

Relational Database Preservation Standards and Tools

Workshop guide

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Here a list of the steps to be demonstrated will be presented to help attendants follow the demonstrations. The workshop will be divided in three themes, that are relevant in the archive preservation workflow: extraction from live system, validation upon reception, and access information.

Preparation

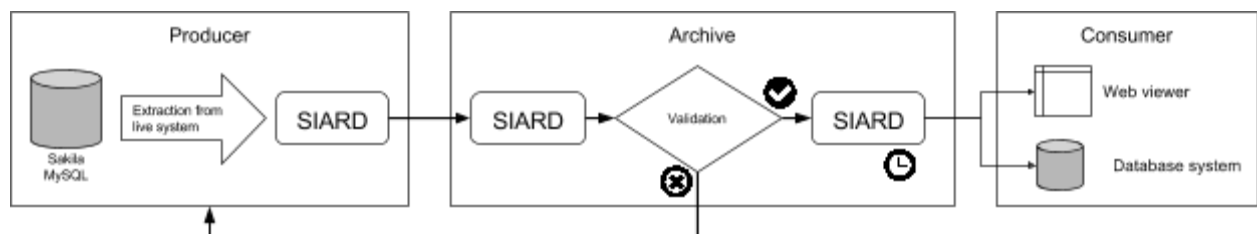
Do you have a laptop? Then:

1. Request your pen drive with the software pack. No pen drive?
http://provided_address/pack.zip
<https://github.com/keeps/db-visualization-toolkit/releases/download/v0.1.0/dbvbk-0.1.0-all.zip>
2. Insert the pen drive and copy its contents to your Desktop folder
3. Access the wireless “WORKSHOP08” with password “databases”

Scenario

We will be demonstrating three scenarios:

1. The extraction of a database from a live system into a SIARD file
2. Validating the SIARD file
3. Using a viewer to explore the contents of the SIARD file



1. Extraction from live system

A live MySQL database is provided in the system and a tool will be used to extract all information into a SIARD file. Two tools will be presented: Database preservation toolkit and SIARD Suite.

1.A. Database preservation toolkit

Execute the following steps:

1.A.1. Go to the software pack, and in the folder db-visualization-toolkit on your file explorer

1.A.2. Open a terminal

- **On Windows:**

`SHIFT+Right Click` the folder and select “Open command window here”

- **On Mac OS:**

`CMD+SPACE`, write “Terminal” and press `ENTER`, then change into the db-visualization-toolkit directory

```
cd ~/Desktop/WORKSHOP08/db-preservation-toolkit
```

- **On Linux**

`Right Click` the folder and select “Open in terminal”

1.A.3. Execute the following command:

- **On Windows:**

```
jre\windows\bin\java.exe "-Dfile.encoding=UTF-8" -jar dbptk-app.jar --import=mysql --import-hostname=provided_address --import-database=sakila --import-username=ipres --import-password=ipres --export=siard-2 --export-file=sakila-siard2.siard
```

- **On Mac OS:**

```
jre/mac/bin/java -Dfile.encoding=UTF-8 -jar dbptk-app.jar --import=mysql --import-hostname=provided_address --import-database=sakila --import-username=ipres --import-password=ipres --export=siard-2 --export-file=sakila-siard2.siard
```

- **On Linux:**

```
jre/linux/bin/java -Dfile.encoding=UTF-8 -jar dbptk-app.jar --import=mysql --import-hostname=provided_address --import-database=sakila --import-username=ipres --import-password=ipres --export=siard-2 --export-file=sakila-siard2.siard
```

1.A.4. Checkout the SIARD file that was created, named sakila-siard2.siard

- You can rename the file to “sakila-siard2.siard.zip” and unzip it

1.B. SIARD Suite

1.B.1. Go to the software pack, and in the folder *SIARD Suite-1.89* on your file explorer

1.B.2. Start SIARD Suite

- **On Windows:**

Doubleclick `siardedit.cmd`

- **On Mac OS and Linux:**

Run `siardedit.sh` (either by doubleclick, or in a Terminal)

1.B.3. Import from Database:

1. Click `File > New from database ...`
2. Choose location to save SIARD file (e.g. Desktop) and enter filename (e.g. sakila-siard1), then click `Save`
3. Configure database connection

Connection type: `MySQL`

Connection Info: `provided_address/sakila`

Database user: `ipres`

Database password: `ipres`

Click `Open`

1.B.4. Wait until the database export finished, then click `Exit`

- You can now view the file in SiardEdit and change Metadata (Click `Apply` beneath fields or `File > Save` to apply changes)
- You can rename the file to “sakila-siard1.siard.zip” and unzip it

2. Validating the SIARD file

2.A. Using KOST-val

2.A.1. Go to the software pack, and in the folder *KOST-Val* on your file explorer

2.A.2. Perform validation using KOST-Val

- **GUI (Windows only):**

- a. Doubleclick `KOST-Val_en.exe`
- b. Click `Select File ...` and choose *sakila-siard1.siard*
- c. Click `Validate`
- d. Click `Yes` to show detailed result in Browser

- **Command Line - Windows**

- a. Open a Terminal (See 1.A.2 for instructions)
- b. Execute command:

```
..\jre\windows\bin\java.exe -jar kostval_en.jar --format  
..\sakila_siard1.siard
```

- c. Detailed logfile can be found in folder *logs*

- **Command Line - Mac OS**

- a. Open a Terminal (See 1.A.2 for instructions)
- b. Execute command:

```
../jre/mac/bin/java -jar kostval_en.jar --format  
../sakila_siard1.siard
```

- c. Detailed logfile can be found in folder *logs*

- **Command Line - Linux**

- a. Open a Terminal (See 1.A.2 for instructions)
- b. Execute command:

```
../jre/linux/bin/java -jar kostval_en.jar --format  
../sakila_siard1.siard
```

- c. Detailed logfile can be found in folder *logs*

3. Accessing information in the SIARD file

Two tools will be presented that aim to display information contained in a SIARD file: Database visualization toolkit and SIARDexcerpt.

3.A. Database Visualization Toolkit

A server is available at http://provided_address:8080/ to explore a Sakila database loaded with additional descriptive metadata.

To set up your own, execute the following steps:

3.A.1. Go to the software pack, and in the folder db-visualization-toolkit

3.A.2. Open a terminal

3.A.3. Execute the following command, and keep the terminal window open:

- **On Linux:**

```
./start.sh
```

- **On Mac OS:**

```
./start.command
```

- **On Windows:**

```
start.bat
```

3.A.4. The server will be available at <http://127.0.0.1:8080/> and include a Sakila database loaded with additional descriptive metadata

3.A.5. If you'd like to add more databases, checkout the instructions of the 3.A.3 step output

3.A.6. To shutdown the server, execute the following steps:

- **On Linux**, execute the command:

```
./stop.sh
```

- **On Mac OS**, execute the command:

```
./stop.command
```

- **On Windows:**

a. Close both terminal windows that opened when the server was started

b. Execute the command:

```
stop.bat
```

(some Windows versions output errors when executing this command; the errors can be safely ignored)

3.B. SIARDexcerpt

3.B.1. Go to the software pack, and in the folder *SIARDexcerpt* on your file explorer

3.B.2. Perform validation using SIARDexcerpt

- **GUI (Windows only):**

a. Doubleclick `SIARDexcerpt_en.exe`

b. Click `Select File ...` and choose *sakila-siard1.siard*

- c. Enter Configuration: language
- d. Click `Run`
- e. Search for eng (click `Run`, click `Yes`)
- f. Click on `3. Excerpt`
- g. Search for 1 (click `Run`, click `Yes`)

- **Command Line - Windows**

- a. Open a Terminal (See 1.A.2 for instructions)
- b. Execute command:

```
..\jre\windows\bin\java.exe -jar siardexcerpt_en.jar  
language --init
```

- c. Execute command:

```
..\jre\windows\bin\java.exe -jar siardexcerpt_en.jar  
language --search eng
```

- d. Execute command:

```
..\jre\windows\bin\java.exe -jar siardexcerpt_en.jar  
language --excerpt 1
```

- e. Detailed logfile can be found in folder *logs*

- **Command Line - Mac OS**

- **Command Line - Linux**