

# Textual Index

- Textual Index
- Operation

# 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.

**soffid** Search

Main Menu > Administration > Configuration > Global Settings > Metadata 9 / 12

Object type : com.soffid.iam.api.User

Description : Builtin user object

Use textual index : Yes **III**

Code	Label	Data type	Built-in type
Filter	Filter	Filter	Filter
<input type="checkbox"/> __COMMONATTRIBUTES__	Common attributes	Separator	Yes
<input type="checkbox"/> userName	User name	String	Yes
<input type="checkbox"/> firstName	First name	String	Yes
<input type="checkbox"/> lastName	Last Name	String	Yes
<input type="checkbox"/> middleName	Middle name	String	Yes

## 2. Check the attributes included in the quick search.

**soffid** Attribute metadata

Main Menu > Administration > Configuration > Global Settings > Metadata 2 / 31

Object type : com.soffid.iam.api.User

Description : Builtin user object

Use textual index : Yes

Code : userName

Label : User name

Data type : String

Letter case : Keep as entered by the user

User hint : User hint

Description : Description

Required : Yes **II**

Include in quick search : Yes **II**

Prevent duplicated values : **II** No

Multiple values : **II** No

Maximum number of rows to display : Maximum number of rows to display

# 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.

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

frankin

Quick [Basic](#) [Advanced](#)

<input type="checkbox"/>	▼ User name	↕ First name	↕ Last Name	↕ Primary group	↕ Enabled	↕ Manager
<input type="checkbox"/>	aretha	Aretha	Franklin	world	Yes	
<input type="checkbox"/>	frank	Frank	Sinatra	Music	Yes	
<input type="checkbox"/>	frankrudolph	Frank Rudolph	Olson	scientist	Yes	
<input type="checkbox"/>	franks	Frank	Sherwood	scientist	Yes	
<input type="checkbox"/>	rfranklin	Rosalind	Franklin	scientist	Yes	

Displayed rows: 5

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

soffid

Attribute metadata

15 / 32

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

Object type :

Description :

Use textual index :

☐

Code

Filter

☐

rid

☐

fullName

☐

birthDate

☐

picture

☐

\_\_ORGANIZATION

☐

userType

Code :

manager

Label :

Manager

Data type :

User

User hint :

User hint

Description :

Description

Required :

☐

Yes

☐

No

Include in quick search :

☒

Yes

☐

No

Prevent duplicated values :

☐

Yes

☐

No

Multiple values :

☐

Yes

☐

No

Maximum number of rows to display :

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.

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

frankin

Quick [Basic](#) [Advanced](#)

<input type="checkbox"/>	▼ User name	↕ First name	↕ Last Name	↕ Primary group	↕ Enabled	↕ Manager
<input type="checkbox"/>	aretha	Aretha	Franklin	world	Yes	
<input type="checkbox"/>	frank	Frank	Sinatra	Music	Yes	
<input type="checkbox"/>	frankrudolph	Frank Rudolph	Olson	scientist	Yes	
<input type="checkbox"/>	franks	Frank	Sherwood	scientist	Yes	
<input type="checkbox"/>	hlamarr	Hedy	Lamarr	scientist	Yes	franks
<input type="checkbox"/>	inewton	Isaac	Newton	scientist	Yes	frank
<input type="checkbox"/>	janis	Janis	Joplin	Music	Yes	frank
<input type="checkbox"/>	rfranklin	Rosalind	Franklin	scientist	Yes	

Displayed rows: 8

## Example 2

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

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

≡

🔍

[Quick](#)
[Basic](#)
[Advanced](#)

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
<input type="checkbox"/>	inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
<input type="checkbox"/>	janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
<input type="checkbox"/>	ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 4

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

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

≡

🔍

[Quick](#)
[Basic](#)
[Advanced](#)

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
<input type="checkbox"/>	ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 2

And by searching "manager:frank\*":

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

≡

🔍

[Quick](#)
[Basic](#)
[Advanced](#)

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
<input type="checkbox"/>	inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
<input type="checkbox"/>	janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
<input type="checkbox"/>	ntesla	Nikola Tesla	Support IT	Yes	Nikola	Tesla	frankrudolph

Displayed rows: 4

And also by searching "manager:fr\*"

soffid

Search

?

⚙

[Main Menu](#) > [Administration](#) > [Resources](#) > [Users](#)

≡

🔍

[Quick](#)
[Basic](#)
[Advanced](#)

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	etaylor	Elizabeth Taylor	Movie Stars	Yes	Elizabeth	Taylor	freddie
<input type="checkbox"/>	hlamarr	Hedy Lamarr	scientist	Yes	Hedy	Lamarr	franks
<input type="checkbox"/>	inewton	Isaac Newton	scientist	Yes	Isaac	Newton	frank
<input type="checkbox"/>	janis	Janis Joplin	Music	Yes	Janis	Joplin	frank
<input type="checkbox"/>	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.

soffid

Search

?

Main Menu > Administration > Resources > Users

userName:frank\*

Quick Basic Advanced

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	frank	Frank Sinatra	Music	Yes	Frank	Sinatra	
<input type="checkbox"/>	frankrudolph	Frank Rudolph Olson	scientist	Yes	Frank Rudolph	Olson	
<input type="checkbox"/>	franks	Frank Sherwood	scientist	Yes	Frank	Sherwood	

Displayed rows: 3

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

soffid

Search

?

Main Menu > Administration > Resources > Users

userName:frank?

Quick Basic Advanced

<input type="checkbox"/>	▼ User name	↕ Full name	↕ Primary group	↕ Enabled	↕ First name	↕ Last Name	↕ Manager
<input type="checkbox"/>	frankrudolph	Frank Rudolph Olson	scientist	Yes	Frank Rudolph	Olson	
<input type="checkbox"/>	franks	Frank Sherwood	scientist	Yes	Frank	Sherwood	

Displayed rows: 2

## 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.

soffid

Search

?

Main Menu > Administration > Resources > Users

frank?

Quick Basic Advanced

<input type="checkbox"/>	▼ User name	↕ First name	↕ Last Name	↕ Primary group	↕ Enabled	↕ Manager
<input type="checkbox"/>	aretha	Aretha	Franklin	world	Yes	
<input type="checkbox"/>	frankrudolph	Frank Rudolph	Olson	scientist	Yes	
<input type="checkbox"/>	franks	Frank	Sherwood	scientist	Yes	
<input type="checkbox"/>	hlamarr	Hedy	Lamarr	scientist	Yes	franks
<input type="checkbox"/>	ntesla	Nikola	Tesla	Support IT	Yes	frankrudolph
<input type="checkbox"/>	rfranklin	Rosalind	Franklin	scientist	Yes	

Displayed rows: 6

Notice the difference by searching "fran?"

soffid

Search

?

Main Menu > Administration > Resources > Users

fran?

Quick Basic Advanced

<input type="checkbox"/>	▼ User name	↕ First name	↕ Last Name	↕ Primary group	↕ Enabled	↕ Manager
<input type="checkbox"/>	aretha	Aretha	Franklin	world	Yes	
<input type="checkbox"/>	frank	Frank	Sinatra	Music	Yes	
<input type="checkbox"/>	frankrudolph	Frank Rudolph	Olson	scientist	Yes	
<input type="checkbox"/>	franks	Frank	Sherwood	scientist	Yes	
<input type="checkbox"/>	hlamarr	Hedy	Lamarr	scientist	Yes	franks
<input type="checkbox"/>	inewton	Isaac	Newton	scientist	Yes	frank
<input type="checkbox"/>	janis	Janis	Joplin	Music	Yes	frank
<input type="checkbox"/>	ntesla	Nikola	Tesla	Support IT	Yes	frankrudolph
<input type="checkbox"/>	rfranklin	Rosalind	Franklin	scientist	Yes	

Displayed rows: 9

# 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:

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

<b>Fuzzy Searches</b>	<p>To do a fuzzy search use the tilde, "~", symbol at the end of a Single word Term</p> <p><u>Soffid Console &lt;= 3.4 version</u></p> <p>~0.8: stricter search</p> <p>~0.1: more lax search</p> <p><u>Soffid Console &gt; 3.4 version</u></p> <p>An additional (optional) parameter can specify the maximum number of edits allowed. The value is between 0 and 2.</p>
<b>Range Searches</b>	<p>Range Queries allow one to match documents whose field(s) values are between the lower and upper bound specified by the Range Query</p>
<b>Boosting a Term</b>	<p>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.</p>

## Boolean Operators

<b>OR</b>	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
<b>AND</b>	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.
<b>+</b>	The "+" or required operator requires that the term after the "+" symbol exist somewhere in a the field of a single document.
<b>NOT</b>	The NOT operator excludes documents that contain the term after NOT. This is equivalent to a difference using sets.
<b>-</b>	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+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": "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+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+false",
      "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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+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+false",
        "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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+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"
    }
  ]
}
```



[illegible]

1Kp0Oul7jkbk/vwlli6oegjjgSvkDp8Cl/pbs/qcXWp7lc51+6/at4A3HllmFX6t6ZG7tr8j+UAILCO40F4zEbH7S52sx0vb2  
eXjNL0VIZATb/n9/KWu19kBxmXQj98IGOTYFU5lennDEMhVwpzDQWO+1uGnHnNbsvolSSiyOLs5zWXUILAKoYgXsA  
Ne+Q8Hh6yEAG/jrL6i1S3bbTugYXaXQ1kVnDLZbm2rE6nyGhHpM9sZiuJ52mtp6lTrFKtJgd1tTPLqFT65SN94HsuGfsA  
nu+Ufhgt75QfLjluz+1RvxtHYapAj4/C02a5WxBBvoDod17eMqcZsNajEq+W9iyIQWjGgOp0PfNTXoh1uN8rv4fnp++c  
BcFhkw6ZFYm9yxvqzHS5t4W8pG/gUe5YAchbcJMTBrvzEwopiBUrg8h/4lZtB7dkbyQB56TQ4phaZjFDNUQd9/Td8bQI  
229ji9RKiXznsuP5V7Kn0EvcEgzKo1ChU89Xb/avrCVqjVLKbE72tckHSwHG5Mk7OweRdd9txNyL6knmx4+AECTOvH  
GNlGcTEvEvHgQODTs04iNjgKRBOsfnjWeBHcRto52gs8DUARwjVMdA4CLEvEjgLmiXnRsB0VYwQloDhDI0AIRTAxP0o  
7PNqWJUaLenUI4Am6E+eYeYmDw9UBh37/Oe5VqSujl6hkYZWU6gg8JgdrdBEO5qwxGSiNSGQu4/IQgjOeAvr4wM1s  
XH9VVKndfT4zd0cfmE80xrlxFsncKb2DEFhY21K6E7t3OXuwt07lJ8PIA2Ard3nO6y5sYGIVBj0S8Cg6Z4oCnkHEzE7lo5  
6qjvvL/ppibsEXgLM6G4G5LnU7v1gej7Jp2pnw/f78JGxERLHZOnZ5iQ8ahDHxgHwb8L/v8AZkhWdVEqkd13jjlIDFBh  
A5113QLsRvk1jIwJ4wkjG4nWU+GrMa6sqlramys1hY6kKCQOEtmYmhj/fKO6LJ2qrFcF/xE/IA8lju2dxIA0VbWpPiV90b9  
DrrraTTFtOgDjSsIREgCyx6xWEEzQFcbwGNZ4wtAdeNaNBjjAG8FDNBWGaVIVYNBCCAtoWWgEaywEnRLR0DgI4CII4  
QHARwWcsKggKizyb6SuknWw1CEdWhsbnss/E2Gr24DcOPdrun3SL+HpGjTI611Nze2SnuJJ4E7v+bTxqtUN81wt9c7  
DtH7icB+7wJWz3GQ7rF2IsLC4VLI3C418pJw1TlwPCQcC+dKiBizLaqtxY2HZf4FT5Q9B8ynmNfKBv8AAV8wUjWWO0t  
opRpFjvl0HMzObBq2S54CUO2tqm1+A3DugQ8XiC7Mx1JMteiWOCVCjGwOovzmezzkuzALcnaB7LhMcpbRh6ynx/  
SJDV6tFeq17HihZVPe268pNh7EZSHrs1j7oNvWbzB00RQEUKOAAAgOw1AhbuLE7xy7ryn2jQek3WjDk3uo3gfaHdLt6  
OjjFKDraBFwe0VdbqZ1epbUyi21hjSb+loeyT9YnAX94Dh3jvklMVnTN3XgLjDmU21PLvgMBtE4cMhpliTc62bcBfLa5Xv  
GmshPisis53LzV7h+svMLthHUHQ8bwOo9JUb3G13ZSGv929s3leSqe26De/bhqDv46jSGQYeotmRCDvuo1MhbU6NK  
wLjdWt97dqAQfbHc3kRAnjF0yLiOlueYTqeJRjZXRjyDAn0BmAqsYUOcEMBmsLtdQdXS+rqOK+2ttcwgXRDe9gGs5INI  
dRufMpF1ud+4ccu6B6SwgnWYXCbfq4dsrl3UvlyN1aJTW1xZyBw58LTZbO2ITrpnpsDb2gGBKncplgPYRhEKyxloAwj  
OJlnZYAmg80M6wVoGIURyiDVo9WgEUzmiRYDZ1o4LHBYAwIRRHBI9afpA5FId0g22mFplmILhIv8A9jyUSDtXpfQpB  
shFRI35TdR4kanyE8l25t56zl3bUm4JF2HIII7IOV9YAdtY96jmo7asbl21uearvbkCQAOHOVYJOqIW/nqaj46R5ze0EA7  
9Q3Y9/a/SMrFTrUqM55LrbuudPSBKwGOenVR3emQDZl7PsEWYaC24mWO1MAcPUsuqPc025rxUnmNPKxmeDjuWm  
W8ST8BN30bdMVhuoqqQUsNfaAt2HUnlqPLvgR9m1s1F1XeFOg4ixmeqLIAvLV6L4StkFVT7LcGXn+o4SHj6gZrj0gRK  
KK28i3jNVsjcOhzM6X7yjjqyEbxLXZWYkdXXPc8V9lh+vH1gennFUKIO6upAtexBt6RKGG0aIATrVuObCZzBdEcPa+erry  
cDcByGssE6MYNd6FiL+3UbXfwB8IFliNoU1FzUQD74/WQ6rmqv1Op0IY6KdeHP5QB2bhUYFKNPNwsoNvM6k+Mt6Lh  
BfjAr8ArgIKo9rnuInbSpBFsDpu/WO2IWLLpvGt5SYmpUqsiXsSQo8WNh5m8CJjaud0QA5ew5W2joHABXkCjXdsP60K/  
VFKpSmST1be2VvrjsaL7V7a6jjLPplow2ITLotHEVKZ/7bpTqW/C7yp2jh7L1V7t1qlydNVZqRPhYo3/qXgEo4qrTdHd2K  
0zldCMrl/DOOIPBhoZ6XsnaiuoN73nmW0axavinDG1IBRFVWBdaZpsOKntaeYtJOysU9FkKezUynIWGZMwzDxUjc3rY7  
w3nSHYi10upKPCmjrvVx7LDv+YnntXOjMjjqyHGew0pVW0TEU/9J9zLuveobLrFls2t5IOm2FAIrbC2VWWon/Uot/mKO  
ZA7Y+6YGXF7dWUANygQ3KrUHabDk7zTcdpD7p3RNIY16Lq9JaRQDsgkU6zpfIdbOym6kHiNN8FVXQqXuAEps/NG7  
WExPipshPlyLinS4esjFHZg6lcpp11stS3DWwax/KB6xhMStRFqJqrC4594I4EboRhMj0Hx62egHzrq9Jjo2XQOjD7amxP  
3r8Zq2eAhMS8S8SBzmBzwjiDtA0Aj1M4CotAVWhVMCBCKIBRHARiIRNq7XTDrdu05BKotyzd9hqB3wD7R2hToJnqNb  
kPeY8gPz3Cefbb6Q1MV2EJCfYp1aYc/eBBznuB8oLaWJq1nNR1qDk3ULUVV5atoB4CQEgVGPZGGxAPuZfVJ/Llw8rwK  
DGk7hUL2YDlyZKwN9ymx1vyPIK50ZfdWn3sbufz+E021aYrLICZKo0FOr7R5CnVNmBvuV9OR4SrOAFuxg3J+1UZiPS  
yiBRsyX1Lufwj8zHpm9ykB3kfj6tjGlp1UOuSn3BK09CZFc39qrFuAY/OwgPdXpTqO92YD4LjmwDonD1lfrMynsuNTdTvl  
7xv8u+VI6Y4OfML+s4svBP7mMD1fauAXE0Sglv7dN+Aa2mv2Tx9eE87VGRzTcFWU5WB3gzRdCtsAr/AA7XBXVNd6  
8VvzHyPdLHPsXrl62mPrUH/uKpDP8w4engFDiMASugvpKhsM6nshr915ouju0Vaytv3WPxmjQICCANf3+/CBisM2ONs  
gqW3bv1Es8NsrHsczs4B3gkCbZKigX+EmjXUiBQbP2a6bxr6n1lg1Mrv3yfUrASqx+LAHfuA4k8LCBWba2itjc7nTlxJ5  
DmZA6C4tsTjKebgxcjkEBK/HLKfpc5Y6nQbhy5zQ/Q3hO3WrHgqovmczH4CAP6SFHW4pbah8NVH9aGkf9qiE2bsF6/

wBY3YLomZSAe2qKGPgSin+kS8x2CTEYypIASUKU0A91shJzeFybeF5Z136pVYaWdAfBjI+ZEDzTpXQqUi6OEyuVLMi  
hCxW5UtbedTIH8cGxKuoIRVRFB3gKoFj33BM3PTvCipTzDhr+v5TzzDUI7qote/tW1sPnA9d2HUBUGQemastPrE1ZCH  
A+0FN3XzXMPOSdh0cqAdwndKCwoO6i7lpcDmV7VvO0Dzg0kVsl70xZM3PC4jWm39Dnfwgu0wdH9tII3X/xOGNhod  
5en63hCiEZfcQ5Cf8AyuJ7VNV6HIgqrsCKje2pV3H+rQcUq/4kZWgM2btIJUTEU1C9pespjQB7WLIPsuuYW4G3dPUetD  
AMpupAIPMEXE8uxRp1M9RRIKXSqqjUoHHV107xZcwm56J4o1MMoNsyMyG27TVSO4gi0C2Dzs84rGEQH5oy8WMtA  
0itHgwSiFUQHrDoINU4zGdlek3WXo4c3QGzuC/a5gdWPlXzF/DeFztjpMIO6Uu2/wBoK7IvgUUHjMjjHaqxLujltSr1alln8Y  
RYF6ii1+qB/mOLuPMYRQqZtFBb/s1s/wD8Fa5bwgREwrUzmFDEp/NScOO7ULb4yQtRa182WsRvV16rEabyrrcOd+hj  
PdEZFQK9xIL5M6B8PURt5zpqmnd6wjUc5Hb/E02z0yQt6iWuAHhtEAzhqQdYA8QV6tTmaphnOVs4+sovpoDztqOB  
A3XIXicjTRnTE1atwQaZUB1dCLhrsRv/MS4p4hAGqZPqqnYxFIb0YnR0HAX1XkbjIB1kdCEV1z01vSqEArUwzm7C5BtY  
dsb9zCBncSuEX2RWfvZkXX+mV75T7FEkcNWf8psHbEnQYnDaaAhqY9Oxf4SsxeHrn28ZT8qxPwUAQKEdYNYZf6Lf7  
o1jV4sB/Uo+XhCYvCoNTXVj3Bm+N5DyJ9o+SvDU69VHV1cZIII7SnX9P1nqGx9pJWpo67yOOL+y3vCeTOE4FvSXHR  
naYo1At+w5AJ3Wf3Tv47vTIA1u2+jpZzXw1g+903BjxZTUdcxuO/TjQrtipSbl6spG9Wfj6H5zbUsRcSPjXUizqGHjgGHx  
gRMN0ipMmrWPlx9Hb6D3x6yH/8AzqbGwo0/wLNBszohhaq2enlb7SGx9LW9RArk/SBdynOeAGvryjMCjM2dzdzcADc  
o7uZ75dYno3h6Jp1yIBpeoMgNt4DAENbQHdaRa+TIWoulWxCk03R+0QSQ2U3zEA2HceUCsw1Km1Zmex6u1g1rDj  
mN+QmgwLtUzCklkIKs9ygdTvAG8i3Ezz7Z2MV8Qrkgrmtl4HS4J5ier7LqLYeEBINcgHYJUb8upHlxHhrlfSHFKcJWdWB  
C0y6nvWzD4iX7rxEwfTqkilSzMqVDCqpsrOpv6nTTja8Cg2p0g69FppfddzyEi7FT64abpV0WBHYBuxsANSeQ75othbjc  
1O2xVtDIWxIHedwgegbLY2F5Kx9MMpHAjXzkBD0coGpPiZfVbwPLsVhVpv1Tajrh3v/ANGsSabX5JUUVk0hKC5Abew  
Gcfz64asfU03mk6V0Q532zjqSeRftU2Pg6IP6zM2WLHNuNTK/eDUU0qg7stVEPnAFg665ErFRmpDqcQm7rKT9gP4i+  
U94Uy96A1sISpSvcG4/qT2GH3ILfglFtHDhLOvsYijUvbXtg3YfiVJJ2VieorLWJy5KjUqwlJ3lijEDXUZlvtxgemMIwiSaRV1  
V0IZWAI1BB3WliMkCPaDtjBgvoBoEWfd1RS7sFUbyTYTp0DC9Iekj1wUpgrR5nKvWcLI3ITL/KA/eAZQI/86eeKcHw7C  
hR6Tp0Agruod7aC9PGo1rm2qtra54+sl6Z2am7KtVWVqfWU6ahxbRS677k6Xup011iToBqdRsz5Ulc/wCdhXvapze  
mTx423jeMwjKioEUhyaOb6up/4mHqb8j21tfXTxHI9OgdUZyzOFXrkU9ft9yvSPtOoGhuLE27mG6MWmjotLP2HzNh6j  
WBR/foudwBNvPKdxnToFfhKN1KnCO7U2NNyr1PbXmoBANiDbviVqCa5sFWHi9QfNPGLogVmKRPdwr373qH4BRKm  
op4Ubd1nPznToAWY/YH4W/WNKnflsNxGtjOnQNv0Y2pnQKx7SaG/EcD+veJpKeEaoQBOOnQNjs3YoWxl1/f6SZtnGU8j  
h3rsAci3VLhc77kQHvNok6B5JT2saH+ISun8TUqVC6OjMtMPmcvncZb3IAABOp7xM2+LZ83ZA7CltWIZlv23Gt3OY2Jt  
lvpaLOgDw+Is2lgBusLcbi/E8tZ6p0a2mHRTfxD5zp0DV0sRKjpdsX+ModWrhGDBwxGYXAlsRcEXvvE6dAotl9HqeDQ  
sVNSqB7ZsLE7gg90X85Z7D2aEGdtXY3J8Yk6BdVGAtluKJtp8506BjNvlztkU+32A2mj5WZCP60UTO583aC2LXcDgppq  
A51/pr0x+KLOgBwo6xBTJ0FSoi62s1VCafkXQjzkps9UU61NVZ3BpVUYLINSmAwJDGxLIN3MGdOgazoNtEWfDFSjKSw  
pNe6X9oITqUvrY6i54Wmqczp0ATiAnToH//2Q=="

```
    },  
    "id": 3910,  
    "userType": "I",  
    "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+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+false",
      "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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+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",
"createdAt": "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+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+false",
        "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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"
```

[illegible]

MU8r3NvIXlXWpAOVAFrgj9+szmA26uHxLoVuxF8xPshgCQB4W9Zf5y75h7639bpf+4QLmn7I8B8opESLAQRSZxEYR  
AW84xVE5IgBYxpjmSMcQBvY08c0HaBqFEdalohA60UCdaKIC3nTohMDoojLxYBVMbjsP1IGpT+2jp+JSBOWSKZgeB  
1Kp0Oul7jkbk/vwlli6oegjigSvkDp8Cl/pbs/qcXWp7lc51+6/at4A3HllmFX6t6ZG7tr8j+UAILCO40F4zEbH7S52sx0vb2  
eXjNL0VIZATb/n9/KWu19kBxmXQj98IGOTYFU5lennDEMhVwpzDQWO+1uGnHnNbsvoISsiyOLs5zWXUILAKoYgXsA  
Ne+Q8Hh6yEAG/jrL6i1S3bbTugYXaXQ1kVnDLZbm2rE6nyGhHpM9sZiuJS2mtp6ltrFKtJgd1tTPLqFT65SN94HsuGfsA  
nu+Ufhgt75QfLjuz+1RvxtHYapAj4/C02a5WxBBvoDod17eMqcZsNajEq+W9iyIQWjGgOp0PfNTXoh1uN8rv4fnp++c  
BcFhkW6ZFYm9yxvqzHS5t4W8pG/gUe5YAchbcJMTBrvzEwopiBUrg8h/4IZtB7dkbyQB56TQ4phaZjFDNUQd9/Td8bQI  
229ji9RKiXznsuP5V7Kn0EvcEgzKo1ChU89Xb/avrCVqjVLKbE72tckHSwHG5Mk7OweRdd9txNyL6knmx4+AECTOVH  
GNlGcTEvEvHgQODTs04iNjgKRBOsfnjWeBHcRto52gs8DUARwjVMdA4CLEvEjgLmiXnRsB0VYwQloDhDI0AIRTAXP0o  
7PNqWJUaLenUI4Am6E+eYeYmDw9UBh37/Oe5VqSujl6hkYZWU6gg8JgdrdBEo5qwxGSiNSGQu4/IQgjOeAvr4wM1s  
XH9VVKndfT4zd0cfmE80xrlxFSncKb2DEFhY21K6E7t3OXuwt07Ij8PIA2Ard3nO6y5sYGIVBj0S8Cg6Z4oCnkHEzE7Io5  
6qjvvL/ppibsEXgLmM6G4G5LnU7v1gej7Jp2pnw/f78JGXeRLHZOnZ5iQ8ahDHxgHwb8L/v8AZkhWdVEqkd13jjlIDFBh  
A51I3QLsRvk1jIwJ4wKjG4nWU+GrMa6sqlramys1hY6kKCQOEtmYmhj/fKO6Lj2qrFc/xE/IAS8lju2dxIA0VbWwPiV90b9  
DrrraTTFtOgDjSsIREgCyx6xWEEzQFcbwGNZ4wtAdeNaNBjjAG8FDNBWgaVIVYNBCCAtowwgEaywEnRLR0DgI4CIH4  
QHARwWcsKggKizyb6SuknWv1CEdWhsbns/E2Gr24DcOPdrun3SL+HpGjTI611Nze2SnuJJ4E7v+bTxqtUN81wt9c7  
DtH7icB+7wJWz3GQ7rF2IsLC4VLI3C418pjw1TIwPCQcC+dKiBizLaqtxY2HZf4FT5Q9B8ynmNfKBv8AAV8wUjWWO0t  
opRpFjvl0HMzObBq2S54CUO2tqm1+A3DugQ8XiC7Mx1JmteiWOCVCjGwOovzmezzkuzALcnhaB7LHmcpbRh6ynx/  
SJDV6tFeq17HihZVPe268pNh7EZSHrs1j7oNvWbzB00RQEUKOAAAgOw1AhbuLE7xy7ryn2jQek3WjDk3uo3gfaHdLt6  
OjjFKDraBFwe0VdbqZ1epbUyi21hjSb+loeyT9YnAX94Dh3jvklMVnTN3XgLjDmU21PLvgMBtE4cMhpliTc62bcBfLa5Xv  
GmshPisis53LZv7h+svMLthHUHQ8bwOo9JUb3G13ZSGv929s3leSqe26De/bhqDv46jSGQYeotmRCDvuo1MhbU6NK  
wLjdWt97dqAQfbHc3kRAnjF0yLiolueYTqeJRjZXRjyDAn0BmAqsyOUcEMBmsLtdQdXS+rqOK+2ttcwgXRDe9gGs5INI  
dRufMpF1ud+4ccu6B6SwgnWYXCbfq4dsrl3UvlyN1aJTW1xZyBw58LTZbO2ITrpnpsDb2gGBKncplgPYRhEKyxloAwJ  
OJlnZYAmg80M6wVoGIURyiDVo9WgEUzmiRYDZ1o4LHBYAwIRRHBI9afpA5Fld0g22mFplmLkHlv8A9jyUSDtXpfQpB  
shFRI35TdR4kanyE8I25t56zl3bUm4JF2HIII7IOV9YAdtY96jmo7asbl21uearvbkCQAOHOVYJOqIW/nqaj46R5ze0EA7  
9Q3Y9/a/SMrFTrUqM55LrbuudPSBKwGOenVR3emQDZ17PsEWYaC24mWO1MAcPUsuqPc025rxUnmNPKxmeDjuWm  
W8ST8BN30bdMVhuoqqQUsNfaAt2HUnlqPLvgR9m1s1F1XeFOg4ixmeqLIAvLV6L4StkFVT7LcGXn+o4SHj6gZrj0gRK  
KK28i3jNVsJcOhzM6X7yjjqyEbxLXZWYkdXXPc8V9lh+vH1gennFUKIO6upAtexBt6RKGOaIATrVuObCZzBdEcPa+erry  
cDcByGssE6MYNd6FiL+3UbXfwB8IFliNoU1FzUQD74/WQ6rmqv1Op0IY6KdeHP5QB2bhUYFKNPNwsoNvM6k+Mt6Lh  
BfjAr8ArgIKo9rnulnbSpBFsDpu/WO2IWLLpvGt5SYmpUqsiXsSQo8WNh5m8CJjaud0QA5ew5W2joHAbXkCjXdsP60K/  
VFKpSmST1be2VVrjsaL7V7a6jjLPplow2ITLotHEVKZ/7bpTqW/C7yp2jh7L1V7t1qlydNVZqRPhYo3/qXgEo4qrTdHd2K  
0zldCMrl/DOOIPBhoZ6XsnaiuoN73nmW0axavinDG1IBrfVWBdaZpsOKntaeYtJOysU9FkKezUynIWGZMwzDxUjc3rY7  
w3nSHYi10upKPCmJrvVx7LDv+YnntXOjMjjqyHGew0pVW0TEU/9J9zLuveeobLrFls2t5IOm2FAIrBc2VWWon/Uot/mKO  
ZA7Y+6YGXF7dWUANygQ3KrUHabDk7zTcdpD7p3RNIY16Lq9JaRQDsgkU6zpfIdbOym6kHiNN8FVXQqXuAEps/NG7  
WExPipshPlyLinS4esjFHZg6lcpp11stS3DWwax/KB6xhMStRfQjqrC4594I4EboRhMj0Hx62egHzrq9Jjo2XQOjD7amxP  
3r8Zq2eAhMS8S8SBzmBzwjiDtA0Aj1M4CotAVWhVMCBCKIBRHARiiRNq7XTDrdu05BKotyzd9hqB3wD7R2hToJnqNb  
kPeY8gPz3Cefbb6Q1MV2EjCfYp1aYc/eBBznuB8oLaWjq1nNR1qDk3ULUVV5atoB4CQEgVGPZGGxAPuZfV/JLlw8rwK  
DGk7hUL2YDlyZKwN9ymx1vyPIK50ZfdWn3sbufz+E021aYrLICZKo0FOr7R5CnVNmBvuV9OR4SrOAFuxg3J+1UZiPS  
yiBRsyX1Lufwj8zHpm9ykb3Kfj6tjGlp1UOuSn3Bk09CZFc39qrfuAY/OwgPdXpTqO92YD4LjmwdonD1lfrMynsuNTdTvl  
7xv8u+VI6Y4OfML+s4svBP7mMD1fauAXE0Sglv7dN+Aa2mv2Tx9eE87VGRzTcFWU5WB3gzRdCtsAr/AA7XBXVNd6  
8VvzHyPdLHPsXrl62mPrUH/uKPdP8w4engFDiMASugvpKhsM6nsr915ouju0Vaytv3WPxmjQICCANf3+/CBisM2ONs

gqW3bv1Es8NsrHsczs4B3gkCbZKigX+EmjXUiBQbP2a6bxr6n1lg1Mrv3yfUrASqx+LAHfuA4k8LCBWba2itjc7nTlxJ5  
DmZA6C4tsTjKebgxcjkEBK/HLKfpc5Y6nQbhy5zQ/Q3hO3WrHgqovmczH4CAP6SFHW4pbah8NVH9aGkf9qiE2bsF6/  
wBY3YLomZSAe2qKGPgSin+kS8x2CTEYypIASUKU0A91shJzeFybeF5Z136pVYaWdAfBjl+ZEDzTpXQqUi6OEyuVLMi  
hCxW5UtbedTIH8cGxKuolRVRFB3gKoFj33BM3PTvCipTzDhr+v5TzzDUI7qote/tW1sPnA9d2HUBUGQemastPrE1ZCH  
A+0FN3XzXMPOSdh0cqAdwndKCwoO6i7lpcDmV7VvO0Dzg0kVsl70xZM3PC4jWm39Dnfwgu0wdH9tI3X/xOGNhod  
5en63hCiEzfcQ5Cf8Ayuj7VNv6HlgqrsCKje2pV3H+rQcUq/4kZWgM2btIJUTEU1C9pespjQB7WLIPsuuYW4G3dPUetD  
AMpupAIPMEXE8uxRp1M9RRIKXSqqjUoHHV107xZcwm56J4o1MMoNsyMyG27TVSO4gi0C2Dzs84rGEQH5oy8WMtA  
0itHgwSiFUQHrDoINU4zGdlek3WXo4c3QGzuC/a5gdWpIXzF/DeFztjpMIO6Uu2/wBoK7lvgUUhjMjjHaqxLujltSr1alln8Y  
RYF6iil+qB/mOLuPMYRQqZtFBb/s1s/wD8Fa5bwgREwrUzmFDEp/NScOO7ULb4yQtRa182WsRvV16rEabyrrcOd+hj  
PdEZFQK9xIL5M6B8PURt5zpqmnd6wjjUc5Hb/E02z0yQt6iWuAHtEAzhqQdYA8QV6tTmaphnOVs4+sovpoDztqOB  
A3XIXicjTRnTE1atwQaZUB1dCLhrsRv/MS4p4hAGqZPqqYxFlb0YnR0HAX1XkbjIB1kdCEV1z01vSqEarUwzm7C5BTy  
dsb9zCBncSuEX2RWfvZkXX+mV75T7FEkcNWf8psHbEnQYnDaaAhqY9Oxf4SsxeHrn28ZT8qxPwUAQKEdYNYZf6Lf7  
o1jV4sB/Uo+XhCYvCoNTXVj3Bm+N5DyJ9o+SvDU69VHV1cZlII7SnX9P1nqGx9pJWpo67yOOL+y3vCeTOE4FvSXHR  
naYo1At+w5AJ3Wf3Tv47vTIA1u2+jpZzXw1g+903BjxZTuDcxuO/TjQrtipSbl6spG9WFj6H5zbUsRcSPjXUizqGHjGhx  
gRMN0ipMmrWPIx9Hb6D3x6yH/8AZqbGwo0/wLNBszohhaq2enlb7SGx9LW9RArk/SBdynOeAGvryjMCjM2dzdzcADc  
o7uZ75dYno3h6JP1yIBpeoMgNt4DAENbQHdaRa+TIWoulWxCK03R+0QSq2U3zEA2HceUCsw1Km1Zmex6u1g1rDj  
mN+QmgwLtUzCklkIKs9ygdTvAG8i3Ezz7Z2MV8Qrkgmrtl4HS4J5ier7LqLYeEBINcgHYJUb8upHlxHhrlfSHFKcjWdWB  
C0y6nvWzD4iX7rxEwfTqkilSzMqVDCqpsrOpv6nTTja8Cg2p0g69FppfddzyEi7FT64abpV0WBHYBuxsANSeQ75othbjc  
1O2xVtDIWxIHedwgegbLY2F5Kx9MMpHAjXzkbd0coGpPiZlfvbwPLsVhVvpv1Tajrh3v/ANGsSabX5JUUVk0hKC5Abew  
Gcfz64asfU03mk6V0Q532zjqSeRftU2Pg6IP6zM2WLHNuNTK/eDUU0qg7stVEPnAFg665ErFRmpDqcQm7rKT9gP4i+  
U94Uy96A1slSpSvcG4/qT2GH3ILfglFtHDhLOvsYijUvbXtg3YfiVJJ2VieorLWJy5KjUqwlJ3lijEDXUZlvwtxgemMlwiSaRV1  
V0IZWAI1BB3WliMkCPaDtjBgvoBoEWFd1RS7sFUbyTYTp0DC9Iekj1wUpgrR5nKvWclI3ITL/KA/eAZQI/86eeKcHw7C  
hR6Tp0Agruod7aC9PGo1rm2qtra54+sl6Z2am7KtVWVqfWU6ahxbRS677k6Xup011iToBqdRsz5Ulc/wCdhXvapze  
mTx423jeMwjKioEUhyaOb6up/4mHqb8j21tfXTxHI9OgdUZyzOFXrkU9ft9yvSPtOoGhuLE27mG6MWmjotLP2HzNh6j  
WBR/foudwBNvPKdxnToFfhKN1KnCO7U2NNyr1PbXmoBANiDbviVqCa5sFWHi9QfNPGLOgVmKRPdwr373qH4BRKm  
op4Ubd1nPznToAWY/YH4W/WNKnfIsNxGtjOnQNv0Y2pnQKx7SaG/EcD+veJpKeEaoQBOOnQNJs3YoWxl1/f6SZtnGU8j  
h3rsAci3VLhc77kQHvNok6B5JT2saH+ISun8TUqVC6OjMtMPmcvncZb3IAABOp7xM2+LZ83ZA7ClTwiZlv23Gt3OY2Jt  
lvpaLOgDw+Is2lgBusLcbi/E8tZ6p0a2mHRTfXd5zp0DV0sRKjpdsX+ModWrhGDBwxGYXAlsRcEXvvE6dAotl9HqeDQ  
sVNSqB7ZsLE7gg90X85Z7D2aEGdtXY3J8Yk6BdVGAtluKJtp8506BjNvlztkU+32A2mj5WZCP60UTO583aC2LXcDgppq  
A51/pr0x+KLOgBwo6xBTJ0FSoi62s1VCafkXQjzkps9UU61NVZ3BpVUYLINSmAwJDGxLIN3MGdOgazoNtEWfDFSjKSw  
pNe6X9oITqUvrY6i54Wmqczp0ATiAnToH//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+false",
          "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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+false",
      "accounts":
"http://soffid.35x.lab:8089/soffid/webservice/scim2/v1/Account?filter=type+eq+U+and+users.user.userName+eq+'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+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"
  }
]
}

```

## 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.i.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: ?\Lucene90DocValuesData  Mi!k
Lucene90_0 e(Y;RooGaoYlG(  mG
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: ?\Lucene90FieldsIndexMeta  Mi!k
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:

soffid

Main Menu > Administration > Agents > Agent

Agent

Filter

soffid

SSO

Name

soffid

Url

local

Version

3.5.0-beta-1

Task	Priority	Executions	Execution time	Message	Scheduled
Filter	Filter	Filter	Filter	Filter	Filter
IndexObject com.soffid.iam.api.User 3864	1				

Displayed rows: 1

Close

# Step-by-step

## Example 1

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

soffid

search

Main Menu > Administration > Resources > Users

Basics

Groups

Accounts

Roles

Effective Roles

Shared accounts

Sessions

User processes

Common attributes

User name : ibergerman

First name : agata

Last Name : bergman

Middle name : Middle name

Internal id : Internal id

Full name : agata bergman

Birth Date : 12/15/1999

Picture :

Organization

Type : Internal user

Primary group : Movie Stars

Home server : Home server

Profile server : Profile server

Manager : rfranklin

2. New tasks are created and executed.

soffid

Main Menu > Administration > Agents > Agent

Agent

Filter

soffid

SSO

Name

soffid

Url

local

Version

3.5.0-beta-1

Task	Priority	Executions	Execution time	Message	Scheduled
Filter	Filter	Filter	Filter	Filter	Filter
IndexObject com.soffid.iam.api.User 3897	1				
UpdateUser ibergerman	1				

Displayed rows: 2

Close

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

soffid

Search

Main Menu > Administration > Configuration > Integration engine > Smart engine settings

Task engine mode: Read only

Tasks limit per transaction: 15. If a single transaction creates more than this number of tasks, tasks will be held until Soffid administrator releases them.

Scripting language: Javascript

Undo Confirm changes

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

soffid

Search

Main Menu > Administration > Resources > Users

Basics Groups Accounts Roles Effective Roles Shared accounts Sessions User processes

Common attributes

User name: ibergman

First name: agata

Last Name: bergman

Middle name: Middle name

Internal id: Internal id

Full name: agata bergman

Birth Date: 12/15/1999

Picture:

Organization

Type: Internal user

Primary group: Movie Stars

Home server: Home server

Profile server: Profile server

Manager: rfranklin

### 3. A new task is created and executed

The screenshot shows the 'soffid' web interface. On the left, there is a sidebar with a 'Main Menu > Admin' link and a list of agents: 'Agent', 'Filter', 'soffid', and 'SSO'. The 'soffid' agent is selected. A modal window is open, displaying the configuration for the 'soffid' agent. The modal has a header bar with the 'soffid' logo and a refresh icon. Below the header, there are fields for 'Name' (soffid), 'Url' (local), and 'Version' (3.5.0-beta-1). Below these fields is a table with columns: 'Task', 'Priority', 'Executions', 'Execution time', 'Message', and 'Scheduled'. The table has a 'Filter' row and one data row with the task 'IndexObject com.soffid.iam.api.User 3897' and a priority of '1'. At the bottom right of the modal, it says 'Displayed rows: 1' and has a 'Close' button. In the background, another modal is partially visible, showing 'Displayed rows: 2'.

Task	Priority	Executions	Execution time	Message	Scheduled
Filter	Filter	Filter	Filter	Filter	Filter
IndexObject com.soffid.iam.api.User 3897	1				

### 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.