fix will become effective for newly indexed content items, or after changes were made to content items. The Solr field 'editor' was changed as part of the fix.

Follow Section "Fix Studio Search Filter "Last Edited By"" [485] for upgrade information.

[CMS-27056]

CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Follow Section "Configured limit for part count in multipart/form-data requests" [486] for upgrade information.

[CMS-28098]

CoreMedia Studio Client

CKEditor5 updated to version 45.2.0

CKEditor5 has been updated to version 45.2.0 and comes with updated versions of CoreMedia's CKEditor5 plugins. The update includes 2 major changes:

- Icons are no longer imported as a single `icons` class, but need to be imported separately.
- The link balloon of the CKEditor's link plugin has been re-implemented completely and now consists of a `ToolbarView` instead of the `LinkActionsView`. CoreMedia's link plugin extension has also been updated to still be compatible.

Follow Section "CKEditor5 updated to version 45.2.0" [486] for upgrade information.

[CMS-27076]

Improve Internal Studio Protocol for Better Performance

The internal protocol between Studio Client and Studio Server has been improved to provide better performance for getting the repository path (and thus the site) of a content item. Among other scenarios, this reduces the time to open the Locale Switcher of a document with many localized variants substantially, even with a cold cache. Instead of one request for each transitive parent folder, now, the whole path is retrieved with one request. This protocol change is compatible with the public Studio Client API contract. However, in rare cases, where code relies on certain `Content` `RemoteBean`s to already be loaded as a side-effect of a prior `getPath()` operation, the changed behavior can lead to errors. Please review and test your Studio Client customizations thoroughly.

[CMS-22940]

CoreMedia Frontend Workspace

Replaced node-sass with dart-sass

As node-sass has been deprecated we replaced the dependency with the new default implementation "dart-sass" which is actively maintained.

Follow Section "Replaced node-sass with dart-sass" [488] for upgrade information.

[CMS-27164]

Miscellaneous

Corba ORB JMX MBeans Removed to Save Heap Memory

JMX MBeans under prefix "com.sun.corba" have been removed to work around a bug in the JMX support of the ORB, which consumes a large amount of heap memory for each application: https://github.com/eclipse-ee4j/orb/issues/5 . To this end, the Maven dependency `org.glassfish.gmbal:gmbal` has been replaced with `org.glassfish.gmbal:gmbal-api-only`.

Follow Section "Corba ORB JMX MBeans Removed to Save Heap Memory" [489] for upgrade information.

[CMS-27749]

Third-Party Update: Spring Boot and Related Dependencies

Spring Boot and Spring Security as well as several other dependencies have been updated.

- Spring Boot → 3.5.0
- Spring Security → 6.5.0

For details on the changes in Spring Boot 3.5 release, see https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-3.5.0-Release-Notes. For other updated dependencies, view the release notes of "Updated Maven Dependencies and Plugins".

Follow Section "Third-Party Update: Spring Boot and Related Dependencies" [489] for upgrade information.

[CMS-27313]

4.10.2 Changes and Improvements

CoreMedia Core

Updated postgresql driver

Updated `org.postgresql:postgresql` to `42.7.7`

[CMS-28048]

Third-Party Update: OpenCSV

OpenCSV has been updated to version 5.11.1. This includes an update of transitive dependency commons-beanutils to version 1.11.0 and avoids potential security issue CVE-2025-48734.

[CMS-27955]

Deprecation: Workflow JAR Upload

The feature to upload a JAR file of classes with a workflow process definition has been deprecated and should not be used anymore. This avoids potential problems with storing executable code in the database. With different versions of custom code in the database, it can become hard to track which code is actually used in production, and to detect and fix security issues in all variants of uploaded custom code. Furthermore, in case attackers have gained write access to the database, they could use this feature to execute code in the *Workflow Server*. If unused, it is therefore recommended to disable the usage of uploaded classes by setting the newly introduced configuration property `workflow.server.use-uploaded-jar` to `false`. Required classes should be added to the *Workflow Server* classpath instead.

The *Workflow Server* does not automatically remove previously uploaded JAR files from the database, if `workflow.server.use-uploaded-jar` is set to `false`. In case of unexpected problems with workflows that still need previously uploaded JAR files, it is possible to enable JAR file usage again by setting the property back to `true`.

As part of this change, the corresponding options `j` and `-jar` of the `cm upload` tool have been deprecated.

The following Java API methods have been deprecated as well, and should not be used anymore:

- `com.coremedia.cap.workflow.WorkflowRepository#create ProcessDefinition(byte[], byte[])`
- `com.coremedia.cap.workflow.ProcessDefinition#getPro cessClasses()`
- `com.coremedia.workflow.WfObjectRepository#createPro cess(byte[], byte[])`
- `com.coremedia.workflow.WfProcess#getProcessClasses()`

[CMS-27951]

Fix Content Feeder Background Issue Feeding

Fixed a bug in the Content Feeder that content issues were not indexed in the background.

[CMS-27868]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.14
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.13
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.15
- CoreMedia Adapter for HCL Commerce → 3.0.13
- Apache HttpComponents Client 5 → 5.5
- Awaitility → 4.3.0
- Bouncy Castle Java → 1.81
- Caffeine → 3.2.0
- Commons Exec → 1.5.0
- Enterprise Security API → 2.6.2.0
- Google Analytics Data Client for Java → 0.75.0
- Google API Common for Java → 2.50.0
- Google API Extensions for Java → 2.67.0
- Google Auth Library for Java → 1.37.0
- GraphQL Java → 24.1
- GraphQL Java DataLoader → 5.0.0
- gRPC-Java → 1.73.0
- Hibernate ORM → 6.6.17.Final
- JSON-Java → 20250517
- JUnit Jupiter → 5.13.1
- Micrometer → 1.15.1
- Mockito → 5.18.0
- Netty → 4.1.122.Final
- Protocol Buffers for Java → 4.31.1
- Reactor Project BOM → 2024.0.7
- Spring Boot → 3.5.3
- Spring Data BOM → 2025.0.0
- Spring for GraphQL → 1.4.0
- Spring Security → 6.5.0
- Spring Framework → 6.2.8
- Tomcat → 10.1.42

Preceding release for the documented updates is 2406.1.3.

[CMS-27859]

Deprecation: Public API for Custom Proactive Engine Application

Custom Proactive Engine / Persistent Cache applications will not be supported anymore in the next major version CMCC 13 (2512.0.0). Proactive Engine and Persistent Cache are internal technical components of the *CAE Feeder*. They should not be used in custom applications anymore and may not work as before in future release CMCC 13. Consequently, parts of the public Java API have been deprecated.

The following classes and interfaces have been deprecated now for removal in CMCC 13. There is no known use case to keep that API for customization in the CAE Feeder.

- `com.coremedia.cap.persistentcache.InvalidationEvent`
- `com.coremedia.cap.persistentcache.InvalidationListener`
- `com.coremedia.cap.persistentcache.ProcessingCallback`
- `com.coremedia.cap.persistentcache.ProcessingCallbackBase`
- `com.coremedia.cap.persistentcache.example.HelloPersistentCacheKey`
- `com.coremedia.cap.persistentcache.example.HelloPersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.BaseReceiver`
- `com.coremedia.cap.persistentcache.proactive.IllegalStateTransitionException`
- `com.coremedia.cap.persistentcache.proactive.KeyManager`
- `com.coremedia.cap.persistentcache.proactive.KeyPrefixFilteringReceiver`
- `com.coremedia.cap.persistentcache.proactive.Receiver`
- `com.coremedia.cap.persistentcache.proactive.TriggerBase`
- `com.coremedia.cap.persistentcache.proactive.content.ContentAwarePersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.content.ContentBeanEvaluator`
- `com.coremedia.cap.persistentcache.proactive.content.ContentEvaluator`
- `com.coremedia.cap.persistentcache.proactive.content.ContentPersistentCacheKeyFactory`
- `com.coremedia.cap.persistentcache.proactive.content.ContentTrigger`

- `com.coremedia.cap.persistentcache.proactive.ex ample.LoggingReceiver`
- `com.coremedia.cap.persistentcache.proactive.ex ample.PathContentEvaluator`

The following interface of package `com.coremedia.cap.persistent cache.proactive.content` has been deprecated with replacement:

- `ContentTrigger.ContentCollection` - use `ContentSelection` instead

The following methods of package `com.coremedia.cap.persistent cache.proactive.content` have been deprecated with replacement:

- `ContentSelector.start(ContentTrigger.ContentCollec tion)` - use method `start(ContentSelection)` instead.
- `PathAndTypeContentSelector.start(ContentTrigger.Con tentCollection)` - use method `start(ContentSelection)` instead.

The methods `startEvaluators` and `stopEvaluators` of class `com.coremedia.cap.persistentcache.proactive.ProactiveEn gineManagement` have been deprecated. JMX operations of MBean `Proact iveEngine` with the same name should not be used anymore. They don't have any effect for the *CAE Feeder*.

[CMS-27400]

Deprecation: Java API Package com.coremedia.cap.server.search

Interfaces and classes of package `com.coremedia.cap.server.search` have been deprecated in the Java API and should not be used anymore. This includes the *Content Server* `SearchService` interface and some related classes that are listed below. They were introduced long time ago for integrating alternative search engines for the *Site Manager*. The use case does not exist anymore, because the *Site Manager* has been removed from the product with *CMCC 12*. Internally, this interface is still used in the *Content Server* to implement search functionality for the *Unified API*. However, the now deprecated interface should not be used anymore to customize the implementation of search functionality. In most cases, applications should rather communicate directly with a search engine anyway, and not use the less flexible and less performant *Unified API* SearchService abstraction.

Note, that there are multiple `SearchService` interfaces in different packages of the Java API. This deprecation only affects package `com.coremedia.cap.serv er.search`.

The following classes and interfaces have been deprecated:

- `com.coremedia.cap.server.search.SearchContext`
- `com.coremedia.cap.server.search.SearchException`
- `com.coremedia.cap.server.search.SearchService`
- `com.coremedia.cap.server.search.SearchServiceResult`

[CMS-25951]

CoreMedia Studio Client

Third-Party Update: pnpm to version 10

All packages in frontend workspace and in studio-client require at least pnpm 10.11.0. Please take note of the list of changes here https://github.com/pnpm/pnpm/re-leases/tag/v10.0.0

In order to upgrade pnpm to 10.x use the following command:

```
npm install -g pnpm@10
```

[CMS-27630]

Third-Party Update: Upgraded Node.js to 22 LTS

Since October 2024 the new LTS of Node.js is v22. All workspaces were adjusted accordingly.

[CMS-27162]

4.10.3 Fixed Issues

CoreMedia Core

Fix Workflow Action Attribute ignoreErrors

Fixed a bug in the handling of the attribute `ignoreErrors=true` in workflow definitions for actions `ApproveResource`, `PublishResources`, and others. Previously, client action timeout errors were never ignored and always caused task escalation. This has been fixed, so that timeouts don't cause an escalated task anymore if `ignoreErrors` is set to `true`.

[CMS-27896]

Workflow Action Conditional Execution

Fixed the bug, that `<Condition>` elements could not be used in workflow definitions for conditional execution of custom workflow actions.

[CMS-27570]

CoreMedia Content Application Engine

Mega menus should now render much faster in CAE (Salesforce and Hybris)

When building links to commerce categories we avoid the loading of the commerce items, at least for Salesforce and Hybris. Unfortunately, it is still necessary for HCL, because links can only be build using technical IDs which must be requested from the commerce system. It should speed up loading of mega menus considerably, at least if a lot of Commerce items are not in the CAE cache.

[CMS-28021]

CoreMedia Studio Client

Fixed Preview Date Selector Dialog

Fixed the width of the preview date selector dialog so that the reset button is also visible when the German localization is selected.

[CMS-28023]

CoreMedia Headless Server

Fixed Regression: Non-trivial server context path for REST request was ignored

A non-trivial server context path, e.g. '/customContextPrefix' was not working anymore with REST requests. That regression was now fixed.

[CMS-27931]

Exception handling by DataFetcherExceptionResolverAdapter

To resolve exceptions to GraphQL errors, a `DataFetcherExceptionResolverAdapter` has been added which resolves implementations of `RuntimeException` to `ErrorType.DataFetchingError`. Specific exceptions and corresponding `ErrorTypes` can be configured via configuration property `caas.exceptionErrorMap`. Exceptions are resolved via configuration for the most specific super class.

[CMS-27811]

Miscellaneous

Application SBOMs are optionally added to the Spring-Boot actuator

Application SBOMs are now optionally added to the Spring-Boot actuator. This prevents an error where the application would not start if the SBOM was missing, e.g. when building was disabled by setting the 'skipSboms=true' switch for the Maven build.

[CMS-27975]

Fixed UrlValidator

The UrlValidator complained about URLs containing "%" characters. URL validation has been fixed to properly deal with URL encoding.

[CMS-27815]

4.11 Release 2406.1.4

The release contains:

- Breaking changes: 1
- Changes and improvements: 28
- Bugfixes: 35

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.

Release date: 2025-09-08

Breaking Changes

- CMS-28098: Configured limit for part count in multipart/form-data requests

Changes and Improvements

- CMS-28431: Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies
- CMS-28161: Third-Party Update: AWS SDK for Java
- CMS-28048: Updated postgresql driver
- CMS-27955: Third-Party Update: OpenCSV
- CMS-27868: Fix Content Feeder Background Issue Feeding
- CMS-27837: Updated Project Dependencies
- CMS-28020: Reduced category loading in fragment calls
- CMS-28032: Configurable Cache Duration for Outdated Transformed Blobs
- CMS-27839: Third-Party Update: commons-io 2.19.0

Bugfixes

- CMS-27896: Fix Workflow Action Attribute ignoreErrors
- CMS-28288: Fixed Parameter Resolution of Dynamic Includes
- CMS-28160: Fixed JMX issue with CAE startup
- CMS-28021: Mega menus should now render much faster in CAE (Salesforce and Hybris)
- CMS-27938: Default configuration of cache-control headers fixed

- CMS-28259: Fixed Miscellaneous Aria Roles and Labels
- CMS-28258: Repository Tree Accessibility
- CMS-26035: Fixed Miscellaneous Struct Editor Issues
- CMS-25975: Workflows in ControlRoom inbox are now correctly displayed
- CMS-28156: Update to latest minor version of Spring-GraphQL and GraphiQL 5.0
- CMS-27931: Fixed Regression: Non-trivial server context path for REST request was ignored
- CMS-27811: Exception handling by DataFetcherExceptionResolverAdapter
- CMS-28208: Fixed ContentHub Issue with duplicate beans
- CMS-28100: Category parameter is taken for augmented products
- CMS-27975: Application SBOMs are optionally added to the Spring-Boot actuator
- CMS-27815: Fixed UrlValidator
- CMS-18211: Changed the logic for the metric com.coremedia.Store.Connected

4.11.1 Breaking Changes

CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Follow Section "Configured limit for part count in multipart/form-data requests" [491] for upgrade information.

[CMS-28098]

4.11.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Apache Tika 3.2.2 and Transitive Dependencies

Apache Tika has been updated to version 3.2.2. As part of this change, transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.14.1
- Apache Commons IO 2.20.0
- Apache Commons Lang3 3.18.0
- Apache Mime4J 0.8.13
- Apache PDFBox 3.0.5
- Apache Tika 3.2.2
- ASM 9.8
- jsoup 1.21.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-28431]

Third-Party Update: AWS SDK for Java

The AWS SDK for Java has been updated to version 2.28.24 (see Changelog) to prevent security issue CVE-2025-52999 of its transitive jackson-core dependency.

[CMS-28161]

Updated postgresql driver

Updated `org.postgresql:postgresql` to `42.7.7`

[CMS-28048]

Third-Party Update: OpenCSV

OpenCSV has been updated to version 5.11.1. This includes an update of transitive dependency commons-beanutils to version 1.11.0 and avoids potential security issue CVE-2025-48734.

[CMS-27955]

Fix Content Feeder Background Issue Feeding

Fixed a bug in the Content Feeder that content issues were not indexed in the background.

[CMS-27868]

Updated Project Dependencies

Updated several dependency and plugin versions:

- Angus Mail → 2.0.4
- Apache HttpComponents Client 5 → 5.5
- AssertJ → 3.27.4
- Bouncy Castle Java → 1.81
- Byte Buddy → 1.17.7
- Commons CLI → 1.10.0
- Commons Codec → 1.19.0
- Commons Compress → 1.28.0
- Commons Exec → 1.5.0
- CoreMedia Adapter for HCL Commerce → 3.0.14
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.16
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.14
- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.16
- Enterprise Security API → 2.7.0.0
- Error Prone → 2.41.0
- Google Analytics Data Client for Java → 0.83.0
- Google API Common for Java → 2.53.0
- Google API Extensions for Java → 2.70.0
- Google Auth Library for Java → 1.38.0
- Google HTTP Client Library for Java → 1.47.1
- gRPC-Java → 1.75.0
- Hibernate ORM → 6.6.27.Final
- Hibernate Validator → 8.0.3.Final
- Jackson → 2.19.2
- Jib Maven Plugin → 3.4.6

- JSON-Java → 20250517
- jsoup → 1.21.2
- JUnit Jupiter → 5.13.4
- Micrometer → 1.14.9
- Mockito → 5.19.0
- Netty → 4.1.124.Final
- Protocol Buffers for Java → 4.32.0
- Reactor Project BOM → 2024.0.8
- Spring Boot → 3.4.9
- Spring Data BOM → 2024.1.9
- Spring for GraphQL → 1.3.6
- Spring Framework → 6.2.10
- Spring Security → 6.4.9
- Tomcat → 10.1.44

[CMS-27837]

CoreMedia Content Application Engine

Reduced category loading in fragment calls

There is a new configuration flag in CAE `cae.livecontext.categor ies.lazy-loading:false` that can be used to enable a "lazy category loading mode" in the CAE. If set to "true" no categories will be loaded during a fragment call (at least for pure augmentation). This also prevents the validation of the entire category path. This mode certainly results in less load for a CAE (when cache misses are expected), but you should be sure that the categories can be loaded during request processing.

[CMS-28020]

Miscellaneous

Configurable Cache Duration for Outdated Transformed Blobs

Added a new configuration property `delivery.outdated-transformed-blob-cache-duration` to control how long outdated or yet unknown transformed blobs are to be cached in a multi-CAE scenario (`cae.single-node=false`). Before this fix, CAE send a cache-control header with `max-age` of 0 seconds. This value is now configurable. Consider that a yet unknown cache should not be cached for long because the CDN should ideally cache the correct transformed blob for a given URL. The cases to cover are that (1) either a more up-to-date CAE generated the link and

the CAE answering the request for the transformed blob does not yet know about the updated blob and (2) a client has stored a very old version of a transformed blob URL for which the blob data is no longer cached by the CDN. A CAE cannot distinguish between these two cases but serves the currently (either outdated or newer) known transformed blob. The new configuration property allows projects to optimize for scenario (1) or (2) by setting a (1) short duration or (2) a long duration.

Configuration example:

```
# Set cache duration to 1 hour
delivery.outdated-transformed-blob-cache-duration=1h
```

Upgrade Information

[CMS-28032]

Third-Party Update: commons-io 2.19.0

Apache Commons IO has been updated to 2.19.0.

[CMS-27839]

4.11.3 Fixed Issues

CoreMedia Core

Fix Workflow Action Attribute ignoreErrors

Fixed a bug in the handling of the attribute `ignoreErrors=true` in workflow definitions for actions `ApproveResource`, `PublishResources`, and others. Previously, client action timeout errors were never ignored and always caused task escalation. This has been fixed, so that timeouts don't cause an escalated task anymore if `ignoreErrors` is set to `true`.

[CMS-27896]

CoreMedia Content Application Engine

Fixed Parameter Resolution of Dynamic Includes

When using dynamic includes on the Preview CAE the parameters (required to serve personalized content) were lost. This bug has been fixed so that parameter resolution for dynamic includes functions properly on Preview CAE.

(CMS-28288)

Fixed JMX issue with CAE startup

In rare cases the CAE didn't start up the application context due to an issue with anonymous LinkFormatter instantiation in JMX configuration.

(CMS-28160)

Mega menus should now render much faster in CAE (Salesforce and Hybris)

When building links to commerce categories we avoid the loading of the commerce items, at least for Salesforce and Hybris. Unfortunately, it is still necessary for HCL, because links can only be build using technical IDs which must be requested from the commerce system. It should speed up loading of mega menus considerably, at least if a lot of Commerce items are not in the CAE cache.

(CMS-28021)

Default configuration of cache-control headers fixed

In Live CAE the default configuration of cache-control headers for css and javascript URLs contained an incorrect pattern. This led to exceptions in the log and the values could not be read.

(CMS-27938)

CoreMedia Studio Client

Fixed Miscellaneous Aria Roles and Labels

- Improved the aria label for the type icon column by adding role "img" and an aria label.
- Added aria labels for the image editors rotation actions.
- Fixed preview options toolbar aria label.
- Fixed toolbar overflow button label.
- Changed the header toolbar aria label from Kopf to Site Auswahl, Guides, Info-Center und Benutzermenü.
- Added aria role "button" and aria label for the close button of work area tabs.

[CMS-28259]

Repository Tree Accessibility

The aria role of repository tree items has been changed to "treeitem".

[CMS-28258]

Fixed Miscellaneous Struct Editor Issues

- Fixed issue that the markup editor for did not show values or did show values for other markup fields or did not save these.
- Fixed errors that happened for markup lists.
- Fixed the error that when a property editor dialog was opened for a struct property (e.g. markup or date fields) and the node was cut or deleted, the dialog remained open.

[CMS-26035]

Workflows in ControlRoom inbox are now correctly displayed

When several workflow are created at the same time (e.g., a translation is triggered against multiple target languages), then there are several workflows with the same creation date. When completing one of them it could remain in the inbox even after it is completed. Now the malbehavior is fixed.

[CMS-25975]

CoreMedia Headless Server

Update to latest minor version of Spring-GraphQL and GraphiQL 5.0

Due to an update in the publishing policy of GraphiQL, spring-graphql library could not deliver graphiql correctly. This was fixed by updating Spring-GraphlQL to the corresponding latest minor version:

CMS 2506.0: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 esm.sh (was 4.0.0 via esm.sh) CMS 2412.0: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh (was via unpkg.com) CMS 2406.2: Spring-GraphQL V 1.4.1 delivering GraphiQL 5.0.0 via esm.sh (was 4.0.0 via esm.sh) CMS 2416.1: Spring-GraphQL V 1.3.6 delivering GraphiQL 5.0.0 via esm.sh (was via unpkg.com)

(CMS-28156)

Fixed Regression: Non-trivial server context path for REST request was ignored

A non-trivial server context path, e.g. '/customContextPrefix' was not working anymore with REST requests. That regression was now fixed.

(CMS-27931)

Exception handling by DataFetcherExceptionResolverAdapter

To resolve exceptions to GraphQL errors, a `DataFetcherExceptionResolverAdapter` has been added which resolves implementations of `RuntimeException` to `ErrorType.DataFetchingError`. Specific exceptions and corresponding `ErrorTypes` can be configured via configuration property `caas.exceptionErrorMap`. Exceptions are resolved via configuration for the most specific super class.

(CMS-27811)

Miscellaneous

Fixed ContentHub Issue with duplicate beans

An issue has been fixed regarding the `BaseFileSystemConfiguration` in the `ContentHubAdapter`. You do not need to import the `BaseFileSystemCon`

`figuration` class anymore, as the `ContentHubMimeTypeService` bean is now available automatically if your Adapter lives in the Blueprint. If it lives in a Plugin, you can access `ContentHubMimeTypeService` via the new `ContentHub BeansForPluginsConfiguration`.

[CMS-28208]

Category parameter is taken for augmented products

If you have an augmented product and set some alternative placements and if the product is contained in multiple categories (e.g. beside the primary category it is also part of the e.g. "newarrivals-mens" category). If the PDP fragment is called with such an additional category parameter (not the primary category id) it is taken for augmentation (and not the primary category of the product).

[CMS-28100]

Application SBOMs are optionally added to the Spring-Boot actuator

Application SBOMs are now optionally added to the Spring-Boot actuator. This prevents an error where the application would not start if the SBOM was missing, e.g. when building was disabled by setting the 'skipSboms=true' switch for the Maven build.

[CMS-27975]

Fixed UrlValidator

The UrlValidator complained about URLs containing "%" characters. URL validation has been fixed to properly deal with URL encoding.

[CMS-27815]

Changed the logic for the metric com.coremedia.Store.Connected

Changed the logic for the metric `com.coremedia.Store.Connected` to monitor the open connections to the database. This ensures that the state changes when the last connection is closed due to an error instead of waiting for a future connection request to encounter an error. Requires the number of minumum open connections to be set to at least 1 (`sql.pool.minConnections`). This is enforced by the code - values below 1 will be ignored and the minumum will be set to 1. As the server must open at least one connection to work, this won't change its operation. Relies on the connection validator to discover broken connections. If a more timely detection of connection issues is required, reduce the values of the properties `sql.pool.val idatorInterval` and `sql.pool.validatorTimeout`.

[CMS-18211]

4.12 Release 2406.1.3

The release contains:

- Breaking changes: 0
- Changes and improvements: 7
- Bugfixes: 10

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.

Release date: 2025-05-16

Breaking Changes

Changes and Improvements

- CMS-27654: Updated Maven dependencies and plugins
- CMS-27644: Case-insensitive User and Group Search
- CMS-27224: Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"
- CMS-25999: MongoDB update to version 8.0
- CMS-25920: Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies
- CMS-25571: Parameter Appending Link Transformers May Skip Transformation for Bean Types

Bugfixes

- CMS-23141: Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows
- CMS-27775: Fixed Potential Cache Deadlock in LoadedImageCacheKey
- CMS-27338: Fixed Bug - Special Characters in Commerce IDs
- CMS-27728: Optimized Blob Link Building

4.12.1 Breaking Changes

This release contains no breaking changes

4.12.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.13
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.12
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.14
- CoreMedia Adapter for HCL Commerce → 3.0.12
- Apache HttpComponents Client 5 → 5.4.4
- AspectJ → 1.9.24
- Byte Buddy → 1.17.5
- Commons Collections → 4.5.0
- Commons Text → 1.13.1
- Error Prone → 2.38.0
- Google Analytics Data Client for Java → 0.73.0
- Google API Common for Java → 2.48.0
- Google API Extensions for Java → 2.65.0
- Google Auth Library for Java → 1.35.0
- Google Auth Library for Java → 1.34.0
- Google HTTP Client Library for Java → 1.47.0
- GraphQL Java → 22.4
- gRPC-Java → 1.72.0
- Gson → 2.13.1
- Guava → 33.4.8-jre
- Hibernate ORM → 6.6.14.Final
- Jackson → 2.19.0
- JUnit Jupiter → 5.12.2
- Micrometer → 1.14.6
- Mockito → 5.17.0
- Netty → 4.1.121.Final
- Reactor Project BOM → 2024.0.5
- Spring Boot → 3.4.5
- Spring Data BOM → 2024.1.5
- Spring Framework → 6.2.6
- Spring for GraphQL → 1.3.5

- Tomcat → 10.1.41

[CMS-27654]

Case-insensitive User and Group Search

There is a new content server configuration option `cap.server.case-sensitive-member-search`. If set to `false`, the user and group search in the Studio's User Manager app works case-insensitively. Default is `true` (case-sensitive, backward compatible).

More generally, the option affects the UAPI methods `com.core media.cap.user.UserRepository#findUsers` and `com.core media.cap.user.UserRepository#findGroups`. If you use these methods in custom code, the current behaviour may be mandatory. In that case leave the option at its default.

[CMS-27644]

Content Server and Workflow Server DB Transaction Retry on Amazon Aurora "Zero-Downtime Patching"

The Content Server can now be configured to perform retries on database transactions in case of connection loss due to "Zero-Downtime Patching" on Amazon Aurora (MySQL only).

To configure the Content Servers for retries, use these properties:

- *sql.pool.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *sql.pool.retry-delay*: wait given time before retrying (*Duration*; default: 15 seconds).
- *sql.pool.max-retries*: maximum number of retries (default: 15).

To configure the Workflow Server for retries, use these properties:

- *workflow.server.tx.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*). This is the same property as already available for retries on other connection loss situations.
- *workflow.server.tx.retry-on-connection-loss-delay*: wait given time before retrying on database connection loss (*Duration*; default: 15 seconds).

Retries on a single Workflow Server database transaction are limited to 15 times.

Set the delay values and retries (see above) large enough to cover prolonged database unavailability during failover.

Make sure to set DNS caching on your system to a very short time (probably shorter than *.retry-delay*) to allow for refreshed hostname resolution before the next attempt on a previously failing database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

[CMS-27224]

MongoDB update to version 8.0

MongoDB has been updated to version 8.0 for the Docker Deployment. Note that an upgrade is only possible from a 7.0.x version. An upgrade from an earlier version needs to be done successively. Please refer to the official MongoDB documentation on how to upgrade: https://www.mongodb.com/docs/manual/release-notes/8.0-upgrade-standalone/ The compatibility changes are described here: https://www.mongodb.com/docs/manual/release-notes/8.0-compatibility/

[CMS-25999]

Third-Party Update: Apache Tika 3.1.0 and Transitive Dependencies

Apache Tika has been updated to version 3.1.0. As part of this change, the following transitive dependencies of Apache Tika have been updated.

Updated dependencies:

- Apache Commons CSV 1.13.0
- Apache Commons IO 2.18.0
- Apache Log4J API 2.24.3
- Apache Mime4J 0.8.12
- Apache PDFBox 3.0.4
- Apache POI 5.4.1
- Apache Tika 3.1.0
- Apache XMLBeans 5.3.0
- ASM 9.7.1

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-25920]

CoreMedia Content Application Engine

Parameter Appending Link Transformers May Skip Transformation for Bean Types

The configuration property `cae.link-transformer.params-append er.skip-for-type` has been added that allows deployments to skip link transformation by parameter appending link transformers for configurable bean types. The configuration property is a map indexed by the lowercase version of the transformer bean name and the values of the map are a collection of fully-qualified classes for which the transformation should be skipped.

Example:

```
cae.link-transformer.params-appender.skip-for-type.previewdateappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMCSS,com.coremedia.blueprint.common.contentbeans.CMImage,
com.coremedia.blueprint.common.contentbeans.CMJavaScript,com.coremedia.blueprint.common.contentbeans.CMTheme

cae.link-transformer.params-appender.skip-for-type.developermodeappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMExternalLink
```

The configuration is applicable to beans of the following link transformer implementations:

- `com.coremedia.livecontext.fragment.links.trans formers.FragmentParamsAppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewDate AppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewParametersAp pendingLinkTransformer`
- `com.coremedia.objectserver.web.links.ParameterAp pendingLinkTransformer`

[CMS-25571]

4.12.3 Fixed Issues

CoreMedia Core

Fixed Bug of Missing Workflows in Lists of Pending and Finished Workflows

Fixed a bug in the Workflow Server action 'RegisterPendingProcess', which ignored temporary exceptions like communication problems to MongoDB or the SQL database when adding a workflow to a user's list of pending workflows. As a consequence, the workflow would also not appear in the list of finished workflows The action now retries until the workflow was added successfully.

[CMS-23141]

CoreMedia Studio Server

Fixed Potential Cache Deadlock in LoadedImageCacheKey

Fixed a bug in the LoadedImageCacheKey that could cause a deadlock in the Studio Server.

[CMS-27775]

Fixed Bug - Special Characters in Commerce IDs

A bug which prevented special characters, such as '%' or '/' in commerce IDs, has been fixed. However, it is not recommended using such characters in IDs.

[CMS-27338]

Miscellaneous

Optimized Blob Link Building

Starting with CMCC 2401.1, blob links of the Blueprint CAE (generated by `com.core media.blueprint.cae.handlers.TransformedBlobHand ler#buildLink`) are sensitive to responsive image settings. Therefore, building the link requires a transformation incl. streaming the original blob each time, because the settings may have changed. This turned out to be a severe performance issue, so we reverted this behaviour.

The drawback is that changed responsive image settings are not effective immediately, but outdated images may be rendered. However, responsive image settings are not changed frequently on production systems, so this should not be an issue in practice. You can enforce up-to-date images by restarting the CAE.

There is a configuration property delivery.image-settings-aware-etags to control the behaviour. The default is `true`, which means backward compatible behaviour. However, it is recommended to set it to `false` for production systems.

[CMS-27728]

4.13 Release 2406.1.2

The release contains:

- Breaking changes: 3
- Changes and improvements: 13
- Bugfixes: 43

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.

Release date: 2025-04-24

Breaking Changes

- CMS-27671: Upgraded @jangaroo/ext-ts to 2.1.0
- CMS-27666: Patch to Fix XLIFF Download in CoreMedia Studio
- CMS-27514: Moved upcoming KIO Backend Images to container-registry.core-media.com

Changes and Improvements

- CMS-27423: Updated Maven dependencies and plugins
- CMS-26000: Update of MongoDB Java driver to 5.3.1
- CMS-25982: Make library column resizer more visible
- CMS-25190: Enabled AMAsset Thumbnail Previews
- CMS-19538: Warning before publication workflow is fixed
- CMS-27519: Enhanced documentation around Sitemap generation
- CMS-27308: Support MySQL 8.4.
- CMS-27299: Support PostgreSQL 16
- CMS-18494: Smart Validation for Segment in Commerce Pages

Bugfixes

- CMS-27190: Fixed CAE Feeder JMX Metric LatestIndexing
- CMS-27638: Eliminated Race Condition on Computation of Image Transformations
- CMS-27431: SiteFilter pattern matching for /service/search/{site} fixed for CAE

- CMS-27500: Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"
- CMS-27466: Studio Client Container Image now Respects sigterm and sigint Signals
- CMS-27361: Added Overflow for Struct Editor and Pagegrid Toolbars
- CMS-27257: Fixed Height of Start Workflow Dialog
- CMS-27250: Removed AS Documentation References
- CMS-27216: Fixed Mouse Selection for Annotated Link Lists
- CMS-27149: Fixed Job Service Event Handling
- CMS-27148: Fixed: Inconsistent tab focus when opening documents via links in CkEditor
- CMS-27047: Fixed Locale Switcher Endless Loading
- CMS-25606: Fixed "RemoteItemsPlugin" Logging
- CMS-25394: The Sencha Ext fonts are now loaded
- CMS-23480: Fixed "Open In Tab" Toolbar Action
- CMS-18223: Fixed Lazy Loading in Library
- CMS-9208: Translation State Widget Robustness Enhanced
- CMS-27420: Fixed: Problem with Focus in RichtextField
- CMS-27046: PublicationContentStateValidator now uses connectionSession
- CMS-11873: The link suggester field is now reset
- CMS-8538: New deprecation: CMMedia#getCaption
- CMS-27699: Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses
- CMS-27635: HeadlessServer now also supports type conversion of path segments used as GraphQL input variables
- CMS-27646: Fixed Method ContentSiteAspect#setMasterVersion
- CMS-27457: Fixed QuickCreate Dialog "skipInitializers" Flag
- CMS-27244: MongoDbHealthIndicator has been Changed to use the hello-command
- CMS-26018: Fixed Filtering of Searchable Content Types

4.13.1 Breaking Changes

CoreMedia Studio Client

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

Follow Section "Upgraded @jangaroo/ext-ts to 2.1.0" [493] for upgrade information.

[CMS-27671]

CoreMedia Studio Server

Patch to Fix XLIFF Download in CoreMedia Studio

If you are downloading XLIFF in CoreMedia Studio, you may have experienced (since CMCC v10.2307.1), that the feature to add nested Struct properties configured in bean `translateXliffTranslatableExpressions` did not work anymore, thus, properties like `CMLinkable.localSettings.callToActionCustomText` were not added to the resulting XLIFF export.

Follow Section "Patch to Fix XLIFF Download in CoreMedia Studio" [494] for upgrade information.

[CMS-27666]

Miscellaneous

Moved upcoming KIO Backend Images to container-registry.coremedia.com

Future docker images will be available on `container-registry.core media.com`:

Follow Section "Moved upcoming KIO Backend Images to container-registry.core-media.com" [494] for upgrade information.

[CMS-27514]

4.13.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.12
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.11
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.13
- CoreMedia Adapter for HCL Commerce → 3.0.11
- Apache HttpComponents Client 5 → 5.4.3
- AspectJ → 1.9.23
- Byte Buddy → 1.17.4
- Error Prone → 2.37.0
- Google Analytics Data Client for Java → 0.71.0
- Google API Common for Java → 2.46.1
- Google API Extensions for Java → 2.63.1
- Google Auth Library for Java → 1.33.1
- Google HTTP Client Library for Java →
- Google OAuth Client Library for Java → 1.39.0
- gRPC-Java → 1.71.0
- Guava → 33.4.6-jre
- Hibernate ORM → 6.6.12.Final
- Jackson → 2.18.3
- Jib Maven Plugin → 3.4.5
- JUnit Jupiter → 5.12.1
- Logback → 1.5.18
- Micrometer → 1.14.5
- Mockito → 5.16.1
- Netty → 4.1.119.Final
- Protocol Buffers for Java → 4.30.2
- Reactor Project BOM → 2024.0.4
- SLF4J → 2.0.17
- SnakeYAML → 2.4
- Spring Boot → 3.4.4
- Spring Data BOM → 2024.1.4
- Spring Framework → 6.2.5

- Spring for GraphQL → 1.3.4
- Spring Security → 6.4.3
- Tomcat → 10.1.39

[CMS-27423]

Update of MongoDB Java driver to 5.3.1

The third-party dependencies `org.mongodb:mongodb-driver-legacy`, `org.mongodb:mongodb-driver-core` and `org.mongodb:bson` have been updated from version 4.11.1 to 5.3.1.

No breaking change was required for CoreMedia code, but custom code using MongoDB API may need to be adapted.

[CMS-26000]

CoreMedia Studio Client

Make library column resizer more visible

The "Adjust column width" function is much easier to find and handle in the column header of the library.

[CMS-25982]

Enabled AMAsset Thumbnail Previews

Enabled the thumbnail previews for the document formulars of *AMAsset* and *AMPictureAsset*.

[CMS-25190]

Warning before publication workflow is fixed

When starting a publication workflow on contents with warning now shows correct warning messages.

[CMS-19538]

CoreMedia Documentation

Enhanced documentation around Sitemap generation

The chapter about sitemap in the Blueprint Developer Manual now mentions the requirement for the configuration to be part of the Spring management application context.

[CMS-27519]

Miscellaneous

Support MySQL 8.4.

We now also support MySQL 8.4. No code change was required.

MySQL 8.4 replaces MySQL 8.0 as default for the Blueprint docker compose setup in the `global/deployment/docker`.

`mysql-connector-j` has also been updated to the latest version (9.2.0).

Support for MySQL 8.0 will be removed in future versions.

Please see https://dev.mysql.com/doc/refman/8.4/en/mysql-nutshell.html and https://dev.mysql.com/doc/refman/8.4/en/upgrading.html for more information on changes and upgrading.

[CMS-27308]

Support PostgreSQL 16

We now also support PostgreSQL 16. No code change was required.

`org.postgresql:postgresql` has also been updated to the latest version (42.7.5).

Support for PostgreSQL 13 will be removed in future versions.

Please see https://www.postgresql.org/support/versioning/ for more information about versions and upgrading.

[CMS-27299]

Smart Validation for Segment in Commerce Pages

In commerce-related page types (Augmented Category, Augmented Product and Augmented Page) the segment is typically not used, at least when it is a commerce-led scenario. In such a case the segment is not used to build an URL (but it is a Storefront URL). Therefore, the segment does not need to be validated. Only in a hybrid scenario (when the settings "livecontext.policy.commerce-category-links", "livecontext.policy.commerce-product-links" or "livecontext.policy.commerce-page-links" are "true") the validation is done for these page types.

[CMS-18494]

4.13.3 Fixed Issues

CoreMedia Core

Fixed CAE Feeder JMX Metric LatestIndexing

Fixed a bug in the CAE Feeder that the JMX metric 'LatestIndexing' was not updated if Feedables are created without 'freshness' information.

[CMS-27190]

CoreMedia Content Application Engine

Eliminated Race Condition on Computation of Image Transformations

A race condition could lead to wrong computation of image transformations, affecting hash computation and potentially other functionality during processing of transformed images. This has been eliminated now.

[CMS-27638]

SiteFilter pattern matching for /service/search/{site} fixed for CAE

In the `cae.site.patterns` property the {{/service/search/

{site}

}} had an unintended } at the end and therefore did not match. Now it matches. The bug had no impact as a fallback resolved the site from the path in another way if no pattern matched.

(CMS-27431)

CoreMedia Studio Client

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

Fixed: removed trailing slash in import statements of "@coremedia-blueprint/studio-client.ckeditor5"

(CMS-27500)

Studio Client Container Image now Respects sigterm and sigint Signals

due to a misconfiguration in the entrypoint script of the studio-client, the nginx process of the container did not receive sigint and sigterm signals and therefore did not shut down as required but was killed by the container runtime after it hit the configured graceful shutdown timeout.

(CMS-27466)

Added Overflow for Struct Editor and Pagegrid Toolbars

The overflow option of these toolbars were not enabled. Buttons are now shown in a drop down on overflow again.

(CMS-27361)

Fixed Height of Start Workflow Dialog

The minimum height of the Start Publication Workflow has been fixed so that it fits for FullHD screens with 150% scaling too.

(CMS-27257)

Removed AS Documentation References

Removed reference to ASDoc documentation and replaced it with TSDoc.

[CMS-27250]

Fixed Mouse Selection for Annotated Link Lists

For annotated link list that use an input field as annotation widget, the text of this field can now be selected via mouse too. The selection does not trigger the drag and drop of the whole row anymore.

[CMS-27216]

Fixed Job Service Event Handling

Fixed issue that when a job is immediately successful, it was not properly finished.

[CMS-27149]

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

Fixed: Inconsistent tab focus when opening documents via links in CkEditor

[CMS-27148]

Fixed Locale Switcher Endless Loading

Depending on the permissions of the user, the locale switcher might not have recovered from the loading state. The stability has been improved here. In case the user can only "see" one site, a label with the locale is shown now (instead of the whole locale switcher menu).

[CMS-27047]

Fixed "RemoteItemsPlugin" Logging

The logging of the "RemoveItemsPlugin" has been fixed so that no error is logged anymore even when the replacement was successful.

[CMS-25606]

The Sencha Ext fonts are now loaded

Sencha specific icons font packages are now loaded when using the blueprint workspace.

[CMS-25394]

Fixed "Open In Tab" Toolbar Action

The action was not properly refreshed when content was deleted or restored.

[CMS-23480]

Fixed Lazy Loading in Library

Fixed issue that sometimes empty rows where showing in the library.

[CMS-18223]

Translation State Widget Robustness Enhanced

The Translation State Dashboard Widget may have struggled reporting translation states for derived sites, whose site IDs contained space characters (a "Contact Your System Administrator" message was shown).

This has been fixed.

[CMS-9208]

CoreMedia Studio Server

Fixed: Problem with Focus in RichtextField

Fixed: When focussing a RichtextField, then clicking away in external app and then clicking again in the same RichtextField, no focus event was fired. The effect was, that changes made to the text (e.g. pasting text from an external app) were not saved. The reason was that in that case the delegation mode was still active.

[CMS-27420]

PublicationContentStateValidator now uses connectionSession

The `PublicationContentStateValidator` now uses the `connectionSession` for running the validators to be able to validate content that the current user might not have permissions for.

[CMS-27046]

The link suggester field is now reset

When changing the content tab the suggestion text is now reset so that it isn't from other forms.

[CMS-11873]

New deprecation: CMMedia#getCaption

The method `CMMedia#getCaption` is unused for a while and is confusing because the Studio property field `caption` is stored in the property `teaserText` of `CMTeasable`. The method `CMMedia#getCaption` will be removed, use `CMTeasable#getTeaserText` instead.

[CMS-8538]

CoreMedia Headless Server

Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses

Starting with 2404 (the introduction of Spring-GraphQL-Library), GraphQL responses of JSLT transformed persisted queries did not pass through potential GraphQL error messages.

This regression was fixed. In order not to break the current version, the fix must be enabled by an additional compatibility flag `caas.rest.error-messages-over-jslt-enabled=true|false`. To stay non-breaking within versions 2406 and 2412, the flag defaults to false!

If the flag is activated, all JSLT templates must be updated, as the JSON path of the response now includes the explicit "data" property again and the potential "errors" property of course. In effect this means, the former JSLT templates of version 2310-LTS and prior will work again.

[CMS-27699]

HeadlessServer now also supports type conversion of path segments used as GraphQL input variables

Previously, HeadlessServer converted HTTP request parameters into the necessary type for a GraphQL input variables only. With this fix type conversion is now also supported for path segments of the HTTP request path.

[CMS-27635]

Miscellaneous

Fixed Method ContentSiteAspect#setMasterVersion

Fixed a bug that caused a StackOverflowError when calling `com.core media.cap.multisite.ContentSiteAspect#setMasterVersion` with a null argument.

[CMS-27646]

Fixed QuickCreate Dialog "skipInitializers" Flag

The configuration flag "skipInitializers" is no longer ignored when content is created through the Quick-Create dialog.

[CMS-27457]

MongoDbHealthIndicator has been Changed to use the hello-command

The `MongoDbHealthIndicator` has been changed to use the `hello`-command instead of creating a new `MongoClient` every time. This prevents unnecessary creation of ConnectionPools and Connections to the MongoDb Server Nodes.

[CMS-27244]

Fixed Filtering of Searchable Content Types

When filtering searchable content types in the library there used to be duplicates for some content types. That's now fixed.

[CMS-26018]

4.14 Release 2406.1.1

The release contains:

- Breaking changes: 4
- Changes and improvements: 14
- Bugfixes: 43

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.

Release date: 2025-02-21

Breaking Changes

- CMS-27252: Freemarker: make class resolver configurable
- CMS-27377: CoreMedia CKEditor5 Plugins updated to Version 23.0.0
- CMS-25815: RichTextPropertyFields is now capable of handling StructSubBeans
- CMS-27141: Removed Support for Filter Expressions in Log Configurations

Changes and Improvements

- CMS-27088: Updated Maven dependencies and plugins
- CMS-27159: Changed Content Type Selector Filter Options
- CMS-26913: Enhanced Multi-Site Manual Section "Designing Locales"
- CMS-27366: Updated Liquibase And Disabled Liquibase Analytics
- CMS-27253: Third-Party Update: Apache Solr 9.8.0

Bugfixes

- CMS-27181: Content Server Unresponsive after Database Failover Recovery
- CMS-27126: Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section
- CMS-27003: RichTextCorrectionConverter: Multiple corrected attributes ArrayIndex-OutOfBounds exception fixed
- CMS-26904: Fixed Content Feeder to Set Correct Metadata after Content Withdrawal
- CMS-26930: Fixed: Dynamic Template loading
- CMS-27354: Initialization of StudioStartupPlugin may now Return a Promise

- CMS-27193: Preventing of Superfluous Augmentation Requests
- CMS-27096: Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)
- CMS-26968: Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests
- CMS-25556: Fixed German translation for "Add Bookmark" Menu Item
- CMS-25339: Theme Updates for GenericDocumentForm
- CMS-25171: Fixed External Link Validator
- CMS-24907: Studio Client: Umlauts are not always displayed with colons
- CMS-23901: The BBCode RichText Editor Renders Additional bbcode Tags
- CMS-27059: Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors
- CMS-27045: ConfigurableDeadLinkValidator is configurable now
- CMS-25296: Fixed CommerceContentTypesPictureResolver for empty URLs
- CMS-25685: Fixed a bug with code splitting feature not working in certain setups
- CMS-27168: Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type
- CMS-27128: Apollo Federation Support
- CMS-24169: Update Documentation on CAE Spring Security

4.14.1 Breaking Changes

CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://freemarker.apache.org/docs/api/freemarker/template/Configuration.html and https://freemarker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

CoreMedia Studio Client

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Document-ation.

[CMS-27141]

4.14.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.11
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.10
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.12
- CoreMedia Adapter for HCL Commerce → 3.0.10
- Apache HttpComponents Client 5 → 5.4.2

- AssertJ → 3.27.3
- Bouncy Castle Java → 1.80
- Byte Buddy → 1.17.0
- Commons Codec → 1.18.0
- Commons DBCP → 2.13.0
- Commons Pool → 2.12.1
- FreeMarker → 2.3.34
- Google Analytics Data Client for Java → 0.68.0
- Google API Common for Java → 2.43.0
- Google API Extensions for Java → 2.60.0
- Google Auth Library for Java → 1.31.0
- Google HTTP Client Library for Java → 1.45.3
- Google OAuth Client Library for Java → 1.37.0
- GraphQL Java DataLoader → 3.4.0
- gRPC-Java → 1.70.0
- Gson → 2.12.1
- Guava → 33.4.0-jre
- Hibernate → 6.6.6.Final
- Hibernate Validator → 8.0.2.Final
- Jackson → 2.18.2
- Jakarta Validation API → 3.1.1
- Javassist → 3.30.2-GA
- JBoss Logging → 3.6.1.Final
- JSON-Java → 20250107
- JUnit Jupiter → 5.11.4
- Micrometer → 1.14.3
- Mockito → 5.15.2
- Netty → 4.1.118.Final
- Plugin Framework for Java → 3.13.0
- Protocol Buffers for Java → 4.29.3
- Reactor Project BOM → 2024.0.2
- Spring Boot → 3.4.2
- Spring Data BOM → 2024.1.2
- Spring Framework → 6.2.2
- Spring Security → 6.4.2
- Tomcat → 10.1.34

[CMS-27088]

CoreMedia Studio Client

Changed Content Type Selector Filter Options

When inputting a filter value for the Content Type selector combo-box, any matches are shown now, not only type names that start with the given input.

[CMS-27159]

CoreMedia Documentation

Enhanced Multi-Site Manual Section "Designing Locales"

Knowing, that designing locales (and, thus, corresponding language tags) for your multi-site experience may sometimes get challenging, we enhanced the section "Designing Locales" within the Multi-Site Manual:

- For clarity, the reference to Locale.Builder got merged with the section "Defining Valid Language Tags". The Locale.Builder is meant as a possible assistive tool, to create a custom locale, that as well matches your needs (like a good display name in CoreMedia Studio) as well as being valid.
- A new subsection "Example: The Global Site Locale" got added, that matches typical solutions for multi-site hierarchies having a so-called "abstract master site". Given that you want to have a nicely distinguishable name for that site, the section describes two viable solutions for customized locales.

We also added a reference to a possible viable alternative to custom locales, which is using the "World" region 001 (zero-zero-one), such as in language tag `en-001` represented by your JDK as "English (world)".

[CMS-26913]

Miscellaneous

Updated Liquibase And Disabled Liquibase Analytics

Updated `org.liquibase:liquibase-core` to 4.31.0 and disabled new opt-out sending of usage statistics introduced with 4.30.0.

To disable Liquibase analytics we now set `LIQUIBASE_ANALYTICS_ENABLED: false` in the blueprint example deployment for the studio-server in the file `default.yml`. You should consider applying this configuration to your deployment.

Note that we do not use Liquibase anymore in versions 2506.0 and later.

See:

- https://docs.liquibase.com/start/release-notes/liquibase-release-notes/liquibase-4.30.0.html
- https://docs.liquibase.com/analytics/home.html
- https://docs.liquibase.com/parameters/analytics-enabled.html

[CMS-27366]

Third-Party Update: Apache Solr 9.8.0

Apache Solr has been updated to version 9.8.0. The new version fixes security vulnerability CVE-2025-24814.

A new coremedia/solr-base Docker image with tag 2.5-cm-9.8.0 has been released, which also provides a fix for leader/follower replication with enabled basic authentication. It adds the environment variable `SOLR_LEADER_BASIC_AUTH` for configuring basic authentication credentials. Starting with previous release Solr 9.7.0, credentials that are included in the `SOLR_LEADER_URL` environment variable are not used anymore.

See https://solr.apache.org/docs/9_8_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-8 for a list of changes in Solr.

[CMS-27253]

4.14.3 Fixed Issues

CoreMedia Core

Content Server Unresponsive after Database Failover Recovery

Content Servers can automatically recover from a database failover when settings *sql.pool.retry-on-connection-loss* and *sql.pool.retry-on-read-only-db* are set to *true*.

However, a bug led to high load on Content Servers after such a failover recovery which could leave the system unresponsive. This is fixed now.

[CMS-27181]

Fixed CAE Feeder Page Grid Feeding Configuration of Excluded Section

Fixed a bug in the CAE Feeder page grid feeding, that comma-separated values configured in `corporate.search.pageGrid.excludedSections` were not correctly parsed, and placement sections were not excluded from feeding as configured.

[CMS-27126]

RichTextCorrectionConverter: Multiple corrected attributes ArrayIndexOutOfBounds exception fixed

In `RichTextCorrectionConverter` an ArrayIndexOutOfBounds exception was thrown when multiple attributes were adapted. This has been fixed and works now as expected.

[CMS-27003]

Fixed Content Feeder to Set Correct Metadata after Content Withdrawal

Fixed a bug in the Content Feeder which could have led to wrong values in Solr index fields "ispublished", "isapproved", and "istobewithdrawn" after a content was withdrawn from publication. These Solr index fields were not used in the default product, but projects may have relied on correct values.

[CMS-26904]

CoreMedia Content Application Engine

Fixed: Dynamic Template loading

Dynamic templates were not loaded in CM12 as configured in the CAEConfig settings (the setting "viewRepositoryNames" for a Page). This was due to an incorrectly injected ResourceLoader. With the fix, the correct instance of a CompoundResourceLoader is injected.

[CMS-26930]

CoreMedia Studio Client

Initialization of StudioStartupPlugin may now Return a Promise

This allows asynchronous initialization of a StudioStartupPlugin when needed.

[CMS-27354]

Preventing of Superfluous Augmentation Requests

The studio-client and studio-server application are now more robust in detecting whether a product or category is already augmented. Superfluous augmentation request are now prevented when a catalog item is augmented and dropped inside a richtext field.

[CMS-27193]

Fixed: After editing a richtext property (in CKEditor) the cursor jumps to front (Firefox Windows only)

Fixed: After editing (in CKEditor) a richtext property bound to a Struct property the cursor jumps to front (Firefox Windows only)

[CMS-27096]

Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests

We fixed a bug for the Studio multi-preview where in the case of a previewUrlServicePreviewProvider the preview URL was obtained many times, effectively making the preview unusable for possibly minutes.

[CMS-26968]

Fixed German translation for "Add Bookmark" Menu Item

Fixed German translation for "Add Bookmark" Menu Item

[CMS-25556]

Theme Updates for GenericDocumentForm

Missing theme updates for GenericDocumentForm added.

[CMS-25339]

Fixed External Link Validator

When URLs are pasted into Studio input fields (e.g. from Word or Excel documents), these may contain invalid characters that are not visible. The URL validator has been improved so that these characters are detected now and indicate an error in the Studio for the corresponding input field.

[CMS-25171]

Studio Client: Umlauts are not always displayed with colons

Possible cutoff umlauts on cards header component in forms is fixed.

[CMS-24907]

The BBCode RichText Editor Renders Additional bbcode Tags

The BBCode RichText editor now comes with additional plugins that allow to display certain bbcode tags inside the editor. The editor now displays italic [i], underlined [u] and strikethrough [s] text, as well as lists [list] and headings [h1]...[h6].

[CMS-23901]

CoreMedia Studio Server

Fix bug in InterceptorsStudioAutoConfiguration#settingsUploadInterceptors

A bug in settingsUploadInterceptor where the content type on the interceptor was falsely set to CMArticle has been resolved. The content type for the interceptor is CMDownload again.

[CMS-27059]

ConfigurableDeadLinkValidator is configurable now

The ConfigurableDeadLinkValidator (that validates dead links to deleted or destroyed documents) is configurable now. The excludedProperties config prop `configurable-dead-link-validator.excluded-properties` can be used to exclude properties from validation. The single validator operates on type Document and excludes by default the "placement" property.

[CMS-27045]

Fixed CommerceContentTypesPictureResolver for empty URLs

Fixed CommerceContentTypesPictureResolver so that `Optional.empty()` is returned for empty commerce URLs.

[CMS-25296]

CoreMedia Frontend Workspace

Fixed a bug with code splitting feature not working in certain setups

Fixed an issue with getChunkPathById.js were an invalid url is generated and requested in certain CAE setups.

[CMS-25685]

CoreMedia Headless Server

Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type

HeadlessServer overwrote the fetch expression when a GraphQL type used the @inherit directive with two or more types, which also implemented GraphQL interfaces. The problem was fixed.

[CMS-27168]

Apollo Federation Support

HeadlessServer now comes with Apollo Federation Support for GraphQL. To enable Federation Support, simply add the library `com.apollographql.federa`

`tion:federation-graphql-java-support:5.0.0` to your maven dependencies with scope `runtime`:

```
<dependency>
  <groupId>com.apollographql.federation</groupId>
  <artifactId>federation-graphql-java-support</artifactId>
  <scope>runtime</scope>
</dependency>
```

During server start, the library will be detected and federation support will be enabled. The log will show an additional info level message, that federation support is active.

[CMS-27128]

Miscellaneous

Update Documentation on CAE Spring Security

The CAE Developer Manual - Spring Security section now contains a paragraph about User Authentication configuration and hints towards necessary actions in case the Elastic Social extension was disabled.

[CMS-24169]

4.15 Release 2406.1.0

The release contains:

- Breaking changes: 3
- Changes and improvements: 29
- Bugfixes: 31

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.

Release date: 2024-12-18

Breaking Changes

- CMS-25319: Updated to Spring Boot 3.4 and Spring Framework 6.2
- CMS-25871: Changed UserProvider Setup Policy
- CMS-25371: CKEditor 5 Version Update

Changes and Improvements

- CMS-26946: Updated Maven dependencies and plugins
- CMS-26990: Updated Commerce Client ClientProduct#getCategories
- CMS-25708: Deprecation of Google Analytics Connectors
- CMS-24847: Updated Hibernate

Bugfixes

- CMS-25907: Fixed Content Feeder to Detect Cycles in CMS Catalog Categories
- CMS-25632: Additional Information on Blob Sharing Configuration Options
- CMS-26944: Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.
- CMS-25937: Added Protected Users
- CMS-25824: Content Lists In Start Workflow Forms Are Now Colorful Again
- CMS-25135: Added option to show home folder
- CMS-26978: Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer

- CMS-25420: HtmlFragment did not support data.sizeLong
- CMS-24243: Warning for cache configuration of Remote Links cache

4.15.1 Breaking Changes

CoreMedia Core

Updated to Spring Boot 3.4 and Spring Framework 6.2

The project has been updated to:

Spring Boot to 3.4.0 - see also Spring Boot 3. Release Notes

Spring Framework to 6.2.0 - see also Upgrading to Spring Framework 6.x

This update includes many further 3rd library updates, which are given in a separate release note. This release note is marked as a breaking change because it may require work to fix project code (blueprint customizations) to adjust to the following (or further) changes:

- URL Parsing
- Bean Overriding in Tests

Also, some plugins or extensions might break and have to be updated (e.g. CoreMedia Salesforce Marketing Cloud extension).

In many cases this update will not be breaking at all.

(CMS-25319)

Miscellaneous

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

Follow Section "Changed UserProvider Setup Policy" [499] for upgrade information.

(CMS-25871)

CKEditor 5 Version Update

CKEditor 5 has been updated to 43.3.1. Find details below:

- **New Version:** 43.3.1

- **Reason:** Module structure changed: Using unified package ckeditor5.

- Migration:
  - If any imports like `"@ckeditor/ckeditor5-*"` are used, migration efforts are necessary, as only imports from "ckeditor5" are allowed
    - all other imports have to be replaced by imports from "ckeditor5"
    - or, if imports are not available, utilize workarounds like alias configurations for webpack
- Migration Hint:
  - Due to inconsistent package exports in some CKEditor5 plugins, you might be forced to create a patch and add a default export to the `package.json` of the plugin package. Please see the PNPM patch documentation to learn about how to patch packages or the CoreMedia CKEditor5 plugins workspace's `package.json` to see how the patch is applied.
- **Release Notes:** [Migrating to new installation methods | CKEditor5 documentation|https://ckeditor.com/docs/ckeditor5/43.3.1/updating/nim-migration/migration-to-new-installation-methods.html]

[CMS-25371]

4.15.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.10
- Bouncy Castle Java → 1.79
- Byte Buddy → 1.15.10
- Commons Lang → 3.17.0
- Enterprise Security API → 2.6.0.0
- Error Prone → 2.36.0
- Google Analytics Data Client for Java → 0.65.0
- Google API Common for Java → 2.41.0
- Google API Extensions for Java → 2.58.0
- Google Auth Library for Java → 1.30.0

- Google HTTP Client Library for Java → 1.45.1
- gRPC-Java → 1.68.2
- Guava → 33.3.1-jre
- Mockito → 5.14.2
- Micrometer → 1.14.1
- Netty → 4.1.115.Final
- Protocol Buffers for Java → 4.29.0
- Reactor Project BOM → 2024.0.0
- Spring Boot → 3.4.0
- Spring Data BOM → 2024.1.0
- Spring Framework → 6.2.0
- Spring for GraphQL → 1.3.3
- Spring Security → 6.4.1
- Spring Webflow → 3.0.1
- Tomcat → 10.1.33

[CMS-26946]

CoreMedia Commerce Hub

Updated Commerce Client ClientProduct#getCategories

The commerce client now might return multiple Categories when calling Client-Product#getCategories.

[CMS-26990]

Miscellaneous

Deprecation of Google Analytics Connectors

The integration of Google Analytics Connectors in Studio is deprecated together with the persistence based on the Elastic Core (ModelService). This includes extensions es-alx/es-alx-google, es-alx/es-alx-retrieval-component and module bpbase-es-alx-common. These features are discontinued and will be replaced by an integrated solution.

Update: Functionality for website tracking will still be available.

[CMS-25708]

Updated Hibernate

Updated hibernate-core to 6.6.3-Final and update hypersistence-utils-hibernate-62 to hypersistence-utils-hibernate-63 version 3.8.3.

[CMS-24847]

4.15.3 Fixed Issues

CoreMedia Core

Fixed Content Feeder to Detect Cycles in CMS Catalog Categories

Fixed a bug in the Content Feeder to not run into a StackOverflowError, if there is a cycle in children links of CMCategory content items.

[CMS-25907]

Additional Information on Blob Sharing Configuration Options

New blob sharing configuration options for Content Servers have been documented recently (*sql.store.generate-blob-ids* and *sql.store.read-only-media-store-names*). These are currently *only* to be used with integration of the *Image Transformation Service* and *Blob Service* and must not be used in projects otherwise. An additional note in the documentation makes this restriction clear now.

[CMS-25632]

CoreMedia Studio Client

Fixed: LinkBalloon Closes when a Drag and Drop started in CoreMedia Studio.

There was an issue while dropping contents into the RichText editor. The editor's link balloon would close on the first drag attempt. This issue is now fixed.

[CMS-26944]

Added Protected Users

A list of protected users and groups can be defined in the application.properties from the Studio server now. The members are marked with a lock symbol and tooltiop and the deletion action is disabled then.

The CoreMedia Blueprint system users and groups are already part of these lists.

[CMS-25937]

Content Lists In Start Workflow Forms Are Now Colorful Again

The content lists in the start-workflow forms were no longer colorful since the Studio refresh for 2401. There are now, once again.

[CMS-25824]

Added option to show home folder

A setting has been added to the user preference, that allows to show the "Home" folder as part of the library. The setting is limited to administrative users and allows to access the home folders of all users.

[CMS-25135]

CoreMedia Headless Server

Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer

Richtext transformation did not filter invalid, embedded content links. The problem was fixed invoking the filter predicates during richtext transformation.

The changes made new constructors in the public API necessary. For backward compatibility, the former constructors were kept in the code as legacy constructors but marked deprecated for removal. It is highly recommended not to use the deprecated constructor anymore and instead update existing custom code to use the new constructors. Also be aware, using the old constructors will work but will also keep the old, wrong behavior!

[CMS-26978]

HtmlFragment did not support data.sizeLong

A query for property `sizeLong` of `data` from a `CMHTML` document lead to an error, this is fixed now by adding the corresponding method ContentMarkupAdapter#get-SizeLong. The method ContentMarkupAdapter#getSize is deprecated analog to Content-BlobAdapter#getSize.

[CMS-25420]

Warning for cache configuration of Remote Links cache

The cache configuration for "remote-links" was erroneously configured with a specific weigher which lead to a warning. The cache is now configured without a specific weigher.

[CMS-24243]

4.16 Release 2406.0.5

The release contains:

- Breaking changes: 2
- Changes and improvements: 34
- Bugfixes: 55

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.

Release date: 2025-05-16

Breaking Changes

- CMS-27252: Freemarker: make class resolver configurable
- CMS-27141: Removed Support for Filter Expressions in Log Configurations

Changes and Improvements

- CMS-25948: Updated Maven dependencies and plugins
- CMS-25571: Parameter Appending Link Transformers May Skip Transformation for Bean Types
- CMS-27159: Changed Content Type Selector Filter Options
- CMS-25982: Make library column resizer more visible
- CMS-27253: Third-Party Update: Apache Solr 9.8.0
- CMS-18494: Smart Validation for Segment in Commerce Pages

Bugfixes

- CMS-27003: RichTextCorrectionConverter: Multiple corrected attributes ArrayIndex-OutOfBounds exception fixed
- CMS-25907: Fixed Content Feeder to Detect Cycles in CMS Catalog Categories
- CMS-27431: SiteFilter pattern matching for /service/search/{site} fixed for CAE
- CMS-26930: Fixed: Dynamic Template loading
- CMS-27466: Studio Client Container Image now Respects sigterm and sigint Signals
- CMS-27361: Added Overflow for Struct Editor and Pagegrid Toolbars

- CMS-27257: Fixed Height of Start Workflow Dialog
- CMS-26968: Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests
- CMS-25937: Added Protected Users
- CMS-25824: Content Lists In Start Workflow Forms Are Now Colorful Again
- CMS-25556: Fixed German translation for "Add Bookmark" Menu Item
- CMS-25339: Theme Updates for GenericDocumentForm
- CMS-25171: Fixed External Link Validator
- CMS-25135: Added option to show home folder
- CMS-24907: Studio Client: Umlauts are not always displayed with colons
- CMS-27775: Fixed Potential Cache Deadlock in LoadedImageCacheKey
- CMS-27045: ConfigurableDeadLinkValidator is configurable now
- CMS-25296: Fixed CommerceContentTypesPictureResolver for empty URLs
- CMS-8538: New deprecation: CMMedia#getCaption
- CMS-27699: Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses
- CMS-27635: HeadlessServer now also supports type conversion of path segments used as GraphQL input variables
- CMS-27168: Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type
- CMS-26978: Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer
- CMS-27728: Optimized Blob Link Building
- CMS-27457: Fixed QuickCreate Dialog "skipInitializers" Flag

4.16.1 Breaking Changes

CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's `new_builtin_class_resolver` is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://free-

marker.apache.org/docs/api/freemarker/template/Configuration.html and https://free-marker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Document-ation.

[CMS-27141]

4.16.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.13
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.12
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.14
- CoreMedia Adapter for HCL Commerce → 3.0.12
- Apache HttpComponents Client 5 → 5.4.4
- AspectJ → 1.9.24
- AssertJ → 3.27.3
- Bouncy Castle Java → 1.80
- Byte Buddy → 1.17.4
- Commons Codec → 1.18.0
- Commons Collections → 4.5.0
- Commons DBCP → 2.13.0

- Commons Pool → 2.12.1
- Commons Text → 1.13.1
- Enterprise Security API → 2.6.0.0
- Error Prone → 2.38.0
- FreeMarker → 2.3.34
- Google Analytics Data Client for Java → 0.73.0
- Google API Common for Java → 2.48.0
- Google API Extensions for Java → 2.65.0
- Google Auth Library for Java → 1.35.0
- Google HTTP Client Library for Java → 1.47.0
- Google OAuth Client Library for Java → 1.39.0
- GraphQL Java DataLoader → 3.4.0
- GraphQL Java → 22.4
- gRPC-Java → 1.72.0
- Gson → 2.13.1
- Guava → 33.4.8-jre
- Hibernate Validator → 8.0.2.Final
- Jackson → 2.19.0
- Jakarta Validation API → 3.1.1
- Javassist → 3.30.2-GA
- JBoss Logging → 3.6.1.Final
- Jib Maven Plugin → 3.4.5
- JSON-Java → 20250107
- JUnit Jupiter → 5.12.2
- Logback → 1.5.18
- Micrometer → 1.13.13
- Netty → 4.1.121.Final
- Plugin Framework for Java → 3.13.0
- Protocol Buffers for Java → 4.30.2
- Reactor Project BOM → 2023.0.17
- SLF4J → 2.0.17
- SnakeYAML → 2.4
- Spring Boot → 3.3.11
- Spring Data BOM → 2024.0.11
- Spring Framework → 6.1.19
- Spring for GraphQL → 1.3.5
- Spring Security → 6.3.7
- Spring Webflow → 3.0.1
- Tomcat → 10.1.41

[CMS-25948]

CoreMedia Content Application Engine

Parameter Appending Link Transformers May Skip Transformation for Bean Types

The configuration property `cae.link-transformer.params-append er.skip-for-type` has been added that allows deployments to skip link transformation by parameter appending link transformers for configurable bean types. The configuration property is a map indexed by the lowercase version of the transformer bean name and the values of the map are a collection of fully-qualified classes for which the transformation should be skipped.

Example:

```
cae.link-transformer.params-appender.skip-for-type.previewdateappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMCSS,com.coremedia.blueprint.common.contentbeans.CMImage,
com.coremedia.blueprint.common.contentbeans.CMJavaScript,com.coremedia.blueprint.common.contentbeans.CMTheme

cae.link-transformer.params-appender.skip-for-type.developermodeappendinglinktransformer=
com.coremedia.blueprint.common.contentbeans.CMExternalLink
```

The configuration is applicable to beans of the following link transformer implementations:

- `com.coremedia.livecontext.fragment.links.trans formers.FragmentParamsAppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewDate AppendingLinkTransformer`
- `com.coremedia.livecontext.preview.PreviewParametersAp pendingLinkTransformer`
- `com.coremedia.objectserver.web.links.ParameterAp pendingLinkTransformer`

[CMS-25571]

CoreMedia Studio Client

Changed Content Type Selector Filter Options

When inputting a filter value for the Content Type selector combo-box, any matches are shown now, not only type names that start with the given input.

[CMS-27159]

Make library column resizer more visible

The "Adjust column width" function is much easier to find and handle in the column header of the library.

[CMS-25982]

Miscellaneous

Third-Party Update: Apache Solr 9.8.0

Apache Solr has been updated to version 9.8.0. The new version fixes security vulnerability CVE-2025-24814.

A new coremedia/solr-base Docker image with tag 2.5-cm-9.8.0 has been released, which also provides a fix for leader/follower replication with enabled basic authentication. It adds the environment variable `SOLR_LEADER_BASIC_AUTH` for configuring basic authentication credentials. Starting with previous release Solr 9.7.0, credentials that are included in the `SOLR_LEADER_URL` environment variable are not used anymore.

See https://solr.apache.org/docs/9_8_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-8 for a list of changes in Solr.

[CMS-27253]

Smart Validation for Segment in Commerce Pages

In commerce-related page types (Augmented Category, Augmented Product and Augmented Page) the segment is typically not used, at least when it is a commerce-led scenario. In such a case the segment is not used to build an URL (but it is a Storefront URL). Therefore, the segment does not need to be validated. Only in a hybrid scenario (when the settings "livecontext.policy.commerce-category-links", "livecontext.policy.commerce-product-links" or "livecontext.policy.commerce-page-links" are "true") the validation is done for these page types.

[CMS-18494]

4.16.3 Fixed Issues

CoreMedia Core

RichTextCorrectionConverter: Multiple corrected attributes ArrayIndexOutOfBounds exception fixed

In `RichTextCorrectionConverter` an ArrayIndexOutOfBounds exception was thrown when multiple attributes were adapted. This has been fixed and works now as expected.

[CMS-27003]

Fixed Content Feeder to Detect Cycles in CMS Catalog Categories

Fixed a bug in the Content Feeder to not run into a StackOverflowError, if there is a cycle in children links of CMCategory content items.

[CMS-25907]

CoreMedia Content Application Engine

SiteFilter pattern matching for /service/search/{site} fixed for CAE

In the `cae.site.patterns` property the {{/service/search/

{site}

}} had an unintended `}` at the end and therefore did not match. Now it matches. The bug had no impact as a fallback resolved the site from the path in another way if no pattern matched.

[CMS-27431]

Fixed: Dynamic Template loading

Dynamic templates were not loaded in CM12 as configured in the CAEConfig settings (the setting "viewRepositoryNames" for a Page). This was due to an incorrectly injected

ResourceLoader. With the fix, the correct instance of a CompoundResourceLoader is injected.

[CMS-26930]

CoreMedia Studio Client

Studio Client Container Image now Respects sigterm and sigint Signals

due to a misconfiguration in the entrypoint script of the studio-client, the nginx process of the container did not receive sigint and sigterm signals and therefore did not shut down as required but was killed by the container runtime after it hit the configured graceful shutdown timeout.

[CMS-27466]

Added Overflow for Struct Editor and Pagegrid Toolbars

The overflow option of these toolbars were not enabled. Buttons are now shown in a drop down on overflow again.

[CMS-27361]

Fixed Height of Start Workflow Dialog

The minimum height of the Start Publication Workflow has been fixed so that it fits for FullHD screens with 150% scaling too.

[CMS-27257]

Fixed Multi-Preview Issue Where The Preview Url Service Provider Ended Up With Too Many Requests

We fixed a bug for the Studio multi-preview where in the case of a previewUrlServicePreviewProvider the preview URL was obtained many times, effectively making the preview unusable for possibly minutes.

[CMS-26968]

Added Protected Users

A list of protected users and groups can be defined in the application.properties from the Studio server now. The members are marked with a lock symbol and tooltiop and the deletion action is disabled then.

The CoreMedia Blueprint system users and groups are already part of these lists.

[CMS-25937]

Content Lists In Start Workflow Forms Are Now Colorful Again

The content lists in the start-workflow forms were no longer colorful since the Studio refresh for 2401. There are now, once again.

[CMS-25824]

Fixed German translation for "Add Bookmark" Menu Item

Fixed German translation for "Add Bookmark" Menu Item

[CMS-25556]

Theme Updates for GenericDocumentForm

Missing theme updates for GenericDocumentForm added.

[CMS-25339]

Fixed External Link Validator

When URLs are pasted into Studio input fields (e.g. from Word or Excel documents), these may contain invalid characters that are not visible. The URL validator has been improved so that these characters are detected now and indicate an error in the Studio for the corresponding input field.

[CMS-25171]

Added option to show home folder

A setting has been added to the user preference, that allows to show the "Home" folder as part of the library. The setting is limited to administrative users and allows to access the home folders of all users.

[CMS-25135]

Studio Client: Umlauts are not always displayed with colons

Possible cutoff umlauts on cards header component in forms is fixed.

[CMS-24907]

CoreMedia Studio Server

Fixed Potential Cache Deadlock in LoadedImageCacheKey

Fixed a bug in the LoadedImageCacheKey that could cause a deadlock in the Studio Server.

[CMS-27775]

ConfigurableDeadLinkValidator is configurable now

The ConfigurableDeadLinkValidator (that validates dead links to deleted or destroyed documents) is configurable now. The excludedProperties config prop `configurable-dead-link-validator.excluded-properties` can be used to exclude properties from validation. The single validator operates on type Document and excludes by default the "placement" property.

[CMS-27045]

Fixed CommerceContentTypesPictureResolver for empty URLs

Fixed CommerceContentTypesPictureResolver so that `Optional.empty()` is returned for empty commerce URLs.

[CMS-25296]

New deprecation: CMMedia#getCaption

The method `CMMedia#getCaption` is unused for a while and is confusing because the Studio property field `caption` is stored in the property `teaserText` of `CMTeasable`. The method `CMMedia#getCaption` will be removed, use `CMTeasable#getTeaserText` instead.

[CMS-8538]

CoreMedia Headless Server

Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses

Starting with 2404 (the introduction of Spring-GraphQL-Library), GraphQL responses of JSLT transformed persisted queries did not pass through potential GraphQL error messages.

This regression was fixed. In order not to break the current version, the fix must be enabled by an additional compatibility flag `caas.rest.error-messages-over-jslt-enabled=true|false`. To stay non-breaking within versions 2406 and 2412, the flag defaults to false!

If the flag is activated, all JSLT templates must be updated, as the JSON path of the response now includes the explicit "data" property again and the potential "errors" property of course. In effect this means, the former JSLT templates of version 2310-LTS and prior will work again.

(CMS-27699)

HeadlessServer now also supports type conversion of path segments used as GraphQL input variables

Previously, HeadlessServer converted HTTP request parameters into the necessary type for a GraphQL input variables only. With this fix type conversion is now also supported for path segments of the HTTP request path.

(CMS-27635)

Bugfix HeadlessServer: Multiple inheritance for GraphQL types overwrites fetch expression by last type

HeadlessServer overwrote the fetch expression when a GraphQL type used the @inherit directive with two or more types, which also implemented GraphQL interfaces. The problem was fixed.

(CMS-27168)

Bugfix: Missing validation of invalid, embedded content in richtext in HeadlessServer

Richtext transformation did not filter invalid, embedded content links. The problem was fixed invoking the filter predicates during richtext transformation.

The changes made new constructors in the public API necessary. For backward compatibility, the former constructors were kept in the code as legacy constructors but marked deprecated for removal. It is highly recommended not to use the deprecated constructor anymore and instead update existing custom code to use the new constructors. Also be aware, using the old constructors will work but will also keep the old, wrong behavior!

[CMS-26978]

Miscellaneous

Optimized Blob Link Building

Starting with CMCC 2401.1, blob links of the Blueprint CAE (generated by `com.core media.blueprint.cae.handlers.TransformedBlobHand ler#buildLink`) are sensitive to responsive image settings. Therefore, building the link requires a transformation incl. streaming the original blob each time, because the settings may have changed. This turned out to be a severe performance issue, so we reverted this behaviour.

The drawback is that changed responsive image settings are not effective immediately, but outdated images may be rendered. However, responsive image settings are not changed frequently on production systems, so this should not be an issue in practice. You can enforce up-to-date images by restarting the CAE.

There is a configuration property delivery.image-settings-aware-etags to control the behaviour. The default is `true`, which means backward compatible behaviour. However, it is recommended to set it to `false` for production systems.

[CMS-27728]

Fixed QuickCreate Dialog "skipInitializers" Flag

The configuration flag "skipInitializers" is no longer ignored when content is created through the Quick-Create dialog.

[CMS-27457]

4.17 Release 2406.0.4

The release contains:

- Breaking changes: 0
- Changes and improvements: 8
- Bugfixes: 33

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.

Release date: 2024-11-14

Breaking Changes

Changes and Improvements

- CMS-25837: Updated Maven dependencies and plugins
- CMS-25831: Third-Party Update: Apache Solr 9.7.0

Bugfixes

- CMS-25773: Informative Exception for Non-Existing Markup Grammar
- CMS-25589: Documentation for cap.server.maximum-startup-delay updated
- CMS-25645: Adjustment of enable-sitemap-generation script
- CMS-24147: Adjusted *.asRichtextEmbed.ftl templates
- CMS-25928: Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded
- CMS-25722: Fixed Bug That Broke Keyboard Navigation Through Document Forms
- CMS-25647: Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client
- CMS-25613: IntegerPropertyFields do not have an underline
- CMS-24129: CKEditor5 Cursor Issue Fixed
- CMS-25737: Fixed thumbnails for augmented commerce items
- CMS-25651: External Page validators enabled
- CMS-25334: Fixed memory issue for blob loading

- CMS-24935: Handled StackOverflowError While Resolving Default Picture [2nd Fix]
- CMS-25962: Fixed bug in AbsoluteUrlPrefixRuleProvider matching null
- CMS-25563: Normalized Extension Dependency Order

4.17.1 Breaking Changes

This release contains no breaking changes

4.17.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.9
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.8
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.9
- CoreMedia Adapter for HCL Commerce → 3.0.8
- Apache HttpComponents Client 5 → 5.4.1
- Byte Buddy → 1.15.7
- Enterprise Security API → 2.5.5.0
- Error Prone → 2.35.1
- Google Analytics Data Client for Java → 0.64.0
- Google API Common for Java → 2.40.0
- Google API Extensions for Java → 2.57.0
- Google Auth Library for Java → 1.29.0
- gRPC-Java → 1.68.1
- Jackson → 2.18.1
- Jib Maven Plugin → 3.4.4
- JUnit Jupiter → 5.11.3
- Logback → 1.5.12
- Micrometer → 1.13.6
- Netty → 4.1.114.Final
- Plugin Framework for Java → 3.12.1

- Protocol Buffers for Java → 4.28.3
- Reactor Project BOM → 2023.0.11
- Spring Boot → 3.3.5
- Spring Data BOM → 2024.0.5
- Spring Framework → 6.1.14
- Spring for GraphQL → 1.3.3
- Spring Security → 6.3.4
- Tomcat → 10.1.31

[CMS-25837]

Third-Party Update: Apache Solr 9.7.0

Apache Solr has been updated to version 9.7.0. Alongside, a new coremedia/solr-base Docker image with tag 2.4-cm-9.7.0 was released. As part of this change, the following transitive dependencies of Apache Solr have been updated to match versions used by Solr:

- Apache Zookeeper 3.9.2
- Eclipse Jetty 10.0.22

See https://solr.apache.org/docs/9_7_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-7 for a list of changes in Solr. We have kept Solr schema configuration files at version 1.6 to avoid the need to re-index data.

[CMS-25831]

4.17.3 Fixed Issues

CoreMedia Core

Informative Exception for Non-Existing Markup Grammar

When a custom *XmlGrammar* is removed from the *Document Type Model* [`*-doc types.xml`] but documents exist in the repository which still reference the removed *XmlGrammar*, this is an inconsistent configuration. An attempt to publish such a document logs a *NullPointerException* in the *Content Management Server* and publication fails. With the change, now more detail information is logged in both *Content Management Server* and *Studio Server* if a publication is attempted.

[CMS-25773]

Documentation for cap.server.maximum-startup-delay updated

The documentation for server property `cap.server.maximum-startup-delay` has been updated to reflect the configured default value. In addition the effect of this property on the server's startup has been detailed.

[CMS-25589]

CoreMedia Content Application Engine

Adjustment of enable-sitemap-generation script

A superfluous line in the `enable-sitemap-generation` script was removed.

[CMS-25645]

Adjusted *.asRichtextEmbed.ftl templates

With `CMS-19278` closing and opening `<p>` tags have been added to `CMTeasable.asRichtextEmbed.ftl` to avoid breaking HTML validity. Since embedded content can also be embedded inside headlines, tables, etc., this change actually broke HTML validity even more. This change also caused empty `<p>` tags surrounding embedded content, especially when embedded content was placed at the beginning of the richtext. Now these additional closing and re-opening `<p>` tags have been removed in all `*.asRichtextEmbed.ftl` templates.

[CMS-24147]

CoreMedia Studio Client

Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded

We fixed a bug related to the WorkAreaTabBar where the layouting mechanism would run into a "maximum call stack size exceeded" error leading to a Studio freeze.

[CMS-25928]

Fixed Bug That Broke Keyboard Navigation Through Document Forms

We fixed a bug where opening the third tab of a content type (which is when tab reuse kicks in) broke the keyboard navigation through the document form (with the TAB key).

[CMS-25722]

Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client

We removed the deprecation notice for `siteIndicatorDepth` as part of the `SiteModel` in Studio Client.

As part of this change `cm validate-multisite` got extended by a new issue code:

```
MS-VALIDATION-4009 – DISCOURAGED_PROPERTY_VALUE
```

The new issue-code is reported at level `INFO` and is triggered, when using a `siteIndicatorDepth` different to `0` (zero).

Motivation

As part of `CMS-9521` we deprecated `siteIndicatorDepth` for 2001.1 and changed the default to `0` (zero) rather than `1` (one), as we got aware that many editors struggled with site indicators being hidden in the "depth" of a site – which in the end caused corrupted sites.

Nevertheless, migrating existing content from a depth 1 to depth 0 may raise considerable migration effort, as you have to move all site indicators up one level in one step (while stopping editorial work) and then republish all your sites.

Because of this, we decided to remove the deprecation notice, so that we will support site indicator depths different to `0` also on in the future. The default which ships with CoreMedia Blueprint will stick to the recommended default `0`, though.

[CMS-25647]

IntegerPropertyFields do not have an underline

Layout underline problem of IntegerPropertyField fixed.

[CMS-25613]

CKEditor5 Cursor Issue Fixed

An issue with the CKEditor5 cursor when used with struct properties has been fixed.

[CMS-24129]

CoreMedia Studio Server

Fixed thumbnails for augmented commerce items

If augmented commerce items (category, product) didn't have a picture url in the commerce system, the thumbnail icon couldn't displayed in CoreMedia Studio even if a picture asset has been assigned (a broken URL was rendered). This has been fixed.

[CMS-25737]

External Page validators enabled

Added two new validator beans for External Pages. External Pages must also be part of the navigation in order to function, hence the new validators check that they are not part of a cycle (recursion) and that they do not have multiple parent nodes. This has so far only been checked for Channels, Augmented Categories and Categories.

[CMS-25651]

Fixed memory issue for blob loading

Fixed possible heap size exceptions when downloading blobs via the Studio REST service.

[CMS-25334]

Handled StackOverflowError While Resolving Default Picture (2nd Fix)

We fixed a bug where a StackOverflowError was thrown while resolving default pictures for cyclicly linked content items. This is the second fix for this problem as the first one was not sufficient.

[CMS-24935]

Miscellaneous

Fixed bug in AbsoluteUrlPrefixRuleProvider matching null

The `com.coremedia.blueprint.base.links.impl.AbsoluteUrl PrefixRuleProvider` now interprets the `?` as undefined value for matching `null` again.

[CMS-25962]

Normalized Extension Dependency Order

In recent releases, the dependencies of enabled Blueprint extensions were not correctly ordered as established by the extensions tool. This would lead to a diff when calling `extensions:sync` even without enabling or disabling any extensions. This has been corrected.

To minimize merge conflicts, you should invoke the extensions tool to normalize the dependency order in your customized Blueprint workspace, too. To that end, in your workspace root directory, simply call

```
mvn    -f    workspace-configuration/extensions    exten
sions:sync
```

and commit the resulting diff before merging the new CoreMedia Blueprint version.

[CMS-25563]

4.18 Release 2406.0.3

The release contains:

- Breaking changes: 2
- Changes and improvements: 15
- Bugfixes: 37

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.

Release date: 2024-10-18

Breaking Changes

- CMS-24694: CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset
- CMS-25278: Updated Spring Security

Changes and Improvements

- CMS-25509: Updated Maven dependencies and plugins
- CMS-25375: Missing CORS configuration don't disable CORS protection anymore
- CMS-25550: Upload Dialog Post Upload Actions
- CMS-22625: Content Hub: Improved initial page load behavior for small page sizes
- CMS-25725: Update of springdoc to 2.6.0
- CMS-25603: HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

Bugfixes

- CMS-25496: Improved Logging for Server Import
- CMS-25570: Fixing a related teaser overlay mechanism resolved this behavior
- CMS-25403: Fix for JPEG Image Upload Failure
- CMS-21492: Content Hub: Delete temporary files after import
- CMS-25749: Pendo plugin v2.2.0
- CMS-25553: Update of Pendo plugin to version v2.1.0
- CMS-25610: Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception

- CMS-25435: Headless server can be run without commerce extension
- CMS-25167: Documentation
- CMS-25421: Fix ParameterAppendingLinkTransformer for opaque URLs
- CMS-24884: Fixed Bug in Blueprint Link Building
- CMS-24040: Fixed Cache Size Error

4.18.1 Breaking Changes

CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

Follow Section "CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset" [502] for upgrade information.

[CMS-24694]

Miscellaneous

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

4.18.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.8
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.7
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.8
- CoreMedia Adapter for HCL Commerce → 3.0.7
- Byte Buddy → 1.15.1
- Commons CLI → 1.9.0
- Commons Compress → 1.27.1
- Commons Lang → 3.17.0
- Error Prone → 2.32.0
- Google Analytics Data Client for Java → 0.60.0
- Google API Common for Java → 2.36.0
- Google API Extensions for Java → 2.53.0
- Google Auth Library for Java → 1.25.0
- Google HTTP Client Library for Java → 1.45.0
- GraphQL Java → 22.3
- gRPC-Java → 1.66.0
- Guava → 33.3.0-jre
- Hibernate → 6.4.10.Final
- Jackson → 2.17.2
- JUnit Jupiter → 5.11.0
- Logback → 1.5.8
- Micrometer → 1.13.4
- Netty → 4.1.113.Final
- Protocol Buffers for Java → 4.28.1
- Reactor Project BOM → 2023.0.10
- SLF4J → 2.0.16
- SnakeYAML → 2.3
- Spring Boot → 3.3.3
- Spring Data BOM → 2024.0.4
- Spring Framework → 6.1.13
- Spring Security → 6.3.3

- Tomcat → 10.1.30

[CMS-25509]

CoreMedia Content Application Engine

Missing CORS configuration don't disable CORS protection anymore

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to CAE configuration properties.

[CMS-25375]

CoreMedia Studio Client

Upload Dialog Post Upload Actions

An extension point for the upload dialog is now available.

Example

```
import { postUploadRegistry } from "@coremedia/studio-client.cap-base-models";

postUploadRegistry._.registerPostUploadAction({
  id: "an-action-id",
  priority: 100, // Priority to sort and execute the actions in order
  description: "descriptive text",
  infoTooltip: "tooltip", // Optional, if not set, no explanation icon will
 be rendered
  action: (content) => {
    // your custom action
  },
  isCheckedByDefault: true, // Optional, if not set, false
});
```

Furthermore, the upload dialog is now wider and contains two columns. One for selecting the files and post actions and one to display the selected files.

[CMS-25550]

Content Hub: Improved initial page load behavior for small page sizes

While using the Content Hub with small page sizes in the library lists a flickering after each loaded page was observable. The flickering has been fixed.

[CMS-22625]

CoreMedia Headless Server

Update of springdoc to 2.6.0

The dependencies org.springdoc:springdoc-openapi-starter-webmvc-ui and org.springdoc:springdoc-openapi-starter-common have been updated to version 2.6.0.

[CMS-25725]

HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

The class LinkWriter of the richtext transformation was not able to receive AttributeTransformer by the transformation-yaml files. This is now possible.

In order to stay non-breaking, the necessary changes to add the existing **PassStyles** attribute transformer was **not** added to the default.yml transformation config.

Customer with this requirement may add this code snippet to their correspondent transformation yml files.

```
outputHandler:         !LinkWriter
 attributeTransformers:         - !PassStyles {styles: *link_styles}
```

Additionally, the referred `*link_styles` of course must be defined also (compare e.g. `*float_styles` of the ImgWriters default configuration for reference).

[CMS-25603]

4.18.3 Fixed Issues

CoreMedia Core

Improved Logging for Server Import

Content Server tool *serverimport* did not report paths of problematic import files in all cases. Those cases have been improved to include the file's path now, too.

[CMS-25496]

CoreMedia Studio Client

Fixing a related teaser overlay mechanism resolved this behavior

The behavior is resolved by fixing a related bug of the teaser overlay mechanism: The teaser overlay was not reset when the source text gets empty.

[CMS-25570]

Fix for JPEG Image Upload Failure

JPEG images which have density metadata outside allowed range [1..65535] could not be uploaded and showed an exception *javax.imageio.metadata.IIOInvalidTreeException: Xdensity attribute out of range* in Studio Server log. With the fix, the system now retries upload of the image without any metadata, effectively falling back to default values. Additional JPEG image metadata will be lost in that case.

[CMS-25403]

Content Hub: Delete temporary files after import

The Content Hub uses temporary files while importing blobs. Those temporary files are now correctly deleted after the import.

[CMS-21492]

CoreMedia Studio Server

Pendo plugin v2.2.0

- Updated Pendo initialization process to use a dedicated endpoint for loading client configuration instead of a queued job. This avoids blocking studio-client startup during high load
- Implemented a 10-second timeout for Pendo client initialization via the dedicated endpoint, ensuring the plugin does not block studio-client startup for longer than this duration
- The default accountId has been updated to "cmcc-on-prem". This value can still be overridden through configuration

[CMS-25749]

Update of Pendo plugin to version v2.1.0

The Pendo plugin now ensures that content listener operations are no longer unnecessarily delayed. All backend tracking operations are moved to a separate thread.

[CMS-25553]

CoreMedia Headless Server

Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception

When the HTML in a HTML fragment is left empty, a serverside exception was thrown by the `HtmlAdapter`. The adapter now returns null instead.

[CMS-25610]

Headless server can be run without commerce extension

There was a dependency for the headless server that could be satisfied without the commerce extension. However, this was not intentional and now the required component is also found without having the commerce extension enabled.

[CMS-25435]

CoreMedia Documentation

Documentation

Update Extensions Chapter

[CMS-25167]

Miscellaneous

Fix ParameterAppendingLinkTransformer for opaque URLs

ParameterAppendingLinkTransformer does not modify opaque URIs like "mailto:mail@www.example.com" anymore.

[CMS-25421]

Fixed Bug in Blueprint Link Building

Due to a bug, the Blueprint CAE built dead links to CMChannel (aka Page) contents which are not linked into the navigation hierarchy. In particular, such links occured in sitemaps. This has been fixed now, and such channels cannot be linked to any longer.

[CMS-24884]

Fixed Cache Size Error

An error in the UAPI cache size calculation could lead to Out-Of-Memory errors in CMS clients. This has been fixed now.

[CMS-24040]

4.19 Release 2406.0.2

The release contains:

- Breaking changes: 3
- Changes and improvements: 16
- Bugfixes: 54

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.

Release date: 2024-08-16

Breaking Changes

- CMS-15884: Starting XML Importer in a Docker Container
- CMS-24982: Changed Signature CartService#deleteCartOrderItem
- CMS-25362: Reverted behavioral change of BELOW folder queries in the QueryService

Changes and Improvements

- CMS-25290: Updated Maven dependencies and plugins

Bugfixes

- CMS-25255: Fixed Blob Sharing ID Inconsistency
- CMS-24727: Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder
- CMS-25105: Added apache httpcomponents5 runtime dependency
- CMS-24695: Made TransformedBlobHandler a page handler
- CMS-22836: Changed generation of RSA keys via CAE application
- CMS-25467: Fixed an issue with loading projects created before 2406.0.0
- CMS-19645: Elastic Social Link Building Properties
- CMS-25416: Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss
- CMS-25335: Bugfix: Headless supports servlet context path for Persisted Queries over REST

- CMS-24871: Enhanced Documentation of Spring Boot ConfigurationProperties
- CMS-25382: Consolidated And Updated Oracle Driver Dependencies

4.19.1 Breaking Changes

CoreMedia Core

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow Section "Starting XML Importer in a Docker Container" [504] for upgrade information.

[CMS-15884]

CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

Follow Section "Reverted behavioral change of BELOW folder queries in the QueryService" [505] for upgrade information.

[CMS-25362]

4.19.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.7
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.6
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.7
- CoreMedia Adapter for HCL Commerce → 3.0.6
- AssertJ → 3.26.3
- Byte Buddy → 1.14.18
- Commons Codec → 1.17.1
- Commons Lang → 3.15.0
- Error Prone → 2.29.2
- Google Analytics Data Client for Java → 0.57.0
- Google API Common for Java → 2.33.0
- Google API Extensions for Java → 2.50.0
- Google Auth Library for Java → 1.24.0
- gRPC-Java → 1.65.1
- Plugin Framework for Java → 3.12.0
- Micrometer → 1.13.2
- Netty → 4.1.112.Final
- Protocol Buffers for Java → 3.25.4
- Reactor Project BOM → 2023.0.7
- Spring Boot → 3.3.2
- Spring Data BOM → 2024.0.2
- Spring Framework → 6.1.11
- Spring for GraphQL → 1.3.2
- Tomcat → 10.1.26

[CMS-25290]

4.19.3 Fixed Issues

CoreMedia Core

Fixed Blob Sharing ID Inconsistency

If you use the RLS's blob sharing capability [`sql.store.generate-blob-ids=false`] in combination with URL blobs, blob ids may have been assigned inconsistently in the RLS repository. This is fixed now.

[CMS-25255]

Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder

Log level of some log messages in `FeedingReceiver` and `ContentTrigger` has been changed from `INFO` to `DEBUG` as they are logged very often.

[CMS-24727]

CoreMedia Content Application Engine

Added apache httpcomponents5 runtime dependency

The `org.apache.httpcomponents.client5:httpclient5` dependency was added as a runtime dependency for `com.coremedia.blueprint:cae-sitemap`.

[CMS-25105]

Made TransformedBlobHandler a page handler

The Blueprint's{{TransformedBlobHandler}} extends `PageHandlerBase` now, and enhances the `ModelAndView` with the page model. This is necessary for the `ExposeCurrentNavigationInterceptor` to set the correct locale in the response.

[CMS-24695]

Changed generation of RSA keys via CAE application

The generation of RSA private and public keys via CAE application has changed. The keys are required for creating a signed token to identify anonymous visitors. Before, a new key pair (signCookie.publicKey and signCookie.privateKey) was created and logged, if a value was missing or invalid. Now a new key pair can be generated via code or actuator, see documentation for details.

(CMS-22836)

CoreMedia Studio Server

Fixed an issue with loading projects created before 2406.0.0

Projects created before 2406.0.0 did not store the "additionalProperties" property if it was empty. This lead to a NullPointerException when loading such projects which is now fixed.

(CMS-25467)

CoreMedia Elastic Social

Elastic Social Link Building Properties

Added option to the ElasticSocialLinkBuildingProperties so that the SimpleLinkFormatter must not use the current request in Studio.

(CMS-19645)

CoreMedia Commerce Hub

Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss

Under certain circumstances the commerce adapter client implementation may not have recovered from temporary connection losses to the commerce adapter. As a result of this bug, fragment requests could not derive the requested site from the given store ID and locale. The only solution was to restart the application that had run into this situation or to clear its cache via actuator or JMX. This bug has been fixed.

[CMS-25416]

CoreMedia Headless Server

Bugfix: Headless supports servlet context path for Persisted Queries over REST

With the introduction of Spring-GraphQL, a non-trivial servlet context path was not working for persisted queries over REST. This problem was fixed.

[CMS-25335]

CoreMedia Documentation

Enhanced Documentation of Spring Boot ConfigurationProperties

We enhanced the documentation of Spring Boot `ConfigurationProperties` along with fixing some issues:

- Type information of a given property is now shorted for types from `java.base` module (such as `Map` rather than `java.util.Map`).
- Deprecated properties are now sorted along with the non-deprecated ones. This especially fixes an issue, that some deprecated properties never made it into the manuals yet.
- All properties within a table are now correctly sorted. Before, you may have seen "parts of the properties" to be not correctly sorted.
- Deprecation information is now enriched by the information as provided by `spring-configuration-metadata.json`, which is, if available, mentioning the replacement (as before), the version since when the property is deprecated and the reason for the deprecation, which may also contain more details on required upgrade steps.

[CMS-24871]

Miscellaneous

Consolidated And Updated Oracle Driver Dependencies

We now consistently use `com.oracle.database.jdbc:ojd
bc11:23.4.0.24.05` as Oracle database driver. The dependency is managed in
`com.coremedia.cms:common-thirdparty-bom` and added as dependency
in `com.coremedia.blueprint:database-drivers` and `com.core
media.cms:editorial-comments-data-oracle`.

[CMS-25382]

4.20 Release 2406.0.1

The release contains:

- Breaking changes: 0
- Changes and improvements: 3
- Bugfixes: 1

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.

Release date: 2024-07-12

Breaking Changes

Changes and Improvements

- CMS-25345: Updated Tomcat to mitigate CVE-2024-34750

Bugfixes

4.20.1 Breaking Changes

This release contains no breaking changes

4.20.2 Changes and Improvements

CoreMedia Core

Updated Tomcat to mitigate CVE-2024-34750

Updated Tomcat to version 10.1.25 to mitigate CVE-2024-34750.

[CMS-25345]

4.20.3 Fixed Issues

4.21 Release 2406.0.0

The release contains:

- Breaking changes: 15
- Changes and improvements: 65
- Bugfixes: 127

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.

Release date: 2024-07-08

Breaking Changes

- CMS-24165: Third-Party Update: Apache Solr 9.6.1
- CMS-24585: Reworked CAE security configuration API
- CMS-25106: Third-Party Update: pnpm to version 9
- CMS-23308: Overhaul of WorkflowValidation Settings
- CMS-24909: Removed dependency management for Google APIs Client Library for Java
- CMS-25260: Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets
- CMS-24141: Updated maven-enforcer-plugin
- CMS-24945: HeadlessServer: Update to GraphQL-Java 22.1
- CMS-24798: Code cleanup: Removed unused SchemaParser
- CMS-24683: HeadlessServer: Missing support for blobs in structs fixed
- CMS-19714: Headless-Server major update to Spring-GraphQL
- CMS-24975: MariaDB Community Server: Known to Work State Discontinued
- CMS-24338: Removed Package com.coremedia.transform.impl from Public API
- CMS-22570: Integer Properties can now be used for the creation of new content with the Ingest Service
- CMS-22469: Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

Changes and Improvements

- CMS-25131: Removed plugins.early-starters property in favor of new plugin descriptor property
- CMS-24725: Third-Party Update: Bouncy Castle
- CMS-24612: Updated Maven dependencies and plugins
- CMS-24348: cm query Provides Format Option
- CMS-24944: Changed management of reactor dependencies to BOM imports
- CMS-25035: Public API Changes of Projects API
- CMS-24863: Bundle CoreMedia Studio In-App Guides and Tracking Plugin into Blueprint
- CMS-24025: Developing Studio Apps Public API and Documentation
- CMS-24023: Studio Apps Public API Avaliable
- CMS-23951: Exclude predefined system users from User Changes App

Bugfixes

- CMS-24789: Fixed CAE Feeder Configuration of Content Repository
- CMS-24773: Fixed Loading of Multiple Document Type Model Files in XML Repository
- CMS-24765: Fixed Content ID Comparison on Client-Side Query
- CMS-24310: Improved Performance for Large Structs
- CMS-24109: Improved Publication Performance
- CMS-22943: Configuration of Custom MIME Types
- CMS-15270: Theme Importer Logging
- CMS-24830: Old SiteFilter is configured to avoid unwanted site resolvings
- CMS-24711: Updated and optimized @coremedia/brick-mediaelement
- CMS-24946: Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled
- CMS-24881: Control Room: Fixed non localized label 'Withdraw All'
- CMS-24745: Locale Switcher: Wrong Master Site Information
- CMS-24730: Taxonomy Performance Issue
- CMS-24709: Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup
- CMS-24622: solved dialogue showing up late in workflow app
- CMS-24551: Added Taxonomy Context Documentation
- CMS-24336: Exclude internal documents of type EditorProfile from "My Edited Content"

- CMS-23998: Client Personalization Monetate deadlock in experiences fixed
- CMS-23482: Content-Disposition Header for BLOB Download in Studio Fixed
- CMS-23104: Content Hub: Improved Logging
- CMS-18687: Fixed Translation Status Widget
- CMS-18488: Fixed Translation Search Filter
- CMS-24354: Added missing master link property for P13N extensions doctypes
- CMS-24768: Lookup of Augmented Pages improved
- CMS-24682: Bugfix: Maximum search limit was ignored
- CMS-23928: Documentation for Custom Filter Queries
- CMS-23916: Bugfix: Headless-Server MediaController does not consider validity date
- CMS-24719: Headless Configuration Issue behind a proxy solved

4.21.1 Breaking Changes

CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Follow Section "Third-Party Update: Apache Solr 9.6.1" [507] for upgrade information.

[CMS-24165]

CoreMedia Content Application Engine

Reworked CAE security configuration API

Reworked CAE security configuration API. Turned `com.coremedia.cae.security.CaeHttpSecurityConfigurer` into an abstract class and removed the former `caeHttpSecurityConfigurer` bean of type `com.coremedia.cae.security.CaeHttpSecurityConfigurer`. The aspects formerly configured by that bean are now configured along with the `securityFilterChain` bean.

[CMS-24585]

CoreMedia Studio Client

Third-Party Update: pnpm to version 9

All packages in frontend workspace and in studio-client require at least pnpm 9.3.0. Please take note of the list of changes here https://github.com/pnpm/pnpm/releases/tag/v9.0.0

Follow Section "Third-Party Update: pnpm to version 9" [508] for upgrade information.

[CMS-25106]

Overhaul of WorkflowValidation Settings

Access to `/Settings/Options/Settings/WorkflowValidation` had some issues, that we fixed. Changes can be summarized as:

- **Rights Issue:** If editors did not have rights on settings documents within `/Settings/Options/Settings`, they experienced, for example, the workflow validation to never end loading when trying to start a workflow. This has been fixed.
- **Publication Limits:** Limits for publication validation could not be adapted as configuration within `WorkflowValidation` settings, as it caused an error. This has been fixed.
- **Documentation:** Documentation for `WorkflowValidation` settings has been straightened and missing parts got added. Corresponding updates have been applied to the Studio User manuals as well as to the Studio Developer Manual.
- **German Localization:** If limits got adjusted editors may have experienced warnings about limits reached within the Start Workflow Window containing badly formatted numbers or even "NaN" [Not a number]. This has been fixed, the localization got aligned with the English localization.
- **Disable Validation:** The option to disable the validation completely was inoperable. This has been fixed. The corresponding setting moved from `/Settings/Options/Settings/WorkflowValidationSettings` to `/Settings/Options/Settings/WorkflowValidation`, so that all validation settings are at a central place now. Note, though, that disabling validation should only be applied in exceptional cases. More details to be found in the manuals.

As part of addressing these issues, the former configuration structure had to be updated from:

```
{
  "limits": {
    "translation": {
      "maxDepthToCompleteChangeSet": null, // type: integer
      "limitForDependentContentItems": null, // type: integer
    },
    "publication": {
      "maxDepthToCompleteChangeSet": null,  // type: integer
    },
```

```
  },
}
```

to a new structure:

```
{
  "disabled": null, // type: boolean, not part of Blueprint content
  "localization": {
    "maxDepthToCompleteChangeSet": null, // type: integer
    "limitForDependentContentItems": null, // type: integer
  },
  "publication": {
    "maxDepthToCompleteChangeSet": null,  // type: integer
  },
}
```

For compatibility reasons, the old settings structure, thus, for example, `limits.translation.maxDepthToCompleteChangeSet` will still work, but the new settings, if set, take precedence.

Follow Section "Overhaul of WorkflowValidation Settings" [508] for upgrade information.

[CMS-23308]

CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there's no more usages of that dependency.

[CMS-24909]

CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

Follow Section "Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets" [510] for upgrade information.

[CMS-25260]

CoreMedia Workspace

Updated maven-enforcer-plugin

maven-enforcer-plugin has been updated to 3.4.1. This also required a new release of our coremedia-enforcer-rules and a slightly different configuration of the rules in pom.xml files.

Follow Section "Updated maven-enforcer-plugin" [511] for upgrade information.

[CMS-24141]

CoreMedia Headless Server

HeadlessServer: Update to GraphQL-Java 22.1

Along with the update of SpringBoot to V3.3, Spring-GraphQL was also updated to the bundled version 1.3. Consequently, the GraphQL-Java library was updated to the latest supported version 22.1. This update came with some breaking changes in its API, causing breaking changes in Headless Server also.

Follow Section "HeadlessServer: Update to GraphQL-Java 22.1" [511] for upgrade information.

[CMS-24945]

Code cleanup: Removed unused SchemaParser

Class Schema `com.coremedia.caas.schema.SchemaParser` was removed from the code base. Since the introduction of Spring-GraphQL in CM12 (2404), Schema-Parser was replaced by several `TypeDefinitionConfigurer`. Consequently, the related `com.coremedia.caas.schema.InheritanceGraphQLError`, used by the SchemaParser was revoked from public API and moved to a non public package, where it is still used by the `TypeDefinitionConfigurer`.

Follow Section "Code cleanup: Removed unused SchemaParser" [512] for upgrade information.

[CMS-24798]

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Follow Section "HeadlessServer: Missing support for blobs in structs fixed" [512] for upgrade information.

[CMS-24683]

Headless-Server major update to Spring-GraphQL

Headless-Server now uses Spring-GraphQL as its main Spring integration. Because of that the following libraries were removed and their APIs cannot be used anymore. They were removed because the corresponding projects are not updated or supported anymore.

Follow Section "Headless-Server major update to Spring-GraphQL" [513] for upgrade information.

[CMS-19714]

Miscellaneous

MariaDB Community Server: Known to Work State Discontinued

The status "Known to work" for the database MariaDB Community Server (compatible with MySQL 8) got removed from our supported environments.

Follow Section "MariaDB Community Server: Known to Work State Discontinued" [514] for upgrade information.

[CMS-24975]

Removed Package com.coremedia.transform.impl from Public API

Package `com.coremedia.transform.impl` contains implementation classes only and was removed from public API. Use the interfaces of package `com.core media.transform` instead.

[CMS-24338]

Integer Properties can now be used for the creation of new content with the Ingest Service

Previously, when you tried to create a new content with Integer Properties by means of the Ingest Service, the Integer values were ignored and returned as Null values. This bug has been fixed. Integer Properties can now also be used during content creation.

Follow Section "Integer Properties can now be used for the creation of new content with the Ingest Service" [515] for upgrade information.

[CMS-22570]

Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

To be able to use human-readable capacity configurations such as `1GB` in favor of `1_073_741_824` given as bytes, a bunch of properties got transformed to hold `DataSize` instead of `long` or `int` values denoting bytes, for example.

The following is a list of affected properties that benefit from this change:

- `com.coremedia.transform`
  - `com.coremedia.transform.blob-cache.size`
- `management.health`
  - `management.health.blobCacheDiskspace.threshold`
  - `management.health.transformedBlob CacheDiskspace.threshold`
- `repository`
  - `repository.blob-streaming-size-threshold`
  - `repository.blob-cache-size`
  - `repository.heap-cache-size`
  - `repository.max-cached-blob-size`
- `studio`
  - `studio.differencing.max-markup-size`
- `sql`
  - `sql.store.sgml-cache-size` [renamed from: `sql.store.sgml-cache-size-bytes`; old name still applicable]
- `workflow`
  - `workflow.blob-streaming-size-threshold`
  - `workflow.blob-cache-size`
  - `workflow.heap-cache-size`
  - `workflow.max-cached-blob-size`

Follow Section "Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications" [515] for upgrade information.

[CMS-22469]

4.21.2 Changes and Improvements

CoreMedia Core

Removed plugins.early-starters property in favor of new plugin descriptor property

The plugin manager property `plugins.early-starters` was removed in favor of the new plugin descriptor property `plugin.independent`. CoreMedia Plugins, like the *awskms-encryption-plugin*, which are independent plugins and can be started on their own - possibly early in an application lifecycle - will provide the necessary configuration themselves now.

[CMS-25131]

Third-Party Update: Bouncy Castle

Bouncy Castle has been updated to version 1.78 to fix security issues like CVE-2024-29857 and CVE-2024-30172.

[CMS-24725]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.4
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.3
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.4
- CoreMedia Adapter for HCL Commerce → 3.0.3
- CoreMedia Plugins Maven Plugin → 1.2.0
- Angus Activation → 2.0.2
- Angus Mail → 2.0.3
- Apache HttpComponents Client → 5.3.1
- AspectJ → 1.9.22.1
- AssertJ → 3.26.0
- Bouncy Castle Java → 1.78.1
- Byte Buddy → 1.14.17
- Commons CLI → 1.8.0
- Commons Codec → 1.17.0
- Commons Compress → 1.26.2
- Commons Exec → 1.4.0
- Commons IO → 2.16.1
- Commons Text → 1.12.0
- Enterprise Security API → 2.5.4.0
- Error Prone → 2.28.0
- Freemarker → 2.3.33
- Google Analytics Data Client for Java → 0.56.0
- Google API Common for Java → 2.32.0
- Google API Extensions for Java → 2.49.0
- Google APIs Client Library for Java → 2.5.0
- Google Auth Library for Java → 1.35.0
- Google HTTP Client Library for Java → 1.44.2
- Google OAuth Client Library for Java → 1.36.0
- gRPC-Java → 1.64.0
- Gson → 2.11.0
- Guava → 33.2.1-jre
- Hibernate → 6.4.9.Final

- Jackson → 2.17.1
- Jakarta Validation API → 3.1.0
- Jib Maven Plugin → 3.4.3
- Liquibase → 4.28.0
- Logback → 1.5.6
- Micrometer → 1.13.1
- Netty → 4.1.111.Final
- PF4J → 3.11.1
- SLF4J → 2.0.13
- Spring Boot → 3.3.0
- Spring Data BOM → 2024.0.1
- Spring Framework → 6.1.9
- Spring for GraphQL → 1.3.0
- Spring Security → 6.3.0
- Tomcat → 10.1.24

[CMS-24612]

cm query Provides Format Option

The `cm query` command has been enhanced to support a `--format` option.

It allows to control to output either using the default multi-column output or new single-column outputs suitable, for example, for forwarding results to subsequent processing via shell pipes.

Supported formats despite the default:

- id: Prints the CoreMedia Content or Version ID
- uuid: Prints the UUID
- path: Prints the path of the content related to the `CapObject` found.

The Content Server Manual has been updated accordingly.

[CMS-24348]

CoreMedia Content Application Engine

Changed management of reactor dependencies to BOM imports

The dependency management for the `io.projectreactor:reactor-core` and the `io.projectreactor.netty:reactor-netty-http` dependencies have been replaced with imports of the `io.projectreactor:reactor-bom`.

Using the latest Reactor Project BOM version 2023.0.7, the dependencies have effectively been updated to:

- Reactor Core → 3.6.7
- Reactor Netty → 1.1.20

[CMS-24944]

CoreMedia Studio Server

Public API Changes of Projects API

The public API of Projects (collaboration-project-api) has changed in preparation for a new implementation. Several methods have been deprecated, the replacement can be found in the javadoc.

[CMS-25035]

Miscellaneous

Bundle CoreMedia Studio In-App Guides and Tracking Plugin into Blueprint

Studio-Client and Studio-Server includes a new bundled plugin `pendo-tracking-plugin` to provide Studio In-App guides together with usage analytics.

This plugin is enabled by default and needs connections to https://content.telemetry.coremedia.services and https://data.telemetry.coremedia.services. If you don't want it in your deployment, you can simple remove the plugin. Please check https://documentation.coremedia.com/cmcc-12/artifacts/2404/webhelp/coremedia-en/content/ApplicationPlugins.html for more details.

[CMS-24863]

Developing Studio Apps Public API and Documentation

Developing Studio Apps now comes with a public API and a developer documentation. Consult the Studio Developer Manual for details.

[CMS-24025]

Studio Apps Public API Avaliable

Public API for developing custom Studio Apps was introduced. The public API types and functions of each of the following packages are exported by their index.d.ts and consequently can be imported from the top-level of these packages. All imports from these packages that require sub-path imports are not public API.

Developer documentation on developing custom apps will follow shortly.

- service-agent ^2.1.0
- @coremedia/studio-client.app-context-models
- @coremedia/studio-client.interaction-services-api
- @coremedia/studio-client.interaction-services-impl
- @coremedia/studio-client.content-services-api
- @coremedia/studio-client.workflow-services-api
- @coremedia/studio-client.project-services-api

[CMS-24023]

Exclude predefined system users from User Changes App

For predefined system users, the User Changes App does not generate "My Edited Content" anymore. These users are defined via default value of the property `user changes.excluded-user-names=admin, publisher, workflow, importer, translation-workflow-robot`. Custom values of this property should be adapted.

The deprecated internal properties `userchanges.paths.exclude` and `userchanges.users.exclude` have been removed.

[CMS-23951]

4.21.3 Fixed Issues

CoreMedia Core

Fixed CAE Feeder Configuration of Content Repository

CAE Feeder failed to connect to content repository as 'feeder' user under certain circumstances. This bug was fixed by tweaking the auto configuration order of the feeder auto configurations.

[CMS-24789]

Fixed Loading of Multiple Document Type Model Files in XML Repository

Loading of multiple Document Type Model (DTM) files for the XML Repository was broken and has been fixed now. Multiple DTM files may again be stated as a comma-separated list with property `repository.params.contentxml` of test class annotation `@TestPropertySource` (see Blueprint workspace for examples).

[CMS-24773]

Fixed Content ID Comparison on Client-Side Query

QueryService#getContentsFulfilling(...) did not work for numerical Content ID comparisons, e.g., `TYPE Document_ : id > 10000`, and threw an exception. This is fixed now.

[CMS-24765]

Improved Performance for Large Structs

The code for loading struct properties was optimized, especially for large structs. This speeds up various operations for content that contains a larger struct value.

[CMS-24310]

Improved Publication Performance

The code for destroying intermediate versions after publication was optimized, especially for very large version histories, and/or if many derived multi-site contents exist with possibly large version histories. This reduces the time needed for publication for some cases.

[CMS-24109]

Configuration of Custom MIME Types

A central configuration for custom MIME Type definitions was added to the Blueprint workspace with file `shared/common/modules/shared/custom-mime-types/src/main/resources/org/apache/tika/mime/custom-mimetypes.xml`. All relevant CMS components depend on this configuration file so that MIME Type definitions added here are active everywhere.

[CMS-22943]

Theme Importer Logging

The output of the theme importer has been cleaned up to distinguish user interaction (unformatted on stdout, like the usage message) from logging (more detailed, formatted with timestamp and severity in the logfile).

[CMS-15270]

CoreMedia Content Application Engine

Old SiteFilter is configured to avoid unwanted site resolvings

In very rare cases it could happen that the CAE SiteFilter resolves a wrong site for certain requests. The SiteFilter was not actually responsible for these requests (e.g. fragment calls). In addition, this could only occur if legacy mode was used, i.e. if no site patterns had been configured. To avoid these unwanted hits even in legacy mode, we have now at least activated the ignore patterns in the default configuration (cae application.properties).

[CMS-24830]

Updated and optimized @coremedia/brick-mediaelement

The external library mediaelement has been updated to latest version 7. In the past the library has been loaded asynchronously only if a video or audio is used. But this caused a ~250ms delay for initializing mediaelement, which results in a short video flickering for videos with autoplay=true. To avoid the flickering the library (~150kb) is now loaded directly in the brick.

[CMS-24711]

CoreMedia Studio Client

Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled

The editorContext allows to disable the DefaultTabStateManager. We fixed a bug where content items could not be opened form the library in that case.

[CMS-24946]

Control Room: Fixed non localized label 'Withdraw All'

Fixed non localized button 'Withdraw All' in the Control Room.

[CMS-24881]

Locale Switcher: Wrong Master Site Information

Fixed Locale Switcher so that is allows contents from intermediate sites to be a master document.

[CMS-24745]

Taxonomy Performance Issue

Fixed the auto-focusing of the document formular inside the taxonomy manager which took up to several seconds.

[CMS-24730]

Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup

The pre-caching call SiteAwareFeatureUtil.preLoadConfiguration() has been removed from the Studio startup since it is too expensive when used with many sites and is only used in combination with the SiteAwareFeaturePlugin.

[CMS-24709]

solved dialogue showing up late in workflow app

Dialog has been removed from workflow App

[CMS-24622]

Added Taxonomy Context Documentation

Added documentation of how to fix context problems with new taxonomy trees.

[CMS-24551]

Exclude internal documents of type EditorProfile from "My Edited Content"

To exclude internal documents of type "`EditorProfile`" from being displayed in "My Edited Content", the folder `/Home/*/EditorProfile` has been added to the application property `userchanges.excluded-paths` of the User-Changes App.

[CMS-24336]

CoreMedia Studio Server

Client Personalization Monetate deadlock in experiences fixed

A deadlock in the monetate adapter has been fixed.

[CMS-23998]

Content-Disposition Header for BLOB Download in Studio Fixed

When downloading a BLOB from Studio, you may have experienced an invalid type information in Content-Disposition header. The type has been fixed and adjusted to `attachment` instead.

As CoreMedia Studio user you will experience a different behavior in BLOB download, which are now always downloaded instead of possibly directly opened within a Browser tab.

[CMS-23482]

Content Hub: Improved Logging

If `com.coremedia.contenthub.api.ContentHubBlob#build` fails, it now logs a warning with the relevant information to analyze the problem. Moreover, it logs a DEBUG message about successful creation of ContentHubBlob instances.

[CMS-23104]

Fixed Translation Status Widget

Fixed issue with the translation status widget that did not show translated sites for some site hierarchies.

[CMS-18687]

Fixed Translation Search Filter

Fixed issue with the translation search filter that did not show translated sites for some site hierarchies.

[CMS-18488]

CoreMedia Adaptive Personalization

Added missing master link property for P13N extensions doctypes

The missing master link property for P13N extensions doctypes has been fixed.

[CMS-24354]

CoreMedia Commerce Hub

Lookup of Augmented Pages improved

The lookup of commerce pages that are augmented in in the CMS was changed to using the AugmentationService with the help of observed properties instead of content queries.

[CMS-24768]

CoreMedia Headless Server

Bugfix: Maximum search limit was ignored

The bug, that the configuration property `caas.search-max-search-limit` was ignored, was fixed.

[CMS-24682]

Documentation for Custom Filter Queries

Updated documentation: To add a custom filter query, the filter query identifier must be added to the graphql input type CustomFilterQueryArg.

[CMS-23928]

Bugfix: Headless-Server MediaController does not consider validity date

Headless-Server did not consider the validity dates 'from' and 'to' on the media delivery endpoint. The validation was fixed and now includes the validity dates.

Since this is the wanted behavior, this bugfix is not considered breaking. Be aware, that this might lead to 404 responses on media content, where the validity date is set and validation does not pass anymore!

[CMS-23916]

Miscellaneous

Headless Configuration Issue behind a proxy solved

When Headless-Server is running behind a reverse proxy, it is necessary to set a Spring configuration property to make Swagger work correctly. The configuration property `server.forward-headers-strategy`should be set to the value `framework`. This can be done either by application properties or preferably by environment variable, like `SERVER_FORWARD_HEADERS_STRATEGY: "framework"`.

[CMS-24719]

4.22 Release 2404.6

The release contains:

- Breaking changes: 0
- Changes and improvements: 5
- Bugfixes: 32

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.

Release date: 2024-11-14

Breaking Changes

Changes and Improvements

- CMS-25838: Updated Maven dependencies and plugins
- CMS-25831: Third-Party Update: Apache Solr 9.7.0

Bugfixes

- CMS-25773: Informative Exception for Non-Existing Markup Grammar
- CMS-25589: Documentation for cap.server.maximum-startup-delay updated
- CMS-24147: Adjusted *.asRichtextEmbed.ftl templates
- CMS-25928: Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded
- CMS-25722: Fixed Bug That Broke Keyboard Navigation Through Document Forms
- CMS-25647: Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client
- CMS-25613: IntegerPropertyFields do not have an underline
- CMS-25737: Fixed thumbnails for augmented commerce items
- CMS-25651: External Page validators enabled
- CMS-25334: Fixed memory issue for blob loading
- CMS-24935: Handled StackOverflowError While Resolving Default Picture [2nd Fix]
- CMS-25962: Fixed bug in AbsoluteUrlPrefixRuleProvider matching null

- CMS-25563: Normalized Extension Dependency Order

4.22.1 Breaking Changes

This release contains no breaking changes

4.22.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.9
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.8
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.9
- CoreMedia Adapter for HCL Commerce → 3.0.8
- Apache HttpComponents Client 5 → 5.4.1
- Byte Buddy → 1.15.7
- Enterprise Security API → 2.5.5.0
- Error Prone → 2.35.1
- Jackson → 2.18.1
- Jib Maven Plugin → 3.4.4
- JUnit Jupiter → 5.11.3
- Google Analytics Data Client for Java → 0.64.0
- Google API Common for Java → 2.40.0
- Google API Extensions for Java → 2.57.0
- Google Auth Library for Java → 1.29.0
- gRPC-Java → .68.1
- Netty → 4.1.114.Final
- Plugin Framework for Java → 3.12.1
- Protocol Buffers for Java → 4.28.3
- Reactor Project BOM → 2023.0.11
- Spring Boot → 3.2.11
- Spring Framework → 6.1.14
- Spring for GraphQL → 1.2.9

- Spring Security → 6.2.7
- Tomcat → 10.1.31

[CMS-25838]

Third-Party Update: Apache Solr 9.7.0

Apache Solr has been updated to version 9.7.0. Alongside, a new coremedia/solr-base Docker image with tag 2.4-cm-9.7.0 was released. As part of this change, the following transitive dependencies of Apache Solr have been updated to match versions used by Solr:

- Apache Zookeeper 3.9.2
- Eclipse Jetty 10.0.22

See https://solr.apache.org/docs/9_7_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-7 for a list of changes in Solr. We have kept Solr schema configuration files at version 1.6 to avoid the need to re-index data.

[CMS-25831]

4.22.3 Fixed Issues

CoreMedia Core

Informative Exception for Non-Existing Markup Grammar

When a custom *XmlGrammar* is removed from the *Document Type Model* [`*-doc types.xml`] but documents exist in the repository which still reference the removed *XmlGrammar*, this is an inconsistent configuration. An attempt to publish such a document logs a *NullPointerException* in the *Content Management Server* and publication fails. With the change, now more detail information is logged in both *Content Management Server* and *Studio Server* if a publication is attempted.

[CMS-25773]

Documentation for cap.server.maximum-startup-delay updated

The documentation for server property `cap.server.maximum-startup-delay` has been updated to reflect the configured default value. In addition the effect of this property on the server's startup has been detailed.

[CMS-25589]

CoreMedia Content Application Engine

Adjusted *.asRichtextEmbed.ftl templates

With `CMS-19278` closing and opening `<p>` tags have been added to `CMTeasable.asRichtextEmbed.ftl` to avoid breaking HTML validity. Since embedded content can also be embedded inside headlines, tables, etc., this change actually broke HTML validity even more. This change also caused empty `<p>` tags surrounding embedded content, especially when embedded content was placed at the beginning of the richtext. Now these additional closing and re-opening `<p>` tags have been removed in all `*.asRichtextEmbed.ftl` templates.

[CMS-24147]

CoreMedia Studio Client

Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded

We fixed a bug related to the WorkAreaTabBar where the layouting mechanism would run into a "maximum call stack size exceeded" error leading to a Studio freeze.

[CMS-25928]

Fixed Bug That Broke Keyboard Navigation Through Document Forms

We fixed a bug where opening the third tab of a content type (which is when tab reuse kicks in) broke the keyboard navigation through the document form (with the TAB key).

[CMS-25722]

Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client

We removed the deprecation notice for `siteIndicatorDepth` as part of the `SiteModel` in Studio Client.

As part of this change `cm validate-multisite` got extended by a new issue code:

```
MS-VALIDATION-4009 – DISCOURAGED_PROPERTY_VALUE
```

The new issue-code is reported at level `INFO` and is triggered, when using a `siteIndicatorDepth` different to `0` [zero].

Motivation

As part of `CMS-9521` we deprecated `siteIndicatorDepth` for 2001.1 and changed the default to `0` [zero] rather than `1` [one], as we got aware that many editors struggled with site indicators being hidden in the "depth" of a site – which in the end caused corrupted sites.

Nevertheless, migrating existing content from a depth 1 to depth 0 may raise considerable migration effort, as you have to move all site indicators up one level in one step [while stopping editorial work] and then republish all your sites.

Because of this, we decided to remove the deprecation notice, so that we will support site indicator depths different to `0` also on in the future. The default which ships with CoreMedia Blueprint will stick to the recommended default `0`, though.

[CMS-25647]

IntegerPropertyFields do not have an underline

Layout underline problem of IntegerPropertyField fixed.

[CMS-25613]

CoreMedia Studio Server

Fixed thumbnails for augmented commerce items

If augmented commerce items [category, product] didn't have a picture url in the commerce system, the thumbnail icon couldn't displayed in CoreMedia Studio even if a picture asset has been assigned [a broken URL was rendered]. This has been fixed.

[CMS-25737]

External Page validators enabled

Added two new validator beans for External Pages. External Pages must also be part of the navigation in order to function, hence the new validators check that they are not part of a cycle (recursion) and that they do not have multiple parent nodes. This has so far only been checked for Channels, Augmented Categories and Categories.

[CMS-25651]

Fixed memory issue for blob loading

Fixed possible heap size exceptions when downloading blobs via the Studio REST service.

[CMS-25334]

Handled StackOverflowError While Resolving Default Picture [2nd Fix]

We fixed a bug where a StackOverflowError was thrown while resolving default pictures for cyclicly linked content items. This is the second fix for this problem as the first one was not sufficient.

[CMS-24935]

Miscellaneous

Fixed bug in AbsoluteUrlPrefixRuleProvider matching null

The `com.coremedia.blueprint.base.links.impl.AbsoluteUrl PrefixRuleProvider` now interprets the `?` as undefined value for matching `null` again.

[CMS-25962]

Normalized Extension Dependency Order

In recent releases, the dependencies of enabled Blueprint extensions were not correctly ordered as established by the extensions tool. This would lead to a diff when calling `extensions:sync` even without enabling or disabling any extensions. This has been corrected.

To minimize merge conflicts, you should invoke the extensions tool to normalize the dependency order in your customized Blueprint workspace, too. To that end, in your workspace root directory, simply call

```
mvn   -f   workspace-configuration/extensions   exten
sions:sync
```

and commit the resulting diff before merging the new CoreMedia Blueprint version.

[CMS-25563]

4.23 Release 2404.5

The release contains:

- Breaking changes: 5
- Changes and improvements: 26
- Bugfixes: 83

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.

Release date: 2024-10-18

Breaking Changes

- CMS-24694: CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset
- CMS-15884: Starting XML Importer in a Docker Container
- CMS-24982: Changed Signature CartService#deleteCartOrderItem
- CMS-25362: Reverted behavioral change of BELOW folder queries in the QueryService
- CMS-25278: Updated Spring Security

Changes and Improvements

- CMS-25291: Updated Maven dependencies and plugins
- CMS-25375: Missing CORS configuration don't disable CORS protection anymore
- CMS-22625: Content Hub: Improved initial page load behavior for small page sizes
- CMS-25725: Update of springdoc to 2.6.0
- CMS-25603: HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

Bugfixes

- CMS-25496: Improved Logging for Server Import
- CMS-25255: Fixed Blob Sharing ID Inconsistency
- CMS-24727: Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder
- CMS-25105: Added apache httpcomponents5 runtime dependency

- CMS-24695: Made TransformedBlobHandler a page handler
- CMS-22836: Changed generation of RSA keys via CAE application
- CMS-25570: Fixing a related teaser overlay mechanism resolved this behavior
- CMS-25403: Fix for JPEG Image Upload Failure
- CMS-21492: Content Hub: Delete temporary files after import
- CMS-19645: Elastic Social Link Building Properties
- CMS-25416: Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss
- CMS-25610: Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception
- CMS-25442: Regression-Fix: Update of GraphQL-Java library to 21.5
- CMS-25435: Headless server can be run without commerce extension
- CMS-25335: Bugfix: Headless supports servlet context path for Persisted Queries over REST
- CMS-25167: Documentation
- CMS-25421: Fix ParameterAppendingLinkTransformer for opaque URLs
- CMS-25382: Consolidated And Updated Oracle Driver Dependencies
- CMS-24884: Fixed Bug in Blueprint Link Building
- CMS-24040: Fixed Cache Size Error

4.23.1 Breaking Changes

CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

Follow Section "CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset" [518] for upgrade information.

[CMS-24694]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow Section "Starting XML Importer in a Docker Container" [518] for upgrade information.

[CMS-15884]

CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

Follow Section "Reverted behavioral change of BELOW folder queries in the QueryService" [519] for upgrade information.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

4.23.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.8
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.7
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.8
- CoreMedia Adapter for HCL Commerce → 3.0.7
- AssertJ → 3.26.3
- Byte Buddy → 1.15.1
- Commons CLI → 1.9.0
- Commons Codec → 1.17.1
- Commons Compress → 1.27.1
- Commons Lang → 3.17.0
- Error Prone → 2.32.0
- Google Analytics Data Client for Java → 0.60.0
- Google API Common for Java → 2.36.0
- Google API Extensions for Java → 2.53.0
- Google Auth Library for Java → 1.25.0
- Google HTTP Client Library for Java → 1.45.0
- GraphQL Java → 20.9
- GraphQL Java DataLoader → 3.3.0
- gRPC-Java → 1.66.0
- Guava → 33.3.0-jre
- Hibernate → 6.4.10.Final
- Jackson → 2.17.2
- JUnit Jupiter → 5.11.0
- Micrometer → 1.12.10
- Netty → 4.1.113.Final
- Plugin Framework for Java → 3.12.0
- Protocol Buffers for Java → 4.28.1
- Reactor Project BOM → 2023.0.10
- SLF4J → 2.0.16
- SnakeYAML → 2.3
- Spring Boot → 3.2.9

- Spring Data BOM → 2023.1.10
- Spring for GraphQL → 1.2.8
- Spring Framework → 6.1.13
- Spring Security → 6.2.6
- Tomcat → 10.1.30

[CMS-25291]

CoreMedia Content Application Engine

Missing CORS configuration don't disable CORS protection anymore

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to CAE configuration properties.

[CMS-25375]

CoreMedia Studio Client

Content Hub: Improved initial page load behavior for small page sizes

While using the Content Hub with small page sizes in the library lists a flickering after each loaded page was observable. The flickering has been fixed.

[CMS-22625]

CoreMedia Headless Server

Update of springdoc to 2.6.0

The dependencies org.springdoc:springdoc-openapi-starter-webmvc-ui and org.springdoc:springdoc-openapi-starter-common have been updated to version 2.6.0.

[CMS-25725]

HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

The class LinkWriter of the richtext transformation was not able to receive AttributeTransformer by the transformation-yaml files. This is now possible.

In order to stay non-breaking, the necessary changes to add the existing **PassStyles** attribute transformer was **not** added to the default.yml transformation config.

Customer with this requirement may add this code snippet to their correspondent transformation yml files.

```
outputHandler:          !LinkWriter
  attributeTransformers:            - !PassStyles {styles: *link_styles}
```

Additionally, the referred `*link_styles` of course must be defined also (compare e.g. `*float_styles` of the ImgWriters default configuration for reference).

[CMS-25603]

4.23.3 Fixed Issues

CoreMedia Core

Improved Logging for Server Import

Content Server tool *serverimport* did not report paths of problematic import files in all cases. Those cases have been improved to include the file's path now, too.

[CMS-25496]

Fixed Blob Sharing ID Inconsistency

If you use the RLS's blob sharing capability (`sql.store.generate-blob-ids=false`) in combination with URL blobs, blob ids may have been assigned inconsistently in the RLS repository. This is fixed now.

[CMS-25255]

Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder

Log level of some log messages in `FeedingReceiver` and `ContentTrigger` has been changed from `INFO` to `DEBUG` as they are logged very often.

[CMS-24727]

CoreMedia Content Application Engine

Added apache httpcomponents5 runtime dependency

The `org.apache.httpcomponents.client5:httpclient5` dependency was added as a runtime dependency for `com.coremedia.blueprint:cae-sitemap`.

[CMS-25105]

Made TransformedBlobHandler a page handler

The Blueprint's{{TransformedBlobHandler}} extends `PageHandlerBase` now, and enhances the `ModelAndView` with the page model. This is necessary for the `ExposeCurrentNavigationInterceptor` to set the correct locale in the response.

[CMS-24695]

Changed generation of RSA keys via CAE application

The generation of RSA private and public keys via CAE application has changed. The keys are required for creating a signed token to identify anonymous visitors. Before, a new key pair (signCookie.publicKey and signCookie.privateKey) was created and logged, if a value was missing or invalid. Now a new key pair can be generated via code or actuator, see documentation for details.

[CMS-22836]

CoreMedia Studio Client

Fixing a related teaser overlay mechanism resolved this behavior

The behavior is resolved by fixing a related bug of the teaser overlay mechanism: The teaser overlay was not reset when the source text gets empty.

[CMS-25570]

Fix for JPEG Image Upload Failure

JPEG images which have density metadata outside allowed range (1..65535) could not be uploaded and showed an exception *javax.imageio.metadata.IIOInvalidTreeException: Xdensity attribute out of range* in Studio Server log. With the fix, the system now retries upload of the image without any metadata, effectively falling back to default values. Additional JPEG image metadata will be lost in that case.

[CMS-25403]

Content Hub: Delete temporary files after import

The Content Hub uses temporary files while importing blobs. Those temporary files are now correctly deleted after the import.

[CMS-21492]

CoreMedia Elastic Social

Elastic Social Link Building Properties

Added option to the ElasticSocialLinkBuildingProperties so that the SimpleLinkFormatter must not use the current request in Studio.

[CMS-19645]

CoreMedia Commerce Hub

Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss

Under certain circumstances the commerce adapter client implementation may not have recovered from temporary connection losses to the commerce adapter. As a result of this bug, fragment requests could not derive the requested site from the given store ID and locale. The only solution was to restart the application that had run into this situation or to clear its cache via actuator or JMX. This bug has been fixed.

[CMS-25416]

CoreMedia Headless Server

Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception

When the HTML in a HTML fragment is left empty, a serverside exception was thrown by the `HtmlAdapter`. The adapter now returns null instead.

[CMS-25610]

Regression-Fix: Update of GraphQL-Java library to 21.5

The version of GraphQL-Java was unintentionally downgraded to `com.graphql-java:graphql-java:20.7`, leading to the situation that HeadlessServer versions 2404.1 and 2404.2 have older library versions of GraphQL-Java than version 2401. The library was now updated to the most recent, non-breaking version suitable for Head-lessServer 2404.

Customers may update that library by themselves if necessary for security reasons to `com.graphql-java:graphql-java:21.5`.

[CMS-25442]

Headless server can be run without commerce extension

There was a dependency for the headless server that could be satisfied without the commerce extension. However, this was not intentional and now the required component is also found without having the commerce extension enabled.

[CMS-25435]

Bugfix: Headless supports servlet context path for Persisted Queries over REST

With the introduction of Spring-GraphQL, a non-trivial servlet context path was not working for persisted queries over REST. This problem was fixed.

[CMS-25335]

CoreMedia Documentation

Documentation

Update Extensions Chapter

[CMS-25167]

Miscellaneous

Fix ParameterAppendingLinkTransformer for opaque URLs

ParameterAppendingLinkTransformer does not modify opaque URIs like "mailto:mail@www.example.com" anymore.

[CMS-25421]

Consolidated And Updated Oracle Driver Dependencies

We now consistently use `com.oracle.database.jdbc:ojdbc11:23.4.0.24.05` as Oracle database driver. The dependency is managed in `com.coremedia.cms:common-thirdparty-bom` and added as dependency in `com.coremedia.blueprint:database-drivers` and `com.coremedia.cms:editorial-comments-data-oracle`.

[CMS-25382]

Fixed Bug in Blueprint Link Building

Due to a bug, the Blueprint CAE built dead links to CMChannel (aka Page) contents which are not linked into the navigation hierarchy. In particular, such links occured in sitemaps. This has been fixed now, and such channels cannot be linked to any longer.

[CMS-24884]

Fixed Cache Size Error

An error in the UAPI cache size calculation could lead to Out-Of-Memory errors in CMS clients. This has been fixed now.

[CMS-24040]

4.24 Release 2404.4

The release contains:

- Breaking changes: 0
- Changes and improvements: 3
- Bugfixes: 2

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.

Release date: 2024-07-12

Breaking Changes

Changes and Improvements

- CMS-25345: Updated Tomcat to mitigate CVE-2024-34750

Bugfixes

4.24.1 Breaking Changes

This release contains no breaking changes

4.24.2 Changes and Improvements

CoreMedia Core

Updated Tomcat to mitigate CVE-2024-34750

Updated Tomcat to version 10.1.25 to mitigate CVE-2024-34750.

[CMS-25345]

4.24.3 Fixed Issues

4.25 Release 2404.3

The release contains:

- Breaking changes: 4
- Changes and improvements: 12
- Bugfixes: 23

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.

Release date: 2024-07-08

Breaking Changes

- CMS-24165: Third-Party Update: Apache Solr 9.6.1
- CMS-24909: Removed dependency management for Google APIs Client Library for Java
- CMS-25260: Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets
- CMS-24683: HeadlessServer: Missing support for blobs in structs fixed

Changes and Improvements

- CMS-25131: Removed plugins.early-starters property in favor of new plugin descriptor property
- CMS-25048: Updated Maven dependencies and plugins
- CMS-24944: Changed management of reactor dependencies to BOM imports

Bugfixes

- CMS-15270: Theme Importer Logging
- CMS-24946: Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled
- CMS-24881: Control Room: Fixed non localized label 'Withdraw All'
- CMS-24709: Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup
- CMS-24551: Added Taxonomy Context Documentation

- CMS-24682: Bugfix: Maximum search limit was ignored
- CMS-25076: Downgraded Micrometer to 1.12.6

4.25.1 Breaking Changes

CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Follow Section "Third-Party Update: Apache Solr 9.6.1" [522] for upgrade information.

[CMS-24165]

CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there're no more usages of that dependency.

[CMS-24909]

CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

Follow Section "Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets" [523] for upgrade information.

[CMS-25260]

CoreMedia Headless Server

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Follow Section "HeadlessServer: Missing support for blobs in structs fixed" [523] for upgrade information.

[CMS-24683]

4.25.2 Changes and Improvements

CoreMedia Core

Removed plugins.early-starters property in favor of new plugin descriptor property

The plugin manager property `plugins.early-starters` was removed in favor of the new plugin descriptor property `plugin.independent`. CoreMedia Plugins, like the *awskms-encryption-plugin*, which are independent plugins and can be started on their own - possibly early in an application lifecycle - will provide the necessary configuration themselves now.

[CMS-25131]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Plugins Maven Plugin → 1.2.0
- Apache HttpComponents Client → 5.3.1
- AssertJ → 3.26.0
- Byte Buddy → 1.14.17
- Commons CLI → 1.6.0
- Commons Compress → 1.26.2
- Commons Exec → 1.4.0
- Commons IO → 2.16.1

- Commons Text → 1.12.0
- Enterprise Security API → 2.5.4.0
- Error Prone → 2.28.0
- Freemarker → 2.3.33
- Google Analytics Data Client for Java → 0.56.0
- Google API Common for Java → 2.32.0
- Google API Extensions for Java → 2.49.0
- Google HTTP Client Library for Java → 1.44.2
- gRPC-Java → 1.64.0
- Gson → 2.11.0
- Hibernate → 6.4.9.Final
- Jackson → 2.17.1
- Jakarta Validation API → 3.1.0
- Jib Maven Plugin → 3.4.3
- Micrometer → 1.12.7
- Netty → 4.1.111.Final
- PF4J → 3.11.1
- Spring Boot → 3.2.6
- Spring Data BOM → 2023.1.7
- Spring Framework → 6.1.9

[CMS-25048]

CoreMedia Content Application Engine

Changed management of reactor dependencies to BOM imports

The dependency management for the `io.projectreactor:reactor-core` and the `io.projectreactor.netty:reactor-netty-http` dependencies have been replaced with imports of the `io.projectreactor:reactor-bom`.

Using the latest Reactor Project BOM version 2023.0.7, the dependencies have effectively been updated to:

- Reactor Core → 3.6.7
- Reactor Netty → 1.1.20

[CMS-24944]

4.25.3 Fixed Issues

CoreMedia Core

Theme Importer Logging

The output of the theme importer has been cleaned up to distinguish user interaction (unformatted on stdout, like the usage message) from logging (more detailed, formatted with timestamp and severity in the logfile).

[CMS-15270]

CoreMedia Studio Client

Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled

The editorContext allows to disable the DefaultTabStateManager. We fixed a bug where content items could not be opened form the library in that case.

[CMS-24946]

Control Room: Fixed non localized label 'Withdraw All'

Fixed non localized button 'Withdraw All' in the Control Room.

[CMS-24881]

Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup

The pre-caching call SiteAwareFeatureUtil.preLoadConfiguration() has been removed from the Studio startup since it is too expensive when used with many sites and is only used in combination with the SiteAwareFeaturePlugin.

[CMS-24709]

Added Taxonomy Context Documentation

Added documentation of how to fix context problems with new taxonomy trees.

[CMS-24551]

CoreMedia Headless Server

Bugfix: Maximum search limit was ignored

The bug, that the configuration property `caas.search-max-search-limit` was ignored, was fixed.

[CMS-24682]

Miscellaneous

Downgraded Micrometer to 1.12.6

Micrometer has been downgraded to version 1.12.6.

In the previous AMP, Micrometer was upgraded to a new version (1.13.x) that is not fully supported by the current Spring Boot version (<=3.2). As a result, the Prometheus actuator did not work anymore. To fix that, the Micrometer version had to be downgraded.

[CMS-25076]

4.26 Release 2404.2

The release contains:

- Breaking changes: 0
- Changes and improvements: 8
- Bugfixes: 50

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.

Release date: 2024-05-28

Breaking Changes

Changes and Improvements

- CMS-24613: Updated Maven dependencies and plugins
- CMS-24348: cm query Provides Format Option

Bugfixes

- CMS-24789: Fixed CAE Feeder Configuration of Content Repository
- CMS-24773: Fixed Loading of Multiple Document Type Model Files in XML Repository
- CMS-24765: Fixed Content ID Comparison on Client-Side Query
- CMS-24310: Improved Performance for Large Structs
- CMS-24109: Improved Publication Performance
- CMS-22943: Configuration of Custom MIME Types
- CMS-24830: Old SiteFilter is configured to avoid unwanted site resolvings
- CMS-24711: Updated and optimized @coremedia/brick-mediaelement
- CMS-24745: Locale Switcher: Wrong Master Site Information
- CMS-24730: Taxonomy Performance Issue
- CMS-24336: Exclude internal documents of type EditorProfile from "My Edited Content"
- CMS-23482: Content-Disposition Header for BLOB Download in Studio Fixed
- CMS-23104: Content Hub: Improved Logging
- CMS-18687: Fixed Translation Status Widget

- CMS-24768: Lookup of Augmented Pages improved
- CMS-23916: Bugfix: Headless-Server MediaController does not consider validity date

4.26.1 Breaking Changes

This release contains no breaking changes

4.26.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.4
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.3
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.4
- CoreMedia Adapter for HCL Commerce → 3.0.3
- Angus Activation → 2.0.2
- Angus Mail → 2.0.3
- AspectJ → 1.9.22.1
- Bouncy Castle for JDK 1.8 and up → 1.78.1
- Commons Codec → 1.17.0
- Error Prone → 2.27.1
- Google Analytics Data Client for Java → 0.54.0
- Google API Common for Java → 2.31.0
- Google API Extensions for Java → 2.48.0
- Google APIs Client Library for Java → 2.5.0
- Google OAuth Client Library for Java → 1.36.0
- gRPC-Java → 1.63.0
- Hibernate → 6.4.8.Final
- Jib Maven Plugin → 3.4.2
- Micrometer → 1.13.0
- Netty → 4.1.109.Final
- SLF4J → 2.0.13
- Spring Boot → 3.2.5

- Spring Data BOM → 2023.1.5
- Tomcat → 10.1.24

[CMS-24613]

cm query Provides Format Option

The `cm query` command has been enhanced to support a `--format` option.

It allows to control to output either using the default multi-column output or new single-column outputs suitable, for example, for forwarding results to subsequent processing via shell pipes.

Supported formats despite the default:

- id: Prints the CoreMedia Content or Version ID
- uuid: Prints the UUID
- path: Prints the path of the content related to the `CapObject` found.

The Content Server Manual has been updated accordingly.

[CMS-24348]

4.26.3 Fixed Issues

CoreMedia Core

Fixed CAE Feeder Configuration of Content Repository

CAE Feeder failed to connect to content repository as 'feeder' user under certain circumstances. This bug was fixed by tweaking the auto configuration order of the feeder auto configurations.

[CMS-24789]

Fixed Loading of Multiple Document Type Model Files in XML Repository

Loading of multiple Document Type Model (DTM) files for the XML Repository was broken and has been fixed now. Multiple DTM files may again be stated as a comma-separated list with property `repository.params.contentxml` of test class annotation `@TestPropertySource` (see Blueprint workspace for examples).

[CMS-24773]

Fixed Content ID Comparison on Client-Side Query

QueryService#getContentsFulfilling(...) did not work for numerical Content ID comparisons, e.g., `TYPE Document_ : id > 10000`, and threw an exception. This is fixed now.

[CMS-24765]

Improved Performance for Large Structs

The code for loading struct properties was optimized, especially for large structs. This speeds up various operations for content that contains a larger struct value.

[CMS-24310]

Improved Publication Performance

The code for destroying intermediate versions after publication was optimized, especially for very large version histories, and/or if many derived multi-site contents exist with possibly large version histories. This reduces the time needed for publication for some cases.

[CMS-24109]

Configuration of Custom MIME Types

A central configuration for custom MIME Type definitions was added to the Blueprint workspace with file `shared/common/modules/shared/custom-mime-types/src/main/resources/org/apache/tika/mime/custom-mimetypes.xml`. All relevant CMS components depend on this configuration file so that MIME Type definitions added here are active everywhere.

[CMS-22943]

CoreMedia Content Application Engine

Old SiteFilter is configured to avoid unwanted site resolvings

In very rare cases it could happen that the CAE SiteFilter resolves a wrong site for certain requests. The SiteFilter was not actually responsible for these requests (e.g. fragment calls). In addition, this could only occur if legacy mode was used, i.e. if no site patterns

had been configured. To avoid these unwanted hits even in legacy mode, we have now at least activated the ignore patterns in the default configuration (cae application.properties).

[CMS-24830]

Updated and optimized @coremedia/brick-mediaelement

The external library mediaelement has been updated to latest version 7. In the past the library has been loaded asynchronously only if a video or audio is used. But this caused a ~250ms delay for initializing mediaelement, which results in a short video flickering for videos with autoplay=true. To avoid the flickering the library (~150kb) is now loaded directly in the brick.

[CMS-24711]

CoreMedia Studio Client

Locale Switcher: Wrong Master Site Information

Fixed Locale Switcher so that is allows contents from intermediate sites to be a master document.

[CMS-24745]

Taxonomy Performance Issue

Fixed the auto-focusing of the document formular inside the taxonomy manager which took up to several seconds.

[CMS-24730]

Exclude internal documents of type EditorProfile from "My Edited Content"

To exclude internal documents of type "`EditorProfile`" from being displayed in "My Edited Content", the folder `/Home/*/EditorProfile` has been added to the application property `userchanges.excluded-paths` of the User-Changes App.

[CMS-24336]

CoreMedia Studio Server

Content-Disposition Header for BLOB Download in Studio Fixed

When downloading a BLOB from Studio, you may have experienced an invalid type information in Content-Disposition header. The type has been fixed and adjusted to `attachment` instead.

As CoreMedia Studio user you will experience a different behavior in BLOB download, which are now always downloaded instead of possibly directly opened within a Browser tab.

(CMS-23482)

Content Hub: Improved Logging

If `com.coremedia.contenthub.api.ContentHubBlob#build` fails, it now logs a warning with the relevant information to analyze the problem. Moreover, it logs a DEBUG message about successful creation of ContentHubBlob instances.

(CMS-23104)

Fixed Translation Status Widget

Fixed issue with the translation status widget that did not show translated sites for some site hierarchies.

(CMS-18687)

CoreMedia Commerce Hub

Lookup of Augmented Pages improved

The lookup of commerce pages that are augmented in in the CMS was changed to using the AugmentationService with the help of observed properties instead of content queries.

(CMS-24768)

CoreMedia Headless Server

Bugfix: Headless-Server MediaController does not consider validity date

Headless-Server did not consider the validity dates 'from' and 'to' on the media delivery endpoint. The validation was fixed and now includes the validity dates.

Since this is the wanted behavior, this bugfix is not considered breaking. Be aware, that this might lead to 404 responses on media content, where the validity date is set and validation does not pass anymore!

[CMS-23916]

4.27 Release 2404.1

The release contains:

- Breaking changes: 25
- Changes and improvements: 70
- Bugfixes: 121

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.

Release date: 2024-04-22

Breaking Changes

- CMS-24179: Support for Blobs Larger Than 2GB
- CMS-24130: TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans
- CMS-24098: Default of publisher.autoextend.latest-approved-version has been changed to true
- CMS-23184: Update of MongoDB driver to 4.11.1
- CMS-23183: MongoDB update to version 7.0.5
- CMS-24585: Reworked CAE security configuration API
- CMS-24219: Remove RequestRejectedExceptionFilter
- CMS-24213: Remove Commerce Context Interceptors
- CMS-24132: Transformed Blob Cache Requires Writeable Base Directory
- CMS-23644: Configured Content Security Policy for Live CAE
- CMS-23583: Changed Site Resolution of Requests
- CMS-24139: Changed Linter Rules
- CMS-24095: CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated
- CMS-23769: Third-Party Update: Upgraded Node.js to 20 LTS
- CMS-23579: Moved Classes
- CMS-23319: Upgraded TypeScript to 5.3.3
- CMS-22181: Removed deprecated richTextPropertyFieldRegistry
- CMS-20144: Removed deprecated CSS/JS property "ieExpression"
- CMS-17725: Thirdparty Upgrade: Upgraded Webpack to 5.90.3

- CMS-24249: Headless-Server Missing CORS configuration now disabled CORS protection
- CMS-19714: Headless-Server major update to Spring-GraphQL
- CMS-24338: Removed Package com.coremedia.transform.impl from Public API
- CMS-24111: Rename service "mysql" to "db" in global/deployment/docker
- CMS-23501: Removed Sencha CMD
- CMS-22469: Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

Changes and Improvements

- CMS-24725: Third-Party Update: Bouncy Castle
- CMS-24115: Updated Maven dependencies and plugins
- CMS-23846: Added Taxonomy Access Configuration
- CMS-23573: New Default Start Workflow Form With Two Column Layout
- CMS-21202: Fixed Pre-Loading of SiteAwareFeatureUtil
- CMS-14870: Infocenter has replaced the old Jobs and Notification menus
- CMS-16960: SingleLinkField is Public API now
- CMS-24087: Deprecation of overloading frontend ImageFunctions#getImageLinkFor-AspectRatio
- CMS-23768: Third-Party Update: Upgraded Node.js to 20 LTS
- CMS-23707: Deprecated com.coremedia.caas.web.persistedqueries.Hash#md5
- CMS-24053: Third-Party Update: Apache Commons DBCP
- CMS-24025: Developing Studio Apps Public API and Documentation
- CMS-24023: Studio Apps Public API Avaliable

Bugfixes

- CMS-24288: Third-Party Update: Apache James Mime4J
- CMS-24229: Fixed a Bug Where A Publication Workflow With Content Errors Could Be Started
- CMS-24216: Postgresql driver has been updated
- CMS-24210: Third-Party Update: Apache Commons Compress
- CMS-24076: Content Server DB Transaction Retry
- CMS-24075: Improved Performance Of Deriving Sites
- CMS-24058: Improved Logging for Workflow Errors

- CMS-24051: Method Content#copyTo[...] fixed
- CMS-23587: Fixed CAE Feeder Partial Re-Indexing by Actuator or JMX
- CMS-23428: Extended Workflow Server DB Transaction Retry
- CMS-24194: When copy and pasting only valid content types are now accepted to the placement linkists.
- CMS-24086: Richtext Transformation no Longer Swallows Links with Trailing Spaces
- CMS-24083: Dynamic fragments fixed in live side
- CMS-23370: Elastic Social user: number of logins
- CMS-23290: Decoding fragment parameters error fixed
- CMS-23207: Freemarker function bp.getBiggestImageLink gets flag for absolute link
- CMS-24301: Fixed a Bug Where (In Chrome) A New Content Was Created When Dragging A Thumbnail
- CMS-24093: Fixed A Bug Where All Versions Of A Content Item Are Loaded On Withdraw
- CMS-24041: Altered alignment of CKEditor 5 main toolbar dropdowns
- CMS-23925: Fixed Duplicates in InputChecksField
- CMS-23755: Fixed Document Form Layout Isses
- CMS-23647: Fixed Hidden Pop Up Dialogs
- CMS-22465: Outdated Items in Apps Menu
- CMS-21580: Fixed Studio App README.adoc
- CMS-24172: Fixed Scrolling of Create-From-Template Dialog
- CMS-23816: Fixed a Bug with Disappearing Paddings
- CMS-18488: Fixed Translation Search Filter
- CMS-23928: Documentation for Custom Filter Queries
- CMS-24719: Headless Configuration Issue behind a proxy solved
- CMS-24163: The management-tools script to download a remote content-archive was broken
- CMS-24156: Revert Update Of MySQL In Blueprint Docker-Compose Setup
- CMS-23940: Fixed reset of DatePropertyField
- CMS-22695: Marked FavoritesUserItem as public API

4.27.1 Breaking Changes

CoreMedia Core

Support for Blobs Larger Than 2GB

The CMS now supports blobs larger than 2GB (henceforth called "*huge blobs*") on external media stores. Huge blobs can be up- and downloaded via UAPI clients, serverimport/serverexport, and Studio. They can also be delivered via CAE and Headless Server.

Follow Section "Support for Blobs Larger Than 2GB" [526] for upgrade information.

[CMS-24179]

TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans

Spring configuration class `com.coremedia.cap.transform.TransformImageServiceConfiguration` of module `com.coremedia.cms:cap-transform` no longer imports `com.coremedia.cap.transform.BlobTransformerConfiguration`. This makes it possible to create application contexts that provide access to the `transformImageService` bean without actually activating all the beans necessary for blob transformation. Such application contexts are the ones of feeder applications, for example. Class `com.coremedia.cap.transform.BlobTransformerAutoConfiguration` has been deleted along with this change. The Spring XML configuration resources `framework/spring/mediatransform.xml` of Blueprint shared/middle module `image-transformation` and `com/coremedia/cap/transform/transform-services.xml` of module `com.coremedia.cms:cap-transform` have also been removed. Use `TransformImageServiceConfiguration` instead.

[CMS-24130]

Default of publisher.autoextend.latest-approved-version has been changed to true

Automatic extension of publication sets will now by default use the latest approved version of referenced content items instead of their earliest approved version.

Follow Section "Default of publisher.autoextend.latest-approved-version has been changed to true" [528] for upgrade information.

[CMS-24098]

Update of MongoDB driver to 4.11.1

The thirdparty dependencies org.mongodb:mongodb-driver-legacy, org.mongodb:mongodb-driver-core and org.mongodb:bson have been updated from version 4.8.2 to 4.11.1.

This is marked as a breaking change, because custom implementations can potentially use changed API of the MongoDB driver.

[CMS-23184]

MongoDB update to version 7.0.5

MongoDB has been updated to version 7.0.5 for the Docker Deployment. Note that an upgrade is only possible from a 6.0.x version. An upgrade from an earlier version needs to be done successively. Please refer to the official MongoDB documentation on how to upgrade: https://www.mongodb.com/docs/manual/release-notes/7.0-upgrade-standalone/ The compatibility changes are described here: https://www.mongodb.com/docs/manual/release-notes/7.0-compatibility/

[CMS-23183]

CoreMedia Content Application Engine

Reworked CAE security configuration API

Reworked CAE security configuration API. Turned `com.coremedia.cae.security.CaeHttpSecurityConfigurer` into an abstract class and removed the former `caeHttpSecurityConfigurer` bean of type `com.coremedia.cae.security.CaeHttpSecurityConfigurer`. The aspects formerly configured by that bean are now configured along with the `securityFilterChain` bean.

[CMS-24585]

Remove RequestRejectedExceptionFilter

The `com.coremedia.blueprint.cae.filter.RequestRejectedExceptionFilter` has been removed. It was a workaround for the issue RequestRejectedException should be 400 by default #7568 that has been fixed with Spring 6.

[CMS-24219]

Remove Commerce Context Interceptors

Class `com.coremedia.blueprint.livecontext.ecommerce.filter.CommerceConnectionFilter` now incorporates the concerns that were previously scattered amongst the commerce context interceptors. It resolves the requested site, performs a commerce connection lookup and then initializes the commerce contexts. The filter uses site lookup functions with signature `Function<ServletRequest, Optional<Site>>` to resolve the requested site and provides the interface `com.coremedia.blueprint.livecontext.ecommerce.filter.CommerceContextsInitializer` for initialization or post processing of commerce contexts. The former commerce context interceptor code concerned with initialization of store context and user context has been moved to `com.core`

`media.livecontext.handler.FragmentCommerceContextsIni
tializer`. The following classes have been removed:

- `com.coremedia.blueprint.ecommerce.cae.config.ECommer
ceCaeConfiguration`
- `com.coremedia.blueprint.ecommerce.cae.AbstractCommer
ceContextInterceptor`
- `com.coremedia.blueprint.ecommerce.cae.WebCommerceCon
textInterceptor`
- `com.coremedia.livecontext.config.LcCaeInterceptorsCon
figuration`
- `com.coremedia.livecontext.handler.FragmentCommerceCon
textInterceptor`
- `com.coremedia.livecontext.handler.RestCommerceContex
tInterceptor`
- `com.coremedia.livecontext.p13n.handler.FragmentCommer
ceP13nContextInterceptor`
- `com.coremedia.livecontext.preview.config.LcPreview
CaeInterceptorsConfiguration`
- `com.coremedia.livecontext.preview.PreferredSitePreview
CommerceContextInterceptor`
-
  `com.coremedia.livecontext.preview.PreviewCommerceContextInterceptor`
  The module `ec-cae-lib` was removed from the blueprint workspace.

[CMS-24213]

Transformed Blob Cache Requires Writeable Base Directory

The bean `transformedBlobCache` of type `com.coremedia.trans
form.impl.TransformedBlobCache` now validates the configured base path
(configuration option `com.coremedia.transform.blobCache.basePath`)
and throws an exception if it finds that the base path is not a writeable directory in which
it can cache and rotate temporary files holding the transformed blob data.

[CMS-24132]

Configured Content Security Policy for Live CAE

CAE HTTP security now supports configuration of the `Content-Security-Policy`
response header via `cae.http-headers.csp.directives`. It has been set
to a same-origin-only policy as recommended by the OWASP CSP cheat sheet. The Spring
`dev` profile configures report-only mode for Live CAE and disables CSP for the Preview
CAE.

Follow for upgrade inform-
ation.

[CMS-23644]

Changed Site Resolution of Requests

SiteFilter now matches request paths against configurable patterns to derive the requested site. This is much more efficient than the previous strategy which simply checked every path segment if it matched one of the segments of the known site root navigations. The new strategy is to take a list of patterns to check if the current request URI paths contains a site segment, then check the first path segment after the dispatcher servlet segment if it is site segment but exclude a list of known prefixes. The list of path patterns that have a site segment in it is configured via `cae.site.patterns` and the list of known non-site path prefixes is configured via `cae.site.ignore-prefix-patterns`. The former SiteFilter behavior can be restored by setting both properties to empty values. Configure `cae.site.collect-non-matching-paths=true` to collect non matching paths to support debugging your SiteFilter config. This setting is enabled in the `dev` profile for your convenience.

[CMS-23583]

CoreMedia Studio Client

Changed Linter Rules

Please check the section "Changed Linter Rules" in the "Studio Client Changes" Chapter of the Upgrade Guide for CMCC12.

[CMS-24139]

CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated

CKEditor 5 has been updated to version 41.1.0 (CKEditor 5 Development Tooling to 39.6.0). CoreMedia's CKEditor 5 Plugins and the CKEditor 5 CoreMedia OEM License have been updated accordingly:

- CoreMedia CKEditor 5 Plugins: 17.0.0
- CKEditor 5 CoreMedia OEM License: 2.1.0

Along with that, we fixed some meanwhile broken references to the CKEditor 5 documentation within the Studio Developer Manual.

Upgrade Highlights – CoreMedia CKEditor 5 Plugins

- Hardening Default Link Target Configuration: Prior to this release, a configured function based default link target filter (to apply a default target based on a given URL) may have been called with `null` in contrast to the method signature. This has been fixed, so that the function is only called for non-empty URLs.

Notable Upgrade Highlights – CKEditor 5

This section is just about remarkable changes we observed during the upgrade. For detailed information and possibly required upgrade steps in context of custom plugins, take a look at the CKEditor 5 changelog, please.

- **Links:** For external links, you may now just paste the URL having a text selected, and the text will get the link applied. Side Note: This feature also automatically triggers the possible default target selection provided by CoreMedia CKEditor 5 Plugins based on your configuration.
- **Paste from Office:** When General HTML Support is activated (transitively through CoreMedia Rich Text Support), class attribute values like `MsoNormal` were kept during paste. CKEditor 5 now actively removes such artificial artifacts.
- **AI Assistant Capability:** While not enabled in CoreMedia Blueprint, you may be interested to know, that with supporting CKEditor 5 41.0.0 within CoreMedia Studio, it is the first supported release, that comes with AI features.
- **Integration Changes:** CKEditor 5 now ships as ECMAScript modules, which requires additional upgrade steps, where the most important one is upgrading to TypeScript 5. Find more details below.
- **API Changes:**
  - **CKEditor 5 UI:** While there was no need to apply adaptations in CoreMedia Blueprint, we observed typing adjustments in context of the CKEditor 5 UI. This is due to some progress towards providing a so-called dialog system.
  - **Document Lists:** They are now the "standard list API". As a result the prefix `Document*`, like `DocumentList` is deprecated and got replaced by `List`, while the old feature got prefixed with `Legacy*`.

Follow Section "CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated" [532] for upgrade information.

[CMS-24095]

Third-Party Update: Upgraded Node.js to 20 LTS

Since October 2023 the new LTS of Node.js is v20. All workspaces were adjusted accordingly. Also pnpm has been updated to 8.15.3.

[CMS-23769]

Moved Classes

The following classes/modules have been moved:

- *RegisterNotificationsStudioPlugin.ts* has been moved from module *notification-studio-client* to *bpbase-notification-studio-plugin* module.
- All job related components have been moved from *editor-components* to the new module @*coremedia/studio-client.ext.job-components*.
- The module @*coremedia/studio-client.main.notification-studio-client* has been moved to the new module @*coremedia/studio-client.ext.notification-components*.

[CMS-23579]

Upgraded TypeScript to 5.3.3

The TypeScript used in studio-client was upgraded to 5.3.3.

Follow Section "Upgraded TypeScript to 5.3.3" [534] for upgrade information.

[CMS-23319]

Removed deprecated richTextPropertyFieldRegistry

Removed deprecated `richTextPropertyFieldRegistry`

- The registry was used to switch between different CKEditor versions in the Studio. Since CKEditor 4 is not supported anymore, this registry is now removed.

Follow Section "Removed deprecated richTextPropertyFieldRegistry" [535] for upgrade information.

[CMS-22181]

CoreMedia Frontend Workspace

Removed deprecated CSS/JS property "ieExpression"

The doctype property `ieExpression` of `CMAbstractCode` has been deprecated in release 2110.1. All usages in Studio, CAE and Frontend are removed now. To avoid migration issues, the doctype property still exists in the CoreMedia content type model.

[CMS-20144]

Thirdparty Upgrade: Upgraded Webpack to 5.90.3

Webpack was upgraded to 5.90.3. This also includes upgrades to all associates loader and plugin packages in theme-utils as well as node-sass. This change was necessary to be able to upgrade to NodeJS 20 LTS.

Follow Section "Thirdparty Upgrade: Upgraded Webpack to 5.90.3" [536] for upgrade information.

[CMS-17725]

CoreMedia Headless Server

Headless-Server Missing CORS configuration now disabled CORS protection

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

Follow Section "Headless-Server Missing CORS configuration now disabled CORS protection" [536] for upgrade information.

[CMS-24249]

Headless-Server major update to Spring-GraphQL

Headless-Server now uses Spring-GraphQL as its main Spring integration. Because of that the following libraries were removed and their APIs cannot be used anymore. They were removed because the corresponding projects are not updated or supported anymore.

Follow Section "Headless-Server major update to Spring-GraphQL" [537] for upgrade information.

[CMS-19714]

Miscellaneous

Removed Package com.coremedia.transform.impl from Public API

Package `com.coremedia.transform.impl` contains implementation classes only and was removed from public API. Use the interfaces of package `com.coremedia.transform` instead.

[CMS-24338]

Rename service "mysql" to "db" in global/deployment/docker

To prepare the workspace for usage with different databases, the service "mysql" has been renamed to "db" in `global/deployment/docker`. The container name is still "mysql".

[CMS-24111]

Removed Sencha CMD

Sencha CMD is no longer needed to build the studio-client. This means Java 11 and Sencha CMD no longer need to be installed. Because this is one less step during the studio-client build the build is now also faster.

Follow Section "Removed Sencha CMD" [538] for upgrade information.

[CMS-23501]

Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

To be able to use human-readable capacity configurations such as `1GB` in favor of `1_073_741_824` given as bytes, a bunch of properties got transformed to hold `DataSize` instead of `long` or `int` values denoting bytes, for example.

The following is a list of affected properties that benefit from this change:

- `com.coremedia.transform`
  - `com.coremedia.transform.blob-cache.size`

- `management.health`
  - `management.health.blobCacheDiskspace.threshold`
  - `management.health.transformedBlob CacheDiskspace.threshold`
- `repository`
  - `repository.blob-streaming-size-threshold`
  - `repository.blob-cache-size`
  - `repository.heap-cache-size`
  - `repository.max-cached-blob-size`
- `studio`
  - `studio.differencing.max-markup-size`
- `sql`
  - `sql.store.sgml-cache-size` (renamed from: `sql.store.sgml-cache-size-bytes`; old name still applicable)
- `workflow`
  - `workflow.blob-streaming-size-threshold`
  - `workflow.blob-cache-size`
  - `workflow.heap-cache-size`
  - `workflow.max-cached-blob-size`

Follow Section "Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications" [539] for upgrade information.

[CMS-22469]

4.27.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Bouncy Castle

Bouncy Castle has been updated to version 1.78 to fix security issues like CVE-2024-29857 and CVE-2024-30172.

[CMS-24725]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.3
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.2
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.3
- CoreMedia Adapter for HCL Commerce → 3.0.2
- AspectJ → 1.9.22
- Byte Buddy → 1.14.12
- Commons Codec → 1.16.1
- Error Prone → 2.26.1
- Enterprise Security API → 2.5.3.1
- gRPC-Java → 1.62.2
- Google Analytics Data Client for Java → 0.47.0
- Google Auth Library for Java → 1.23.0
- Google API Extensions for Java → 2.43.0
- Google HTTP Client Library for Java → 1.44.1
- Guava → 33.1.0-jre
- Hibernate → 6.4.4.Final
- Jackson → 2.17.0
- Jakarta Activation API → 2.1.3
- Jakarta Mail API → 2.1.3
- Jakarta XML Binding API → 4.0.2
- Janino → 3.1.12
- JUnit Jupiter → 5.10.2
- JAXB Reference Implementation → 4.0.5
- Micrometer → 1.12.4
- Netty → 4.1.108.Final
- PF4J → 3.11.0
- Protocol Buffers for Java → 3.25.3
- SLF4J → 2.0.12
- Spring Boot → 3.2.4
- Spring Data BOM → 2023.1.4
- Spring Framework → 6.1.6
- Spring for GraphQL → 1.2.6
- Spring Security → 6.2.4
- Tomcat → 10.1.20

[CMS-24115]

CoreMedia Studio Client

Added Taxonomy Access Configuration

The "Taxonomy Settings" have been extended so that the visibility of root nodes in the
Taxonomy Manager can be configured for different user groups.

[CMS-23846]

New Default Start Workflow Form With Two Column Layout

By default, all start workflow forms (publication as well as localization) now have a new responsive layout. If wide enough (> 800px) it is a two column layout, otherwise it switches back the the classical one column layout.

The public API for workflow customizations that was introduced with CM11 is not affected by this. In that case you define start / running workflow form extensions in a declarative way and do not need to care about the changes.

However, as this CM11 public API still does not cover all customization use cases that were possible with the previous custom workflow API, especially concerning custom fields in the start forms, there are still quite some customizations in the old style in use.

The old start workflow forms still exist (DefaultStartPublicationWorkflowForm, Default-StartTranslationWorkflowForm, DefaultStartSynchronizationForm). So if you use them in your AddPublicationWorkflowPlugin or AddTranslationWorkflowPlugin, you can keep this up but of course you will not enjoy the benefit of the new responsive layout.

You can simply replace these usages of the old start forms with the new ones. For each of the old forms there exists a new counterpart (DefaultTwoColumnStartPublicationWork-flowForm, DefaultTwoColumnStartTranslationWorkflowForm, DefaultTwoColumnStart-SynchronizationForm).

This switch should cause very few problems. All properties of the old forms are also supported by the new forms. If you are just utilizing the "additionalFields" property of the old start forms, you can simply continue to do so. Only if you are using plugins like the AddItemsPlugin or RemoveItemsPlugin to alter the old forms in very specific ways, you will probably have to adapt the plugin usages to the structure of the new forms.

Our built-in workflows now all come with the new start forms. If for some reason, this causes any problems that you cannot fix, you can switch back the old forms. For example, for the two-step publication workflow, you can add this plugin configuration somewhere in the blueprint:

```
new AddPublicationWorkflowPlugin({
  processDefinitionName:
PublicationWorkflowConstants.TWO_STEP_PUBLICATION_WORKFLOW_DEFINITION_NAME,
  nextSelectedTaskProcessVariableName:
PublicationWorkflowConstants.NEXT_SELECTED_TASK_PROCESS_VARIABLE_NAME,
  assignmentTasks: ["Approve"],
  startForm: Config(DefaultStartPublicationWorkflowForm),
}),
```

[CMS-23573]

Fixed Pre-Loading of SiteAwareFeatureUtil

Fixed issue of the *SiteAwareFeatureUtil* that the pre-loading did only affect the preferred site.

[CMS-21202]

CoreMedia Studio Server

Infocenter has replaced the old Jobs and Notification menus

The new Infocenter with new UX concept has replaced the old Jobs and Notifications menus.

[CMS-14870]

CoreMedia Workspace

SingleLinkField is Public API now

The component *SingleLinkField* has been marked as public API.

[CMS-16960]

CoreMedia Frontend Workspace

Deprecation of overloading frontend ImageFunctions#getImageLinkForAspectRatio

The overloaded frontend `ImageFunctions#getImageLinkForAspectRatio` methods have been deprecated. Use `ImageFunctions#getImageLinkForAspectRatio(Blob, String, Map, boolean, String, HttpServletRequest, HttpServletResponse, boolean)`, which was introduced with this release instead.

[CMS-24087]

Third-Party Update: Upgraded Node.js to 20 LTS

Since October 2023 the new LTS of Node.js is v20 and this version is now the default in the frontend workspace. Also `pnpm` has been updated to 8.15.3 and the dependency `node-sass` to version 9 accordingly. No further changes are needed.

[CMS-23768]

CoreMedia Headless Server

Deprecated com.coremedia.caas.web.persistedqueries.Hash#md5

The method `com.coremedia.caas.web.persistedqueries.Hash#md5` has been deprecated, just like the method `com.google.common.hash.Hashing#md5` it is using internally. MD5 is neither fast nor secure. Use `com.coremedia.caas.web.persistedqueries.Hash#sha256` instead.

[CMS-23707]

Miscellaneous

Third-Party Update: Apache Commons DBCP

Apache Commons DBCP has been updated to version 2.12.0.

[CMS-24053]

Developing Studio Apps Public API and Documentation

Developing Studio Apps now comes with a public API and a developer documentation. Consult the Studio Developer Manual for details.

[CMS-24025]

Studio Apps Public API Avaliable

Public API for developing custom Studio Apps was introduced. The public API types and functions of each of the following packages are exported by their index.d.ts and consequently can be imported from the top-level of these packages. All imports from these packages that require sub-path imports are not public API.

Developer documentation on developing custom apps will follow shortly.

- service-agent ^2.1.0
- @coremedia/studio-client.app-context-models
- @coremedia/studio-client.interaction-services-api
- @coremedia/studio-client.interaction-services-impl
- @coremedia/studio-client.content-services-api
- @coremedia/studio-client.workflow-services-api
- @coremedia/studio-client.project-services-api

[CMS-24023]

4.27.3 Fixed Issues

CoreMedia Core

Third-Party Update: Apache James Mime4J

Apache James Mime4J has been updated to version 0.8.10.

[CMS-24288]

Fixed a Bug Where A Publication Workflow With Content Errors Could Be Started

We fixed a timing issue where the start-workflow window would not show content errors and consequently, a publication workflow could be started.

[CMS-24229]

Postgresql driver has been updated

The postgresql driver `org.postgresql:postgresql` has been updated to `42.6.1`.

[CMS-24216]

Third-Party Update: Apache Commons Compress

Third-party library Apache Commons Compress has been updated to 1.26.0 to fix known security vulnerabilities.

[CMS-24210]

Content Server DB Transaction Retry

The Content Server can now be configured to perform retries on database transactions in case of connection loss or read-only databases (MySQL only). These situations may arise in the context of database failovers in setups like, e.g., Amazon Aurora.

To configure the Content Server for retries, use these properties:

- *sql.pool.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*).
- *sql.pool.retry-on-read-only-db*: enable retries on read-only database when set to value *true* (default: *false*).
- *sql.pool.retry-delay*: wait given time before retrying (*Duration*; default: 15 seconds).
- *sql.pool.max-retries*: maximum number of retries (default: 15).

Make sure to set DNS caching on your system to a very short time (probably shorter than *sql.pool.retry-delay*) to allow for refreshed hostname resolution before the next attempt on a previously failing database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

The number of retries on a single database transaction and the delay are configurable. Set the maximum retries and delay values (see above) large enough to cover prolonged database unavailability during failover.

[CMS-24076]

Improved Performance Of Deriving Sites

Performance of Deriving Sites via Studio or API (`com.coremedia.cap.multis ite.SitesService#deriveSite(...)`) has been improved.

[CMS-24075]

Improved Logging for Workflow Errors

The Workflow Server logs more details for errors from certain workflow actions. Previously, some important details were only visible with enabled DEBUG logging.

[CMS-24058]

Method Content#copyTo(...) fixed

Method Content#copyTo(...) showed an error with documents whose blob properties had data. This has now been fixed.

[CMS-24051]

Fixed CAE Feeder Partial Re-Indexing by Actuator or JMX

Fixed a bug in the CAE Feeder that not all content items were re-indexed after a request for partial re-indexing via Spring Boot actuator or JMX.

[CMS-23587]

Extended Workflow Server DB Transaction Retry

The Workflow Server can now be configured to perform retries on database transactions in case of connection loss or read-only databases (MySQL only). These situations may arise in the context of database failovers in setups like, e.g., Amazon Aurora.

To configure the Workflow Server for retries on connection loss, use these properties:

- *workflow.server.tx.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*).
- *workflow.server.tx.retry-on-connection-loss-delay*: wait given time before retrying on database connection loss (*Duration*; default: 15 seconds).

To configure the Workflow Server for retries on a read-only database, use these properties. This is currently only supported on MySQL:

- *workflow.server.tx.retry-on-read-only-db*: enable retries on read-only database when set to value *true* (default: *false*).
- *workflow.server.tx.retry-on-read-only-db-delay*: wait given time before retrying on read-only database (*Duration*; default: 5 seconds).

Make sure to set DNS caching on your system to a very short time (probably shorter than *workflow.server.tx.retry-on-read-only-db-delay*) to allow for refreshed hostname resolution before the next attempt on a previously read-only database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

Retries on a single database transaction are limited to 15 times - regardless of which concrete issue arises on each retry. Set the delay values (see above) large enough to cover prolonged database unavailability during failover.

[CMS-23428]

CoreMedia Content Application Engine

When copy and pasting only valid content types are now accepted to the placement linkists.

Placement linklists in the pagegrid are usually configured to accept only `CMTeasible` content type. Nevertheless, when copying and pasting the type check was ignored. This is now fixed.

[CMS-24194]

Richtext Transformation no Longer Swallows Links with Trailing Spaces

Transformation of CoreMedia richtext used to swallow links with trailing space characters because the trailing space characters were interpreted as illegal URL characters. The richtext transformation now trims the link text before parsing it.

[CMS-24086]

Dynamic fragments fixed in live side

Dynamic fragments that require parameters were not displayed correctly via a live CAE because the parameters were not appended to a dynamic fragment URL, at least not if the standard CAE configuration was used. However, you could have previously set the property "cae.link-transformer.include-params-appender.uri-paths" to "/dynamic/" to solve the problem. We have set the default value to "/dynamic", so it will work in most cases.

[CMS-24083]

Elastic Social user: number of logins

Before, the number of logins was not increased for Elastic Social users on login. The cause was a missing authenticationEventPublisher. The DefaultAuthenticationEventPublisher is configured for the authenticationManager now.

[CMS-23370]

Decoding fragment parameters error fixed

An error occured if the fragment parameters contained "%" characters with the meaning of percents (like "50 percent off"). But these were not "escape characters" to encode special chars in URLs. This led to an error during decoding which has now been fixed.

(CMS-23290)

Freemarker function bp.getBiggestImageLink gets flag for absolute link

New Feature: The Freemarker function `bp.getBiggestImageLink` now has a boolean flag as third parameter to make it return an absolute link in every case.

(CMS-23207)

CoreMedia Studio Client

Fixed a Bug Where (In Chrome) A New Content Was Created When Dragging A Thumbnail

We fixed a bug where an additional content item (with name "convert.png") was created and added to the linklist when drag + dropping a picture thumbnail to a linklist.

(CMS-24301)

Fixed A Bug Where All Versions Of A Content Item Are Loaded On Withdraw

We fixed a bug where all versions of a content item where loaded on content withdraw although no particular listeners where attached to the version items. This was particularly problematic for content items with a large amount of versions up to a point where the Studio froze.

(CMS-24093)

Altered alignment of CKEditor 5 main toolbar dropdowns

The alignment of the `Insert Table` and `Insert Code Block` dropdown menus in the CKEditor 5 main toolbar was changed from right to left to avoid an overflow issue with ExtJS layouts.

(CMS-24041)

Fixed Duplicates in InputChecksField

Fixed issue that duplicate values have been accepted by chip input fields when these have been entered with whitespaces.

[CMS-23925]

Fixed Document Form Layout Isses

Fixed layout issues of document forms with the re-design of the Studio.

[CMS-23755]

Fixed Hidden Pop Up Dialogs

Fixed issue where parts of the date dialogs were cut off.

[CMS-23647]

Outdated Items in Apps Menu

Due to a caching problem, some items in the apps menu were sometimes not properly updated when updating to a new version of the studio-client. This problem should be fixed now.

[CMS-22465]

Fixed Studio App README.adoc

Fixed the path information where to start the pnpm watch task.

[CMS-21580]

CoreMedia Studio Server

Fixed Scrolling of Create-From-Template Dialog

Added missing scrollbars for the CreateFromTemplate dialog.

[CMS-24172]

Fixed a Bug with Disappearing Paddings

We fixed a bug where paddings disappeared in the configuration dialog for hidden form fields

[CMS-23816]

Fixed Translation Search Filter

Fixed issue with the translation search filter that did not show translated sites for some site hierarchies.

[CMS-18488]

CoreMedia Headless Server

Documentation for Custom Filter Queries

Updated documentation: To add a custom filter query, the filter query identifier must be added to the graphql input type CustomFilterQueryArg.

[CMS-23928]

Miscellaneous

Headless Configuration Issue behind a proxy solved

When Headless-Server is running behind a reverse proxy, it is necessary to set a Spring configuration property to make Swagger work correctly. The configuration property `server.forward-headers-strategy`should be set to the value `framework`. This can be done either by application properties or preferably by environment variable, like `SERVER_FORWARD_HEADERS_STRATEGY: "framework"`.

[CMS-24719]

The management-tools script to download a remote content-archive was broken

The script `use-remote-content-archive` tries to write the archive to the wrong folder, since the tmp directory path has changed from `/var/tmp` to `/tmp` .

[CMS-24163]

Revert Update Of MySQL In Blueprint Docker-Compose Setup

The mysql container was updated to 8.2.0 in default.yml by mistake. The version has now been changed to 8.0 which is the current LTS version and our officially supported version.

[CMS-24156]

Fixed reset of DatePropertyField

Unlike the *DateTimePropertyField*, the *DatePropertyField* has no reset button. The value can now be resetted by clearing the text field.

[CMS-23940]

Marked FavoritesUserItem as public API

Marked FavoritesUserItem as public API.

[CMS-22695]

4.28 Release 2401.8

The release contains:

- Breaking changes: 0
- Changes and improvements: 5
- Bugfixes: 24

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.

Release date: 2024-11-14

Breaking Changes

Changes and Improvements

- CMS-25839: Updated Maven dependencies and plugins
- CMS-25831: Third-Party Update: Apache Solr 9.7.0

Bugfixes

- CMS-25773: Informative Exception for Non-Existing Markup Grammar
- CMS-24147: Adjusted *.asRichtextEmbed.ftl templates
- CMS-25928: Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded
- CMS-25722: Fixed Bug That Broke Keyboard Navigation Through Document Forms
- CMS-25647: Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client
- CMS-25737: Fixed thumbnails for augmented commerce items
- CMS-25651: External Page validators enabled
- CMS-25334: Fixed memory issue for blob loading
- CMS-24935: Handled StackOverflowError While Resolving Default Picture [2nd Fix]
- CMS-25962: Fixed bug in AbsoluteUrlPrefixRuleProvider matching null
- CMS-25563: Normalized Extension Dependency Order

4.28.1 Breaking Changes

This release contains no breaking changes

4.28.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.9
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.8
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.9
- CoreMedia Adapter for HCL Commerce → 3.0.8
- Apache HttpComponents Client 5 → 5.4.1
- Byte Buddy → 1.15.7
- Enterprise Security API → 2.5.5.0
- Error Prone → 2.35.1
- Google Analytics Data Client for Java → 0.64.0
- Google API Common for Java → 2.40.0
- Google API Extensions for Java → 2.57.0
- Google Auth Library for Java → 1.29.0
- gRPC-Java → 1.68.1
- Jackson → 2.18.1
- Jib Maven Plugin → 3.4.4
- JUnit Jupiter → 5.11.3
- Netty → 4.1.114.Final
- Plugin Framework for Java → 3.12.1
- Protocol Buffers for Java → 4.28.3
- Reactor Project BOM → 2023.0.11
- Spring Boot → 3.2.11
- Spring Framework → 6.1.14
- Spring Security → 6.2.7
- Tomcat → 10.1.31

[CMS-25839]

Third-Party Update: Apache Solr 9.7.0

Apache Solr has been updated to version 9.7.0. Alongside, a new coremedia/solr-base Docker image with tag 2.4-cm-9.7.0 was released. As part of this change, the following transitive dependencies of Apache Solr have been updated to match versions used by Solr:

- Apache Zookeeper 3.9.2
- Eclipse Jetty 10.0.22

See https://solr.apache.org/docs/9_7_0/changes/Changes.html and https://solr.apache.org/guide/solr/latest/upgrade-notes/major-changes-in-solr-9.html#solr-9-7 for a list of changes in Solr. We have kept Solr schema configuration files at version 1.6 to avoid the need to re-index data.

[CMS-25831]

4.28.3 Fixed Issues

CoreMedia Core

Informative Exception for Non-Existing Markup Grammar

When a custom *XmlGrammar* is removed from the *Document Type Model* [`*-doc types.xml`] but documents exist in the repository which still reference the removed *XmlGrammar*, this is an inconsistent configuration. An attempt to publish such a document logs a *NullPointerException* in the *Content Management Server* and publication fails. With the change, now more detail information is logged in both *Content Management Server* and *Studio Server* if a publication is attempted.

[CMS-25773]

CoreMedia Content Application Engine

Adjusted *.asRichtextEmbed.ftl templates

With `CMS-19278` closing and opening `<p>` tags have been added to `CMTeas able.asRichtextEmbed.ftl` to avoid breaking HTML validity. Since embedded content can also be embedded inside headlines, tables, etc., this change actually broke HTML validity even more. This change also caused empty `<p>` tags surrounding embedded content, especially when embedded content was placed at the beginning of the richtext. Now these additional closing and re-opening `<p>` tags have been removed in all `*.asRichtextEmbed.ftl` templates.

[CMS-24147]

CoreMedia Studio Client

Fixed Layout Bug That Would Freeze The Studio Due To Maximum Call Stack Size Exceeded

We fixed a bug related to the WorkAreaTabBar where the layouting mechanism would run into a "maximum call stack size exceeded" error leading to a Studio freeze.

[CMS-25928]

Fixed Bug That Broke Keyboard Navigation Through Document Forms

We fixed a bug where opening the third tab of a content type (which is when tab reuse kicks in) broke the keyboard navigation through the document form (with the TAB key).

[CMS-25722]

Removal: Deprecation for SiteModel's siteIndicatorDepth in Multi-Site for Studio Client

We removed the deprecation notice for `siteIndicatorDepth` as part of the `SiteModel` in Studio Client.

As part of this change `cm validate-multisite` got extended by a new issue code:

```
MS-VALIDATION-4009 - DISCOURAGED_PROPERTY_VALUE
```

The new issue-code is reported at level `INFO` and is triggered, when using a `siteIndicatorDepth` different to `0` (zero).

Motivation

As part of `CMS-9521` we deprecated `siteIndicatorDepth` for 2001.1 and changed the default to `0` (zero) rather than `1` (one), as we got aware that many editors struggled with site indicators being hidden in the "depth" of a site – which in the end caused corrupted sites.

Nevertheless, migrating existing content from a depth 1 to depth 0 may raise considerable migration effort, as you have to move all site indicators up one level in one step (while stopping editorial work) and then republish all your sites.

Because of this, we decided to remove the deprecation notice, so that we will support site indicator depths different to `0` also on in the future. The default which ships with CoreMedia Blueprint will stick to the recommended default `0`, though.

(CMS-25647)

CoreMedia Studio Server

Fixed thumbnails for augmented commerce items

If augmented commerce items (category, product) didn't have a picture url in the commerce system, the thumbnail icon couldn't displayed in CoreMedia Studio even if a picture asset has been assigned (a broken URL was rendered). This has been fixed.

(CMS-25737)

External Page validators enabled

Added two new validator beans for External Pages. External Pages must also be part of the navigation in order to function, hence the new validators check that they are not part of a cycle (recursion) and that they do not have multiple parent nodes. This has so far only been checked for Channels, Augmented Categories and Categories.

(CMS-25651)

Fixed memory issue for blob loading

Fixed possible heap size exceptions when downloading blobs via the Studio REST service.

[CMS-25334]

Handled StackOverflowError While Resolving Default Picture (2nd Fix)

We fixed a bug where a StackOverflowError was thrown while resolving default pictures for cyclicly linked content items. This is the second fix for this problem as the first one was not sufficient.

[CMS-24935]

Miscellaneous

Fixed bug in AbsoluteUrlPrefixRuleProvider matching null

The `com.coremedia.blueprint.base.links.impl.AbsoluteUrl PrefixRuleProvider` now interprets the `?` as undefined value for matching `null` again.

[CMS-25962]

Normalized Extension Dependency Order

In recent releases, the dependencies of enabled Blueprint extensions were not correctly ordered as established by the extensions tool. This would lead to a diff when calling `extensions:sync` even without enabling or disabling any extensions. This has been corrected.

To minimize merge conflicts, you should invoke the extensions tool to normalize the dependency order in your customized Blueprint workspace, too. To that end, in your workspace root directory, simply call

```
mvn -f workspace-configuration/extensions exten
sions:sync
```

and commit the resulting diff before merging the new CoreMedia Blueprint version.

[CMS-25563]

4.29 Release 2401.7

The release contains:

- Breaking changes: 6
- Changes and improvements: 25
- Bugfixes: 70

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.

Release date: 2024-10-18

Breaking Changes

- CMS-24694: CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset
- CMS-15884: Starting XML Importer in a Docker Container
- CMS-24982: Changed Signature CartService#deleteCartOrderItem
- CMS-25362: Reverted behavioral change of BELOW folder queries in the QueryService
- CMS-25278: Updated Spring Security

Changes and Improvements

- CMS-25292: Updated Maven dependencies and plugins
- CMS-25375: Missing CORS configuration don't disable CORS protection anymore
- CMS-22625: Content Hub: Improved initial page load behavior for small page sizes
- CMS-25725: Update of springdoc to 2.6.0
- CMS-25603: HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

Bugfixes

- CMS-25496: Improved Logging for Server Import
- CMS-25255: Fixed Blob Sharing ID Inconsistency
- CMS-24727: Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder
- CMS-25105: Added apache httpcomponents5 runtime dependency

- CMS-24695: Made TransformedBlobHandler a page handler
- CMS-22836: Changed generation of RSA keys via CAE application
- CMS-25570: Fixing a related teaser overlay mechanism resolved this behavior
- CMS-25403: Fix for JPEG Image Upload Failure
- CMS-21492: Content Hub: Delete temporary files after import
- CMS-19645: Elastic Social Link Building Properties
- CMS-25416: Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss
- CMS-25610: Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception
- CMS-25435: Headless server can be run without commerce extension
- CMS-25167: Documentation
- CMS-25421: Fix ParameterAppendingLinkTransformer for opaque URLs
- CMS-25382: Consolidated And Updated Oracle Driver Dependencies
- CMS-24884: Fixed Bug in Blueprint Link Building
- CMS-24040: Fixed Cache Size Error

4.29.1 Breaking Changes

CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

Follow Section "CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset" [542] for upgrade information.

[CMS-24694]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow Section "Starting XML Importer in a Docker Container" [542] for upgrade information.

[CMS-15884]

CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

CoreMedia Headless Server

The dependency com.graphql-java:graphql-java was updated to version 21.5 to handle the security issue CVE-2024-40094. This change is breaking, as stricter rules apply to introspection queries. See https://github.com/graphql-java/graphql-java/releases/tag/v21.5 for details.

[CMS-25438]

Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

Follow Section "Reverted behavioral change of BELOW folder queries in the QueryService" [543] for upgrade information.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 [see dependency updates for the concrete version]. In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects

which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

4.29.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.8
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.7
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.8
- CoreMedia Adapter for HCL Commerce → 3.0.7
- AssertJ → 3.26.3
- Byte Buddy → 1.15.1
- Commons CLI → 1.9.0
- Commons Codec → 1.17.1
- Commons Compress → 1.27.1
- Commons Lang → 3.17.0
- Error Prone → 2.32.0
- Google Analytics Data Client for Java → 0.60.0
- Google API Common for Java → 2.36.0
- Google API Extensions for Java → 2.53.0
- Google Auth Library for Java → 1.25.0
- Google HTTP Client Library for Java → 1.45.0
- GraphQL Java → 21.5
- gRPC-Java → 1.66.0
- Guava → 33.3.0-jre
- Hibernate → 6.4.10.Final
- Jackson → 2.17.2
- JUnit Jupiter → 5.11.0
- Micrometer → 1.12.10
- Netty → 4.1.113.Final
- Plugin Framework for Java → 3.12.0
- Protocol Buffers for Java → 4.28.1

- Reactor Project BOM → 2023.0.10
- SLF4J → 2.0.16
- SnakeYAML → 2.3
- Spring Boot → 3.2.9
- Spring Data BOM → 2023.1.10
- Spring Framework → 6.1.13
- Spring Security → 6.2.6
- Tomcat → 10.1.30

[CMS-25292]

CoreMedia Content Application Engine

Missing CORS configuration don't disable CORS protection anymore

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to CAE configuration properties.

[CMS-25375]

CoreMedia Studio Client

Content Hub: Improved initial page load behavior for small page sizes

While using the Content Hub with small page sizes in the library lists a flickering after each loaded page was observable. The flickering has been fixed.

[CMS-22625]

CoreMedia Headless Server

Update of springdoc to 2.6.0

The dependencies org.springdoc:springdoc-openapi-starter-webmvc-ui and org.springdoc:springdoc-openapi-starter-common have been updated to version 2.6.0.

[CMS-25725]

HeadlessServer: LinkWriter of Richtext Transformation now able to invoke AttributeTransformers

The class LinkWriter of the richtext transformation was not able to receive AttributeTransformer by the transformation-yaml files. This is now possible.

In order to stay non-breaking, the necessary changes to add the existing **PassStyles** attribute transformer was **not** added to the default.yml transformation config.

Customer with this requirement may add this code snippet to their correspondent transformation yml files.

```
outputHandler:          !LinkWriter
 attributeTransformers:          - !PassStyles {styles: *link_styles}
```

Additionally, the referred `*link_styles` of course must be defined also (compare e.g. `*float_styles` of the ImgWriters default configuration for reference).

[CMS-25603]

4.29.3 Fixed Issues

CoreMedia Core

Improved Logging for Server Import

Content Server tool *serverimport* did not report paths of problematic import files in all cases. Those cases have been improved to include the file's path now, too.

[CMS-25496]

Fixed Blob Sharing ID Inconsistency

If you use the RLS's blob sharing capability [`sql.store.generate-blob-ids=false`] in combination with URL blobs, blob ids may have been assigned inconsistently in the RLS repository. This is fixed now.

[CMS-25255]

Decreased Log Level For Some very Frequent Log Messages In The CAE Feeder

Log level of some log messages in `FeedingReceiver` and `ContentTrigger` has been changed from `INFO` to `DEBUG` as they are logged very often.

[CMS-24727]

CoreMedia Content Application Engine

Added apache httpcomponents5 runtime dependency

The `org.apache.httpcomponents.client5:httpclient5` dependency was added as a runtime dependency for `com.coremedia.blueprint:cae-sitemap`.

[CMS-25105]

Made TransformedBlobHandler a page handler

The Blueprint's{{TransformedBlobHandler}} extends `PageHandlerBase` now, and enhances the `ModelAndView` with the page model. This is necessary for the `ExposeCurrentNavigationInterceptor` to set the correct locale in the response.

[CMS-24695]

Changed generation of RSA keys via CAE application

The generation of RSA private and public keys via CAE application has changed. The keys are required for creating a signed token to identify anonymous visitors. Before, a new key pair [signCookie.publicKey and signCookie.privateKey] was created and logged, if a value was missing or invalid. Now a new key pair can be generated via code or actuator, see documentation for details.

[CMS-22836]

CoreMedia Studio Client

Fixing a related teaser overlay mechanism resolved this behavior

The behavior is resolved by fixing a related bug of the teaser overlay mechanism: The teaser overlay was not reset when the source text gets empty.

[CMS-25570]

Fix for JPEG Image Upload Failure

JPEG images which have density metadata outside allowed range [1..65535] could not be uploaded and showed an exception *javax.imageio.metadata.IIOInvalidTreeException: Xdensity attribute out of range* in Studio Server log. With the fix, the system now retries upload of the image without any metadata, effectively falling back to default values. Additional JPEG image metadata will be lost in that case.

[CMS-25403]

Content Hub: Delete temporary files after import

The Content Hub uses temporary files while importing blobs. Those temporary files are now correctly deleted after the import.

[CMS-21492]

CoreMedia Elastic Social

Elastic Social Link Building Properties

Added option to the ElasticSocialLinkBuildingProperties so that the SimpleLinkFormatter must not use the current request in Studio.

[CMS-19645]

CoreMedia Commerce Hub

Fixed a Bug Regarding Store Handling on Commerce Adapter Connection Loss

Under certain circumstances the commerce adapter client implementation may not have recovered from temporary connection losses to the commerce adapter. As a result of this bug, fragment requests could not derive the requested site from the given store ID and locale. The only solution was to restart the application that had run into this situation or to clear its cache via actuator or JMX. This bug has been fixed.

[CMS-25416]

CoreMedia Headless Server

Headless Server Bugfix: Empty HTML in Html Fragments leads to Exception

When the HTML in a HTML fragment is left empty, a serverside exception was thrown by the `HtmlAdapter`. The adapter now returns null instead.

[CMS-25610]

Headless server can be run without commerce extension

There was a dependency for the headless server that could be satisfied without the commerce extension. However, this was not intentional and now the required component is also found without having the commerce extension enabled.

[CMS-25435]

CoreMedia Documentation

Documentation

Update Extensions Chapter

[CMS-25167]

Miscellaneous

Fix ParameterAppendingLinkTransformer for opaque URLs

ParameterAppendingLinkTransformer does not modify opaque URIs like "mailto:mail@www.example.com" anymore.

[CMS-25421]

Consolidated And Updated Oracle Driver Dependencies

We now consistently use `com.oracle.database.jdbc:ojdbc11:23.4.0.24.05` as Oracle database driver. The dependency is managed in `com.coremedia.cms:common-thirdparty-bom` and added as dependency in `com.coremedia.blueprint:database-drivers` and `com.coremedia.cms:editorial-comments-data-oracle`.

[CMS-25382]

Fixed Bug in Blueprint Link Building

Due to a bug, the Blueprint CAE built dead links to CMChannel (aka Page) contents which are not linked into the navigation hierarchy. In particular, such links occured in sitemaps. This has been fixed now, and such channels cannot be linked to any longer.

[CMS-24884]

Fixed Cache Size Error

An error in the UAPI cache size calculation could lead to Out-Of-Memory errors in CMS clients. This has been fixed now.

[CMS-24040]

4.30 Release 2401.6

The release contains:

- Breaking changes: 0
- Changes and improvements: 4
- Bugfixes: 2

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.

Release date: 2024-07-12

Breaking Changes

Changes and Improvements

- CMS-25345: Updated Tomcat to mitigate CVE-2024-34750

Bugfixes

4.30.1 Breaking Changes

This release contains no breaking changes

4.30.2 Changes and Improvements

CoreMedia Core

Updated Tomcat to mitigate CVE-2024-34750

Updated Tomcat to version 10.1.25 to mitigate CVE-2024-34750.

[CMS-25345]

4.30.3 Fixed Issues

4.31 Release 2401.5

The release contains:

- Breaking changes: 3
- Changes and improvements: 10
- Bugfixes: 14

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.

Release date: 2024-07-08

Breaking Changes

- CMS-24165: Third-Party Update: Apache Solr 9.6.1
- CMS-24909: Removed dependency management for Google APIs Client Library for Java
- CMS-24683: HeadlessServer: Missing support for blobs in structs fixed

Changes and Improvements

- CMS-25049: Updated Maven dependencies and plugins
- CMS-24944: Changed management of reactor dependencies to BOM imports

Bugfixes

- CMS-15270: Theme Importer Logging
- CMS-24946: Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled
- CMS-24881: Control Room: Fixed non localized label 'Withdraw All'
- CMS-24709: Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup
- CMS-24551: Added Taxonomy Context Documentation
- CMS-24682: Bugfix: Maximum search limit was ignored
- CMS-25076: Downgraded Micrometer to 1.12.6

4.31.1 Breaking Changes

CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Follow Section "Third-Party Update: Apache Solr 9.6.1" [546] for upgrade information.

[CMS-24165]

CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there're no more usages of that dependency.

[CMS-24909]

CoreMedia Headless Server

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Follow Section "HeadlessServer: Missing support for blobs in structs fixed" [547] for upgrade information.

[CMS-24683]

4.31.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- Apache HttpComponents Client → 5.3.1
- AssertJ → 3.26.0
- Byte Buddy → 1.14.17
- Commons CLI → 1.6.0
- Commons DBCP → 2.12.0
- Commons Compress → 1.26.2
- Commons Exec → 1.4.0
- Commons IO → 2.16.1
- Commons Text → 1.12.0
- Enterprise Security API → 2.5.4.0
- Error Prone → 2.28.0
- Freemarker → 2.3.33
- Google Analytics Data Client for Java → 0.56.0
- Google API Common for Java → 2.32.0
- Google API Extensions for Java → 2.49.0
- Google HTTP Client Library for Java → 1.44.2
- gRPC-Java → 1.64.0
- Gson → 2.11.0
- Hibernate → 6.4.8.Final
- Jackson → 2.17.1
- Jakarta Validation API → 3.1.0
- Jib Maven Plugin → 3.4.3
- Micrometer → 1.12.7
- Netty → 4.1.111.Final
- PF4J → 3.11.1
- Spring Boot → 3.2.6
- Spring Data BOM → 2023.1.7
- Spring Framework → 6.1.9

[CMS-25049]

CoreMedia Content Application Engine

Changed management of reactor dependencies to BOM imports

The dependency management for the `io.projectreactor:reactor-core` and the `io.projectreactor.netty:reactor-netty-http` dependencies have been replaced with imports of the `io.projectreactor:reactor-bom`.

Using the latest Reactor Project BOM version 2023.0.7, the dependencies have effectively been updated to:

- Reactor Core → 3.6.7
- Reactor Netty → 1.1.20

[CMS-24944]

4.31.3 Fixed Issues

CoreMedia Core

Theme Importer Logging

The output of the theme importer has been cleaned up to distinguish user interaction (unformatted on stdout, like the usage message) from logging (more detailed, formatted with timestamp and severity in the logfile).

[CMS-15270]

CoreMedia Studio Client

Fixed Bug Where Content Items Could Not Be Opened From Library When DefaultTabStateManager is Disabled

The editorContext allows to disable the DefaultTabStateManager. We fixed a bug where content items could not be opened form the library in that case.

[CMS-24946]

Control Room: Fixed non localized label 'Withdraw All'

Fixed non localized button 'Withdraw All' in the Control Room.

[CMS-24881]

Removed "SiteAwareFeatureUtil.preLoadConfiguration()" from Startup

The pre-caching call SiteAwareFeatureUtil.preLoadConfiguration() has been removed from the Studio startup since it is too expensive when used with many sites and is only used in combination with the SiteAwareFeaturePlugin.

[CMS-24709]

Added Taxonomy Context Documentation

Added documentation of how to fix context problems with new taxonomy trees.

[CMS-24551]

CoreMedia Headless Server

Bugfix: Maximum search limit was ignored

The bug, that the configuration property `caas.search-max-search-limit` was ignored, was fixed.

[CMS-24682]

Miscellaneous

Downgraded Micrometer to 1.12.6

Micrometer has been downgraded to version 1.12.6.

In the previous AMP, Micrometer was upgraded to a new version (1.13.x) that is not fully supported by the current Spring Boot version (<=3.2). As a result, the Prometheus actuator did not work anymore. To fix that, the Micrometer version had to be downgraded.

[CMS-25076]

4.32 Release 2401.4

The release contains:

- Breaking changes: 2
- Changes and improvements: 9
- Bugfixes: 45

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.

Release date: 2024-05-28

Breaking Changes

- CMS-24704: Updated NodeJS Version to 18.20.1
- CMS-24249: Headless-Server Missing CORS configuration now disabled CORS protection

Changes and Improvements

- CMS-24725: Third-Party Update: Bouncy Castle
- CMS-24544: Updated Maven dependencies and plugins
- CMS-24348: cm query Provides Format Option

Bugfixes

- CMS-24789: Fixed CAE Feeder Configuration of Content Repository
- CMS-24773: Fixed Loading of Multiple Document Type Model Files in XML Repository
- CMS-24765: Fixed Content ID Comparison on Client-Side Query
- CMS-24310: Improved Performance for Large Structs
- CMS-24109: Improved Publication Performance
- CMS-24076: Content Server DB Transaction Retry
- CMS-22943: Configuration of Custom MIME Types
- CMS-24830: Old SiteFilter is configured to avoid unwanted site resolvings
- CMS-24711: Updated and optimized @coremedia/brick-mediaelement
- CMS-24086: Richtext Transformation no Longer Swallows Links with Trailing Spaces

- CMS-24336: Exclude internal documents of type EditorProfile from "My Edited Content"
- CMS-24041: Altered alignment of CKEditor 5 main toolbar dropdowns
- CMS-23104: Content Hub: Improved Logging
- CMS-18687: Fixed Translation Status Widget
- CMS-24768: Lookup of Augmented Pages improved
- CMS-23928: Documentation for Custom Filter Queries
- CMS-23916: Bugfix: Headless-Server MediaController does not consider validity date
- CMS-24719: Headless Configuration Issue behind a proxy solved

4.32.1 Breaking Changes

CoreMedia Studio Client

Updated NodeJS Version to 18.20.1

The images provided in studio-client and frontend workspace have been updated to utilize NodeJS 18.20.1 which fixes CVE-2024-27983. However the security issue does not affect any of the workspaces.

Follow Section "Updated NodeJS Version to 18.20.1" [548] for upgrade information.

[CMS-24704]

CoreMedia Headless Server

Headless-Server Missing CORS configuration now disabled CORS protection

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

Follow Section "Headless-Server Missing CORS configuration now disabled CORS protection" [548] for upgrade information.

[CMS-24249]

4.32.2 Changes and Improvements

CoreMedia Core

Third-Party Update: Bouncy Castle

Bouncy Castle has been updated to version 1.78 to fix security issues like CVE-2024-29857 and CVE-2024-30172.

[CMS-24725]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub → 3.0.4
- CoreMedia Adapter for SAP Commerce Cloud → 3.0.3
- CoreMedia Adapter for Salesforce Commerce Cloud B2C → 3.0.4
- CoreMedia Adapter for HCL Commerce → 3.0.3
- Angus Activation → 2.0.2
- Angus Mail → 2.0.3
- AspectJ → 1.9.22.1
- Byte Buddy → 1.14.12
- Commons Codec → 1.17.0
- Enterprise Security API → 2.5.3.1
- Error Prone → 2.27.1
- Google Analytics Data Client for Java → 0.54.0
- Google API Common for Java → 2.31.0
- Google API Extensions for Java → 2.48.0
- Google APIs Client Library for Java → 2.5.0
- Google OAuth Client Library for Java → 1.36.0
- gRPC-Java → 1.63.0
- Guava → 33.1.0-jre
- Hibernate → 6.4.4.Final
- Jackson → 2.17.0
- Jakarta Activation API → 2.1.3
- Jakarta Mail API → 2.1.3
- Jakarta XML Binding API → 4.0.2
- Janino → 3.1.12

- JAXB Reference Implementation → 4.0.5
- Jib Maven Plugin → 3.4.2
- JUnit Jupiter → 5.10.2
- Micrometer → 1.13.0
- Netty → 4.1.109.Final
- PF4J → 3.11.0
- SLF4J → 2.0.13
- Spring Boot → 3.2.5
- Spring Data BOM → 2023.1.5
- Spring Framework → 6.1.5
- Spring Security → 6.2.3
- Tomcat → 10.1.24

[CMS-24544]

cm query Provides Format Option

The `cm query` command has been enhanced to support a `--format` option.

It allows to control to output either using the default multi-column output or new single-column outputs suitable, for example, for forwarding results to subsequent processing via shell pipes.

Supported formats despite the default:

- id: Prints the CoreMedia Content or Version ID
- uuid: Prints the UUID
- path: Prints the path of the content related to the `CapObject` found.

The Content Server Manual has been updated accordingly.

[CMS-24348]

4.32.3 Fixed Issues

CoreMedia Core

Fixed CAE Feeder Configuration of Content Repository

CAE Feeder failed to connect to content repository as 'feeder' user under certain circumstances. This bug was fixed by tweaking the auto configuration order of the feeder auto configurations.

[CMS-24789]

Fixed Loading of Multiple Document Type Model Files in XML Repository

Loading of multiple Document Type Model (DTM) files for the XML Repository was broken and has been fixed now. Multiple DTM files may again be stated as a comma-separated list with property `repository.params.contentxml` of test class annotation `@TestPropertySource` (see Blueprint workspace for examples).

[CMS-24773]

Fixed Content ID Comparison on Client-Side Query

QueryService#getContentsFulfilling(...) did not work for numerical Content ID comparisons, e.g., `TYPE Document_ : id > 10000`, and threw an exception. This is fixed now.

[CMS-24765]

Improved Performance for Large Structs

The code for loading struct properties was optimized, especially for large structs. This speeds up various operations for content that contains a larger struct value.

[CMS-24310]

Improved Publication Performance

The code for destroying intermediate versions after publication was optimized, especially for very large version histories, and/or if many derived multi-site contents exist with possibly large version histories. This reduces the time needed for publication for some cases.

[CMS-24109]

Content Server DB Transaction Retry

The Content Server can now be configured to perform retries on database transactions in case of connection loss or read-only databases (MySQL only). These situations may arise in the context of database failovers in setups like, e.g., Amazon Aurora.

To configure the Content Server for retries, use these properties:

- *sql.pool.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*).

- *sql.pool.retry-on-read-only-db*: enable retries on read-only database when set to value *true* (default: *false*).
- *sql.pool.retry-delay*: wait given time before retrying (*Duration*; default: 15 seconds).
- *sql.pool.max-retries*: maximum number of retries (default: 15).

Make sure to set DNS caching on your system to a very short time (probably shorter than *sql.pool.retry-delay*) to allow for refreshed hostname resolution before the next attempt on a previously failing database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

The number of retries on a single database transaction and the delay are configurable. Set the maximum retries and delay values (see above) large enough to cover prolonged database unavailability during failover.

[CMS-24076]

Configuration of Custom MIME Types

A central configuration for custom MIME Type definitions was added to the Blueprint workspace with file `shared/common/modules/shared/custom-mime-types/src/main/resources/org/apache/tika/mime/custom-mimetypes.xml`. All relevant CMS components depend on this configuration file so that MIME Type definitions added here are active everywhere.

[CMS-22943]

CoreMedia Content Application Engine

Old SiteFilter is configured to avoid unwanted site resolvings

In very rare cases it could happen that the CAE SiteFilter resolves a wrong site for certain requests. The SiteFilter was not actually responsible for these requests (e.g. fragment calls). In addition, this could only occur if legacy mode was used, i.e. if no site patterns had been configured. To avoid these unwanted hits even in legacy mode, we have now at least activated the ignore patterns in the default configuration (cae application.properties).

[CMS-24830]

Updated and optimized @coremedia/brick-mediaelement

The external library mediaelement has been updated to latest version 7. In the past the library has been loaded asynchronously only if a video or audio is used. But this caused a ~250ms delay for initializing mediaelement, which results in a short video flickering

for videos with autoplay=true. To avoid the flickering the library (~150kb) is now loaded directly in the brick.

[CMS-24711]

Richtext Transformation no Longer Swallows Links with Trailing Spaces

Transformation of CoreMedia richtext used to swallow links with trailing space characters because the trailing space characters were interpreted as illegal URL characters. The richtext transformation now trims the link text before parsing it.

[CMS-24086]

CoreMedia Studio Client

Exclude internal documents of type EditorProfile from "My Edited Content"

To exclude internal documents of type "`EditorProfile`" from being displayed in "My Edited Content", the folder `/Home/*/EditorProfile` has been added to the application property `userchanges.excluded-paths` of the User-Changes App.

[CMS-24336]

Altered alignment of CKEditor 5 main toolbar dropdowns

The alignment of the `Insert Table` and `Insert Code Block` dropdown menus in the CKEditor 5 main toolbar was changed from right to left to avoid an overflow issue with ExtJS layouts.

[CMS-24041]

CoreMedia Studio Server

Content Hub: Improved Logging

If `com.coremedia.contenthub.api.ContentHubBlob#build` fails, it now logs a warning with the relevant information to analyze the problem. Moreover, it logs a DEBUG message about successful creation of ContentHubBlob instances.

[CMS-23104]

Fixed Translation Status Widget

Fixed issue with the translation status widget that did not show translated sites for some site hierarchies.

[CMS-18687]

CoreMedia Commerce Hub

Lookup of Augmented Pages improved

The lookup of commerce pages that are augmented in in the CMS was changed to using the AugmentationService with the help of observed properties instead of content queries.

[CMS-24768]

CoreMedia Headless Server

Documentation for Custom Filter Queries

Updated documentation: To add a custom filter query, the filter query identifier must be added to the graphql input type CustomFilterQueryArg.

[CMS-23928]

Bugfix: Headless-Server MediaController does not consider validity date

Headless-Server did not consider the validity dates 'from' and 'to' on the media delivery endpoint. The validation was fixed and now includes the validity dates.

Since this is the wanted behavior, this bugfix is not considered breaking. Be aware, that this might lead to 404 responses on media content, where the validity date is set and validation does not pass anymore!

[CMS-23916]

Miscellaneous

Headless Configuration Issue behind a proxy solved

When Headless-Server is running behind a reverse proxy, it is necessary to set a Spring configuration property to make Swagger work correctly. The configuration property `server.forward-headers-strategy`should be set to the value `framework`. This can be done either by application properties or preferably by environment variable, like `SERVER_FORWARD_HEADERS_STRATEGY: "framework"`.

[CMS-24719]

4.33 Release 2401.3

The release contains:

- Breaking changes: 4
- Changes and improvements: 7
- Bugfixes: 38

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.

Release date: 2024-03-15

Breaking Changes

- CMS-23184: Update of MongoDB driver to 4.11.1
- CMS-23183: MongoDB update to version 7.0.5
- CMS-24183: Third Party Upgrades for Studio-Client
- CMS-24095: CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated

Changes and Improvements

- CMS-24114: Updated Maven dependencies and plugins
- CMS-21202: Fixed Pre-Loading of SiteAwareFeatureUtil

Bugfixes

- CMS-24288: Third-Party Update: Apache James Mime4J
- CMS-24229: Fixed a Bug Where A Publication Workflow With Content Errors Could Be Started
- CMS-24216: Postgresql driver has been updated
- CMS-24210: Third-Party Update: Apache Commons Compress
- CMS-24075: Improved Performance Of Deriving Sites
- CMS-24058: Improved Logging for Workflow Errors
- CMS-24051: Method Content#copyTo[...] fixed
- CMS-23587: Fixed CAE Feeder Partial Re-Indexing by Actuator or JMX
- CMS-23428: Extended Workflow Server DB Transaction Retry

- CMS-24256: Changed Site Resolution of Requests
- CMS-24194: When copy and pasting only valid content types are now accepted to the placement linkists.
- CMS-24083: Dynamic fragments fixed in live side
- CMS-24301: Fixed a Bug Where (In Chrome) A New Content Was Created When Dragging A Thumbnail
- CMS-24093: Fixed A Bug Where All Versions Of A Content Item Are Loaded On Withdraw
- CMS-23925: Fixed Duplicates in InputChecksField
- CMS-24172: Fixed Scrolling of Create-From-Template Dialog
- CMS-24163: The management-tools script to download a remote content-archive was broken
- CMS-24156: Revert Update Of MySQL In Blueprint Docker-Compose Setup
- CMS-23940: Fixed reset of DatePropertyField

4.33.1 Breaking Changes

CoreMedia Core

Update of MongoDB driver to 4.11.1

The thirdparty dependencies org.mongodb:mongodb-driver-legacy, org.mongodb:mongodb-driver-core and org.mongodb:bson have been updated from version 4.8.2 to 4.11.1. This is marked as a breaking change, because custom implementations can potentially use changed API of the MongoDB driver.

[CMS-23184]

MongoDB update to version 7.0.5

MongoDB has been updated to version 7.0.5 for the Docker Deployment. Note that an upgrade is only possible from a 6.0.x version. An upgrade from an earlier version needs to be done successively. Please refer to the official MongoDB documentation on how to upgrade: https://www.mongodb.com/docs/manual/release-notes/7.0-upgrade-standalone/ The compatibility changes are described here: https://www.mongodb.com/docs/manual/release-notes/7.0-compatibility/

[CMS-23183]

CoreMedia Studio Client

Third Party Upgrades for Studio-Client

Jangaroo, TypeScript and ESLint were upgraded to a new major version to support pure ESM packages within the studio-client. This upgrade was necessary in an AMP version to support the latest CKEditor 5 version which now comes as pure ESM package.

Follow Section "Third Party Upgrades for Studio-Client" [549] for upgrade information.

[CMS-24183]

CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated

CKEditor 5 has been updated to version 41.1.0 (CKEditor 5 Development Tooling to 39.6.0). CoreMedia's CKEditor 5 Plugins and the CKEditor 5 CoreMedia OEM License have been updated accordingly:

- CoreMedia CKEditor 5 Plugins: 17.0.0
- CKEditor 5 CoreMedia OEM License: 2.1.0

Along with that, we fixed some meanwhile broken references to the CKEditor 5 documentation within the Studio Developer Manual.

Upgrade Highlights – CoreMedia CKEditor 5 Plugins

- **Hardening Default Link Target Configuration:** Prior to this release, a configured function based default link target filter (to apply a default target based on a given URL) may have been called with `null` in contrast to the method signature. This has been fixed, so that the function is only called for non-empty URLs.

Notable Upgrade Highlights – CKEditor 5

This section is just about remarkable changes we observed during the upgrade. For detailed information and possibly required upgrade steps in context of custom plugins, take a look at the CKEditor 5 changelog, please.

- **Links:** For external links, you may now just paste the URL having a text selected, and the text will get the link applied. Side Note: This feature also automatically triggers the possible default target selection provided by CoreMedia CKEditor 5 Plugins based on your configuration.
- **Paste from Office:** When General HTML Support is activated (transitively through CoreMedia Rich Text Support), class attribute values like `MsoNormal` were kept during paste. CKEditor 5 now actively removes such artificial artifacts.
- **AI Assistant Capability:** While not enabled in CoreMedia Blueprint, you may be interested to know, that with supporting CKEditor 5 41.0.0 within CoreMedia Studio, it is the first supported release, that comes with AI features.

- Integration Changes: CKEditor 5 now ships as ECMAScript modules, which requires additional upgrade steps, where the most important one is upgrading to TypeScript 5. Find more details below.
- API Changes:
  - CKEditor 5 UI: While there was no need to apply adaptations in CoreMedia Blueprint, we observed typing adjustments in context of the CKEditor 5 UI. This is due to some progress towards providing a so-called dialog system.
  - Document Lists: They are now the "standard list API". As a result the prefix `Document*`, like `DocumentList` is deprecated and got replaced by `List`, while the old feature got prefixed with `Legacy*`.

Follow for upgrade information.

[CMS-24095]

4.33.2 Changes and Improvements

CoreMedia Core

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- CoreMedia Client API and Mock Adapter for Commerce Hub from 3.0.1 to 3.0.2
- CoreMedia Adapter for SAP Commerce Cloud from 3.0.0 to 3.0.1
- CoreMedia Adapter for Salesforce Commerce Cloud B2C 3.0.0 to 3.0.1
- CoreMedia Adapter for HCL Commerce from 3.0.0 to 3.0.1
- Google Analytics Data Client for Java from 0.20.0 to 0.47.0
- Google Auth Library for Java from 1.14.0 to 1.23.0
- Google API Extensions for Java from 2.22.0 to 2.43.0
- Google HTTP Client Library for Java from 1.42.3 to 1.44.1
- gRPC-Java from 1.61.0 to 1.62.2
- Netty from 4.1.106.Final to 4.1.107.Final
- Protocol Buffers for Java from 3.25.2 to 3.25.3
- Spring Boot from 3.2.2 to 3.2.3
- Spring Framework from 6.1.3 to 6.1.4
- Spring Security from 6.2.1 to 6.2.2
- Tomcat from 10.1.18 to 10.1.19

[CMS-24114]

CoreMedia Studio Client

Fixed Pre-Loading of SiteAwareFeatureUtil

Fixed issue of the *SiteAwareFeatureUtil* that the pre-loading did only affect the preferred site.

[CMS-21202]

4.33.3 Fixed Issues

CoreMedia Core

Third-Party Update: Apache James Mime4J

Apache James Mime4J has been updated to version 0.8.10.

[CMS-24288]

Fixed a Bug Where A Publication Workflow With Content Errors Could Be Started

We fixed a timing issue where the start-workflow window would not show content errors and consequently, a publication workflow could be started.

[CMS-24229]

Postgresql driver has been updated

The postgresql driver `org.postgresql:postgresql` has been updated to `42.6.1`.

[CMS-24216]

Third-Party Update: Apache Commons Compress

Third-party library Apache Commons Compress has been updated to 1.26.0 to fix known security vulnerabilities.

[CMS-24210]

Improved Performance Of Deriving Sites

Performance of Deriving Sites via Studio or API [`com.coremedia.cap.multis ite.SitesService#deriveSite(...)`] has been improved.

[CMS-24075]

Improved Logging for Workflow Errors

The Workflow Server logs more details for errors from certain workflow actions. Previously, some important details were only visible with enabled DEBUG logging.

[CMS-24058]

Method Content#copyTo(...) fixed

Method Content#copyTo(...) showed an error with documents whose blob properties had data. This has now been fixed.

[CMS-24051]

Fixed CAE Feeder Partial Re-Indexing by Actuator or JMX

Fixed a bug in the CAE Feeder that not all content items were re-indexed after a request for partial re-indexing via Spring Boot actuator or JMX.

[CMS-23587]

Extended Workflow Server DB Transaction Retry

The Workflow Server can now be configured to perform retries on database transactions in case of connection loss or read-only databases (MySQL only). These situations may arise in the context of database failovers in setups like, e.g., Amazon Aurora.

To configure the Workflow Server for retries on connection loss, use these properties:

- *workflow.server.tx.retry-on-connection-loss*: enable retries on database connection loss when set to value *true* (default: *false*).

- *workflow.server.tx.retry-on-connection-loss-delay*: wait given time before retrying on database connection loss (*Duration*; default: 15 seconds).

To configure the Workflow Server for retries on a read-only database, use these properties. This is currently only supported on MySQL:

- *workflow.server.tx.retry-on-read-only-db*: enable retries on read-only database when set to value *true* (default: *false*).
- *workflow.server.tx.retry-on-read-only-db-delay*: wait given time before retrying on read-only database (*Duration*; default: 5 seconds).

Make sure to set DNS caching on your system to a very short time (probably shorter than *workflow.server.tx.retry-on-read-only-db-delay*) to allow for refreshed hostname resolution before the next attempt on a previously read-only database is started. This can be necessary to successfully contact the current primary database instance in a database failover setup.

Retries on a single database transaction are limited to 15 times - regardless of which concrete issue arises on each retry. Set the delay values (see above) large enough to cover prolonged database unavailability during failover.

[CMS-23428]

CoreMedia Content Application Engine

Changed Site Resolution of Requests

SiteFilter can now match request paths against configurable patterns to derive the requested site. This is much more efficient than the previous strategy which simply checked every path segment if it matched one of the segments of the known site root navigations. The new strategy is to take a list of patterns to check if the current request URI paths contains a site segment, then check the first path segment after the dispatcher servlet segment if it is site segment but exclude a list of known prefixes. The list of path patterns that have a site segment in it is configured via `cae.site.patterns` and the list of known non-site path prefixes is configured via `cae.site.ignore-prefix-patterns`. The former SiteFilter behavior is active when both properties have empty values. Configure `cae.site.collect-non-matching-paths=true` to collect non matching paths to support debugging your SiteFilter config. This setting is enabled in the `dev` profile for your convenience.

[CMS-24256]

When copy and pasting only valid content types are now accepted to the placement linkists.

Placement linklists in the pagegrid are usually configured to accept only `CMTeasible` content type. Nevertheless, when copying and pasting the type check was ignored. This is now fixed.

[CMS-24194]

Dynamic fragments fixed in live side

Dynamic fragments that require parameters were not displayed correctly via a live CAE because the parameters were not appended to a dynamic fragment URL, at least not if the standard CAE configuration was used. However, you could have previously set the property "cae.link-transformer.include-params-appender.uri-paths" to "/dynamic/" to solve the problem. We have set the default value to "/dynamic", so it will work in most cases.

[CMS-24083]

CoreMedia Studio Client

Fixed a Bug Where (In Chrome) A New Content Was Created When Dragging A Thumbnail

We fixed a bug where an additional content item (with name "convert.png") was created and added to the linklist when drag + dropping a picture thumbnail to a linklist.

[CMS-24301]

Fixed A Bug Where All Versions Of A Content Item Are Loaded On Withdraw

We fixed a bug where all versions of a content item where loaded on content withdraw although no particular listeners where attached to the version items. This was particularly problematic for content items with a large amount of versions up to a point where the Studio froze.

[CMS-24093]

Fixed Duplicates in InputChecksField

Fixed issue that duplicate values have been accepted by chip input fields when these have been entered with whitespaces.

[CMS-23925]

CoreMedia Studio Server

Fixed Scrolling of Create-From-Template Dialog

Added missing scrollbars for the CreateFromTemplate dialog.

[CMS-24172]

Miscellaneous

The management-tools script to download a remote content-archive was broken

The script `use-remote-content-archive` tries to write the archive to the wrong folder, since the tmp directory path has changed from `/var/tmp` to `/tmp` .

[CMS-24163]

Revert Update Of MySQL In Blueprint Docker-Compose Setup

The mysql container was updated to 8.2.0 in default.yml by mistake. The version has now been changed to 8.0 which is the current LTS version and our officially supported version.

[CMS-24156]

Fixed reset of DatePropertyField

Unlike the *DateTimePropertyField*, the *DatePropertyField* has no reset button. The value can now be resetted by clearing the text field.

[CMS-23940]

4.34 Release 2401.2

The release contains:

- Breaking changes: 2
- Changes and improvements: 2
- Bugfixes: 3

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.

Release date: 2024-02-12

Breaking Changes

- CMS-24130: TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans
- CMS-24132: Transformed Blob Cache Requires Writeable Base Directory

Changes and Improvements

Bugfixes

4.34.1 Breaking Changes

CoreMedia Core

TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans

Spring configuration class `com.coremedia.cap.transform.Transfor mImageServiceConfiguration` of module `com.coremedia.cms:cap- transform` no longer imports `com.coremedia.cap.transform.Blob TransformerConfiguration`. This makes it possible to create application contexts that provide access to the `transformImageService` bean without actually activating all the beans necessary for blob transformation. Such application contexts are the ones of feeder applications, for example. Class `com.core media.cap.transform.BlobTransformerAutoConfiguration` has

been deleted along with this change. The Spring XML configuration resources `frame work/spring/mediatransform.xml` of Blueprint shared/middle module `image-transformation` and `com/coremedia/cap/transform/trans form-services.xml` of module `com.coremedia.cms:cap-transform` have also been removed. Use `TransformImageServiceConfiguration` instead.

[CMS-24130]

CoreMedia Content Application Engine

Transformed Blob Cache Requires Writeable Base Directory

The bean `transformedBlobCache` of type `com.coremedia.trans form.impl.TransformedBlobCache` now validates the configured base path (configuration option `com.coremedia.transform.blobCache.basePath`) and throws an exception if it finds that the base path is not a writeable directory in which it can cache and rotate temporary files holding the transformed blob data.

[CMS-24132]

4.34.2 Changes and Improvements

This release contains no changes and improvements with release notes

4.34.3 Fixed Issues

4.35 Release 2401.1

The release contains:

- Breaking changes: 46
- Changes and improvements: 63
- Bugfixes: 112

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.

Release date: 2024-02-05

Breaking Changes

- CMS-23947: Removed Deprecated Workflow Java API
- CMS-23909: Replacement of Deprecated Workflow Server Log Facility
- CMS-23899: Deprecated ArchiveProcess Workflow Action: Functionality Removed
- CMS-23869: Site Manager Removal
- CMS-23786: Changed Properties for Process Archiving in the in-memory Setup
- CMS-23586: Upgrade to Java 17
- CMS-23118: Workflow Server Database Tables
- CMS-22810: Removed Conversion Service Bean from CapRepositoriesConfiguration
- CMS-21716: Upgraded Spring dependencies to latest major versions
- CMS-20028: Property 'usecaplist' no longer interpreted by Workflow Server
- CMS-23884: Removed Webtrends Analytics Connector
- CMS-23860: Removed class MappedInterceptor
- CMS-23847: com.coremedia.blueprint.base.links.impl.RuleUrlPrefixResolver has new constructor
- CMS-23843: com.coremedia.blueprint.base.links.Optional removed
- CMS-22845: Third-Party Update: Spring Webflow
- CMS-23580: Added Configurable Document Types for Search
- CMS-23562: StatefulDateTimeField's Configuration has Changed
- CMS-23540: Date and Time Formats Configuration Changed
- CMS-23171: Running Sencha Cmd after Java 17 Upgrade

- CMS-22221: Stricter CSP Rules
- CMS-23917: Removed property for Spring Boot Maven plugin
- CMS-22678: Elastic Social Moderation With CKEditor 5
- CMS-24084: Removed usages of Apache HTTP Components 4.x
- CMS-23686: Replacement/Removal of Deprecated Code
- CMS-23557: Third-Party Update: Caffeine
- CMS-20144: Removed deprecated CSS/JS property "ieExpression"
- CMS-24015: APPLICATION_OPTS Removed from Base Image
- CMS-23629: Volume definitions Moved to Application Module or Deployment
- CMS-23628: The coremedia/java-application-base image is now Corretto JRE by default
- CMS-23622: Switch from /var/tmp to /tmp as the default java.io.tmpdir path
- CMS-23621: Prometheus jmx-exporter Agent Disabled by default
- CMS-23618: SPRING_BOOT_EXPLODED_APP Removed from Base Image
- CMS-23613: The environment variable SPRING_PROFILES has been removed from the base image and the compose setup
- CMS-23330: coremedia/java-application-base is now based on amazonlinux:2023
- CMS-22787: Port 8199 Removed from the Exposed Ports by Default
- CMS-23832: Headless Server Uses Auto Configured Task Scheduler Bean
- CMS-23635: Media hash calculation Changed
- CMS-23487: Replace Springfox with Springdoc
- CMS-24021: Migration of Spring XML configuration files to Java Configuration
- CMS-23995: CKEditor 4 Support Removed
- CMS-23742: Salesforce Marketing Cloud: Migrated to Java 17
- CMS-23624: Removal of Pre-created Directories in coremedia/java-application-base Image
- CMS-23556: Cleaned Up Spring Configuration Files and Classes
- CMS-23224: Migration of Spring XML configuration files to Java Configuration
- CMS-20586: Removed OpenCalais Integration

Changes and Improvements

- CMS-24001: Upgrade to Solr 9.4.1
- CMS-23952: Third-Party Update: Apache Tika and Transitive Dependencies

- CMS-23830: Updated Maven dependencies and plugins
- CMS-17071: --bloburl option for serverexport and serverimport
- CMS-23591: Changed icons in Studio to SVG format
- CMS-23571: Workflow App Split View Footer Bar
- CMS-22970: Fixed Browser Console Warnings
- CMS-23554: Adjusted Postgres Sequence Increment Size
- CMS-23512: "Clear my edited content" is in the context menu
- CMS-23551: Make blueprint groupId configurable in ModularOneRepoEnforcerRule
- CMS-10271: Sort-POM-Plugin for Maven updated
- CMS-23970: Third-Party Update: Upgraded jQuery to version 3.7.1
- CMS-23949: Modernized eslint and prettier in frontend workspace
- CMS-23630: Build OCI conform images and provide property to select base image architecture
- CMS-23626: File log directory for Spring Boot dev profile changed
- CMS-23714: Fixed headless-server-base Dependencies
- CMS-24004: Removed logging-common.xml of base-component artifact
- CMS-23780: Updated ESAPI

Bugfixes

- CMS-23910: Fixed Content Feeder Bug that Causes Reindexing after Restart
- CMS-23678: Fixed Bug in Workflow Converter
- CMS-23648: Updated JSON-Java
- CMS-23614: Third-Party Update: Jetty
- CMS-23597: Ambiguous published navigation tree will be detected
- CMS-23080: Removed Property db.schema.name-uppercase
- CMS-22486: Set replicator.tmp-dir to /tmp in container setup
- CMS-21028: Fixed Feeder Shutdown on Error
- CMS-12532: Studio Search and Special Characters in Prefix Queries
- CMS-24006: Removed blueprint-handlers.xml
- CMS-23598: Change Link Building/Handling for Transformed Blobs
- CMS-23874: Fixed Draggable Menu Items Error
- CMS-23793: Typo in Withdrawal Success message is fixed

- CMS-23758: [Partly] Fixed Bug Where Studio Client Creation of Content Objects Took Too Long
- CMS-23731: Fixed Bug Where Withdrawing A Version Could Freeze Studio
- CMS-23730: Fixed Bug Where UUID Listeners on Studio Client Remote Beans Lead to Unnecessary Invalidations
- CMS-23600: Fixed Library Column Header Localization
- CMS-23441: CompoundPlugin Works with Plugin Configs again
- CMS-21820: Sometimes the pagegrid loses all content
- CMS-23953: Lower severity for new PublishedNavigationTreeValidator issue
- CMS-23933: Fixed a Bug Where CKEditor 5 Did Not Notice Changes
- CMS-23883: Fixed Taxonomy Suggestions
- CMS-23821: The logging of the class org.apache.coyote.http11.Http11InputBuffer is muted
- CMS-23807: Bookmarks reordering fixed
- CMS-23659: Fixed Taxonomy Renaming
- CMS-23611: Fixed Taxonomy Renaming with Double Quotes
- CMS-12017: Added Site Id Validator
- CMS-23495: Fixed invalid comment in pom.xml
- CMS-23076: Moved tooling dependencies to devDependencies
- CMS-22661: Replaced deprecated dependency "request" with "axios"
- CMS-24020: Handle CVEs for graphql-spring-boot-autoconfigure-15.0.0.jar: subscriptions-transport-ws-browser-client.js
- CMS-23900: Prevent exceptions when logging resource paths
- CMS-23595: HeadlessServer: More tolerant request handling for invalid hashes on MediaController
- CMS-23882: Updated bouncycastle dependencies
- CMS-23875: Refactoring of Internal MBeanRegistry class
- CMS-23863: Performance Improvement for LdapUserProvider
- CMS-23787: Restored Missing Solr JMX MBeans
- CMS-19635: Fixed "Add Link Entry" Button in Struct Editor

4.35.1 Breaking Changes

CoreMedia Core

Removed Deprecated Workflow Java API

The following deprecated classes and methods have been removed from the Workflow Server API and cannot be used in custom code or workflow definitions anymore:

- Class `com.coremedia.workflow.common.util.AbstractExternalManager`
- Class `com.coremedia.workflow.common.util.LongActionRegistry`
- Class `com.coremedia.workflow.common.util.RegisteringLongAction`
- Class `com.coremedia.workflow.common.util.SpringCollectiveLongAction`
- Class `com.coremedia.workflow.common.util.SpringDelegateAction`
- Class `com.coremedia.workflow.common.util.SpringDelegateLongAction`
- Method `com.coremedia.workflow.WfServer#hasManager`
- Method `com.coremedia.workflow.WfServer#getManager`
- Method `com.coremedia.workflow.common.actions.Log#setFatal`
- Method `com.coremedia.workflow.common.util.WithSpringContext#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareAction#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareExpression#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareLongAction#getBean`

Follow Section "Removed Deprecated Workflow Java API" [554] for upgrade information.

[CMS-23947]

Replacement of Deprecated Workflow Server Log Facility

The location of loggers for certain classes changed. The following classes are now using a logger in their own class instead of the logger of the `com.coremedia.workflow.impl.server.Server` class:

- com.coremedia.cotopaxi.wfserver.ServerRightsPolicyMarshallerResolver
- classes extending com.coremedia.workflow.impl.server.AbstractProcessSignalHandler
- classes extending com.coremedia.workflow.impl.server.AbstractTaskSignalHandler
- com.coremedia.workflow.impl.server.Condition
- com.coremedia.workflow.impl.server.ContentManager
- com.coremedia.workflow.impl.server.ErrorLog
- com.coremedia.workflow.impl.server.InternalSession
- com.coremedia.workflow.impl.server.LightweightSession
- com.coremedia.workflow.impl.server.MasterSession
- com.coremedia.workflow.impl.server.ObjectRepositoryImpl
- com.coremedia.workflow.impl.server.ParameterAssignment
- com.coremedia.workflow.impl.server.ProcessValidator
- com.coremedia.workflow.impl.server.SessionManager
- com.coremedia.workflow.impl.server.TaskImpl
- com.coremedia.workflow.impl.server.TimerManager
- com.coremedia.workflow.impl.server.TimerMap
- com.coremedia.workflow.impl.server.TransactionManager
- com.coremedia.workflow.impl.server.Transformer
- com.coremedia.workflow.adapters.persistence.GenericRDBMSAdapter
- com.coremedia.workflow.beanparser.ProcessDefinitionFactory
- com.coremedia.workflow.handlers.RunActionTimerHandler
- com.coremedia.workflow.handlers.SkipUserTaskTimerHandler
- com.coremedia.workflow.servlets.CommandServlet
- com.coremedia.workflow.servlets.IORServlet
- com.coremedia.workflow.servlets.StatsServlet
- com.coremedia.workflow.tasks.ForkSubprocessRunTaskHandler
- com.coremedia.workflow.validation.OfflineProcessDefinitionFactory

[CMS-23909]

Deprecated ArchiveProcess Workflow Action: Functionality Removed

The functionality of the deprecated workflow action `com.coremedia.work` `flow.common.actions.ArchiveProcess` has been removed. The class still exists for backwards-compatibility of old serialized workflow definitions, but the action does not do anything anymore.

Follow Section "Deprecated ArchiveProcess Workflow Action: Functionality Removed" [556] for upgrade information.

[CMS-23899]

Site Manager Removal

The Site Manager has been removed from the product.

Follow Section "Site Manager Removal" [556] for upgrade information.

[CMS-23869]

Changed Properties for Process Archiving in the in-memory Setup

The `processes-memory-defaults.properties` were turned into ConfigurationProperties. Configure the process archiving in the in-memory setup with the following properties also documented in the Deployment Dependencies section:

- `workflow.archive.endpoint-url` instead of `studio.url`
- `workflow.archive.username` instead of `studio.user`
- `workflow.archive.password` instead of `studio.password`

[CMS-23786]

Upgrade to Java 17

Java 17 is the next Long Term Support version of the Java platform. All components have been updated to work with Java 17. Java 17 is now also required for building the workspace and running the applications, Java 11 will not work anymore. The exception is the studio-client workspace which uses Sencha Cmd to build, which still requires Java 11. Please refer to the release note "Running Sencha Cmd after Java 17 Upgrade" for further details.

Follow Section "Upgrade to Java 17" [557] for upgrade information.

[CMS-23586]

Workflow Server Database Tables

The *Workflow Server* will automatically create new tables in the 'cm_management' database: `WfArchivedProcessInstances`, `WfArchivedTaskIn stances`, and `WfArchivedVariables`. These names are reserved and cannot be used as document type names.

[CMS-23118]

Removed Conversion Service Bean from CapRepositoriesConfiguration

The Unified API spring boot integration configured a bean `conversionService` of type `org.springframework.core.convert.support.Default ConversionService` so that it was capable of converting Strings to `Content Type` instances. This feature was previously used for the Blueprint Spring configuration classes `InterceptorsStudioAutoConfiguration`, `LcStudioLibCom ponentAutoConfiguration`, and `InferrersStudioConfiguration`). The default conversion service bean has been removed and the configuration classes have been adjusted to use explicit content type retrieval. Instead of

```
@Value("CMLinkable") ContentType contentType
```

Follow Section "Removed Conversion Service Bean from CapRepositoriesConfiguration" [558] for upgrade information.

[CMS-22810]

Upgraded Spring dependencies to latest major versions

Spring Boot was upgraded to version 3 and Spring to version 6. With these upgrades, many further dependencies had to be upgraded as well.

Follow Section "Upgraded Spring dependencies to latest major versions" [559] for upgrade information.

[CMS-21716]

Property 'usecaplist' no longer interpreted by Workflow Server

In the Workflow-Server previously, the `usecaplist` property was used to decide whether to connect to CapListRepository. Now, the `repository.caplist.con nect` is used for this.

[CMS-20028]

CoreMedia Content Application Engine

Removed Webtrends Analytics Connector

The Webtrends Analytics Connector was removed from the Blueprint workspace without replacement.

[CMS-23884]

Removed class MappedInterceptor

Removed class `com.coremedia.objectserver.web.MappedIntercept or`. Use `org.springframework.web.servlet.handler.MappedIn terceptor` instead.

[CMS-23860]

com.coremedia.blueprint.base.links.impl.RuleUrlPrefixResolver has new constructor

The `com.coremedia.blueprint.base.links.impl.RuleUrlPre fixResolver` has a new `RuleUrlPrefixResolver(java.util.List)` constructor. The `PostConstruct` method was removed.

[CMS-23847]

com.coremedia.blueprint.base.links.Optional removed

The custom `com.coremedia.blueprint.base.links.Optional` imple-mentation was removed and replaced by `java.util.Optional` wrapping a String. The `UNDEFINED` (`"?"`/null) value is now represented by an `Optional#empty`, `ANY` by an `Optional` of `"*"`.

[CMS-23843]

Third-Party Update: Spring Webflow

Updated Spring Webflow from 2.5.1.RELEASE to 3.0.0 from 2.5.1.RELEASE to 3.0.0.

[CMS-22845]

CoreMedia Studio Client

Added Configurable Document Types for Search

In the preferences, the user can select preferred content types that should be used for the library search now. The selected content types are shown at the top of the content type combobox (next to the search text slot). The preferred entries remain in the global list of types that can be filtered for.

Follow Section "Added Configurable Document Types for Search" [562] for upgrade information.

[CMS-23580]

StatefulDateTimeField's Configuration has Changed

The date and time formats of the component `StatefulDateTimeField` are now configured in `BaseModels_properties`. The properties `Date_format` and `Time_format` in `UI_properties` are now removed.

[CMS-23562]

Date and Time Formats Configuration Changed

The date and time format of all Studio components are now localised centrally in `BaseModels_properties`. The date and time format properties in other resource bundles are obsolete and removed.

[CMS-23540]

Running Sencha Cmd after Java 17 Upgrade

As of version CMCC 2404.1 Sencha Cmd will not be required anymore. However in release 2401, the studio-client workspace still needs Sencha Cmd to build applications and JooUnit tests.

As there is no official support for Java 17 from Sencha and it only works with workarounds, we suggest running it with Java 11.

While this does not affect the Docker based studio-client build as it downloads a suitable JRE 11 anyway, you might need to adjust the installation of Sencha Cmd when building the studio-client locally.

Follow Section "Running Sencha Cmd after Java 17 Upgrade" [563] for upgrade information.

[CMS-23171]

Stricter CSP Rules

> The Content Security Rules for Studio Client have been hardened to prevent attackers from uploading JavaScript code into CMS Content and exploit possible XSS vulnerabilities to execute that code in the context of another Studio user. If you have added any custom scripts to Studio Client which are *not* deployed under the paths `/packages/` or `/resources/`, they will now be blocked by the stricter CSP rules, which is reported in the browser console.

> Follow Section "Stricter CSP Rules" [564] for upgrade information.

> *[CMS-22221]*

CoreMedia Studio Server

Removed property for Spring Boot Maven plugin

> The `additionalProfiles` property that could have been used to set profiles to activate when starting the Studio Server Spring Boot app locally via the Spring Boot Maven plugin was removed. When additional profiles need to be set, use the `spring-boot.run.profiles` property of the plugin. This will override the plugin configuration. Therefore, make sure to also activate the `dev` and `local` profiles if needed.

> *[CMS-23917]*

CoreMedia Elastic Social

Elastic Social Moderation With CKEditor 5

> Elastic Social moderation in CoreMedia Studio has been updated to use CKEditor 5 instead of CKEditor 4.

> This change especially includes new CKEditor 5 editor types, that support data backed by BBCode as well as support to managing blocked words to provide hints to editors where comments/review posts contain problematic words or character sequences.

> Follow Section "Elastic Social Moderation With CKEditor 5" [564] for upgrade information.

> *[CMS-22678]*

CoreMedia Workspace

Removed usages of Apache HTTP Components 4.x

All usages of Apache HTTP Components 4.x (`org.apache.httpcomponents:ht tpclient` and `org.apache.httpcomponents:httpcore`) have been removed from core and blueprint sources.

Follow Section "Removed usages of Apache HTTP Components 4.x" [565] for upgrade information.

[CMS-24084]

Replacement/Removal of Deprecated Code

Content-Server: Removal of deprecated `query` command line tool options:

- The deprecated `paths` and `versions` (short option: `e`) option of the `query` command line tool were removed. Use the `path` and `versionquery` parameter instead.

The location of loggers for certain classes changed. The following classes are now using a logger in their own class instead of the logger of the `hox.corem.server.Serv er` class:

- `hox.corem.server.ResourceImpl`
- `hox.corem.server.DocumentTypeImpl`
- `hox.corem.server.FolderImpl`
- `hox.corem.server.RepositoryImpl`
- `hox.corem.server.ListenerManager`
- `hox.corem.server.CapUserManager`
- `hox.corem.server.ResourceCache`
- `hox.corem.server.SessionManager`
- `hox.corem.server.SortingServiceFactory`

Common:

- `com.coremedia.publisher.importer.XmlPropertyTrans former#getFilter` now also throws `NoSuchMethodException` and `InvocationTargetException`

Middle:

- `com.coremedia.cap.util.ContentCacheKey` now extends `com.coremedia.cache.util.ObjectCacheKey` instead of `com.coremedia.cap.util.ObjectCacheKey`

[CMS-23686]

Third-Party Update: Caffeine

> Updated Caffeine from 2.9 to 3.1.

> *[CMS-23557]*

CoreMedia Frontend Workspace

Removed deprecated CSS/JS property "ieExpression"

> The doctype property `ieExpression` of `CMAbstractCode` has been deprecated in release 2110.1. All usages in Studio, CAE and Frontend are removed now. To avoid migration issues, the doctype property still exists in the CoreMedia content type model.

> *[CMS-20144]*

CoreMedia Deployment

APPLICATION_OPTS Removed from Base Image

> Starting with `coremedia/java-application-base:2.1-cm-17.*` the environment variable toggle `APPLICATION_OPTS` has been removed from the base image, please use `_JAVA_OPTIONS` instead as intended by the JVM.

> *[CMS-24015]*

Volume definitions Moved to Application Module or Deployment

> Starting with `coremedia/java-application-base:2.1-cm-17.*` the base image only defines the new default for `java.io.tmpdir`, `/tmp` as a volume. Volumes should be defined in the deployment code matching the configured paths for ephemeral and persistent state paths.

> This change is one of many to consolidate the image creation to make the containers immutable with a readonly rootfs.

> *[CMS-23629]*

The coremedia/java-application-base image is now Corretto JRE by default

> The `coremedia/java-application-base` image now also provides a JRE based Corretto image. The image tag suffix is `corretto-jre`. If there are Java modules missing for your use case, there is still the JDK based image with the suffix `corretto-jdk` or the Eclipse Temurin based images with the prefixes `temurin-jre` or `temurin-jdk`.

> *[CMS-23628]*

Switch from /var/tmp to /tmp as the default java.io.tmpdir path

The `coremedia/java-application-base` images starting with `2.1-cm-17.*` will no longer set `java.io.tmpdir` to `/var/tmp` by default but instead to `/tmp` to match the default used in most JVM frameworks like Apache Tomcat uses it for its root dir when embedded in Spring Boot applications. This is a consolidation to make CoreMedia container based applications easier to configure when securing it to have a readonly rootfs.

[CMS-23622]

Prometheus jmx-exporter Agent Disabled by default

Please use the Spring Boot Prometheus actuator endpoint to scrape metrics instead. You can still enable the exporter using `PROMETHEUS=true` but you also need to expose the `8199` port for the prometheus service discovery.

Follow Section "Prometheus jmx-exporter Agent Disabled by default" [568] for upgrade information.

[CMS-23621]

SPRING_BOOT_EXPLODED_APP Removed from Base Image

Starting with `coremedia/java-application-base:2.1-cm-17.*` the environment variable toggle `SPRING_BOOT_EXPLODED_APP` has been removed from the base image. Images build using Google Jib Maven plugin are always exploded, making this toggle obsolete.

[CMS-23618]

The environment variable SPRING_PROFILES has been removed from the base image and the compose setup

Starting with `coremedia/java-application-base:2.1-cm-17.*`, using the environment variable `SPRING_PROFILES` is deprecated. It will still work but you should migrate and use the `SPRING_PROFILES_ACTIVE` environment variable.

[CMS-23613]

coremedia/java-application-base is now based on amazonlinux:2023

Starting with `coremedia/java-application-base:2.1-cm-17*` the image is based on `public.ecr.aws/amazonlinux/amazonlinux:2023-minimal`.

[CMS-23330]

Port 8199 Removed from the Exposed Ports by Default

Only in case the container exposes the jmx-exporter metrics endpoint by setting `PROMETHEUS=true`, the container should expose the port. Because the jmx-exporter is now disabled by default, this port has been removed from the expose list, so it does not get accidentally scraped by prometheus.

Follow Section "Port 8199 Removed from the Exposed Ports by Default" [569] for upgrade information.

[CMS-22787]

CoreMedia Headless Server

Headless Server Uses Auto Configured Task Scheduler Bean

Headless Server created its own executor service which was configurable via `caas.rest.num-threads`. It now uses the auto configured task execution service. The property `caas.rest.num-threads` was removed. Use `spring.task.execution.pool.max-size` instead.

[CMS-23832]

Media hash calculation Changed

Previously the media hash calculation for the media endpoint included all properties from site or global image transformation settings. This led to an unexpected change of the media hash, when changing non-relevant transformation properties, e.g. minWidth. This change introduces the application property `caas.media.hash-property-names`, which defaults to the list of these values: `"width"`, `"height"`, `"widthRatio"`, `"heightRatio"`.

Follow Section "Media hash calculation Changed" [570] for upgrade information.

[CMS-23635]

Replace Springfox with Springdoc

Springfox was replaced by Springdoc. This change is considered breaking only for customers using custom Spring controllers. If that's the case, the replacement of annotations might be required as described in the Springdoc migration guide: https://springdoc.org/v2/#migrating-from-springfox. The swagger documentation is still accessed the same way as before.

[CMS-23487]

Miscellaneous

Migration of Spring XML configuration files to Java Configuration

In the course of migrating from Spring XML to Java configurations, some XML files were removed in favor of their replacement Java Spring configuration classes. The details can be found below:

- removed bpbase-links-postprocessor.xml (import BlueprintLinksPostprocessorsConfiguration instead)
- removed bpbase-context-finder-services.xml (import NavigationContextFinderConfiguration instead)
- removed handler-services.xml (import CaeHandlerServicesConfiguration instead)
- removed link-services.xml (import CaeLinkServicesConfiguration instead)
- removed user-services.xml (import UserServicesConfiguration instead)
- removed cap-xliff-service.xml (import CapXliffConfiguration instead)
- removed mimetype-service.xml (import MimeTypeServiceConfiguration instead)
- removed com.coremedia.cap.test.xmlrepo.XmlRepoResources (import Java configuration classes instead)
  - CACHE => com.coremedia.cache.config.CacheConfiguration
  - CONTENT_BEAN_FACTORY => com.coremedia.objectserver.config.ContentBeanServicesConfiguration
  - HANDLERS => com.coremedia.objectserver.web.config.CaeHandlerServicesConfiguration
  - DATA_VIEW_FACTORY => com.coremedia.objectserver.config.DataviewServicesConfiguration
  - ID_PROVIDER => com.coremedia.id.IdServicesConfiguration
  - LINK_FORMATTER => com.coremedia.objectserver.web.links.CaeLinkServicesConfiguration

[CMS-24021]

CKEditor 4 Support Removed

Starting with CMCC 12.2401.1 CKEditor 4 is not supported anymore.

Corresponding references in Studio Developer Manual have been removed.

Note, that in upcoming releases, left-over traces in CoreMedia Blueprint will be removed.

Follow Section "CKEditor 4 Support Removed" [571] for upgrade information.

[CMS-23995]

Salesforce Marketing Cloud: Migrated to Java 17

The integration for Salesforce Marketing Cloud has been migrated to Java 17.

[CMS-23742]

Removal of Pre-created Directories in coremedia/java-application-base Image

Starting with `coremedia/java-applicaition-base:2.1-cm-17.*`, the base image no longer precreates the following directories:

- `/coremedia/tools/var/logs`
- `/coremedia/corem-home/var/tmp`
- `/coremedia/log`

[CMS-23624]

Cleaned Up Spring Configuration Files and Classes

In the course of updating from spring boot 2.7 to 3.1 a number of configuration XML files and configuration classes had to be adjusted:

- Bean `translate.xliff.translatableExpressions` provided by class `com.coremedia.translate.item.TranslatablePredicate Configuration` was renamed to `translateXliffTranslatableExpressions`
- `com.coremedia.blueprint.studio.topicpages.rest.Custom TopicPagesConfiguration` was renamed to `CustomTopicPagesAuto Configuration`
- `com.coremedia.blueprint.analytics.elastic.rest.ES ALXStudioConfiguration` was renamed to `ESALXStudioAutoConfiguration`
- `com.coremedia.blueprint.taxonomies.TaxonomyConfigura tion` was renamed to `TaxonomyAutoConfiguration`
- `com.coremedia.blueprint.studio.rest.taxonomies.Taxono myStudioConfiguration` was renamed to `TaxonomyStudioAutoConfiguration`
- `com.coremedia.blueprint.studio.rest.intercept.Inter ceptorsStudioConfiguration` was renamed to `InterceptorsStudioAutoConfiguration`
- XML configuration file `com/coremedia/blueprint/common/multis ite/translation-config.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/studio-in-memory-cap- list.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-common.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-content beans.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-retrieval.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/caefeeder-blue print.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/caefeeder-ser vices.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/livecontext-content feeder.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/elastic-worker.xml` was removed without replacement

[CMS-23556]

Migration of Spring XML configuration files to Java Configuration

The CoreMedia Component Loader is deprecated in favor of Spring Boot auto configurations. Many Spring component XML files have been converted to Spring Boot auto configuration classes. Several non-component Spring XML files have been converted to Spring configuration classes in that course. Also, existing configuration classes have been renamed and component properties files have been renamed to ordinary properties files. The detailed changes are listed below.

Follow Section "Migration of Spring XML configuration files to Java Configuration" [574] for upgrade information.

[CMS-23224]

Removed OpenCalais Integration

The integration for the service "OpenCalais" has been removed.

[CMS-20586]

4.35.2 Changes and Improvements

CoreMedia Core

Upgrade to Solr 9.4.1

Solr has been upgraded to release 9.4.1. See https://solr.apache.org/docs/9_4_1/changes/Changes.html for a list of changes. Alongside, a new coremedia/solr-base Docker image with tag 2.2-cm-9.4.1 was released.

As part of this change, the following transitive dependencies of Apache Solr have been updated to match versions used by Solr:

- Apache Zookeeper 3.9.1
- Eclipse Jetty 10.0.19
- FasterXML Jackson 2.16.1
- SLF4J 2.0.10 (CMCC 12 2401 only)

Since Solr 9.4.0, configuration of a proxy in communication of clients with Solr via HTTP/2 is possible. To enable a proxy, use these new properties:

- *solr.proxy-host*: Proxy host for Solr communication.
- *solr.proxy-port*: Proxy port for Solr communication.
- *solr.proxy-is-socks4*: SOCKS 4 flag for Solr proxy. Default is *false*.
- *solr.proxy-is-secure*: Secure flag for Solr proxy. Default is *false*.

Leaving *solr.proxy-host* or *solr.proxy-port* unset, disables proxy configuration and lets the clients communicate with Solr directly. Environment variables *HTTP_PROXY* and *HTTPS_PROXY* are not evaluated and thus have no effect.

[CMS-24001]

Third-Party Update: Apache Tika and Transitive Dependencies

Apache Tika has been updated to version 3.0.0-BETA. As part of this change, the following transitive dependencies of Apache Tika have been updated to match versions used by Tika.

Updated dependencies:

- Apache Commons Codec 1.16.0
- Apache Commons Compress 1.25.0
- Apache Commons Lang3 3.14.0
- Apache Commons IO 2.13.0
- Apache Log4J API 2.21.1
- Apache PDFBox 3.0.1
- Apache POI 5.2.5
- Apache Tika 3.0.0-BETA
- Apache XMLBeans 5.2.0
- ASM 9.6
- Drew Noakes Metadata Extractor 2.19.0
- FasterXML Jackson 2.16.1
- Glassfish JAXB 4.0.4
- Jakarta Bind API 4.0.1
- Rome 2.1.0

If you use these libraries in project code, please check their respective release notes for changes and upgrade information.

[CMS-23952]

Updated Maven dependencies and plugins

Updated several dependency and plugin versions.

The following plugins and dependencies have been updated:

- Commerce Client API and Mock Adapter for Commerce Hub from 2.2.3 to 3.0.1
- Adapter for SAP Commerce Cloud from 2.2.0 to 3.0.0
- Adapter for Salesforce Commerce Cloud B2C from 2.2.2 to 3.0.0
- Adapter for HCL Commerce from 2.2.0 to 3.0.0
- AspectJ from 1.9.19 to 1.9.21

- AssertJ from 3.24.2 to 3.25.1
- Byte Buddy from 1.12.23 to 1.14.11
- Classmate from 1.5.1 to 1.7.0
- Commons DBCP from 2.9.0 to 2.10.0
- Error Prone from 2.17.0 to 2.24.1
- Jackson from 2.15.2 to 2.16.1
- JAXB Runtime from 2.3.8 to 4.0.4
- GraphQL Spring Boot Starter from 11.0.0 to 15.0.0
- gRPC-Java from 1.58.0 to 1.61.0
- gRPC Spring Boot Starter from 2.14.0.RELEASE to 2.15.0.RELEASE
- Guava from 32.1.2-jre to 33.0.0-jre
- Hibernate from 5.6.15.FINAL to 6.4.1.Final
- Hibernate Validator from 6.2.5.FINAL to 8.0.1.FINAL
- Janino from 3.1.10 to 3.1.11
- JBoss Logging from 3.4.3.Final to 3.5.3.Final
- JUnit 5 from 5.9.3 to 5.10.1
- Liquibase from 4.19.1 to 4.25.1
- Log4j from 2.19.0 to 2.21.1
- Logback from 1.2.12 to 1.4.11
- MariaDB Connector/J from 3.1.3 to 3.1.4
- Maven Source Plugin from 3.2.1 to 3.3.0
- Maven Compiler Plugin from 3.8.0 to 3.9.0
- Micrometer from 1.10.11 to 1.12.2
- Mockito from 5.3.0 to 5.3.1
- Netty from 4.1.100.FINAL to 4.1.105.Final
- Protocol Buffers for Java from 3.24.3 to 3.25.2
- REST Assured from 5.3.1 to 5.3.2
- SLF4J from 1.7.36 → 2.0.10
- Thymeleaf 3.0.15.RELEASE → 3.1.2.RELEASE
- Tomcat from 9.0.82 to 10.1.18

[CMS-23830]

--bloburl option for serverexport and serverimport

`serverimport` and `serverexport` support the `- bloburl` option now, which allows to store blobs under an HTTP URL. This keeps the blobs out of the exported set of files, so that it becomes smaller and easier to handle. See the contentserver manual and the usage output for details. The `—bloburl` option has been a hidden feature for a while, and on popular demand we support it publicly now.

[CMS-17071]

CoreMedia Studio Client

Changed icons in Studio to SVG format

All usages of the *CoreIcon_properties* have been removed from the workspace. The utility method *SvgIconUtil#getIconStyleClassForSvgIcon* is used instead. This method can either be used directly inside a component or inside a resource bundle class.

Additionally, the following resource bundle changes have been made:

- The deprecated resource bundle *StandardDocumentTypes_properties* has been removed. The resource bundle *ContentTypes_properties* must be used instead.
- The module *core-icons* which included the *CoreIcons_properties.ts* has been removed.
- The module *collaboration-icons* which included the *CollaborationIcons_properties.ts* has been removed.
- Job icons are now read from the new properties class *Job_properties*. If your are using custom icons for jobs, use the *CopyResourceBundleProperties* to apply your icon definitions to this resource bundle.
- Content Hub icons are now read from the new properties class *ContentHub_properties*. If your are using custom icons for a Content Hub adapter, use the *CopyResourceBundleProperties* to apply your icon definitions to this resource bundle.

[CMS-23591]

Workflow App Split View Footer Bar

When the Workflow App is shown in the Content App split view a footer bar was shown across the whole Content App. This has been changed, so that the footer is now confined to the embedded Workflow App itself.

[CMS-23571]

Fixed Browser Console Warnings

Fixed miscellaneous browser console warnings.

[CMS-22970]

CoreMedia Studio Server

Adjusted Postgres Sequence Increment Size

The Postgres sequence increment size used for editorial comments is set to 50 now. This matches the default Hibernate sequence generator behavior.

[CMS-23554]

"Clear my edited content" is in the context menu

In the control room the context menu for "My Edited Content" has now the menu item "Clear my edited content".

[CMS-23512]

CoreMedia Workspace

Make blueprint groupId configurable in ModularOneRepoEnforcerRule

To keep the ModularOneRepoEnforcerRule functional after changing the blueprints groupId, you can now configure new groupId in the rule like this:

```
<myCustomRule
implementation="com.coremedia.maven.enforcer.ModularOneRepoEnforcerRule">
  <blueprintGroupId>YOUR_BLUEPRINT_GROUP_ID</blueprintGroupId>
</myCustomRule>
```

To use this option `blueprintGroupId` make sure to use version 1.2.2 of the core-media-enforcer-rules:

```
<dependency>
  <groupId>com.coremedia.maven</groupId>
  <artifactId>coremedia-enforcer-rules</artifactId>
  <version>1.2.2</version>
</dependency>
```

[CMS-23551]

Sort-POM-Plugin for Maven updated

The Maven plugin to sort pom files was updated to the most recent version. The old plugin was outdated and had different maven coords. The old maven coords was actually

a wrong name for the plugin. The new coords are the same but lates version of the same plugin with new coords. In case, the plugin was used in blueprint extension, be aware, that there may be slightly changed flags, new options and behaviour.

[CMS-10271]

CoreMedia Frontend Workspace

Third-Party Update: Upgraded jQuery to version 3.7.1

Updated jQuery to 3.7.1 in the blueprint and in the frontend workspace. If you are using jQuery in your themes, please update the dependency in the package.json of the theme too to avoid importing both jquery versions.

Upgrade steps:

Run `pnpm -r up jquery@3.7.1` in your frontend workspace.

[CMS-23970]

Modernized eslint and prettier in frontend workspace

We updated and integrated eslint and prettier (via eslint-plugin) to the whole frontend workspace. It is enabled and configured for all themes and bricks via a shared configuration. It is integrated in the frontend tooling too. You can check and lint all files via `pnpm lint`. All blueprint source files have been linted.

Upgrade steps:

If you don't want to use eslint and prettier, everything should work as before. Otherwise run the following command in your custom themes and bricks: `pnpm add -D eslint @coremedia/eslint-config-frontend` Also add the following entry to the scripts block in the `package.json`: `"lint": "eslint --fix \"src/*/.js\""`

[CMS-23949]

CoreMedia Deployment

Build OCI conform images and provide property to select base image architecture

All maven modules that build container images using the Google Jib Maven plugin, now provide a property `application.image-arch` to configure the base image architecture.

If not set specifically to a different architecture, Jib will always select `linux/amd64`.

[CMS-23630]

File log directory for Spring Boot dev profile changed

The directory to log application logs when the Spring Boot profile `dev` is activated has changed to `/tmp` to match the change of the common tmp directory of all containers and not to write to the application root directory `coremedia`.

[CMS-23626]

CoreMedia Headless Server

Fixed headless-server-base Dependencies

Removed `headless-server-p13n` test dependency from `headless-server-base`.

[CMS-23714]

Miscellaneous

Removed logging-common.xml of base-component artifact

The logging-common.xml resource provided by artifact `com.coremedia.cms:base-component` was deleted. Use Spring Boot logging config or a whole custom logging config instead.

[CMS-24004]

Updated ESAPI

Updated ESAPI from 2.4.0.0 to 2.5.2.0.

[CMS-23780]

4.35.3 Fixed Issues

CoreMedia Core

Fixed Content Feeder Bug that Causes Reindexing after Restart

Fixed a bug in the Content Feeder, that after restart, old content events are handled once again and cause up-to-date content to be re-indexed, which may take some time. Furthermore, the bug caused the PendingEvents metric to stay at a high value until restart. The reason of this bug was that the Content Feeder has not always correctly stored the last processed timestamp in Solr.

[CMS-23910]

Fixed Bug in Workflow Converter

Fixed a bug in the Workflow Converter's check to detect incompatible code changes for existing workflow definitions. The bug caused workflow definitions to be treated as incompatible, even if nothing had changed. This could lead to unnecessary conversion of workflow definitions, and also delay Workflow Server startup if it's configured with `workflow.server.enable-workflow-converter=true`.

[CMS-23678]

Updated JSON-Java

Updated JSON-Java from 20230227 to 20231013

[CMS-23648]

Third-Party Update: Jetty

Jetty has been updated to version 10.0.17 (9.4.53.v20231009 for Site Manager) to avoid reported security vulnerabilities of previous versions.

[CMS-23614]

Ambiguous published navigation tree will be detected

If an already published navigation node (a page) has been moved under another node, then it was a common error that the old parent node was not also updated/published. If only the new parent node was published then suddenly there were 2 parent nodes on the live side, both of which linking to the moved child page. No validator has drawn attention to this yet.

A new Studio validator "PublishedNavigationTreeValidator" is introduced to address this issue. A warning is displayed both on the moved page and on the new parent page. It says that there is still a published parent page that should also be updated/published.

[CMS-23597]

Removed Property db.schema.name-uppercase

The property `db.schema.name-uppercase` has become obsolete and has been removed.

[CMS-23080]

Set replicator.tmp-dir to /tmp in container setup

In order to make the replicator have a readonly rootfs, the replicator.tmp-dir should be set to an ephemeral tmp dir volume:

- In a Docker environment set this to an anonymous volume.
- In a Kubernetes environment set this to an emptyDir volume.

[CMS-22486]

Fixed Feeder Shutdown on Error

Fixed a bug in CAE Feeder and Content Feeder that they did not correctly stop in case of errors that happened during its start. Some threads were not correctly stopped and kept the Java process alive. This has been fixed now.

[CMS-21028]

Studio Search and Special Characters in Prefix Queries

Fixed a bug in the Studio search functionality, that some content items were not returned for a prefix query, if the query contained special characters like dashes or slashes. This

fix also affects the suggested content items for link list fields, and the suggested folders in the folder chooser.

A prefix query is a query that ends with an asterisk like "2023-04*". Such queries can be used in the library's search view to find content items containing words that start with a given string. Suggestions for link list fields and the folder chooser use such prefix queries internally.

Previously, these queries did not return all expected results, if the query prefix contained certain special characters. This has been fixed by replacing special characters internally before sending queries to the Solr Server.

In case of unexpected problems, the old behavior can be restored by configuring the Studio Server with `studio.rest.search-service.replace-special-characters-in-prefix-or-wildcard-query=false`.

[CMS-12532]

CoreMedia Content Application Engine

Removed blueprint-handlers.xml

Removed blueprint-handlers.xml from cae-base-lib without replacement. The file provided the abstract beans `pageHandlerBase`, `defaultPageHandler`, and `defaultPageActionHandler`. The dependencies assigned to these abstract beans have to be assigned explicitly in handler beans as Spring java config does not support abstract beans.

[CMS-24006]

Change Link Building/Handling for Transformed Blobs

Methods `buildLink` and `handleRequest` of `com.coremedia.blue print.cae.handlers.TransformedBlobHandler` have been changed to generate / validate the digest url segment based on the ETag of the actual transformed blob which respects the width/height parameters and the effective Responsive Image Settings.

This means that new links are generated not only when the local transformation string of a blob changes but also when the effective Responsive Image Settings change.

[CMS-23598]

CoreMedia Studio Client

Fixed Draggable Menu Items Error

Fixed JavaScript error that happened sometimes when opening the "Favorites" menu which was caused by a duplicate drag zone registration.

[CMS-23874]

Typo in Withdrawal Success message is fixed

It showed `withdrawel` instead of `withdrawal`.

[CMS-23793]

[Partly] Fixed Bug Where Studio Client Creation of Content Objects Took Too Long

We fixed a bug where the creation of content (ContentImpl) objects on the Studio Client took unnecessarily long.

[CMS-23758]

Fixed Bug Where Withdrawing A Version Could Freeze Studio

We fixed a bug where withdrawing a version from a content with many versions (> 10000) leads to a complete remote bean cache invalidation on the Studio Client side.

[CMS-23731]

Fixed Bug Where UUID Listeners on Studio Client Remote Beans Lead to Unnecessary Invalidations

We fixed a bug where unloaded remote beans on the Studio Client were accidentally loaded on invalidation because of a "uuid" property listener.

[CMS-23730]

Fixed Library Column Header Localization

Added missing translations for the column sorting dropdown menu.

[CMS-23600]

CompoundPlugin Works with Plugin Configs again

The CompoundPlugin works again when using Plugin Configs. Before, it assumed that the given `plugins` were already instantiated.

[CMS-23441]

Sometimes the pagegrid loses all content

It has been already fixed.

[CMS-21820]

CoreMedia Studio Server

Lower severity for new PublishedNavigationTreeValidator issue

The new PublishedNavigationTreeValidator checks if a navigation node that will be moved from one parent to another might be still linked from the old parent (a common issue). The warn issue that was added was also displayed in the Publication Workflow window, even if the editor has done everything right (adding the old and the new parent node to the publication set according to the issue text). That could be confusing. That is why we have lowered the level to INFO.

[CMS-23953]

Fixed a Bug Where CKEditor 5 Did Not Notice Changes

We fixed a bug where the CKEditor 5 did not notice changes made to the rich text. Consequently, the "checked out" state of the underlying content item was not entered and nothing got written back to the server. What's worse, this problem would sometimes go unnoticed by editors who just published the content item alongside others and were not aware of the fact that all their changes for the content item got lost.

This problem only happened in combination with Studio tab reuse.

[CMS-23933]

Fixed Taxonomy Suggestions

Taxonomy contents located in unreadable folders are not tried to be evaluated for suggestions anymore.

[CMS-23883]

The logging of the class org.apache.coyote.http11.Http11InputBuffer is muted

The class `org.apache.coyote.http11.Http11InputBuffer` logs - on the debug level - all requests to the Studio Server. To prevent the logging of sensitive information the logging of the class is per default muted. You have to set the log level of the class explicitly to `debug` to reverse the default.

[CMS-23821]

Bookmarks reordering fixed

Now the drag & dropping of bookmarks works properly even when the list is long and the scroll bar is present.

[CMS-23807]

Fixed Taxonomy Renaming

Fixed issue that a taxonomy document was automatically renamed when users with different Studio languages accessing it via Taxonomy Mananger.

[CMS-23659]

Fixed Taxonomy Renaming with Double Quotes

Added missing HTML escaping for taxonomy nodes.

[CMS-23611]

Added Site Id Validator

Added site id validator which ensures that when a new site is created or an copied, the id is unique.

[CMS-12017]

CoreMedia Workspace

Fixed invalid comment in pom.xml

Invalid comment in pom.xml has been fixed, so maven-release-plugin update-version command works.

[CMS-23495]

CoreMedia Frontend Workspace

Moved tooling dependencies to devDependencies

Some dependencies ["@coremedia/cm-cli", "@coremedia/theme-utils", "cross-env", "webpack"] used for tooling and building themes have been moved to `devDependencies` for better clarity. This has no impact to the themes, it's just good practise.

[CMS-23076]

Replaced deprecated dependency "request" with "axios"

The frontend tooling for uploading themes has been modernized. The old and deprecated dependency `request` has been replaced with `axios`. The usage of the theme-importer hasn't changed.

[CMS-22661]

CoreMedia Headless Server

Handle CVEs for graphql-spring-boot-autoconfigure-15.0.0.jar: subscriptions-transport-ws-browser-client.js

Lodash is directly included in the affected file `subscriptions-transport-ws-browser-client.js`, which in turn is part of the included graphiql version. Unfortunately the project has been archived and there will be no updates anymore. Since graphiql is a pure developer tool and only enabled in preview mode, the reported security risk is considered only moderate to low, thus CVE-2019-10744, CVE-2020-8203, CVE-2021-23337, CVE-2018-3721, CVE-2019-1010266, CVE-2018-16487, CVE-2020-28500 were suppressed.

The whole library will be replaced with CM12 version 2404 by the latest version of Spring-GraphQL, which is much better supported as a part of the Spring project and also includes a maintained and updated version of graphiql.

[CMS-24020]

Prevent exceptions when logging resource paths

Logging resource paths with `org.springframework.core.io.Resource#getURI` can fail on Windows development environments in some cases. To prevent such exceptions, log statements have been changed to just use the implicit `toString()`.

[CMS-23900]

HeadlessServer: More tolerant request handling for invalid hashes on MediaController

Previously the validation on the MediaController denied requests with wrong or outdated hashes. HeadlessServer now accepts requests with wrong or outdates hashes as long as the rest of the url parameters are conclusive (id, crop name, filename, width). If this is the case HeadlessServer now responds with a HTTP 301 / Moved Permanently to the correct URL of the corresponding media, instead of a HTTP 401 / Not Found.

[CMS-23595]

Miscellaneous

Updated bouncycastle dependencies

`org.bouncycastle:bcprov-jdk18on` and `org.bouncycastle:bcmail-jdk18on` have been updated to version 1.77. Also, dependency management for `org.bouncycastle:bcjmail-jdk18on` has been added. All of these dependencies are now managed in `com.coremedia.cms:common-thirdparty-bom` [org.bouncycastle:bcmail-jdk18on was previously managed in `com.coremedia.cms:middle-thirdparty-bom`].

[CMS-23882]

Refactoring of Internal MBeanRegistry class

The internal class `com.coremedia.jmx.DefaultMBeanRegistry` was refactored. As a consequence, the properties `generateUniqueName` and `unre`

gister of bean `mbeanRegistry` can no longer be customized. The internal properties `management.mbeans.generate-unique-name` and `management.mbeans.unregister` can be used instead. Note that this is only relevant for projects using a custom WAR deployment and pre-installed servlet containers.

[CMS-23875]

Performance Improvement for LdapUserProvider

A recent bugfix caused a performance degradation of the `LdapUserProvider`. This has been fixed now.

[CMS-23863]

Restored Missing Solr JMX MBeans

Fixed a bug that Solr metrics starting with "solr.jetty", "solr.jvm", and "solr.node" were missing as JMX Mbeans with Solr 9. These metrics have been re-enabled now in the solr.xml configuration file.

[CMS-23787]

Fixed "Add Link Entry" Button in Struct Editor

The "Add Link" button in the struct editor was enabled for link list properties. Since no empty link values are allowed, clicking the button has no effect. Therefore, it is disabled now for link list item properties.

[CMS-19635]

5. Upgrade Information

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

5.1 Upgrade to 2506.0.2

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.

5.1.1 CoreMedia Core

Updated mssql-jdbc to fix CVE

`com.microsoft.sqlserver:mssql-jdbc` has been updated to `10.2.4.jre11` to fix CVE-2025-59250.

This update introduces some breaking changes, especially that encryption is now enabled by default. To restore the old behavior, you can add `;encrypt=false` to the JDBC url.

https://msrc.microsoft.com/update-guide/vulnerability/CVE-2025-59250

https://learn.microsoft.com/en-us/sql/connect/jdbc/release-notes-for-the-jdbc-driver?view=sql-server-ver17#changes-in-102

[CMS-28866]

5.1.2 Miscellaneous

Removed redundant dependency management from blueprint parent POMs

Imports for Spring dependencies have been removed from the `dependencyManagement` sections from the `blueprint-parent` POMs.

They were redundant with imports in the `com.coremedia.cms:common-thirdparty-for-plugins-bom`. Furthermore they overrode some exclusions from that BOM and thus accidentally lead to inconsistencies in the application class paths.

This change is considered breaking, because it removes the version properties `spring-framework.version` and `spring-security.version` from the parent POMs. In the default blueprint, they were configured with the same version that are defined in the `com.coremedia.cms:common-thirdparty-for-plugins-bom` anyway. But customers who want the customize these versions now have to introduce a `dependencyManagement` for these dependencies theirselves.

[CMS-28515]

5.2 Upgrade to 2506.0.1

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.

5.2.1 Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

5.3 Upgrade to 2506.0.0

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

Matured cm jshell for Automation

We matured the Java JShell-wrapper `cm jshell`. Main purpose of the adaptations is to pave paths for using `cm jshell` in automation scenarios.

For all these changes, the corresponding help texts have been updated:

- Output of `cm jshell --help` (see below)
- Inline help in `coremedia` namespace (triggered by `coremedia.help()` at JShell prompt)
- Manual section "JShell" in the Content Server manual.

Command Line Options:

The changes include new command line options:

- New option `--ask-password` to trigger interactive password prompt (previous environment variable and local system property approach still work but are considered deprecated).
- New option `--config <cfg>` to set a custom location for `.cm.jshell.properties`.
-
  New option `--no-config` to ignore any user configuration file.
  This removes the need for workarounds to suppress reading the user configuration file (like redefining `user.ho`
-
  New option `--no-connect` to prevent auto-connect when starting the `coremedia` namespace.
  You can still later connect to the Content Server via `cm.connect()`.

`cm jshell --help` lists these augmented options.

Also, the JShell command line options `- help` and `-version` have been enhanced to skip obsolete actions (like preparing the `coremedia` namespace) and thus suppress irrelevant output.

The (undocumented by JShell) long-option syntax for arguments using equals sign is now also supported (like `--startup=DEFAULT`).

Error handling matured for invalid argument usage: For options like `--class-path` (original JShell option, we augment by the CoreMedia classpath) argument pre-parsing of `cm jshell` has been hardened to more align with the (wrapped) JShell tool itself especially in the case of improper arguments usage to provide better error messages.

Increased Configuration Capabilities:

When using the user configuration file (`.cm.jshell.properties` or alike) or environment variables, they now forward all information to be available in the Spring application context within your JShell script making use of the `coremedia` namespace.

As a result, for example, properties for "Unified API Spring Boot Client Properties" are respected when establishing the connection. This includes the already known properties:

- `repository.url`
- `repository.user`
- `repository.domain`
- `repository.password`

There is one change relevant change to be aware of, which is about `repository.password`: If provided via interactive prompt, it is now applied with highest precedence overriding all other configuration sources. This better aligns with the expected behavior for interactively provided information.

CoreMedia Namespace Enhancements:

The so-called `coremedia` namespace (represented as a variable in your JShell script) got enhanced:

-
  Custom properties support enhancement: Full access to all properties in `cm.jshell.properties` via appl
  This includes the ability to use `.cm.jshell.properties` for properties required to control the behavior of

- More log-levels: While before only `coremedia.info(...)` was available, you now have more options, like, for example, `coremedia.warn(...)` and `coremedia.error(...)`. Note that for output that is not meant to be suppressed by `--feedback silent` option and alike, it is still recommended to use normal `System.out` to output message, that, for example, should be read from shell scripts that invoke `cm jshell`.

- Aligned return-type: As all other `connect(...)` methods now also the no-arg method `coremedia.connect()` returns the established `CapConnection` (which you may also query later via `coremedia.connection` as usual).

Documentation Enhancements:

Despite mentioning the new capabilities (like the new CLI options), we applied the following changes:

Non-Writable Volumes Usage: Using the `coremedia` namespace without further efforts requires a writable volume at `java.io.tmpdir`. This is not always desirable, for example, in container environments. The approach how to prevent this (using `/save start` and later `-startup`) is now described in the Content Server manual.

Security Section: Security notices got moved to an extra section, now also referring to a relevant TOCTOU (Time-of-Check to Time-of-Use) attack vector when using the `coremedia` namespace along with an option to mitigate the risk (which is the same as the non-writable volumes usage mentioned above).

Upgrade Notes:

Due to the empowered configuration capabilities, a relevant change has been applied for these environment variables and their use in the `coremedia` namespace:

- `REPOSITORY_URL`
- `REPOSITORY_USER`
- `REPOSITORY_DOMAIN`
- `REPOSITORY_PASSWORD`

They are no longer duplicated in the `coremedia` namespace as system properties like `repository.url`. For all these properties it is best to access them now via the Spring application context, like:

```
coremedia.context.getEnvironment().getProperty("repository.url")
```

This again requires a connection to be established via the `coremedia` namespace. Otherwise, you can just access these environment variables as usual via `System.getenv(...)` in your JShell script.

Similar to that, the previous option to suppress a connection being established right from the start (by setting `repository.url` to an empty value) has been dropped, so that you benefit from the `repository.url` to be respected from all applicable property sources. If you used this option, you should now use the `--no-connect` option.

`coremedia` namespace enhancement: If you saved the initialization script of the `coremedia` namespace before using `/save -start`, you may want to apply the hardened invocation of `cm.info(...)` that could have caused a `NullPointer`

`Exception` if the `coremedia` (and `cm`) variable failed to initialize. You can either just save the startup scripts again or just apply a `null` check for `cm` prior to invoking `cm.info(...)`.

[CMS-27867]

Content Feeder Configuration Changes and Deprecations

Content Feeder configuration properties for indexing blob properties have changed in this release, and may require adapting your configuration.

The configuration property `feeder.content.property-type.blob-max-size` to limit the size of indexed blobs was deprecated and its default value changed from 5 MB to unlimited. It has been replaced by property `feeder.blob.max-size[*/*]`. The new property has the same default of 5 MB, but only for Blueprint usage, where it is set in `content-feeder-blueprint.properties` of Blueprint Maven module `content-feeder-blueprint-component`. You cannot configure a larger maximum size using the deprecated property `feeder.content.property-type.blob-max-size` without also increasing the new property.

The Spring bean `feederContentBlobMaxSizePerMimeType` has been deprecated. Instead of customizing this Map to limit the size of indexed blobs per MIME-type, you can use the new configuration property `feeder.blob.max-size`.

The configuration properties `feeder.content.property-type.blob-mime-type.includes` and `feeder.content.property-type.blob-mime-type.excludes` have been deprecated. The default value for the former changed from a list of selected MIME-types for text, PDF, and MS Word to any MIME-type. The deprecated properties have been replaced by new property `feeder.blob.enabled`, for which the previous default MIME-type restrictions are set in the Blueprint, in file `content-feeder-blueprint.properties`. You cannot configure additional enabled MIME-types using the deprecated property `feeder.content.property-type.blob-mime-type.includes` without also enabling the same MIME-types for the new property.

[CMS-27819]

Removal of Deprecated Content Server Code

The following deprecated classes and methods have been removed:

- `com.coremedia.ldap.OrganizationalUnit`

- `hox.corem.server.media.S3Store`
  - Note: `hox.corem.server.media.S3BlobStore` handles encryption differently. It uses the buckets default method. If you want to keep the behavior of the removed class, you need to set the encryption mode to AES256 explicitly via `cap.server.blobstore.s3.encryption-mode=AES256`.
- `com.coremedia.ldap.LdapUserProvider.defaultLdapProperty(Properties, String, String)`
- `com.coremedia.ldap.LdapUserProvider.getExpirationSeconds()`
- `com.coremedia.ldap.LdapUserProvider.tokenize(String, String)`
- `com.coremedia.ldap.UserProvider.getExpirationSeconds()`
- `hox.corem.server.media.CompoundMediaStoreSelector.addSelector(MediaStoreSelector)`
- `hox.corem.server.media.CompoundMediaStoreSelector.setSelectors(List)`
- `hox.corem.server.media.CompoundMediaStoreSelector()`
- `hox.corem.server.media.UploadContextImpl(MimeType, int, String, String, String, boolean)`

Additionally, the property `cap.server.blobstore.s3.enhanced` has been removed, as it was only used for backward compatibility reasons to use the removed `S3Store`. Now, the `hox.corem.server.media.S3BlobStore` is always used, when `cap.server.blobstore.s3.bucketname` is set.

[CMS-27560]

Removal of Deprecated Code

The following classes, methods and fields were removed:

- `com.coremedia.translate.workflow.ValidateTranslationParametersAction.Parameters.targetSiteId` [use field `ValidateTranslationParametersAction.Parameters.targetSiteIds` instead]
- `com.coremedia.translate.workflow.GetDerivedContentsAction.Parameters.getTargetSite()` [use `GetDerivedContentsAction.Parameters.getTargetSiteIds()` and `SitesService.getSite(java.lang.String)` instead]
- `com.coremedia.translate.workflow.ListDiff.elementEqual(T, T)` [instead of overriding this method, pass an equality predicate to the constructor]

- `com.coremedia.translate.workflow.ValidateTranslation
  ParametersAction.Parameters(User, List<ContentObject>,
  String)` [use other constructor instead]

For `com.coremedia.translate.workflow.GetDerivedContents
Action.Parameters` to mature the API, these changes have been applied to the constructors in addition to the above mentioned removed method:

- removed deprecated constructor: `com.coremedia.translate.work
  flow.GetDerivedContentsAction.Parameters(Collec
  tion<ContentObject>, Site)`
- deprecated constructor: `com.coremedia.translate.workflow.Get
  DerivedContentsAction.Parameters(Collection<ContentO
  bject>, List<String>)`
- added new constructor: `com.coremedia.translate.workflow.Get
  DerivedContentsAction.Parameters(Collection<ContentO
  bject>, List<String>, String)`

The new constructor is required for using the "include updated content" feature, an API previously hidden, so that extending API could not use it.

[CMS-27558]

CAE Feeder Configuration Changes and Deprecations

Multiple changes were made to CAE Feeder configuration properties, its defaults and related Java API. This includes changes for configuring indexed blob values and properties by name, that may require adapting your configuration. Other changes deprecate existing configuration properties or API, and introduce suggested replacements. For the latter, it is not necessary but still recommended to switch to new properties and API. Deprecated properties and API will be removed in future releases.

The default configuration of the Blueprint CAE Feeder was changed to restrict feeding of blobs to MIME-types for text, PDF, and MS Word (`text/*`, `application/pdf`, `application/msword`, and `application/vnd.openxmlformats-officedocument.wordprocessingml.document`) in file `caefeeder-blueprint.properties` of Blueprint Maven module `caefeeder-blueprint-component`. This breaking change was made to avoid potential issues when feeding and parsing text from unexpected formats. If it is necessary to feed blobs of other MIME-types, then you must add these MIME-types to the enabled ones using configuration property `feeder.blob.enabled[<mimetype>]=true`. If some of the default MIME-types are not necessary for feeding, then you should remove them from the list of enabled ones. Previously, blobs of any MIME-type were accepted

by default. Note, that the existing configuration properties for configuring MIME-types `feeder.beanMapping.mimeType.includes` and `feeder.beanMapping.mimeType.excludes` have been replaced by new property `feeder.blob.enabled`.

Configuration property `feeder.beanPropertyMaxBytes` to limit the size of indexed bean properties was deprecated and its default value changed from 5 MB to unlimited. It has been replaced by property `feeder.blob.max-size[*/*]`. The new property has the same default of 5 MB, but only for Blueprint usage, where it is set in `caefeeder-blueprint.properties`. You cannot configure a larger maximum size using the deprecated property `feeder.beanPropertyMaxBytes` without increasing the new property. The new property is also used for blobs added by custom `FeedablePopulator` implementations. However, opposed to `feeder.beanPropertyMaxBytes` it is only used for Blob values. Bean properties of other types typically don't need to be skipped based on their size. If still necessary, this must be implemented in the bean property's getter method itself or in a custom implementation of `com.coremedia.cap.feeder.bean.PropertyConverter`

The type of Spring bean `caeFeederBeanPropertiesByClass` was changed from `Map<Class, String>` to `Map<String, String>`. If you add entries to that map in a Spring Java configuration class with the `@Customize` annotation, then you have to change the Map key from type `Class` to `String` as returned by `Class#getName()`. No change is necessary for `<customize:append ...>` elements in Spring XML.

The following public Java API methods have been deprecated. See their deprecation notice in the API documentation for details.

- Method `setMaxBytes` of class `com.coremedia.blueprint.feeder.cae.assets.AssetDocumentBlobFeedablePopulator`
- Methods `getBeanPropertyMaxBytes` and `setBeanPropertyMaxBytes` of classes `com.coremedia.cap.feeder.bean.BeanMappingFeedablePopulator`, `com.coremedia.cap.feeder.bean.BeanFeedableMapping`, and `com.coremedia.cap.feeder.bean.BeanPropertyFeedableElementMapping`
- Methods `getMimeTypeIncludes`, `setMimeTypeIncludes`, `setMimeTypeIncludesCsv`, `getMimeTypeExcludes`, `setMimeTypeExcludes`, and `setMimeTypeExcludesCsv` of classes `com.coremedia.cap.feeder.bean.BeanMappingFeedablePopulator`, `com.coremedia.cap.feeder.bean.BeanFeedableMapping`, and `com.coremedia.cap.feeder.bean.BeanPropertyFeedableElementMapping`.

Multiple configuration properties of the *CAE Feeder* have been renamed or replaced as part of an initiative to use Spring Boot's type-safe `ConfigurationProperties`. The old property names still work as before but have been deprecated, and will be re-

moved in a future release. It's recommend to migrate to the new property names. See also section 'CAE Feeder Properties' in the Deployment Manual for a description of deprecated and new properties.

The following properties have been replaced:

- `contentDependencyInvalidator.invalidationStopped` → `caefeeder.invalidation.paused`
- `dependencyStore.jobQueueCapacity` → `caefeeder.store.dependency-job-queue-capacity`
- `dependencyStore.maxTransactionWeight` → `caefeeder.store.dependency-transaction-max-weight`
- `dependencyStore.storeDependencyNames` → `caefeeder.store.dependency-names`
- `feeder.contentSelector.basePath` -> `caefeeder.content.path`
- `feeder.contentSelector.contentTypeNames` -> `caefeeder.content.type`
- `feeder.contentSelector.includeSubTypes` -> `caefeeder.content.include-subtypes`
- `feeder.beanMapping.mimeType.includes` → `feeder.blob.enabled`
- `feeder.beanMapping.mimeType.excludes` → `feeder.blob.enabled`
- `feeder.beanPropertyMaxBytes` → `feeder.blob.max-size[*/*]`
- `jdbc.lock.enable` → `caefeeder.lock.enabled`
- `jdbc.lock.timeout` → `caefeeder.lock.timeout`
- `persistentcache.clear` → `caefeeder.store.reset`
- `proactiveengine.log.progress.interval.seconds` → `caefeeder.evaluation.log-interval`
- `proactiveengine.senders.delay` → `caefeeder.evaluation.delay`
- `proactiveengine.senders.evaluators` → `caefeeder.evaluation.threads`
- `proactiveengine.senders.idledelay` → `caefeeder.evaluation.idle-delay`
- `timedDependencyInvalidator.timerResolutionMinimum` → `caefeeder.invalidation.timed-dependency-interval`

The new properties `caefeeder.content.path`, `caefeeder.content.type`, `caefeeder.blob.enabled`, and `caefeeder.blob.max-size` do not take a comma-separated list of values as their predecessors, but a Map with different configuration syntax. For details, have a look at the section "Specifying the Set of Indexed Content Beans" and "Mapping of Property Types" in the Search Manual, or section "CAE Feeder Properties" in the Deployment Manual. For example, a comma-separated list of paths specified with `feeder.contentSelect`

`or.basePath=/Sites,/Settings/Taxonomies` can be replaced with two properties `caefeeder.content.path[/Sites]=true` and `caefeeder.content.path[/Settings/Taxonomies]=true`.

[CMS-27543]

New Options -g/--grpc-endpoint and --http-base-uri for Command Line Tools

The options `- grpc-endpoint` [short: `-g`] and `-http-base-uri` have been added to the command line tools. These have been applied to `com.coremedia.cm dline.CommandLineClient`, so that your custom command line clients may inherit them, too.

The command line option `--grpc-endpoint <ENDPOINT>` has been added to support a gRPC-based Unified API Connection. The `ENDPOINT` has the format `HOSTNAME:PORT[,HOSTNAME:PORT]*`.

Upgrade Information:

Custom command line clients extending `AbstractUAPIClient` or `Abstract SpringAwareUAPIClient` will automatically inherit and use the new connection options. Implementations of `CommandLineClient` need to validate, if they want to or need to make use of the new parameters.

You may want to check if especially the short option `-g` collides with your own command line clients.

This conflict, for example, applied to the `--grace` [`-g`] for `cm runlevel`. As part of this change, the short options of `cm runlevel` has been renamed to `-G`.

[CMS-27489]

CAE Feeder Option to Inherit Indexed Valid Time From Navigation Contexts

The *CAE Feeder* can now be configured to feed index fields `validfrom` and `validto` not only based on a CMLinkable's own `validFrom` and `validTo` fields, but by also taking `validFrom` and `validTo` fields of its navigation contexts into account. If enabled and after corresponding content has been re-indexed, then website search will not return CMLinkable hits anymore if their page was marked as invalid for the current time. This new behavior can be enabled with Blueprint configuration property `caefeed er.valid-time.inherit-from-navigation=true` [default is false].

The default behavior is the same as before, but changes in the *CAE Feeder* Spring configuration may require adjustments for project customizations.

- Previously, feeding `validfrom` and `validto` index fields was configured in Blueprint Spring configuration `apps/cae-feeder/modules/search/cae feeder-blueprint-component/src/main/resources/META-INF/coremedia/caefeeder.xml` using `BeanPropertyFeedableEle mentMapping` elements. This has been replaced with the configuration of a newly introduced dedicated `ValidTimeFeedablePopulator` in `com.core media.blueprint.caefeeder.config.CaeFeederBlueprintAu toConfiguration`. If needed, you can still keep custom alternative logic for feeding the valid time using a `BeanPropertyFeedableElementMapping`. The `ValidTimeFeedablePopulator` runs afterward and doesn't do anything, if `validfrom` or `validto` elements are already set in the `Feedable`.
- The Spring bean `navigationPathKeyFactory` that was used in Blueprint `caefeeder.xml` has been replaced with bean `navigationPathContents Function`. If you called method `TreePathKeyFactory#getPath(Con tent)` of the `navigationPathKeyFactory` bean in custom code, then you can replace such usages by calling the `Function#apply(Content)` method of the new `navigationPathContentsFunction` bean. For details, see also the API documentation of `com.coremedia.blueprint.base.cae feeder.navigation.CaeFeederNavigationConfiguration#nav igationPathContentsFunction`.
- Public API interface `com.coremedia.cap.feeder.MutableFeedable` got a new default method `setDateElement(String, java.time.In stant, Map)` that works like existing methods but supports values of new type `java.time.Instant`.
- Note, that if you enable property `caefeeder.valid-time.inherit-from-navigation=true` to feed an existing index, then contents need to be re-indexed before changes will become effective for them. Also, automatic re-indexing of many contents may happen once, if `validFrom` or `validTo` is already set at transitive navigation contents and the *CAE Feeder* is re-indexing other content below that navigation.
- For more details on feeding valid time, have a look at the CAE Feeder Java API documentation in packages `com.coremedia.blueprint.base.caefeeder` and `com.coremedia.blueprint.base.caefeeder.navigation`.

[CMS-27206]

Fix Studio Search Filter "Last Edited By"

Fixed a bug in the Studio Search Filter "Last Edited By", that caused a content item to not show up as edited by the current user, if its latest modification was a publication that destroyed old intermediate versions. The fix will become effective for newly indexed

content items, or after changes were made to content items. The Solr field 'editor' was changed as part of the fix.

If you want to apply the fix to all content items of an existing Solr index, then you can trigger re-indexing of content metadata by using the Content Feeder's reindex actuator endpoint:

```
curl -i -X POST -H 'Content-Type: application/json' -d '{"aspects":
"checkedOut"}' http://localhost:40481/actuator/reindex
```

Before this change, the Solr index field 'editor' of the Content Feeder Solr index was empty for checked-in content items. Now, it is also set for checked-in content items and contains the ID of the user that has edited the latest version. If you use the Solr index field 'editor' in custom code or Solr queries, then your results may change. To restrict a Solr search to checked-out content items, you can add the Solr filter query condition `ischeckedout:true`.

[CMS-27056]

Enhanced translate.xliff.import.ignorableWhitespaceRegex

The pattern `translate.xliff.import.ignorableWhitespaceRegex` is meant to match those strings, that translators may perceive as empty (and thus, won't provide a translation for).

The previous pattern:

```
[\s\p{Z}]*
```

did not cover, for example, characters of Unicode category "Format", such as the Zero-Width-Space (ZWSP) character.

We extended the pattern to be also applicable to Unicode categories "Control" and "Format":

```
[\s\p{Z}\p{Cc}\p{Cf}]*
```

Upgrade Notes:

If you haven't adapted `translate.xliff.import.ignorable WhitespaceRegex`, no upgrade steps are required.

For any adaptation, you may want to validate, if you want to apply the additional character classes to your pattern as well.

[CMS-26952]

Package 'hox.configuration' removed from public API

The deprecated classes and interfaces of package hox.configuration have been removed without replacement. Use Spring's external configuration API instead.

[CMS-25528]

New Method in ServerImportBuilder

Some internal mime type utilities have been abandoned in favor of the `com.core media.mimetype.MimeTypeService`. The `serverimport` tool needs the `MimeTypeService` now, and therefore the `com.coremedia.cap.serv er.importexport.base.importer.ServerImportBuilder` has been enhanced with a new method `withMimeTypeService`. The `MimeTypeService` is mandatory for `serverimport`. If you use the `ServerImportBuilder`, you must set a `MimeTypeService`, otherwise the `ServerImportBuilder` fails to build the `ServerImport`. In the unlikely case that you have implemented the `ServerImportBuilder` interface, you must implement the new method.

[CMS-23764]

Case-insensitive User and Group Search

The default of the content server configuration option `cap.server.case-sensitive-member-search` has been changed to `false`. This makes the user and group search in the Studio's User Manager app case-insensitive.

More generally, the option affects the UAPI methods `com.core media.cap.user.UserRepository#findUsers` and `com.core media.cap.user.UserRepository#findGroups`. If you use these methods in custom code, this behavioural change may be unwanted. In that case set the option to `true` (case-sensitive, backward compatible).

[CMS-20282]

Removal of license property "workflow"

The content server license property "workflow" was always enabled. As it does not license any additional features, it has been removed from future licenses.

[CMS-379]

5.3.2 CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Tomcat introduced a new `maxPartCount` limit with a default of 10 in oder to fix CVE-2025-48988. With the latest Spring Boot versions, a new configuration property was introduced to customize the limit. As some of the CAE implementations require a slightly higher part count, that limit has been increased to 15 in the CAE's application properties:

```
server.tomcat.max-part-count=15
```

Please check Your project's customizations if that limit requires further increment. This might e.g. be the case for HTML forms with many input fields.

See also:

- Fixed Vulnerabilities in Apache Tomcat 10.1.42
- Apache Tomcat 10 Changelog
- Spring Boot releases

[CMS-28098]

Optimized Blob Link Building

Starting with CMCC 2401.1, blob links of the Blueprint CAE (generated by `com.core media.blueprint.cae.handlers.TransformedBlobHand ler#buildLink`) are sensitive to responsive image settings. Therefore, building the link requires a transformation incl. streaming the original blob each time, because the settings may have changed. This turned out to be a severe performance issue, so we reverted this behaviour.

The drawback is that changed responsive image settings are not effective immediately, but outdated images may be rendered. However, responsive image settings are not changed frequently on production systems, so this should not be an issue in practice. You can enforce up-to-date images by restarting the CAE.

There is a configuration property `delivery.image-settings-aware-etags` to control the behaviour. The property has already been introduced with CMOC 2412.0 and 2406.1 with the backward compatible default value `true`. Now we changed the default to the recommended value `false`. By setting the property to `true`, you can preserve the settings-sensitive behaviour. This may be useful for frontend development CAEs, or if the changed behaviour causes unexpected problems and you need (temporary) backward compatibility immediately.

(CMS-27414)

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `al lows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unres tricted`, `safer` or `allows_nothing` for security reasons. See https://free-marker.apache.org/docs/api/freemarker/template/Configuration.html and https://free-marker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

(CMS-27252)

Avoid Auto-wiring on Spring Beans with Scope "Prototype"

A bug in the Spring framework may lead to problems with initialization of members annotated with `@Autowired` when it comes to beans of scope *prototype*. Content beans (or any Spring bean with scope *prototype*, for that matter) should thus not use autowired members. Auto-wiring on *prototype* beans in the Blueprint has been exchanged by explicit dependency injection.

Always use explicit injection on *prototype* beans. If content beans have been customized in your project, check for occurrences of annotation `@Autowired` and replace them with explicit injection. Do so for any other bean of scope *prototype* that you have introduced in your project (look for `scope="prototype"` in your Spring XML definitions).

If you used a custom `SettingsStructToSearchQueryConverterFactory` for content bean `contentBeanFactory:CMQueryList`, this is not autowired any longer and you need to add an explicit injection in file `blueprint-content beans.xml`:

```
<bean name="contentBeanFactory:CMQueryList"
parent="abstractTeasable-blueprint-doctypes"
      class="com.coremedia.blueprint.cae.contentbeans.CMQueryListImpl"
scope="prototype">
  <property name="converterClassFactory" ref="myConverterClassFactory"/>
</bean>
```

[CMS-26015]

Generalized CORS properties for delivery applications

The CORS configuration properties for the CoreMedia delivery applications have been generalized.

Instead of using the `cae.cors.` (CAE) and `caas.cors.` (Headless Server) configuration properties, the CoreMedia delivery services now have to be configured using the `cors.*` configuration properties. The migrate existing CORS configurations, just remove the `cae.` and `caas.` prefixes.

Please note that the deprecated `cae.cors.` (CAE) and `caas.cors.` (Headless Server) configuration properties only still exist to document the replacements. But these legacy properties must not be used anymore, because the delivery applications only take the new `cors.*` configuration properties into account.

Please see the CORS Properties reference in the Deployment Manual.

[CMS-25644]

5.3.3 CoreMedia Studio Client

Public API changes for studio-client packages

The following changes to Public API packages have been made:

Package @coremedia/studio-client.base-models

- Deprecations

- The module `TimeZones_properties` has been deprecated. Use the new timeZoneLocalizationRegistry to add localization for time zones instead.

Package @coremedia/studio-client.cap-base-models

- Changes
  - Member `svgIcon` of `IContentTypeLocalizationis` now `string | URL` was `string`.
  - `getPreferencesState` of `PostUploadPreferences}}`now returns a `{{Promise<boolean | undefined>`, in addition to this the type has been sharpened, reflecting that it can also return `undefined` (which it could before but it was not stated)
- Deprecations
  - The import for types `ILocalization` and `ILocalizationWithIcon` have been deprecated. Please import the types now from `@coremedia/studio-client.base-models`

Package @coremedia/studio-client.content-services-api

- Deprecations
  - The methods `getActiveContent` and `getOpenedContents` of `ContentFormService` have been deprecated. Please utilize `observe_activeContent` and `observe_openedContents` instead (also check https://rxjs.dev/api/index/function/firstValueFrom).

Package @coremedia/studio-client.interaction-services-api

- Removal
  - The abstract classes `Clipboard` and `ClipboardItem` have been removed in favor of the standard Web API interface https://developer.mozilla.org/en-US/docs/Web/API/Clipboard_API]
  - The class `ClipboardItemImpl` and the singleton `clipboard` have been removed without replacement. To access clipboard data utilize new API `observeClipboardData` and `writeToClipboard` of new package `@coremedia/studio-client.interaction-services-toolkit` instead
- Move
  - `DataTransferTypes` has been moved to package `@coremedia/studio-client.interaction-services-toolkit`

Package @coremedia/studio-client.project-services-api

- Deprecations
  - The methods `getActiveProject` and `getOpenedProjects` of `ProjectFormService` have been deprecated. Please utilize `observe_activeProject` and `observe_openedProjects` instead (also check https://rxjs.dev/api/index/function/firstValueFrom).

Package @coremedia/studio-client.workflow-services-api

- Deprecations
  - The methods `getActiveProcess`, `getActiveTask`, `getOpenedProcesses` and `getOpenedTasks` of `WorkflowFormService` have been deprecated. Please utilize `observe_activeProcess`, `observe_activeTask`, `observe_openedProcesses` and `observe_openedTasks` instead (also check https://rxjs.dev/api/index/function/firstValueFrom).

General

The API of many types extending (and including) `RemoteBean` has been sharpened. It is now correctly stated if a property can be `null`. In addition to this all properties that are only available if a `RemoteBean` has been loaded are now also declared as `undefined`. Furthermore, the `isLoaded` method has been improved with a type guard meaning that Typescript https://www.typescriptlang.org/docs/handbook/2/narrowing.html is now working when checking `isLoaded` first before accessing a `RemoteBean` property.

While improving the types has no impact on runtime code, you might need to consider the undefined / null results in your code in case you have enabled strict null checks in your TypeScript project. The later however, is not relevant for packages build with jangaroo as strict null checks are not enabled per default.

[CMS-27964]

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

The minimum @jangaroo/ext-ts version of all studio-client packages was changed. Please also do this in the package.json of your custom packages using @jangaroo/ext-ts:

Old:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.0.0"
  },
  ...
```

New:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.1.0"
  },
  ...
```

Upgrading the dependencies might reveal new type errors which then need to be fixed.

[CMS-27671]

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

Removed ExtJS Workflow App

Public API changes (ExtJS)

With the removal of the ExtJS Workflow App the following ExtJS components and plugins have been removed. Neither of the classes were in use by the content app so if you have still used any of these classes this might just be dead code.

Package @coremedia/studio-client.ext.control-room-editor-components:

- Removal
  - AddInboxDetailFormPlugin
  - AddProcessDetailFormPlugin
  - AddFinishedProcessFormPlugin
  - WorkflowDateDisplayField
  - WorkflowTextDisplayField
  - WorkflowForm / WorkflowFormBase
  - DefaultPublicationWorkflowDetailForm / DefaultPublicationWorkflowDetailFormBase
  - DefaultPublicationWorkflowInfoForm / DefaultPublicationWorkflowInfoFormBase
  - DefaultTranslationWorkflowDetailForm / DefaultTranslationWorkflowDetailFormBase
  - DefaultTranslationWorkflowInfoForm / DefaultTranslationWorkflowFormBase
  - EmbedWorkflowObjectFromContentAppAction
  - WorkflowObjectFromContentAppAction
- Removed the following config from AddWorkflowPlugin, AddPublicationWorkflowPlugin and AddTranslationWorkflowPlugin

- inboxForm
- pendingForm
- finishedForm
- The module "PublicationWorkflowConstants" is now deprecated. Utilize the PublicationWorkflowConstants class of "@coremedia/studio-client.workflow-models" instead.

Package @coremedia/studio-client.ext.workflow-components:

- Removed method "errorIssueExists" from WorkflowIssuesUtil

Package @coremedia/studio-client.workflow-services-api

- Removed WorkflowRouteKeys

[CMS-27362]

CKEditor5 updated to version 45.2.0

CKEditor5 has been updated to version 45.2.0 and comes with updated versions of CoreMedia's CKEditor5 plugins. The update includes 2 major changes:

- Icons are no longer imported as a single `icons` class, but need to be imported separately.
- The link balloon of the CKEditor's link plugin has been re-implemented completely and now consists of a `ToolbarView` instead of the `LinkActionsView`. CoreMedia's link plugin extension has also been updated to still be compatible.

If you have customized the link targets for the link balloon, you will now have to add those targets to the `link.toolbar` configuration. Please have a look at the corresponding documentation.

Migration path: Previously you would have configured the link targets via this configuration:

```
//...
link {
  //...
  targets: [
    "_self",
    {
      name: "_parent",
      icon: parentIcon,
    },
  ]
}
```

Now, the new `toolbar` configuration handles which targets are displayed inside the link balloon. You will still need to define custom targets in `targets` to may remove the default targets ["_self", "_new", "_other", "_top"] and simply add them to the

`toolbar`. Please note, that you will also need to add the buttons to display, edit or unlink the link here as well:

```
//...
link {
  //...
  toolbar: ["linkPreview", "editLink", "|", "_self", "_parent", "|", "unlink"],

  targets: [
    {
      name: "_parent",
      icon: parentIcon,
    },
  ]
}
```

The default toolbar looks like this. Please feel free to reconfigure it in `ckeditorDefault.ts` if you previously changed the link targets:

```
["linkPreview", "editLink", "|", "_self", "_blank",
"_embed", "_other", "|", "unlink"]
```

[CMS-27076]

Changed LinkList Thumbnails

The LinkList component of Studio has the content type icon as an overlay in the lower right corner now. This icon replaces the type icon column which has been removed from all Blueprint usages. The former thumnail column (without type icon) is still available, but has been deprecated. In addition to that, the distance between the thumbnail and the content item name has been increased to make the view more appealing.

[CMS-26960]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

Improve Internal Studio Protocol for Better Performance

The internal protocol between Studio Client and Studio Server has been improved to provide better performance for getting the repository path (and thus the site) of a content item. Among other scenarios, this reduces the time to open the Locale Switcher of a document with many localized variants substantially, even with a cold cache. Instead of one request for each transitive parent folder, now, the whole path is retrieved with one request. This protocol change is compatible with the public Studio Client API contract. However, in rare cases, where code relies on certain `Content` `RemoteBean`s to already be loaded as a side-effect of a prior `getPath()` operation, the changed behavior can lead to errors. Please review and test your Studio Client customizations thoroughly.

(CMS-22940)

Build-In Workflows Now Utilize workflowPlugins Registry

Built-In Workflows Studio Client Side

The CoreMedia built-in workflows (two-step publication, direct publication, translation, synchronization) are now all configured / added on the Studio Client side via the `workflowPlugins` registry, just as for custom workflows. This happens in the core, so the addition of "translation" and "synchronization" workflows has been deleted from the `ControlRoomStudioPlugin` in the Blueprint. However, it is still possible to override / customize built-in workflows the same way as before, using AddPublication-WorkflowPlugin or AddTranslatrionWorkflowPlugin if needed.

(CMS-22454)

5.3.4 CoreMedia Studio Server

Maturing Struct "translatable" Configuration

As part of the correction of a configuration known as `translateXliffTranslatableExpressions` that has not worked (with default Blueprint configuration) for CoreMedia Studio since version CMCC v11.2307.1, the configuration itself has been significantly simplified and the configuration eventually fixed.

Instead of previous customizations of the bean `translateXliffTranslatable Expressions` like this:

```
@Bean
@Customize("translateXliffTranslatableExpressions")
List<String> translatableExpressions() {
  return List.of(
          "CMLinkable.localSettings.callToActionCustomText",
          "CMTeaser.targets.links.callToActionCustomText"
  );
}
```

You can now use a property-based configuration instead:

```
translatable.predicate.property-path[CMLinkable.localSettings.callToActionCustomText]=true
translatable.predicate.property-path[CMTeaser.targets.links.callToActionCustomText]=true
```

As these settings are typically required at least for CoreMedia Studio and for Workflow Server (if you generate XLIFF directly within a translation workflow action), a new Blueprint module `com.coremedia.blueprint:multi-site` has been introduced for this shared configuration and subsequently added as dependency to both, the Studio Server and Workflow Server application. Via `AutoConfiguration` it is ensured that these properties are available in the corresponding applications.

See Also

Find more information in the CoreMedia Blueprint Developer and Deployment Manual.

Workaround for Versions prior to CMCC v12.2506.0.0

As a quick fix for previous releases, you may adapt the `StudioInMemoryAutoCon figuration` and remove the `ConditionalOnProperty` annotation (for property `elastic.core.persistence`), so that the customization of `translateXliffTranslatableExpressions` is also active for default Studio deployments.

Upgrade Notes

Deprecation: While it still works, the customization of bean `translateXliffTrans latableExpressions` is considered deprecated starting from CMCC v12.2506.0.0.

No immediate action required: For now, both configurations, the property-based configuration via `translatable.predicate.property-path` and the property-paths mentioned in `translateXliffTranslatableExpressions` are merged, so that, if any of these configurations mark a property as translatable, it will be considered as translatable (as by default these translatable decisions are ORed; see Blueprint Developer Manual for details].

Recommended steps:

- Accept updates for `StudioInMemoryAutoConfiguration` and `Blue printWorkflowServerAutoConfiguration` which remove the customization of `translateXliffTranslatableExpressions`.
- Accept updates for modules `studio-blueprint-component` and `work flow-blueprint-component` that add this dependency as runtime dependency:

```
<dependency>
  <groupId>com.coremedia.blueprint</groupId>
  <artifactId>multi-site</artifactId>
  <scope>runtime</scope>
</dependency>
```

- Transform previous adaptations of `translateXliffTranslatableExpres sions` to the corresponding configuration for `translatable.predic ate.property-path`.

Side Note Blueprint Module: If you upgrade from versions prior to CMCC v11.2307.1, you will observe, that the module `com.coremedia.blueprint:multi-site` existed before (since CMCC v10.2004.1).

[CMS-27624]

Removed Deprecated Public API Classes

Deleted following classes without replacement:

- com.coremedia.collaboration.project.rest.picture.ProjectPictureStrategy
- com.coremedia.rest.cap.workflow.pictures.WorkflowPictureStrategy

[CMS-27561]

Configuration of ProjectDefaultPictureResolver has moved

The configuration of class `ProjectDefaultPictureResolver` and the class itself have moved from module `com.coremedia.blueprint:es-control room-studio` to module `com.coremedia.blueprint:studio-blue print-component`.

As default, the module `com.coremedia.blueprint:studio-blueprint-component` is already in the dependency tree of the *Studio-Server App*. In custom code the dependency may need to be added. Also, changes in the `ProjectDefault PictureResolver` may need to be applied again, as the class has relocated, therefore this change is marked as *breaking*.

This change is *non-breaking* in the default setup without customizations in the mentioned modules.

[CMS-26996]

Replace Liquibase for editorial-comments

Liquibase has been replaced by our own database management tool that we also use for other features. The update is executed automatically and the Liquibase changelog tables are removed. This means that you cannot start an older version of the studio-server anymore on a updated database. Please make sure to backup your data before the update.

The management of dependency `liquibase-core` has been removed from `middle-thirdparty-bom`.

[CMS-23134]

Changed shortcuts to increase and decrease window and dialog sizes

The shortcut to increase and decrease the size of dialogs and windows within Studio has been changed from *STRG/CMD+ALT+N/M* to *STRG/CMD+ALT+8/9* .

[CMS-11041]

5.3.5 CoreMedia Headless Server

Add missing support for table attributes in rich text transformation

The rich text transformation lacked support for several attributes for tables, like `colspan` and `rowspan`.

This fix added support for all missing attributes for tables according to the CoreMedia richtext DTD:

- \<TBODY\> tag
  - align
  - valign

- <TR> tags
  - align
  - valign
- <TD> tags
  - colspan
  - rowspan
  - align
  - valign
  - abbr

This fix is considered breaking as these changes might affect delivery of existing tables unexpectedly. Additionally, a code change in the transformation descriptor {{default.yml }}was necessary.

The fix also added a new (non-breaking) attribute transformer `PassAttribute` to the standard configuration for rich text transformation.

[CMS-28033]

Fixed Regression in HeadlessServer: REST calls pass through error messages via JSLT transformed responses

Starting with 2404 (the introduction of Spring-GraphQL-Library), GraphQL responses of JSLT transformed persisted queries did not pass through potential GraphQL error messages.

This regression was fixed starting from version 2506 and forward.

The fix is considered breaking, because all existing JSLT templates had to be updated again back to the state prior to version 2404. In effect this means, the former JSLT templates of version 2310-LTS and prior will work again. Hence, customers updating from CM10 directly to 2506 may consider this bugfix non-breaking.

All others must update their JSLT templates. The JSON path of the response now includes the explicit "data" property again and the potential "errors" property of course.

If the compatibility flag `caas.rest.error-messages-over-jslt-en abled = true` for this fix in versions 2406 and 2412 was activated, the JSLT templates were most likely already updated. In this case, this fix may be considered as non-breaking and the compatibility flag can be dropped again.

[CMS-27689]

Deleted Deprecated Blueprint Commerce Augmentation Queries from HLS Schema

The following queries have been removed from Headless Server Schema:

```
commerce/productAugmentationBySite
commerce/productAugmentationByStore
commerce/categoryAugmentationBySite
commerce/categoryAugmentationByStore
commerce/augmentationForCommerceIdBySite
```

Use the available queries below content root instead:

```
content/categoryAugmentationBySite
content/categoryAugmentationBySegment
content/productAugmentationBySite
content/productAugmentationBySegment
```

[CMS-23704]

5.3.6 Miscellaneous

Corba ORB JMX MBeans Removed to Save Heap Memory

JMX MBeans under prefix "com.sun.corba" have been removed to work around a bug in the JMX support of the ORB, which consumes a large amount of heap memory for each application: https://github.com/eclipse-ee4j/orb/issues/5 . To this end, the Maven dependency `org.glassfish.gmbal:gmbal` has been replaced with `org.glassfish.gmbal:gmbal-api-only`.

If you have added dependencies to the `org.glassfish.gmbal:gmbal` in custom modules, then you must also replace those with `org.glassfish.gmbal:gmbal-api-only`. It's not allowed to depend on both artifacts at once.

If you really require JMX MBeans for the Corba ORB and can accept increased heap memory usage, then you have to exclude the `gmbal-api-only` Maven dependency and replace it with the `org.glassfish.gmbal:gmbal` dependency again, for all applications in the Blueprint.

[CMS-27724]

Third-Party Update: Spring Boot and Related Dependencies

Spring Boot and Spring Security as well as several other dependencies have been updated.

- Spring Boot → 3.5.0
- Spring Security → 6.5.0

For details on the changes in Spring Boot 3.5 release, see https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-3.5.0-Release-Notes. For other updated dependencies, view the release notes of "Updated Maven Dependencies and Plugins".

Upgrade Information

- With Spring Boot 3.5 rules for profile names have been tightened. Profiles can now only contain `-` (dash), `_` (underscore), letters and digits. For this, the commerce blueprint `wcs-8.0`, `wcs-9.0`, `wcs-9.1` as well as `wcs-9.1-solr` profiles had to be renamed. Now, they are named `wcs-8_0`, `wcs-9_0`, `wcs-9_1` and `wcs-9_1-solr` respectively. Blueprint docker compose deployment files have been adapted. In case you are using these profiles, adjust their names accordingly.
- With Spring Security 6.5 the `org.springframework.security.web.util.matcher.AntPathRequestMatcher` has been deprecated. Instead, the `org.springframework.security.web.servlet.util.matcher.PathPatternRequestMatcher` should be used. The deprecated usages have been replaced in blueprint code. In contrast to `org.springframework.util.AntPathMatcher`, which was used with the deprecated `AntPathRequestMatcher`, the now active `org.springframework.web.util.pattern.PathPattern` only supports `*` at the end of a pattern. For example, `/pages/{}` is valid but `/pages/{*}/details` is not.
  - This directly affects the property `cae.csrf.ignore-paths`, which now needs to be a path pattern opposed to Ant path before. The paths must be specified relative to any servlet path prefix (meaning you should exclude the context path and any servlet path prefix in stating your pattern).
- There might be more changes that affect your application. Refer to the official release notes mentioned above if you encounter any issues.

[CMS-27313]

Removal of Deprecated Public API Classes

The following deprecated classes have been removed:

- `com.coremedia.workflow.common.util.WorkflowPublication Result`
- `hox.corem.common.CalendarWrapper` - Use `java.text.SimpleD ateFormat` for formatting dates and times instead.
- `hox.corem.publisher.ResultItem`
- `hox.corem.publisher.PublicationResult`

[CMS-27232]

Modernized log implementation in publisher classes

The log implementation in publisher classes has been modernized.

Formerly, all log entries for the publisher were logged with the category `cap.serv er.publisher`. Now they are logged with the categories reflecting their fully qualified class names, starting with `hox.corem.server.publish`. Monitoring queries with the affected categories may have to be adjusted.

[CMS-27158]

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Document-ation.

[CMS-27141]

Removed version management for jmeter-maven-plugin

Version management for `jmeter-maven-plugin` was removed.

Upgrade Information In case you run jmeter performance test in your project using the jmeter-maven-plugin, you have manage the jmeter maven plugin version on your own. With Java 17 or newer you may run into errors like

```
Caused by: java.lang.reflect.InaccessibleObjectException: Unable to make
```

```
field private final java.util.Comparator java.util.TreeMap.comparator
accessible: module java.base does not "opens java.util" to unnamed module
@63440df3
```

This can be prevented by allowing reflective access by using adding `--add-opens`
JVM arguments to the plugin configuration as follows:

```
<plugin>
  <groupId>com.lazerycode.jmeter</groupId>
  <artifactId>jmeter-maven-plugin</artifactId>
  <configuration>
    <jMeterProcessJVMSettings>
      <arguments>
        <argument>--add-opens</argument>
        <argument>java.base/java.lang.reflect=ALL-UNNAMED</argument>
        <argument>--add-opens</argument>
        <argument>java.base/java.util=ALL-UNNAMED</argument>
        <argument>--add-opens</argument>
        <argument>java.base/java.text=ALL-UNNAMED</argument>
        <argument>--add-opens</argument>
        <argument>java.desktop/java.awt.font=ALL-UNNAMED</argument>
      </arguments>
    </jMeterProcessJVMSettings>
  </configuration>
</plugin>
```

The list of arguments can vary depending on your jmeter tests.

[CMS-26982]

Header Toolbar Revamp

The header toolbar has been reorganized. The revamp contains the following changes:

- The library, control room and quick search buttons have been moved from the right side to the left.
- The upload button has been removed from the dashboard and added to the header toolbar directly.
- The bookmarks have been moved into the new header toolbar menu "Open". This menu contain additional menu items for the control room and library too.
- All separators have been removed from the header toolbar. Since these and the buttons might have been used as reference for adding other elements, this change is considered breaking.
- The saved searches have been moved into the new header toolbar menu "Open".

[CMS-26977]

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

There is a flag `cap.server.userproviders[n].mandatory` [default: `true`], which you can set to `false` in order to achieve backward compatibility. However, we do not actually see a usecase for the old behaviour, and we recommend to leave the flag at its default.

[CMS-25871]

Custom Workflow API Changes

While the Workflow App has been replaced by a new implementation based on React instead of ExtJs, the API for custom workflows has largely been kept unchanged.

There are notable breaking changes:

Localization based on resource bundles

The well-known Studio mechanism for localization based on resource bundles was [and in the Content App still is] based on ExtJs mechanisms. So to localize your custom workflow labels and texts, you need to apply a new mechanism. You still have resource bundles as before in different languages. However, you need to register the localized bundles for "de" and "ja" using the `registerLocale()` function:

```
import { registerLocale } from "@coremedia/studio-client.i18n-models";

registerLocale(Gcc_properties, "de", async () => {
  await import("./Gcc_de_properties");
});
```

Following that, when localizing a specific resource bundle key, you need to use the `getLocalizer()` function:

```
import { getLocalizer} from "@coremedia/studio-client.i18n-models";

const localize = await getLocalizer(Gcc_properties);

TextField({
  label: localize("TranslationGlobalLink_submission_status_key"),
  ...
}),
```

WorkflowPlugin API

The type `WorkflowPlugin` is no longer generic, this is now only the case for its properties `startWorkflowFormExtension` and `runningWorkflow FormExtension`. In addition, for the two form extension, the factory function `StartWorkflowFormExtension<ViewModel>()` and `RunningWork flowFormExtension<ViewModel>()` have been introduced respectively. So the registration of a new workflow plugin follows this pattern:

```
interface GccViewModel {
 ...
}

const getGccWorkflowPlugin = async (): Promise<TranslationWorkflowPlugin> =>
 {
  workflowType: "TRANSLATION",
  workflowName: "TranslationGlobalLink",
  ...
  startWorkflowFormExtension: StartWorkflowFormExtension<GccViewModel>({ ...
 }),
  runningWorkflowFormExtension: RunningWorkflowFormExtension<GccViewModel>({
 ... }),
  ...
}

getGccWorkflowPlugin().then((gccWorkflowPlugin) => {
  workflowPlugins._.addTranslationWorkflowPlugin(gccWorkflowPlugin);
});
```

For more details, please have a look at the "Custom Workflow" Section of the Studio Developer Manual.

ResourceBundleUtil

The utility class ResourceBundleUtil from "@jangaroo/runtime/l10n/ResourceBundleUtil" has been deprecated in jangaroo.npm and is not supported inside the workflow app. In order to replace "ResourceBundleUtil.override" please just utilize Web API "Object.assign" instead which doesn't require any import. You can also remove the dependency "@jangaroo/runtime" from your package if it was only utilized for that.

To retain code completion and type errors if a overridden resource bundle key does not longer exist in the default resource bundle, you can utilize "satisfies Partial<MyResource-Bundle_properties>" (supported by jangaroo.npm 3.3.1+), e.g.

```
import ResourceBundleUtil from "@jangaroo/runtime/l10n/ResourceBundleUtil";
import MyResourceBundle_properties from "./MyResourceBundle_properties";

ResourceBundleUtil.override(MyResourceBundle_properties, {
  someKey: "...",
});
```

should be replaced by:

```
import MyResourceBundle_properties from "./MyResourceBundle_properties";

Object.assign(MyResourceBundle_properties, {
```

```
  someKey: "...",
} satisfies Partial<MyResourceBundle_properties>);
```

Public API

Whenever utilizing studio-client API you now need to make sure to only utilize Public API. In addition to this Public API needs to be imported from the package export, meaning that deep path imports inside the package will not work. The new plugin build will report corresponding warnings and errors.

Example:

```
import contentTypeLocalizationRegistry from
"@coremedia/studio-client.cap-base-models/content/contentTypeLocalizationRegistry";
```

now needs to be:

```
import { contentTypeLocalizationRegistry } from
"@coremedia/studio-client.cap-base-models";
```

The identifiers are always named after the module file name of the old import.

If you have split your plugin into multiple packages this applies to all packages used inside the runtime code of the plugin. Please also be aware that in case you have used packages that did not contain any Public API at all, the plugin build may not report any warnings or errors. Those packages will be handled as custom third party packages, so their code is just bundled into your plugin. This could lead to unintended side effects if you rely on shared runtime state or similar in that case.

Extensions Mechanism

While the API is mostly the same there are changes regarding affecting the extension package structure because the new Workflow App is no longer running with ExtJS and though cannot work with the ExtJS based "Dynamic Packages" mechanism.

This has been replaced with a new mechanism based on https://webpack.js.org/concepts/module-federation/.

package.json changes

In order to switch an extension for the old workflow app to the new workflow app, you need to make notable changes to the devDependencies and the scripts of the package.json:

- Declare package type as "module" by adding:

```
"type": "module",
```

- Remove "@jangaroo/core" and "@jangaroo/build" and make sure you have at least these devDependencies

```
"devDependencies": {
  "@babel/core": "^7.23.2",
  "@coremedia/eslint-config-studio-client": "2506.0.0",
  "@coremedia/studio-client.build-config": "2506.0.0",
  "@coremedia/studio-client.workflow.shared-modules": "2506.0.0",
  "eslint": "^8.57.0",
  "rimraf": "^5.0.7",
  "typescript": "^5.8.2",
  "webpack": "^5.98.0",
  "webpack-cli": "^6.0.1"
}
```

- Make sure to have at least these scripts:

```
"scripts": {
  "clean": "rimraf ./dist",
  "prebuild": "sync-tsconfig-project-references src --includeDevDependencies",

  "build": "tsc --project src && webpack build --mode=production",
  "watch": "webpack watch --mode=development",
  "lint": "eslint \"src/**/*.ts*\""
}
```

- Add a new section "coremedia" with the following entry (replacing the $placeholder with a name containing only letters or underscore [a-z_]+):

```
"coremedia": {
  "projectExtensionFor": "studio-client.workflow",
  "plugins": {
    "$placeholder": "./dist/appEntry.js"
  }
},
```

Other files

- Remove jangaroo.config.js
- Create .eslintrc.cjs

```
module.exports = {
  extends: ["@coremedia/eslint-config-studio-client"],
};
```

- Create babel.config.js

```
import { babelConfig } from "@coremedia/studio-client.build-config";

export default babelConfig;
```

- Create webpack.config.js

```
import { sharedModules } from
"@coremedia/studio-client.workflow.shared-modules";
import { getPluginWebpackConfig } from "@coremedia/studio-client.build-config";

export default getPluginWebpackConfig({
  name: "$placeholder",
  sharedModules: {
    "@coremedia/studio-client.workflow.shared-modules": sharedModules,
  },
});
```

Where $placeholder must be the same identifier that you have used in your package.json.

- Create src/index.ts

```
// empty, must be there for webpack...
```

- Create src/tsconfig.json (the new prebuild script will automatically modify this tsconfig.json later):

```
{
  "extends": "@coremedia/studio-client.build-config/tsconfig-shared.json",
  "compilerOptions": {
    "rootDir": ".",
    "outDir": "../dist/src"
  }
}
```

- Create src/plugin.ts

```
export const initPlugin = async () => {
  // add your plugin code here, e.g. start utilizing the custom workflow api
};
```

Now you have a base skeleton for the new plugin mechnism. You can start adding your own code to the src/plugin.ts

Migrating Content Type Localization for Content App and Workflow App

You usually want to have Content Type Localization only once in a shared packages. If you have sticked to the examples for Content Type Localization provided in the blueprint

there is a migration path for the new plugin mechanism. While all examples in the blueprint are adjusted, the general approach looks as follows.

Add the initialization codee to the src/plugin.ts of your plugin

```
export const initPlugin = async () => {
  const module = await
import("@coremedia-blueprint/studio-client.my-doctypes");
  await module.initMyDocTypes();
};
```

For the shared package itself (in the example this is "@coremedia-blueprint/studio-client.my-doctypes") you now need to create and export the corresponding init method. This can be as simple as just exporting it in their index.ts:

```
import { contentTypeLocalizationRegistry } from
"@coremedia/studio-client.cap-base-models";
import MyDocTypes_properties from "./MyDocTypes_properties";

export const initMyDocTypes = async () => {
  registerLocale(MyDocTypes_properties, "de", async () => {
    await import("./BlueprintDoctypesDocTypes_de_properties");
  });
  registerLocale(MyDocTypes_properties, "ja", async () => {
    await import("./BlueprintDoctypesDocTypes_de_properties");
  });

  const localizer = await getLocalizer(MyDocTypes_properties);

  contentTypeLocalizationRegistry.addLocalization("CMMyDocType", {
    displayName: localize("Content_displayName"),
  })
  // ...
};
```

For more a more complex examples (including different locales), check the packages @coremedia-blueprint/studio-client.workflow.blueprint-doctypes-plugin and @coremedia-blueprint/studio-client.blueprint-doctypes in the blueprint workspace.

Customization via ExtJS plugins

The ExtJS Plugin mechanism was never supported in the old Workflow App. However, it was possible to ignore that and just utilize the API in order to make customizations. As we switched to React, there is no replacement for that and though we cannot offer a migration path here.

Customization for the Workflow App can now only be done via the provided CustomWorkflowApi and additional APIs like the contentLocalizationRegistry.

[CMS-24826]

5.4 Upgrade to 2412.0.4

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.

5.4.1 CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Tomcat introduced a new `maxPartCount` limit with a default of 10 in oder to fix CVE-2025-48988. With the latest Spring Boot versions, a new configuration property was introduced to customize the limit. As some of the CAE implementations require a slightly higher part count, that limit has been increased to 15 in the CAE's application properties:

```
server.tomcat.max-part-count=15
```

Please check Your project's customizations if that limit requires further increment. This might e.g. be the case for HTML forms with many input fields.

See also:

- Fixed Vulnerabilities in Apache Tomcat 10.1.42
- Apache Tomcat 10 Changelog
- Spring Boot releases

[CMS-28098]

5.4.2 Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

5.5 Upgrade to 2412.0.3

Release 2412.0.3 requires no upgrade steps.

5.6 Upgrade to 2412.0.2

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.

5.6.1 CoreMedia Studio Client

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

The minimum @jangaroo/ext-ts version of all studio-client packages was changed. Please also do this in the package.json of your custom packages using @jangaroo/ext-ts:

Old:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.0.0"
  },
  ...
```

New:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.1.0"
  },
  ...
```

Upgrading the dependencies might reveal new type errors which then need to be fixed.

[CMS-27671]

5.6.2 CoreMedia Studio Server

Patch to Fix XLIFF Download in CoreMedia Studio

If you are downloading XLIFF in CoreMedia Studio, you may have experienced (since CMCC v10.2307.1), that the feature to add nested Struct properties configured in bean `translateXliffTranslatableExpressions` did not work anymore, thus, properties like `CMLinkable.localSettings.callToActionCustomText` were not added to the resulting XLIFF export.

The corresponding required configuration was wrongly hidden in `StudioIn MemoryAutoConfiguration`.

This patch will remove the `@ConditionalOnProperty` annotation from `Studi oInMemoryAutoConfiguration`, so that the required configuration for `translateXliffTranslatableExpressions` is now also available again in CoreMedia Studio.

Upgrade Notes

If you have adapted `translateXliffTranslatableExpressions`, you may need to review the customized bean in `StudioInMemoryAutoConfigur ation`, if it matches your needs. If you already set up a parallel unconditional configuration to work around this issue, you may just keep the `StudioInMemoryAuto Configuration` with its `@ConditionalOnProperty` annotation.

Ensure that configurations in CoreMedia Studio and in `BlueprintWork flowServerAutoConfiguration` are aligned.

[CMS-27666]

5.6.3 Miscellaneous

Moved upcoming KIO Backend Images to container-registry.coremedia.com

Future docker images will be available on `container-registry.core media.com`:

```
docker   login   container-registry.coremedia.com   docker
pull    container-registry.coremedia.com/coremedia/kio-
editorial-backend:latest
```

[CMS-27514]

5.7 Upgrade to 2412.0.1

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.

5.7.1 CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://freemarker.apache.org/docs/api/freemarker/template/Configuration.html and https://freemarker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

5.7.2 CoreMedia Studio Client

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

5.7.3 Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Document-ation.

[CMS-27141]

5.8 Upgrade to 2412.0.0

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.

5.8.1 CoreMedia Core

XML Converter Configuration

Due to a bug, XML converters in the contentserver had to be configured with a duplicate `sql.store.convert` prefix, like

```
sql.store.convert.sql.store.convert.MyContentType.myXmlProperty=example.org.MyConverter
```

This has been fixed now, so XML converters must be configured as intended with a single prefix now:

```
sql.store.convert.MyContentType.myXmlProperty=example.org.MyConverter
```

[CMS-26006]

Configurable Site Manager Group Alternatives

A feature previously known as a kind of "fallback" has been matured. This fallback was known to take over, when the "site manager groups" field of a given site was empty.

Due to the nature of this change, this "fallback" is now called "alternative", as you may apply different strategies for different use-cases on application configuration level.

Without diving into the past, here is, what is possible now (find more details in Blueprint Developer Manual):

The Default Behavior

The default behavior has not changed much – the only change is, that it now aligns better with the documented approach:

- The only entry for alternative groups is, as before, the group with ID 0 (zero), named `administratoren` (this is a hard-wired name that cannot be changed).
- If the site manager groups field is empty, the alternative groups are used instead.
- Now, also, if all groups within the site manager groups field are invalid (there is a validator to signal this broken state), also, the alternative groups will be applied. As stated, this aligns with the documented behavior.

Possible Adaptation: External User Repositories

For purely externally managed users, the default approach is flawed: There was no option, to also provide alternative groups from this external repository.

This is possible now, as you may, for example, configure:

```
sitemodel.siteManagerGroupAlternatives=administrators@example.org,coremedia:///cap/group/0
```

Possible Adaptation: Always Consider Administrators

As another adaptation, that ships with this release, you may also change the strategy, when these alternatives are considered. For example, if you want your configured alternative groups to be always taken into account (like, to possibly take over for absent editors), you may do so by changing the strategy:

```
sitemodel.siteManagerGroupAlternativesStrategy=ALWAYS
```

Upgrade Notes

While the behavior has not changed much from before using the default Blueprint configuration (despite fixing to also consider alternative groups, when given ones are all invalid), there have been some compatible changes on API layer:

- A new enumeration `SiteModel.SiteManagerGroupAlternativesStrategy` has been introduced.
- The `SiteModel` interface provides new methods (backed by default implementation that are aligned with the previous behavior):
  - `getSiteManagerGroupAlternatives() : List<String>`
  - `getSiteManagerGroupAlternativesStrategy() : SiteModel.SiteManagerGroupAlternativesStrategy`

The latter may require, at least on unit test level, to possibly adapt your mocks of `SiteModel`. It should require no adaptation in your existing production code.

The upgrade involves these applications, that should be updated for the feature to work to its full extend:

- Studio-Server, required to be able to actually start the localization workflows;

- Localization Workflows using `GetSiteManagerGroupAction` (like the Translation Workflow, that ships as part of the CoreMedia Blueprint). While the API of the action did not change, it is important to also update these artifacts, as otherwise your configured alternative groups may not be able to proceed handling started localization workflows.

[CMS-25668]

bulkpublish -ab now also withdraws the base folder

Straightened bulkpublish parameters: All operations are now including the base folder(s).

Since 2304.1 the base folder has been included in all operations except for "unpublish" which now also includes it.

[CMS-25484]

Removal and Deprecation of Public API

The following deprecated classes/interfaces have been removed:

- `hox.corem.common.Filter`
- `hox.corem.common.Sorter`

They were exclusively used by the Site Manager which has been removed in CMCC 12. Please switch to Unified API calls if you previously used these interfaces.

The following deprecated classes/interfaces have been removed:

- `RightsConstant`

The following classes/interfaces are now deprecated:

- `hox.corem.common.CalendarWrapper` - use `java.text.SimpleDateFormat` instead for formatting date and time.

[CMS-25426]

Updated to Spring Boot 3.4 and Spring Framework 6.2

The project has been updated to:

Spring Boot to 3.4.0 - see also Spring Boot 3. Release Notes

Spring Framework to 6.2.0 - see also Upgrading to Spring Framework 6.x

This update includes many further 3rd library updates, which are given in a separate release note. This release note is marked as a breaking change because it may require work to fix project code (blueprint customizations) to adjust to the following (or further) changes:

- URL Parsing
- Bean Overriding in Tests

Also, some plugins or extensions might break and have to be updated (e.g. CoreMedia Salesforce Marketing Cloud extension).

In many cases this update will not be breaking at all.

(CMS-25319)

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

The limit was added in Blueprint class `com.coremedia.blueprint.feeder.cae.assets.AssetDocumentBlobFeedablePopulator` and its configuration `apps/cae-feeder/modules/extensions/am/am-caefeeder-component/src/main/resources/META-INF/coremedia/am-caefeeder.xml`.

(CMS-24694)

Using java.time.Duration in ConfigurationProperties for human-readable Duration Specification

To be able to use human-readable duration configurations such as `1d` in favor of `86_400` given as seconds, a bunch of properties got transformed to hold `java.time.Duration` instead of `long` or `int` values denoting milliseconds, for example.

The following is a list of affected properties that benefit from this change:

- `caas`
  - `commerce.assetsearchservice.cache-seonds`
  - `search.cache`
    - `seconds`
    - `querylist-search-cache-for-seconds`
  - `strict-transport-security-header.max-age`
- `cae.sitemap.period-minutes`
- `cap.server`
  - `blob-channel-timeout`
  - `cache`
    - `group-cache-status-interval`
    - `resource-cache-status-interval`
    - `rights-cache-status-interval`
    - `user-chache-status-interval`
  - `kicense-reload-interval-millis`
  - `session-ping-interval`
  - `termination-timeout-seconds`
  - `unique-db-access-write-interval`
- `elastic.core.event-collection-ttl-sec`
- `publisher`
  - `connection-timeout-seconds`
  - `status-interval`
- `replicator.check-timeout`
- `repository.connect-retry-delay-seconds`

- `solr`
  - `connection-timeout`
  - `socket-timeout`
  - `zookeeper.client-timeout`
  - `zookeeper.connect-timeout`
- `sql`
  - `pool`

- `check-timeout`
- `open-timeout`
- `reaper-interval`
- `reaper-timeout`
- `validator-interval`
- `validator-timeout`
- `store`
  - `collector`
    - `blob-preservation-period`
    - `delay`
    - `initial-delay`
    - `start-time`
  - `sgml-cache-interval-seconds`
- `workflow.server`
  - `session`
    - `reaper-timeout`
    - `timeout`
  - `termination-timeout-seconds`
  - `tx.idletimeout`
  - `uapi.session-pool.max-idle-time-ms`

The following unused properties were removed:

- `commerce.hub.data.endpoint.shutdown-timeout-millis`
- `workflow.server.sweep.delay`
- `workflow.uapi.connect-retry-delay-seconds` (use `repository.connect-retry-delay-seconds` instead)

Upgrade Information

In general, no additional upgrade steps should be required. Nevertheless, you may experience incoming changes, especially to our default `application.properties` we ship with CoreMedia Blueprint, where we changed respective properties to the human-readable form.

Properties using the old unitless format are still supported and use the same default unit as they did before.

(CMS-24149)

Removed legacy logging configuration in Workflow-Server

Legacy logging configuration in Workflow-Server has been replaced by standard slf4j class log facilities.

- All properties with the prefix `workflow.common.log` and `workflow.server.log` have been removed.
- Managed JMX attributes like `isLogClientActions` etc have been removed from `WorkflowServerManager`.
- Class `com.coremedia.workflow.common.Common` has been deleted.

[CMS-23946]

Removed deprecated class `hox.corem.Corem`

Deprecated class `hox.corem.Corem` was removed. Use Spring's external configuration instead. If `hox.corem.Corem` was used and the need to load a properties file programmatically remains, then the following code using Spring utility classes can be used as a replacement:

```
PropertiesLoaderUtils.loadProperties(new PathMatchingResourcePatternResolver().getResource(propertiesFileURL));
```

[CMS-23765]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow instructions in *Importer Manual*, section 3.4 *Deployment and Operation of an Importer in Docker*, to learn how to set up a Docker-based importer.

[CMS-15884]

5.8.2 CoreMedia Content Application Engine

Avoid Auto-wiring on Spring Beans with Scope "Prototype"

A bug in the Spring framework may lead to problems with initialization of members annotated with `@Autowired` when it comes to beans of scope *prototype*. Content beans (or any Spring bean with scope *prototype*, for that matter) should thus not use autowired

members. Auto-wiring on *prototype* beans in the Blueprint has been exchanged by explicit dependency injection.

Always use explicit injection on *prototype* beans. If content beans have been customized in your project, check for occurrences of annotation `@Autowired` and replace them with explicit injection. Do so for any other bean of scope *prototype* that you have introduced in your project (look for `scope="prototype"` in your Spring XML definitions).

If you used a custom `SettingsStructToSearchQueryConverterFactory` for content bean `contentBeanFactory:CMQueryList`, this is not autowired any longer and you need to add an explicit injection in file `blueprint-content beans.xml`:

```
<bean name="contentBeanFactory:CMQueryList"
parent="abstractTeasable-blueprint-doctypes"
      class="com.coremedia.blueprint.cae.contentbeans.CMQueryListImpl"
scope="prototype">
  <property name="converterClassFactory" ref="myConverterClassFactory"/>
</bean>
```

[CMS-26015]

Query List with context condition sometimes contained context documents in the result

A query list with a context condition contained the context documents in the result, if the query list result types include pages. The query list result documents are now filtered, so that the context documents are not contained anymore. If the context documents should still be contained in the result, they can be added as fixed items.

[CMS-25611]

Blueprint CAE Class GenericIdToContentWrapperConverter Removed

Removed deprecated class `com.coremedia.blueprint.uapi.convert er.GenericIdToContentWrapperConverter` without replacement.

[CMS-8668]

5.8.3 CoreMedia Studio Client

Switched to pnpm workspace protocol

Since pnpm 9 the usage of the workspace protocol is the default configuration in pnpm workspaces (see https://github.com/pnpm/pnpm/releases/tag/v9.0.0 - new default "false" for link-workspace-packages). While CMCC 2406.0.0 already uses pnpm 9 the releases did arrive too shortly after each other to fully adapt the studio-client workspace to this change. That's why we enabled linking of workspace packages again via an .npmrc.

For this release we changed our dependencies and tooling around the dependencies (like the extensions mechanism) to support and utilize the workspace protocol. For this all dependencies to packages within the studio-client workspace have been adjusted in their corresponding package.json.

Dependencies

If you have any customizations to dependencies of existing packages or have added new packages, please make sure that you utilize the workspace protocol as well. This means that in the package.json of the corresponding packages all entries inside "dependencies", "devDependencies" or "peerDependencies" need to be adjusted if they reference another package inside the workspace from "1.0.0-SNAPSHOT" (default version in the blueprint workspace, might be different) to "workspace:*".

Important: Please do not change dependencies referencing released artifacts starting with "@coremedia/" or any third party vendor.

Changes to provided publish task

In case you do not release any npm package from within the studio-client workspace, you can skip this section.

With this change we also adjusted the provided publish task and configuration to no longer utilize "@jangaroo/publish" but the default "pnpm publish". This means that the dependencies to "@jangaroo/publish" inside the "devDependencies" section of every package have been removed.

In addition to this we also removed the "publish" script for every package where it was no longer necessary.

Before the change we prevented using "pnpm publish" by adding making the packages "private" via the corresponding entry in their package.json. This has been removed as well.

Finally, the publish-task provided inside Dockerfile.tasks has been adjusted accordingly.

[CMS-25787]

Removed usages of jangaroo-net and corresponding URI class

As the title says we removed the usage of jangaroo-net and its corresponding URI class in the studio-client to streamline the API and get rid of obsolete dependencies.

The package.json of the blueprint package "@coremedia-blueprint/studio-client.main.lc-studio" was adjusted accordingly and the implementation of src/action/OpenCreateExternalPageDialogActionBase.ts has slightly changed.

In addition for the package @coremedia/studio-client.main.editor-components" the "getUri" method of the PreviewURI class has been removed. Please use "getUrl" instead.

The following non-public API are affected as well:

- @coremedia/studio-client.client-core
  - remoteService
  - UrlUtil
- @coremedia/studio-client.client-core-impl
  - RemoteService
- @coremedia/studio-client.client-core-test-helper
  - MockFetch

[CMS-25748]

Moved preview related entities to cap-rest-client

Preview related entities have been moved from the packages "@coremedia/studio-client.client-core" and "@coremedia/studio-client.client-core-impl" to "@coremedia/studio-client.cap-rest-client" and "@coremedia/studio-client.cap-rest-client-impl".

Please adjust the following import statements:

```
import Previewable from
"@coremedia/studio-client.client-core/data/Previewable";
import PreviewConfig from
"@coremedia/studio-client.client-core/data/PreviewConfig";
import Previews from "@coremedia/studio-client.client-core/data/Previews";
import PreviewsImpl from
"@coremedia/studio-client.client-core-impl/data/impl/PreviewsImpl";
```

to

```
import { Previewable } from "@coremedia/studio-client.cap-rest-client";
import { PreviewConfig } from "@coremedia/studio-client.cap-rest-client";
import { Previews } from "@coremedia/studio-client.cap-rest-client";
import { PreviewsImpl } from "@coremedia/studio-client.cap-rest-client-impl";
```

[CMS-25374]

studio-client container is now read-only

The studio-client container is now read-only in the docker compose setup. The following volumes were added for the nginx and plugin setup:

- /usr/share/nginx
- /etc/nginx/conf.d
- /var/cache/nginx
- /var/run

[CMS-24803]

5.8.4 CoreMedia Studio Server

For Nested Synchronized Sites: Relaxed Permission Checks for Site Managers

With this release, the behavior to calculate if users are allowed to start a synchronization workflow has been slightly adapted for nested synchronized sites.

Prior to this change, a glitch existed in context of managing nested synchronized sites hierarchies, where users could meet a situation like this:

- They are allowed to trigger a synchronization from the root master site...
- but they are not allowed to trigger a synchronization workflow from a master site below that root master site.

The latter case now also works, which means, that the contract got slightly adapted: If starting a synchronization workflow starting from a given site, it is enough if the user either manages the current master site *or any of its master sites up above*.

[CMS-25768]

Enhanced Error Messages For Not Being Able to Start Localization Workflows

We enhanced error messages for not being able to start a localization workflow (synchronization and/or translation) within the start localization workflow window in CoreMedia Studio.

Despite some minor adaptations to the message, if opening the issue details, you will now also get a link to the site indicator of the master, which may be the first content item, where you want to review the corresponding property "site manager groups".

More information about site manager groups and their slightly different behavior has been added to the manuals: Blueprint Developer Manual and Studio User Manuals (English and German).

Upgrade Notes:

This change requires to update the Studio Server as well as the Studio Client.

(CMS-24663)

5.8.5 CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

The type of the value returned by these getters can now either be a `java.lang.String` or a `com.coremedia.cap.common.Blob`:

- In case of a string, the value is assumed to be a plaintext value and the respective getters of the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will simply return the string.
- In case of a blob, the value is expected to be an encrypted secret, and the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will decrypt it and then return the decrypted plaintext string when calling the same getter.

- Other types are not supported.

Please note: To allow encryption and decryption of secrets in the Elastic Social Credentials document, the AWS KMS Encryption Plugin for CoreMedia CMS must be installed and properly configured.

[CMS-25260]

5.8.6 CoreMedia Frontend Workspace

Replaced node-sass with dart-sass

As node-sass has been deprecated we replaced the dependency with the new default implementation "dart-sass" which is actively maintained.

As it is a different implementation with some limitations regarding the loader API the following breaking changes have been made:

- SCSS syntax checking may be more strict, leading to possible errors if invalid SCSS is encountered
- As the new importer API doesn't allow tracking and intercepting all @imports anymore, the following custom scss importers have been removed without replacement
  - sassExcludeImport - this means that you can no longer exclude certain imports with the "?exclude" suffix
  - sassImportOnce - see below
  - dependencyCheckPlugin.getNodeSassImporter() - meaning we will no longer check if all dependencies have been properly declared in the package.json
- When importing a SCSS file multiple times all imports except for the last imports will be ignored. This is a major difference to the behavior of our old custom sassImportOnce loader which kept the first imports. If you are encountering issues with the order of the generated css rules, this should be the first thing to inspect

[CMS-18916]

5.8.7 CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

5.8.8 CoreMedia Headless Server

Only send Cache-Control Max-Age response headers for configured URLs

Since CM11, Headless can compute cache-control headers based on content valid from/to dates and a static configuration. Previously, the implementation computed the max-age value based on the content properties valid from/to and and the static configuration based on the request URI.

Unfortunately, even without a configuration for a certain URI, the max-age Cache-Control directive was send, if valid from/to was set for a content that was part of the response.

This changes fixes this behavior. The max-age value is only computed and send, if the request URI matches an existing configuration. Furthermore, the default value for max-age was changed from 5 minutes to 2 minutes.

Since the behavior has changed and the default was decreased to two minutes, this change is considered breaking.

If you upgrade from CM10 or older to 2412+, the cache-control header-feature might be considered new and thus non-breaking.

[CMS-26021]

5.8.9 Miscellaneous

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

There is a flag `cap.server.userproviders[n].mandatory` [default: `true`], which you can set to `false` in order to achieve backward compatibility. However, we do not actually see a usecase for the old behaviour, and we recommend to leave the flag at its default.

[CMS-25871]

Editorial Comments Database Change

Due to new deprecations in Hibernate and to follow best practices, we adjusted the database schema for editorial-comments.

The adjustments are applied automatically on startup of the Studio-Server and there are no required further actions to take.

You should however be aware that you cannot start old versions of the Studio-Server anymore once the schema has been adjusted. So, please consider making a database backup for the editorial-comments schema before the upgrade.

[CMS-25739]

Remove Groovy dependency management from blueprint parent POMs

The dependency management entries for the `org.codehaus.groovy:groovy-:2.4.21` in all `.blueprint-parent` POMs were unused and thus have been removed.

[CMS-25707]

CKEditor 5 Version Update

CKEditor 5 has been updated to 43.3.1. Find details below:

- **New Version:** 43.3.1

- **Reason:** Module structure changed: Using unified package ckeditor5.

- **Migration:**
  - If any imports like `"@ckeditor/ckeditor5-*"` are used, migration efforts are necessary, as only imports from "ckeditor5" are allowed
    - all other imports have to be replaced by imports from "ckeditor5"
    - or, if imports are not available, utilize workarounds like alias configurations for webpack
- **Migration Hint:**
  - Due to inconsistent package exports in some CKEditor5 plugins, you might be forced to create a patch and add a default export to the `package.json` of the plugin package. Please see the PNPM patch documentation to learn about how to patch packages or the CoreMedia CKEditor5 plugins workspace's `package.json` to see how the patch is applied.
- **Release Notes:** [Migrating to new installation methods | CKEditor5 documentation|https://ckeditor.com/docs/ckeditor5/43.3.1/updating/nim-migration/migration-to-new-installation-methods.html]

[CMS-25371]

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

However, this change introduced performance issues on some databases so that we reverted the change and the queries now work as before and *do not return the folder itself* except for the special case of the root folder.

The documentation has been adjusted accordingly.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

Removed deprecations for commons-cli

Usage of deprecated classes from dependency commons-cli:commons-cli habe been replaced. Now the DefaultParser is used for parsing input of Commandline tools. As the DefaultParser handles short and long options more strictly, existing command line calls, that worked before, may now result in errors. The command line tools should only be used as described in documentation.

[CMS-25098]

Upgraded Mockito to 5.13.0

Upgraded Mockito to 5.13.0. A small number of unit tests may have to be adjusted because mockito now checks for unused stubbings even stricter than before.

[CMS-25089]

Removed Management of Maven WAR Plugin

Configuration of the "maven-war-plugin" has been removed. If your project still builds WAR files, please manage the "maven-war-plugin" in your maven parent files.

[CMS-23945]

5.9 Upgrade to 2406.2.1

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.

5.9.1 Miscellaneous

Content hub adapters are no longer delivered as bundled plugins

In previous versions the content hub adapters for youtube and rss were bundled in the studio-server and studio-client. The plugins are no longer bundled and have to be added like other plugins in each project.

[CMS-28213]

5.10 Upgrade to 2406.2.0

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.

5.10.1 CoreMedia Core

Fix Studio Search Filter "Last Edited By"

Fixed a bug in the Studio Search Filter "Last Edited By", that caused a content item to not show up as edited by the current user, if its latest modification was a publication that destroyed old intermediate versions. The fix will become effective for newly indexed content items, or after changes were made to content items. The Solr field 'editor' was changed as part of the fix.

If you want to apply the fix to all content items of an existing Solr index, then you can trigger re-indexing of content metadata by using the Content Feeder's reindex actuator endpoint:

```
curl -i -X POST -H 'Content-Type: application/json' -d '{"aspects":
"checkedOut"}' http://localhost:40481/actuator/reindex
```

Before this change, the Solr index field 'editor' of the Content Feeder Solr index was empty for checked-in content items. Now, it is also set for checked-in content items and contains the ID of the user that has edited the latest version. If you use the Solr index field 'editor' in custom code or Solr queries, then your results may change. To restrict a Solr search to checked-out content items, you can add the Solr filter query condition `ischeckedout:true`.

[CMS-27056]

5.10.2 CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Tomcat introduced a new `maxPartCount` limit with a default of 10 in oder to fix CVE-2025-48988. With the latest Spring Boot versions, a new configuration property was introduced to customize the limit. As some of the CAE implementations require a slightly higher part count, that limit has been increased to 15 in the CAE's application properties:

```
server.tomcat.max-part-count=15
```

Please check Your project's customizations if that limit requires further increment. This might e.g. be the case for HTML forms with many input fields.

See also:

- Fixed Vulnerabilities in Apache Tomcat 10.1.42
- Apache Tomcat 10 Changelog
- Spring Boot releases

[CMS-28098]

5.10.3 CoreMedia Studio Client

CKEditor5 updated to version 45.2.0

CKEditor5 has been updated to version 45.2.0 and comes with updated versions of CoreMedia's CKEditor5 plugins. The update includes 2 major changes:

- Icons are no longer imported as a single `icons` class, but need to be imported separately.
- The link balloon of the CKEditor's link plugin has been re-implemented completely and now consists of a `ToolbarView` instead of the `LinkActionsView`. CoreMedia's link plugin extension has also been updated to still be compatible.

If you have customized the link targets for the link balloon, you will now have to add those targets to the `link.toolbar` configuration. Please have a look at the corresponding documentation.

Migration path: Previously you would have configured the link targets via this configuration:

```
//...
link {
  //...
  targets: [
    "_self",
    {
      name: "_parent",
      icon: parentIcon,
    },
  ]
}
```

Now, the new `toolbar` configuration handles which targets are displayed inside the link balloon. You will still need to define custom targets in `targets` to may remove the default targets ["_self", "_new", "_other", "_top"] and simply add them to the `toolbar`. Please note, that you will also need to add the buttons to display, edit or unlink the link here as well:

```
//...
link {
  //...
  toolbar: ["linkPreview", "editLink", "|", "_self", "_parent", "|", "unlink"],

  targets: [
    {
      name: "_parent",
      icon: parentIcon,
    },
  ]
}
```

The default toolbar looks like this. Please feel free to reconfigure it in `ckeditorDefault.ts` if you previously changed the link targets:

```
["linkPreview",  "editLink",  "|",  "_self",  "_blank",
"_embed",  "_other",  "|",  "unlink"]
```

[CMS-27076]

Improve Internal Studio Protocol for Better Performance

The internal protocol between Studio Client and Studio Server has been improved to provide better performance for getting the repository path (and thus the site) of a content item. Among other scenarios, this reduces the time to open the Locale Switcher of a

document with many localized variants substantially, even with a cold cache. Instead of one request for each transitive parent folder, now, the whole path is retrieved with one request. This protocol change is compatible with the public Studio Client API contract. However, in rare cases, where code relies on certain `Content` `RemoteBean`s to already be loaded as a side-effect of a prior `getPath()` operation, the changed behavior can lead to errors. Please review and test your Studio Client customizations thoroughly.

[CMS-22940]

5.10.4 CoreMedia Frontend Workspace

Replaced node-sass with dart-sass

As node-sass has been deprecated we replaced the dependency with the new default implementation "dart-sass" which is actively maintained.

As it is a different implementation with some limitations regarding the loader API the following breaking changes have been made:

- SCSS syntax checking may be more strict, leading to possible errors if invalid SCSS is encountered
- As the new importer API doesn't allow tracking and intercepting all @imports anymore, the following custom scss importers have been removed without replacement
  - sassExcludeImport - this means that you can no longer exclude certain imports with the "?exclude" suffix
  - sassImportOnce - see below
  - dependencyCheckPlugin.getNodeSassImporter() - meaning we will no longer check if all dependencies have been properly declared in the package.json
- When importing a SCSS file multiple times all imports except for the last imports will be ignored. This is a major difference to the behavior of our old custom sassImportOnce loader which kept the first imports. If you are encountering issues with the order of the generated css rules, this should be the first thing to inspect

[CMS-27164]

5.10.5 Miscellaneous

Corba ORB JMX MBeans Removed to Save Heap Memory

JMX MBeans under prefix "com.sun.corba" have been removed to work around a bug in the JMX support of the ORB, which consumes a large amount of heap memory for each application: https://github.com/eclipse-ee4j/orb/issues/5 . To this end, the Maven dependency `org.glassfish.gmbal:gmbal` has been replaced with `org.glassfish.gmbal:gmbal-api-only`.

If you have added dependencies to the `org.glassfish.gmbal:gmbal` in custom modules, then you must also replace those with `org.glassfish.gmbal:gmbal-api-only`. It's not allowed to depend on both artifacts at once.

If you really require JMX MBeans for the Corba ORB and can accept increased heap memory usage, then you have to exclude the `gmbal-api-only` Maven dependency and replace it with the `org.glassfish.gmbal:gmbal` dependency again, for all applications in the Blueprint.

[CMS-27749]

Third-Party Update: Spring Boot and Related Dependencies

Spring Boot and Spring Security as well as several other dependencies have been updated.

- Spring Boot → 3.5.0
- Spring Security → 6.5.0

For details on the changes in Spring Boot 3.5 release, see https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-3.5.0-Release-Notes. For other updated dependencies, view the release notes of "Updated Maven Dependencies and Plugins".

Upgrade Information

- With Spring Boot 3.5 rules for profile names have been tightened. Profiles can now only contain − [dash], _ [underscore], letters and digits. For this, the commerce blueprint `wcs-8.0`, `wcs-9.0`, `wcs-9.1` as well as `wcs-9.1-solr` profiles

had to be renamed. Now, they are named `wcs-8_0`, `wcs-9_0`, `wcs-9_1` and `wcs-9_1-solr` respectively. Blueprint docker compose deployment files have been adapted. In case you are using these profiles, adjust their names accordingly.

- With Spring Security 6.5 the `org.springframework.secur ity.web.util.matcher.AntPathRequestMatcher` has been deprecated. Instead, the `org.springframework.security.web.ser vlet.util.matcher.PathPatternRequestMatcher` should be used. The deprecated usages have been replaced in blueprint code. In contrast to `org.springframework.util.AntPathMatcher`, which was used with the deprecated `AntPathRequestMatcher`, the now active `org.spring framework.web.util.pattern.PathPattern` only supports `*` at the end of a pattern. For example, `/pages/{}` is valid but `/pages/{*}/details` is not.
  - This directly affects the property `cae.csrf.ignore-paths`, which now needs to be a path pattern opposed to Ant path before. The paths must be specified relative to any servlet path prefix (meaning you should exclude the context path and any servlet path prefix in stating your pattern).
- There might be more changes that affect your application. Refer to the official release notes mentioned above if you encounter any issues.

[CMS-27313]

5.11 Upgrade to 2406.1.4

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.

5.11.1 CoreMedia Content Application Engine

Configured limit for part count in multipart/form-data requests

A limit of 15 parts for multipart/form-data requests has been configured for the CAE.

Tomcat introduced a new `maxPartCount` limit with a default of 10 in oder to fix CVE-2025-48988. With the latest Spring Boot versions, a new configuration property was introduced to customize the limit. As some of the CAE implementations require a slightly higher part count, that limit has been increased to 15 in the CAE's application properties:

```
server.tomcat.max-part-count=15
```

Please check Your project's customizations if that limit requires further increment. This might e.g. be the case for HTML forms with many input fields.

See also:

- Fixed Vulnerabilities in Apache Tomcat 10.1.42
- Apache Tomcat 10 Changelog
- Spring Boot releases

[CMS-28098]

5.12 Upgrade to 2406.1.3

Release 2406.1.3 requires no upgrade steps.

5.13 Upgrade to 2406.1.2

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.

5.13.1 CoreMedia Studio Client

Upgraded @jangaroo/ext-ts to 2.1.0

@jangaroo/ext-ts was upgraded to 2.1.0. This fixes problems with incorrectly typed component event signatures and also allows using the aforementioned package in a typescript project with strict mode without running into unexpected errors.

The minimum @jangaroo/ext-ts version of all studio-client packages was changed. Please also do this in the package.json of your custom packages using @jangaroo/ext-ts:

Old:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.0.0"
  },
  ...
```

New:

```
{
  ...
  "dependencies": {
    "@jangaroo/ext-ts": "^2.1.0"
  },
  ...
```

Upgrading the dependencies might reveal new type errors which then need to be fixed.

[CMS-27671]

5.13.2 CoreMedia Studio Server

Patch to Fix XLIFF Download in CoreMedia Studio

If you are downloading XLIFF in CoreMedia Studio, you may have experienced (since CMCC v10.2307.1), that the feature to add nested Struct properties configured in bean `translateXliffTranslatableExpressions` did not work anymore, thus, properties like `CMLinkable.localSettings.callToActionCustomText` were not added to the resulting XLIFF export.

The corresponding required configuration was wrongly hidden in `StudioIn MemoryAutoConfiguration`.

This patch will remove the `@ConditionalOnProperty` annotation from `Studi oInMemoryAutoConfiguration`, so that the required configuration for `translateXliffTranslatableExpressions` is now also available again in CoreMedia Studio.

Upgrade Notes

If you have adapted `translateXliffTranslatableExpressions`, you may need to review the customized bean in `StudioInMemoryAutoConfigur ation`, if it matches your needs. If you already set up a parallel unconditional configuration to work around this issue, you may just keep the `StudioInMemoryAuto Configuration` with its `@ConditionalOnProperty` annotation.

Ensure that configurations in CoreMedia Studio and in `BlueprintWork flowServerAutoConfiguration` are aligned.

[CMS-27666]

5.13.3 Miscellaneous

Moved upcoming KIO Backend Images to container-registry.coremedia.com

Future docker images will be available on `container-registry.core media.com`:

```
docker   login   container-registry.coremedia.com  docker
pull    container-registry.coremedia.com/coremedia/kio-
editorial-backend:latest
```

[CMS-27514]

5.14 Upgrade to 2406.1.1

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.

5.14.1 CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://free-marker.apache.org/docs/api/freemarker/template/Configuration.html and https://free-marker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

5.14.2 CoreMedia Studio Client

CoreMedia CKEditor5 Plugins updated to Version 23.0.0

This Update comes with a minor breaking change: Empty xlink attributes will no longer be stripped from the CKEditor Rich Text.

[CMS-27377]

RichTextPropertyFields is now capable of handling StructSubBeans

The RichTextPropertyField did not work with a StructSubBean as the bindTo value. This issue is now fixed.

[CMS-25815]

5.14.3 Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Document-ation.

[CMS-27141]

5.15 Upgrade to 2406.1.0

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.

5.15.1 CoreMedia Core

Updated to Spring Boot 3.4 and Spring Framework 6.2

The project has been updated to:

Spring Boot to 3.4.0 - see also Spring Boot 3. Release Notes

Spring Framework to 6.2.0 - see also Upgrading to Spring Framework 6.x

This update includes many further 3rd library updates, which are given in a separate release note. This release note is marked as a breaking change because it may require work to fix project code (blueprint customizations) to adjust to the following (or further) changes:

- URL Parsing
- Bean Overriding in Tests

Also, some plugins or extensions might break and have to be updated (e.g. CoreMedia Salesforce Marketing Cloud extension).

In many cases this update will not be breaking at all.

[CMS-25319]

5.15.2 Miscellaneous

Changed UserProvider Setup Policy

If a UserProvider fails to setup, the contentserver used to run nevertheless, which led to accidental deactivation of users. Now, the contentserver does not go online any longer if a UserProvider fails to setup.

There is a flag `cap.server.userproviders[n].mandatory` (default: `true`), which you can set to `false` in order to achieve backward compatibility. However, we do not actually see a usecase for the old behaviour, and we recommend to leave the flag at its default.

[CMS-25871]

CKEditor 5 Version Update

CKEditor 5 has been updated to 43.3.1. Find details below:

- **New Version:** 43.3.1

- **Reason:** Module structure changed: Using unified package ckeditor5.

- Migration:
  - If any imports like `"@ckeditor/ckeditor5-*"` are used, migration efforts are necessary, as only imports from "ckeditor5" are allowed
    - all other imports have to be replaced by imports from "ckeditor5"
    - or, if imports are not available, utilize workarounds like alias configurations for webpack
- Migration Hint:
  - Due to inconsistent package exports in some CKEditor5 plugins, you might be forced to create a patch and add a default export to the `package.json` of the plugin package. Please see the PNPM patch documentation to learn about how to patch packages or the CoreMedia CKEditor5 plugins workspace's `package.json` to see how the patch is applied.
- **Release Notes:** [Migrating to new installation methods | CKEditor5 documentation|https://ckeditor.com/docs/ckeditor5/43.3.1/updating/nim-migration/migration-to-new-installation-methods.html]

[CMS-25371]

5.16 Upgrade to 2406.0.5

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.

5.16.1 CoreMedia Content Application Engine

Freemarker: make class resolver configurable

The configuration of Freemarker's new_builtin_class_resolver is now by default `allows_nothing` instead of `unrestricted` and configurable by setting the property `freemarker.new_builtin_class_resolver` to either `unrestricted`, `safer` or `allows_nothing` for security reasons. See https://freemarker.apache.org/docs/api/freemarker/template/Configuration.html and https://freemarker.apache.org/docs/app_faq.html for more information.

Note that this fix was applied for security reasons and is only breaking for projects using Freemarker templates with java code execution.

[CMS-27252]

5.16.2 Miscellaneous

Removed Support for Filter Expressions in Log Configurations

Class ch.qos.logback.classic.boolex.JaninoEventEvaluator has been removed from ch.quos.logback:logback-classic with version 1.5.13 without a replacement. To migrate existing configurations, please follow the steps described in Logback's Online Documentation.

[CMS-27141]

5.17 Upgrade to 2406.0.4

Release 2406.0.4 requires no upgrade steps.

5.18 Upgrade to 2406.0.3

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.

5.18.1 CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

The limit was added in Blueprint class `com.coremedia.blueprint.feeder.cae.assets.AssetDocumentBlobFeedablePopulator` and its configuration `apps/cae-feeder/modules/extensions/am/am-caefeeder-component/src/main/resources/META-INF/coremedia/am-caefeeder.xml`.

[CMS-24694]

5.18.2 Miscellaneous

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects

which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

5.19 Upgrade to 2406.0.2

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.

5.19.1 CoreMedia Core

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow instructions in *Importer Manual*, section 3.4 *Deployment and Operation of an Importer in Docker*, to learn how to set up a Docker-based importer.

[CMS-15884]

5.19.2 CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

5.19.3 Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

However, this change introduced performance issues on some databases so that we reverted the change and the queries now work as before and *do not return the folder itself* except for the special case of the root folder.

The documentation has been adjusted accordingly.

[CMS-25362]

5.20 Upgrade to 2406.0.1

Release 2406.0.1 requires no upgrade steps.

5.21 Upgrade to 2406.0.0

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.

5.21.1 CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Solr 9.6.1 includes an update of Lucene, and indices written by the new version may become unreadable for previous Solr versions. You should make a backup of Solr indices before the update to be able to revert the update in case of unexpected problems. To avoid errors with Solr replication, followers should be updated at the same time or before leaders, or Solr replication should be stopped during upgrade, for example by disconnecting Solr followers from the Solr leader.

See https://solr.apache.org/docs/9_6_1/changes/Changes.html for a list of changes in Solr.

[CMS-24165]

5.21.2 CoreMedia Content Application Engine

Reworked CAE security configuration API

Reworked CAE security configuration API. Turned `com.coremedia.cae.security.CaeHttpSecurityConfigurer` into an abstract class and removed the former `caeHttpSecurityConfigurer` bean of type `com.coremedia.cae.security.CaeHttpSecurityConfigurer`. The aspects

formerly configured by that bean are now configured along with the `securityFil terChain` bean.

[CMS-24585]

5.21.3 CoreMedia Studio Client

Third-Party Update: pnpm to version 9

All packages in frontend workspace and in studio-client require at least pnpm 9.3.0. Please take note of the list of changes here https://github.com/pnpm/pnpm/re-leases/tag/v9.0.0

In order to upgrade pnpm to 9.x use the following command:

```
npm install -g pnpm@9
```

This update is called "breaking", because the version and format of the `pnpm-lock.yaml` has changed. The studio-client also needs the pnpm config `link-workspace-packages=true` in the `.npmrc`. This change is set in the blueprint workspace. No further change is needed.

[CMS-25106]

Overhaul of WorkflowValidation Settings

Access to `/Settings/Options/Settings/WorkflowValidation` had some issues, that we fixed. Changes can be summarized as:

- Rights Issue: If editors did not have rights on settings documents within `/Set tings/Options/Settings`, they experienced, for example, the workflow validation to never end loading when trying to start a workflow. This has been fixed.
- Publication Limits: Limits for publication validation could not be adapted as configuration within `WorkflowValidation` settings, as it caused an error. This has been fixed.
- Documentation: Documentation for `WorkflowValidation` settings has been straightened and missing parts got added. Corresponding updates have been applied to the Studio User manuals as well as to the Studio Developer Manual.
- German Localization: If limits got adjusted editors may have experienced warnings about limits reached within the Start Workflow Window containing badly formatted

numbers or even "NaN" (Not a number). This has been fixed, the localization got aligned with the English localization.

- **Disable Validation:** The option to disable the validation completely was inoperable. This has been fixed. The corresponding setting moved from `/Settings/Options/Settings/WorkflowValidationSettings` to `/Settings/Options/Settings/WorkflowValidation`, so that all validation settings are at a central place now. Note, though, that disabling validation should only be applied in exceptional cases. More details to be found in the manuals.

As part of addressing these issues, the former configuration structure had to be updated from:

```
{
  "limits": {
    "translation": {
      "maxDepthToCompleteChangeSet": null, // type: integer
      "limitForDependentContentItems": null, // type: integer
    },
    "publication": {
      "maxDepthToCompleteChangeSet": null,  // type: integer
    },
  },
}
```

to a new structure:

```
{
  "disabled": null, // type: boolean, not part of Blueprint content
  "localization": {
    "maxDepthToCompleteChangeSet": null, // type: integer
    "limitForDependentContentItems": null, // type: integer
  },
  "publication": {
    "maxDepthToCompleteChangeSet": null,  // type: integer
  },
}
```

For compatibility reasons, the old settings structure, thus, for example, `limits.translation.maxDepthToCompleteChangeSet` will still work, but the new settings, if set, take precedence.

Upgrade Steps:

It is not required to take any action on upgrade, as the previous structure of `/Settings/Options/Settings/WorkflowValidation` will still work. You may want to think about adapting it to the new structure as described above, though.

As the Blueprint Test-Data document `WorkflowValidation.xml` got updated to reflect the new structure, you may experience merge conflicts to resolve, if you happen to have adapted this content in your workspace.

(CMS-23308)

5.21.4 CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there's no more usages of that dependency.

[CMS-24909]

5.21.5 CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

The type of the value returned by these getters can now either be a `java.lang.String` or a `com.coremedia.cap.common.Blob`:

- In case of a string, the value is assumed to be a plaintext value and the respective getters of the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will simply return the string.
- In case of a blob, the value is expected to be an encrypted secret, and the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will decrypt it and then return the decrypted plaintext string when calling the same getter.
- Other types are not supported.

Please note: To allow encryption and decryption of secrets in the Elastic Social Credentials document, the AWS KMS Encryption Plugin for CoreMedia CMS must be installed and properly configured.

[CMS-25260]

5.21.6 CoreMedia Workspace

Updated maven-enforcer-plugin

maven-enforcer-plugin has been updated to 3.4.1. This also required a new release of our coremedia-enforcer-rules and a slightly different configuration of the rules in pom.xml files.

See section Structure of the Workspace / Enforcer in the Blueprint Developer Manual for some more details on the enforcer rules.

(CMS-24141)

5.21.7 CoreMedia Headless Server

HeadlessServer: Update to GraphQL-Java 22.1

Along with the update of SpringBoot to V3.3, Spring-GraphQL was also updated to the bundled version 1.3. Consequently, the GraphQL-Java library was updated to the latest supported version 22.1. This update came with some breaking changes in its API, causing breaking changes in Headless Server also.

For details about the changes in GraphQL-Java, please see the original documentation at https://github.com/graphql-java/graphql-java/releases/tag/v22.1 and https://github.com/graphql-java/graphql-java/releases/tag/v22.0 .

These class were changed due to the mentioned API changes in GraphQL-Java 22.1:

- `DataFetcherMappingInstrumentation`
- `ExecutionTimeoutInstrumentation`

As long as these classes were not changed, nor `CaasConfig` was customized (where these classes are instantiated), this change might be considered **non-breaking**.

Stricter value coercion with GraphQL-Java v22.x

Please pay special attention on the breaking change in GraphQL-Java regarding "Stricter parseValue coercion: Aligning with JS reference implementation".

This means, that the previous "relaxed" handling of query parameters sent as strings where the schema required a different type, e.g. an integer, **will now fail query validation**! See the release notes for https://github.com/graphql-java/graphql-java/releases/tag/v22.0

The stricter validation made it necessary to update the invocation of persisted queries over REST also. Since HTTP query parameters are strings by default, for query parameter of persisted queries other then of type string, a type mapping and conversion is now necessary. Persisted queries are mapped via their query-id to their (REST) URI-template. By default, this takes place in the file `simple-mapping.properties` (blueprint module headless-server-base at `/resources/graphql/rest-mapping`). The format used in this file was enhanced. The old format still supported, but for more complex mappings including a type mapping for certain parameters, the mapping now consists of a JSON object, containing the URI-template and the type mappings for all necessary variables.

```
# compatible, old rest mapping: query-id = uri-template
article = /article/{id}

# enhanced, new rest mapping: query-id = JSON-Object
search = {"uriTemplate": "/search/", "limit": "integer", "offset": "integer",
 "includeSubTypes": "boolean"}
```

[CMS-24945]

Code cleanup: Removed unused SchemaParser

Class Schema `com.coremedia.caas.schema.SchemaParser` was removed from the code base. Since the introduction of Spring-GraphQL in CM12 (2404), Schema-Parser was replaced by several `TypeDefinitionConfigurer`. Consequently, the related `com.coremedia.caas.schema.InheritanceGraphQLError`, used by the SchemaParser was revoked from public API and moved to a non public package, where it is still used by the `TypeDefinitionConfigurer`.

Although this change alters public API, this change might be considered **non-breaking** for those customers who did not extend or use the mentioned classes (SchemaParser and InheritanceGraphQLError) above.

[CMS-24798]

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Since encrypted string in structs are also stored as blobs in structs, headless now also delivery encrypted values. For security reasons, the delivery of encrypted values is disabled by default. If you want to use encrypted values, one can enable the delivery by setting the **new config property** `caas.graphql.exposeSecrets=true`.

Please be aware, the one still has to decrypt those values on the client side, which also requires the correct decryption key on the client!

Due to the fix, the constructor of class `com.coremedia.caas.model.con verter.MapToNestedMapsConverter` had to be changed. `com.core media.caas.model.converter.MapToNestedMapsConverter` is instantiated as a spring bean in `CaasConfig`. If one has not changed `CaasConfig`, this change may be considered **non-breaking**. Otherwise please check your version of `CaasConfig` and eventually update the instantiation of `com.core media.caas.model.converter.MapToNestedMapsConverter`.

[CMS-24683]

Headless-Server major update to Spring-GraphQL

Headless-Server now uses Spring-GraphQL as its main Spring integration. Because of that the following libraries were removed and their APIs cannot be used anymore. They were removed because the corresponding projects are not updated or supported anymore.

```
com.graphql-java:graphql-java-spring-webmvc com.graphql-
java-kickstart:graphql-spring-boot-starter
```

If you have used some of the classes provided by these libraries in your custom code, this code will not compile anymore. Depending on what your code was doing, it might be necessary to reimplement it, using the API and principles of the newly introduced Spring-GraphQL library.

As a replacement for the removed libraries Headless-Server now uses the new Spring-GraphQL library.

```
org.springframework.graphql:spring-graphql:1.2.5
```

For further reference please see the official documentation of Spring-GraphQL at https://docs.spring.io/spring-graphql/reference/index.html

With the introduction of Spring-GraphQL, the following transitively dependent libraries were updated:

```
com.graphql-java:graphql-java:20.7          com.graphql-
java:java-dataloader:3.2.2
```

If you have based custom code on some of the classes provided by these or the removed libraries, they might not compile anymore as there were some breaking changes introduced. For details please see the original release note at https://github.com/graphql-java/graphql-java/releases and https://github.com/graphql-java/java-dataloader/releases.

Furthermore, several configuration properties have changed. Even if a deployment does not rely on potentially breaking code extension, at least all configuration properties should be checked and updated accordingly.

With the introduction of Spring-GraphQL, the developer tool GraphiQL is now not a static part of the library anymore. Instead it is delivered via the means http://unpkg.com CDN. This way, the formerly statically built-in resources are now served instead dynamically, always with the latest version.

For details about all changes, it is highly recommended to study our CM12 migration guide in depth.

(CMS-19714)

5.21.8 Miscellaneous

MariaDB Community Server: Known to Work State Discontinued

The status "Known to work" for the database MariaDB Community Server (compatible with MySQL 8) got removed from our supported environments.

For any possible alternatives, please take a look at our new supported environments or contact us.

(CMS-24975)

Removed Package com.coremedia.transform.impl from Public API

Package `com.coremedia.transform.impl` contains implementation classes only and was removed from public API. Use the interfaces of package `com.core media.transform` instead.

[CMS-24338]

Integer Properties can now be used for the creation of new content with the Ingest Service

Previously, when you tried to create a new content with Integer Properties by means of the Ingest Service, the Integer values were ignored and returned as Null values. This bug has been fixed. Integer Properties can now also be used during content creation.

If you relied on faulty behaviour, or implemented a workaround, please make sure to adapt your code accordingly.

[CMS-22570]

Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

To be able to use human-readable capacity configurations such as `1GB` in favor of `1_073_741_824` given as bytes, a bunch of properties got transformed to hold `DataSize` instead of `long` or `int` values denoting bytes, for example.

The following is a list of affected properties that benefit from this change:

- `com.coremedia.transform`
  - `com.coremedia.transform.blob-cache.size`
- `management.health`
  - `management.health.blobCacheDiskspace.threshold`
  - `management.health.transformedBlob CacheDiskspace.threshold`
- `repository`
  - `repository.blob-streaming-size-threshold`
  - `repository.blob-cache-size`
  - `repository.heap-cache-size`
  - `repository.max-cached-blob-size`
- `studio`
  - `studio.differencing.max-markup-size`
- `sql`
  - `sql.store.sgml-cache-size` (renamed from: `sql.store.sgml-cache-size-bytes`; old name still applicable)
- `workflow`
  - `workflow.blob-streaming-size-threshold`

- `workflow.blob-cache-size`
- `workflow.heap-cache-size`
- `workflow.max-cached-blob-size`

Upgrade Information

In general no additional upgrade steps should be required. Nevertheless you may experience incoming changes especially to our default `application.properties` we ship with CoreMedia Blueprint, where we changed respective properties to the human-readable form.

Properties using the old unitless format are still supported and use the same default unit as they did before.

In addition to that, some `ConfigurationProperties` that ship with CoreMedia Blueprint have been adjusted. This applies to the following classes:

- `com.coremedia.blueprint.transform.boot.autoconfigure.CoremediaTransformHealthIndicatorAutoConfiguration`
- `com.coremedia.blueprint.boot.autoconfigure.HealthIndicatorAutoConfiguration`

[CMS-22469]

5.22 Upgrade to 2404.6

Release 2404.6 requires no upgrade steps.

5.23 Upgrade to 2404.5

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.

5.23.1 CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanPropertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

The limit was added in Blueprint class `com.coremedia.blueprint.feeder.cae.assets.AssetDocumentBlobFeedablePopulator` and its configuration `apps/cae-feeder/modules/extensions/am/am-caefeeder-component/src/main/resources/META-INF/coremedia/am-caefeeder.xml`.

[CMS-24694]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow instructions in *Importer Manual*, section 3.4 *Deployment and Operation of an Importer in Docker*, to learn how to set up a Docker-based importer.

[CMS-15884]

5.23.2 CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecom-merce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

5.23.3 Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

However, this change introduced performance issues on some databases so that we reverted the change and the queries now work as before and *do not return the folder itself* except for the special case of the root folder.

The documentation has been adjusted accordingly.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects

which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

5.24 Upgrade to 2404.4

Release 2404.4 requires no upgrade steps.

5.25 Upgrade to 2404.3

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.

5.25.1 CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Solr 9.6.1 includes an update of Lucene, and indices written by the new version may become unreadable for previous Solr versions. You should make a backup of Solr indices before the update to be able to revert the update in case of unexpected problems. To avoid errors with Solr replication, followers should be updated at the same time or before leaders, or Solr replication should be stopped during upgrade, for example by disconnecting Solr followers from the Solr leader.

See https://solr.apache.org/docs/9_6_1/changes/Changes.html for a list of changes in Solr.

[CMS-24165]

5.25.2 CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there're no more usages of that dependency.

[CMS-24909]

5.25.3 CoreMedia Elastic Social

Changed return types in ElasticSocialSettings to allow encryption and decryption of secrets

To allow that the secret settings in the Elastic Social Credentials document can be stored as encrypted secrets instead of only plaintext strings, the return types of the respective getters in the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialSettings had to be changed to `java.lang.Object`.

The type of the value returned by these getters can now either be a `java.lang.String` or a `com.coremedia.cap.common.Blob`:

- In case of a string, the value is assumed to be a plaintext value and the respective getters of the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will simply return the string.
- In case of a blob, the value is expected to be an encrypted secret, and the com.coremedia.blueprint.base.elastic.social.configuration.ElasticSocialConfiguration will decrypt it and then return the decrypted plaintext string when calling the same getter.
- Other types are not supported.

Please note: To allow encryption and decryption of secrets in the Elastic Social Credentials document, the AWS KMS Encryption Plugin for CoreMedia CMS must be installed and properly configured.

(CMS-25260)

5.25.4 CoreMedia Headless Server

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Since encrypted string in structs are also stored as blobs in structs, headless now also delivery encrypted values. For security reasons, the delivery of encrypted values is dis-

abled by default. If you want to use encrypted values, one can enable the delivery by setting the **new config property** `caas.graphql.exposeSecrets=true`.

Please be aware, the one still has to decrypt those values on the client side, which also requires the correct decryption key on the client!

Due to the fix, the constructor of class `com.coremedia.caas.model.con verter.MapToNestedMapsConverter` had to be changed. `com.core media.caas.model.converter.MapToNestedMapsConverter` is instantiated as a spring bean in `CaasConfig`. If one has not changed `CaasConfig`, this change may be considered **non-breaking**. Otherwise please check your version of `CaasConfig` and eventually update the instantiation of `com.core media.caas.model.converter.MapToNestedMapsConverter`.

[CMS-24683]

5.26 Upgrade to 2404.2

Release 2404.2 requires no upgrade steps.

5.27 Upgrade to 2404.1

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.

5.27.1 CoreMedia Core

Support for Blobs Larger Than 2GB

The CMS now supports blobs larger than 2GB (henceforth called "*huge blobs*") on external media stores. Huge blobs can be up- and downloaded via UAPI clients, serverimport/serverexport, and Studio. They can also be delivered via CAE and Headless Server.

Huge blobs are only supported if external media stores are used (e.g., *FileStore*, *S3Store*, *Blob Service*). See section *3.3 Configuring Blob Storage* in *Content Server Manual*. For *Blob Service*, refer to https://documentation.coremedia.com/discover/services/image-transformation/. Huge blobs cannot be stored in the database.

Internal tests with a blob of 5GB have been performed to validate functionality. Depending on network performance and general system stability, larger blobs may be possible. Please keep in mind that AWS S3 and file systems have upper file size limits which must be adhered to. For *S3Store* and *Blob Service*, 5GB currently is the upper limit. Also have an eye on your service quotas when using S3 or a file system.

"Ranged requests" for large blobs are supported, e.g., to stream video data. Image transformation on huge blobs is not supported as this may easily exceed any reasonably available Java process memory.

API Changes

Unfortunately, supporting huge blobs implies that we cannot represent blobs' sizes as `int` values any longer, but had to switch to `long`. This required some changes which affect the public API. You must at least recompile your project Blueprint workspace against the new CMCC version. Depending on your customizations, you may have to adjust some source code too.

To access a blob's size, a new UAPI method `com.coremedia.cap.common.Blob#getSizeLong()` has been introduced which returns the blob size as a `long` value. The still existing method `Blob#getSize():int` has been deprecated and will be removed in a future release. Please be aware that this deprecated

method will fail with an exception when called for a blob of size 2GB and beyond since an `int` value cannot represent huge numbers (it's limited to `java.lang.Integer#MAX_VALUE`). To be safe, only the new method `Blob#getSizeLong()}}`should be used in UAPI clients and Freemarker templates. All usages of `{{Blob#getSize()` have been replaced by `Blob#getSizeLong()` in the Blueprint workspace. For backward compatibility, `Blob#getSizeLong()` is a default method that delegates to `Blob#getSize()`. Thus, existing custom implementations of the `Blob` interface will still work until we finally delete `Blob#getSize()`.

The Headless Server API class `com.coremedia.caas.model.adapter.ContentBlobAdapter` also has a method `getSize()`, which has been deprecated in favor of a new method `getSizeLong()`, just like the UAPI `Blob` interface. This change has also been done in he GraphQL schema where a new field `sizeLong` was added to the `Blob` interface. The old field `size` is now deprecated.

Furthermore, avoid the use of method `Blob#asBytes():bytes[]` if huge blobs are to be processed, as a Java array can only hold up to `java.lang.Integer#MAX_VALUE` bytes and thus cannot be used for huge blobs. Calling this method on a huge blob will result in an exception being thrown. Ideally, all blobs should be transferred via streams.

The interface `com.coremedia.cap.common.BlobService` features various blob creation methods which expect a `size` argument. The type of the `size` argument has been changed from `int` to `long` for all those methods.

In the interface `com.coremedia.cap.common.CapConnectionManager` the methods `setMaxCachedBlobSize` and `getMaxCachedBlobSize` have been changed from `int` to `long`.

Database Changes

To represent huge blob sizes, the database schema has been adjusted. Upon first startup, the database schema will be migrated automatically. As this process, depending on the size of the existing Blob data, may take a long time, it is recommended to record migration times during a test run on a copy of productive data to estimate downtimes during production roll-out.

Additionally keep in mind that a CMS server during such a migration is not available for normal operation and take the following precautions:

- Increase the CMS server's property cap.server.maximum-startup-delay to a value that is higher than the expected migration time. This will prevent the Spring-Boot component of the server to switch to the 'running' state and, if using the default Blueprint compose setup, prevent dependent containers to start before the migration is completed.
- Disable or adjust health check probes to prevent the server from being marked as "unhealthy" and automatically restarted while the migration is still running. As many

databases cannot execute multiple DDL statements in a transactional way, this could lead to an inconsistent upgrade state of the schema.

- Check connection settings on your databases/JDBC database connections. As single DDL statements run for a very long time without returning data, there must not be any configured socket timeouts for reading data, or they must be set large enough to cover the expected migration time.

Studio Configuration

The `UploadSettings` have been extended with a new property `maxFileSizeMB }}`to allow for the configuration of upload limits beyond 2GB. When present, this settings overrides the old value `{{maxFileSize`. The default value of 64MB is unchanged.

[CMS-24179]

TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans

Spring configuration class `com.coremedia.cap.transform.Transfor mImageServiceConfiguration` of module `com.coremedia.cms:cap-transform` no longer imports `com.coremedia.cap.transform.Blob TransformerConfiguration`. This makes it possible to create application contexts that provide access to the `transformImageService` bean without actually activating all the beans necessary for blob transformation. Such application contexts are the ones of feeder applications, for example. Class `com.core media.cap.transform.BlobTransformerAutoConfiguration` has been deleted along with this change. The Spring XML configuration resources `frame work/spring/mediatransform.xml` of Blueprint shared/middle module `image-transformation` and `com/coremedia/cap/transform/trans form-services.xml` of module `com.coremedia.cms:cap-transform` have also been removed. Use `TransformImageServiceConfiguration` instead.

[CMS-24130]

Default of publisher.autoextend.latest-approved-version has been changed to true

Automatic extension of publication sets will now by default use the latest approved version of referenced content items instead of their earliest approved version.

Note that by default still only directly referenced unpublished content items are considered.

For further details see documentation of `publisher.autoextend.latest-approved-version` and `publisher.autoextend.update-linked-documents`.

[CMS-24098]

Update of MongoDB driver to 4.11.1

The thirdparty dependencies org.mongodb:mongodb-driver-legacy, org.mongodb:mongodb-driver-core and org.mongodb:bson have been updated from version 4.8.2 to 4.11.1. This is marked as a breaking change, because custom implementations can potentially use changed API of the MongoDB driver.

[CMS-23184]

MongoDB update to version 7.0.5

MongoDB has been updated to version 7.0.5 for the Docker Deployment. Note that an upgrade is only possible from a 6.0.x version. An upgrade from an earlier version needs to be done successively. Please refer to the official MongoDB documentation on how to upgrade: https://www.mongodb.com/docs/manual/release-notes/7.0-upgrade-standalone/ The compatibility changes are described here: https://www.mongodb.com/docs/manual/release-notes/7.0-compatibility/

[CMS-23183]

5.27.2 CoreMedia Content Application Engine

Reworked CAE security configuration API

Reworked CAE security configuration API. Turned `com.coremedia.cae.security.CaeHttpSecurityConfigurer` into an abstract class and removed the former `caeHttpSecurityConfigurer` bean of type `com.coremedia.cae.security.CaeHttpSecurityConfigurer`. The aspects

formerly configured by that bean are now configured along with the `securityFil` `terChain` bean.

[CMS-24585]

Remove RequestRejectedExceptionFilter

The `com.coremedia.blueprint.cae.filter.RequestRejectedEx` `ceptionFilter` has been removed. It was a workaround for the issue RequestRejectedException should be 400 by default #7568 that has been fixed with Spring 6.

[CMS-24219]

Remove Commerce Context Interceptors

Class `com.coremedia.blueprint.livecontext.ecommerce.fil` `ter.CommerceConnectionFilter` now incorporates the concerns that were previously scattered amongst the commerce context interceptors. It resolves the requested site, performs a commerce connection lookup and then initializes the commerce contexts. The filter uses site lookup functions with signature `Function<Servle` `tRequest, Optional<Site>>` to resolve the requested site and provides the interface `com.coremedia.blueprint.livecontext.ecommerce.fil` `ter.CommerceContextsInitializer` for initialization or post processing of commerce contexts. The former commerce context interceptor code concerned with initialization of store context and user context has been moved to `com.core` `media.livecontext.handler.FragmentCommerceContextsIni` `tializer`. The following classes have been removed:

- `com.coremedia.blueprint.ecommerce.cae.config.ECommer` `ceCaeConfiguration`
- `com.coremedia.blueprint.ecommerce.cae.AbstractCommer` `ceContextInterceptor`
- `com.coremedia.blueprint.ecommerce.cae.WebCommerceCon` `textInterceptor`
- `com.coremedia.livecontext.config.LcCaeInterceptorsCon` `figuration`
- `com.coremedia.livecontext.handler.FragmentCommerceCon` `textInterceptor`
- `com.coremedia.livecontext.handler.RestCommerceContex` `tInterceptor`
- `com.coremedia.livecontext.p13n.handler.FragmentCommer` `ceP13nContextInterceptor`

- `com.coremedia.livecontext.preview.config.LcPreview CaeInterceptorsConfiguration`
- `com.coremedia.livecontext.preview.PreferredSitePreview CommerceContextInterceptor`
-
  `com.coremedia.livecontext.preview.PreviewCommerceContextInterceptor`
  The module `ec-cae-lib` was removed from the blueprint workspace.

[CMS-24213]

Transformed Blob Cache Requires Writeable Base Directory

The bean `transformedBlobCache` of type `com.coremedia.trans form.impl.TransformedBlobCache` now validates the configured base path (configuration option `com.coremedia.transform.blobCache.basePath`) and throws an exception if it finds that the base path is not a writeable directory in which it can cache and rotate temporary files holding the transformed blob data.

[CMS-24132]

Configured Content Security Policy for Live CAE

CAE HTTP security now supports configuration of the `Content-Security-Policy` response header via `cae.http-headers.csp.directives`. It has been set to a same-origin-only policy as recommended by the OWASP CSP cheat sheet. The Spring `dev` profile configures report-only mode for Live CAE and disables CSP for the Preview CAE.

Additionally, for HTTP requests to the Live CAE, the `X-XSS-Protection` response header has been disabled. Even though setting the `X-XSS-Protection` response header can protect users of older web browsers that don't yet support CSP, in some cases, XSS protection can create XSS vulnerabilities in otherwise safe websites. Therefore, it is recommended to use the `Content-Security-Policy` without allowing `unsafe-inline` scripts instead. For further information, see X-XSS-Protection in Mozilla Developer Resources and OWASP Content Security Policy Cheat Sheet.

[CMS-23644]

Changed Site Resolution of Requests

SiteFilter now matches request paths against configurable patterns to derive the requested site. This is much more efficient than the previous strategy which simply checked every path segment if it matched one of the segments of the known site root navigations. The new strategy is to take a list of patterns to check if the current request URI paths contains a site segment, then check the first path segment after the dispatcher servlet segment if it is site segment but exclude a list of known prefixes. The list of path patterns that have a site segment in it is configured via `cae.site.patterns` and the list of known non-site path prefixes is configured via `cae.site.ignore-prefix-patterns`. The former SiteFilter behavior can be restored by setting both properties to empty values. Configure `cae.site.collect-non-matching-paths=true` to collect non matching paths to support debugging your SiteFilter config. This setting is enabled in the `dev` profile for your convenience.

[CMS-23583]

5.27.3 CoreMedia Studio Client

Changed Linter Rules

Please check the section "Changed Linter Rules" in the "Studio Client Changes" Chapter of the Upgrade Guide for CMCC12.

[CMS-24139]

CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated

CKEditor 5 has been updated to version 41.1.0 (CKEditor 5 Development Tooling to 39.6.0). CoreMedia's CKEditor 5 Plugins and the CKEditor 5 CoreMedia OEM License have been updated accordingly:

- CoreMedia CKEditor 5 Plugins: 17.0.0
- CKEditor 5 CoreMedia OEM License: 2.1.0

Along with that, we fixed some meanwhile broken references to the CKEditor 5 documentation within the Studio Developer Manual.

Upgrade Highlights – CoreMedia CKEditor 5 Plugins

- **Hardening Default Link Target Configuration:** Prior to this release, a configured function based default link target filter (to apply a default target based on a given URL) may have been called with `null` in contrast to the method signature. This has been fixed, so that the function is only called for non-empty URLs.

Notable Upgrade Highlights – CKEditor 5

This section is just about remarkable changes we observed during the upgrade. For detailed information and possibly required upgrade steps in context of custom plugins, take a look at the CKEditor 5 changelog, please.

- **Links:** For external links, you may now just paste the URL having a text selected, and the text will get the link applied. Side Note: This feature also automatically triggers the possible default target selection provided by CoreMedia CKEditor 5 Plugins based on your configuration.
- **Paste from Office:** When General HTML Support is activated (transitively through CoreMedia Rich Text Support), class attribute values like `MsoNormal` were kept during paste. CKEditor 5 now actively removes such artificial artifacts.
- **AI Assistant Capability:** While not enabled in CoreMedia Blueprint, you may be interested to know, that with supporting CKEditor 5 41.0.0 within CoreMedia Studio, it is the first supported release, that comes with AI features.
- **Integration Changes:** CKEditor 5 now ships as ECMAScript modules, which requires additional upgrade steps, where the most important one is upgrading to TypeScript 5. Find more details below.
- **API Changes:**
  - **CKEditor 5 UI:** While there was no need to apply adaptations in CoreMedia Blueprint, we observed typing adjustments in context of the CKEditor 5 UI. This is due to some progress towards providing a so-called dialog system.
  - **Document Lists:** They are now the "standard list API". As a result the prefix `Document*`, like `DocumentList` is deprecated and got replaced by `List`, while the old feature got prefixed with `Legacy*`.

Upgrade Information

The following changes ship with `ckeditorDefault.ts` that may require to adapt your customizations to incoming changes, as well as you may need to adapt your custom CKEditor 5 flavors:

- **Recommended (due to deprecation):** Rename import from `@ckeditor/ckeditor5-list`:
  - Was: `DocumentList`
  - Is: `List`
- **CSS Adaptation:** Rename `- ck-z-modal` to `-ck-z-panel` in `custom.css` (CKEditor 5 Theme).

- **Required – Opt-In to previous Find & Replace UI:** Add a new configuration: `config.findAndReplace.uiType` and set it to `dropdown`. While the new behavior (based on a so-called "dialog-system") has many benefits, we experienced severe issues within the Studio integration regarding context management (dialog stays open, even if switching tabs). Thus, for now, our recommendation is to ensure to opt in to the old behavior.

Note, that this update requires TypeScript 5 and Jangaroo Tooling in version 2. If you see conflicts between "CommonJS" and "EcmaScript Modules" while building, you may have missed the required update.

[CMS-24095]

Third-Party Update: Upgraded Node.js to 20 LTS

Since October 2023 the new LTS of Node.js is v20. All workspaces were adjusted accordingly. Also pnpm has been updated to 8.15.3.

[CMS-23769]

Moved Classes

The following classes/modules have been moved:

- *RegisterNotificationsStudioPlugin.ts* has been moved from module *notification-studio-client* to *bpbase-notification-studio-plugin* module.
- All job related components have been moved from *editor-components* to the new module @*coremedia/studio-client.ext.job-components*.
- The module @*coremedia/studio-client.main.notification-studio-client* has been moved to the new module @*coremedia/studio-client.ext.notification-components*.

[CMS-23579]

Upgraded TypeScript to 5.3.3

The TypeScript used in studio-client was upgraded to 5.3.3.

Please check the corresponding release notes for potential changes: https://devblogs.microsoft.com/typescript/announcing-typescript-5-0/

All packages now utilize the newly introduced moduleResolution "Bundler" basically because of the reasons described in this link: https://www.typescriptlang.org/docs/handbook/release-notes/typescript-5-0.html#--moduleresolution-bundler

This enables utilizing pure ES6 module packages inside the studio-client as well without the TypeScript compiler complaining about invalid usages.

Please be aware that all packages utilizing jangaroo (which was updated as well - see corresponding section) will automatically switch to the new moduleResolution which is reflected in the automatically generated tsconfig.json.

[CMS-23319]

Removed deprecated richTextPropertyFieldRegistry

Removed deprecated `richTextPropertyFieldRegistry`

- The registry was used to switch between different CKEditor versions in the Studio. Since CKEditor 4 is not supported anymore, this registry is now removed.

Removed `ckeditor4-components` package

- CKEditor 4 is not supported anymore in CoreMedia Studio. Therefore, all corresponding CKEditor 4 components are removed. Please use the provided components for CKEditor 5 instead, such as `RichTextPropertyField` or `CKEditor5RichTextArea`.

[CMS-22181]

5.27.4 CoreMedia Frontend Workspace

Removed deprecated CSS/JS property "ieExpression"

The doctype property `ieExpression` of `CMAbstractCode` has been deprecated in release 2110.1. All usages in Studio, CAE and Frontend are removed now. To avoid migration issues, the doctype property still exists in the CoreMedia content type model.

[CMS-20144]

Thirdparty Upgrade: Upgraded Webpack to 5.90.3

Webpack was upgraded to 5.90.3. This also includes upgrades to all associates loader and plugin packages in theme-utils as well as node-sass. This change was necessary to be able to upgrade to NodeJS 20 LTS.

Update steps:

Please run `pnpm remove -r cross-env` and adjust the following entry of your themes' `package.json` files from:

```
"scripts": {
  ...
  "build": "cross-env NODE_OPTIONS=--openssl-legacy-provider webpack",
  ...
}
```

back to

```
"scripts": {
  ...
  "build": "webpack",
  ...
}
```

Please also make sure that the "webpack" entry is adjusted to "^5.90.3".

If you have made any customizations to the `webpack.config.js` of your themes, you might need to make further adjustments like adjusting configuration or upgrading your used webpack loaders and plugins for compatibility. The offical upgrade guide can be found here: https://webpack.js.org/migrate/5/

[CMS-17725]

5.27.5 CoreMedia Headless Server

Headless-Server Missing CORS configuration now disabled CORS protection

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to Headless-Server configuration properties.

[CMS-24249]

Headless-Server major update to Spring-GraphQL

Headless-Server now uses Spring-GraphQL as its main Spring integration. Because of that the following libraries were removed and their APIs cannot be used anymore. They were removed because the corresponding projects are not updated or supported anymore.

```
com.graphql-java:graphql-java-spring-webmvc com.graphql-
java-kickstart:graphql-spring-boot-starter
```

If you have used some of the classes provided by these libraries in your custom code, this code will not compile anymore. Depending on what your code was doing, it might be necessary to reimplement it, using the API and principles of the newly introduced Spring-GraphQL library.

As a replacement for the removed libraries Headless-Server now uses the new Spring-GraphQL library.

```
org.springframework.graphql:spring-graphql:1.2.5
```

For further reference please see the official documentation of Spring-GraphQL at https://docs.spring.io/spring-graphql/reference/index.html

With the introduction of Spring-GraphQL, the following transitively dependent libraries were updated:

```
com.graphql-java:graphql-java:20.7          com.graphql-
java:java-dataloader:3.2.2
```

If you have based custom code on some of the classes provided by these or the removed libraries, they might not compile anymore as there were some breaking changes introduced. For details please see the original release note at https://github.com/graphql-java/graphql-java/releases and https://github.com/graphql-java/java-dataloader/releases.

Furthermore, several configuration properties have changed. Even if a deployment does not rely on potentially breaking code extension, at least all configuration properties should be checked and updated accordingly.

With the introduction of Spring-GraphQL, the developer tool GraphiQL is now not a static part of the library anymore. Instead it is delivered via the means http://unpkg.com CDN.

This way, the formerly statically built-in resources are now served instead dynamically, always with the latest version.

For details about all changes, it is highly recommended to study our CM12 migration guide in depth.

[CMS-19714]

5.27.6 Miscellaneous

Removed Package com.coremedia.transform.impl from Public API

Package `com.coremedia.transform.impl` contains implementation classes only and was removed from public API. Use the interfaces of package `com.core media.transform` instead.

[CMS-24338]

Rename service "mysql" to "db" in global/deployment/docker

To prepare the workspace for usage with different databases, the service "mysql" has been renamed to "db" in `global/deployment/docker`. The container name is still "mysql".

[CMS-24111]

Removed Sencha CMD

Sencha CMD is no longer needed to build the studio-client. This means Java 11 and Sencha CMD no longer need to be installed. Because this is one less step during the studio-client build the build is now also faster.

For this some (third-party) packages have been updated to new (major) versions. Make sure to do the same as well for every additional package in the studio-client workspace:

- @coremedia/sencha-* to "^1.1.0"

- @jangaroo/ext-ts to "^2.0.0"
- remaining @jangaroo/* to "^3.0.0"
- typescript to "^5.3.3"
- eslint to "^8.56.0"
- rimraf to "^5.0.5"

The Dockerfile in apps/studio-client/Dockerfile.tooling no longer has a "sencha-layer" and the corresponding installation for Java11 and Sencha CMD have been removed. Please also mind the dependency adjustments in the "npm-tooling-base" layer.

[CMS-23501]

Using DataSize in ConfigurationProperties for Human-readable Capacity Specifications

To be able to use human-readable capacity configurations such as `1GB` in favor of `1_073_741_824` given as bytes, a bunch of properties got transformed to hold `DataSize` instead of `long` or `int` values denoting bytes, for example.

The following is a list of affected properties that benefit from this change:

- `com.coremedia.transform`
  - `com.coremedia.transform.blob-cache.size`
- `management.health`
  - `management.health.blobCacheDiskspace.threshold`
  - `management.health.transformedBlob CacheDiskspace.threshold`
- `repository`
  - `repository.blob-streaming-size-threshold`
  - `repository.blob-cache-size`
  - `repository.heap-cache-size`
  - `repository.max-cached-blob-size`
- `studio`
  - `studio.differencing.max-markup-size`
- `sql`
  - `sql.store.sgml-cache-size` [renamed from: `sql.store.sgml-cache-size-bytes`; old name still applicable]
- `workflow`
  - `workflow.blob-streaming-size-threshold`
  - `workflow.blob-cache-size`
  - `workflow.heap-cache-size`
  - `workflow.max-cached-blob-size`

Upgrade Information

In general no additional upgrade steps should be required. Nevertheless you may experience incoming changes especially to our default `application.properties` we ship with CoreMedia Blueprint, where we changed respective properties to the human-readable form.

Properties using the old unitless format are still supported and use the same default unit as they did before.

In addition to that, some `ConfigurationProperties` that ship with CoreMedia Blueprint have been adjusted. This applies to the following classes:

- `com.coremedia.blueprint.transform.boot.autoconfigure.CoremediaTransformHealthIndicatorAutoConfiguration`
- `com.coremedia.blueprint.boot.autoconfigure.HealthIndicatorAutoConfiguration`

[CMS-22469]

5.28 Upgrade to 2401.8

Release 2401.8 requires no upgrade steps.

5.29 Upgrade to 2401.7

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.

5.29.1 CoreMedia Core

CAE Feeder Limits Feeding of Large Binary Values in AMDocumentAsset

The *CAE Feeder* does not index binary data from AMDocumentAsset contents anymore, if the byte size is larger than the value configured in property `feeder.beanProp ertyMaxBytes`. The same configuration property was already used previously to restrict feeding of other blob values in the *CAE Feeder*, and defaults to 5 MB. This change is necessary to avoid running out of memory in case of very large binary values.

The limit was added in Blueprint class `com.coremedia.blueprint.feed er.cae.assets.AssetDocumentBlobFeedablePopulator` and its configuration `apps/cae-feeder/modules/extensions/am/am-cae feeder-component/src/main/resources/META-INF/core media/am-caefeeder.xml`.

[CMS-24694]

Starting XML Importer in a Docker Container

Examples and documentation have been added to illustrate the start of a CoreMedia XML Importer in a Docker container. As the description of starting the importer as a Tomcat webapp was defunct, it has been removed.

Follow instructions in *Importer Manual*, section 3.4 *Deployment and Operation of an Importer in Docker*, to learn how to set up a Docker-based importer.

[CMS-15884]

5.29.2 CoreMedia Commerce Hub

Changed Signature CartService#deleteCartOrderItem

Parameter productId may not be null anymore for com.coremedia.livecontext.ecommerce.order.CartService#deleteCartOrderItem. If you use this function you may simply reuse the orderItemId parameter again. Otherwise nothing needs to be done.

[CMS-24982]

5.29.3 CoreMedia Headless Server

Missing title

The dependency com.graphql-java:graphql-java was updated to version 21.5 to handle the security issue CVE-2024-40094. This change is breaking, as stricter rules apply to introspection queries. See https://github.com/graphql-java/graphql-java/releases/tag/v21.5 for details.

[CMS-25438]

5.29.4 Miscellaneous

Reverted behavioral change of BELOW folder queries in the QueryService

The documentation of the UAPI QueryService stated that a "BELOW folder" condition also matches the folder itself. As this was only true for some corner cases, the implementation had been adjusted with 2304.1 to match the documentation.

However, this change introduced performance issues on some databases so that we reverted the change and the queries now work as before and *do not return the folder itself* except for the special case of the root folder.

The documentation has been adjusted accordingly.

[CMS-25362]

Updated Spring Security

Updated Spring Security to a version higher than 6.3.1 or 6.2.5 (see dependency updates for the concrete version). In that course the beans 'unauthenticatedRequestMatcher' and 'csrfIgnoringRequestMatcher' of type `org.springframework.security.web.util.matcher.RequestMatcher` have been replaced by beans of type `List<RequestMatcher>` named 'unauthenticatedRequestMatchers' and 'csrfIgnoringRequestMatchers' respectively. This change is only breaking for projects which have customized one of these two matcher beans. These projects must now customize the new list beans instead.

[CMS-25278]

5.30 Upgrade to 2401.6

Release 2401.6 requires no upgrade steps.

5.31 Upgrade to 2401.5

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.

5.31.1 CoreMedia Core

Third-Party Update: Apache Solr 9.6.1

Apache Solr has been updated to version 9.6.1. Alongside, a new coremedia/solr-base Docker image with tag 2.3-cm-9.6.1 was released. As part of this change, Solr's transitive dependency to Jetty has been updated to version 10.0.20, which fixes security vulnerability CVE-2024-222-01.

Solr 9.6.1 includes an update of Lucene, and indices written by the new version may become unreadable for previous Solr versions. You should make a backup of Solr indices before the update to be able to revert the update in case of unexpected problems. To avoid errors with Solr replication, followers should be updated at the same time or before leaders, or Solr replication should be stopped during upgrade, for example by disconnecting Solr followers from the Solr leader.

See https://solr.apache.org/docs/9_6_1/changes/Changes.html for a list of changes in Solr.

[CMS-24165]

5.31.2 CoreMedia Studio Server

Removed dependency management for Google APIs Client Library for Java

The dependency management for `com.google.api-client:google-api-client` has been removed, because there's no more usages of that dependency.

[CMS-24909]

5.31.3 CoreMedia Headless Server

HeadlessServer: Missing support for blobs in structs fixed

HeadlessServer had a problem delivering blobs stored in structs of a linked settings document, e.g. in a page. This bug was fixed.

Since encrypted string in structs are also stored as blobs in structs, headless now also delivery encrypted values. For security reasons, the delivery of encrypted values is disabled by default. If you want to use encrypted values, one can enable the delivery by setting the **new config property** `caas.graphql.exposeSecrets=true`.

Please be aware, the one still has to decrypt those values on the client side, which also requires the correct decryption key on the client!

Due to the fix, the constructor of class `com.coremedia.caas.model.converter.MapToNestedMapsConverter` had to be changed. `com.coremedia.caas.model.converter.MapToNestedMapsConverter` is instantiated as a spring bean in `CaasConfig`. If one has not changed `CaasConfig`, this change may be considered **non-breaking**. Otherwise please check your version of `CaasConfig` and eventually update the instantiation of `com.coremedia.caas.model.converter.MapToNestedMapsConverter`.

[CMS-24683]

5.32 Upgrade to 2401.4

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.

5.32.1 CoreMedia Studio Client

Updated NodeJS Version to 18.20.1

The images provided in studio-client and frontend workspace have been updated to utilize NodeJS 18.20.1 which fixes CVE-2024-27983. However the security issue does not affect any of the workspaces.

Both Docker images are no longer using the rolling tag "18". Instead the version is pinned to "18.20.1" to guarantee reproduceable builds regardless of time.

[CMS-24704]

5.32.2 CoreMedia Headless Server

Headless-Server Missing CORS configuration now disabled CORS protection

A missing CORS configuration set allowed-origins to *. Now a missing configuration effectively disabled CORS protection, resulting in a "same origin policy only".

For customer with an existing CORS configuration, this change is considered as *non-breaking*.

All customers without a CORS configuration will encounter potential CORS restrictions eventually leading to a non working client. Please review the necessary CORS settings and add them to Headless-Server configuration properties.

[CMS-24249]

5.33 Upgrade to 2401.3

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.

5.33.1 CoreMedia Core

Update of MongoDB driver to 4.11.1

The thirdparty dependencies org.mongodb:mongodb-driver-legacy, org.mongodb:mongodb-driver-core and org.mongodb:bson have been updated from version 4.8.2 to 4.11.1. This is marked as a breaking change, because custom implementations can potentially use changed API of the MongoDB driver.

[CMS-23184]

MongoDB update to version 7.0.5

MongoDB has been updated to version 7.0.5 for the Docker Deployment. Note that an upgrade is only possible from a 6.0.x version. An upgrade from an earlier version needs to be done successively. Please refer to the official MongoDB documentation on how to upgrade: https://www.mongodb.com/docs/manual/release-notes/7.0-upgrade-standalone/ The compatibility changes are described here: https://www.mongodb.com/docs/manual/release-notes/7.0-compatibility/

[CMS-23183]

5.33.2 CoreMedia Studio Client

Third Party Upgrades for Studio-Client

Jangaroo, TypeScript and ESLint were upgraded to a new major version to support pure ESM packages within the studio-client. This upgrade was necessary in an AMP version to support the latest CKEditor 5 version which now comes as pure ESM package.

For this all package dependencies in the studio-client have been updated. Make sure to do the same as well for every additional package in the studio-client workspace:

- @jangaroo/ext-ts to "^1.1.0"
- remaining @jangaroo/* to "^2.0.0"
- typescript to "^5.3.3"
- eslint to "^8.56.0"

[CMS-24183]

CKEditor 5 and CoreMedia CKEditor 5 Plugins Updated

CKEditor 5 has been updated to version 41.1.0 (CKEditor 5 Development Tooling to 39.6.0). CoreMedia's CKEditor 5 Plugins and the CKEditor 5 CoreMedia OEM License have been updated accordingly:

- **CoreMedia CKEditor 5 Plugins:** 17.0.0
- **CKEditor 5 CoreMedia OEM License:** 2.1.0

Along with that, we fixed some meanwhile broken references to the CKEditor 5 documentation within the Studio Developer Manual.

Upgrade Highlights – CoreMedia CKEditor 5 Plugins

- **Hardening Default Link Target Configuration:** Prior to this release, a configured function based default link target filter (to apply a default target based on a given URL) may have been called with `null` in contrast to the method signature. This has been fixed, so that the function is only called for non-empty URLs.

Notable Upgrade Highlights – CKEditor 5

This section is just about remarkable changes we observed during the upgrade. For detailed information and possibly required upgrade steps in context of custom plugins, take a look at the CKEditor 5 changelog, please.

- **Links:** For external links, you may now just paste the URL having a text selected, and the text will get the link applied. Side Note: This feature also automatically triggers the possible default target selection provided by CoreMedia CKEditor 5 Plugins based on your configuration.
- **Paste from Office:** When General HTML Support is activated (transitively through CoreMedia Rich Text Support), class attribute values like `MsoNormal` were kept during paste. CKEditor 5 now actively removes such artificial artifacts.

- **AI Assistant Capability:** While not enabled in CoreMedia Blueprint, you may be interested to know, that with supporting CKEditor 5 41.0.0 within CoreMedia Studio, it is the first supported release, that comes with AI features.
- **Integration Changes:** CKEditor 5 now ships as ECMAScript modules, which requires additional upgrade steps, where the most important one is upgrading to TypeScript 5. Find more details below.
- **API Changes:**
  - **CKEditor 5 UI:** While there was no need to apply adaptations in CoreMedia Blueprint, we observed typing adjustments in context of the CKEditor 5 UI. This is due to some progress towards providing a so-called dialog system.
  - **Document Lists:** They are now the "standard list API". As a result the prefix `Document*`, like `DocumentList` is deprecated and got replaced by `List`, while the old feature got prefixed with `Legacy*`.

Upgrade Information

The following changes ship with `ckeditorDefault.ts` that may require to adapt your customizations to incoming changes, as well as you may need to adapt your custom CKEditor 5 flavors:

- **Recommended (due to deprecation):** Rename import from `@ckeditor/ckeditor5-list`:
  - Was: `DocumentList`
  - Is: `List`
- **CSS Adaptation:** Rename `- ck-z-modal` to `-ck-z-panel` in `custom.css` (CKEditor 5 Theme).
- **Required – Opt-In to previous Find & Replace UI:** Add a new configuration: `config.findAndReplace.uiType` and set it to `dropdown`. While the new behavior (based on a so-called "dialog-system") has many benefits, we experienced severe issues within the Studio integration regarding context management (dialog stays open, even if switching tabs). Thus, for now, our recommendation is to ensure to opt in to the old behavior.

Note, that this update requires TypeScript 5 and Jangaroo Tooling in version 2. If you see conflicts between "CommonJS" and "EcmaScript Modules" while building, you may have missed the required update.

(CMS-24095)

5.34 Upgrade to 2401.2

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.

5.34.1 CoreMedia Core

TransformImageServiceConfiguration no Longer Activates Blob Transformation Beans

Spring configuration class `com.coremedia.cap.transform.Transfor mImageServiceConfiguration` of module `com.coremedia.cms:cap-transform` no longer imports `com.coremedia.cap.transform.Blob TransformerConfiguration`. This makes it possible to create application contexts that provide access to the `transformImageService` bean without actually activating all the beans necessary for blob transformation. Such application contexts are the ones of feeder applications, for example. Class `com.core media.cap.transform.BlobTransformerAutoConfiguration` has been deleted along with this change. The Spring XML configuration resources `frame work/spring/mediatransform.xml` of Blueprint shared/middle module `image-transformation` and `com/coremedia/cap/transform/trans form-services.xml` of module `com.coremedia.cms:cap-transform` have also been removed. Use `TransformImageServiceConfiguration` instead.

[CMS-24130]

5.34.2 CoreMedia Content Application Engine

Transformed Blob Cache Requires Writeable Base Directory

The bean `transformedBlobCache` of type `com.coremedia.transform.impl.TransformedBlobCache` now validates the configured base path (configuration option `com.coremedia.transform.blobCache.basePath`) and throws an exception if it finds that the base path is not a writeable directory in which it can cache and rotate temporary files holding the transformed blob data.

[CMS-24132]

5.35 Upgrade to 2401.1

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.

5.35.1 CoreMedia Core

Removed Deprecated Workflow Java API

The following deprecated classes and methods have been removed from the Workflow Server API and cannot be used in custom code or workflow definitions anymore:

- Class `com.coremedia.workflow.common.util.AbstractExternalManager`
- Class `com.coremedia.workflow.common.util.LongActionRegistry`
- Class `com.coremedia.workflow.common.util.RegisteringLongAction`
- Class `com.coremedia.workflow.common.util.SpringCollectiveLongAction`
- Class `com.coremedia.workflow.common.util.SpringDelegateAction`
- Class `com.coremedia.workflow.common.util.SpringDelegateLongAction`
- Method `com.coremedia.workflow.WfServer#hasManager`
- Method `com.coremedia.workflow.WfServer#getManager`
- Method `com.coremedia.workflow.common.actions.Log#setFatal`
- Method `com.coremedia.workflow.common.util.WithSpringContext#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareAction#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareExpression#getBean`
- Method `com.coremedia.workflow.common.util.SpringAwareLongAction#getBean`

Hints on how to replace these classes and methods are documented as deprecation note in the Javadoc of CMCC 11. In general, it's recommended to use Unified API interfaces

to implement custom managers, and to use SpringAware*Action classes to implement actions that interact with the Spring context.

If you have used some of these classes in custom workflow definitions, then you should make sure to finish all running workflow instances that were started from these definitions before upgrading. Old workflow definitions that were using these classes will not be usable anymore, and may have to be destroyed using `cm workflowconverter -X`.

[CMS-23947]

Replacement of Deprecated Workflow Server Log Facility

The location of loggers for certain classes changed. The following classes are now using a logger in their own class instead of the logger of the `com.coremedia.workflow.impl.server.Server` class:

- com.coremedia.cotopaxi.wfserver.ServerRightsPolicyMarshallerResolver
- classes extending com.coremedia.workflow.impl.server.AbstractProcessSignalHandler
- classes extending com.coremedia.workflow.impl.server.AbstractTaskSignalHandler
- com.coremedia.workflow.impl.server.Condition
- com.coremedia.workflow.impl.server.ContentManager
- com.coremedia.workflow.impl.server.ErrorLog
- com.coremedia.workflow.impl.server.InternalSession
- com.coremedia.workflow.impl.server.LightweightSession
- com.coremedia.workflow.impl.server.MasterSession
- com.coremedia.workflow.impl.server.ObjectRepositoryImpl
- com.coremedia.workflow.impl.server.ParameterAssignment
- com.coremedia.workflow.impl.server.ProcessValidator
- com.coremedia.workflow.impl.server.SessionManager
- com.coremedia.workflow.impl.server.TaskImpl
- com.coremedia.workflow.impl.server.TimerManager
- com.coremedia.workflow.impl.server.TimerMap
- com.coremedia.workflow.impl.server.TransactionManager
- com.coremedia.workflow.impl.server.Transformer
- com.coremedia.workflow.adapters.persistence.GenericRDBMSAdapter
- com.coremedia.workflow.beanparser.ProcessDefinitionFactory
- com.coremedia.workflow.handlers.RunActionTimerHandler
- com.coremedia.workflow.handlers.SkipUserTaskTimerHandler
- com.coremedia.workflow.servlets.CommandServlet
- com.coremedia.workflow.servlets.IORServlet
- com.coremedia.workflow.servlets.StatsServlet
- com.coremedia.workflow.tasks.ForkSubprocessRunTaskHandler

- com.coremedia.workflow.validation.OfflineProcessDefinitionFactory

[CMS-23909]

Deprecated ArchiveProcess Workflow Action: Functionality Removed

The functionality of the deprecated workflow action `com.coremedia.work flow.common.actions.ArchiveProcess` has been removed. The class still exists for backwards-compatibility of old serialized workflow definitions, but the action does not do anything anymore.

You should remove the deprecated `ArchiveProcess` action from custom workflow definitions, and replace it with the `ArchiveProcessFinalAction` as `<Fi nalAction>`. Only workflows with configured `ArchiveProcessFinalAction` will appear in the workflow archive. The `ArchiveProcessFinalAction` was introduced as replacement in CMCC 11, because it can also archive data from aborted workflows, while the `ArchiveProcess` action was only capable to archive data from workflows that completed successfully.

[CMS-23899]

Site Manager Removal

The Site Manager has been removed from the product.

If you have project specific usecases which are not covered by other CMCC clients (esp. Studio), please contact the CoreMedia support.

With the removal of the Site Manager, the following content types and related grammars have been deprecated and should not be used any longer:

- Dictionary and coremedia-dictionary.dtd
- Preferences and coremedia-preferences.dtd (Not to be confused with Studio's EditorPreferences)
- Query and coremedia-query.dtd

Client-side actions of the old Workflow API are no longer supported.

[CMS-23869]

Changed Properties for Process Archiving in the in-memory Setup

The `processes-memory-defaults.properties` were turned into ConfigurationProperties. Configure the process archiving in the in-memory setup with the following properties also documented in the Deployment Dependencies section:

- `workflow.archive.endpoint-url` instead of `studio.url`
- `workflow.archive.username` instead of `studio.user`
- `workflow.archive.password` instead of `studio.password`

[CMS-23786]

Upgrade to Java 17

Java 17 is the next Long Term Support version of the Java platform. All components have been updated to work with Java 17. Java 17 is now also required for building the workspace and running the applications, Java 11 will not work anymore. The exception is the studio-client workspace which uses Sencha Cmd to build, which still requires Java 11. Please refer to the release note "Running Sencha Cmd after Java 17 Upgrade" for further details.

Upgrade Information

Update your development and production environments to use Java 17 according to the *Supported Platforms* information.

Also note that a new *Java 17 Base Image* is provided that must be used for building Docker images. Refer to https://github.com/coremedia-contributions/docker.java-application-base/releases/ for the corresponding 2.1 release and changes associated with it.

The following Maven plugins have been updated:

- `org.apache.maven.plugins:maven-javadoc-plugin` to version 3.5.0
- `org.codehaus.gmaven:groovy-maven-plugin` to version 2.1.1

If you are using artifact `cglib:cglib` in your own project code, you may want to consider switching to Spring's shadowed version of *cglib* provided by `org.springframework:spring-core`. *cglib* is not maintained actively any longer and presumably not compatible with Java 17, see https://github.com/cglib/cglib. The CoreMedia Blueprint workspace has been migrated to Spring's shadowed version of *cglib* and, consequently, does not define a *cglib* artifact version any longer. Should you want to

migrate use of *cglib* in your own code, you need to replace package `net.sf.cglib` with `org.springframework.cglib`.

For handling of GIFs in the built-in image transformation we make use of the package `java.desktop/com.sun.imageio.plugins.gif` which is not exported and thus not usable with Java 17 by default. To allow access the following JVM argument has to be added: `--add-exports java.desktop/com.sun.im ageio.plugins.gif=ALL-UNNAMED`. This argument is already added to the docker images, spring-boot-maven-plugin configuration and the provided Idea run configuration files of the apps that perform image transformation (studio-server, cae, headless-server). If you have a custom deployment process or use GIF transformation in other applications, be aware to add this export.

The Java 17 Base Image is prepared to add other `add-exports` or `add-opens` arguments if you need to via env vars `JAVA_ADD_EXPORTS` and `JAVA_ADD_OPENS`.

[CMS-23586]

Workflow Server Database Tables

The *Workflow Server* will automatically create new tables in the 'cm_management' database: `WfArchivedProcessInstances`, `WfArchivedTaskIn stances`, and `WfArchivedVariables`. These names are reserved and cannot be used as document type names.

[CMS-23118]

Removed Conversion Service Bean from CapRepositoriesConfiguration

The Unified API spring boot integration configured a bean `conversionService` of type `org.springframework.core.convert.support.Default ConversionService` so that it was capable of converting Strings to `Content Type` instances. This feature was previously used for the Blueprint Spring configuration classes `InterceptorsStudioAutoConfiguration`, `LcStudioLibCom ponentAutoConfiguration`, and `InferrersStudioConfiguration`). The default conversion service bean has been removed and the configuration classes have been adjusted to use explicit content type retrieval. Instead of

```
@Value("CMLinkable") ContentType contentType
```

the following code can be used to achieve the content type lookup

```
@Value("#{@contentRepository.getContentType('CMLinkable')}") ContentType
contentType
```

See https://docs.spring.io/spring-framework/reference/core/validation/con-vert.html#core-convert-Spring-config for further information on spring type conversion.

[CMS-22810]

Upgraded Spring dependencies to latest major versions

Spring Boot was upgraded to version 3 and Spring to version 6. With these upgrades, many further dependencies had to be upgraded as well.

Upgrade Information

The following dependencies were upgraded:

- Spring Boot from 2.7.16 to 3.2.2 - see also
  - Spring Boot 3.0 Release Notes
  - Spring Boot 3.1 Release Notes
  - Spring Boot 3.2 Release Notes
- Spring Framework from 5.3.30 to 6.1.3 - see also
  - What's New in Spring Framework 6.x
  - Upgrading to Spring Framework 6.x
- Spring Security from 5.8.7 to 6.2.1 - see also
  - What's New in Spring Security 6.0
  - What's New in Spring Security 6.1
  - What's New in Spring Security 6.2
  - Migrating to Spring Security 6.0
  - Migrating to Spring Security 6.2
- Spring Data BOM from 2021.2.12 to 2023.1.2
- Jakarta Activation API from 1.2.2 to 2.1.2
  - the dependency coordinates changed from `com.sun.activa tion:jakarta.activation` to `jakarta.activa tion:jakarta.activation-api`
  - the packages of the Java classes changed from `javax.activation` to `jakarta.activation`
- Jakarta Annotations API from 1.3.5 to 2.1.1
  - the packages of the Java classes changed from `javax.annotation` to `jakarta.annotation`
- Jakarta Dependency Injection API from 1 to 2.0.1
  - the dependency coordinates changed from `javax.inject:javax.inject` to `jakarta.inject:jakarta.inject-api`

- the packages of the Java classes changed from `javax.inject` to `jakarta.inject`
- Jakarta Mail API from 1.6.7 to 2.1.2
  - the dependency coordinates changed from `com.sun.mail:jakarta.mail` to `jakarta.mail:jakarta.mail-api`
  - the packages of the Java classes changed from `javax.mail` to `jakarta.mail`
- Jakarta Servlet API from 4.0.4 to 6.0.0
  - the packages of the Java classes changed from `javax.servlet` to `jakarta.servlet`
- Jakarta Server Pages API from 2.3.5 to 3.1.1
  - the packages of the Java classes changed from `javax.servlet.jsp` to `jakarta.servlet.jsp`
- Jakarta Transactions API from 1.3.3 to 2.0.1
  - the packages of the Java classes changed from `javax.transaction` to `jakarta.transaction`
- Jakarta Validation API from 2.0.2 to 3.0.2
  - the packages of the Java classes changed from `javax.validation` to `jakarta.validation`
- Jakarta XML Binding API from 2.3.3 to 4.0.1
  - the packages of the Java classes changed from `javax.xml.bind` to `jakarta.xml.bind`

Other changes:

- The `RequestMapping` annotation was exchanged for `Controller` annotation on type-level, see Spring Framework Issue #22154.
- Class `com.coremedia.blueprint.cae.web.FreemarkerEnvironment` was turned into `com.coremedia.blueprint.cae.web.WebEnvironment`
- The spring-boot maven plugin no longer supports disabling of forking, so `spring-boot:run` now always forks
- Spring no longer attempts to deduce parameter names by parsing bytecode. As dependency injection, property binding, SpEL expressions etc. are heavily used by the CoreMedia CMS, all sources must now be compiled with the common Java 8+ `-parameters` flag for parameter name retention. For more information see Upgrading to Spring Framework 6.x - Parameter Name Retention.
- Spring Boot no longer loads auto configuration classes from `spring.factories`, use the `org.springframework.boot.autoconfigure.AutoConfiguration.imports` resource instead to list auto configuration classes
- The public API bean `translate.xliff.translatableExpressions` was renamed to `translateXliffTranslatableExpressions`.

[CMS-21716]

Property 'usecaplist' no longer interpreted by Workflow Server

In the Workflow-Server previously, the `usecaplist` property was used to decide whether to connect to CapListRepository. Now, the `repository.caplist.connect` is used for this.

[CMS-20028]

5.35.2 CoreMedia Content Application Engine

Removed Webtrends Analytics Connector

The Webtrends Analytics Connector was removed from the Blueprint workspace without replacement.

[CMS-23884]

Removed class MappedInterceptor

Removed class `com.coremedia.objectserver.web.MappedInterceptor`. Use `org.springframework.web.servlet.handler.MappedInterceptor` instead.

[CMS-23860]

com.coremedia.blueprint.base.links.impl.RuleUrlPrefixResolver has new constructor

The `com.coremedia.blueprint.base.links.impl.RuleUrlPrefixResolver` has a new `RuleUrlPrefixResolver(java.util.List)` constructor. The `PostConstruct` method was removed.

[CMS-23847]

com.coremedia.blueprint.base.links.Optional removed

The custom `com.coremedia.blueprint.base.links.Optional` implementation was removed and replaced by `java.util.Optional` wrapping a String. The `UNDEFINED` [`"?"`/`null`] value is now represented by an `Optional#empty`, `ANY` by an `Optional` of `"*"`.

[CMS-23843]

Third-Party Update: Spring Webflow

Updated Spring Webflow from 2.5.1.RELEASE to 3.0.0 from 2.5.1.RELEASE to 3.0.0.

[CMS-22845]

5.35.3 CoreMedia Studio Client

Added Configurable Document Types for Search

In the preferences, the user can select preferred content types that should be used for the library search now. The selected content types are shown at the top of the content type combobox [next to the search text slot]. The preferred entries remain in the global list of types that can be filtered for.

The change is consided breaking since the preference name for the preferred search and creation types has been changed in the user settings. Therefore, the user has to re-assign the preferred content types settings.

Additionally, the method *ContentCreationUtil#getPreferredTypesForCreation()* has been moved to *PreferredContentUtil#getPreferredTypes()*.

[CMS-23580]

StatefulDateTimeField's Configuration has Changed

The date and time formats of the component `StatefulDateTimeField` are now configured in `BaseModels_properties`. The properties `Date_format` and `Time_format` in `UI_properties` are now removed.

[CMS-23562]

Date and Time Formats Configuration Changed

The date and time format of all Studio components are now localised centrally in `BaseModels_properties`. The date and time format properties in other resource bundles are obsolete and removed.

[CMS-23540]

Running Sencha Cmd after Java 17 Upgrade

As of version CMCC 2404.1 Sencha Cmd will not be required anymore. However in release 2401, the studio-client workspace still needs Sencha Cmd to build applications and JooUnit tests.

As there is no official support for Java 17 from Sencha and it only works with workarounds, we suggest running it with Java 11.

While this does not affect the Docker based studio-client build as it downloads a suitable JRE 11 anyway, you might need to adjust the installation of Sencha Cmd when building the studio-client locally.

Upgrade Information

Please either use a Sencha Cmd installation with an included JRE (currently only offered for Windows and macOS) or make sure to set the environment variable `INSTALL4J_JAVA_HOME_OVERRIDE` to the root folder path of a JRE 11 installation.

This information has also been included in CoreMedia Blueprint Developer Manual and Studio Developer Manual.

[CMS-23171]

Stricter CSP Rules

The Content Security Rules for Studio Client have been hardened to prevent attackers from uploading JavaScript code into CMS Content and exploit possible XSS vulnerabilities to execute that code in the context of another Studio user. If you have added any custom scripts to Studio Client which are *not* deployed under the paths `/packages/` or `/resources/`, they will now be blocked by the stricter CSP rules, which is reported in the browser console.

To fix this, you need to allow-list those scripts in `apps/studio-client/apps/main/base-app/sencha/resources/config-init.js` by adding their paths to the allow-list `[..., "resources/", "packages/"]`.

(CMS-22221)

5.35.4 CoreMedia Studio Server

Removed property for Spring Boot Maven plugin

The `additionalProfiles` property that could have been used to set profiles to activate when starting the Studio Server Spring Boot app locally via the Spring Boot Maven plugin was removed. When additional profiles need to be set, use the `spring-boot.run.profiles` property of the plugin. This will override the plugin configuration. Therefore, make sure to also activate the `dev` and `local` profiles if needed.

(CMS-23917)

5.35.5 CoreMedia Elastic Social

Elastic Social Moderation With CKEditor 5

Elastic Social moderation in CoreMedia Studio has been updated to use CKEditor 5 instead of CKEditor 4.

This change especially includes new CKEditor 5 editor types, that support data backed by BBCode as well as support to managing blocked words to provide hints to editors where comments/review posts contain problematic words or character sequences.

Upgrade Information

Unless you adapted BBCode handling within the various layers (see next section below), no upgrade steps are required. If you adapted any of the layers listed below, please consult our Support Team. They will provide detailed information on the various aspects.

BBCode Support Layers

For alignment of BBCode processing within CoreMedia Content Cloud, the following relevant layers have been adapted:

- Elastic Social Moderation backed by CKEditor (now CKEditor 5)
- CAE Delivery backed by KefirBB (with mapping configuration options backed by `kefirbb.xml`)
- Contribution to Article backed by `BbCodeToCoreMediaRichtextTransformer`, that ships with CoreMedia Blueprint.

The BBCode language features officially supported are described in the Elastic Social manual (search for BBCode). The corresponding section has been updated to reflect enhancements like quoted arguments support for the `[url]` BBCode tag.

(CMS-22678)

5.35.6 CoreMedia Workspace

Removed usages of Apache HTTP Components 4.x

All usages of Apache HTTP Components 4.x (`org.apache.httpcomponents:httpclient` and `org.apache.httpcomponents:httpcore`) have been removed from core and blueprint sources.

Upgrade Information

The `restClientSchemeRegistry` bean has been removed from the Livecontext CAE extension. It wasn't actually used anymore.

The Apache HTTP client implementation has been replaced with Spring's RestTemplate:

- for the sitemap generation in the CAE
- for the JSON review client in the Headless Server

Please note that the HTTP client implementation of Spring's RestTemplate depends on the presence of HTTP client implementations in the application's class path. For further

information see the API documentation of ClientHttpRequestFactories#get(ClientHttpRequestFactorySettings).

Although the HTTP Components 4.x are not directly used anymore, their dependency versions still need to be managed in the project, because they are still required by a number of frameworks that are used by the CoreMedia CMS implementations.

[CMS-24084]

Replacement/Removal of Deprecated Code

Content-Server: Removal of deprecated `query` command line tool options:

- The deprecated `paths` and `versions` (short option: `e`) option of the `query` command line tool were removed. Use the `path` and `versionquery` parameter instead.

The location of loggers for certain classes changed. The following classes are now using a logger in their own class instead of the logger of the `hox.corem.server.Server` class:

- `hox.corem.server.ResourceImpl`
- `hox.corem.server.DocumentTypeImpl`
- `hox.corem.server.FolderImpl`
- `hox.corem.server.RepositoryImpl`
- `hox.corem.server.ListenerManager`
- `hox.corem.server.CapUserManager`
- `hox.corem.server.ResourceCache`
- `hox.corem.server.SessionManager`
- `hox.corem.server.SortingServiceFactory`

Common:

- `com.coremedia.publisher.importer.XmlPropertyTransformer#getFilter` now also throws `NoSuchMethodException` and `InvocationTargetException`

Middle:

- `com.coremedia.cap.util.ContentCacheKey` now extends `com.coremedia.cache.util.ObjectCacheKey` instead of `com.coremedia.cap.util.ObjectCacheKey`

[CMS-23686]

Third-Party Update: Caffeine

Updated Caffeine from 2.9 to 3.1.

[CMS-23557]

5.35.7 CoreMedia Frontend Workspace

Removed deprecated CSS/JS property "ieExpression"

The doctype property `ieExpression` of `CMAbstractCode` has been deprecated in release 2110.1. All usages in Studio, CAE and Frontend are removed now. To avoid migration issues, the doctype property still exists in the CoreMedia content type model.

[CMS-20144]

5.35.8 CoreMedia Deployment

APPLICATION_OPTS Removed from Base Image

Starting with `coremedia/java-application-base:2.1-cm-17.*` the environment variable toggle `APPLICATION_OPTS` has been removed from the base image, please use `_JAVA_OPTIONS` instead as intended by the JVM.

[CMS-24015]

Volume definitions Moved to Application Module or Deployment

Starting with `coremedia/java-application-base:2.1-cm-17.*` the base image only defines the new default for `java.io.tmpdir`, `/tmp` as a volume. Volumes should be defined in the deployment code matching the configured paths for ephemeral and persistent state paths.

This change is one of many to consolidate the image creation to make the containers immutable with a readonly rootfs.

[CMS-23629]

The coremedia/java-application-base image is now Corretto JRE by default

The `coremedia/java-application-base` image now also provides a JRE based Corretto image. The image tag suffix is `corretto-jre`. If there are Java modules missing for your use case, there is still the JDK based image with the suffix `corretto-jdk` or the Eclipse Temurin based images with the prefixes `temurin-jre` or `temurin-jdk`.

[CMS-23628]

Switch from /var/tmp to /tmp as the default java.io.tmpdir path

The `coremedia/java-application-base` images starting with `2.1-cm-17.*` will no longer set `java.io.tmpdir` to `/var/tmp` by default but instead to `/tmp` to match the default used in most JVM frameworks like Apache Tomcat uses it for its root dir when embedded in Spring Boot applications. This is a consolidation to make CoreMedia container based applications easier to configure when securing it to have a readonly rootfs.

[CMS-23622]

Prometheus jmx-exporter Agent Disabled by default

Please use the Spring Boot Prometheus actuator endpoint to scrape metrics instead. You can still enable the exporter using `PROMETHEUS=true` but you also need to expose the `8199` port for the prometheus service discovery.

To enable the Spring Boot Prometheus actuatuator endpoint, make sure that it is included in the list of exposed endpoints, configured by `management.endpoints.web.exposure.include`.

[CMS-23621]

SPRING_BOOT_EXPLODED_APP Removed from Base Image

Starting with `coremedia/java-application-base:2.1-cm-17.*` the environment variable toggle `SPRING_BOOT_EXPLODED_APP` has been removed from the base image. Images build using Google Jib Maven plugin are always exploded, making this toggle obsolete.

[CMS-23618]

The environment variable SPRING_PROFILES has been removed from the base image and the compose setup

Starting with `coremedia/java-application-base:2.1-cm-17.*`, using the environment variable `SPRING_PROFILES` is deprecated. It will still work but you should migrate and use the `SPRING_PROFILES_ACTIVE` environment variable.

[CMS-23613]

coremedia/java-application-base is now based on amazonlinux:2023

Starting with `coremedia/java-application-base:2.1-cm-17*` the image is based on `public.ecr.aws/amazonlinux/amazonlinux:2023-minimal`.

[CMS-23330]

Port 8199 Removed from the Exposed Ports by Default

Only in case the container exposes the jmx-exporter metrics endpoint by setting `PROMETHEUS=true`, the container should expose the port. Because the jmx-exporter is now disabled by default, this port has been removed from the expose list, so it does not get accidentally scraped by prometheus.

If you want to continue to use the jmx-exporter, you should expose the port in your deployment configuration.

[CMS-22787]

5.35.9 CoreMedia Headless Server

Headless Server Uses Auto Configured Task Scheduler Bean

Headless Server created its own executor service which was configurable via `caas.rest.num-threads`. It now uses the auto configured task execution service. The property `caas.rest.num-threads` was removed. Use `spring.task.execution.pool.max-size` instead.

[CMS-23832]

Media hash calculation Changed

Previously the media hash calculation for the media endpoint included all properties from site or global image transformation settings. This led to an unexpected change of the media hash, when changing non-relevant transformation properties, e.g. minWidth. This change introduces the application property `caas.media.hash-property-names`, which defaults to the list of these values: `"width"`, `"height"`, `"widthRatio"`, `"heightRatio"`.

This change is considered breaking, because all media urls will change regarding the media hash. The expected impact is not high because wrong hashes issue a HTTP redirect (301) to the correct URL.

[CMS-23635]

Replace Springfox with Springdoc

Springfox was replaced by Springdoc. This change is considered breaking only for customers using custom Spring controllers. If that's the case, the replacement of annotations might be required as described in the Springdoc migration guide: https://springdoc.org/v2/#migrating-from-springfox. The swagger documentation is still accessed the same way as before.

[CMS-23487]

5.35.10 Miscellaneous

Migration of Spring XML configuration files to Java Configuration

In the course of migrating from Spring XML to Java configurations, some XML files were removed in favor of their replacement Java Spring configuration classes. The details can be found below:

- removed bpbase-links-postprocessor.xml (import BlueprintLinksPostprocessorsConfiguration instead)
- removed bpbase-context-finder-services.xml (import NavigationContextFinderConfiguration instead)
- removed handler-services.xml (import CaeHandlerServicesConfiguration instead)
- removed link-services.xml (import CaeLinkServicesConfiguration instead)
- removed user-services.xml (import UserServicesConfiguration instead)
- removed cap-xliff-service.xml (import CapXliffConfiguration instead)
- removed mimetype-service.xml (import MimeTypeServiceConfiguration instead)
- removed com.coremedia.cap.test.xmlrepo.XmlRepoResources (import Java configuration classes instead)
  - CACHE => com.coremedia.cache.config.CacheConfiguration
  - CONTENT_BEAN_FACTORY => com.coremedia.objectserver.config.ContentBeanServicesConfiguration
  - HANDLERS => com.coremedia.objectserver.web.config.CaeHandlerServicesConfiguration
  - DATA_VIEW_FACTORY => com.coremedia.objectserver.config.DataviewServicesConfiguration
  - ID_PROVIDER => com.coremedia.id.IdServicesConfiguration
  - LINK_FORMATTER => com.coremedia.objectserver.web.links.CaeLinkServicesConfiguration

[CMS-24021]

CKEditor 4 Support Removed

Starting with CMCC 12.2401.1 CKEditor 4 is not supported anymore.

Corresponding references in Studio Developer Manual have been removed.

Note, that in upcoming releases, left-over traces in CoreMedia Blueprint will be removed.

Upgrade Information

For anyone upgrading from CKEditor 4, a corresponding note has been added to the Studio Developer Manual Section about "Rich Text Editing", quoted here:

> Starting with CMCC 12 (2401) the previous CKEditor 4 integration is not supported anymore. If you are updating from an adapted CKEditor 4 integration, please consult CMCC 11 documentation for upgrade hints, which can be summarized as: For any custom plugin you wrote, take its specification and rewrite it based on the CKEditor 5 architecture. You will benefit from a better architecture and more flexibility when it comes to integrating native CKEditor 5 plugins for use in CoreMedia Studio.

[CMS-23995]

Salesforce Marketing Cloud: Migrated to Java 17

The integration for Salesforce Marketing Cloud has been migrated to Java 17.

[CMS-23742]

Removal of Pre-created Directories in coremedia/java-application-base Image

Starting with `coremedia/java-applicaition-base:2.1-cm-17.*`, the base image no longer precreates the following directories:

- `/coremedia/tools/var/logs`
- `/coremedia/corem-home/var/tmp`
- `/coremedia/log`

[CMS-23624]

Cleaned Up Spring Configuration Files and Classes

In the course of updating from spring boot 2.7 to 3.1 a number of configuration XML files and configuration classes had to be adjusted:

- Bean `translate.xliff.translatableExpressions` provided by class `com.coremedia.translate.item.TranslatablePredicateConfiguration` was renamed to `translateXliffTranslatableExpressions`
- `com.coremedia.blueprint.studio.topicpages.rest.CustomTopicPagesConfiguration` was renamed to `CustomTopicPagesAutoConfiguration`
- `com.coremedia.blueprint.analytics.elastic.rest.ESALXStudioConfiguration` was renamed to `ESALXStudioAutoConfiguration`
- `com.coremedia.blueprint.taxonomies.TaxonomyConfiguration` was renamed to `TaxonomyAutoConfiguration`
- `com.coremedia.blueprint.studio.rest.taxonomies.TaxonomyStudioConfiguration` was renamed to `TaxonomyStudioAutoConfiguration`
- `com.coremedia.blueprint.studio.rest.intercept.InterceptorsStudioConfiguration` was renamed to `InterceptorsStudioAutoConfiguration`
- XML configuration file `com/coremedia/blueprint/common/multisite/translation-config.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/studio-in-memory-cap-list.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-common.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-contentbeans.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/es-alx-retrieval.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/caefeeder-blueprint.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/caefeeder-services.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/livecontext-contentfeeder.xml` was removed without replacement
- XML configuration file `META-INF/coremedia/elastic-worker.xml` was removed without replacement

[CMS-23556]

Migration of Spring XML configuration files to Java Configuration

The CoreMedia Component Loader is deprecated in favor of Spring Boot auto configurations. Many Spring component XML files have been converted to Spring Boot auto configuration classes. Several non-component Spring XML files have been converted to Spring configuration classes in that course. Also, existing configuration classes have been renamed and component properties files have been renamed to ordinary properties files. The detailed changes are listed below.

Migration from CoreMedia Component Loader to Spring Boot auto configurations:

- component-lc-asset.xml —> LcCaeAssetAutoConfiguration
- component-elastic-social.xml → ElasticSocialCaeAutoConfiguration
- component-alx-cae.xml → AlxCaeAutoConfiugration
- component-am-cae.xml → AMCaeAutoConfiguration
- component-blueprint-cae.xml → CaeBaseComponentAutoConfiguration
- component-corporate-cae.xml → CorporateCaeAutoConfiguration
- component-alx-google-cae.xml → AlxGoogleCaeAutoConfiguration
- component-personalization.xml → P13NCaeAutoConfiguration
- component-p13n-preview-cae.xml → P13NPreviewCaeAutoConfiguration
- component-alx-p13n-cae.xml → P13NAlxCaeAutoConfiguration
- component-cae.xml → CaeComponentAutoConfiguration
- component-cap-client.xml → CapClientComponentAutoConfiguration
- component-base.xml → CustomizerAutoConfiguration

Migration of Spring XML to Spring Java configuration:

- livecontext-handler-interceptors.xml → LcCaeInterceptorsConfiguration
- component-lc-elastic-social.xml → LcElasticSocialCaeAutoConfiguration
- component-lc-p13n-cae.xml → LcP13NCaeAutoConfiguration
- component-lc-preview-cae.xml → LcPreviewCaeAutoConfiguration
- component-lc-p13n-preview-cae.xml → LcP13NPreviewCaeAutoConfiguration
- livecontext-preview-links.xml → LcPreviewCaeLinkConfiguration
- livecontext-preview-handler-interceptors.xml → LcPreviewCaeInterceptorsConfiguration
- personalization-context.xml → P13NCaeContextConfiguration
- p13n-preview-cae-context.xml → P13NPreviewCaeContextConfiguration
- personalization-collection.xml → ContextCollectionConfiguration

Removal of Spring XML configuration files:

- removed lc-asset-handlers.xml (import LcCaeAssetHandlersConfiguration instead)

- removed blueprint-i18n.xml [import com.coremedia.blueprint.cae.config.Blue-printI18nCaeBaseLibConfiguration instead]
- removed blueprint-l10n.xml [import com.coremedia.blueprint.cae.config.Blue-printL10nCaeBaseLibConfiguration instead]
- removed blueprint-search.xml [import com.coremedia.blueprint.cae.config.Blueprint-SearchCaeBaseLibConfiguration instead]
- removed blueprint-richtextfilters.xml [import com.coremedia.blueprint.cae.config.Blue-printRichtextFiltersConfiguration instead]
- removed livecontext-validation.xml [import LcCaeValidationConfiguration instead]
- removed livecontext-links.xml [import CommerceLinkConfiguration instead]
- removed livecontext-fragment.xml [import LcCaeFragmentConfiguration instead]
- ec-cae-lib.xml was resolved. Its imports were transferred to CorporateCaeAutoCon-figuration and LcCaeAutoConfiguration.
- removed livecontext-preview-hybrid.xml. It only contained a customizer, which was migrated to LcPreviewCaeAutoConfiguration.
- removed blueprint-links.xml [import com.coremedia.blueprint.cae.config.Blueprint-LinksCaeBaseLibConfiguration instead]
- removed personalization-interceptors.xml [import com.coremedia.blueprint.person-alization.config.P13NInterceptorsConfiguratio instead]
-
  removed p13n-preview-cae-context-.xml [import
  com.coremedia.blueprint.personalization.preview.config.P13NPreviewCaeContextConfiguration instead]

- removed bpbase-sitemodel.xml [import com.coremedia.blueprint.base.multisite.Blue-printMultisiteModelConfiguration instead]
- removed view-development-services.xml [import com.coremedia.objectserv-er.view.config.CaeViewDevelopmentServicesConfiguration instead]
- removed view-error-services.xml [import com.coremedia.objectserver.view.con-fig.CaeViewErrorServicesConfiguration instead]
- removed customizer-services.xml [import com.coremedia.springframework.custom-izer.CustomizerConfiguration instead]

Renamed Spring Java configurations:

- LcCaeAssetConfiguration → LcCaeAssetHandlersConfiguration
- CaeBaseComponentConfiguration → CaeBaseComponentAutoConfiguration
- LiveContextPreviewCaeConfiguration → LcPreviewCaeAutoConfiguration
- CapClientComponentConfiguration → CapClientComponentAutoConfiguration

Miscellaneous:

- removed component-blueprint-cae.properties as it only contained properties set to the default values or commented out properties.

- removed abstract bean 'storeContextInterceptor' as there is no such thing as abstract beans in Java config.
- removed component-livecontext.properties → livecontext.properties (imported in LcCaeAutoConfiguration)
- migrated bean definitions from CaeComponentConfiguration to CaeComponentAuto-Configuration and removed it
- removed com.coremedia.personalization.context.collector.LicenseHelper from public API
- removed com.coremedia.cms:cae-util module. Consequently, uapi-services.xml and CaeUtilConfiguration were removed as well. The beans were migrated to Content-BeanServicesConfiguration.

[CMS-23224]

Removed OpenCalais Integration

The integration for the service "OpenCalais" has been removed.

[CMS-20586]

6. Support

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:

https://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

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

CoreMedia GmbH

Altes Klöpperhaus, 5. OG

Rödingsmarkt 9

20459 Hamburg

Phone: +49 .40 .32 55 87 .777 Fax: .999

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
- 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 the CoreMedia Deployment Manual, "Service and Logfiles Names" chapter for the default names of the logfiles and the Operations Basics Manual, "Logging" chapter for more details.