eIDAS Middleware Migration Guide

Release 3.3.0

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Contents:

1 Overview

In version 3.3.0 of the eIDAS Middleware, the used database changes from ‘H2’ to ‘HSQL’. A migration tool is provided to migrate the data from an old ‘H2’ database to a new ‘HSQL’ database.

There are two options for the usage of the Migration Tool, depending on the type of deployment of your eIDAS Middleware.

1. Executable JAR file for JAR deployments of the eIDAS Middleware
2. Docker Image for Docker deployments of the eIDAS Middleware

The following documentation will provide guidance for both options.

The migration is tested and supported for versions 3.0.x, 3.1.x and 3.2.x to 3.3.0. Older versions are not officially supported.

Migrating using the JAR file describes the migration with the Executable JAR file, while *Migrating using Docker Image* describes the Docker Image migration.

2 Migrating using the JAR file

This section describes the migration process for eIDAS Middleware deployments where the JAR is directly used, e.g. when you are using the OVA image or you have deployed the eIDAS Middleware on any virtual machine.

2.1 Setup the applications.properties

The Migration Tool must be configured for the old and new database. Please see the following example, which must be adapted to your local deployment:

```
#
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↪WITHOUT WARRANTIES OR CONDITIONS
# OF ANY KIND, either express or implied. See the Licence for the specific␣
↪language governing permissions and
# limitations under the Licence.
#

# H2 Database
h2.datasource.url=jdbc:h2:file:/opt/eidas-middleware/database/eidas-
↪middleware-db;DB_CLOSE_DELAY=-1;DB_CLOSE_ON_EXIT=FALSE;IFEXISTS=TRUE
h2.datasource.username=<username>
h2.datasource.password=<password>

# HSQL Database
hsql.datasource.url=jdbc:hsqldb:file:/opt/eidas-middleware/database/eidas-
↪middleware-db;DB_CLOSE_DELAY=-1
hsql.datasource.username=<username>
```

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```
hsql.datasource.password=<password>
```

This file should be created in the working directory of the Migration Tool, typically in the same directory as the Migration Tool JAR file.

The values for the 'H2' database can be copied from the *application.properties* of your eIDAS Middleware deployment, the property names however are slightly different in the Migration Tool. We suggest to define a new directory for the 'HSQL' database. The directory should be empty and will be created if necessary.

2.2 Run the Migration Tool

Before running the Migration Tool, please stop the eIDAS Middleware to prevent data inconsistencies.

The migration tool does not delete or modify data in the old 'H2' database. In case the migration was not successful, you can start the old eIDAS Middleware again.

To run the Migration Tool, execute the following command from the directory where the Migration Tool JAR file is stored. Please make sure that the application.properties for the Migration Tool is stored in the same directory.

```
java -jar database-migration-3.3.0.jar
```

The tool should exit without errors. In case the tool did encounter a problem and did not exit cleanly, please contact the eIDAS Middleware support at Governikus with the log from the Migration Tool.

2.3 Prepare and start the eIDAS Middleware Configuration

The database configuration of the eIDAS Middleware must be updated to use the new 'HSQL' database. Therefore, make the following changes in the *application.properties* of the eIDAS Middleware:

```
# Old H2 database configuration which should be deleted:
spring.datasource.url=jdbc:h2:file:/path/to/your/h2-database;DB_CLOSE_DELAY=-
↪1;DB_CLOSE_ON_EXIT=FALSE
spring.datasource.username=<username>
spring.datasource.password=<password>

# The new HSQL database configuration:
spring.datasource.url=jdbc:hsqldb:file:/path/to/your/hsql-database
spring.datasource.username=<username>
spring.datasource.password=<password>
```

The values for the HSQL database can be copied from the *application.properties* of the Migration Tool.

Afterwards, you can start the eIDAS Middleware application.

With version 3.3.0 of the eIDAS Middleware, a newer API version of the DVCA interface is used. This version is available at different endpoints, which means that the DVCA configuration must be updated for the new version.

For eIDAS Middlewares in test environments:

```
Terminal Authentication service URL
Old: https://dvca-r1.governikus-eid.de/gov_dvca/ta-service
New: https://dvca-r1.governikus-eid.de/gov_dvca/ta-service-140

Passive Authentication service URL
Old: https://dvca-r1.governikus-eid.de/gov_dvca/pa-service
New: https://dvca-r1.governikus-eid.de/gov_dvca/pa-service-140
```

For eIDAS Middlewares in productive environments:

```
Terminal Authentication service URL
Old: https://berca-p1.d-trust.net/ps/dvca-at/v1_1
New: https://berca-p1.d-trust.net/ps/dvca-at/v1_4

Passive Authentication service URL
Old: https://berca-p1.d-trust.net/ps/scs/v1_1
New: https://berca-p1.d-trust.net/ps/scs/v1_4
```

After this change, the connection to the DVCA should be working again, which can be verified by manually renewing the CVC and renewing the Master and Defect List.

3 Migrating using Docker Image

This section describes the migration process for eIDAS Middleware deployments where the Docker Image is used.

3.1 Run the Migration Tool

The Migration Tool must be configured for the old and new database. In case of the Docker Image, this is done using volumes and environment variables.

First, you must define the mounts for the old and new database. There are two directories prepared in the Docker Image to mount the database directories: */opt/eidas-middleware/database-migration/h2* and */opt/eidas-middleware/database-migration/hsql*.

The parameter for mounting a volume in docker is "-v". Here are two examples for different mounting options. Choose the appropriate option for you local deployment.

To mount an existing named volume, in this example to the h2 directory:

```
docker run -v <your_named_volume>:/opt/eidas-middleware/database-migration/h2␣
↪[...]
```

To mount a directory from the host machine, in this example to the h2 directory:

```
docker run -v /path/on/the/host:/opt/eidas-middleware/database-migration/h2 [.
↪..]
```

Secondly, after the mounts for the old and new database are prepared, the configuration for the Migration Tool can be specified using environment variables. These environment variables must be specified:

```
H2_DATASOURCE_URL=jdbc:h2:file:/opt/eidas-middleware/database-migration/h2/
↪<database-name>;DB_CLOSE_DELAY=-1;DB_CLOSE_ON_EXIT=FALSE
H2_DATASOURCE_USERNAME=<username>
H2_DATASOURCE_PASSWORD=<password>
HSQL_DATASOURCE_URL=jdbc:hsqldb:file:/opt/eidas-middleware/database-migration/
↪hsql/<database-name>
HSQL_DATASOURCE_USERNAME=<username>
HSQL_DATASOURCE_PASSWORD=<password>
```

In case the recommended mount paths are used, only the *database-name*, *username* and *password* for both the old and the new database must be adapted to your local deployment. If another mount path inside of the container is used, the path of the *DATASOURCE_URL* must be adapted as well.

This is an example with all necessary parameters to execute the Migration Tool:

```
docker run --rm \
    -v middleware-h2-database:/opt/eidas-middleware/database-migration/h2 \
    -v middleware-hsql-database:/opt/eidas-middleware/database-migration/hsql␣
↪\
    -e H2_DATASOURCE_URL=jdbc:h2:file:/opt/eidas-middleware/database-
↪migration/h2/eumw-db;DB_CLOSE_DELAY=-1;DB_CLOSE_ON_EXIT=FALSE \
    -e H2_DATASOURCE_USERNAME=<username> \
    -e H2_DATASOURCE_PASSWORD=<password> \
    -e HSQL_DATASOURCE_URL=jdbc:hsqldb:file:/opt/eidas-middleware/database-
↪migration/hsql/eumw-db; \
    -e HSQL_DATASOURCE_USERNAME=<username> \
    -e HSQL_DATASOURCE_PASSWORD=<password> \
    governikus/eidas-middleware-databasemigration:3.3.0
```

Before running the Migration Tool, please stop the eIDAS Middleware to prevent data inconsistencies.

The migration tool does not delete or modify data in the old 'H2' database. In case the migration was not successful, you can start the old eIDAS Middleware again.

The tool should exit without errors. In case the tool did encounter a problem and did not exit cleanly, please contact the eIDAS Middleware support at Governikus with the log from the Migration Tool.

3.2 Prepare and start the eIDAS Middleware Configuration

The database configuration of the eIDAS Middleware must be updated to use the new 'HSQL' database. Therefore, make the following changes in the *application.properties* of the eIDAS Middleware:

```
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spring.datasource.url=jdbc:h2:file:/path/to/your/h2-database;DB_CLOSE_DELAY=-
↪1;DB_CLOSE_ON_EXIT=FALSE
spring.datasource.username=<username>
spring.datasource.password=<password>

# The new HSQL database configuration:
spring.datasource.url=jdbc:hsqldb:file:/path/to/your/hsql-database
spring.datasource.username=<username>
spring.datasource.password=<password>
```

The values of the HSQL database environment variables of the Migration Tool may be reused for these properties. In case the same mount point for the volume of the 'HSQL' database is used as during the migration, the same URL can be used for this deployment. Otherwise, adapt the URL to your local deployment.

Afterwards, you can start the eIDAS Middleware application.

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New: https://dvca-r1.governikus-eid.de/gov_dvca/pa-service-140
```

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Passive Authentication service URL
Old: https://berca-p1.d-trust.net/ps/scs/v1_1
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