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

Resource	Description
DomainValue	Management of the DomainValues included in the Soffid solution.
VaultFolder	Management of the VaultFolders included in the Soffid solution.
System	Management of the Systems (Agents) included in the Soffid solution. Information storage system from a technical point of view.
CustomObject	Management of the CustomObjects included in the Soffid solution.
TaskInstance	Management of the TaskInstances included in the Soffid solution.
ProcessInstance	Management of the ProcessInstances included in the Soffid solution.
ProcessDefinition	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 (*please see filtering language here* 5. SCIM filter language)
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 (*the attributes not included will be cleared*)
Update partial	PATCH	.../soffid/webservice/scim/<resource>/<id> + <JSON in the body>	Update only the attributes specified in the JSON stream *(the other attributes will not be updated)*
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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