



**OX2OX Migration Framework Scheduler Technical
Documentation for
2.1.0**

2021-09-01

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1 General Information

1.1 Warnings



Warning

This preview delivery is not for productive usage and not affected by service-level agreements.



Warning

Custom configuration or template files are potentially not updated automatically. After the update, please always check for files with a **.dpkg-new** or **.rpmnew** suffix and merge the changes manually. Configuration file changes are listed in their own respective section below but don't include changes to template files. For details about all the configuration files and templates shipped as part of this delivery, please read the relevant section of each package.

1.2 Delivery Comment

This delivery was requested with following comment:

OMF Scheduler 2.1.0 Preview Delivery 7

1.3 Install Package Repository

This delivery is part of a restricted preview software repository:

<https://software.open-xchange.com/components/omf-scheduler/preview/2.1.0/RHEL7>
<https://software.open-xchange.com/components/omf-scheduler/preview/2.1.0/DebianStretch>
<https://software.open-xchange.com/components/omf-scheduler/preview/2.1.0/DebianBuster>

1.4 Build Dependencies

This delivery was build with following dependencies:

RedHat:RHEL-7,Debian:Stretch,Debian:Buster

2 Shipped Packages and Version

2.1 Package open-xchange-omf-orchestrator

OMF Orchestrator CLI to interoperate with the OX2OX Migration Framework.

Version: 2.1.0-7

Type: Other

2.1.1 Installation

Install on nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-omf-orchestrator
```

2.1.2 Configuration

For details, please see appendix [A](#)

/opt/open-xchange/omf/orchestrator/etc/omf-orchestrator.yml (page [4](#))

2.2 Package open-xchange-omf-scheduler

OMF Scheduler OX2OX Migration Framework Scheduler.

Version: 2.1.0-7

Type: Other

2.2.1 Installation

Install on nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-omf-scheduler
```

2.2.2 Configuration

For details, please see appendix [A](#)

/opt/open-xchange/omf/scheduler/etc/omf-scheduler.yml (page [9](#))

A Configuration Files

File 1 /opt/open-xchange/omf/orchestrator/etc/omf-orchestrator.yml

```

1 micronaut:
2   application:
3     name: omf
4   http:
5     services:
6       # The OMF Scheduler Source HTTP REST API service configuration
7       scheduler-admin-source:
8         url: "${omf.scheduler.url}/omf/scheduler/admin/source/"
9
10      # If the scheduler does not have a valid public certificate
11      # (e.g. uses a self-signed certificate), then its certificate can be
12      # configured here.
13      ssl:
14        enabled: true
15        trust-store:
16          path: file:/opt/open-xchange/omf/certs/scheduler.p12
17          password: secret
18          type: PKCS12
19
20      scheduler-admin-target:
21        url: "${omf.scheduler.url}/omf/scheduler/admin/target/"
22
23      # If the scheduler does not have a valid public certificate
24      # (e.g. uses a self-signed certificate), then its certificate can be
25      # configured here.
26      ssl:
27        enabled: true
28        trust-store:
29          path: file:/opt/open-xchange/omf/certs/scheduler.p12
30          password: secret
31          type: PKCS12
32
33      # The OMF Scheduler Migration HTTP REST API service configuration
34      scheduler-migration:
35        url: "${omf.scheduler.url}/omf/scheduler/migration/"
36
37      # If scheduler-admin above has a custom SSL configuration,
38      # then it needs to be repeated here.
39      ssl:
40        enabled: true
41        trust-store:
42          path: file:/opt/open-xchange/omf/certs/scheduler.p12
43          password: secret

```

```

44         type: PKCS12
45
46     # The OMF Scheduler Monitoring HTTP REST API service configuration
47     scheduler-monitoring:
48         url: "${omf.scheduler.url}/ws/omf/scheduler/workers/monitor/"
49
50     # If scheduler-admin above has a custom SSL configuration,
51     # then it needs to be repeated here.
52     ssl:
53         enabled: true
54         trust-store:
55             path: file:/opt/open-xchange/omf/certs/scheduler.p12
56             password: secret
57             type: PKCS12
58
59 omf:
60     shell:
61         config:
62             user.dir: ${user.dir}/.omf/config
63             app.dir: /opt/open-xchange/omf/lib/scripts
64     scheduler:
65         # Credentials for the scheduler
66         # On multi-user systems, specifying the password in a configuration file
67         # with proper file system permissions is preferred to specifying it on
68         # the command line, since the command line is visible to all local users.
69         #
70         # Example:
71         # username: admin
72         # password: secret
73
74         # Location of the scheduler. Only the protocol and host name need to be
75         # specified.
76         url: "https://localhost:8443"
77     ui:
78         color: true
79         unicode: true
80         expandIds: false
81         history.file: ${user.dir}/.omf_history
82
83     logger:
84         levels:
85             # change this to TRACE to see a detailed log of the HTTP traffic between the
86             # Orchestrator and the Scheduler
87             io.micronaut.http.client: INFO

```

File 2 /opt/open-xchange/omf/scheduler/etc/omf-scheduler.yml

```

1  # https://docs.micronaut.io/latest/guide/config.html#configurationProperties
2  ---
3  micronaut:
4      # SSL configuration
5      # Required for production environments.
6      # See https://docs.micronaut.io/latest/guide/index.html#https for details.
7      ssl:
8          enabled: true
9          port: 8443
10         key-store:
11             path: file:/opt/open-xchange/omf/certs/keystore.p12
12             type: PKCS12
13             password: secret
14         server:
15             dual-protocol: true
16             port: 8080
17
18     http:
19         services:
20             # The omf-source service is use to collect health status and metrics from the Source
21             # OMF nodes. The HTTP client can be configured (ex: ssl) here by referencing

```

```

22      # https://docs.micronaut.io/latest/guide/configurationreference.html#io.micronaut.
23      http.client.ServiceHttpClientConfiguration
24      # and the subsequent sections related to micronaut.http.services.*
25      omf-source:
26        connect-timeout: 30s
27        read-timeout: 120s
28        # Example SSL configuration in case a source uses a private certificate
29        # ssl:
30        #   trust-store:
31        #     path: file:/opt/open-xchange/omf/certs/source.p12
32        #     type: PKCS12
33        #     password: secret
34      omf-target:
35        connect-timeout: 30s
36        read-timeout: 120s
37      application:
38        name: omf-scheduler
39        # Configure security including basic auth: https://micronaut-projects.github.io/
40        micronaut-security/latest/guide/#basicAuth
41        # Must be set to true or the Source Controller is not secure
42      security:
43        enabled: true
44        # Change the security of the open api views to anonymous so that they can be viewed
45        without credentials
46      intercept-url-map:
47        - pattern: /swagger/**
48          access:
49            - isAnonymous()
50        - pattern: /swagger-ui/**
51          access:
52            - isAnonymous()
53        - pattern: /rapidoc/**
54          access:
55            - isAnonymous()
56      # https://docs.micronaut.io/latest/guide/index.html#_configuring_caches
57      #caches:
58        #example:
59        #  charset: UTF-8
60        #  expire-after-access: 1h
61      metrics:
62        enabled: true
63      export:
64        # Creates an endpoint like http://host/prometheus - uses basic auth from
65        # credentials under scheduler.http.admin
66      prometheus:
67        enabled: true
68        step: PT1M
69        descriptions: true
70      router:
71        # Adds api versioning: https://docs.micronaut.io/latest/guide/index.html#apiVersioning
72      versioning:
73        enabled: true
74      parameter:
75        enabled: true
76        names: 'v'
77      header:
78        enabled: true
79        names: 'X-API-VERSION'
80      # Allows the openapi views to be seen
81      static-resources:
82      swagger:
83        paths: classpath:META-INF/swagger
84        mapping: /swagger/**
85      redoc:
86        paths: classpath:META-INF/swagger/views/redoc
87        mapping: /redoc/**
88      rapidoc:
89        paths: classpath:META-INF/swagger/views/rapidoc
90        mapping: /rapidoc/**

```

```

91     swagger-ui:
92       paths: classpath:META-INF/swagger/views/swagger-ui
93       mapping: /swagger-ui/**
94 ---
95 scheduler:
96   # Must be unique for each Scheduler instance.
97   # Be very careful when changing this value, as it is also used to determine the
98     transactional ID for writing
99   # batches into Kafka topics for each Scheduler node.
100   id: 'scheduler-0'
101   hostname: ''
102   window:
103     # If more than this many batches are created as part of a new Window, don't return the
104       list of
105     # Batch IDs as part of the Window creation result DTO, as they would just be too many
106       to display
107     # in the first place (also affects the debug logging):
108     batch.id.threshold: 50
109     # If more than this many context IDs are assigned as part of a new Window, don't
110       return the list of
111     # context IDs as part of the Window creation result DTO, as they would just be too
112       many to display
113     # in the first place:
114     context.id.threshold: 50
115   batch:
116     presync:
117       # Max number of contexts in a batch
118       size: 10
119       # Strategy to use when creating batches.
120       # Current supported strategies:
121       #   - fill-first: create batches up to the batch size then create the next batch
122       #   - fill-equal: create batches of equal size
123       strategy: fill-equal
124     cutover:
125       size: 10
126       strategy: fill-equal
127     preprovisioning:
128       size: 10
129       strategy: fill-equal
130   kafka:
131     wait: false
132     queues:
133       batch: "omf-batch"
134       response: "omf-response"
135     resize:
136       batch: true
137       response: true
138     record.header.enhance: true
139     topic:
140       list:
141         timeout: -1s
142       describe:
143         timeout: -1s
144       retry:
145         attempts: 3
146         wait: 3s
147     create:
148       # whether topics should be created when a source is created or synced (true) or
149       # whether we make use of auto-creation instead (old behaviour prior to 2.1.0-6):
150       enabled: true
151       timeout: -1s
152       partitions: 2
153       replication.factor: 0
154       config:
155         retention.ms: 432000000
156   workers:
157     allow:
158       # allow Worker shutdown via the REST API
159       shutdown: false
160       # allow overriding the Sources Workers subscribe to via the REST API
161       changeSources: false
162   http:

```



```

158     admin:
159         # Basic auth creds
160         username: admin
161         password: secret
162         controller:
163             path: /omf/scheduler/admin
164     migration:
165         controller:
166             path: /omf/scheduler/migration
167 metrics:
168     monitor:
169         windows:
170             enabled: true
171             interval: 5m
172             delay: 30s
173         batches:
174             enabled: true
175             interval: 5m
176             delay: 30s
177         sources:
178             enabled: true
179             interval: 5m
180             delay: 30s
181         targets:
182             enabled: true
183             interval: 5m
184             delay: 30s
185         contextmappings:
186             enabled: true
187             interval: 5m
188             delay: 30s
189         migrationevents:
190             enabled: true
191             interval: 5m
192             delay: 30s
193 ---
194 jackson:
195     bean-introspection-module: true
196     serialization:
197         indent-output: true
198         writeDatesAsTimestamps: false
199 ---
200 datasources:
201     # Used to persist scheduling data
202     scheduler:
203         # url should use createDatabaseIfNotExist=true if the database will not
204         # already exist: https://dev.mysql.com/doc/connector-j/8.0/en/connector-j-reference-
205         # configuration-properties.html
206         url: jdbc:mysql://localhost:3306/scheduler?createDatabaseIfNotExist=true
207         username: root
208         password: my-secret-pw
209         driverClassName: org.mariadb.jdbc.Driver
210         dialect: MYSQL
211         maximumPoolSize: 10
212         maxLifetime: 180000
213     # Used to create/drop databases for sources. This is not really the "default" data
214     # source
215     # but we need to use default because of bug https://github.com/micronaut-projects/
216     # micronaut-data/issues/598s
217     default:
218         url: jdbc:mysql://localhost:3306/
219         username: root
220         password: my-secret-pw
221         driverClassName: org.mariadb.jdbc.Driver
222         dialect: MYSQL
223         maximumPoolSize: 5
224         maxLifetime: 180000
225 ---
226 endpoints:
227     loggers:
228         enabled: true
229         sensitive: true

```

```

227 health:
228   discovery-client:
229     enabled: false
230   sources:
231     enabled: false
232   targets:
233     enabled: false
234 liquibase:
235   # fails with missing transition, might be fixed in later Micronaut releases
236   enabled: false
237 info:
238   enabled: true
239   sensitive: true
240   sourceCodeOrigin:
241     enabled: true
242     location: file:/opt/open-xchange/omf/scheduler/share/SourceCodeOrigin.txt
243 ---
244 zookeeper:
245   server: zookeeper:2181
246   blockUntilConnected: true
247   maxConnectedWaitTime: 30s
248   sessionTimeout: 1m
249   connectionTimeout: 15s
250   maxCloseWait: 15s
251   waitForShutdownTimeout: 15s
252   connectionRetry:
253     baseSleepTime: 5s
254     maxSleepTime: 30s
255     maxRetries: 50
256 ---
257 kafka:
258   bootstrap:
259     servers: kafka-1:9092, kafka-2:9092, kafka-3:9092
260   producers:
261     batch-producer:
262       enable.idempotence: true
263       # This enables transactions for the Batch Producer
264       # The value must be unique per application, but should
265       # not change for the same app after a crash, etc.
266       # Note that if you only want to allow a single Scheduler instance to be capable of
267       # writing Batches into the Kafka topics, then change this to be the same value
268       # all Scheduler instances as Kafka will fence them (see PRODUCER_FENCED).
269       # But if you want all Scheduler instances to be able to write batches into Kafka
270       # use a unique value for each Scheduler instance:
271       transactional.id: ${scheduler.id}
272   #consumers:
273     #response-consumer:
274 ---
275 mail:
276   # whether to send emails
277   enabled: false
278   window:
279     # whether to send emails when a Window succeeds:
280     success: false
281     # whether to send emails when a Window fails:
282     failure: true
283   # mandatory, must be set to be able to send emails and it
284   # must be a valid email address in the form localpart@domain, or sending will fail:
285   from: ${scheduler.id}@example.com
286   # whom to send those mails to (can be a comma separated list):
287   to:
288   cc:
289   bcc:
290   # text to include in the subject line, wrapped in []:
291   subject.id:
292   smtp:
293     host: localhost
294     port: 25
295     # leave empty for no authentication:
296     username:

```

```
297     password:
298     # SMTP, SMTPS or SMTP_TLS (SMTP with mandatory StartTLS):
299     transport: SMTP
300     # whether to allow SMTP without StartTLS:
301     smtp.plain: true
302     tls:
303         # whether to trust all SMTP server keys
304         trustall: false
305         # whether to verify SMTP server keys
306         verify: true
307 ---
308 liquibase:
309     datasources:
310     scheduler:
311         change-log: 'classpath:liquibase/scheduler/liquibase-changelog.xml'
312 ---
313 logger:
314     levels:
315         ROOT: INFO
316         com.openxchange: INFO
317         omf: INFO
318         omf.scheduler.admin.AuthenticationProviderUserPassword: WARN
319         org.apache.kafka.clients.consumer.ConsumerConfig: WARN
320 ---
```