#### **Method Metrics**

#### References

- jqassistant
- Neo4j Python Driver

#### **Effective Method Line Count**

#### Table 1a - Effective method line count distribution

This table shows the distribution of the effective method line count per artifact. For each artifact the number of methods with effective line count = 1,2,3,... is shown to get an overview of how line counts are distributed over methods.

Only the 15 artifacts with the highest method count and their effective method line count distribution (limited by 40)is shown here. The whole table can be found in the CSV report Effective Method Line Count Distribution .

Have a look below to find out which packages and methods have the highest effective lines of code.

| artifactName       | axon-<br>messaging-<br>4.10.2.jar | axon-<br>eventsourcing-<br>4.10.2.jar | axon-server-<br>connector-<br>4.10.2.jar | axon-<br>modelling-<br>4.10.2.jar | axon-<br>test-<br>4.10.2.jar | axon-<br>configuration-<br>4.10.2.jar | axon-spring-boot-<br>autoconfigure-<br>4.10.2.jar | axon-<br>disruptor-<br>4.10.2.jar | axon-tracing-<br>opentelemetry-<br>4.10.2.jar |
|--------------------|-----------------------------------|---------------------------------------|--|-----------------------------------|------------------------------|---------------------------------------|---|-----------------------------------|---|
| effectiveLineCount |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |
| 1                  | 2830                              | 573                                   | 541                                      | 535                               | 280                          | 310                                   | 222   | 84                                | 16  |
| 2                  | 828                               | 204                                   | 197                                      | 159                               | 171                          | 146                                   | 91  | 31                                | 4   |
| 3                  | 671                               | 127                                   | 138                                      | 141                               | 65                           | 34                                    | 18  | 30                                | 10  |
| 4                  | 272                               | 64                                    | 68                                       | 58                                | 49                           | 42                                    | 19  | 8                                 | 7   |
| 5                  | 221                               | 39                                    | 43                                       | 46                                | 24                           | 16                                    | 12  | 5                                 | 2   |
| 6                  | 161                               | 34                                    | 26                                       | 44                                | 18                           | 17                                    | 11  | 6                                 | 3   |
| 7                  | 105                               | 32                                    | 19                                       | 25                                | 20                           | 3                                     | 11  | 2                                 | 2   |
| 8                  | 80                                | 12                                    | 20                                       | 10                                | 11                           | 7                                     | 8   | 0                                 | 0   |
| 9                  | 77                                | 18                                    | 12                                       | 17                                | 10                           | 8                                     | 4   | 4                                 | 1   |
| 10                 | 47                                | 7                                     | 14                                       | 8                                 | 4                            | 6                                     | 3   | 3                                 | 0   |
| 11                 | 44                                | 2                                     | 10                                       | 7                                 | 9                            | 5                                     | 3   | 1                                 | 0   |
| 12                 | 42                                | 5                                     | 9  | 2                                 | 9                            | 1                                     | 0   | 1                                 | 1   |
| 13                 | 28                                | 2                                     | 6  | 9                                 | 4                            | 2                                     | 0   | 1                                 | 0   |
| 14                 |                                   |                                       | 1  | 4                                 | 2                            | 1                                     | 0   | 2                                 | 0   |
| 15                 |                                   | 2                                     | 5  | 5                                 | 3                            | 0                                     | 0   | 0                                 | 0   |
| 16                 | 8                                 | 6                                     | 3  | 2                                 | 4                            | 0                                     | 0   | 0                                 | 0   |
| 17                 |                                   | 0                                     | 6  | 1                                 | 4                            | 1                                     | 0   | 1                                 | 0   |
| 18                 | 9                                 | 3                                     | 0  | 0                                 | 3                            | 1                                     | 0   | 1                                 | 0   |
| 19                 | 7                                 | 0                                     | 4  | 2                                 | 0                            | 1                                     | 1   | 1                                 | 0   |
| 20                 | 5                                 | 2                                     | 2  | 2                                 | 1                            | 0                                     | 0   | 0                                 | 0   |
| 21                 |                                   | 2                                     | 2  | 1                                 | 1                            | 1                                     | 0   | 0                                 | 0   |
| 22                 | 3                                 | 1                                     | 0  | 2                                 | 1                            | 0                                     | 2   | 1                                 | 0   |
| 23                 |                                   | 2                                     | 0  | 0                                 | 1                            | 1                                     | 1   | 0                                 | 0   |
| 24                 | 3                                 | 1                                     | 3  | 1                                 | 1                            | 0                                     | 0   | 1                                 | 0   |
| 25                 |                                   |                                       | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 26                 | 2                                 | 0                                     | 0  | 1                                 | 1                            | 1                                     | 0   | 0                                 | 0   |
| 27                 | 0                                 | 0                                     | 1  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 29                 |                                   | 0                                     | 0  | 0                                 | 1                            | 0                                     | 0   | 0                                 | 0   |
| 30                 | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 31                 |                                   |                                       | 0  | 0                                 | 1                            | 0                                     | 0   | 0                                 | 0   |
| 32                 | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 1                                 | 0   |
| 33                 | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 34                 |                                   |                                       | 1  | 0                                 | 0                            | 0                                     | 1   | 0                                 | 0   |
| 36                 |                                   |                                       | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 38                 |                                   |                                       | 0  | 1                                 |                              | 0                                     | 0   | 0                                 | 0   |
| 40                 |                                   |                                       | 1  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 41                 |                                   |                                       | 1  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 43                 |                                   |                                       | 0  | 0                                 | 0                            | 1                                     | 0   | 0                                 | 0   |
| 44                 |                                   |                                       | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
|                    |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |

# Table 1b - Effective method line count distribution (normalized)

The table shown here only includes the first 40 rows which typically represents the most significant entries. Have a look below to find out which packages and methods have the highest effective lines of code.

| artifactName       | axon-<br>messaging-<br>4.10.2.jar | axon-<br>eventsourcing-<br>4.10.2.jar | axon-server-<br>connector-<br>4.10.2.jar | axon-<br>modelling-<br>4.10.2.jar | axon-<br>test-<br>4.10.2.jar | axon-<br>configuration-<br>4.10.2.jar | axon-spring-boot-<br>autoconfigure-<br>4.10.2.jar | axon-<br>disruptor-<br>4.10.2.jar | axon-tracing-<br>opentelemetry-<br>4.10.2.jar |
|--------------------|-----------------------------------|---------------------------------------|--|-----------------------------------|------------------------------|---------------------------------------|---|-----------------------------------|---|
| effectiveLineCount |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |
| 1                  | 51.435842                         | 50.175131                             | 47.707231                                | 49.399815                         | 40.057225                    | 51.155116                             | 54.545455   | 45.652174                         | 34.782609                                     |
| 2                  | 15.049073                         | 17.863398                             | 17.372134                                | 14.681440                         | 24.463519                    | 24.092409                             | 22.358722   | 16.847826                         | 8.695652                                      |
| 3                  | 12.195565                         | 11.120841                             | 12.169312                                | 13.019391                         | 9.298999                     | 5.610561                              | 4.422604  | 16.304348                         | 21.739130                                     |
| 4                  | 4.943657                          | 5.604203                              | 5.996473                                 | 5.355494                          | 7.010014                     | 6.930693                              | 4.668305  | 4.347826                          | 15.217391                                     |
| 5                  | 4.016721                          | 3.415061                              | 3.791887                                 | 4.247461                          | 3.433476                     | 2.640264                              | 2.948403  | 2.717391                          | 4.347826                                      |
| 6                  | 2.926209                          | 2.977233                              | 2.292769                                 | 4.062789                          | 2.575107                     | 2.805281                              | 2.702703  | 3.260870                          | 6.521739                                      |
| 7                  | 1.908397                          | 2.802102                              | 1.675485                                 | 2.308403                          | 2.861230                     | 0.495050                              | 2.702703  | 1.086957                          | 4.347826                                      |
| 8                  | 1.454017                          | 1.050788                              | 1.763668                                 | 0.923361                          | 1.573677                     | 1.155116                              | 1.965602  | 0.000000                          | 0.000000                                      |
| 9                  | 1.399491                          | 1.576182                              | 1.058201                                 | 1.569714                          | 1.430615                     | 1.320132                              | 0.982801  | 2.173913                          | 2.173913                                      |
| 10                 | 0.854235                          | 0.612960                              | 1.234568                                 | 0.738689                          | 0.572246                     | 0.990099                              | 0.737101  | 1.630435                          | 0.000000                                      |
| 11                 | 0.799709                          | 0.175131                              | 0.881834                                 | 0.646353                          | 1.287554                     | 0.825083                              | 0.737101  | 0.543478                          | 0.000000                                      |
| 12                 | 0.763359                          | 0.437828                              | 0.793651                                 | 0.184672                          | 1.287554                     | 0.165017                              | 0.000000  | 0.543478                          | 2.173913                                      |
| 13                 | 0.508906                          | 0.175131                              | 0.529101                                 | 0.831025                          | 0.572246                     | 0.330033                              | 0.000000  | 0.543478                          | 0.000000                                      |
| 14                 | 0.218103                          | 0.262697                              | 0.088183                                 | 0.369344                          | 0.286123                     | 0.165017                              | 0.000000  | 1.086957                          | 0.000000                                      |
| 15                 | 0.181752                          | 0.175131                              | 0.440917                                 | 0.461681                          | 0.429185                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 16                 | 0.145402                          | 0.525394                              | 0.264550                                 | 0.184672                          | 0.572246                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 17                 | 0.181752                          | 0.000000                              | 0.529101                                 | 0.092336                          | 0.572246                     | 0.165017                              | 0.000000  | 0.543478                          | 0.000000                                      |
| 18                 | 0.163577                          | 0.262697                              | 0.000000                                 | 0.000000                          | 0.429185                     | 0.165017                              | 0.000000  | 0.543478                          | 0.000000                                      |
| 19                 | 0.127226                          | 0.000000                              | 0.352734                                 | 0.184672                          | 0.000000                     | 0.165017                              | 0.245700  | 0.543478                          | 0.000000                                      |
| 20                 | 0.090876                          | 0.175131                              | 0.176367                                 | 0.184672                          | 0.143062                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 21                 | 0.109051                          | 0.175131                              | 0.176367                                 | 0.092336                          | 0.143062                     | 0.165017                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 22                 | 0.054526                          | 0.087566                              | 0.000000                                 | 0.184672                          | 0.143062                     | 0.000000                              | 0.491400  | 0.543478                          | 0.000000                                      |
| 23                 | 0.090876                          | 0.175131                              | 0.000000                                 | 0.000000                          | 0.143062                     | 0.165017                              | 0.245700  | 0.000000                          | 0.000000                                      |
| 24                 | 0.054526                          | 0.087566                              | 0.264550                                 | 0.092336                          | 0.143062                     | 0.000000                              | 0.000000  | 0.543478                          | 0.000000                                      |
| 25                 | 0.036350                          | 0.087566                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 26                 | 0.036350                          | 0.000000                              | 0.000000                                 | 0.092336                          | 0.143062                     | 0.165017                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 27                 | 0.000000                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 28                 | 0.036350                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 29                 | 0.000000                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.143062                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 30                 | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 31                 | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.143062                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 32                 | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.543478                          | 0.000000                                      |
| 33                 | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 34                 | 0.018175                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.245700  | 0.000000                          | 0.000000                                      |
| 36                 | 0.036350                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 38                 | 0.000000                          | 0.000000                              | 0.000000                                 | 0.092336                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 40                 | 0.000000                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 41                 | 0.000000                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 43                 | 0.000000                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.165017                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 44                 | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
|                    |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |

Table 1b Chart 1 - Effective method line count distribution (normalized)

<Figure size 640x480 with 0 Axes>

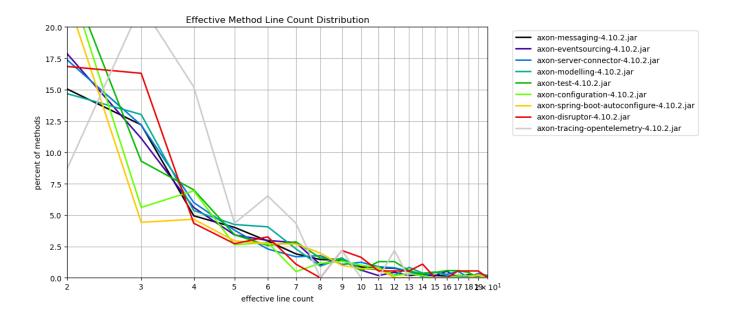


Table 1c - Top 30 packages with highest effective line counts

The following table shows the top 30 packages with the highest effective lines of code. The whole table can be found in the CSV report Effective\_lines\_of\_method\_code\_per\_package .

|    | artifactName                                      | fullPackageName   | linesInPackage | methodCount | maxLinesMethod | maxLinesMethodName                                      |
|----|---|---|----------------|-------------|----------------|---|
| 0  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling                         | 2331           | 838         | 64             | processBatch  |
| 1  | axon-<br>configuration-<br>4.10.2                 | org.axonframework.config                                | 1587           | 606         | 50             | <init></init>   |
| 2  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.pooled                  | 1041           | 341         | 77             | run   |
| 3  | axon-test-<br>4.10.2                              | org.axonframework.test.aggregate                        | 956            | 251         | 45             | appendEventOverview                                     |
| 4  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.queryhandling                         | 953            | 388         | 36             | doQuery   |
| 5  | axon-<br>messaging-<br>4.10.2                     | org. axon framework. eventhand ling. dead letter. jdbc  | 848            | 249         | 31             | convertToLetter   |
| 6  | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.command                     | 844            | 335         | 19             | ${\tt lambd} a initialize Handler 8$                    |
| 7  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.event.axon       | 836            | 264         | 40             | readMessagesFromSegment                                 |
| 8  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.query            | 739            | 216         | 27             | query   |
| 9  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector                  | 729            | 299         | 41             | build   |
| 10 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore              | 712            | 264         | 21             | peekPrivateStream                                       |
| 11 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.annotation                  | 670            | 239         | 23             | <init></init>   |
| 12 | axon-<br>modelling-<br>4.10.2                     | org. ax on framework. modelling. command. in spection   | 637            | 218         | 26             | inspectFieldsAndMethods                                 |
| 13 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing                         | 622            | 251         | 20             | doScheduleSnapshot                                      |
| 14 | axon-<br>disruptor-<br>4.10.2                     | org.axonframework.disruptor.commandhandling             | 605            | 184         | 32             | <init></init>   |
| 15 | axon-<br>eventsourcing-<br>4.10.2                 | org. ax on framework. events our cing. events to re.leg | 573            | 187         | 25             | fetchTrackedEvents                                      |
| 16 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore.jdbc         | 568            | 236         | 24             | <init></init>   |
| 17 | axon-spring-<br>boot-<br>autoconfigure-<br>4.10.2 | org.axonframework.springboot.autoconfig                 | 567            | 192         | 34             | buildSerializer   |
| 18 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.serialization                         | 537            | 181         | 22             | <init></init>   |
| 19 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.deadletter.jpa          | 525            | 132         | 28             | equals  |
| 20 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.common                                | 498            | 144         | 24             | get Exact Direct Super Types Of Parameterized Type Or C |
| 21 | axon-test-<br>4.10.2                              | org.axonframework.test.saga                             | 492            | 168         | 29             | <init></init>   |
| 22 | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.saga                        | 490            | 194         | 22             | handle  |
| 23 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.gateway               | 488            | 174         | 50             | createGateway   |
| 24 | axon-<br>messaging-<br>4.10.2                     | org. ax on framework. command handling. distributed     | 477            | 175         | 23             | dispatch  |
| 25 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.tokenstore.jdbc         | 430            | 130         | 26             | updateToken   |
|    |   |   |                |             |                |   |

|    | artifactName                  | fullPackageName   | linesInPackage | methodCount | maxLinesMethod | maxLinesMethodName |
|----|-------------------------------|---|----------------|-------------|----------------|--------------------|
| 26 | axon-<br>messaging-<br>4.10.2 | org. ax on framework. eventh and ling. dead letter. leg | 401            | 97          | 21             | convert            |
| 27 | axon-<br>messaging-<br>4.10.2 | org.axonframework.commandhandling                       | 377            | 169         | 13             | <init></init>      |
| 28 | axon-<br>modelling-<br>4.10.2 | org.axonframework.modelling.saga.repository.jdbc        | 374            | 84          | 38             | updateSaga         |
| 29 | axon-<br>messaging-<br>4.10.2 | org.axonframework.messaging.unitofwork                  | 363            | 129         | 32             | executeWithResult  |

# Table 1d - Top 30 methods with the highest effective line count

The following table shows the top 30 methods with the highest effective lines of code. The whole table can be found in the CSV report Effective\_lines\_of\_method\_code\_per\_package.

|    |    |   | fullPackageName   | maxLinesMethodType                                     | maxLinesMeth                             |
|----|----|---|---|--|--|
| 0  | 2  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.pooled                  | Coordinator\$CoordinationTask                          |  |
| 1  | 0  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling                         | TrackingEventProcessor                                 | proc                                     |
| 2  | 23 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.gateway               | CommandGatewayFactory                                  | create                                   |
| 3  | 1  | axon-<br>configuration-<br>4.10.2                 | org.axonframework.config                                | DefaultConfigurer                                      |  |
| 4  | 3  | axon-test-<br>4.10.2                              | org.axonframework.test.aggregate                        | Reporter   | appendEvent                              |
| 5  | 42 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.deadline.quartz                       | DeadlineJob  |  |
| 6  | 9  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector                  | AxonServerConnectionManager\$Builder                   |  |
| 7  | 7  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.event.axon       | PersistentStreamConnection\$SegmentConnection          | readMessagesFrom                         |
| 8  | 28 | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.saga.repository.jdbc        | JdbcSagaStore  | up                                       |
| 9  | 4  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.queryhandling                         | SimpleQueryBus   |  |
| 10 | 17 | axon-spring-<br>boot-<br>autoconfigure-<br>4.10.2 | org.axonframework.springboot.autoconfig                 | AxonAutoConfiguration                                  | build                                    |
| 11 | 34 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.deadletter                  | InMemorySequencedDeadLetterQueue                       |  |
| 12 | 14 | axon-<br>disruptor-<br>4.10.2                     | org.axonframework.disruptor.commandhandling             | DisruptorCommandBus                                    |  |
| 13 | 29 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.unitofwork                  | BatchingUnitOfWork                                     | executeV                                 |
| 14 | 5  | axon-<br>messaging-<br>4.10.2                     | org. axon framework. eventhand ling. dead letter. jdbc  | DefaultDeadLetterJdbcConverter                         | conve                                    |
| 15 | 21 | axon-test-<br>4.10.2                              | org.axonframework.test.saga                             | SagaTestFixture  |  |
| 16 | 19 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.deadletter.jpa          | DeadLetterEventEntry                                   |  |
| 17 | 8  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.query            | AxonServerQueryBus                                     |  |
| 18 | 12 | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.command.inspection          | Annotated Aggregate Meta Model Factory \$ Annotated Ag | inspectFieldsAnı                         |
| 19 | 25 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.tokenstore.jdbc         | JdbcTokenStore   | upc                                      |
| 20 | 15 | axon-<br>eventsourcing-<br>4.10.2                 | org. ax on framework. events our cing. events to re.leg | JpaEventStorageEngine                                  | fetchTrack                               |
| 21 | 41 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.deadline                              | SimpleDeadlineManager\$DeadlineTask                    |  |
| 22 | 35 | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.command          | AxonServerCommandBus                                   | da                                       |
| 23 | 20 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.common                                | TypeReflectionUtils                                    | getExactDirectSuperTypesOfParameterizedT |
| 24 | 16 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore.jdbc         | JdbcEventStorageEngine                                 |  |
| 25 | 65 | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.event.util       | EventCipher  |  |

|    | index | artifactName                      | fullPackageName                                | maxLinesMethodType             | maxLinesMeth |
|----|-------|-----------------------------------|--|--------------------------------|--------------|
| 26 | 24    | axon-<br>messaging-<br>4.10.2     | org.axonframework.commandhandling.distributed  | DistributedCommandBus          |              |
| 27 | 11    | axon-<br>messaging-<br>4.10.2     | org.axonframework.messaging.annotation         | AnnotatedMessageHandlingMember |              |
| 28 | 33    | axon-<br>eventsourcing-<br>4.10.2 | org.axonframework.eventsourcing.eventstore.jpa | JpaEventStorageEngine          | fetchTrack   |
| 29 | 56    | axon-<br>messaging-<br>4.10.2     | org.axonframework.deadline.jobrunr             | JobRunrDeadlineManager         |              |

### Cyclomatic Complexity

#### Table 2a - Cyclomatic method complexity distribution

This table shows the distribution of the cyclomatic complexity of methods per artifact. For each artifact the number of methods with the cyclomatic complexity = 1,2,3,... is shown to get an overview of how cyclomatic complexity is distributed over methods.

Only the 15 artifacts with the highest method count sum and their cyclomatic method complexity distribution (limited by 40) is shown here. The whole table can be found in the CSV report Cyclomatic Method Complexity Distribution.

Have a look below to find out which packages and methods have the highest effective lines of code.

| artifactName         | axon-<br>messaging-<br>4.10.2.jar | axon-<br>eventsourcing-<br>4.10.2.jar | axon-server-<br>connector-<br>4.10.2.jar | axon-<br>modelling-<br>4.10.2.jar | axon-<br>test-<br>4.10.2.jar | axon-<br>configuration-<br>4.10.2.jar | axon-spring-boot-<br>autoconfigure-<br>4.10.2.jar | axon-<br>disruptor-<br>4.10.2.jar | axon-tracing-<br>opentelemetry-<br>4.10.2.jar |
|----------------------|-----------------------------------|---------------------------------------|--|-----------------------------------|------------------------------|---------------------------------------|---|-----------------------------------|---|
| cyclomaticComplexity |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |
| 1                    | 4431                              | 943                                   | 954                                      | 899                               | 520                          | 542                                   | 386   | 146                               | 35  |
| 2                    | 462                               | 94                                    | 86                                       | 75                                | 61                           | 37                                    | 10  | 20                                | 8   |
| 3                    | 284                               | 53                                    | 41                                       | 40                                | 59                           | 17                                    | 4   | 5                                 | 2   |
| 4                    | 141                               | 24                                    | 24                                       | 29                                | 23                           | 5                                     | 3   | 4                                 | 1   |
| 5                    | 74                                | 9                                     | 7  | 24                                | 13                           | 3                                     | 1   | 3                                 | 0   |
| 6                    | 46                                | 4                                     | 3  | 10                                | 9                            | 0                                     | 2   | 2                                 | 0   |
| 7                    | 20                                | 7                                     | 6  | 2                                 | 4                            | 2                                     | 0   | 2                                 | 0   |
| 8                    | 12                                | 7                                     | 6  | 1                                 | 2                            | 0                                     | 0   | 2                                 | 0   |
| 9                    | 7                                 | 0                                     | 3  | 2                                 | 2                            | 0                                     | 0   | 0                                 | 0   |
| 10                   | 4                                 | 0                                     | 2  | 0                                 | 1                            | 0                                     | 1   | 0                                 | 0   |
| 11                   | 9                                 | 0                                     | 0  | 0                                 | 2                            | 0                                     | 0   | 0                                 | 0   |
| 12                   | 4                                 | 0                                     | 1  | 0                                 | 2                            | 0                                     | 0   | 0                                 | 0   |
| 13                   | 2                                 | 1                                     | 0  | 0                                 | 1                            | 0                                     | 0   | 0                                 | 0   |
| 14                   | 1                                 |                                       | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 15                   | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 16                   | 0                                 | 0                                     | 0  | 1                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 17                   | 1                                 | 0                                     | 1  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 21                   | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 23                   | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |
| 40                   | 1                                 | 0                                     | 0  | 0                                 | 0                            | 0                                     | 0   | 0                                 | 0   |

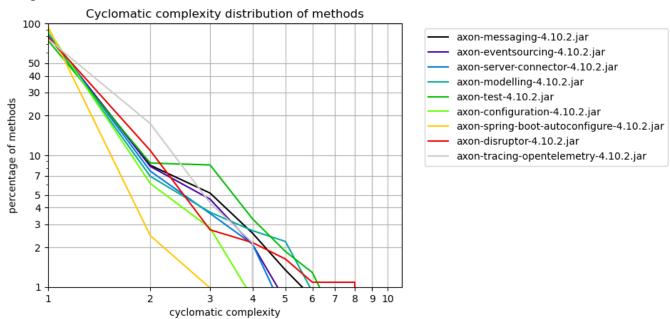
Table 2b - Cyclomatic method complexity distribution (normalized)

The table shown here only includes the first 40 rows which typically represents the most significant entries. Have a look below to find out which packages and methods have the highest effective lines of code.

| artifactName         | axon-<br>messaging-<br>4.10.2.jar | axon-<br>eventsourcing-<br>4.10.2.jar | axon-server-<br>connector-<br>4.10.2.jar | axon-<br>modelling-<br>4.10.2.jar | axon-<br>test-<br>4.10.2.jar | axon-<br>configuration-<br>4.10.2.jar | axon-spring-boot-<br>autoconfigure-<br>4.10.2.jar | axon-<br>disruptor-<br>4.10.2.jar | axon-tracing-<br>opentelemetry-<br>4.10.2.jar |
|----------------------|-----------------------------------|---------------------------------------|--|-----------------------------------|------------------------------|---------------------------------------|---|-----------------------------------|---|
| cyclomaticComplexity |                                   |                                       |  |                                   |                              |                                       |   |                                   |   |
| 1                    | 80.534351                         | 82.574431                             | 84.126984                                | 83.010157                         | 74.391989                    | 89.438944                             | 94.840295   | 79.347826                         | 76.086957                                     |
| 2                    | 8.396947                          | 8.231173                              | 7.583774                                 | 6.925208                          | 8.726753                     | 6.105611                              | 2.457002  | 10.869565                         | 17.391304                                     |
| 3                    | 5.161759                          | 4.640981                              | 3.615520                                 | 3.693444                          | 8.440629                     | 2.805281                              | 0.982801  | 2.717391                          | 4.347826                                      |
| 4                    | 2.562704                          | 2.101576                              | 2.116402                                 | 2.677747                          | 3.290415                     | 0.825083                              | 0.737101  | 2.173913                          | 2.173913                                      |
| 5                    | 1.344965                          | 0.788091                              | 0.617284                                 | 2.216066                          | 1.859800                     | 0.495050                              | 0.245700  | 1.630435                          | 0.000000                                      |
| 6                    | 0.836060                          | 0.350263                              | 0.264550                                 | 0.923361                          | 1.287554                     | 0.000000                              | 0.491400  | 1.086957                          | 0.000000                                      |
| 7                    | 0.363504                          | 0.612960                              | 0.529101                                 | 0.184672                          | 0.572246                     | 0.330033                              | 0.000000  | 1.086957                          | 0.000000                                      |
| 8                    | 0.218103                          | 0.612960                              | 0.529101                                 | 0.092336                          | 0.286123                     | 0.000000                              | 0.000000  | 1.086957                          | 0.000000                                      |
| 9                    | 0.127226                          | 0.000000                              | 0.264550                                 | 0.184672                          | 0.286123                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 10                   | 0.072701                          | 0.000000                              | 0.176367                                 | 0.000000                          | 0.143062                     | 0.000000                              | 0.245700  | 0.000000                          | 0.000000                                      |
| 11                   | 0.163577                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.286123                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 12                   | 0.072701                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.286123                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 13                   | 0.036350                          | 0.087566                              | 0.000000                                 | 0.000000                          | 0.143062                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 14                   | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 15                   | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 16                   | 0.000000                          | 0.000000                              | 0.000000                                 | 0.092336                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 17                   | 0.018175                          | 0.000000                              | 0.088183                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 21                   | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 23                   | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |
| 40                   | 0.018175                          | 0.000000                              | 0.000000                                 | 0.000000                          | 0.000000                     | 0.000000                              | 0.000000  | 0.000000                          | 0.000000                                      |

# Table 2b Chart 1 - Cyclomatic method complexity distribution (normalized)

<Figure size 640x480 with 0 Axes>



# Table 2c - Top 30 packages with highest cyclomatic complexity

The following table shows the top 30 packages with the highest cyclomatic complexity. The whole table can be found in the CSV report Effective\_lines\_of\_method\_code\_per\_package .

|    | artifactName                                      | fullPackageName  | complexityInPackage | methodCount | maxComplexity | maxComplexityMe                              |
|----|---|--|---------------------|-------------|---------------|--|
| 0  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling                          | 1276                | 838         | 21            | processE                                     |
| 1  | axon-<br>configuration-<br>4.10.2                 | org.axonframework.config                                 | 716                 | 606         | 7             | getFactoryFor                                |
| 4  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.queryhandling                          | 484                 | 388         | 11            | doÇ  |
| 2  | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.pooled                   | 460                 | 341         | 23            |  |
| 6  | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.command                      | 455                 | 335         | 9             | resolveTa                                    |
| 3  | axon-test-<br>4.10.2                              | org.axonframework.test.aggregate                         | 438                 | 251         | 13            | ensureValuesE                                |
| 7  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.event.axon        | 428                 | 264         | 17            | readMessagesFromSeg                          |
| 10 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore               | 397                 | 264         | 13            | has  |
| 11 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.annotation                   | 386                 | 239         | 14            | ha   |
| 9  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector                   | 355                 | 299         | 12            |  |
| 12 | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.command.inspection           | 339                 | 218         | 9             | prepareHan                                   |
| 13 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing                          | 325                 | 251         | 8             | doScheduleSnar                               |
| 5  | axon-<br>messaging-<br>4.10.2                     | org. ax on framework. eventh and ling. dead letter. jdbc | 304                 | 249         | 12            | ec   |
| 20 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.common                                 | 301                 | 144         | 9             | getExactDirectSuperTypesOfParameterizedTypeC |
| 15 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore.leg           | 292                 | 187         | 8             | withGapsCle:                                 |
| 8  | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.query             | 292                 | 216         | 9             | Stı  |
| 18 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.serialization                          | 285                 | 181         | 7             | ec   |
| 22 | axon-<br>modelling-<br>4.10.2                     | org.axonframework.modelling.saga                         | 277                 | 194         | 6             | ha   |
| 14 | axon-<br>disruptor-<br>4.10.2                     | org.axonframework.disruptor.commandhandling              | 274                 | 184         | 8             | onR  |
| 16 | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore.jdbc          | 273                 | 236         | 7             | lambda $cleanGa_{i}$                         |
| 23 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.gateway                | 249                 | 174         | 12            | createGate                                   |
| 24 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.distributed            | 243                 | 175         | 12            | ec   |
| 21 | axon-test-<br>4.10.2                              | org.axonframework.test.saga                              | 235                 | 168         | 9             | assertDispatchedEqu                          |
| 17 | axon-spring-<br>boot-<br>autoconfigure-<br>4.10.2 | org.axonframework.springboot.autoconfig                  | 224                 | 192         | 10            | buildSeria                                   |
| 19 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.deadletter.jpa           | 212                 | 132         | 15            | ec   |
| 31 | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging                              | 209                 | 156         | 4             | ec   |

|    | artifactName                  | fullPackageName                        | complexityInPackage | methodCount | maxComplexity | maxComplexityMe |
|----|-------------------------------|--|---------------------|-------------|---------------|-----------------|
| 29 | axon-<br>messaging-<br>4.10.2 | org.axonframework.messaging.unitofwork | 206                 | 129         | 11            | executeWithR    |
| 27 | axon-<br>messaging-<br>4.10.2 | org.axonframework.commandhandling      | 201                 | 169         | 10            | •               |
| 30 | axon-test-<br>4.10.2          | org.axonframework.test.matchers        | 191                 | 108         | 8             | matche          |
| 38 | axon-<br>messaging-<br>4.10.2 | org.axonframework.common.caching       | 182                 | 110         | 8             | onE             |

#### Table 2d - Top 30 methods with highest cyclomatic complexity

The following table shows the top 30 packages containing the methods with the highest cyclomatic complexity. The whole table can be found in the CSV report

Effective\_lines\_of\_method\_code\_per\_package .

|    | ndex | artifactName fullPackageName                      |  | maxComplexityType   | maxCompl      |
|----|------|---|--|---|---------------|
| 0  | 61   | axon-<br>messaging-<br>4.10.2                     | org. ax on framework. even than dling. scheduling. job | JobRunrEventScheduler   | deseria       |
| 1  | 2    | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.pooled                 | Coordinator\$CoordinationTask   |               |
| 2  | 0    | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling                        | TrackingEventProcessor  | 1             |
| 3  | 7    | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector.event.axon      | PersistentStreamConnection\$SegmentConnection                         | readMessagesF |
| 4  | 39   | axon-<br>modelling-<br>4.10.2                     | org. axon framework. modelling. saga. repository       | AssociationValueMap\$AssociationValueComparator                       |               |
| 5  | 19   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.deadletter.jpa         | DeadLetterEventEntry  |               |
| 6  | 11   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.annotation                 | AnnotatedMessageHandlingMember  |               |
| 7  | 62   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.distributed          | CommandNameFilter   | deseria       |
| 8  | 3    | axon-test-<br>4.10.2                              | org.axonframework.test.aggregate                       | AggregateTestFixture  | ensure        |
| 9  | 56   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.deadline.jobrunr                     | JobRunrDeadlineManager  | deseria       |
| 10 | 10   | axon-<br>eventsourcing-<br>4.10.2                 | org.axonframework.eventsourcing.eventstore             | ConcatenatingDomainEventStream  |               |
| 11 | 5    | axon-<br>messaging-<br>4.10.2                     | org.axonframework.eventhandling.deadletter.jdbc        | JdbcDeadLetter  |               |
| 12 | 46   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.common.jdbc                          | ConnectionWrapperFactory  | la            |
| 13 | 9    | axon-server-<br>connector-<br>4.10.2              | org.axonframework.axonserver.connector                 | AxonServerConnectionManager\$Builder                                  |               |
| 14 | 23   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.gateway              | CommandGatewayFactory   | cr            |
| 15 | 45   | axon-test-<br>4.10.2                              | org.axonframework.test.server                          | AxonServerContainer   |               |
| 16 | 24   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling.distributed          | ReplyMessage  |               |
| 17 | 42   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.deadline.quartz                      | DeadlineJob   |               |
| 18 | 32   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.deadline.dbscheduler                 | DbSchedulerBinaryDeadlineDetails                                      |               |
| 19 | 29   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.unitofwork                 | BatchingUnitOfWork  | execu         |
| 20 | 26   | axon-<br>messaging-<br>4.10.2                     | org. ax on framework. eventhand ling. dead letter. leg | JpaDeadLetter   |               |
| 21 | 4    | axon-<br>messaging-<br>4.10.2                     | org.axonframework.queryhandling                        | SimpleQueryBus  |               |
| 22 | 48   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.messaging.responsetypes              | MultipleInstancesResponseType   |               |
| 23 | 59   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.common.lock                          | PessimisticLockFactory\$DisposableLock                                |               |
| 24 | 17   | axon-spring-<br>boot-<br>autoconfigure-<br>4.10.2 | org.axonframework.springboot.autoconfig                | AxonAutoConfiguration   | t             |
| 25 | 27   | axon-<br>messaging-<br>4.10.2                     | org.axonframework.commandhandling                      | $\label{lem:MethodCommandHandlerDefinition} \textbf{MethodCommandMe}$ |               |

|    | index | artifactName                  | fullPackageName                                 | maxComplexityType   | maxCompl                              |
|----|-------|-------------------------------|---|---------------------|---------------------------------------|
| 26 | 34    | axon-<br>messaging-<br>4.10.2 | org.axonframework.messaging.deadletter          | GenericDeadLetter   |                                       |
| 27 | 21    | axon-test-<br>4.10.2          | org.axonframework.test.saga                     | CommandValidator    | assertDispat                          |
| 28 | 20    | axon-<br>messaging-<br>4.10.2 | org.axonframework.common                        | TypeReflectionUtils | getExactDirectSuperTypesOfParameteriz |
| 29 | 25    | axon-<br>messaging-<br>4.10.2 | org.axonframework.eventhandling.tokenstore.jdbc | JdbcTokenStore      |                                       |