Textual Index

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Textual Index

Introduction

A textual index is a data structure used in database systems to facilitate efficient search and retrieval of text-based information. It is designed to handle large volumes of textual data and provide quick access to relevant documents or records based on specified search criteria.

When a search query is performed on a database with a textual index, the index is queried to identify relevant documents or records that match the search terms. The index provides information about the location and relevance of the documents, which enables the database system to retrieve and present the results in a timely manner.

Textual indexes play a crucial role in enabling efficient search and retrieval of textual information in databases, making them an essential component in applications that handle large volumes of textual data, such as search engines, content management systems, and document repositories.

> Soffid incorporates the textual index from version 3.5 using the Apache Lucene library.

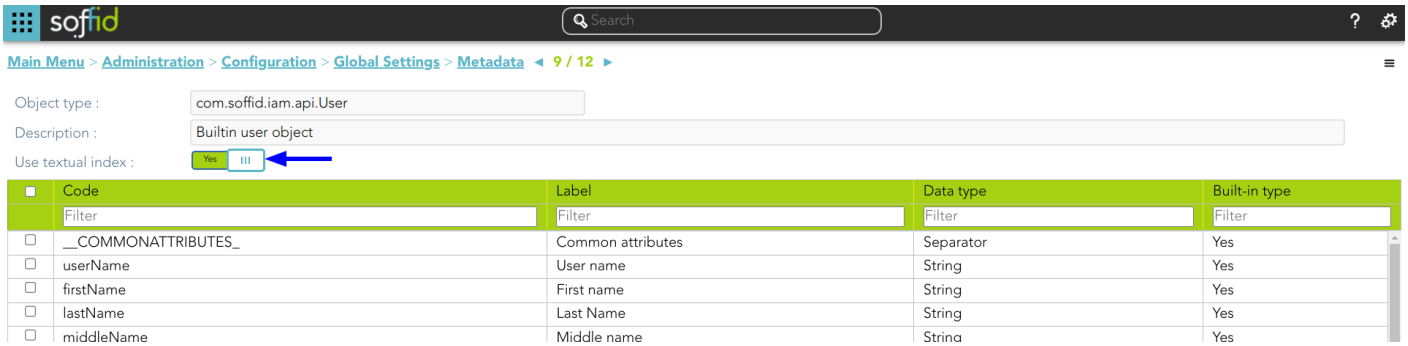
Index configuration

Soffid allows you to configure the objects you want to use in the textual index. To do this, you must select the proper object from the metadata page and enable the option "Use textual index". Once you enable this option, the textual index will be applied to the attributes of this object that have been included in the quick search.

> Notice, from the user interface, it is not interpreted as a Lucene expression.

Example

1. Enable the "Use textual index" on the User object and save the changes.



2. Check the attributes included in the quick search.

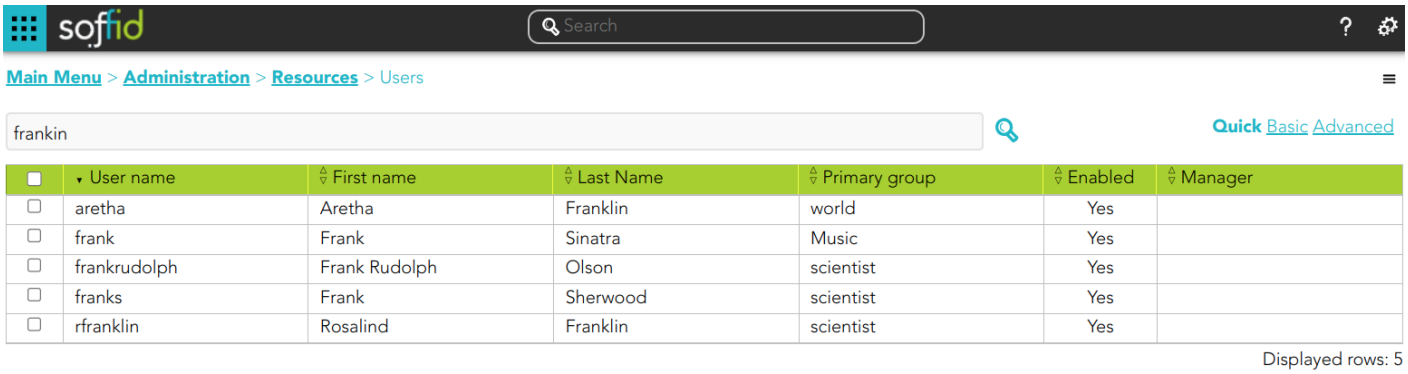


How does the user interface search work?

Once you have configured the textual index for a specific object, Soffid will apply it when you use Quick Search on this object.

Example 1

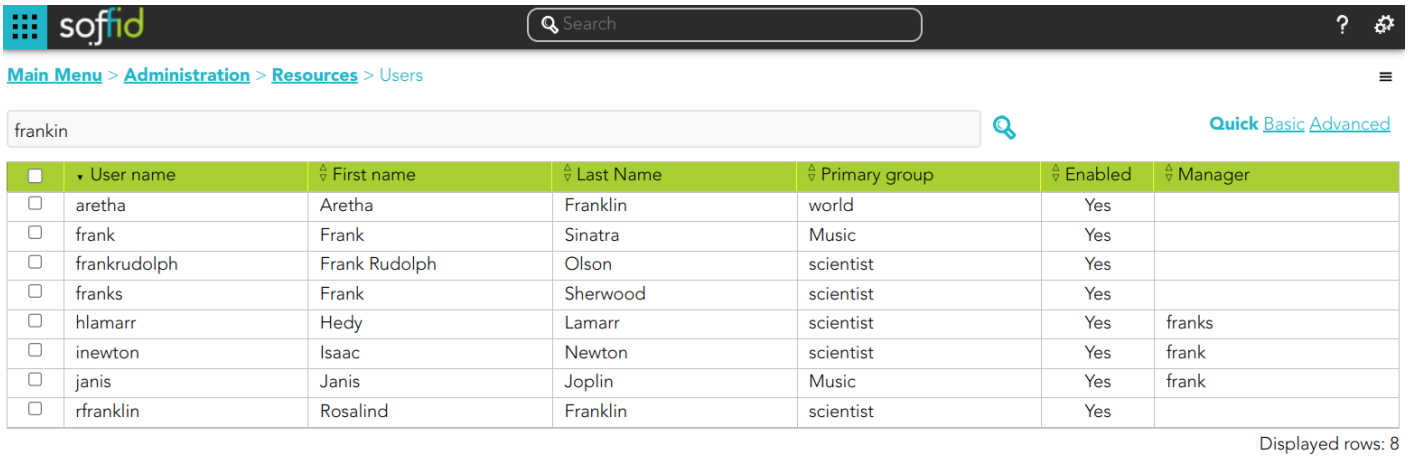
1. If you search for users using the text "*frankin*", then Soffid will display all the users whose userName, firstName, lastName, or middleName match, to some degree, with the typed text following the textual index rules.



2. If you include the attribute manager in the quick search:

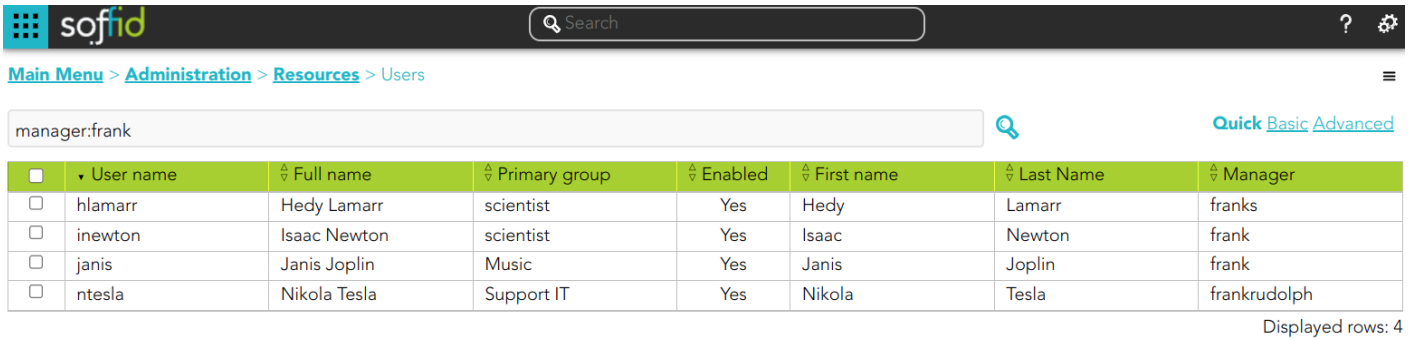


3. And search for "*frankin*", then Soffid will display all the users whose userName, firstName, lastName, middleName, or manager match with the typed text following the textual index rules.



Example 2

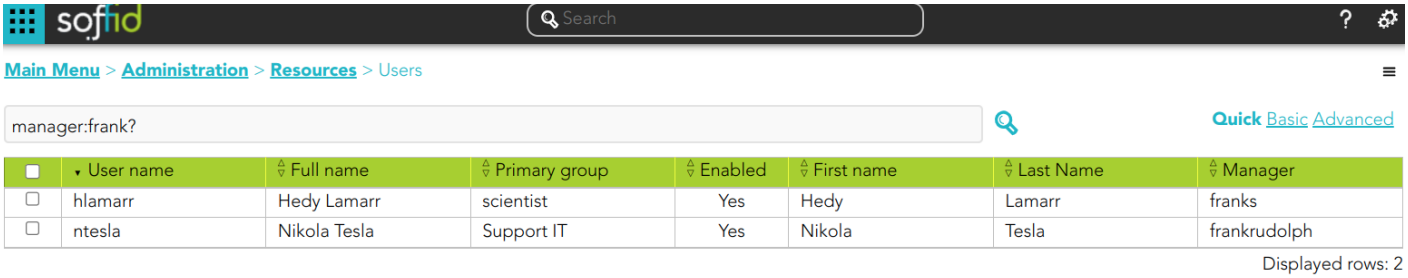
1. If you search for users using the text "manager:frank" Soffid will display all users whose manager matches the text "frank".



User name	Full name	Primary group	Enabled	First name	Last Name	Manager
hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 4

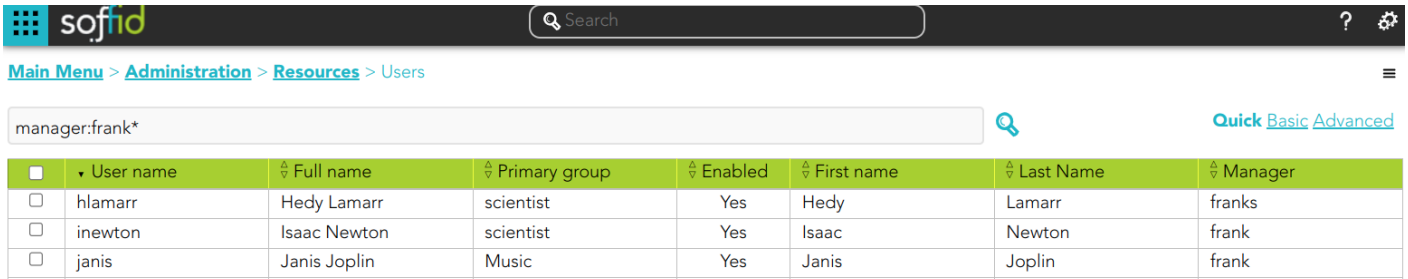
Notice the difference by searching "manager:frank?":



User name	Full name	Primary group	Enabled	First name	Last Name	Manager
hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 2

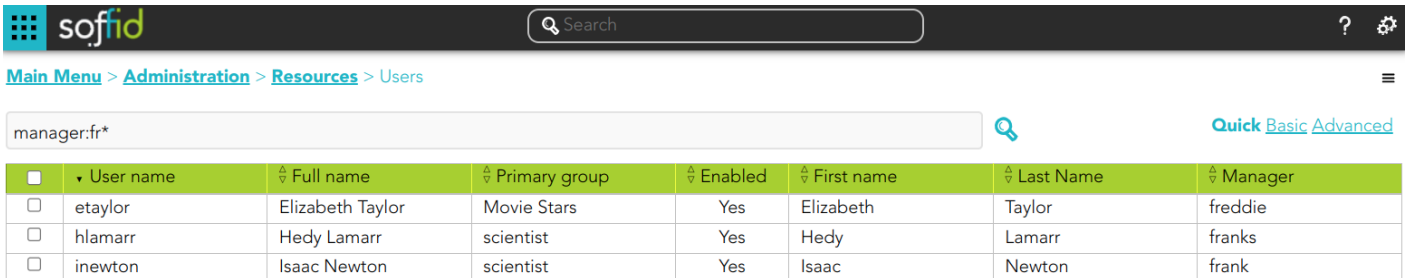
And by searching "manager:frank*":



User name	Full name	Primary group	Enabled	First name	Last Name	Manager
hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 4

And also by searching "manager:fr*"

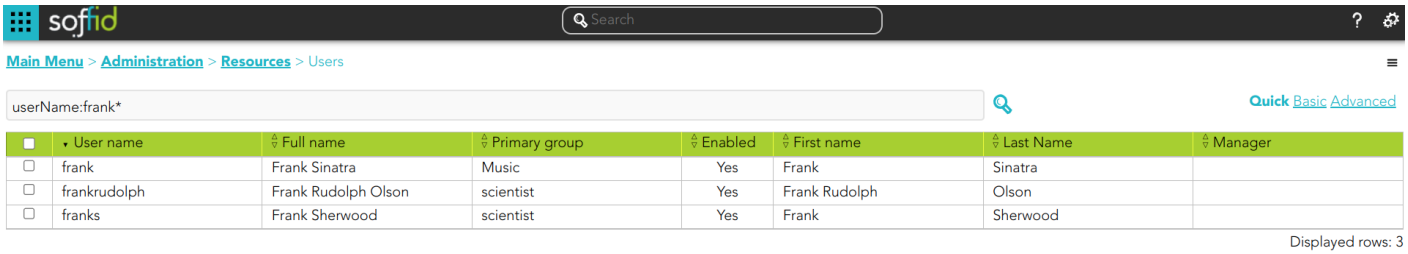


User name	Full name	Primary group	Enabled	First name	Last Name	Manager
etaylor	Elizabeth Taylor	Movie Stars	Yes	Elizabeth	Taylor	freddie
hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

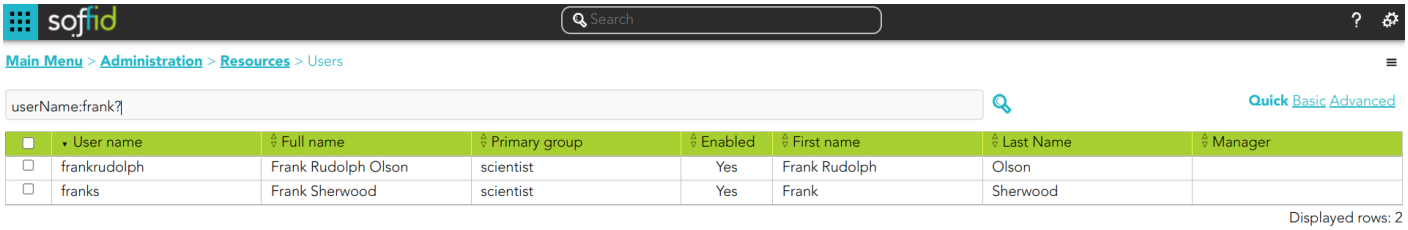
Displayed rows: 5

Example 3

1. If you search for users using the text "userName:frank*" Soffid will display all users whose user name matches the text "frank" followed by any other text.

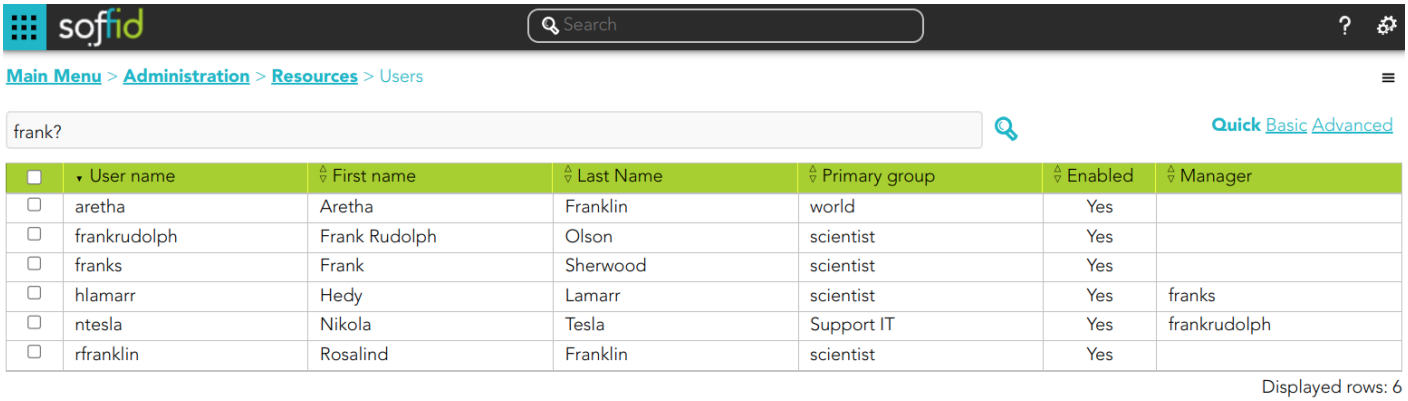


Notice the difference by searching the text "userName:frank?":

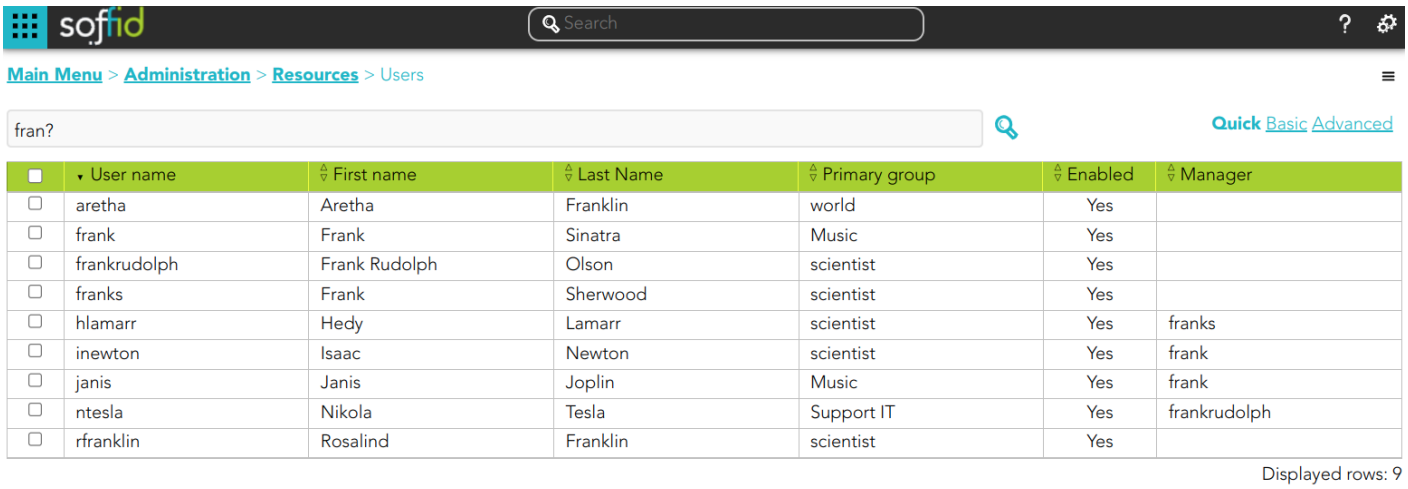


Example 4

1. If you search for users using the text "frank" plus the wildcard "?", Soffid will display all users whose userName, firstName, lastName, middleName, or manager match the typed text as long as it has variation in the characters where the wildcard has been used.



Notice the difference by searching "fran?"



How does the SCIM interface search work?

1. First of all, you must install the SCIM addon in Soffid.

> For more information, you can visit the How to install SCIM in Soffid? page.

2. Then, you can use any REST client to test and consume our SCIM REST web service.

> For more information, you can visit the Testing tool page.

3. Finally, you can start to use the SCIM interface search by using Lucene syntaxis

Lucene syntaxis

> Please browse the standard specifications in this link: https://bookstack.soffid.com/books/soffid-3-reference-guide/page/lucene-query-parser-syntax

Term Modifiers

Lucene supports modifying query terms to provide a wide range of search options. Here are the most common ones:

Wildcard Searches	To perform a single character wildcard search use the "?" symbol. To perform a multiple character wildcard search use the "*" symbol.
Regular Expression Searches	Lucene supports regular expression searches matching a pattern between forward slashes "/"

Fuzzy Searches	To do a fuzzy search use the tilde, "~", symbol at the end of a Single word Term Soffid Console <= 3.4 version ~0.8: stricter search ~0.1: more lax search Soffid Console > 3.4 version An additional (optional) parameter can specify the maximum number of edits allowed. The value is between 0 and 2.
Range Searches	Range Queries allow one to match documents whose field(s) values are between the lower and upper bound specified by the Range Query
Boosting a Term	To boost a term use the caret, "^", symbol with a boost factor (a number) at the end of the term you are searching. The higher the boost factor, the more relevant the term will be.

Boolean Operators

OR	The OR operator links two terms and finds a matching document if either of the terms exist in a document. This is equivalent to a union using sets
AND	The AND operator matches documents where both terms exist anywhere in the text of a single document. This is equivalent to an intersection using sets.
+	The "+" or required operator requires that the term after the "+" symbol exist somewhere in a the field of a single document.
NOT	The NOT operator excludes documents that contain the term after NOT. This is equivalent to a difference using sets.
-	The "-" or prohibit operator excludes documents that contain the term after the "-" symbol.

Escaping Special Characters

Lucene supports escaping special characters that are part of the query syntax.

The current list of special characters are + - && || ! ( ) { } [ ] ^ " ~ * ? : \ /

Examples

Example 1

1. Use the wildcard search

1.1. *

Request

```
GET http://<domain>/webservice/scim2/v1/User?textFilter=fran*
```

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 4,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Franklin",
         "createdByUser": "ActiveDirectory",
         "fullName": "Rosalind Franklin",
         "active": true,
         "userName": "rfranklin",
         "mailAlias": "",
         "firstName": "Rosalind",
         "createdDate": "2023-08-08 14:26:14",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'rfranklin'+and+enabled+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'rfranklin'+and+disabled+eq+false",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'rfranklin'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'rfranklin'",
               "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862/effectiveGrants"
```

```
            },
            "resourceType": "User"
         },
         "modifiedByUser": "ActiveDirectory",
         "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
         ],
         "modifiedDate": "2023-08-08 14:26:14",
         "attributes": {},
         "id": 2862,
         "userType": "I",
         "primaryGroupDescription": "scientist",
         "primaryGroup": "scientist"
      },
      {
         "lastName": "Franklin",
         "createdByUser": "ActiveDirectory",
         "fullName": "Aretha Franklin",
         "active": true,
         "userName": "aretha",
         "mailAlias": "",
         "firstName": "Aretha",
         "createdDate": "2023-09-06 13:12:54",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'aretha'+and+enabled
+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'aretha'+and+disabled+eq+f
alse",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'aretha'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'aretha'",
               "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397/effectiveGrants"
```

```
            },
            "resourceType": "User"
         },
         "modifiedByUser": "ActiveDirectory",
         "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
         ],
         "modifiedDate": "2023-09-06 13:12:54",
         "attributes": {},
         "id": 276397,
         "userType": "I",
         "primaryGroupDescription": "World",
         "primaryGroup": "world"
      },
      {
         "lastName": "Sinatra",
         "createdByUser": "ActiveDirectory",
         "fullName": "Frank Sinatra",
         "active": true,
         "userName": "frank",
         "mailAlias": "",
         "firstName": "Frank",
         "createdDate": "2023-09-06 13:12:54",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
               "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
```

```
            },
            "resourceType": "User"
         },
         "modifiedByUser": "ActiveDirectory",
         "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
         ],
         "modifiedDate": "2023-09-06 13:12:55",
         "attributes": {},
         "id": 276435,
         "userType": "I",
         "primaryGroupDescription": "Music",
         "primaryGroup": "Music"
      },
      {
         "lastName": "Sherwood",
         "createdByUser": "pgarcia",
         "fullName": "Frank Sherwood",
         "active": true,
         "userName": "franks",
         "mailAlias": "",
         "firstName": "Frank",
         "createdDate": "2023-10-05 15:32:40",
         "multiSession": false,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'franks'+and+enabled
+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'franks'+and+disabled+eq+f
alse",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'franks'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'franks'",
               "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644/effectiveGrants"
```

```
            },
            "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-10-05 15:32:40",
        "attributes": {},
        "id": 432644,
        "userType": "I",
        "primaryGroupDescription": "scientist",
        "primaryGroup": "scientist"
    }
  ]
}
```


1.2. ?

Request

```
http://<domain>/webservice/scim2/v1/User?textFilter=fran?
```

Response 200 OK


```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:ListResponse"
  ],
  "totalResults": 2,
  "startIndex": 1,
  "Resources": [
    {
      "lastName": "Sinatra",
      "createdByUser": "ActiveDirectory",
      "fullName": "Frank Sinatra",
      "active": true,
      "userName": "frank",
      "mailAlias": "",
      "firstName": "Frank",
```

```
        "createdDate": "2023-09-06 13:12:54",
        "multiSession": true,
        "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
            "links": {
                "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
                "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
                "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
                "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "ActiveDirectory",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-09-06 13:12:55",
        "attributes": {},
        "id": 276435,
        "userType": "I",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    },
    {
        "lastName": "Sherwood",
        "createdByUser": "pgarcia",
        "fullName": "Frank Sherwood",
        "active": true,
        "userName": "franks",
        "mailAlias": "",
        "firstName": "Frank",
```

```
        "createdDate": "2023-10-05 15:32:40",
        "multiSession": false,
        "meta": {
          "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644",
          "links": {
            "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'franks'+and+enabled
+eq+true",
            "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'franks'+and+disabled+eq+f
alse",
            "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'franks'",
            "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'franks'",
            "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644/effectiveGrants"
          },
          "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
          "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-10-05 15:32:40",
        "attributes": {},
        "id": 432644,
        "userType": "I",
        "primaryGroupDescription": "scientist",
        "primaryGroup": "scientist"
      }
  ]
}
```


Example 2

1. Use the wildcard search in a specific attribute

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=userName:frank
```

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 1,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Sinatra",
         "profileServer": "Void host",
         "createdByUser": "admin",
         "fullName": "Frankaaa Sinatra",
         "active": true,
         "userName": "frank",
         "mailAlias": "",
         "mailServer": "Void host",
         "firstName": "Frankaaa",
         "emailAddress": "pgarcia@soffid.com",
         "mailDomain": "soffid.com",
         "createdDate": "2023-06-02 07:41:47",
         "multiSession": false,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/3910",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
               "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/3910/effectiveGrants"
            },
            "resourceType": "User"
```

```
    },
    "modifiedByUser": "admin",
    "schemas": [
      "urn:soffid:com.soffid.iam.api.User"
    ],
    "modifiedDate": "2023-06-02 07:41:47",
    "attributes": {
      "picture":
"/9j/4AAQSkZJRgABAQAAAQABAAD/2wCEAAoHCBYWFRgVFRYYGRgaGhkYGhgaGBoYGhoYHBkaGhgZGhgcIS4lHB4
rIRgYJjgmKy8xNTU1GiQ7QDs0Py40NTEBDAwMBgYGEAYGEDEdFh0xMTExMTExMTExMTExMTExMTExMTExM
TExMTExMTExMTExMTExMTExMf/AABEIAKgBKwMBIgACEQEDEQH/xAAcAAABBQEBAQAAAAAAAAAAA
ADAQIEBQYABwj/xABFEAACAQIDBAcECAQFAgcBAAABAgADEQQSIQUxQVEGEyJhcYGRMkKhsQcjUnKSwdHwFGKCo
iQzY7LhU3NDZIOTo8LxFf/EABQBAQAAAAAAAAAAAAAAAAD/xAAUEQEAAAAAAAAAAAAAAAAAAA/9oADAM
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```

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        },
        "id": 3910,
        "userType": "l",
        "homeServer": "Void host",
        "shortName": "pgarcia",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
      }
  ]
}

Example 3

1. Use the Fuzzy Searches

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=fran~
```

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 2,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Sinatra",
         "createdByUser": "ActiveDirectory",
         "fullName": "Frank Sinatra",
         "active": true,
         "userName": "frank",
         "mailAlias": "",
         "firstName": "Frank",
         "createdDate": "2023-09-06 13:12:54",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
```

```
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "ActiveDirectory",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-09-06 13:12:55",
        "attributes": {},
        "id": 276435,
        "userType": "I",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    },
    {
        "lastName": "Sherwood",
        "createdByUser": "pgarcia",
        "fullName": "Frank Sherwood",
        "active": true,
        "userName": "franks",
        "mailAlias": "",
        "firstName": "Frank",
        "createdDate": "2023-10-05 15:32:40",
        "multiSession": false,
        "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644",
            "links": {
                "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'franks'+and+enabled
+eq+true",
                "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'franks'+and+disabled+eq+f
alse",
                "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'franks'",
                "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'franks'",
```

```
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-10-05 15:32:40",
        "attributes": {},
        "id": 432644,
        "userType": "I",
        "primaryGroupDescription": "scientist",
        "primaryGroup": "scientist"
    }
  ]
}
```


2. Use the Fuzzy Searches: specify the maximum number of edits allowed

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=frankl~2
```

Response 200 OK


```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:ListResponse"
  ],
  "totalResults": 4,
  "startIndex": 1,
  "Resources": [
    {
      "lastName": "Franklin",
      "createdByUser": "ActiveDirectory",
      "fullName": "Rosalind Franklin",
      "active": true,
      "userName": "rfranklin",
```

```
            "mailAlias": "",
            "firstName": "Rosalind",
            "createdDate": "2023-08-08 14:26:14",
            "multiSession": true,
            "meta": {
                "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862",
                "links": {
                    "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'rfranklin'+and+enable
d+eq+true",
                    "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'rfranklin'+and+disabled+eq
+false",
                    "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'rfranklin'",
                    "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'rfranklin'",
                    "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862/effectiveGrants"
                },
                "resourceType": "User"
            },
            "modifiedByUser": "ActiveDirectory",
            "schemas": [
                "urn:soffid:com.soffid.iam.api.User"
            ],
            "modifiedDate": "2023-08-08 14:26:14",
            "attributes": {},
            "id": 2862,
            "userType": "I",
            "primaryGroupDescription": "scientist",
            "primaryGroup": "scientist"
        },
        {
            "lastName": "Franklin",
            "createdByUser": "ActiveDirectory",
            "fullName": "Aretha Franklin",
            "active": true,
            "userName": "aretha",
            "mailAlias": "",
```

```
            "firstName": "Aretha",
            "createdDate": "2023-09-06 13:12:54",
            "multiSession": true,
            "meta": {
                "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397",
                "links": {
                    "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'aretha'+and+enabled
+eq+true",
                    "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'aretha'+and+disabled+eq+f
alse",
                    "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'aretha'",
                    "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'aretha'",
                    "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397/effectiveGrants"
                },
                "resourceType": "User"
            },
            "modifiedByUser": "ActiveDirectory",
            "schemas": [
                "urn:soffid:com.soffid.iam.api.User"
            ],
            "modifiedDate": "2023-09-06 13:12:54",
            "attributes": {},
            "id": 276397,
            "userType": "I",
            "primaryGroupDescription": "World",
            "primaryGroup": "world"
        },
        {
            "lastName": "Sinatra",
            "createdByUser": "ActiveDirectory",
            "fullName": "Frank Sinatra",
            "active": true,
            "userName": "frank",
            "mailAlias": "",
```

```
        "firstName": "Frank",
        "createdDate": "2023-09-06 13:12:54",
        "multiSession": true,
        "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
            "links": {
                "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
                "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
                "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
                "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "ActiveDirectory",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-09-06 13:12:55",
        "attributes": {},
        "id": 276435,
        "userType": "I",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    },
    {
        "lastName": "Sherwood",
        "createdByUser": "pgarcia",
        "fullName": "Frank Sherwood",
        "active": true,
        "userName": "franks",
        "mailAlias": "",
```

```
            "firstName": "Frank",
            "createdDate": "2023-10-05 15:32:40",
            "multiSession": false,
            "meta": {
                "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644",
                "links": {
                    "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'franks'+and+enabled
+eq+true",
                    "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'franks'+and+disabled+eq+f
alse",
                    "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'franks'",
                    "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'franks'",
                    "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644/effectiveGrants"
                },
                "resourceType": "User"
            },
            "modifiedByUser": "pgarcia",
            "schemas": [
                "urn:soffid:com.soffid.iam.api.User"
            ],
            "modifiedDate": "2023-10-05 15:32:40",
            "attributes": {},
            "id": 432644,
            "userType": "I",
            "primaryGroupDescription": "scientist",
            "primaryGroup": "scientist"
        }
    ]
}
```


Example 4

1. Use the boolean operator AND

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=fran~ AND Sinatra
```

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 1,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Sinatra",
         "profileServer": "Void host",
         "createdByUser": "admin",
         "fullName": "Frankaaa Sinatra",
         "active": true,
         "userName": "frank",
         "mailAlias": "",
         "mailServer": "Void host",
         "firstName": "Frankaaa",
         "emailAddress": "pgarcia@soffid.com",
         "mailDomain": "soffid.com",
         "createdDate": "2023-06-02 07:41:47",
         "multiSession": false,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/3910",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+false",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'frank'",
               "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/3910/effectiveGrants"
```

```
            },
            "resourceType": "User"
        },
        "modifiedByUser": "admin",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-06-02 07:41:47",
        "attributes": {
            "picture":
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TExMTExMTExMTExMTExMTExMf/AABEIAKgBKwMBIgACEQEDEQH/xAAcAAABBQEBAQAAAAAAAAAAA
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iQzY7LhU3NDZIOTo8LxFf/EABQBAQAAAAAAAAAAAAAAAAD/xAAUEQEAAAAAAAAAAAAAAAAAAA/9oADAM
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```

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mTx423jeMwjKioEUhyaOb6up/4mHqb8j21tfXTxHI9OgdUZyzOFXrkU9fT9yvSPtOoGhuLE27mG6MWmjotLP2HzNh6j
WBR/foudwBNvPKdxnToFfhKN1KnCO7U2NNyr1PbXmoBANiDbviVqCa5sFWHi9QfNPGLOgVmKRPdwr373qH4BRKm
op4Ubd1nPznToAWY/YH4W/WNKnflsNxGtjOnQNv0Y2pnQKx7SaG/EcD+veJpKeEaoQBOnQNJs3YoWxI1/f6SZtnGU8J
h3rsAci3VLhc77kQHvNok6B5JT2saH+ISun8TUqVC6OjMtMPmcvncZb3IAABOp7xM2+LZ83ZA7CltWIZlv23Gt3OY2Jt
lvpaLOgDw+Is2lgBusLcbi/E8tZ6p0a2mHRTfXd5zp0DV0sRKjpdsX+ModWrhGDBwxGYXAIsRcEXvvE6dAotl9HqeDQ
sVNSqB7ZsLE7gg90X85Z7D2aEGdtXY3J8Yk6BdVGAtIuKJtp8506BjNvIztkU+32A2mj5WZCP60UTO583aC2LXcDgpq
A51/pr0x+KLOgBwo6xBTJ0FSoi62s1VCafkXQjzkps9UU61NVZ3BpVUYLlNSmAwJDGxLIN3MGdOgazoNtEWfDFSjKSw
pNe6X9olTqUvrY6i54Wmqczp0ATiAnToH//2Q=="
        },
        "id": 3910,
        "userType": "I",
        "homeServer": "Void host",
        "shortName": "pgarcia",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    }
]

```
}
```

2. Use the boolean operator +

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=fran~ +bacall
```

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 3,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Bacall",
         "createdByUser": "ActiveDirectory",
         "fullName": "Lauren Bacall",
         "active": true,
         "userName": "lbacall",
         "mailAlias": "",
         "firstName": "Lauren",
         "createdDate": "2023-08-08 14:26:14",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2844",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'lbacall'+and+enabled
+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'lbacall'+and+disabled+eq+f
alse",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'lbacall'",
               "issues":
```

```
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'lbacall'",
                "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2844/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-08-22 17:34:07",
        "attributes": {},
        "id": 2844,
        "userType": "I",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    },
    {
        "lastName": "Sinatra",
        "createdByUser": "ActiveDirectory",
        "fullName": "Frank Sinatra",
        "active": true,
        "userName": "frank",
        "mailAlias": "",
        "firstName": "Frank",
        "createdDate": "2023-09-06 13:12:54",
        "multiSession": true,
        "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
            "links": {
                "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+eq+true",
                "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+false",
                "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'frank'",
                "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
```

```
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "ActiveDirectory",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-09-06 13:12:55",
        "attributes": {},
        "id": 276435,
        "userType": "I",
        "primaryGroupDescription": "Music",
        "primaryGroup": "Music"
    },
    {
        "lastName": "Sherwood",
        "createdByUser": "pgarcia",
        "fullName": "Frank Sherwood",
        "active": true,
        "userName": "franks",
        "mailAlias": "",
        "firstName": "Frank",
        "createdDate": "2023-10-05 15:32:40",
        "multiSession": false,
        "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644",
            "links": {
                "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'franks'+and+enabled
+eq+true",
                "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'franks'+and+disabled+eq+f
alse",
                "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'franks'",
                "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'franks'",
```

```
                "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/432644/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-10-05 15:32:40",
        "attributes": {},
        "id": 432644,
        "userType": "I",
        "primaryGroupDescription": "scientist",
        "primaryGroup": "scientist"
    }
  ]
}
```


3. Use the boolean operator -

Request

```
GET http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=fran~ -Sherwood
```

Response 200 OK


```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:ListResponse"
  ],
  "totalResults": 1,
  "startIndex": 1,
  "Resources": [
    {
      "lastName": "Sinatra",
      "createdByUser": "ActiveDirectory",
      "fullName": "Frank Sinatra",
      "active": true,
      "userName": "frank",
```

```
            "mailAlias": "",
            "firstName": "Frank",
            "createdDate": "2023-09-06 13:12:54",
            "multiSession": true,
            "meta": {
                "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435",
                "links": {
                    "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'frank'+and+enabled+
eq+true",
                    "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'frank'+and+disabled+eq+fal
se",
                    "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+e
q+'frank'",
                    "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'frank'",
                    "effectiveGrants":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276435/effectiveGrants"
                },
                "resourceType": "User"
            },
            "modifiedByUser": "ActiveDirectory",
            "schemas": [
                "urn:soffid:com.soffid.iam.api.User"
            ],
            "modifiedDate": "2023-09-06 13:12:55",
            "attributes": {},
            "id": 276435,
            "userType": "I",
            "primaryGroupDescription": "Music",
            "primaryGroup": "Music"
        }
    ]
}
```


Example 5

1. U

Request

GET
http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User?textFilter=(firstName:aretha OR firstName:Rosalind) AND lastName:Franklin AND birthDate:1979-01-01

Response 200 OK


```
{
   "schemas": [
      "urn:ietf:params:scim:api:messages:2.0:ListResponse"
   ],
   "totalResults": 2,
   "startIndex": 1,
   "Resources": [
      {
         "lastName": "Franklin",
         "createdByUser": "ActiveDirectory",
         "fullName": "Aretha Franklin",
         "active": true,
         "userName": "aretha",
         "mailAlias": "",
         "firstName": "Aretha",
         "createdDate": "2023-09-06 13:12:54",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'aretha'+and+enabled+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'aretha'+and+disabled+eq+false",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'aretha'",
               "issues":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'aretha'",
               "effectiveGrants":
```

```
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/276397/effectiveGrants"
            },
            "resourceType": "User"
         },
         "modifiedByUser": "pgarcia",
         "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
         ],
         "modifiedDate": "2023-10-05 16:02:40",
         "attributes": {
            "birthDate": "1979-01-01 00:00:00"
         },
         "id": 276397,
         "userType": "I",
         "primaryGroupDescription": "World",
         "primaryGroup": "world"
      },
      {
         "lastName": "Franklin",
         "createdByUser": "ActiveDirectory",
         "fullName": "Rosalind Franklin",
         "active": true,
         "userName": "rfranklin",
         "mailAlias": "",
         "firstName": "Rosalind",
         "createdDate": "2023-08-08 14:26:14",
         "multiSession": true,
         "meta": {
            "location": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862",
            "links": {
               "roleAccounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/RoleAccount?filter=userCode+eq+'rfranklin'+and+enabled+eq+true",
               "groupUsers":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/GroupUser?filter=user+eq+'rfranklin'+and+disabled+eq+false",
               "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'rfranklin'",
               "issues":
```

```
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Issue?filter=user.userName+eq+'rfranklin'",
                "effectiveGrants": "http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/User/2862/effectiveGrants"
            },
            "resourceType": "User"
        },
        "modifiedByUser": "pgarcia",
        "schemas": [
            "urn:soffid:com.soffid.iam.api.User"
        ],
        "modifiedDate": "2023-10-05 16:03:02",
        "attributes": {
            "birthDate": "1979-01-01 00:00:00"
        },
        "id": 2862,
        "userType": "I",
        "primaryGroupDescription": "scientist",
        "primaryGroup": "scientist"
    }
  ]
}
```

Operation

Operation

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

```
root@da8136799e55:/opt/soffid/iam-console-3/index/master# ll
total 16
drwxr-x--- 4 root root 4096 Jun  2 09:58 ./
drwxr-x--- 3 root root 4096 Jun  2 08:53 ../
drwxr-x--- 2 root root 4096 Jun  2 09:58 com.soffid.iam.api.Group/
drwxr-x--- 2 root root 4096 Jun  2 10:45 com.soffid.iam.api.User/
root@da8136799e55:/opt/soffid/iam-console-3/index/master#
```

```
root@da8136799e55:/opt/soffid/iam-console-3/index/master# cd com.soffid.iam.api.Group/
root@da8136799e55:/opt/soffid/iam-console-3/index/master/com.soffid.iam.api.Group# ls
_1f.fdm  _1f.kdi             _1f_Lucene90_0.tim  _1p.fdt  _1p.kdm             _1p_Lucene90_0.tip  _1q.si   _1s.cfs
_1f.fdt  _1f.kdm             _1f_Lucene90_0.tip  _1p.fdx  _1p_Lucene90_0.doc  _1p_Lucene90_0.tmd  _1r.cfe  _1s.si
_1f.fdx  _1f_Lucene90_0.doc  _1f_Lucene90_0.tmd  _1p.fnm  _1p_Lucene90_0.dvd  _1p.si              _1r.cfs  segments_1n
_1f.fnm  _1f_Lucene90_0.dvd  _1f.si              _1p.kdd  _1p_Lucene90_0.dvm  _1q.cfe             _1r.si   write.lock
_1f.kdd  _1f_Lucene90_0.dvm  _1p.fdm             _1p.kdi  _1p_Lucene90_0.tim  _1q.cfs             _1s.cfe
root@da8136799e55:/opt/soffid/iam-console-3/index/master/com.soffid.iam.api.Group#
```

2. And the folder structure for the Sync Server

```
root@17beaa887a1e:/opt/soffid/iam-sync/index/master# ll
total 16
drwxr-xr-x 4 root root 4096 Jun  2 11:00 ./
drwxr-xr-x 3 root root 4096 Jun  2 09:39 ../
drwxr-xr-x 2 root root 4096 Jun  2 11:00 com.soffid.iam.api.Group/
drwxr-xr-x 2 root root 4096 Jun  2 10:45 com.soffid.iam.api.User/
root@17beaa887a1e:/opt/soffid/iam-sync/index/master#
```

```
root@17beaa887a1e:/opt/soffid/iam-sync/index/master/com.soffid.iam.api.Group# ls
_1f_1.liv  _1f.kdi             _1f_Lucene90_0.tip  _1p.fnm             _1p_Lucene90_0.dvm  _1q.cfs  _1s.cfs      write.lock
_1f.fdm    _1f.kdm             _1f_Lucene90_0.tmd  _1p.kdd             _1p_Lucene90_0.tim  _1q.si   _1s.si
_1f.fdt    _1f_Lucene90_0.doc  _1f.si              _1p.kdi             _1p_Lucene90_0.tip  _1r.cfe  _1t.cfe
_1f.fdx    _1f_Lucene90_0.dvd  _1p.fdm             _1p.kdm             _1p_Lucene90_0.tmd  _1r.cfs  _1t.cfs
_1f.fnm    _1f_Lucene90_0.dvm  _1p.fdt             _1p_Lucene90_0.doc  _1p.si              _1r.si   _1t.si
_1f.kdd    _1f_Lucene90_0.tim  _1p.fdx             _1p_Lucene90_0.dvd  _1q.cfe             _1s.cfe  segments_1o
root@17beaa887a1e:/opt/soffid/iam-sync/index/master/com.soffid.iam.api.Group#
```

Database

The database tables involved:

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

Example

1. The database structure

```
MariaDB [soffid_35x]> select * from SC_LUNIND;
+--------+---------------------------------+------------+---------------+
| LIP_ID | LIP_NAME                        | LIP_TEN_ID | LIP_TIMSTA    |
+--------+---------------------------------+------------+---------------+
|   5378 | master/com.soffid.iam.api.User  |          1 | 1685702740517 |
|   5774 | master/com.soffid.iam.api.Group |          1 | 1685703228965 |
+--------+---------------------------------+------------+---------------+
```

```
MariaDB [soffid_35x]> select * from SC_LUINPA \G;
*************************** 1. row ***************************
    LIP_ID: 5379
LIP_LIN_ID: 5378
  LIP_NAME: _v_Lucene90_0.dvd
 LIP_ORDER: 0
LIP_TEN_ID: 1
  LIP_DATA: ?◆lLucene90DocValuesData    ◆Mi◆◆!k
                                        mr◆
Lucene90_0 e(Y;R◆◆oGa◆◆Йr◆◆(◆◆        ◆◆◆
LIP_TIMSTA: 1685697735029
*************************** 2. row ***************************
    LIP_ID: 5380
LIP_LIN_ID: 5378
  LIP_NAME: _v.fdm
 LIP_ORDER: 0
LIP_TEN_ID: 1
  LIP_DATA: ?◆lLucene90FieldsIndexMeta   ◆Mi◆◆!k
                                         mr◆ ◆◆
      0                ◆?         0       6          ◆A         0       $      ◆(◆◆        ◆◆
LIP_TIMSTA: 1685697735025
*************************** 3. row ***************************
    LIP_ID: 5381
```

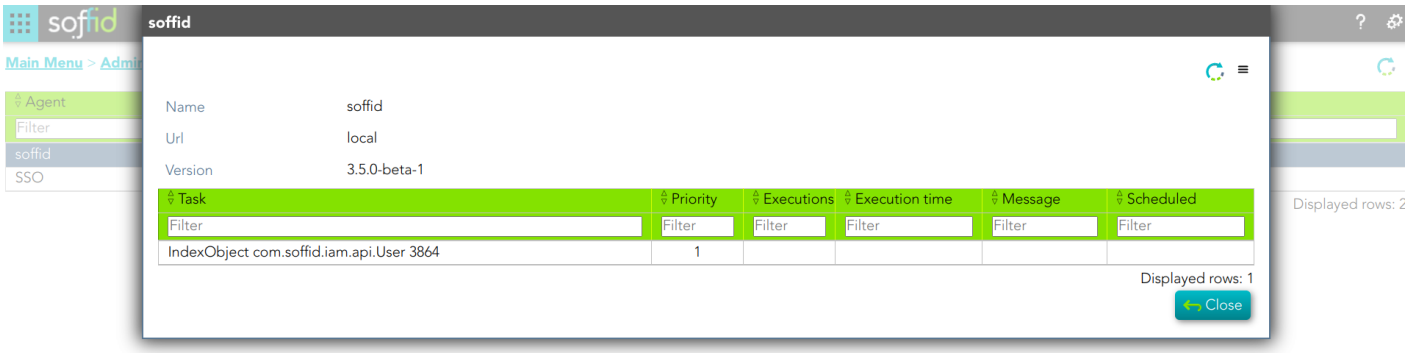
soffid agent

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

> Main Menu > Administration > Monitoring and reporting > Sync server monitoring

Example

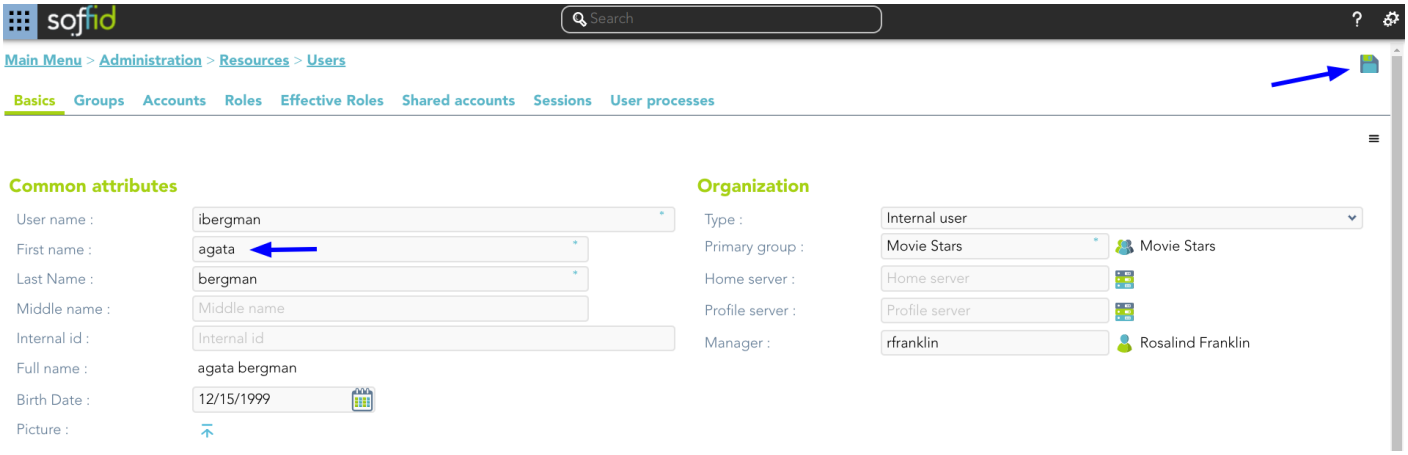
1. A soffid agent pending task:



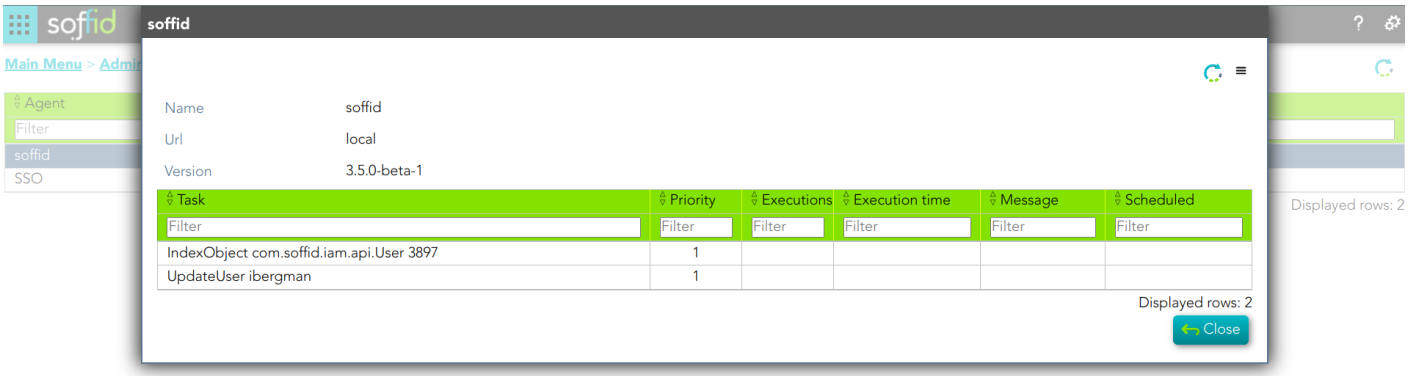
Step-by-step

Example 1

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



2. New tasks are created and executed.



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

```
root@da8136799e55:/opt/soffid/iam-console-3/index/master/com.soffid.iam.api.User# ls -al
total 108
drwxr-x--- 2 root root 4096 Jun  2 13:23 .
drwxr-x--- 4 root root 4096 Jun  2 09:58 ..
-rw-r----- 1 root root  405 Jun  2 10:42 _12.cfe
-rw-r----- 1 root root 2437 Jun  2 10:42 _12.cfs
-rw-r----- 1 root root  350 Jun  2 10:42 _12.si
-rw-r----- 1 root root  405 Jun  2 13:16 _15.cfe
-rw-r----- 1 root root 2608 Jun  2 13:16 _15.cfs
-rw-r----- 1 root root  350 Jun  2 13:16 _15.si
-rw-r----- 1 root root   67 Jun  2 09:40 _b_2.liv
-rw-r----- 1 root root  405 Jun  2 09:22 _b.cfe
-rw-r----- 1 root root 3463 Jun  2 09:22 _b.cfs
-rw-r----- 1 root root  385 Jun  2 09:22 _b.si
```

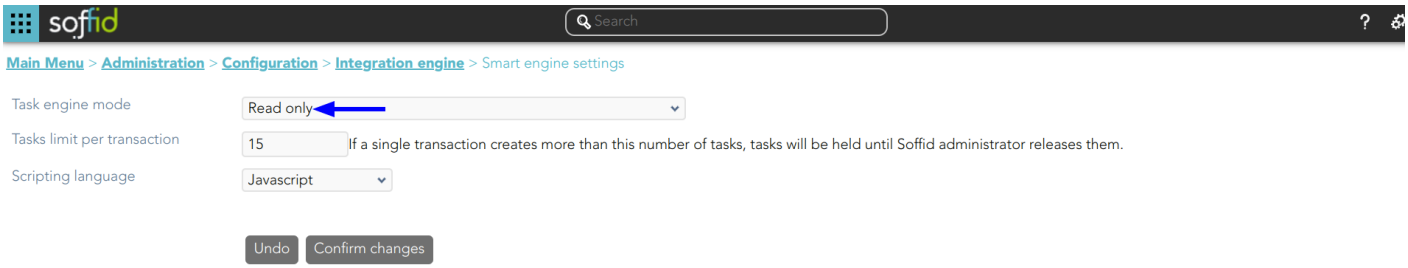
4. Then Sync Server and updates the database table SC_LUNIND by upgrading the LIP_TIMSTA field of the User object or by creating a new record if it did not previously exist.

```
MariaDB [soffid_35x]> select * from SC_LUNIND;
+--------+--------------------------------+------------+---------------+
| LIP_ID | LIP_NAME                       | LIP_TEN_ID | LIP_TIMSTA    |
+--------+--------------------------------+------------+---------------+
|   5378 | master/com.soffid.iam.api.User |          1 | 1685711801976 |
|   5784 | master/com.soffid.iam.api.Group |          1 | 1685703660618 |
+--------+--------------------------------+------------+---------------+
```

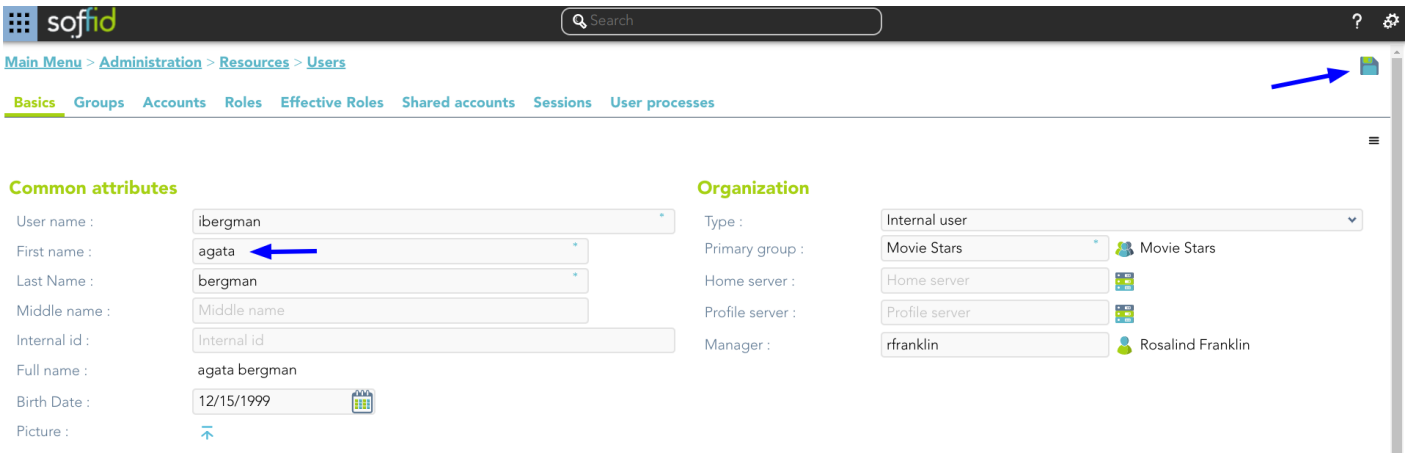
5. When the following search will be performed, the very first thing to do is check the database file. If it is necessary update the file system and finally perform the search.

Example 2

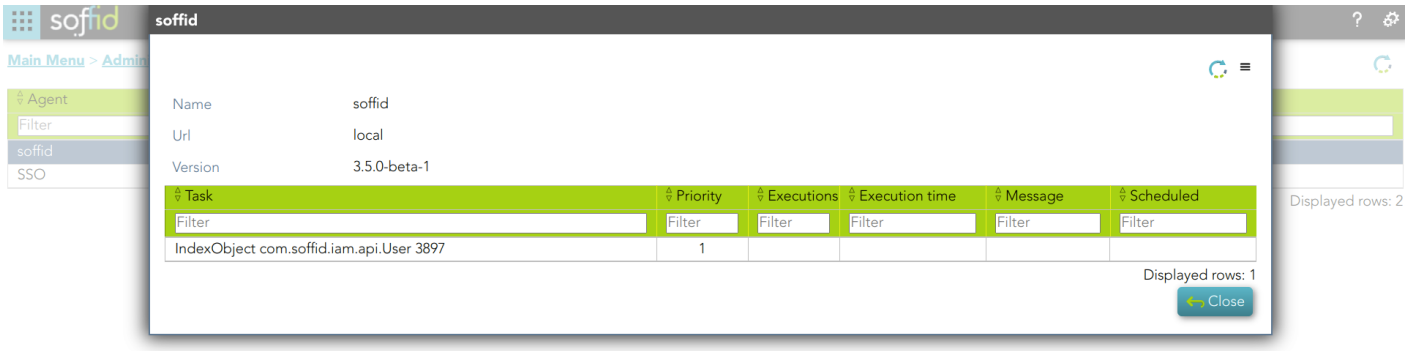
1. The task engine mode is Read only



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



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.