ENCO

Installation Guide

SOX Client and SOX Server

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1 Introduction

This document describes how to install the SOX Client and the SOX Server (also called CDO Server) with database to have a distributed environment to work with SOX. Assumption is that the database and the SOX Server are installed on the same machine.

Preparation

To be able to have the CDO Server up and running you need the following installed on the server where you want to install the SOX Server:

- Installation of MySQL database in version 5.7.x
- Root privileges on the server

Installation of MySQL

Install the MySQL database in version 5.7.x as mentioned on the product page of MySQL. After finish installation of the MySQL database software some preparation is needed to allow SOX Server to work with this database.

Initialization for Linux

When running the database on a linux system, open the configuration file for the MySQL database (normally stored at /etc/my.cnf or /etc/mysql/my.cnf), search for section [mysqld] and add these two lines:

```
… [mysqld]
lower_case_table_names=1
sql-mode="STRICT_TRANS_TABLES,NO_AUTO_CREATE_USER,NO_AUTO_VALUE_ON_ZERO,NO_ENGINE_SUBSTITUTION,ONLY_FULL_GROUP_BY" …
```

Initialization for Windows

When running the MySQL database on a windows system, no further settings needed for the database.

2 Installing SOX Server

To install the SOX Server just download the ZIP file containing the SOX Server and store the downloaded file wherever you want on the server on which you want to install the SOX Server.

Unzip the content to a directory of your choice. If possible do not create a path with spaces in it.
Recommended is the folder c:\sox2server (on Windows) or /opt/sox2server (on Linux). This folder is named INSTALL_FOLDER in the rest of the document.

On Linux also add some executable flags:

```
$ chmod +x $TARGET_DIR/sox2server
$ chmod +x $TARGET_DIR/features/enco.sox2.releng.jre.linux.gtk.x86_64*/jre/bin/*
```

Setup database

On the database a new user must be created with some privileges. For this some scripts exists in the already unzipped server file, so go to <INSTALL_FOLDER>/scripts.

Here you can find the file `mysql-init.sql`.

Open the command line for mysql and execute this file as root user on the database:

```
$ mysql -u root -p -v < mysql-init.sql
```

This script creates the database SOX_REPO and the user SOX_REPO_USER which has all privileges for the new database.

Note that the database user SOX_REPO_USER can only access the database from same server. If you want to have the SOX Server on a different machine than the database please also execute the file `mysql-initremote.sql`. This script will create another user which is allowed to connect the database from another server than localhost.

Setup database connection on SOX Server

In the installation folder of the SOX Server some files must be changed to allow the SOX Server to talk to the MySQL database.

First of all, you have to download the driver which allows the SOX Server to connect to the MySQL database. You can download the driver from here: https://downloads.mysql.com/archives/get/p/3/file/mysql-connector-java-5.1.48.tar.gz

Store the downloaded archive on your system and uncompressing the archive. Inside the archive you will find the file `mysql-connector-java-5.1.48-bin.jar`. Copy this file to <INSTALL_FOLDER>/db-driver.

Now open the file <INSTALL_FOLDER>/`sox2server.ini` (please do not open this file with WordPad on Windows, use a plain text editor like editor or notepad++). At the end of the file you find the line

```
-Dnet4j.config=configuration/config-h2-embedded
```
Replace

this line with the following lines:

```
-Dnet4j.config=configuration/config-mysql
-Xbootclasspath/a:db-driver/mysql-connector-java-5.1.48-bin.jar
```
Save

the changed file.

Now open the file <INSTALL_FOLDER>/`configuration/config-mysql/cdo-server.xml` (also for this file use a plain text editor like editor or notepad++)

At the end of the file you will find lines like this

```
<dataSource class="com.mysql.jdbc.jdbc2.optional.MysqlConnectionPoolDataSource"
URL="jdbc:mysql://localhost:3306/SOX_REPO" user="SOX_REPO_USER"
password="Enco9182" />
```

When you have installed the MySQL database and SOX Server on the same machine and have installed as described in this document, nothing must be changed in the file cdo-server.xml. But when you have changed some settings for your database, like username or password, please add here the right values for your system.

When you also have changed the name of the database to use (the schema, not recommended to do so!), you have also to change the database name not only in the connection settings but also at the beginning of the file in this line: <repository name="SOX_REPO" type="sox">

Now the setup in the configuration has finished. Just one step left which will install the SOX Server as a system service.

Install SOX Server as service on Linux

To create a service on Linux to start/stop the SOX Server like other services on your Linux server do the following

1. Create a file named sox.service in folder <INSTALL_FOLDER>
2. Add this content to the newly created file:
   ```
   [Unit]
   Description=SOX Server
   [Service]
   WorkingDirectory=/opt/sox2server
   Type=simple
   ExecStart=/opt/sox2server/sox2server
   [Install]
   WantedBy=multi-user.target
   ```
3. Install the service on your system as a system service
   ```
   systemctl enable <INSTALL_DIR>/sox.service
   ```

To start the new service, type

```
systemctl start sox.service
```

To stop the service, type

```
systemctl stop sox.service
```

To display currenct status of the new service, type

```
systemctl status sox.service
```

Install SOX Server as service on windows

To install the SOX Server as a service on windows, open a command line with admin privileges and go to folder <INSTALL_FOLDER>/scripts. Here you will find a file named service_install.exe. Execute this file. The file will only work for a short time. Installation was successful if you see an output like this:

```
C:\WINDOWS\System32\cmd.exe
"Removing old sox2server Service ..."
sox2server: STOP: Der Vorgang wurde erfolgreich beendet.
Service "sox2server" removed successfully!

Gewartet wird 0 Sekunden. Weiter mit beliebiger Taste...
Service "sox2server" installed successfully!
Set parameter "Description" for service "sox2server".
Set parameter "AppStdout" for service "sox2server".
Set parameter "AppStderr" for service "sox2server".
sox2server: START: Der Vorgang wurde erfolgreich beendet.
"Finished setting up sox2server service !"
Drücken Sie eine beliebige Taste . . . _
```

When you now open the service control center on Windows you will find a new service called sox2server.

First run of SOX Server

Now you are finished with setting up the SOX Server and you can start the server for the first time. Just start the server as described above and wait until you see in the log file of the server the line

CDO Server started

The first start of the SOX Server will take some minutes as the first startup will create all the tables needed and also add some content to this tables.

On Windows you will find the log in the file log.txt in the install folder, on Linux you will find the log output in /var/log/syslog.

Memory Configuration

There is a default maximum memory setting for the java virtual machine that runs the server. This setting depends on the operating system and the total amount of memory available on the hardware.

F.e: A system with 16 GB of memory provides ~ 8 GB per default.

You can change the value manually in the "sox2server.ini" inside the installation directory of the server.

The memory value is for example set to 8GB with the following setting. Please note that it is mandatory to specify the setting below the -vmargs attribute

-Xmx8192m

or alternatively

-Xmx8g

3 Installation SOX Client

To install the SOX Client just download the archive or the installer.

When you using the archive just uncompressing the file on a folder of your choice (recommended: c:\sox2client).

When using the installer, it is recommended to use a installation path without spaces (recommended install folder is c:\sox2client).

In your home directory (normally c:\users\<username>) create a folder named SOX2 and inside this folder create another folder named licenses. In this folder store the license you have received from EnCo. Do not rename the received license file.

After starting the SOX Client a screen will appear where you can choose with which type of repository you want to work (locally, existing, remote). Choose remote to connect to the SOX Server installed in the steps before.

In the dialog displayed for connection to the SOX Server type in the name of the server where you have installed the SOX Server (you can also type in the IP address if your server does not have a name in your network). The default port of the SOX Server is 2036, this value is preselected in the repository wizard. When the SOX Server is running and accessible you will see the repository SOX_REPO to choose. Select this entry in the list of repositories and finish the wizard.

After a short time, the SOX Client is up and running.