Operation

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The Lucene index information is stored in files arranged in a folder structure. This folder structure is replicated in every Soffid Console and every Sync Server and also is saved in the database.

In case an instance (Docker, Kubernetes, or stand-alone) detects an inconsistency, the information will be overwritten with the database data.

When you update an object, marked as the textual index, a task will be created. The **soffid agent** will execute this task and the Sync Server will update the database tables related to the textual index.

Folder structure

The folder structure is the following:

- **../index/<TENANT>/<SOFFID_OBJECT>**

Example

1. Here you are the folder structure for the Soffid Console

Images

```
root@200d60e4947a:/opt/soffid/iam-console-4/index/master# ll
total 16
drwxr-x--- 4 root root 4096 Sep 27 07:21 ./
drwxr-xr-x 3 root root 4096 Jul 11 16:36 ../
drwxr-x--- 2 root root 4096 Sep  7 15:00 bpm/
drwxr-x--- 2 root root 4096 Sep 27 07:45 com.soffid.iam.base.api.User/
```

```
root@200d60e4947a:/opt/soffid/iam-console-4/index/master/com.soffid.iam.base.api.User# ll
total 88
drwxr-x--- 2 root root 4096 Sep 27 07:45 ./
drwxr-x--- 4 root root 4096 Sep 27 07:21 ../
-rw-r----- 1 root root  447 Sep 27 07:40 _4.cfe
-rw-r----- 1 root root 2519 Sep 27 07:40 _4.cfs
-rw-r----- 1 root root  340 Sep 27 07:40 _4.si
-rw-r----- 1 root root   67 Sep 27 07:41 _b_3.liv
-rw-r----- 1 root root  447 Sep 27 07:40 _b.cfe
-rw-r----- 1 root root 3695 Sep 27 07:40 _b.cfs
-rw-r----- 1 root root  378 Sep 27 07:40 _b.si
-rw-r----- 1 root root  447 Sep 27 07:40 _c.cfe
-rw-r----- 1 root root 2530 Sep 27 07:40 _c.cfs
-rw-r----- 1 root root  340 Sep 27 07:40 _c.si
-rw-r----- 1 root root  447 Sep 27 07:41 _e.cfe
-rw-r----- 1 root root 2662 Sep 27 07:41 _e.cfs
-rw-r----- 1 root root  338 Sep 27 07:41 _e.si
-rw-r----- 1 root root  447 Sep 27 07:41 _i.cfe
-rw-r----- 1 root root 2623 Sep 27 07:41 _i.cfs
-rw-r----- 1 root root  338 Sep 27 07:41 _i.si
-rw-r----- 1 root root  447 Sep 27 07:44 _m.cfe
-rw-r----- 1 root root 2685 Sep 27 07:44 _m.cfs
-rw-r----- 1 root root  338 Sep 27 07:44 _m.si
-rw-r----- 1 root root  564 Sep 27 07:44 segments_m
```

2. And the folder structure for the Soffid Syncserver

Images

```
root@sync-server-version4:/opt/soffid/iam-sync/index/master# ll
total 16
drwxr-xr-x 4 root root 4096 Sep 27 07:32 ./
drwxr-xr-x 3 root root 4096 Sep 16 16:02 ../
drwxr-xr-x 2 root root 4096 Sep 16 16:03 bpm/
drwxr-xr-x 2 root root 4096 Sep 27 08:17 com.soffid.iam.base.api.User/

root@sync-server-version4:/opt/soffid/iam-sync/index/master/com.soffid.iam.base.api.User# ll
total 88
drwxr-xr-x 2 root root 4096 Sep 27 08:17 ./
drwxr-xr-x 4 root root 4096 Sep 27 07:32 ../
-rw-r--r-- 1 root root  447 Sep 27 07:40 _4.cfe
-rw-r--r-- 1 root root 2519 Sep 27 07:40 _4.cfs
-rw-r--r-- 1 root root  340 Sep 27 07:40 _4.si
-rw-r--r-- 1 root root   67 Sep 27 07:41 _b_3.liv
-rw-r--r-- 1 root root  447 Sep 27 07:40 _b.cfe
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-rw-r--r-- 1 root root  378 Sep 27 07:40 _b.si
-rw-r--r-- 1 root root  447 Sep 27 07:41 _e.cfe
-rw-r--r-- 1 root root 2662 Sep 27 07:41 _e.cfs
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-rw-r--r-- 1 root root  447 Sep 27 07:41 _i.cfe
-rw-r--r-- 1 root root 2623 Sep 27 07:41 _i.cfs
-rw-r--r-- 1 root root  338 Sep 27 07:41 _i.si
-rw-r--r-- 1 root root  447 Sep 27 07:44 _m.cfe
-rw-r--r-- 1 root root 2685 Sep 27 07:44 _m.cfs
-rw-r--r-- 1 root root  338 Sep 27 07:44 _m.si
-rw-r--r-- 1 root root  447 Sep 27 08:17 _q.cfe
-rw-r--r-- 1 root root 2532 Sep 27 08:17 _q.cfs
-rw-r--r-- 1 root root  338 Sep 27 08:17 _q.si
-rw-r--r-- 1 root root  564 Sep 27 08:17 segments_q
-rw-r--r-- 1 root root    0 Sep 27 07:41 write.lock
```

Database

The database tables involved:

- **SC_LUINPA**
- **SC_LUNIND**

Example

1. The database structure

Images

```
MariaDB [soffid042]> select * from SC_LUNIND;
+--------+-------------------------------------+------------+---------------+
| LIP_ID | LIP_NAME                            | LIP_TEN_ID | LIP_TIMSTA    |
+--------+-------------------------------------+------------+---------------+
| 101390 | master/bpm                          |          1 | 1758038614646 |
| 197420 | master/com.soffid.iam.base.api.User |          1 | 1758961050456 |
+--------+-------------------------------------+------------+---------------+
2 rows in set (0.000 sec)

MariaDB [soffid042]> select * from SC_LUINPA \G
*************************** 1. row ***************************
    LIP_ID: 101391
LIP_LIN_ID: 101390
  LIP_NAME: _b.nvm
 LIP_ORDER: 0
LIP_TEN_ID: 1
  LIP_DATA: ?◆lLucene90NormsMetadata    i d◆◆{*V.<A◆nc◆     ◆◆◆◆◆◆◆◆        ◆◆◆
   +       ◆◆◆◆◆(◆◆        <C◆◆
LIP_TIMSTA: 1757257253850
*************************** 2. row ***************************
    LIP_ID: 101392
LIP_LIN_ID: 101390
  LIP_NAME: _b_Lucene90_0.tip
 LIP_ORDER: 0
LIP_TEN_ID: 1
  LIP_DATA: ?◆lBlockTreeTermsIndex    i d◆◆{*V.<A◆nc◆
Lucene90_0                                  ◆(◆◆        ,◆p;
LIP_TIMSTA: 1757257253855
```

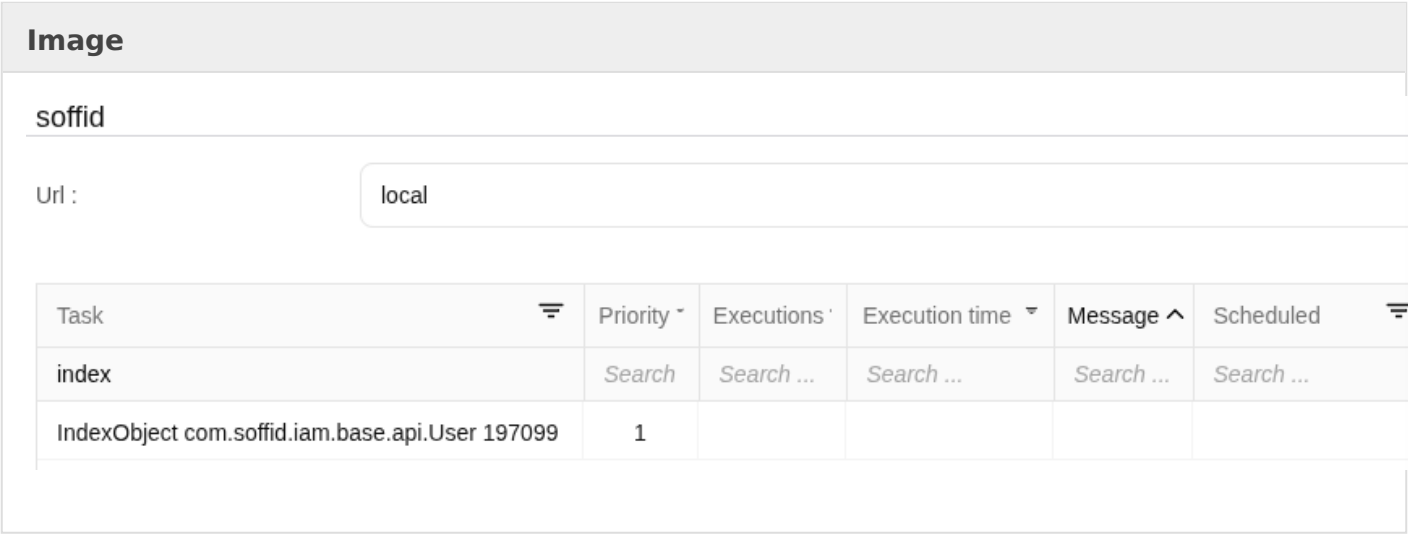
soffid agent

You can check the soffid agent status by visiting the Sync Server monitoring page.

Example

1. A soffid agent pending task.

Image

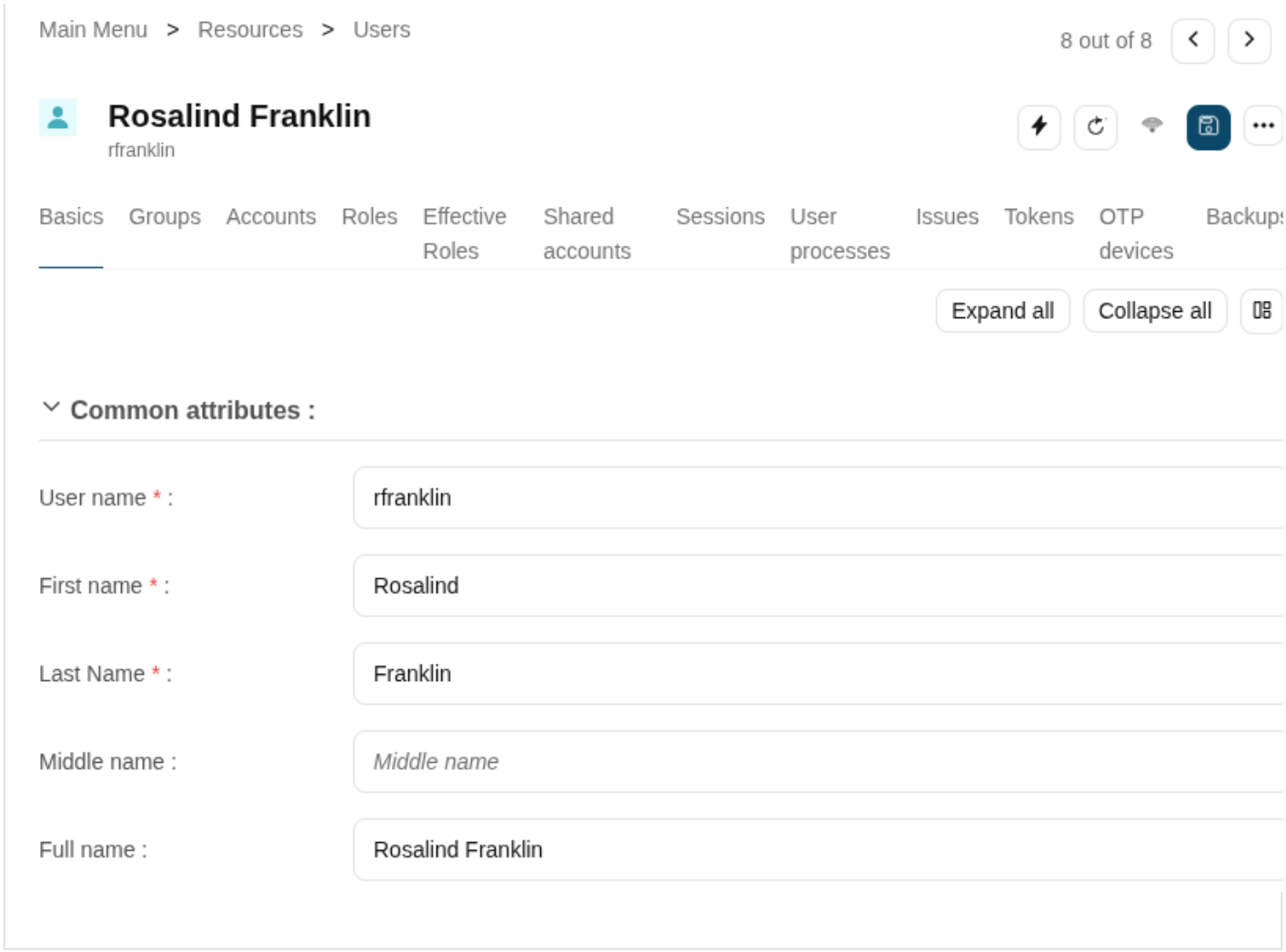


Step-by-step

Example 1

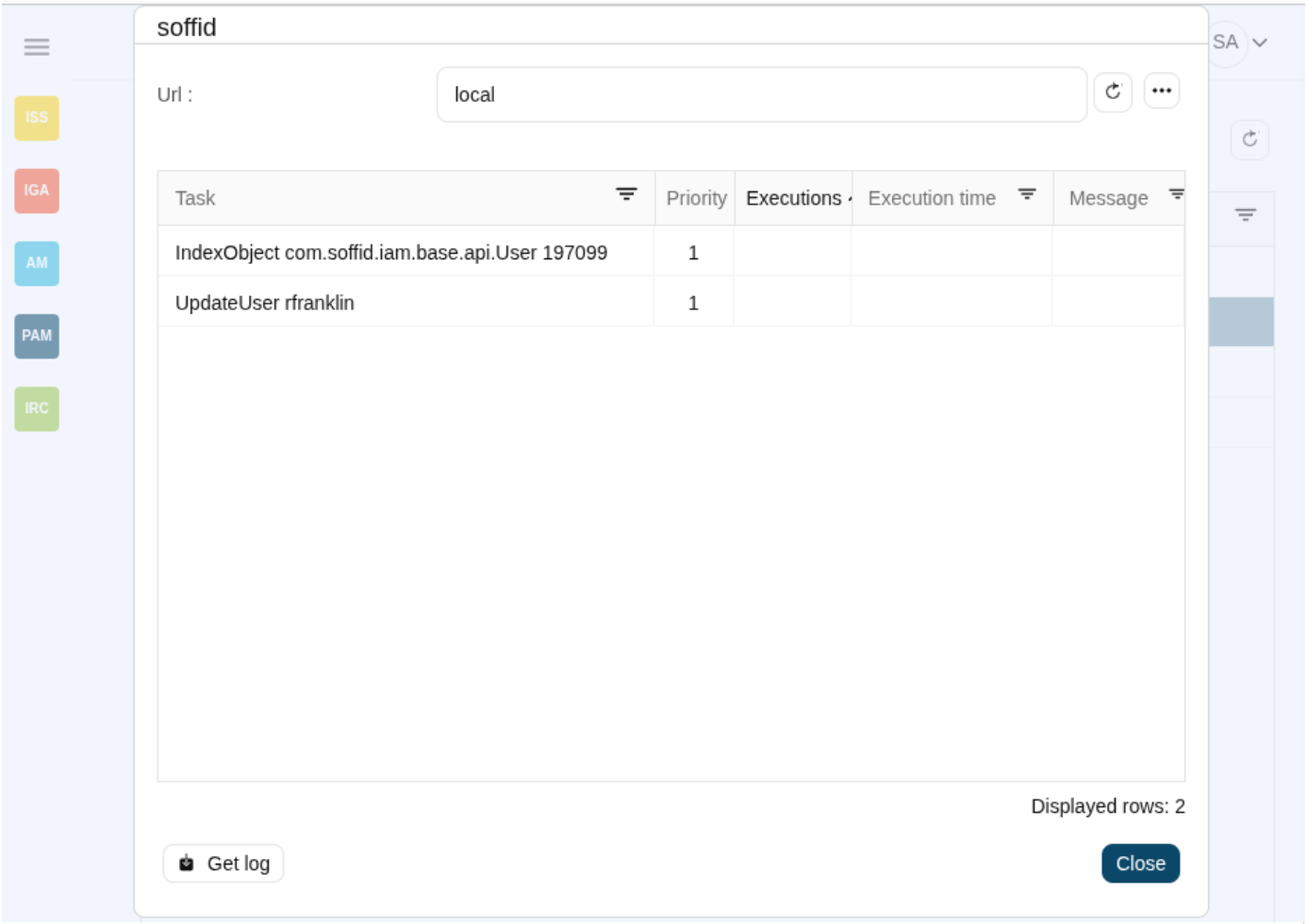
1. You update one user's data and save the changes.

Image



2. New tasks are created and executed.

Image



3. Then Sync Server indexes the updated text and places the index file.

Image

```
root@200d60e4947a:/opt/soffid/iam-console-4/index/master/com.soffid.iam.base.api.User# ll
total 88
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-rw-r----- 1 root root  564 Sep 27 07:44 segments_m
```

4. Then Sync Server and updates the database table SC_LUNIND by upgrading the LIP_TIMSTA field of the User object or by creating a new record if it did not previously exist.

Image

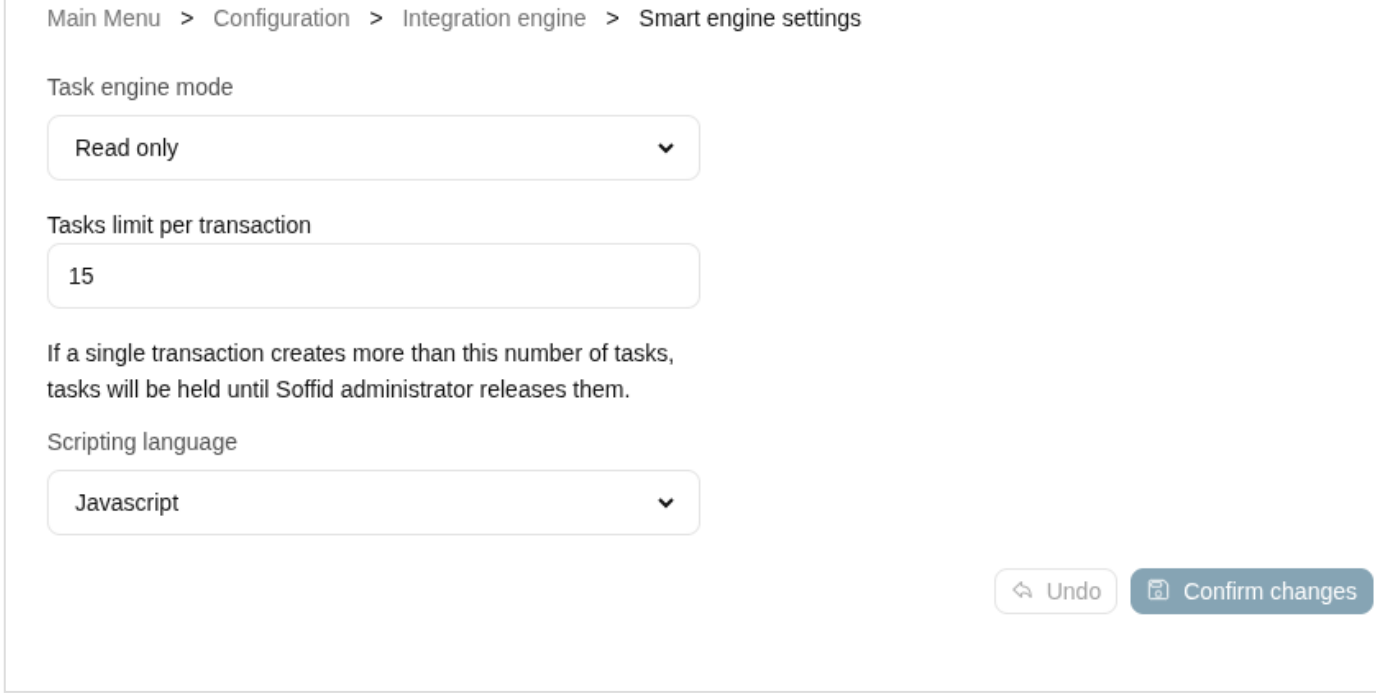
```
MariaDB [soffid042]> select * from SC_LUNIND;
+--------+-------------------------------------+------------+---------------+
| LIP_ID | LIP_NAME                            | LIP_TEN_ID | LIP_TIMSTA    |
+--------+-------------------------------------+------------+---------------+
| 101390 | master/bpm                          |          1 | 1758038614646 |
| 197420 | master/com.soffid.iam.base.api.User |          1 | 1758961050456 |
+--------+-------------------------------------+------------+---------------+
2 rows in set (0.000 sec)
```

5. When the following search will be performed, the very first thing to do is check the database file. If it is necessary update the file system and finally perform the search.

Example 2

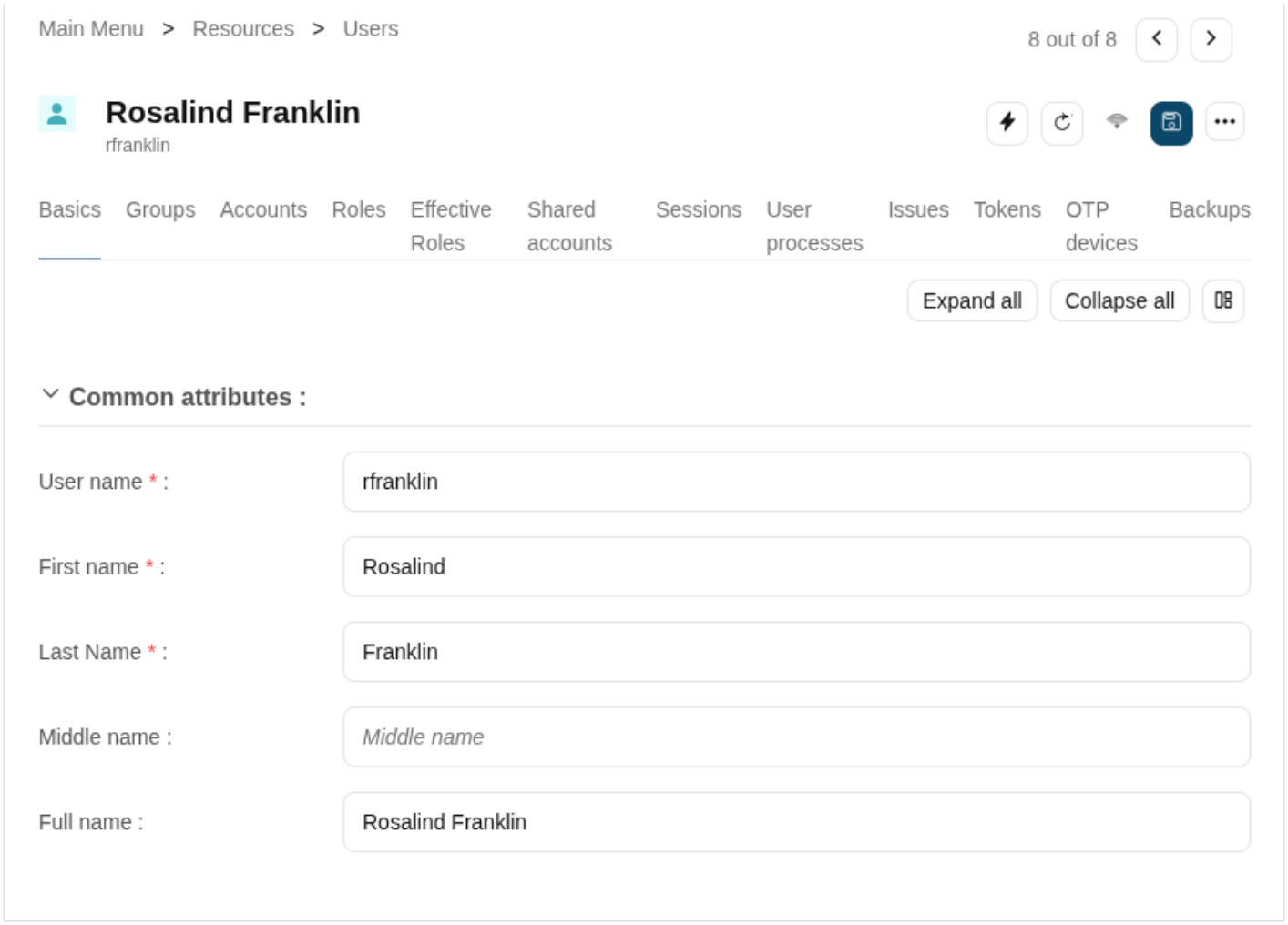
1. The task engine mode is Read only

Image

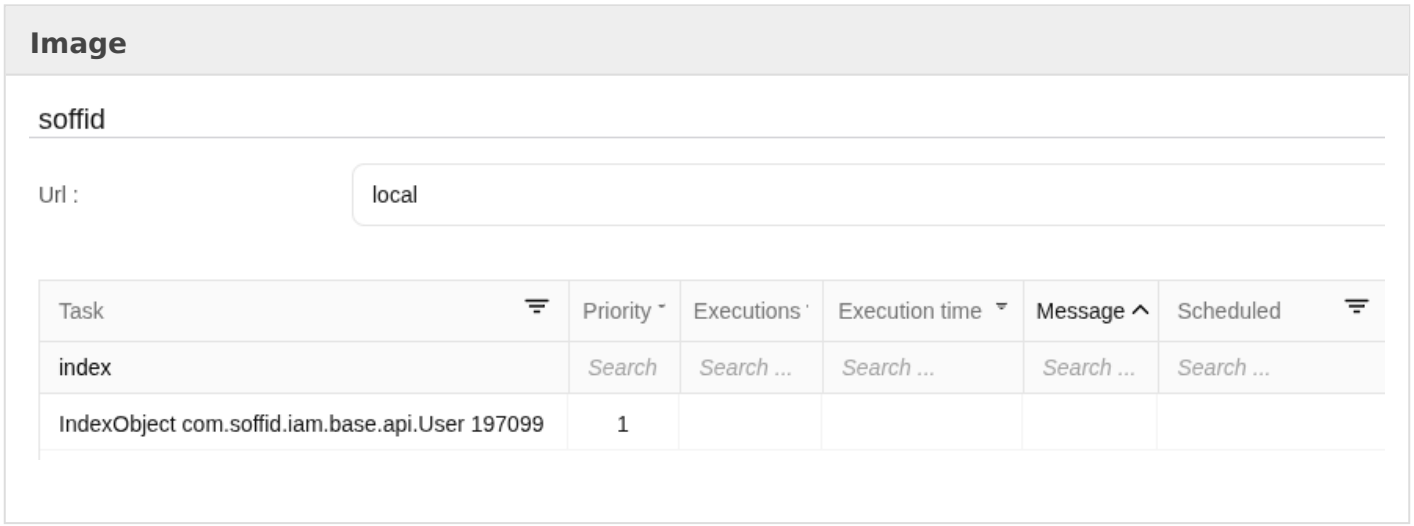


2. You update one user's data and save the changes.

Image



3. A new task is created and executed



4. Then Sync Server indexes the updated text and places the index file.

5. Then Sync Server and updates the database table SC_LUNIND by upgrading the LIP_TIMSTA field of the User object or by creating a new record if it did not previously exist.

6. When the following search will be performed, the very first thing to do is check the database file. If it is necessary update the file system and finally perform the search.

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