

# How to use SCIM in Soffid

## Introduction

Soffid has implemented a version of the SCIM protocol 2.0. Some optional recommendations have also been included to improve the usage of this specification within the Soffid context.

This functionality is available only by installing the SCIM add-on. This add-on is available in the download section of the Soffid website.

## Discovery

Soffid provides some endpoints to discover supported features and specific attribute details:

## Service provider config

This endpoint provides additional information about the Soffid SCIM implementation.

### Request

```
GET https://<your-domain>/soffid/webservice/scim2/v1/ServiceProviderConfig
```

### Response 200 OK

```
{
  "patch": {
    "supported": true
  },
  "filter": {
    "maxResults": 1000,
    "supported": true
  },
}
```

```

"documentationUri": "https://bookstack.soffid.com/books/scim",
"authenticationSchemes": [
  {
    "documentationUri": "https://bookstack.soffid.com/book/scim",
    "name": "HTTP Basic",
    "description": "Authentication scheme using the HTTP Basic Standard",
    "specUri": "http://www.rfc-editor.org/info/rfc2617",
    "type": "httpbasic"
  }
],
"meta": {
  "location": "http://soffid.pat.lab:8080/webservice/scim2/v1/ServiceProvider",
  "resourceType": "ServiceProviderConfig"
},
"schemas": [
  "urn:ietf:params:scim:schemas:core:2.0:ServiceProviderConfig"
],
"etag": {
  "supported": false
},
"sort": {
  "supported": true
},
"bulk": {
  "supported": false
},
"changePassword": {
  "supported": true
}
}

```

## Resources Types

An endpoint used to discover the types of resources available.

### List resources types

The SCIM protocol is focused on resource management, such as users, groups, accounts, etc. To know all the resources that Soffid provides you can use this REST web service:

# Request

```
GET https://<your-domain>/soffid/webservice/scim2/v1/ResourceTypes
```

## Response 200 OK

```
{
  "schemas": [
    "urn:ietf:params:scim:api:messages:2.0:ListResponse"
  ],
  "totalResults": 20,
  "startIndex": 1,
  "Resources": [
    {
      "schema": "urn:soffid:com.soffid.iam.api.Account",
      "endpoint": "http://soffid.pat.lab:8080/webservice/scim2/v1/Account",
      "meta": {
        "location": "http://soffid.pat.lab:8080/webservice/scim2/v1/ResourceTypes/Account",
        "resourceType": "ResourceType"
      },
      "schemas": [
        "urn:ietf:params:scim:schemas:core:2.0:ResourceType"
      ],
      "name": "Account",
      "description": "Account object",
      "id": "Account"
    },
    {
      "schema": "urn:soffid:com.soffid.iam.api.Group",
      "endpoint": "http://soffid.pat.lab:8080/webservice/scim2/v1/Group",
      "meta": {
        "location": "http://soffid.pat.lab:8080/webservice/scim2/v1/ResourceTypes/Group",
        "resourceType": "ResourceType"
      },
      "schemas": [
        "urn:ietf:params:scim:schemas:core:2.0:ResourceType"
      ],
      "name": "Group",
      "description": "Group object",
      "id": "Group"
    }
  ]
}
```

```
    },  
    .....  
  ]  
}
```

## Query resource type

Specifies metadata about each resource. To query a specific resource type, you can use this REST web service:

### Request

```
GET http://<your-domain>/soffid/webservice/scim2/v1/ResourceTypes/{Resource}
```

### Example

```
GET http://<your-domain>/soffid/webservice/scim2/v1/ResourceTypes/User
```

### Response 200 OK

```
{  
  "schema": "urn:soffid:com.soffid.iam.api.User",  
  "endpoint": "http://soffid.pat.lab:8080/webservice/scim2/v1/User",  
  "meta": {  
    "location": "http://soffid.pat.lab:8080/webservice/scim2/v1/ResourceTypes/User",  
    "resourceType": "ResourceType"  
  },  
  "schemas": [  
    "urn:ietf:params:scim:schemas:core:2.0:ResourceType"  
  ],  
  "name": "User",  
  "description": "User object",  
  "id": "User"  
}
```

### Response 404

```
404 Not Found
```

## Schemas

Schema definition for a specific resource.

## Request

```
GET http://<your-domain>/soffid/webservice/scim2/v1/Schemas/{Schema_URL}
```

## Example

```
GET http://<your-domain>/soffid/webservice/scim2/v1/Schemas/urn:soffid:com.soffid.iam.api.Role
```

## Response 200 OK

```
{
  "meta": {
    "location": "http://soffid.pat.lab:8080/webservice/scim2/v1/Schemas/urn:soffid:com.soffid.iam.api.Role",
    "resourceType": "Schema"
  },
  "schemas": [
    "urn:ietf:params:scim:schemas:core:2.0:Schema"
  ],
  "name": "Role",
  "description": "Role object",
  "attributes": [
    {
      "uniqueness": "none",
      "name": "name",
      "mutability": "readWrite",
      "type": "string",
      "caseExact": true,
      "returned": "default",
      "multiValued": false,
      "required": true
    },
    {
      "uniqueness": "none",
      "name": "description",
      "mutability": "readWrite",
      "type": "string",
      "caseExact": true,
      "returned": "default",
      "multiValued": false,

```

```
"required": true
},
{
  "uniqueness": "none",
  "name": "system",
  "mutability": "readWrite",
  "type": "string",
  "caseExact": true,
  "returned": "default",
  "multiValued": false,
  "required": true
},
{
  "uniqueness": "none",
  "name": "category",
  "mutability": "readWrite",
  "type": "string",
  "caseExact": true,
  "returned": "default",
  "multiValued": false,
  "required": false
},
{
  "uniqueness": "none",
  "name": "informationSystemName",
  "mutability": "readWrite",
  "type": "string",
  "caseExact": true,
  "returned": "default",
  "multiValued": false,
  "required": true
},
{
  "uniqueness": "none",
  "name": "domain",
  "mutability": "readWrite",
  "type": "string",
  "caseExact": true,
  "returned": "default",
  "multiValued": false,
```

```
    "required": false
  },
  {
    "uniqueness": "none",
    "name": "bpmEnabled",
    "mutability": "readWrite",
    "type": "boolean",
    "caseExact": true,
    "returned": "default",
    "multiValued": false,
    "required": false
  },
  {
    "uniqueness": "none",
    "name": "approvalStart",
    "mutability": "readOnly",
    "type": "dateTime",
    "caseExact": true,
    "returned": "default",
    "multiValued": false,
    "required": false
  },
  {
    "uniqueness": "none",
    "name": "approvalEnd",
    "mutability": "readOnly",
    "type": "dateTime",
    "caseExact": true,
    "returned": "default",
    "multiValued": false,
    "required": false
  }
],
"id": "urn:soffid:com.soffid.iam.api.Role"
}
```

## Response 404

404 Not Found

# Soffid Resources

Soffid provides the following resources:

| Resource                           | Description   |
|------------------------------------|---|
| <a href="#"><u>User</u></a>        | Management of the users included in the Soffid solution.<br>A user is an identity that represents only one person.  |
| <a href="#"><u>Group</u></a>       | Management of the groups included in the Soffid solution.<br>A group could be part of a hierarchical group tree.<br>Users are assigned to a primary group and optionally could be in some secondary groups.   |
| <a href="#"><u>Account</u></a>     | Management of the accounts included in the Soffid solution.<br>An account is a representation of one application access.<br>A user may have a lot of accounts and may have some accounts for the same applications with different roles and restrictions. |
| <a href="#"><u>Application</u></a> | Management of the applications (Information Systems from a functional point of view) included in the Soffid solution.<br>Every agent (of an external system) manages these roles through one or more applications.  |
| <a href="#"><u>Role</u></a>        | Management of the roles included in the Soffid solution.<br>Every role is created in one application, so an application has a list of roles.  |
| <a href="#"><u>GroupType</u></a>   | Management of the GroupTypes included in the Soffid solution.   |
| <a href="#"><u>UserType</u></a>    | Management of the GroupTypes included in the Soffid solution.   |
| <a href="#"><u>GroupUser</u></a>   | Management of the GroupUsers included in the Soffid solution.   |
| <a href="#"><u>RoleAccount</u></a> | Management of the RoleAccounts included in the Soffid solution.   |
| <a href="#"><u>Host</u></a>        | Management of the Hosts included in the Soffid solution.  |
| <a href="#"><u>MailDomain</u></a>  | Management of the MailDomains included in the Soffid solution.  |
| <a href="#"><u>MailList</u></a>    | Management of the MailLists included in the Soffid solution.  |



| Resource                 | Description   |
|--------------------------|---|
| <u>DomainValue</u>       | Management of the DomainValues included in the Soffid solution.   |
| <u>VaultFolder</u>       | Management of the VaultFolders included in the Soffid solution.   |
| <u>System</u>            | Management of the Systems (Agents) included in the Soffid solution.<br>Information storage system from a technical point of view. |
| <u>CustomObject</u>      | Management of the CustomObjects included in the Soffid solution.  |
| <u>TaskInstance</u>      | Management of the TaskInstances included in the Soffid solution.  |
| <u>ProcessInstance</u>   | Management of the ProcessInstances included in the Soffid solution.   |
| <u>ProcessDefinition</u> | Management of the ProcessDefinition included in the Soffid solution.  |

You can view all resource data models and schemas on [Resource data model & schema chapter](#)

# Soffid Operations

For every resource the following operations are available:

| Operation        | HTTP method | URL example  | Description   |
|------------------|-------------|--|---|
| List all         | GET         | .../soffid/webservice/scim/<resource>                          | List all resources  |
| Search by id     | GET         | .../soffid/webservice/scim/<resource>/<id>                     | Search the resource with the <id> specified   |
| Search by filter | GET         | .../soffid/webservice/scim/<resource>?filter=<filter-language> | Search all resources that fulfil the <filter-language> filter ( <i>please see filtering language here <a href="#">5. SCIM filter language</a></i> ) |
| Create           | POST        | .../soffid/webservice/scim/<resource>                          | Create a resource   |

| Operation      | HTTP method | URL example   | Description   |
|----------------|-------------|---|---|
| Update all     | PUT         | .../soffid/webservice/scim/<resource>/<id> + <JSON in the body> | Update all attributes specified in the JSON stream ( <i>the attributes not included will be cleared</i> )   |
| Update partial | PATCH       | .../soffid/webservice/scim/<resource>/<id> + <JSON in the body> | Update only the attributes specified in the JSON stream ( <i>the other attributes will not be updated</i> ) |
| Delete         | DELETE      | .../soffid/webservice/scim/<resource>/<id>                      | Delete a resource   |

# HTTP request

In every HTTP request the following HTTP header parameters are required:

| Parameter       | Value   | Description   |
|-----------------|---|---|
| URL             | https://<your-domain>/soffid/webservice/scim/<resource> | URL with the <resource> to be managed   |
| Method          | [ GET   POST   PUT   PATCH   DELETE ]                   | Method allowed in SCIM REST protocol  |
| Content-Type    | application/scim+json                                   | SCIM specification  |
| Accept          | application/scim+json                                   | SCIM specification  |
| Authorization   | Basic YWRtaW46Y2hhbmdlaXQ=                              | Only BASIC authentication is implemented in this version. A Soffid user (+password) with SCIM access is required to generate this parameter |
| Accept-Language | [ EN   ES   CA   NL ]                                   | This parameter is OPTIONAL. The default language is EN  |

# HTTP codes

The following HTTP codes are managed in the HTTP response:

| Code | Status | User case |
|------|--------|-----------|
|------|--------|-----------|

|     |            |   |
|-----|------------|---|
| 200 | Ok         | After: list all, search by id, search by filter, update all, update partial |
| 201 | Created    | After: create   |
| 204 | No content | After: delete   |
| 404 | Not found  | After: resource not found   |
| 500 | Error      | After: internal error, PATCH DELETE   |

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