OX2OX Migration Framework Scheduler Technical Documentation for 2.1.0

2021-07-09

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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 4

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: 2.1.0-4
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: 2.1.0-4
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 8)

A Configuration Files

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

```
micronaut:
  application:
    name: omf
  http:
    services:
      # The OMF Source HTTP REST API service configuration
      # The url is dynamic and should not be specified here
      source:
        # If some sources don't have valid public certificates (e.g. use
        # self-signed certificates), then their certificates can be added to
        # a custom Java trust-store using the keytool command and configured
        # here.
        #
        # Example:
        # ssl:
        #   enabled: true
        #   trust-store:
        #     path: file:/opt/open-xchange/omf/certs/source.p12
        #     password: secret
        #     type: PKCS12
      target:

      # The OMF Scheduler Source HTTP REST API service configuration
      scheduler-admin-source:
        url: "${omf.scheduler.url}/omf/scheduler/admin/source/"

        # If the scheduler does not have a valid public certificate
        # (e.g. uses a self-signed certificate), then its certificate can be
        # configured here.
        ssl:
          enabled: true
          trust-store:
            path: file:/opt/open-xchange/omf/certs/scheduler.p12
            password: secret
            type: PKCS12

      scheduler-admin-target:
        url: "${omf.scheduler.url}/omf/scheduler/admin/target/"

        # If the scheduler does not have a valid public certificate
        # (e.g. uses a self-signed certificate), then its certificate can be
        # configured here.
        ssl:
```

```
          enabled: true
          trust-store:
            path: file:/opt/open-xchange/omf/certs/scheduler.p12
            password: secret
            type: PKCS12

      # The OMF Scheduler Migration HTTP REST API service configuration
      scheduler-migration:
        url: "${omf.scheduler.url}/omf/scheduler/migration/"

        # If scheduler-admin above has a custom SSL configuration,
        # then it needs to be repeated here.
        ssl:
          enabled: true
          trust-store:
            path: file:/opt/open-xchange/omf/certs/scheduler.p12
            password: secret
            type: PKCS12

      # The OMF Scheduler Monitoring HTTP REST API service configuration
      scheduler-monitoring:
        url: "${omf.scheduler.url}/omf/scheduler/workers/monitor/"

        # If scheduler-admin above has a custom SSL configuration,
        # then it needs to be repeated here.
        ssl:
          enabled: true
          trust-store:
            path: file:/opt/open-xchange/omf/certs/scheduler.p12
            password: secret
            type: PKCS12

omf:
  source:
    # List source api username and passwords by identifying them
    # with the name that will be used to create the source entry in OMF.
    #
    # This is not required, and the username and password can be entered
    # for each command when working with the source.
    #
    # Example:
    # mysource:
    #   username: admin
    #   password: secret
  target:
    # List target api username and passwords by identifying them
    # with the name that will be used to create the source entry in OMF.
    #
    # This is not required, and the username and password can be entered
    # for each command when working with the target.
    #
    # Example:
    # mytarget:
    #   username: admin
    #   password: secret
  scheduler:
    # Credentials for the scheduler
    # On multi-user systems, specifying the password in a configuration file
    # with proper file system permissions is preferred to specifying it on
    # the command line, since the command line is visible to all local users.
    #
    # Example:
    # username: admin
    # password: secret

    # Location of the scheduler. Only the protocol and host name need to be
    # specified.
    url: "https://localhost:8443"
  ui:
    color: true
    unicode: true
    expandIds: false
```

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

```
# https://docs.micronaut.io/latest/guide/config.html#configurationProperties
---
micronaut:
  # SSL configuration
  # Required for production environments.
  # See https://docs.micronaut.io/latest/guide/index.html#https for details.
  ssl:
    enabled: true
    port: 8443
    key-store:
      path: file:/opt/open-xchange/omf/certs/keystore.p12
      type: PKCS12
      password: secret
  server:
    dual-protocol: true
    port: 8080

  http:
    services:
      # The omf-source service is use to collect health status and metrics from the Source
      # OMF nodes. The HTTP client can be configured (ex: ssl) here by referencing
      # https://docs.micronaut.io/latest/guide/configurationreference.html#io.micronaut.http.client.ServiceHttpClientConfiguration
      # and the subsequent sections related to micronaut.http.services.*
      omf-source:
        connect-timeout: 30s
        read-timeout: 120s
        # Example SSL configuration in case a source uses a private certificate
        # ssl:
        #   trust-store:
        #     path: file:/opt/open-xchange/omf/certs/source.p12
        #     type: PKCS12
        #     password: secret
      omf-target:
        connect-timeout: 30s
        read-timeout: 120s
  application:
    name: omf-scheduler
  # Configure security including basic auth: https://micronaut-projects.github.io/micronaut-security/latest/guide/#basicAuth
  # Must be set to true or the Source Controller is not secure
  security:
    enabled: true
    # Change the security of the open api views to anonymous so that they can be viewed without credentials
    intercept-url-map:
      - pattern: /swagger/**
        access:
          - isAnonymous()
      - pattern: /swagger-ui/**
        access:
          - isAnonymous()
      - pattern: /rapidoc/**
        access:
          - isAnonymous()
      - pattern: /redoc/**
        access:
          - isAnonymous()
  # https://docs.micronaut.io/latest/guide/index.html#_configuring_caches
  #caches:
    #example:
      #charset: UTF-8
      #expire-after-access: 1h
  metrics:
    enabled: true
    export:
      # Creates an endpoint like http://host/prometheus - uses basic auth from
      # credentials under scheduler.http.admin
      prometheus:
        enabled: true
```

```
        step: PT1M
        descriptions: true
  router:
    # Adds api versioning: https://docs.micronaut.io/latest/guide/index.html#apiVersioning
    versioning:
      enabled: true
      parameter:
        enabled: true
        names: 'v'
      header:
        enabled: true
        names: 'X-API-VERSION'
    # Allows the openapi views to be seen
    static-resources:
      swagger:
        paths: classpath:META-INF/swagger
        mapping: /swagger/**
      redoc:
        paths: classpath:META-INF/swagger/views/redoc
        mapping: /redoc/**
      rapidoc:
        paths: classpath:META-INF/swagger/views/rapidoc
        mapping: /rapidoc/**
      swagger-ui:
        paths: classpath:META-INF/swagger/views/swagger-ui
        mapping: /swagger-ui/**
---
scheduler:
  id: 'scheduler-0'
  hostname: ''
  batch:
    presync:
      # Max number of contexts in a batch
      size: 10
      # Strategy to use when creating batches.
      # Current supported strategies:
      #    - fill-first: create batches up to the batch size then create the next batch
      #    - fill-equal: create batches of equal size
      strategy: fill-equal
    cutover:
      size: 10
      strategy: fill-equal
    preprovisioning:
      size: 10
      strategy: fill-equal
  kafka:
    wait: false
    queues:
      batch: "omf-batch"
      response: "omf-response"
    resize:
      batch: true
      response: true
  workers:
    allow.shutdown: false
  http:
    admin:
      # Basic auth creds
      username: admin
      password: secret
      controller:
        path: /omf/scheduler/admin
    migration:
      controller:
        path: /omf/scheduler/migration
  metrics:
    cache:
      windows.millis: 300000
      batches.millis: 300000
      migrationevents.millis: 300000
      source.millis: 300000
      target.millis: 300000
```

```
---
jackson:
  bean-introspection-module: true
  serialization:
    indent-output: true
    writeDatesAsTimestamps: false
---
datasources:
  # Used to persist scheduling data
  scheduler:
    # url should use createDatabaseIfNotExist=true if the database will not
    # already exist: https://dev.mysql.com/doc/connector-j/8.0/en/connector-j-reference-configuration-properties.html
    url: jdbc:mysql://localhost:3306/scheduler?createDatabaseIfNotExist=true
    username: root
    password: my-secret-pw
    driverClassName: org.mariadb.jdbc.Driver
    dialect: MYSQL
    maximumPoolSize: 10
    maxLifetime: 180000
  # Used to create/drop databases for sources. This is not really the "default" data source
  # but we need to use default because of bug https://github.com/micronaut-projects/micronaut-data/issues/598s
  default:
    url: jdbc:mysql://localhost:3306/
    username: root
    password: my-secret-pw
    driverClassName: org.mariadb.jdbc.Driver
    dialect: MYSQL
    maximumPoolSize: 5
    maxLifetime: 180000
---
endpoints:
  loggers:
    enabled: true
    sensitive: true
  health:
    discovery-client:
      enabled: false
    sources:
      enabled: false
    targets:
      enabled: false
  liquibase:
    # fails with missing transition, might be fixed in later Micronaut releases
    enabled: false
  info:
    enabled: true
    sensitive: true
    sourceCodeOrigin:
      enabled: true
      location: file:/opt/open-xchange/omf/scheduler/share/SourceCodeOrigin.txt
---
zookeeper:
  server: zookeeper:2181
---
kafka:
  bootstrap:
    servers: kafka-1:9092, kafka-2:9092, kafka-3:9092
  producers:
    batch-producer:
      enable.idempotence: true
      # This enables transactions for the Batch Producer
      # The value must be unique per application, but should
      # not change for the same app after a crash, etc.
      transactional.id: producer-1
  #consumers:
    #response-consumer:
---
liquibase:
  datasources:
```

```
    scheduler:
      change-log: 'classpath:liquibase/scheduler/liquibase-changelog.xml'
---
jooq:
  datasources:
    default:
      sql-dialect: 'MARIADB'
    scheduler:
      sql-dialect: 'MARIADB'
---
logger:
  levels:
    ROOT: INFO
    com.openxchange: INFO
    omf: INFO
    omf.scheduler.admin.AuthenticationProviderUserPassword: WARN
---
```