

# Release Notes

Version 5.0.2



# Formcentric Analytics: Release Notes

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You can always find the latest version of the Release Notes in the Help centre [help.formcentric.com](https://help.formcentric.com). Older versions and additional information are available in the Formcentric Helpdesk [helpdesk.formcentric.com](https://helpdesk.formcentric.com).

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# Releases

## Version 5.0.2

- Fixes an issue in the index feeder where multiple backends simultaneously attempt to remove the same datasets in Elasticsearch (*OptimisticLockingFailureException*).
- OAuth2 tokens are now issued with a backdated start time (default: 5s). This resolves clock skew issues between multiple backend instances.

## Version 5.0.1

- Spring Boot has been updated to version 4.0.5. This update solves some CVEs
- Fixes an issue with anonymization.

## Version 5.0.0

- Spring Boot has been updated to version 4.0.2.

The Backend API Client (*com.formcentric.analytics:formcentric-backend-api-client:jar:5.0.0*) uses Spring components (from *org.springframework:spring-web:jar:7.0.3*) to communicate with the backend. Therefore, the client cannot be integrated into applications that still use an older version of Spring.

We are working on a solution to decouple the Backend API Client from Spring, which will make it easier to integrate it into other applications.

You can continue to use Backend API Client 4.5.x in your applications. The backend interface has not changed.

- Minor bug fixes

## Version 4.5.14

- Spring Boot has been updated to version 3.5.10.
- Minor bug fixes

## Version 4.5.13

- Spring Boot has been updated to version 3.5.9.

- Minor bug fixes

## **Version 4.5.12**

- Bugfix: When determining the "affected entries" the automation may have generated SQL statements with too many parameters.

## **Version 4.5.11**

- Spring Boot has been updated to version 3.5.8.
- Minor bug fixes
- Preparation for Spring Boot 4

## **Version 4.5.10**

- Updating various third-party libraries.
- Spring Boot has been updated to version 3.5.7.
- Adds support for Rabbit MQ 4.0 and 4.1

## **Version 4.5.9**

- Bugfix: When updating the Solr index, the maximum length of texts with special characters was not calculated correctly.

## **Version 4.5.8**

- Spring Boot has been updated to version 3.5.6.
- Various minor bug fixes.

## **Version 4.5.7**

- Spring Boot has been updated to version 3.5.5.

## **Version 4.5.6**

- Spring Boot has been updated to version 3.5.4.

- Update of various third-party libraries.
- Various minor bug fixes.

## **Version 4.5.5**

- Improvement: The new parameter *analytics.oidc.authorizationQueryParams* enables the transmission of additional query parameters with OIDC authorization requests. This may be required depending on the authorization server to enable access to Formcentric Analytics.
- Improvement: The Reporting webapp now performs validation of the OIDC configuration during startup, preventing application launch if errors are detected.
- Spring Boot has been updated to version 3.5.3.
- The use of custom HTTP headers has been removed.
- The configuration of OIDC (OpenID Connect) has been expanded and improved.
- Bugfix: Corrected an issue in the API account creation process.

## **Version 4.5.4**

- Bugfix: Under certain circumstances, the feeder did not update the index when uploading larger attachments.

## **Version 4.5.3**

- Improvement: The configuration of OIDC (OpenID Connect) has been simplified.

## **Version 4.5.2**

- Bugfix: Corrects a problem in the communication with Solr that led to threads not being removed (under certain circumstances).

## **Version 4.5.1**

- Spring Boot has been updated to version 3.4.5.
- The updating of Elasticsearch has been improved. Errors no longer lead to endless loops.
- Improvement: The *ApiException* now provides a more descriptive *Message*.

## Version 4.5.0

- Analytics now supports integration with OpenID Connect (OIDC). With this new feature, Single Sign-On (SSO) can be implemented. *Please note that this feature requires a Formcentric version that includes at least Analytics 4.5.0.*
- Spring Boot has been updated to version 3.4.4.

## Version 4.4.2

- Improvement: The reporting web app now sets Cache-Control headers for security reasons, ensuring that the browser does not store analytics data in the browser cache.

## Version 4.4.1

- Bugfix: The feeder could not store form data with NaN, Infinity, or -Infinity in Elasticsearch.
- Bugfix: The sorting of form data was sometimes incorrect when using Elasticsearch.
- Bugfix: The display of NaN, Infinity, and -Infinity was incorrect when using Solr.
- Spring Boot has been updated to version 3.4.3.
- Minor bug fixes and updates.

## Version 4.4.0

- In addition to Solr, Elasticsearch is now supported as a full-text search engine. For Analytics to know which search engine you are using, you must set the Spring profile to *elastic* or *solr*. The configuration of Solr has not changed.
- Spring Boot has been updated to version 3.4.2.
- Spring Authorization Server has been updated to version 1.4.1.

## Version 4.3.15

- Updated various third-party libraries.

## Version 4.3.14

- Spring Boot has been updated to 3.3.8.

## **Version 4.3.13**

- Bugfix: The API client may not have encoded the API secret correctly.

## **Version 4.3.12**

- Improvement: The performance of tracking data evaluation for the statistics has been significantly improved and is now much faster.

## **Version 4.3.11**

- Bugfix: With slow databases it could happen that the evaluation of the tracking borrowed all connections in the connection pool.

## **Version 4.3.10**

- Bugfix: The database migration for the Microsoft SQL Server may have been too slow and was accelerated.
- Postgres 17 supported

## **Version 4.3.9**

- Bugfix: The database migration for the Microsoft SQL Server may have been too slow and was accelerated.
- Api-Docs update
- Solr: Apache Solr version 9.7 is now supported.

## **Version 4.3.8**

- Bugfix: Fixed a problem when removing old OAuth2 tokens.

## **Version 4.3.7**

- Bugfix: Fixed a problem when renewing OAuth2 tokens using a refresh token has been fixed. The problem mainly affected the reporting application.

## Version 4.3.6

- Bugfix: Fixed a problem in the API client when renewing OAuth2 tokens.

## Version 4.3.5

- Forms that have not (yet) been submitted are also listed in the statistics.
- Tacking: In rare cases, the *error\_code* column in the *mwfs2\_field\_error\_errors* table may be too short. The column is therefore enlarged.

## Version 4.3.4

- Spring Boot has been updated to 3.2.8.
- Bugfix: When deploying the application as a Spring Boot JAR, some properties of the embedded servlet container were not applied.
- Solr: Apache Solr version 9.6 is now supported.

## Version 4.3.3

- Bugfix: An encoding problem in the search has been fixed.
- RabbitMQ 3.13 is now supported.
- The signature field type is now supported.

## Version 4.3.2

- Bugfix: An error when writing the automation logs has been fixed.
- Spring Boot has been updated to 3.2.5.
- Updates of several third-party libraries.

## Version 4.3.1

- Bugfix: An error in the configuration with encrypted values has been fixed.

## Version 4.2.4

- The configuration of the database parameters has been changed to Spring Boot Standard. The old settings still work but are deprecated. Please update your configuration:
  - *jdbc.username* becomes *spring.datasource.username*
  - *jdbc.password* becomes *spring.datasource.password*
  - *jdbc.driverClassName* becomes *spring.datasource.driver-class-name*
  - *jdbc.url* becomes *spring.datasource.url*

The customisation makes it possible to use the normal settings of Spring Boot, which makes it possible to configure the database connection pool, for example.

- Analytics now accepts a request ID header (e.g. *x-request-id*) and saves the ID in the MDC (Mapped Diagnostic Context) of the logging framework. The ID can then be output in the log file (if configured accordingly).
- The release notes and the installation manuals for reporting and the backend have been merged.

## Version 4.2.3

- Spring Boot has been updated to 3.2.4.
- PostgreSQL: The PostgreSQL 16 database is now officially supported.
- Solr: Apache Solr versions 9.3, 9.4 and 9.5 are now supported.

## Version 4.2.2

- Bugfix: An error (403) while using the full text search has been fixed.

## Version 4.2.1

- Bugfix: Several corrections in the area of form statistics have been implemented.

## Version 4.2.0

- Spring Boot has been updated to 3.2.2. This means that Formcentric Analytics must be operated with Java 17 or newer.

- It has been switched to Jakarta EE. If Formcentric Analytics is operated in a servlet container, this must support at least Servlet API 6.0 (e.g. Tomcat 10.1).
- The specified version of the Servlet API in the *web.xml* now conforms to the minimum requirement of Formcentric Analytics (Servlet API 6.0).
- The logging framework has been switched to Logback for all deployment variants.
- Updates of several third-party libraries.

## Version 4.1.4

- This version prepares for the upcoming update to Spring Boot 3, Java 17 and Jakarta EE in Analytics 4.2. Before migrating to 4.2, you have to update existing installations to this version first.
- Bugfix: Several corrections in the area of form statistics have been implemented.
- Bugfix: Fixes problems with the execution of automations when using IBM WebSphere Liberty.
- Improvement: The reporting interface for querying form data now also outputs the metadata that is unknown in the form definition.

## Version 4.1.3

- Spring Boot has been updated to version 2.7.18.
- Updates of several third-party libraries.
- **Please note:** The next minor release 4.2.0 will contain the upgrade to Spring Boot 3, which means that Formcentric Analytics must be operated with Java 17 or newer. To simplify the upgrade experience, we recommend to run Formcentric Analytics with Java 17 as soon as possible.

## Version 4.1.2

- Spring Boot has been updated to version 2.7.16.

## Version 4.1.1

- Bugfix: A reference to the internal library *formcentric-backend-migration-api-model* has been removed.
- Further improvements of the Formcentric redesign.

## Version 4.1.0

- Feature: Introduces the new filter operation *is not equal to*. This allows you to find records that do not match your search term. The filter is the complement to the *is equal to* filter.
- Solr: The Solr client has been updated and Analytics officially supports Apache Solr versions 9.1 and 9.2. The use of Apache Solr 8.11 is now *deprecated* and no longer recommended.
- PostgreSQL: The PostgreSQL 15 database is now officially supported. The use of PostgreSQL 9.6 and 10 is *deprecated* and no longer recommended.
- The system overview now contains information about the servlet container.
- Bugfix: User accounts from older versions were not migrated correctly, which made it impossible to assign form permissions to these accounts.
- Spring Boot has been updated to version 2.7.14.
- Detail improvements and minor bug fixes of the Formcentric redesign.

## Version 4.0.1

- Spring Boot has been updated to version 2.7.12.

## Version 4.0.0

- The backend can no longer be run without a Solr instance. The Solr instance is used for the full-text search (important for *GDPR*) and provides faster results when filtering form data than the search used previously.
- Connectivity to the Solr instance supports authentication using Basic Auth.
- The Solr config package (formcentric-backend-solr-config-<version>.[zip|tar]) has been restructured. If you're using the package in an automated process, you may need to modify the process.
- Form statistics have been reworked from scratch. Statistics are now analysed effectively in real time.
- Spring Boot Actuator has been updated. This makes the application easier to monitor – with Prometheus, for example. For more information, see the "Monitoring and management" section in the Installation Manual.
- The *DELETE /api/v1/formstatuses/{formId}/{statusId}* interface has a new optional request parameter *force* (the default value is *true*). If *force* is set to *false* and data

records use status, the interface responds with *CONFLICT* and states how many data records are affected by this in the body.

- New: MariaDB support
- **Important:** The Java packages have been renamed from *com.monday.webforms...* to *com.formcentric...*. You will need to modify applications that use the API Client accordingly.
- **Important:** As part of the process of renaming Webforms to Formcentric, the names of the configuration parameters have also been changed. We strongly recommend that you modify your configuration, even if it is currently working OK. Migration is quick and easy. In the properties, simply replace the starting item *webforms* with *analytics*, as shown in the following examples:
  - *webforms.registration.enabled=...* becomes *analytics.registration.enabled=...*
  - *webforms.solr.url=...* becomes *analytics.solr.url=...*

**Important:** No changes are required for settings that do not start with *webforms*.

- New: The Backend can be started as a Spring Boot JAR. A dedicated servlet container is no longer required. Deployment as a WAR continues to be supported. **We recommend the use of the new Spring Boot JAR.**

Use of the JAR has various advantages, including the following:

1. Deployment of new versions is significantly simplified, since you only need to swap out the JAR.
2. The JAR is much simpler to run in a Docker container.

## Version 3.3.11

- Spring Framework has been updated to 5.3.29 and Spring Security has been updated to 5.6.12.

## Version 3.3.10

- The system overview now contains information about the servlet container.
- Bugfix: User accounts from older versions were not migrated correctly, which made it impossible to assign form permissions to these accounts.
- Spring Framework has been updated to 5.3.28 and Spring Security has been updated to 5.6.11.

## Version 3.3.9

- Spring Boot has been updated to version 2.6.15.

## Version 3.3.8

- Spring Framework has been updated to 5.3.26 and Spring Security has been updated to 5.6.10.

## Version 3.3.7

- Spring Boot has been updated to version 2.6.14.

## Version 3.3.6

- Improvement: New ActiveDirectory settings (optional): `webforms.ldap.adBindDomainFromBaseDn` and `webforms.ldap.adBindDomain` (see Installation Manual).

## Version 3.3.5

- Spring Boot has been updated to version 2.6.13.
- Monitoring: The Analytics Backend webapp now includes the *Micrometer Registry Prometheus* library which exposes metrics in a format that can be scraped by a Prometheus server.

## Version 3.3.4

- Spring Boot has been updated to version 2.6.9.
- The system overview now contains information about the RabbitMQ connection.

## Version 3.3.3

- Bugfix: "Delete all filtered form data" did not delete all filtered datasets.

## Version 3.3.2

- Correction: The *HttpClients* (created in *webforms-backend-api-client*) now all respect the system properties.

## Version 3.3.1

- Bugfix: The Postgres database profile could not be overwritten externally.



In this process, *postgresjson* has been removed as the default profile. If you are running Analytics with a Postgres database and have not yet set the database profile, you must do so according to the installation manual.

The Postgres database profile has been renamed to *postgres*. The use of *postgresjson* is still supported, but no longer recommended.

- Bugfix: Existing OAuth tokens were not migrated in version 3.0.0.
- Spring Boot has been updated to version 2.6.7.

## Version 3.3.0

- The connection to the Solr now supports authentication with Basic-Auth.
- New: MariaDB support.
- DB support updated.
- Spring Boot has been updated to version 2.6.6.

## Version 3.2.17

- Update of Log4j to 2.17.2.

## Version 3.2.16

- Updates the Spring Framework to 5.2.20.RELEASE.
- Corrects the database support documentation.

## Version 3.2.15

- Update of Log4j to 2.17.1 (CVE-2021-44832)

## Version 3.2.14

- Update of Log4j to 2.17.0 (CVE-2021-45105)

## Version 3.2.13

- Solves some problems with automation 'Delete form data' jobs when there are many attachments.

## Version 3.2.12

- Update of Log4j to 2.16.0 (CVE-2021-45046)

## Version 3.2.11

- Bugfix: Temporary files are not removed.
- Improvement: Expiration date missing in API detail view.
- Bugfix: Update of Log4j to 2.15.0 (CVE-2021-44228)

## Version 3.2.10

- Fixes a problem with the "Previous Entry" and "Next Entry" functionality in combination with MySQL 8.0.
- Improvement: System Overview shows the timezones of Backend, Reporting and the Browser.

## Version 3.2.9

- Bugfix: The export of date columns is now independent from the server timezone.
- Improvement: The timezone for exporting timestamp columns could now be set with *export.timeZone*.
- Improvement: The timezone for exporting timestamp columns could now be set with the API.
- Improvement: The timezone is transmitted to the backend during export.

## Version 3.2.8

- Fixes a problem with the Solr index refresh.

## Version 3.2.7

- Bugfix: Backend Solr Health is checked with a wrong SolrClient

## Version 3.2.6

- Improvement: Support for Oracle 18c and 19c
- Improvement: It's possible to automatically remove LDAP/AD users if they are not available in the LDAP/AD anymore.
- Improvement: open referrer links in new browser tab
- Improvement: changed header "Referrer-Policy" from "no-referrer" to "strict-origin"

## Version 3.2.5

- Fixes a problem with the migration of LDAP/AD users.
- It's now possible to change the name of the Solr collection with *analytics.solr.collection*

## Version 3.2.4

- Bug fix: The SQL migration scripts were not found when using an IBM WebSphere Application Server.
- Bugfix: Integer number were printed as floating point number in CSV and Excel exports.
- The specified version of the Servlet API in the *web.xml* now conforms to the minimum requirement of Formcentric Analytics (Servlet API 3.1).
- Several frontend dependencies have been updated, including an update of jQuery to version 3.5.1.
- Various security headers are delivered to the browser.

## Version 3.2.3

- Fixes a date filter bug in the user management.
- Fixes a SQL injection vulnerability. The flaw could only be used if the attacker had a user account already.
- Fixes an a sorting problem in the automation management panel.

## Version 3.2.2

- It is now possible to configure the Ldap/ActiveDirectory interface so that users from an ActiveDirectory with multiple subdomains can log into the system.
- Fixes an excel export error that threw an exception when executing a query with and no results were found.
- Fixes an error when migrating the database from MWFA 3.1.1 to 3.2.1.
- Spring-Boot version upgrade to 2.2.10.

## Version 3.2.1

- RabbitMQ: The RabbitMQ integration now also supports exchanges of type *Headers*. This enables further integration scenarios, such as the creation of *Queue Bindings* based on the metadata of a form entry. For more information, see the *Administrative REST API* documentation.
- Fixes an error in the presentation of error types within the form statistics.
- Fixes an error in the edit mode of existing form entries.

## Version 3.2.0

- Spring Boot has been updated to version 2.2.8.
- Monitoring: There is a new parameter *analytics.actuator.security.enabled* that controls whether the Spring Boot Actuator endpoints are secured by OAuth2 or whether no authentication is required.
- Improvement: Adapted database schema to include an explicit primary key for every table.

## Version 3.1.1

- Bug fix: Connecting to an LDAP directory service was not possible in version 3.1.0.

## Version 3.1.0

- Automation: Individual tasks can now be started directly without having to wait for the nightly execution of all automation tasks.
- Automation: The new automation type *Set status* enables the form status to be set automatically.
- API: The new endpoint */api/v1/features* provides information on the activated functionalities (full text search, automation, revisions).
- Spring Boot has been updated to version 2.2.2.

## Version 3.0.2

- Formcentric Analytics now fires the RabbitMQ event *<formId>.attachment.created* when a file is uploaded. For further details, please see the *Administrative REST API* manual.

## Version 3.0.1

- Spring Boot has been updated from version 2.2.0 to version 2.2.1.
- Bug fix: In version 3.0.0, the application did not start in older Jetty web servers.

## Version 3.0.0

- Attention: Existing installations can only be migrated from version 2.5.0 or newer.
- Spring Boot has been updated from version 1.5.22 to version 2.2.0. As part of this update, several third-party libraries have also been updated.
- The configuration files have been moved from *WEB-INF* to *WEB-INF/classes*. The file *application.properties* contains a complete configuration of the application, adaptations can be made in *application-backend.properties*.
- The installation manual has been restructured and includes more detailed information on supported third-party software and system requirements.
- Java 11 is now officially supported. Support for Java 8 is *deprecated* with this release and will be dropped in May 2019.

## Version 2.6.1

- Formcentric Analytics now fires the RabbitMQ event `<formId>.attachment.created` when a file is uploaded. For further details, please see the *Administrative REST API* manual.

## Version 2.6.0

- The *Embedded Solr* included in 2.5.0 has been removed. An external Solr application is now required to use the full text search. The minimum version of Solr has been increased to Solr 7 (reference version 7.7.2). If you have already used the search functionality, the Solr schema must be updated and the search index must be rebuilt.
- The system overview now contains information about the Solr application.
- Bugfix: The application context was not terminated correctly when the application was closed.