MOSP

MONARC Objects Sharing Platform

CASES Luxembourg

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1. Introduction

This document is intented to be a presentation and a user guide to MOSP, a platform to create, edit and share valid JSON objects.

MOSP supports any kind of JSON objects, you just have to specify a JSON schema. The instance objects.monarc.lu, operated by CASES, is dedicated to gather security related objects in the first place aimed to be used with MONARC.

Objects officially provided by the MONARC project are available at https://objects.monarc.lu/organization/MONARC. Note that any **object** created with a **JSON schema** provided by the MONARC project will be compatible with the MONARC software. In other words, you can use our JSON schemas in order to create objects (referentials, mapping, etc.) for a usage in your own security analysis.

2. Objects involved in MOSP

The core concept of MOSP lies on the JSON schemas and JSON Objects. Each objects you create within MOSP will be conforms to a selected schema.

2.1. JSON schema

A JSON schema describes and validates your existing data format(s). This ensures the quality of client submitted data. MOSP also uses JSON schemas for the generation of the object editor.

For example the JSON schema available here validates the Security referentials used in MONARC. When creating a new object with MOSP you have first to choose a JSON schema and an owning organization. A user account can be bind to one or multiple organizations.

You can use any available schemas in order to create shareable JSON objects. It is possible to keep an object private (draft state) even if the goal of this platform is to promote the sharing of information. JSON schemas are always public.
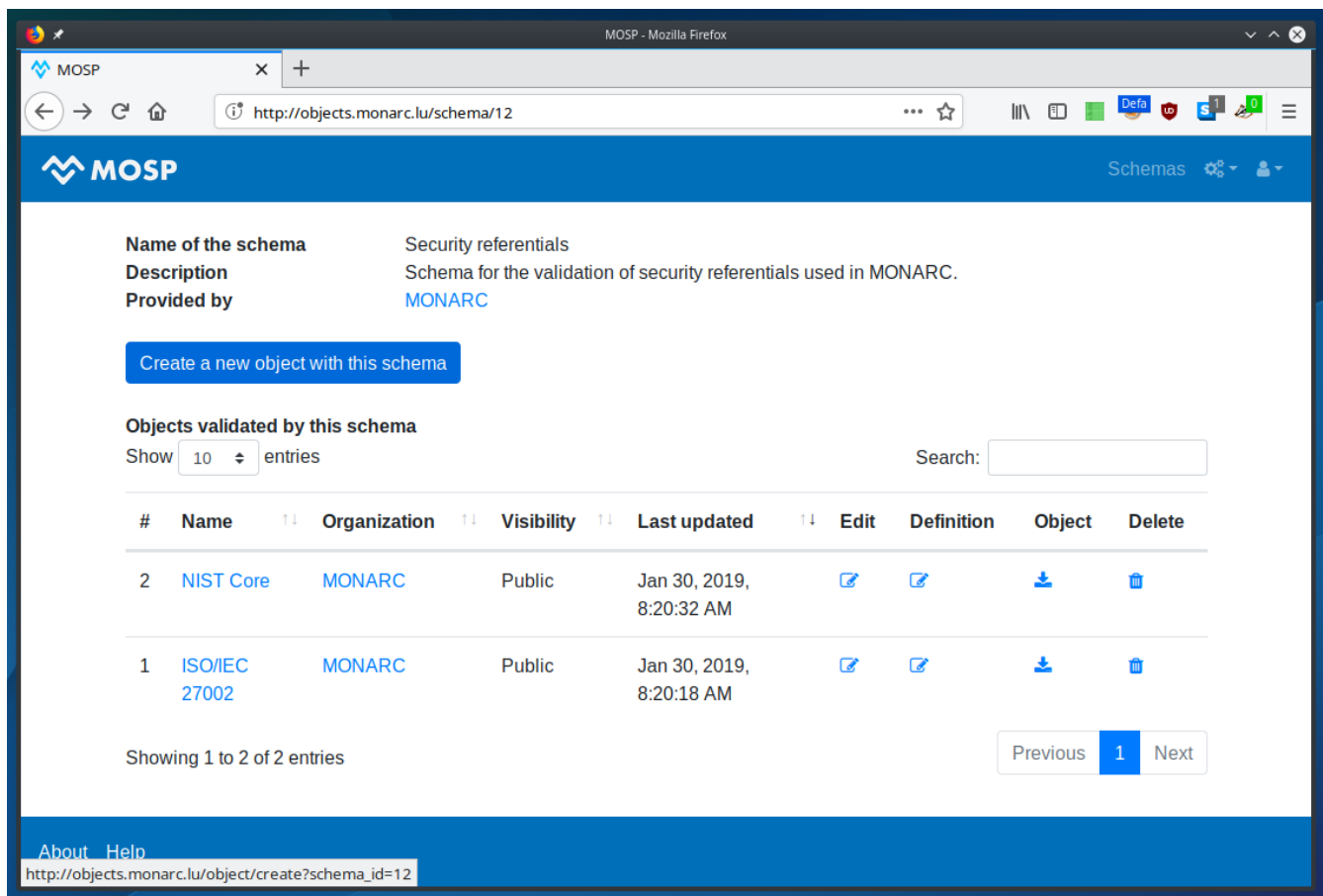
2.1.1. Example of schemas

- Security referentials
- Security referentials mapping

2.2. Objects

3. Using the platform

3.1. Creating a new object

3.2. Select a schema
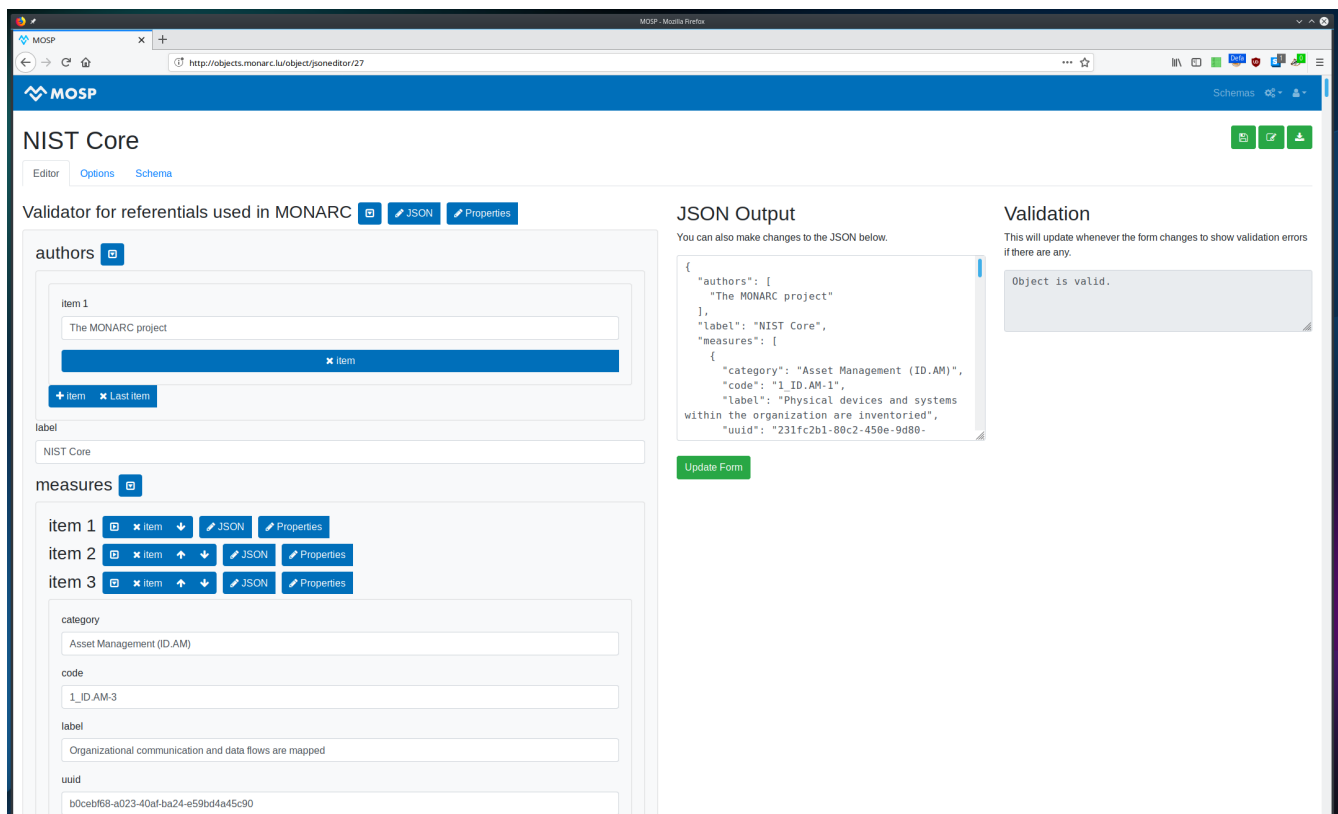
3.3. Edit object definition

The forms above is generated form the validating JSON schema. Validation errors are displayed in the grey box at the right of the interface.

3.4. Exporting an object for use in MONARC

Objects exported from MOSP can be imported in your projects via the knowledge base of MONARC.

4. Using the API

An API is provided in order to interact with the service programmatically.

4.1. Endpoint for Schemas

Getting the list of schemas:

```
https://objects.monarc.lu/api/v1/schema
```

Getting information about a schema:

```
https://objects.monarc.lu/api/v1/schema/13
```

4.2. Endpoint for JSON objects

4.2.1. Getting the list of JSON objects

```
https://objects.monarc.lu/api/v1/json_object
```

4.2.2. Creating a new object

```
$ json_object='{}'
$ curl -i --user username:password \
    -H "Content-Type: application/json" \
    -H "Accept: application/json" -X POST \
    -d '{"name":"NIST","description":"Recommended Security Controls for Federal
Information Systems and Organizations. (Rev.5)"
,"org_id":2,"json_object":'"$json_object"'}' \
    https://objects.monarc.lu/api/v1/json_object

HTTP/1.0 400 BAD REQUEST
Content-Type: application/json
Content-Length: 85
Vary: Cookie

{
  "message": "You are not allowed to create/edit object from this organization."
}
```

```
$ json_object='{}'
$ curl -i --user username:password \
    -H "Content-Type: application/json" \
    -H "Accept: application/json" -X POST \
    -d '{"name":"NIST","description":"Recommended Security Controls for Federal
Information Systems and Organizations. (Rev.5)"
,"org_id":3,"json_object":'"$json_object"'}' \
    https://objects.monarc.lu/api/v1/json_object

HTTP/1.0 400 BAD REQUEST
Content-Type: application/json
Content-Length: 85
Vary: Cookie
Date: Thu, 21 Feb 2019 09:07:26 GMT

{
  "message": "You must provide the id of a schema."
}
```

```
$ json_object='{}'
$ curl -i --user username:password \
    -H "Content-Type: application/json" \
    -H "Accept: application/json" -X POST \
    -d '{"name":"NIST","description":"Recommended Security Controls for Federal
Information Systems and Organizations. (Rev.5)"
,"org_id":3,"schema_id":12,"json_object":'"$json_object"'}' \
    https://objects.monarc.lu/api/v1/json_object

HTTP/1.0 400 BAD REQUEST
Content-Type: application/json
Content-Length: 85
Vary: Cookie
Date: Thu, 21 Feb 2019 09:07:26 GMT

{
  "message": "The object submitted is not validated by the schema."
}
```

```
$ json_object='{"label":"NIST SP 800-53","measures":[{"category": "Access
Control","code": "AC-1","label": "Access Control Policy and Procedures","uuid":
"ebf10522-0f57-4880-aa73-e28a206b7be4"}],"uuid": "cfd2cd50-95fa-4143-b0e5-
794249bacae1","version": "5.0"}'
$ curl -i --user username:password \
    -H "Content-Type: application/json" \
    -H "Accept: application/json" -X POST \
    -d '{"name":"NIST","description":"Recommended Security Controls for Federal
Information Systems and Organizations. (Rev.5)"
,"org_id":3,"schema_id":12,"json_object":'"$json_object"'}' \
    https://objects.monarc.lu/api/v1/json_object

HTTP/1.0 201 CREATED
Content-Type: application/json
Content-Length: 2392
Location: https://objects.monarc.lu/api/v1/json_object/30
Vary: Accept, Cookie
Content-Type: application/json
Date: Thu, 21 Feb 2019 09:34:39 GMT
```

The content of the newly created object is also returned.

4.3. More complex queries

Getting all objects owned by the MONARC organization:

```
https://objects.monarc.lu/api/v1/json_object?q={"name":"organization","op":"has","val"
:{"name":"name","op":"eq","val": "MONARC"}}
```

Getting all schemas owned by the MONARC organization:

```
https://objects.monarc.lu/api/v1/schema?q={"filters":[{"name":"organization","op":"has
","val":{"name":"name","op":"eq","val":"MONARC"}}]}
```

```
https://objects.monarc.lu/api/v1/json_object?q={"name":"schema","op":"has","val":{"nam
e":"name","op":"eq","val": "Security referentials"}}
```

5. Permissions

This section details the management of permissions in MOSP.

5.1. Schemas

Schemas are always public.

You can only create an object in one of the organizations your account is linked to.

In order to edit a schema your account must be linked to the owning organization of the schema.

5.2. Objects

An object can be public or private (draft mode).

You can only create an object in one of the organizations your account is linked to. Since all schemas are public you can instantiate a new object with the schema of your choice.

In order to see a private object or to edit an object your account should be linked to the owning organization of this object.