IUCLID Data Recovery Tool

1. Criteria for use of this software tool

The IUCLID Data Recovery Tool is a standalone java application that recovers data that may not have been correctly migrated during an upgrade of the IUCLID software. The criteria for when the tool should be run are:

1. IUCLID 6 has been upgraded from version 6.x to v7.0.1 or 7.0.2.

AND

2. Before the update, data was known to exist or could have existed in the fields *Description of key information* (KeyInformation) for the following endpoint summaries:
    - Acute toxicity
    - Repeated dose toxicity
    - Carcinogenicity
    - Neurotoxicity
    - Immunotoxicity

Endpoint summaries are the documents used to store the outcome of the assessment of the information available in relevant studies. This part of the format has been subject to changes in IUCLID 6 v7 as part of a harmonisation effort.

AND

3. The IUCLID database is of the type: Oracle, PostgreSQL, or Java Database Server. In these cases, the backup file created by the *IUCLID Updater Tool* (`i6fb`) does not contain the IUCLID database.

2. How to use the tool

The *IUCLID Data Recovery Tool* transfers data between two instances of the IUCLID database: one from before, and one from after the upgrade. These two separate databases must be accessible to the tool at the same time. Therefore, it is necessary to have taken a backup of the database before upgrading. If the old database is no longer running in an accessible form, the backup must be used to create an instance of the old database to which the tool can connect. The tool also connects to the new database, which should be readily available, because it is in use by the upgraded instance of IUCLID.

From a backup of the database of IUCLID 6 version 6.x taken before the upgrade, set up an instance of the IUCLID database. There are various ways of doing this, dependent on the type of database, and the way in which the backup was made. Please be careful not to overwrite your current IUCLID 6 database version 7 with the IUCLID 6 database version 6. It is good practice to give the database/schema a name on-default name, for example *IUCLID6_v26_bu* instead of *IUCLID6*. For more information specific to the type of database, see *Appendix A*.

Ensure that the backup of version 6.x is kept safely such that it can be re-used if required. Take a backup of the upgraded IUCLID 6 database version 7.0.1 or 7.0.2, so that it can be restored if required.

Download the *IUCLID Data Recovery Tool* from the IUCLID website. Configure the tool to point to the source and the target databases. This is done in the file `connections.config`. The configurable parameters are shown below:

```
# url for source database
# derby: jdbc:derby:C:/data/derby/source_folder_name
# oracle: jdbc:oracle:thin:@//127.0.0.1:1521/source_schema_name
# postgres: jdbc:postgresql://127.0.0.1:5432/source_database_name
--source-jdbc-url=
# username for connecting to the source database
--source-user=
# password for connecting to the source database
--source-password=

# url for target database, for oracle and postgres the schema must exist
# derby: jdbc:derby:C:/data/derby/target_folder_name
# oracle: jdbc:oracle:thin:@//127.0.0.1:1521/target_schema_name
# postgres: jdbc:postgresql://127.0.0.1:5432/target_database_name
--target-jdbc-url=
# username for connecting to the source database
--target-user=
# password for connecting to the source database
--target-password=

# uncomment the following line to enable more detailed logging
#-v
```

It includes examples of the formats required for the different types of database connection URL, as shown below.

Type of database	URL format
derby	jdbc:derby:<full path to database folder>
oracle	jdbc:oracle:thin:@//<host>:<port>/<schema name>
postgres	jdbc:postgresql://<host>:<port>/<database name>

For example, for PostgreSQL, if the source database name is *IUCLID6_v27_bu*, and all default values are used for the target, the values to enter would be:

Source

--source-jdbc-url=jdbc:postgresql://127.0.0.1:5432/IUCLID6_v26_bu

--source-user=IUCLID6

--source-password=IUCLID6

Target

--target-jdbc-url=jdbc:postgresql://127.0.0.1:5432/IUCLID6

--target-user=IUCLID6

--target-password=IUCLID6

The *IUCLID Data Recovery Tool* is a Java executable, so Java must be accessible. The tool is run from the command line using a script that depends on the operating system.

Windows:

```
iuc6-data-recover.bat
```

It is convenient to send the output of the tool to a text file for checking after the tool has finished running. To do that, append the following to the command:

```
 > <file name>.log 2>&1
```

e.g.

```
iuc6-data-recover.bat > data-recovery.log 2>&1
```

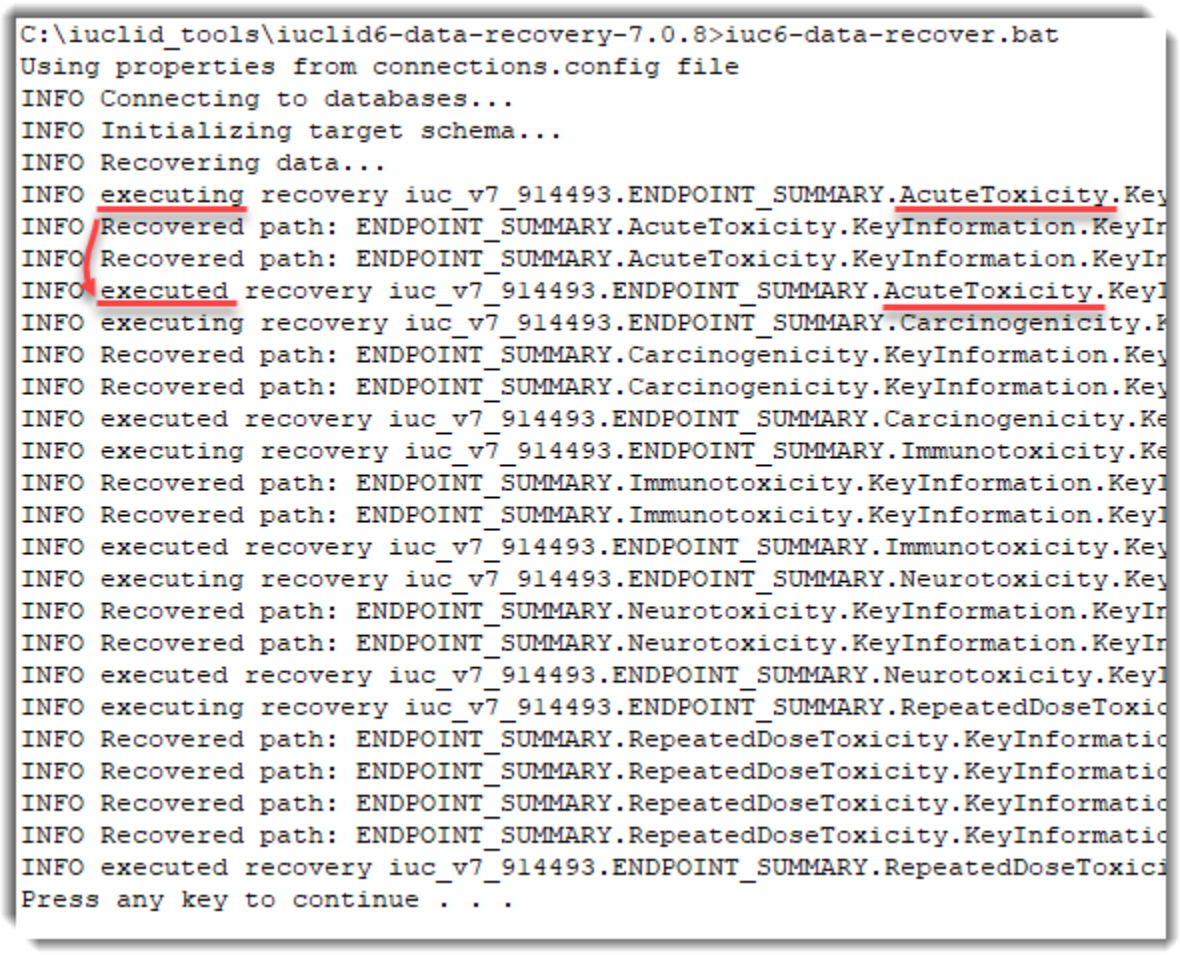
After the tool has run, to exit press any key.

Linux:

```
iuc6-data-recover.sh
```

3. Output of the tool

The output of the tool first shows the start-up, and then the connection to the databases. After *INFO Recovering data…*, the field paths that the tool can act upon are shown in turn, between the statements *INFO executing* and *INFO executed*, as shown below for one type of document, underlined in red.



Each value recovered is indicated by a line that starts with *INFO Recovered path*, and ends with the UUID of the containing document. The documents for which data was recovered as underlined in red above are shown below.

```
INFO Recovered path:
ENDPOINT_SUMMARY.AcuteToxicity.KeyInformation.KeyInformation in
document: 92c5c207-10ab-4f1e-a46b-187d17d4c89d/0
INFO Recovered path:
ENDPOINT_SUMMARY.AcuteToxicity.KeyInformation.KeyInformation in
document: 44e1da5e-a123-4be3-bd9a-a9f8cbdd2ac6/0
```

For example, to view the affected data in the IUCLID interface, copy and paste the UUID into the *Search by UUID* feature.

Appendix A. Creating the source database from a backup

Oracle:

- If the tool *Data Pump* were used to take a backup only of the data in the IUCLID schema, then the simplest method is to set up a new source schema in the same database server where the current IUCLID schema is located.
- If the tool RMAN were used to take a backup of the entire database, then the simplest method is to set up a new database server, and to restore the backup in that new instance.

PostgreSQL:

- If SQL Dump were used to take a backup of the data in the IUCLID database, then the simplest method is to restore the backup in a new source database in the same server where the current IUCLID database is located.
- If a backup were taken at the file system level of the entire database cluster, then the simplest method is to set up a new database server, and to restore the backup in that new instance.
- If a backup copy of the database were made using the tool *pgAdmin*, this backup can be restored into a newly created database using *pgAdmin*.

A detailed description of the installation, configuration, and update of IUCLID 6 Server is provided in the document Installation and Update Instructions for IUCLID 6 Server.