Further information

Further information

- My Profile
- Soffid Objects (for agent mappings)
- Sample scripts
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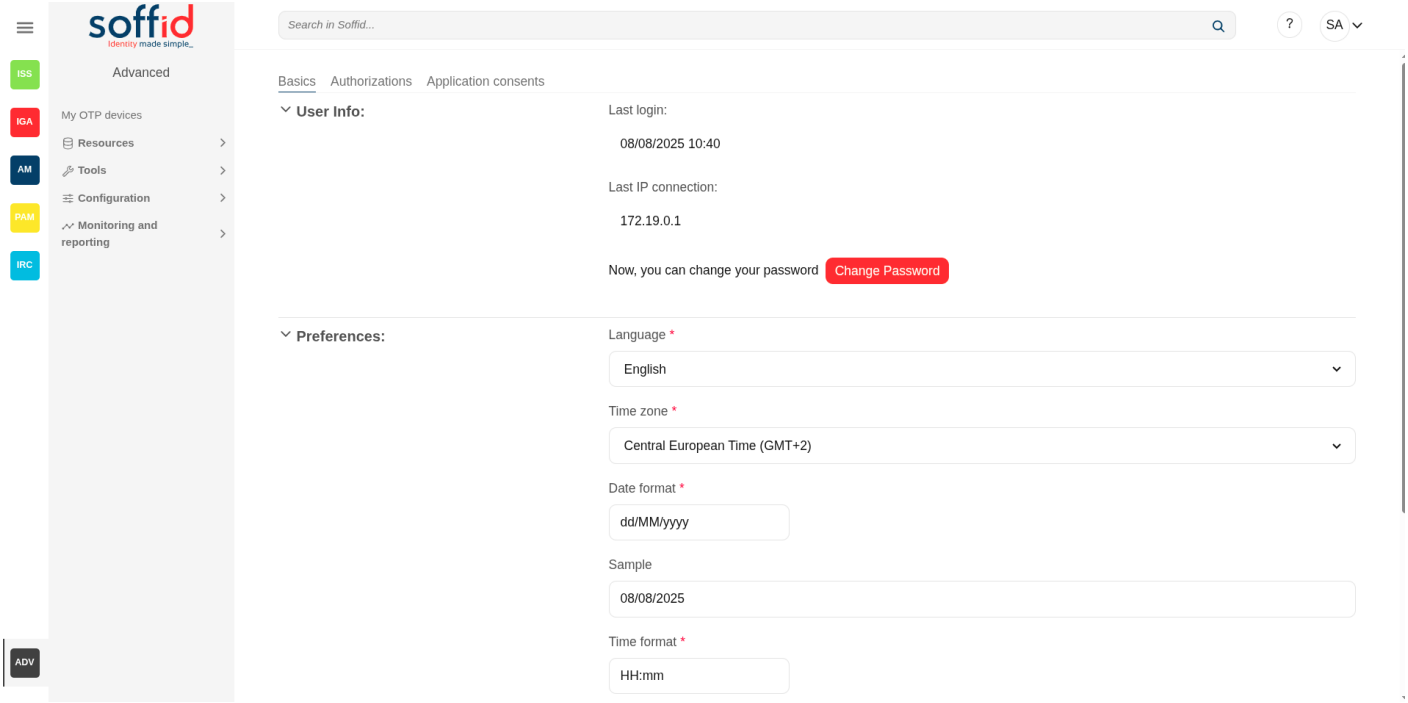
My Profile

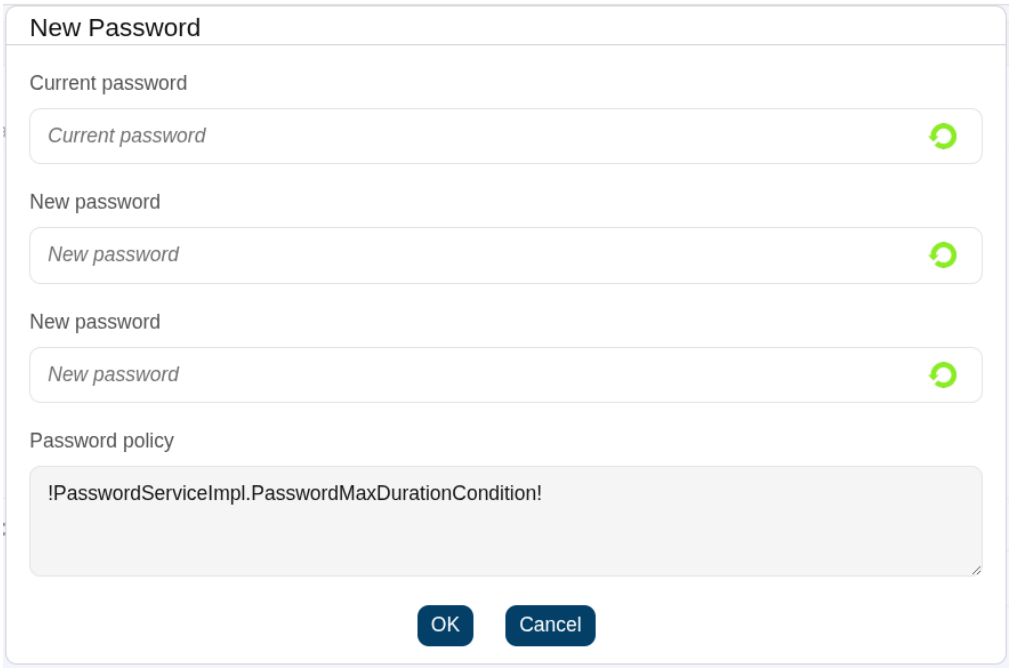
Description

> My Profile is a part of a the Identity self service that allows to end users config their own profile, update the user info and preferences, change their password, and recover questions.

To view My Profile, you must select the My Profile option that will be displayed when you click on the drop-down menu at the top right. Then Soffid displays a new window that will allow end users to configure their profiles.

Screen overview





Related objects

- Users : to display the roles granted to a user
- Roles : to display the roles
- Information systems : to display the roles throught the information systems
- Authorizations : to review the authorizations and manage the roles assigned

Standard attributes

Basic

User Info

- **Last login:** date and time of the user's last login.
- **Last IP connection:** IP of the user's last login.
- **Change password**: allows end-users to change their password.
- **Password recovery questions**: (only when addon retrieve passwords is configured) allows end-users to config their own questions to recover their passwords.

> For more info about password recovery, you can visit the Password recovery questions page.

Preferences

- **Language:** allows end-users to select their preferred language.
- **Time zone:** allows end-users to select their time zone.
- **Date format:** allows end-users to select the format date.
- **Sample:** displays how the date will be displayed in Soffid Console
- **Time format:** allows end-users to select the format time
- **Sample:** displays how the time will be displayed in Soffid Console
- **Enable desktop notifications in this browser**: enable desktop notifications in this browser
- **Display**: Light (backgroud in white), dark (background in dark)

Authorizations

Display a list with the user authorizations.

- **Role**: role granted
- **Authorization [domain value]**: authrization description
- **ITS Scope**: authorization scope
- **Domain value**: domain where the role granted is assigned (* when there is no domain)

Application consents

Displays a list of all the user's consents given, and the user can see all of them. Users can remove the consent at any time as well.

When the user connects to a new application, the IdP will indicate which data will be shared with this application. That information is defined in the Attribute sharing policies page of the Federation.

> For more info about password recovery, you can visit the Attribute sharing policies page.

Actions

Change pasword	Allows the user to change their current password. The pop-up will display the restrictions applied according to your password policy. You must enter your current password. If you cannot remember it, it is best to use the password recovery option when logging in to the Console. This option is included in the password recovery add-on.
Undo	Allows you to undo any changes made.
Apply changes	Allows you to save the data. Once you apply changes, the details page will be closed.

Soffid Objects (for agent mappings)

You can consult the list of Soffid attributes:

1. User Object
2. Account Object
3. Group Object
4. Role Object
5. Grant Object
6. Maillist Object
7. Membership Object
8. dispatcherService
9. Authoritative change object

User object

A user objects are maps that hold the information belonging to a single user account.

Attribute	Type	Description
id	Long	user id
accountId	Long	account id
accountName	String	account name
system	String	managed system (agent) name
accountDescription	String	account description

Attribute	Type	Description
active	Boolean	true if user is active
accountDisabled	Boolean	true if account is diabled
mailAlias	String	blank separated mails
userName	String	user name
primaryGroup	String	user's primary group name
comments	String	user's comments
createdOn	Date	user creation date
modifiedOn	Date	user last modification date
mailDomain	Date	user mail domain (email right side of @)
fullName	String	user full name
shortName	String	user mail name (email left side of @)
firstName	String	user first name
lastName	String	user last name
lastName2	String	user second last name (when applicable)
mailServer	String	mail server host name
homeServer	String	home drive server host name
profileServer	String	roaming profile server host name
phone	String	user's phone number
userType	String	user type
createdBy	String	user name creator of this user
modifiedBy	String	user name modifier of this user

Attribute	Type	Description
secondaryGroups	List<Map<String,Object>>	list of groups the user belongs to, including primary group The attributes of the inner map are described later
attributes	Map<String,String>	additional user attributes
grantedRoles	List<Map<String,Object>>	list of grants directly granted to the user
allGrantedRoles	List<Map<String,Object>>	list of grants directly on indirectly granted to the user
granted	List<String>	list of role names and group names directly granted to the user
allGranted	List<String>	list of role names and group names directly or indirectly granted to the user

Account object

An account object holds the information belonging to an account.

Attribute	Type	Description
accountDescription	String	account description
accountDisabled	Boolean	true if account is diabled
accountId	Long	account id
accountName	String	account name
allGranted	List<String>	list of role names directly or indirectly granted to the user
allGrantedRoles	List<Map<String,Object>>	list of grants directly on indirectly granted to the user
attributes	Map<String,String>	additional account attributes
granted	List<String>	list of role names directly granted to the user
grantedRoles	List<Map<String,Object>>	list of grants directly granted to the user
lastLogin	Calendar	lastLogin

Attribute	Type	Description
lastPasswordUpdate	Calendar	lastPasswordUpdate
lastUpdate	Calendar	lastUpdate
passwordExpiration	Calendar	passwordExpiration
passwordPolicy	String	password policy
system	String	managed system (agent) name
type	AccountType	"U"=user, "S"=shared, "P"=privileged, "I=ignored

Group object

An group object holds the information belonging to a group.

Attribute	Type	Description
groupId	Long	group id
name	String	group name
description	String	group description
parent	String	parent group name
server	String	home server host name
disabled	boolean	true if the group is disabled
accountingGroup	String	group accounting information
type	String	group type
driveLetter	String	home server letter to connect to
users	List<Map<String,Object>>	list of users belonging to this group
userNames	List<String>	list of user names belonging to this group
allUsers	List<Map<String,Object>>	list of users directly or indirectly belonging to this group

Attribute	Type	Description
allUserNames	List<String>	list of user names either directly or indirectly grantee of this role
grantedRoles	List<Map<String,Object>>	list of roles granted to this group
grantedRoleNames	List<String>	list of role names granted to this group

Role object

An role object holds the information belonging to a role.

Attribute	Type	Description
roleId	Long	role id
system	String	managed system (agent) name
name	String	role name
application	String	application system name
category	String	role category
passwordProtected	boolean	true if role should be password protected (where applicable)
description	String	Role description
wfmanaged	boolean	true if role should be displayed in self service requests
domain	String	custom domain for this role: Use com.soffid.iam.api.DomainType constants or configured custom domain
ownedRoles	List<Map<String,Object>>	list of roles granted to this one
ownerRoles	List<Map<String,Object>>	list of roles grantee of this one
ownerGroups	List<Map<String,Object>>	list of groups grantee of this role
grantedAccountNames	List<String>	list of account names directly grantee of this role
grantedAccounts	List<Map<String,Object>>	list of users directly grantee of this role

Attribute	Type	Description
allGrantedAccountNames	List<String>	list of account names either directly or indirectly grantee of this role
allGrantedAccounts	List<Map<String,Object>>	list of users either directly or indirectly grantee of this role
attributes	Map<String,Object>	role's custom attributes

Grant object

Grant, grantedRole & allGrantedRoles

The objects grant, grantedRole and allGrantedRoles are used to assing roles to accounts and roles.

Attribute	Type	Description
domainValue	String	grant value (if any)
grantedRole	String	granted role name
grantedRoleId	Long	granted role id
grantedRoleObject	role object	granted role
grantedRoleSystem	String	granted role managed system (agent) name
id	Long	grant id
ownerAccount	String	grantee account name
ownerAccountObject	account object	grantee account
ownerGroup	String	grantee group name
ownerRoleId	String	grantee role id
ownerRoleName	String	grantee role name
ownerSystem	String	grantee account or role managed system name
ownerUser	String	grantee user name

Examples

Grant

Example to map a grant object (assign a role to an account):

System attribute	Direction	Soffid attribute
role_name	=>	grantedRole
account_name	=>	ownerAccount

GrantedRole

Example to map a grantedRole object (assign a role as a child of another role):

System attribute	Direction	Soffid attribute
role_name	=>	grantedRole
parent_role_name	=>	ownerRoleName

AllGrantedRoles

Example to map a allGrantedRoles object in a holderGroup (assign a role to an account in a specific group):

System attribute	Direction	Soffid attribute
role_name	=>	grantedRole
parent_role_name	=>	ownerRoleName
group_code	=>	domainValue
group_code	=>	holderGroup
userName	=>	ownerUser

Maillist object

Attribute	Type	Description
id	Long	internal mail list id
name	String	mail list name (the initial part, before the @ sign)
domain	String	mail list domain (the remaining part after the @ sign)

Attribute	Type	Description
system	String	managed system (agent) name
description	String	mail list description
users	String array	user names that are bound to this mail list
groups	String array	group names thta are subscribed to this mai list
roles	String array	role names that grant access to this mail list
lists	String array	Nested mail lists
explodedUsers	String array	Names of the users that should be subscribed to this mail list, including the users that should be subscribed due to group or role membership
explodedUserAddresses	String array	Mail addresses of any exploded User

Membership object

A membership object contains the user account information as well as the group the user belongs to.

Attribute	Type	Description
userName	String	User name
user	Map<String,Object>	user object
groupName	String	Group name
group	Map<String,Object>	group object
attributes	Map<String,Object>	Membership custom attributes

dispatcherService

dispatcherService is an object available from agents' attribute translation rules.

This object contains four methods:

method name	parameters	result type	comments

soffidToSystem	ExtensibleObject soffidObject	ExtensibleObject	Uses attribute translation tables to transform a soffid object to a target system object. Mind to fill-in objectType property to use the proper object mapping
systemToSoffid	ExtensibleObject systemObject	ExtensibleObject	Uses attribute translation tables to transform a target system object to a Soffid object. Mind to fill-in objectType property to use the proper object mapping
search	ExtensibleObject exampleObject	ExtensibleObject	Uses the exampleObject to perform a query by example on the target system. If the object exists on the target system, it is returned. Mind to fill-in objectType property with the desired system object type
invoke	String verb String action Map parameters	List of Map	This method allows arbitrary executions on the target system, but it semantics can change depending on the connector used. For instance, it can be used to perform a GET on the target system in REST connector, can issue an LDAP query on ActiveDirectory connector, can execute a SELECT sentence on a SQL connector, or can execute an operating system command in Shell connector. The results are returned as a list of objects (map).

Examples

Snippet to query the sys_id attribute for a grant owner

```
System.out.println("Searching id for "+ownerRoleName);
com.soffid.iam.sync.intf.ExtensibleObject eo = new com.soffid.iam.sync.intf.ExtensibleObject();
```

```
eo.setObjectType("ROLE");
eo{"name"} = ownerRoleName;
eo = dispatcherService.search(eo);
System.out.println("FOUND "+eo{"sys_id"});
return eo{"sys_id"};
```

Snippet that performs a REST query to get group to role assignments in ServiceNow

```
list = dispatcherService.invoke ("GET",
  "https://arxusdev.service-
now.com/api/now/table/sys_group_has_role?sysparm_exclude_reference_link=true&amp;sysparm_display_value
=all&amp;sysparm_fields=role%2Cgroup&amp;sysparm_query=group="+sys_id,
  null).
  get(0).get("result")

r = new java.util.LinkedList();
for ( d: list)
{
  grant = new java.util.HashMap();
  grant{"grantedRole"} = d.get("role").get("display_value");
  grant{"grantedRoleSystem"} = "ServiceNow";
  grant{"ownerRoleName"} = name;
  grant{"ownerSystem"} = "ServiceNow";
  r.add  (grant);
}
return r;
```

Snippet of invoke usage on a relational database

```
// Table ITREPRT
role = source{"granted"}.size() == 0 ? "" : source{"granted"}.get(0);
System.out.println ("********** ROLE "+role);
args = new java.util.HashMap();
args.put("user", source{"accountName"}.toUpperCase());
if (role.equals ("Receptores PR") || role.equals("Jefes_Personal")) {
  r = dispatcherService.invoke("select", "* from ITREPRT where IDUSER=:user", args);
  if (r.size() == 0) {
    dispatcherService.invoke("insert", "into ITREPRT(IDUSER,NOMECO) values (:user, 1)", args);
  }
```

```
} else {
  dispatcherService.invoke("delete", "from ITREPRT where IDUSER=:user", args);
}
// TABLE MRGEUCT
cc = source{"attributes"}{"dominio"};
if ( source{"userType"} .equals ("T")) {
  cc = source{"userName"}.substring(1);
}
while (cc != null && cc.startsWith("0")) cc = cc.substring(1);
System.out.println ("********** COST CENTER "+cc);
if (cc != null && ! cc.trim().isEmpty())
{
  args = new java.util.HashMap();
  args.put("user", source{"accountName"}.toUpperCase());
  args.put("cc", cc);
  r = dispatcherService.invoke("SELECT", "* from MRGEUCT where IDUSER=:user and MOARPR=:cc", args);
  if (r.size() == 0) {
    dispatcherService.invoke("INSERT", "into MRGEUCT(MOARPR,CENTRA, IDUSER, NOTIFI ) "+
                        "values ('II', :cc, :user, 'S')", args);
    dispatcherService.invoke("INSERT", "into MRGEUCT(MOARPR,CENTRA, IDUSER, NOTIFI ) "+
                        "values ('BM', :cc, :user, 'S')", args);
    dispatcherService.invoke("DELETE", "FROM MRGEUCT WHERE CENTRA!=:cc AND IDUSER=:user", args);
  }
}
return true;
```

Snippet of invoke usage on a Active Directory I

```
hashMap = new java.util.HashMap();
list = serviceLocator.getDispatcherService().invoke("AD soffid.pat",
                                        "select",
                                        "(&(objectClass=user))",
                                        hashMap);
out.println("** list.size -- " + list.size());
```

Snippet of invoke usage on a Active Directory II

```
ACC = source{"accountName"};
la = dispatcherService.invoke("AD soffid.pat", "(&(objectClass=user)(sAMAccountName=userName))", new
```

```
java.util.HashMap());
```

Authoritative change object

A user objects are maps that hold the information belonging to a single user account

Attribute	Type	Description
id	Long	user id
accountId	Long	account id
accountName	String	account name
system	String	managed system (agent) name
accountDescription	String	account description
active	Boolean	true if user is active
accountDisabled	Boolean	true if account is diabled
mailAlias	String	blank separated mails
userName	String	user name
primaryGroup	String	user's primary group name
comments	String	user's comments
createdOn	Date	user creation date
modifiedOn	Date	user last modification date
mailDomain	Date	user mail domain (email right side of @)
fullName	String	user full name
shortName	String	user mail name (email left side of @)
firstName	String	user first name
lastName	String	user last name

Attribute	Type	Description
lastName2	String	user second last name (when applicable)
mailServer	String	mail server host name
homeServer	String	home drive server host name
profileServer	String	roaming profile server host name
phone	String	user's phone number
userType	String	user type
createdBy	String	user name creator of this user
modifiedBy	String	user name modifier of this user
secondaryGroups	List<Map<String,Object>>	list of groups the user belongs to, including primary group The attributes of the inner map are described in the link
secondariGroups2	List<Map<String,Object>>	list of user memberships, excluding primary group The attributes of the inner map are described link
attributes	Map<String,String>	additional user attributes
grantedRoles	List<Map<String,Object>>	list of grants directly granted to the user
allGrantedRoles	List<Map<String,Object>>	list of grants directly on indirectly granted to the user
granted	List<String>	list of role names and group names directly granted to the user
allGranted	List<String>	list of role names and group names directly or indirectly granted to the user

Sample scripts

Introduction

> Note that Soffid supports different scripting languages, you can configure it in the Smart engine settings screen. **Soffid 4** configures the smart engine with **Javascript** scripting language as the default.

Additionally, in the initial configuration of the container, we can configure the SOFFID_TRUSTED_SCRIPTS environment variable to allow the use of insecure classes. You can find this information visiting the Installing IAM Console page.

Custom scripts page

The following **examples** of custom scripts can be run directly on the Custom script page.

These scripts can also be used in any other Soffid script component.

The scripts have been generated for the **Javascript engine**.

Identity scripts

Recover a user for userName

```
var u = serviceLocator.getUserService().findUserByUserName("admin");
out.print("User: " + u.firstName);
```

Print some attributes

```
var u = serviceLocator.getUserService().findUserByUserName("test");
out.println("UserName: " + u.userName);
out.println("Name: " + u.firstName);
```

```
out.println("LastName: " + u.lastName);
```

Print by user the email

```
var u = serviceLocator.getUserService().findUserByUserName("test");
out.print("Email: " + u.shortName + "@" + u.mailDomain);
```

Print by user some additional data

```
llistaDadesUsuari = serviceLocator.getUserService().findUserDataByUserName("test");
for (var i=0; i<llistaDadesUsuari.size(); i++) {
  var dadaUsuari = llistaDadesUsuari.get(i);
  out.println("Atributs " + dadaUsuari.attribute + " = " + dadaUsuari.value);
}
```

Recover users from a json query with AI

```
/** Print on screen the names of all users whose username contains the letter a
 **/
var userService = serviceLocator.getService("com.soffid.iam.base.service.UserService");
var query = new com.soffid.zkdb.api.Query();
query.setFilter('userName co "a"'); // SCIM filter for username containing 'a'

var pagedResult = userService.findUsers(query);
var users = pagedResult.getResources();

if (users && users.size() > 0) {
  out.println("Users whose username contains 'a':");
  for (var i = 0; i < users.size(); i++) {
    var user = users.get(i);
    out.println(user.userName);
  }
} else {
  out.println("No users found with 'a' in their username.");
}
```

Create a new identity

```
var newUser = new com.soffid.iam.base.api.User();

newUser.userName = "jkepler";
newUser.firstName = "Johannes";
newUser.lastName = "Kepler";
newUser.userType = "I";
newUser.primaryGroup = "world";
newUser.active = true;

serviceLocator.getUserService().create(newUser);
out.println("Created "+newUser.userName);
```

Update an identity

```
var  u = serviceLocator.getUserService().findUserByUserName("jkepler");
u.userType = "E";
u = serviceLocator.getUserService().update(u);
out.println("Updated "+u.userName);
```

Delete an identity

```
var u = serviceLocator.getUserService().findUserByUserName("jkepler");
if (u!=null) {
  serviceLocator.getUserService().delete(u);
  out.println("Deleted "+u.userName);
} else {
  out.println("User not found");
}
```

Account scripts

Recover accounts of users in Soffid 3

```
la = serviceLocator.getAccountService().findAccountByJsonQuery("users.user.userName eq \"02\" ");
for(a:la) {
  out.println("Cuenta: " + a.name);
  out.println("ID: " + a.id);
  out.println("System: " + a.system + "\n");
```

```
}
```

Recover accounts of users in Soffid 4 with AI with pagination

```
/** search all account whose owner's userName contains the letter 'd' and print the name of the account and the system by the screen
 **/
var query = new com.soffid.zkdb.api.Query();
query.filter = "users.user.userName co \"a\"";
query.pageSize = 2;
query.startIndex = 0;

var pagedResult;
do {
    pagedResult = serviceLocator.getAccountService().findAccounts(query);
    var accounts = pagedResult.resources;

    for (var i = 0; i < accounts.size(); i++) {
        var account = accounts.get(i);
        out.println("Account: " + account.name + ", System: " + account.system);
    }

    query.startIndex += query.pageSize;
} while (query.startIndex < pagedResult.totalResults);
```

Remove attribute values of a metadata in Soffid 3

```
public void removeUnAttributeValues(String attribute, String system) {
  la = serviceLocator.getAccountService().findAccountByJsonQuery("system eq \""+system+"\"");
  for (a : la) {
    laa = serviceLocator.getAccountService().getAccountAttributes(a);
    for (aa : laa) {
      if (aa.attribute.equals(attribute)) {
        if (aa.value!=null) {
          out.print("accountName: "+accountName+", attribute.value: "+aa.value);
          serviceLocator.getAccountService().removeAccountAttribute(aa);
          out.println(" ---> removed");
        }
```

```
    }
   }
  }
}
removeUnAttributeValues("manager","AD");
```

Remove attribute values of a metadata in Soffid 4

```
function removeUnAttributeValues(attribute, system) {
  var query = new com.soffid.zkdb.api.Query();
  query.filter = "system eq \"" + system + "\"";

  var pagedResult = serviceLocator.getAccountService().findAccounts(query);
  var la = pagedResult.getResources();

  for (var i = 0; i < la.size(); i++) {
    var a = la.get(i);
    var laa = serviceLocator.getAccountService().getAccountAttributes(a);
    for (var j = 0; j < laa.size(); j++) {
      var aa = laa.get(j);
      if (aa.attribute == attribute) {
        if (aa.value != null) {
          out.print("accountName: " + a.name + ", attribute.value: " + aa.value);
          serviceLocator.getAccountService().removeAccountAttribute(aa);
          out.println(" ---> removed");
        }
      }
    }
  }
}
removeUnAttributeValues("manager", "AD");
```

Role scripts

Recover roles of a user

```
user = serviceLocator.getUserService().findUserByUserName("Ivan");
out.println("Usuari: " + user.userName + "\n");
rolsUser = serviceLocator.getUserService().findUserRolesHierachyByUserName(user.userName);
for(listrRolsUser:rolsUser){
  out.println("Nombre: " + listrRolsUser.name);
  out.println("Descripcion: " + listrRolsUser.description);
  out.println();
}
```

Print the associated roles for each account

```
var queryUsuaris = new com.soffid.zkdb.api.Query();
queryUsuaris.filter = "userName eq \"david.gomez\"";
var pagedUsuaris = serviceLocator.getUserService().findUsers(queryUsuaris);
var llistaUsuaris = pagedUsuaris.getResources();

for (var i = 0; i < llistaUsuaris.size(); i++) {
  var usuari = llistaUsuaris.get(i);

  var queryComptes = new com.soffid.zkdb.api.Query();
  queryComptes.filter = "users.user.userName eq \"" + usuari.userName + "\"";
  var pagedComptes = serviceLocator.getAccountService().findAccounts(queryComptes);
  var llisstacuentas = pagedComptes.getResources();

  for (var j = 0; j < llisstacuentas.size(); j++) {
    var cuenta = llisstacuentas.get(j);
    out.print("   Cuenta : " + cuenta.name);

    var llistaRole = serviceLocator.getApplicationService().findRoleAccountByAccount(cuenta.id);
    for (var k = 0; k < llistaRole.size(); k++) {
      var role = llistaRole.get(k);
      out.print("      Role: " + role.roleName + "\n");
    }
  }
}
```

Print for an account the roles and applications for each of them

```
var queryUsuaris = new com.soffid.zkdb.api.Query();
queryUsuaris.filter = "userName eq \"david.gomez\"";
var pagedUsuaris = serviceLocator.getUserService().findUsers(queryUsuaris);
var llistaUsuaris = pagedUsuaris.getResources();

for (var i = 0; i < llistaUsuaris.size(); i++) {
  var usuari = llistaUsuaris.get(i);

  var queryComptes = new com.soffid.zkdb.api.Query();
  queryComptes.filter = "users.user.userName eq \"" + usuari.userName + "\"";
  var pagedComptes = serviceLocator.getAccountService().findAccounts(queryComptes);
  var llisstacuentas = pagedComptes.getResources();

  for (var j = 0; j < llisstacuentas.size(); j++) {
    var cuenta = llisstacuentas.get(j);
    out.print("   Cuenta : " + cuenta.name);
    out.println("   ID: " + cuenta.id);

    var llistaRole = serviceLocator.getApplicationService().findRoleAccountByAccount(cuenta.id);
    for (var k = 0; k < llistaRole.size(); k++) {
      var role = llistaRole.get(k);
      out.print("      Role: " + role.roleName + "\n");
      out.println("          Aplicacion: " + role.informationSystemName);
    }
  }
}
```

Print the roles associated with each account

```
var query = new com.soffid.zkdb.api.Query();
query.filter = "";
var paged = serviceLocator.getUserService().findUsers(query);
var usuCuenta = paged.getResources();

for (var i = 0; i < usuCuenta.size(); i++) {
  var listaUsuCuenta = usuCuenta.get(i);

  out.println("Usuario: " + listaUsuCuenta.userName);
  out.println("Nombre: " + listaUsuCuenta.firstName);
```

```
  var rolsUser = serviceLocator.getUserService().findUserRolesHierachyByUserName(listaUsuCuenta.userName);
  for (var j = 0; j < rolsUser.size(); j++) {
    var listaRolsUser = rolsUser.get(j);
    out.println("Nombre del Rol: " + listaRolsUser.name);
    out.println("Descripcion: " + listaRolsUser.description);
    out.println();
  }
}
```

Create a new role

```
try {
  var newRol = new com.soffid.iam.iga.api.Role();
  newRol.name = "Rol_New_Script";
  newRol.description = "Rol Script";
  newRol.informationSystemName = "SOFFID";
  newRol.system = "soffid";
  serviceLocator.getApplicationService().create(newRol);
  out.println("Created: " + newRol.name);

} catch(e) {
    out.println("Error: " + e);
}
```

Update a role

```
var query = new com.soffid.zkdb.api.Query();
query.filter = "name eq \"Rol editado por script\" and informationSystemName eq \"APPLICATION01\"";

var pagedResult = serviceLocator.getApplicationService().findRoles(query);
var editRole = pagedResult.getResources();

for (var i = 0; i < editRole.size(); i++) {
    var role = editRole.get(i);
    out.println(role.name);
    role.name = "ROL01";
    try {
        role = serviceLocator.getApplicationService().update(role);
        out.println(role.name);
```

```
    } catch(e) {
        out.println("Error: " + e.message);
        out.println("Stack: " + e.stack);
    }
}
```

Delete a role

```
try {
  var editRole = serviceLocator.getApplicationService().findRoleById(16576);
  serviceLocator.getApplicationService().delete(editRole);
} catch(e) {
    out.println("Error: " + e.message);
}
```

List the roles of an application

```
var query = new com.soffid.zkdb.api.Query();
query.filter = "informationSystemName eq \"SOFFID\"";

var pagedResult = serviceLocator.getApplicationService().findRoles(query);
var list = pagedResult.getResources();

for (var i = 0; i < list.size(); i++) {
    var role = list.get(i);
    out.println(role.name);
}
```

Mail scripts

Send a simple email

```
serviceLocator.getMailService().sendTextMail("user@domian.com", "Test", "Hello world!");
out.println("Mail sent!");
```

Send emails with attached files

```
import javax.mail.BodyPart;
import javax.mail.internet.MimeBodyPart;
import javax.activation.DataHandler;
import javax.activation.FileDataSource;
import java.util.ArrayList;
path = "/tmp/";
name = "file.txt";
BodyPart att = new MimeBodyPart();
att.setDataHandler(new DataHandler(new FileDataSource(path+name)));
att.setFileName(name);
to = "aretha@soffid.com";
cc = "etaylor@soffid.com";
subject = "This is an email with attachment ";
body = "In this email you can see an attachment.";
mimeBodyParts = new ArrayList();
mimeBodyParts.add(att);

serviceLocator.getMailService().sendHtmlMail(to, subject, body, mimeBodyParts);
serviceLocator.getMailService().sendHtmlMail(to, cc, subject, body, mimeBodyParts);
serviceLocator.getMailService().sendTextMailToActors(new String[]{"aretha"}, subject, body, mimeBodyParts);
serviceLocator.getMailService().sendTextMailToActors(new String[]{"aretha"}, cc, subject, body,
mimeBodyParts);
out.println("Mails sent!");
```

Event Sample scripts

On grant permission

Update a user attribute when assigning a specific permission

```
if (grant.roleName.equals("RS002")) {
  user = serviceLocator.getUserService().findUserByUserName(grant.user);
  if (user != null) {
    attributes = serviceLocator.getUserService().findUserAttributes(user.userName);
    if (attributes == null) {
        attributes = new HashMap();
    }
    attributes.put("language", "Spanish");
    serviceLocator.getUserService().updateUserAttributes(user.userName, attributes);
```

```
  }
}
```

On user change

Run a Python script when the user has assigned an specific role

```
if (user != null) {
  roleGrantList = serviceLocator.getApplicationService().findEffectiveRoleGrantByUser(user.id);
  for(roleGrant:roleGrantList){
    if (roleGrant.roleName.equals("SOFFID_TEST")) {
      // RUN SCRIPT
      String command = "python3 /opt/soffid/iam-console-3/conf/exampleScript.py > /opt/soffid/iam-console-
3/conf/resultscript01.txt";
      Process process = Runtime.getRuntime().exec(command);
      user.comments = "ADD comments";
      user = serviceLocator.getUserService().update(user);
    }
  }
}
```

Agent scripts

User full name

```
return firstName + lastName;
```

Create mainDomain if it doesn't exit

```
var mailDomain = "exampledomain";
if (mailDomain != null && mailDomain.contains("@")) {
    var mailTokens = email.split("@");
    mailDomain = mailTokens[1];
}

var service = serviceLocator.getMailListsService();
var domain = service.findMailDomainByName(mailDomain);

if (domain == null) {
```

```
    domain = new com.soffid.iam.iga.api.MailDomain();  // ← iga.api
    domain.setCode(mailDomain);
    domain.setDescription(mailDomain);
    domain.setObsolete(new java.lang.Boolean(false));
    domain = service.create(domain);
}

return mailDomain;
```

Recover active agents

```
var llistaAgents = serviceLocator.getDispatcherService().findAllActiveDispatchers();
for (var i = 0; i < llistaAgents.size(); i++) {
    var agent = llistaAgents.get(i);
    out.println("Nom: " + agent.name);
    out.println("Class Name: " + agent.className + "\n");
}
```

Show by a user the agents that have associates

```
var queryUsuaris = new com.soffid.zkdb.api.Query();
queryUsuaris.filter = "userName eq \"admin\"";
var pagedUsuaris = serviceLocator.getUserService().findUsers(queryUsuaris);
var llistaUsuaris = pagedUsuaris.getResources();

for (var i = 0; i < llistaUsuaris.size(); i++) {
    var usuari = llistaUsuaris.get(i);
    out.println("Usuario: " + usuari.userName);

    var queryComptes = new com.soffid.zkdb.api.Query();
    queryComptes.filter = "users.user.userName eq \"" + usuari.userName + "\"";
    var pagedComptes = serviceLocator.getAccountService().findAccounts(queryComptes);
    var llisstacuentas = pagedComptes.getResources();

    for (var j = 0; j < llisstacuentas.size(); j++) {
        var cuenta = llisstacuentas.get(j);
        out.print("   Cuenta : " + cuenta.name);
        out.println("   ID: " + cuenta.id);

        var llistaRole = serviceLocator.getApplicationService().findRoleAccountByAccount(cuenta.id);
```

```
        for (var k = 0; k < llistaRole.size(); k++) {
            var role = llistaRole.get(k);
            out.print("      Role: " + role.roleName + "\n");
            out.println("          Aplicacion: " + role.informationSystemName);
            out.println("            Agente: " + role.system);
        }
    }
}
```

Utility classes

Crypt

Crypt allows to encrypt text with different algorithms and verify the resulting hash.

To use this class: `com.soffid.iam.crypt.Crypt`

All methods are static:

```
hash(String algorithm, String text) -> String
pBKDF2Sha256(String text, String utf8Salt, int iterations) -> String
pBKDF2Sha256(String text, byte []salt, int iterations) -> String
pBKDF2Sha1(String text, String utf8Salt, int iterations) -> String
pBKDF2Sha1(String text, byte []salt, int iterations) -> String
genSaltBytes() -> byte[] // 8 bytes
genSaltBytes(int size) -> byte[]
genSalt() -> String // 8 bytes
genSalt(int size) -> String
verify(String algorithm, String text, String hash) -> boolean
```

The algorithms allowed are:

- bcrypt
- pBKDF2Sha256
- pBKDF2Sha1 (or pBKDF2)
- Base64 (used by default is the algorithm is not in the previous list)

One example:

```
String myText = "abcd";
String myAlgorithm = "bcrypt";
String myHash = com.soffid.iam.crypt.Crypt.hash(myAlgorithm, myText);
boolean isVerified = com.soffid.iam.crypt.Crypt.verify(myAlgorithm, myText, myHash);
if (isVerified) {
    return myHash;
} else {
```

```
    return null;
}
```

CalendarConverter

CalendarConverter allows to covert Calendar into String.

To use this class: `com.soffid.iam.json.CalendarConverter`

The methods (non static):

```
toString(Calendar instance) -> String
fromString(final String text) -> Calendar
```

One example:

```
out.println(new com.soffid.iam.json.CalendarConverter().toString(date));
```

Beanshell vs Javascript

Description

> Soffid 4 configures the smart engine with **Javascript** scripting language as the default. See Smart engine settings.

> Previously, the default engine was Beanshell, and many scripts will need to be adapted.

This page lists these differences.

Related objects

- Smart engine settings : where the engine is configured.
- Where we can use scripts:
  - Agents : properties, mappings and triggers
  - Custom scripts : all the scripts
  - Account naming rules : script to validate and set name
  - Role assignment rules : script to validate
  - BPM editor : visualization, triggers, transitions
  - Password policies : optional script

Table of differences

Topic	Beanshell	Javascript

variable	s = "text";	// The use of var should be mandatory,
		//but it almost always works without using it.
		var s = "text";
		
		or
		
		s = "text";

function	public void doSomething(String system) {
	  ...
	}
	doSomething("APP_USERS");
		function doSomething(system) {
		  ...
		}
		doSomething("APP_USERS");

for	for (user : listOfUsers) {
	  ...
	}
		for (var i=0; i<listOgUsers.size(); i++)
		{
		  ...
		}

equals	user == null	user === null
equals	userName.equals("myName")	userName === "myName"

java class	es.caib.seycon.ng.comu.AccountType	Java.type("es.caib.seycon.ng.comu.AccountType")
		
		// We can also generate objects without Java.type
		query = new com.soffid.zkdb.api.Query();
		
		or
		
		Query = Java.type("com.soffid.zkdb.api.Query");
		query = new Query();

catch / printStackTrace	} catch(Exception e) {
	  e.printStackTrace(out);
	}
		} catch(e) {
		  out.println(e.message);
		}

printStackTrace	e.printStackTrace(out)	out.println(e.message) + out.println(e.stack)
non-existent attributes	if (userName==void) ...	if (typeof userName === 'undefined') ...

Search in Soffid 4

> In Soffid 4 the findObjectByJsonQuery method no longers exits, it has been replaced by findObjects with or without pagination.

List users

```
q = new com.soffid.zkdb.api.Query();
pr = serviceLocator.getUserService().findUsers(q);
lu = pr.getResources();
for (i=0; i<lu.size(); i++) {
  u = lu.get(i);
  out.println(u.userName);
}
```

List users with pagination

```
us = serviceLocator.getUserService();
q = new com.soffid.zkdb.api.Query();
q.startIndex = 0;
q.pageSize = 2;
do {
  out.println("Searching...");
  pr = us.findUsers(q);
  lu = pr.getResources();
  for (i=0; i<lu.size(); i++) {
    u = lu.get(i);
    out.println("   "+u.userName);
  }
  q.startIndex = q.startIndex+pr.itemsPerPage;
} while (q.startIndex<pr.totalResults);
```

Office 365 as External SAML identity provider

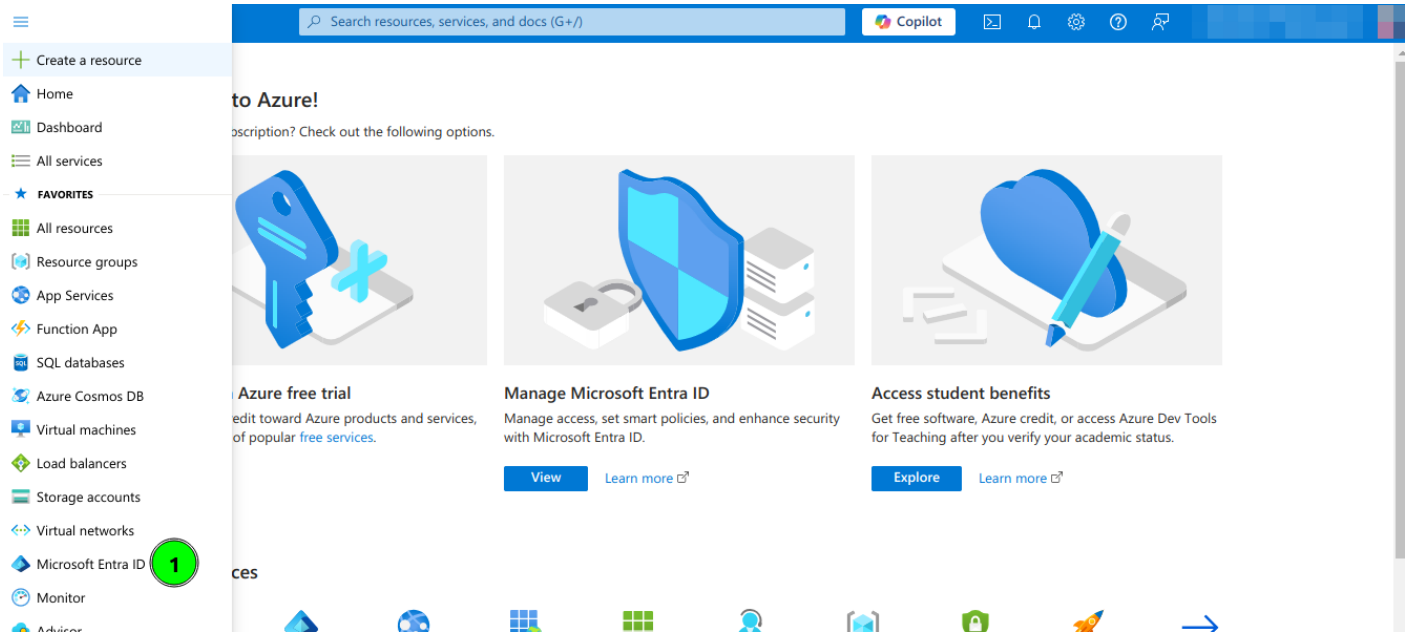
Introduction

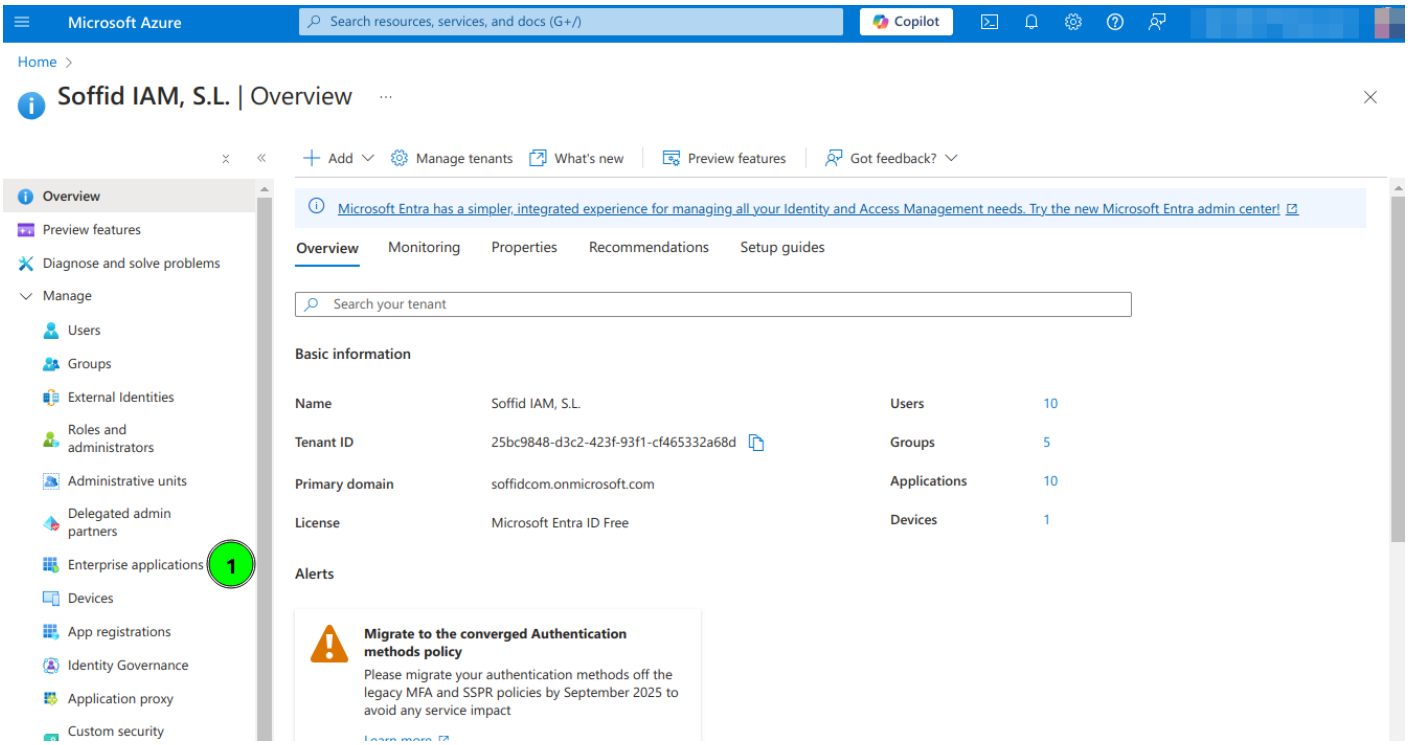
Steps to configure Office 365 as External SAML identity provider.

Step-by-Step

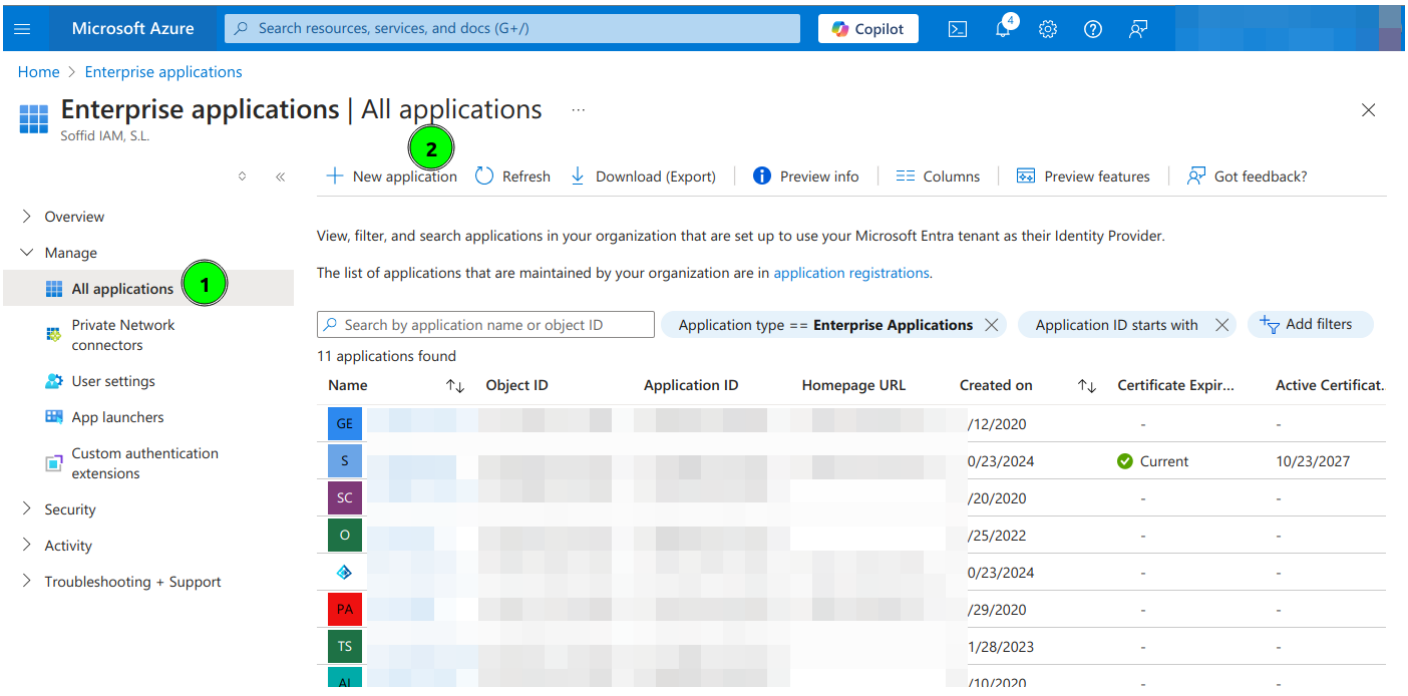
> 1. Open a https://portal.azure.com

2. Open **Microsoft Entra ID** and then select **Enterprise applications** option

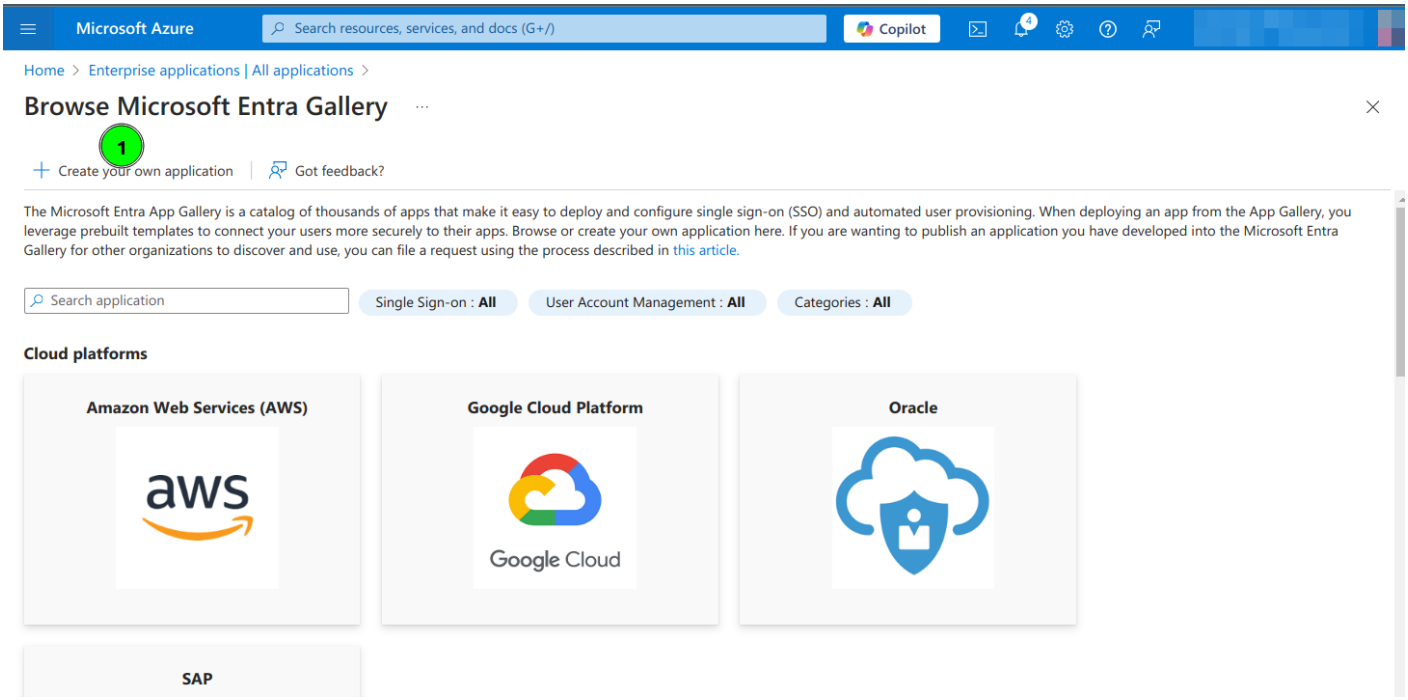




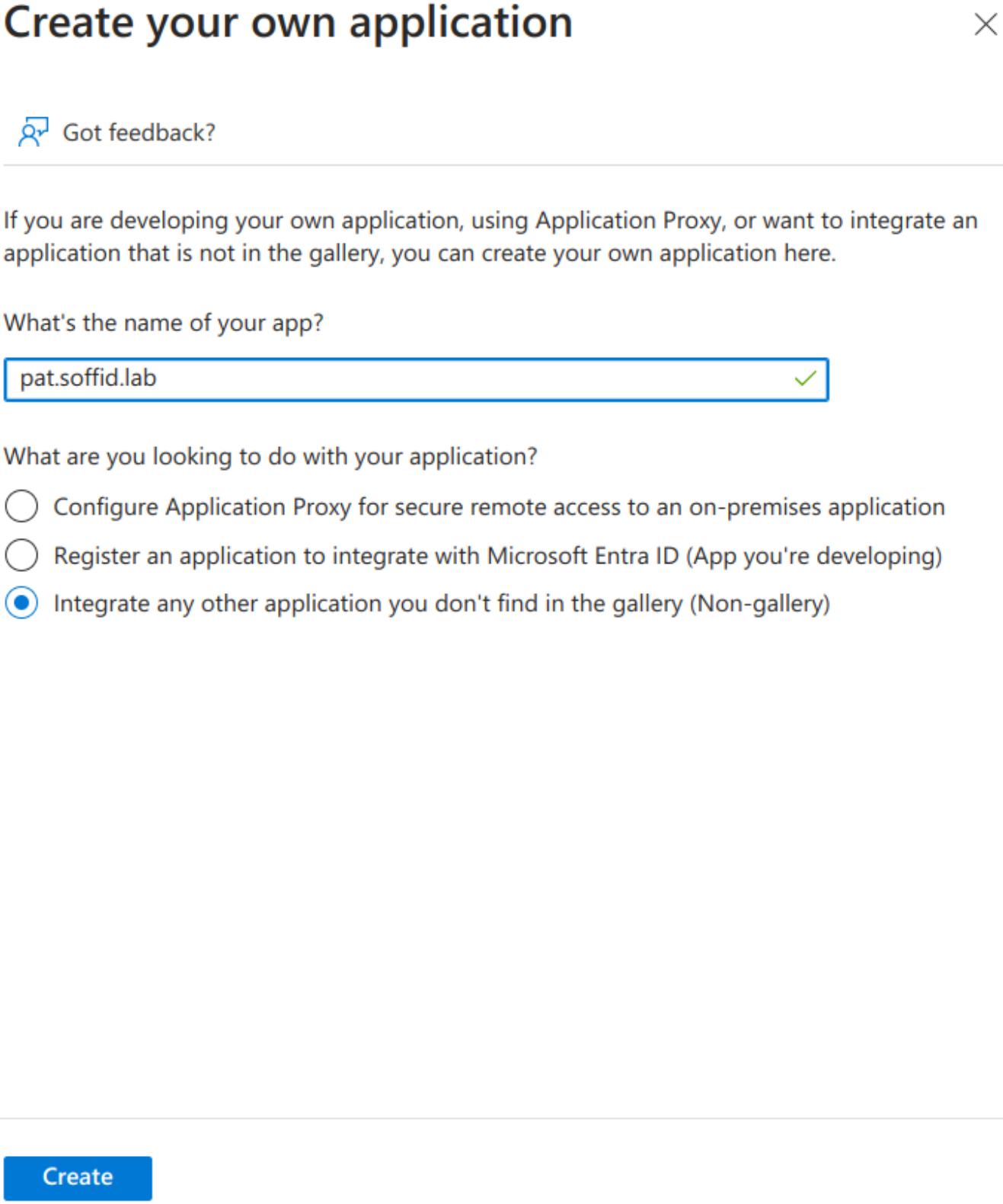
3. Select **All applications** and click **New Application**



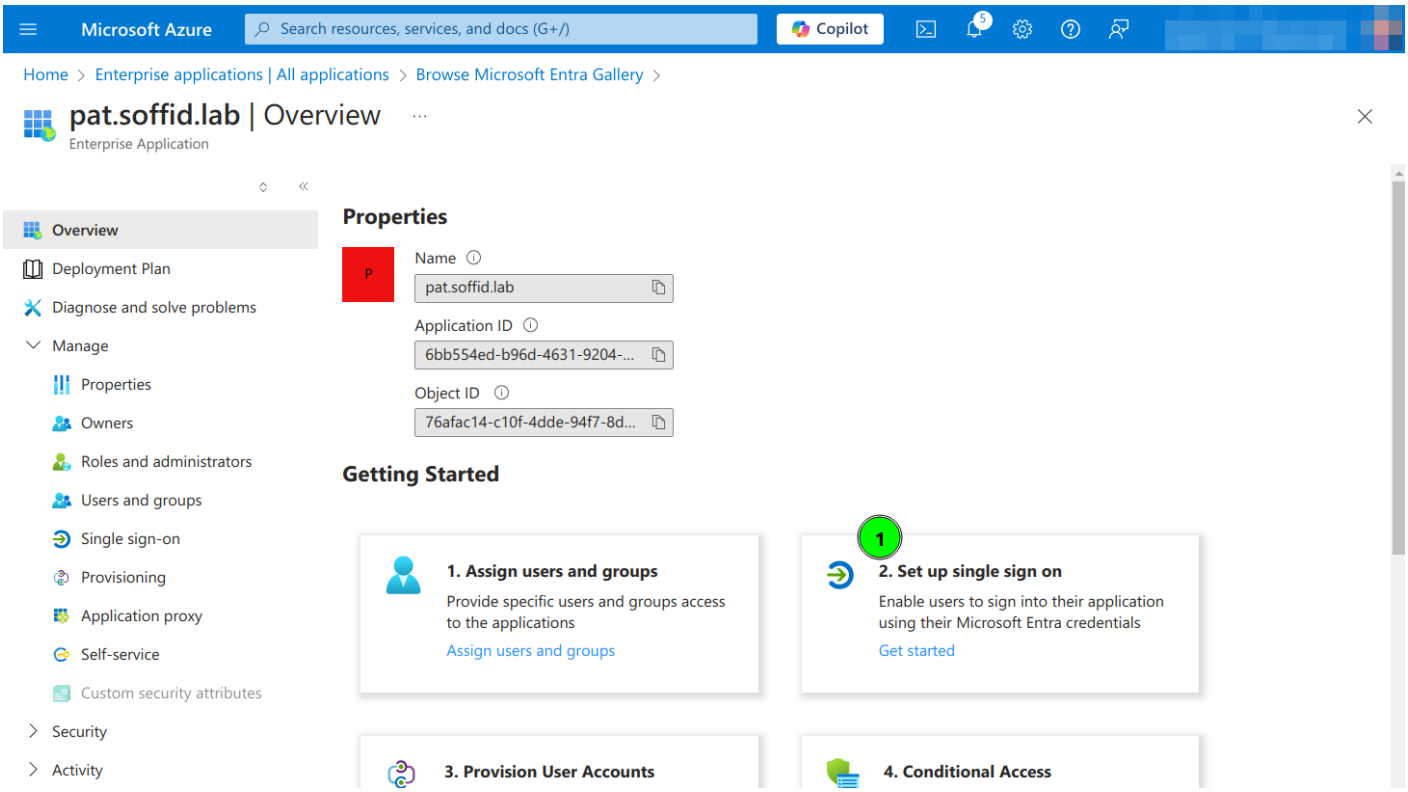
4. Select Create your own application



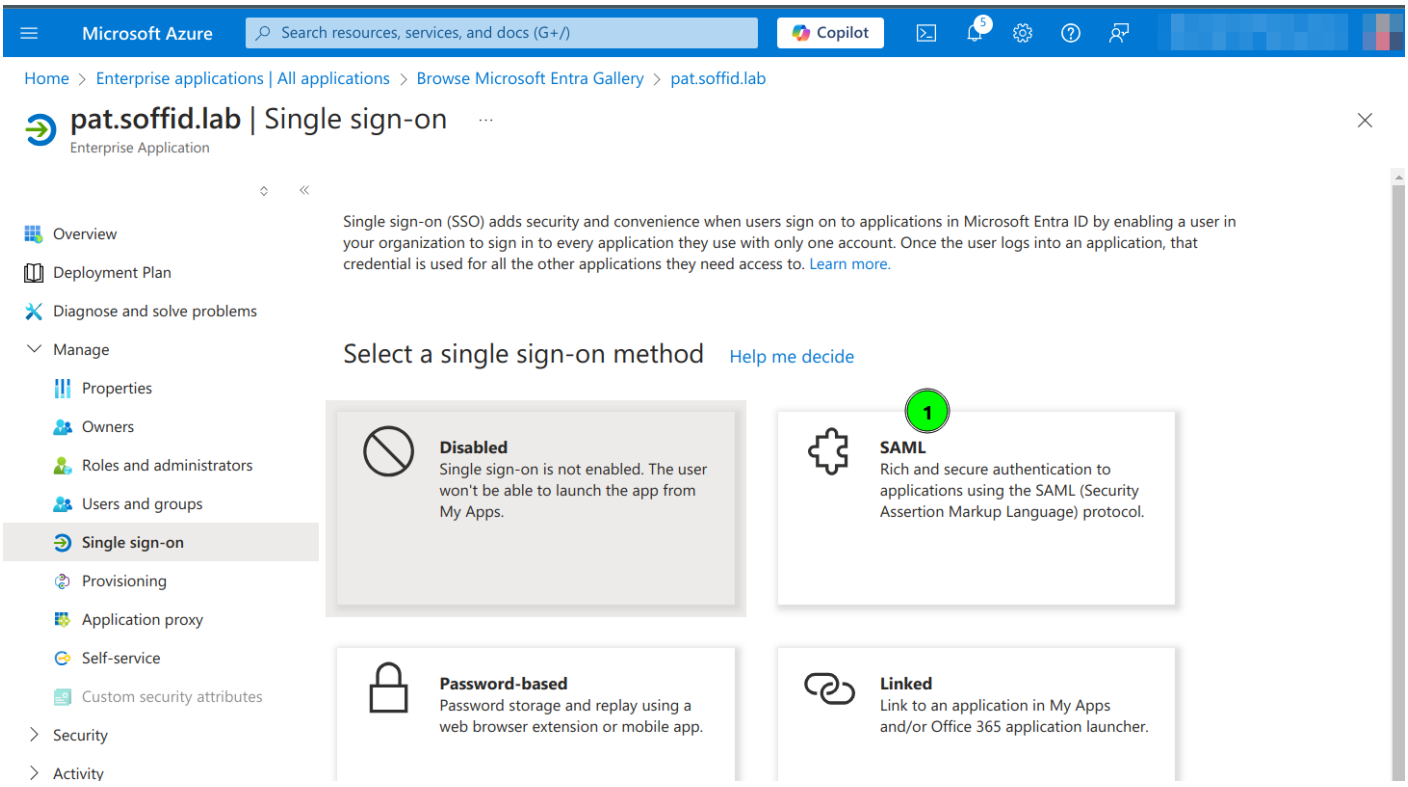
5. Type the name of your app and select the "Integrate any other application you don't find in the gallery (Non-gallery)" option



6. Click on **Set up single sign on**



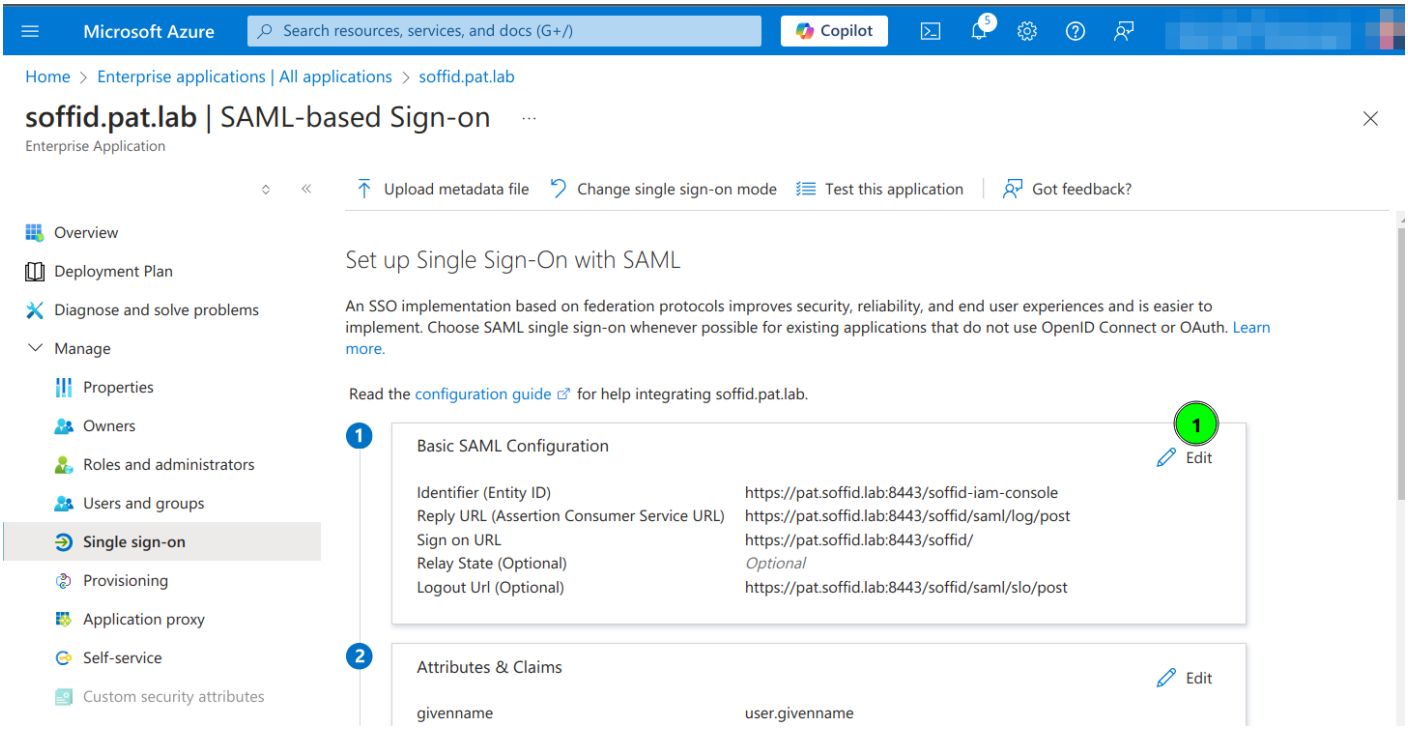
7. Click the **SAML** option

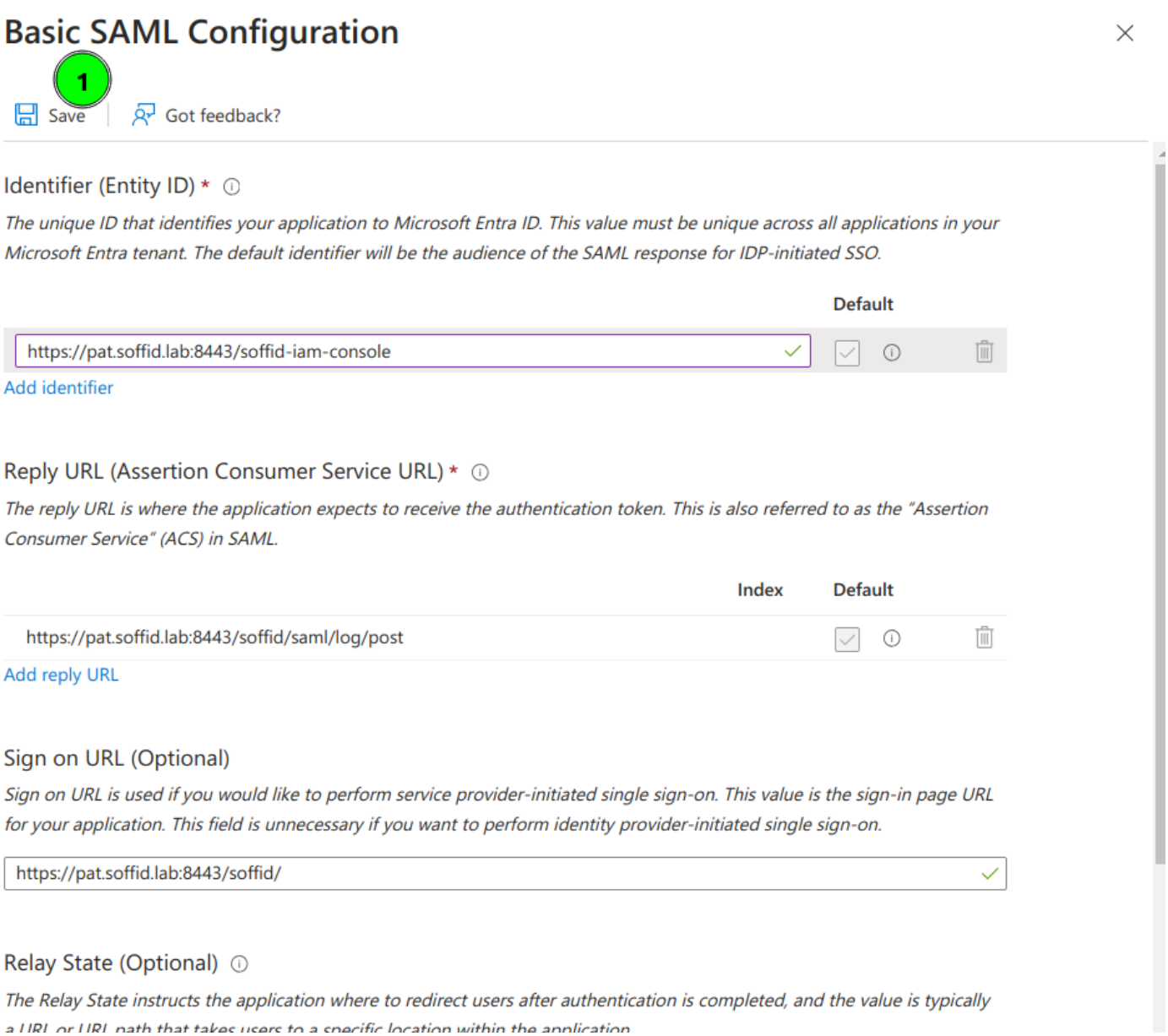


8. Enter the **Basic SAML Configuration** and Save:

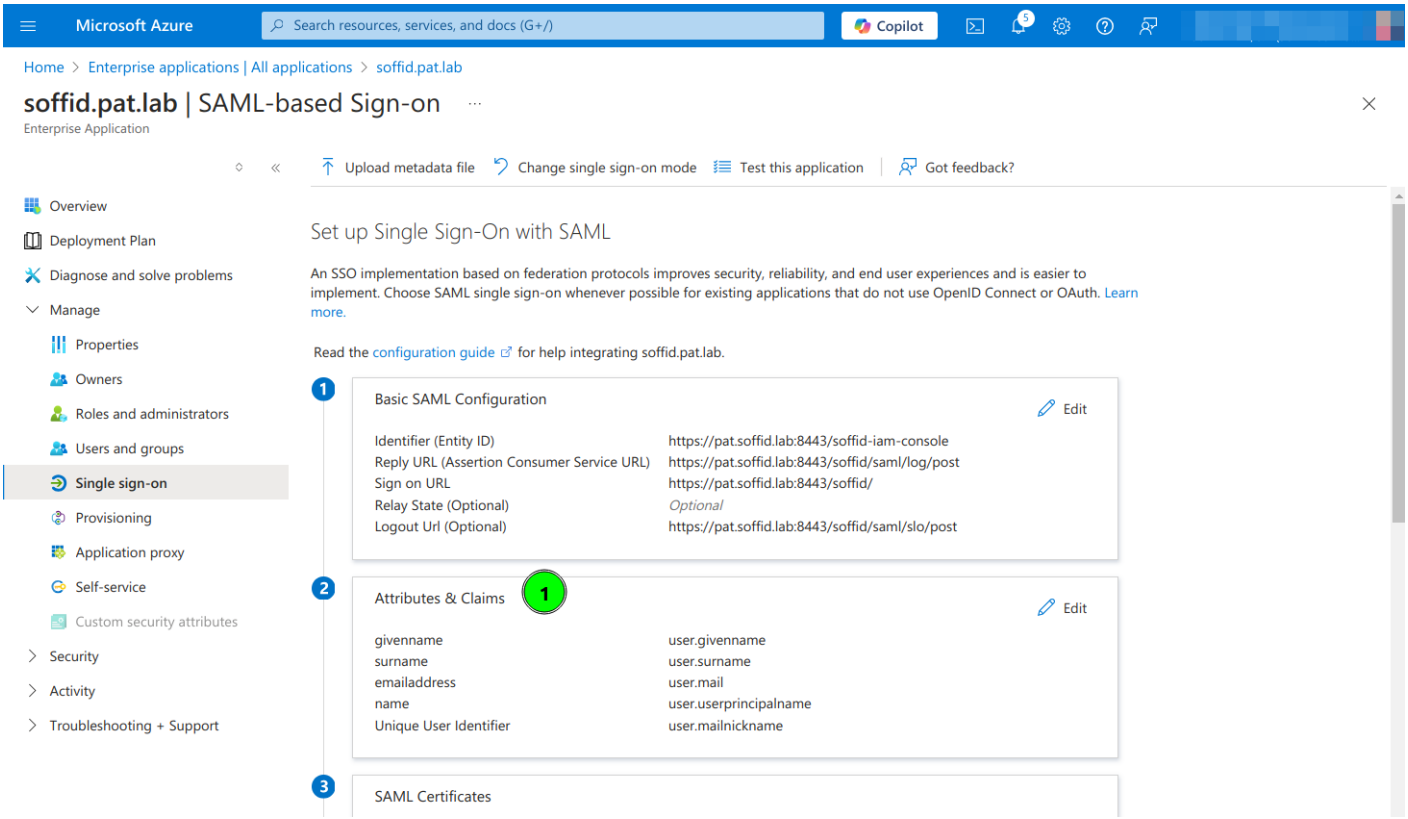
- **Identifier**: https://<YOUR-SERVER>/soffid-iam-console

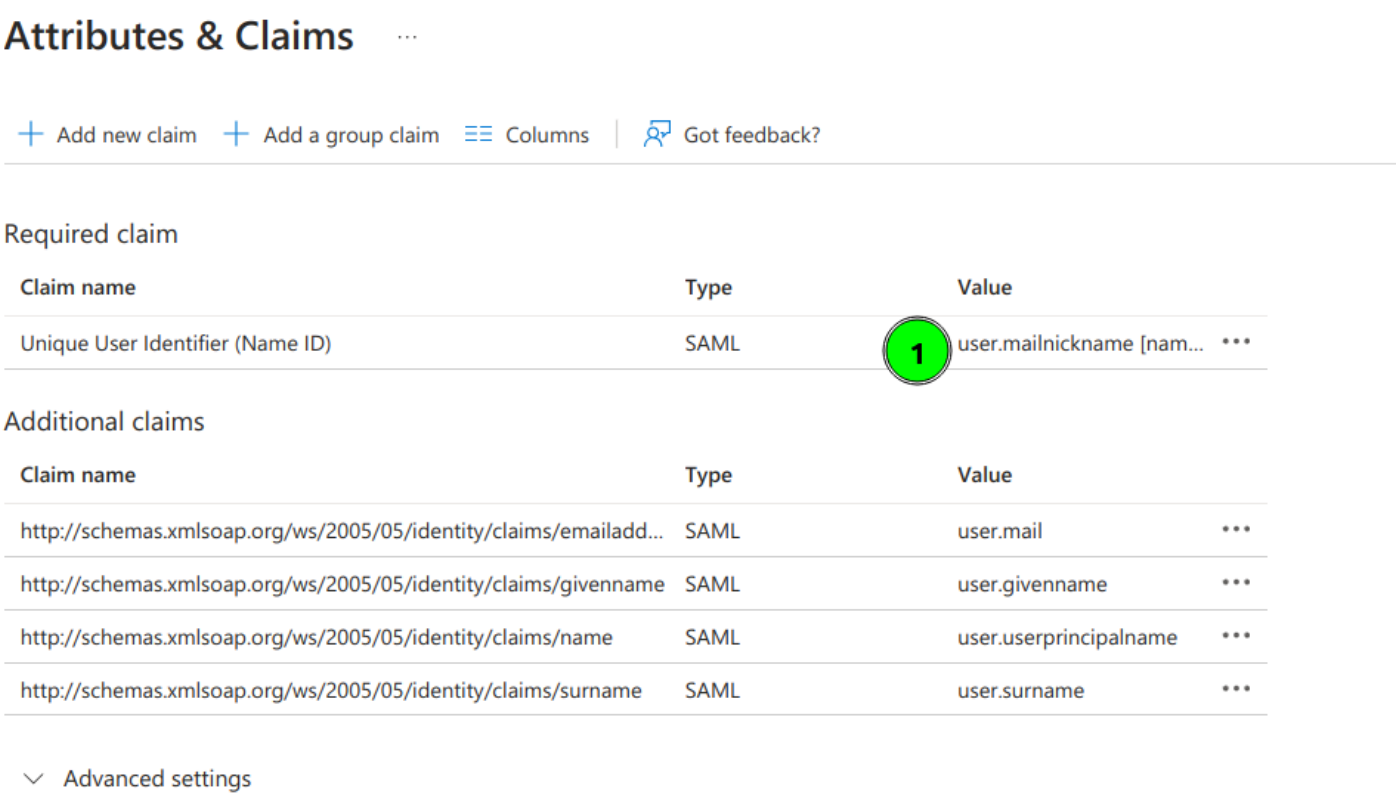
- **Reply URL**: https://<YOUR-SERVER>/soffid/saml/log/post
- **Sign on URL**: https://<YOUR-SERVER>/soffid/
- **Logout URL**: https://<YOUR-SERVER>/soffid/saml/slo/post



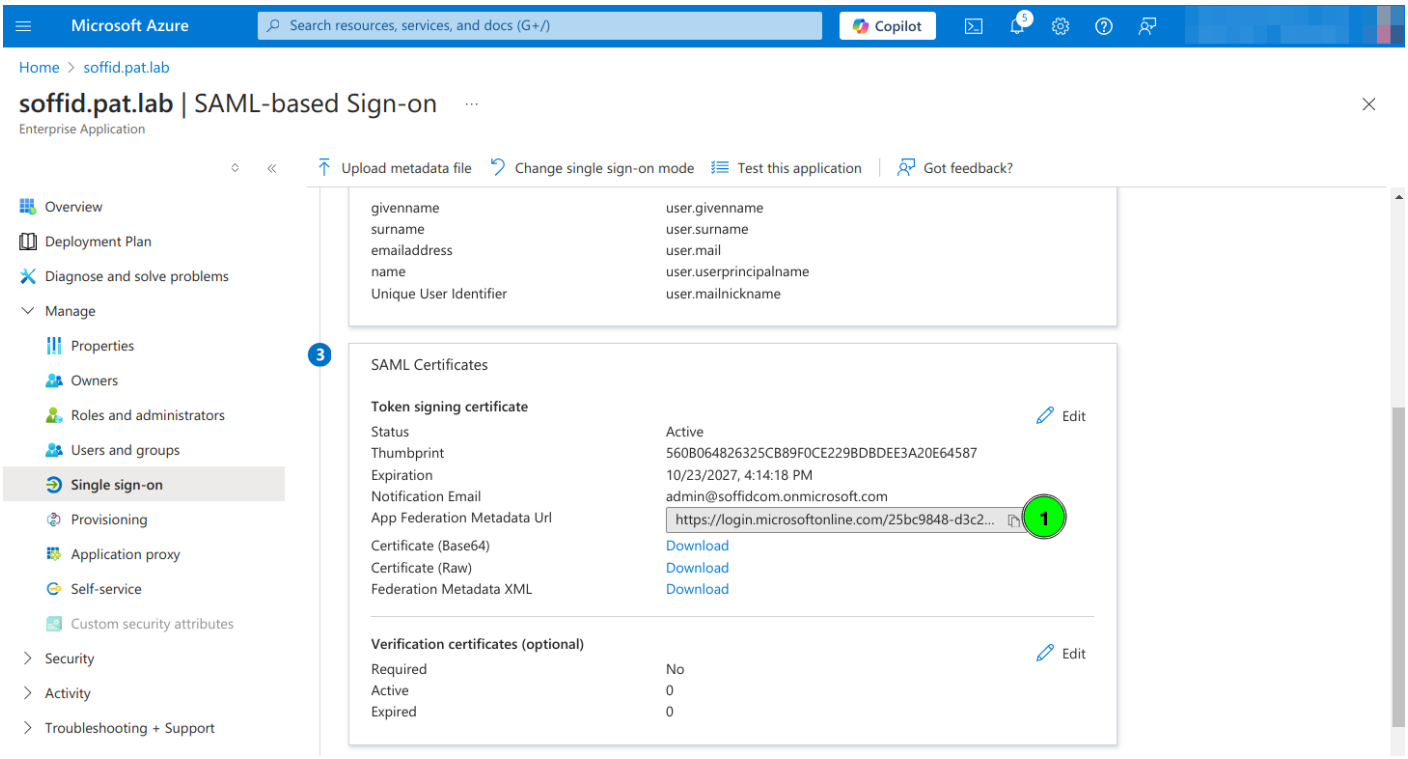


9. Configure **Attributes & Claims** and change the attributes and claims to send the mailnickname as the user identifier (nameid)

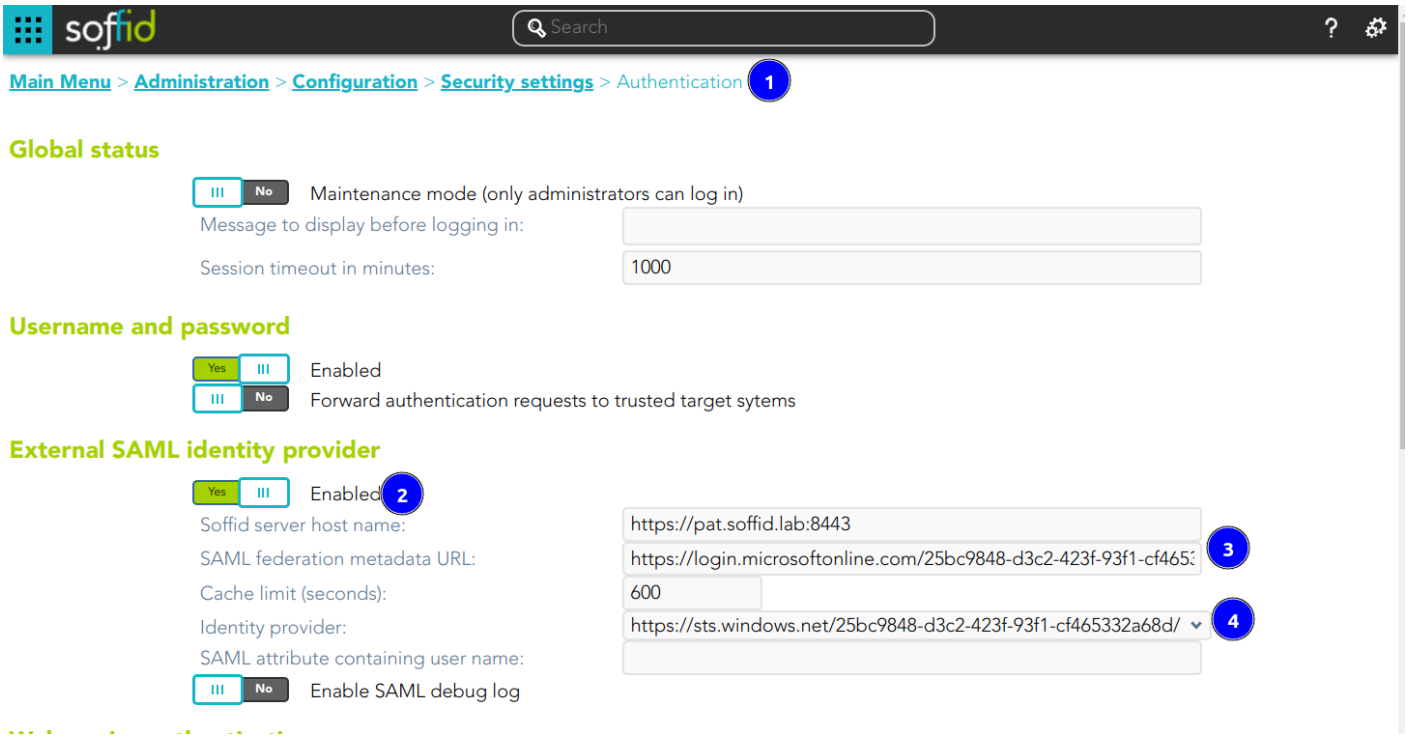




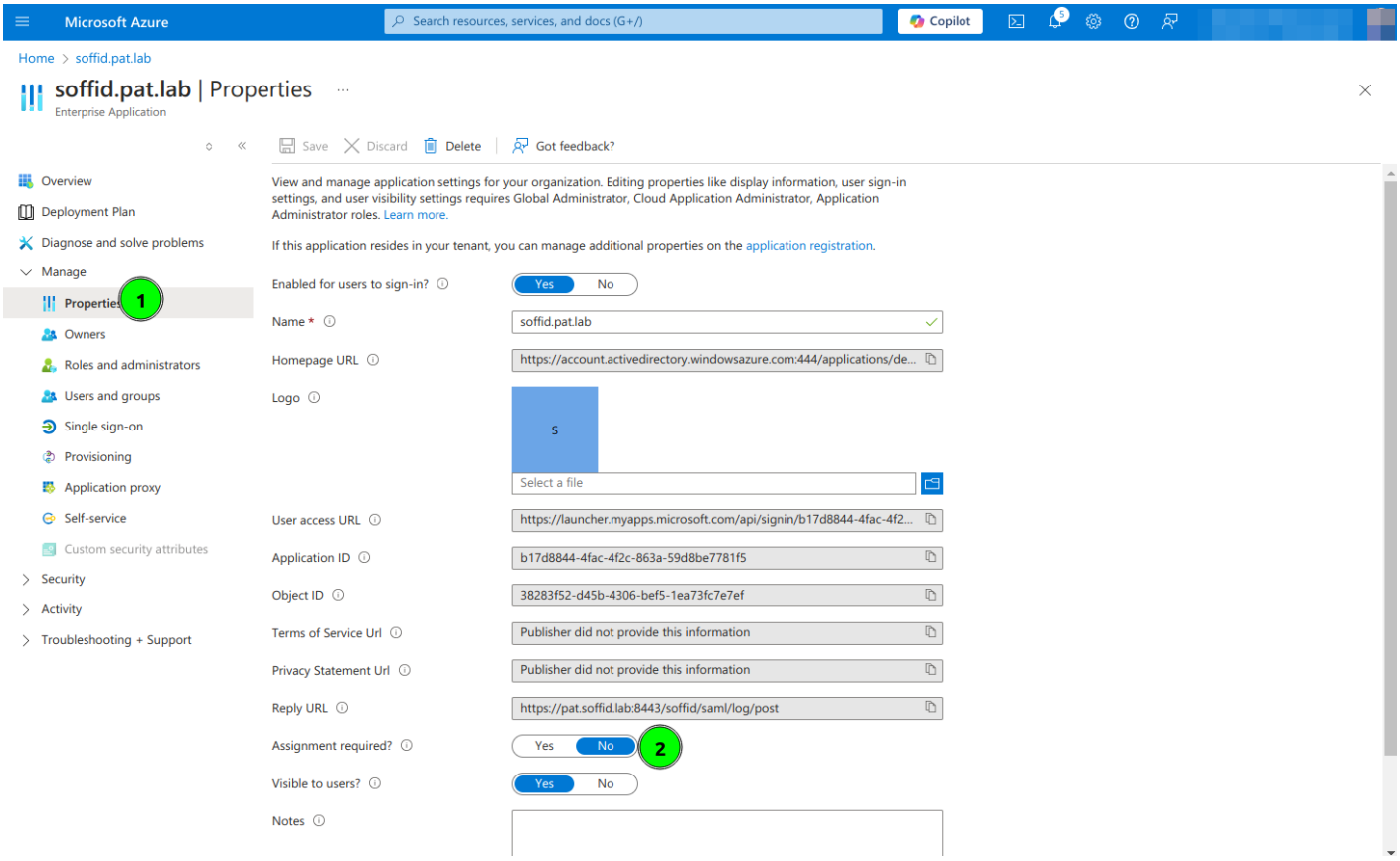
10. Copy the App Federation Metadata Url



11. Configure the **External SAML identity Provider** in the Soffid Console Authentication page



12. Optional, **enable any user to login**


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > soffid.pat.lab
soffid.pat.lab | Properties
Enterprise Application
Save
Discard
Delete
Got feedback?
Overview
Deployment Plan
Diagnose and solve problems
Manage
Properties
1
Owners
Roles and administrators
Users and groups
Single sign-on
Provisioning
Application proxy
Self-service
Custom security attributes
Security
Activity
Troubleshooting + Support
View and manage application settings for your organization. Editing properties like display information, user sign-in settings, and user visibility settings requires Global Administrator, Cloud Application Administrator, Application Administrator roles. Learn more.
If this application resides in your tenant, you can manage additional properties on the application registration.
Enabled for users to sign-in?
Yes
No
Name *
soffid.pat.lab
Homepage URL
https://account.activedirectory.windowsazure.com:444/applications/de...
Logo
s
Select a file
User access URL
https://launcher.myapps.microsoft.com/api/signin/b17d8844-4fac-4f2...
Application ID
b17d8844-4fac-4f2c-863a-59d8be7781f5
Object ID
38283f52-d45b-4306-bef5-1ea73fc7e7ef
Terms of Service Url
Publisher did not provide this information
Privacy Statement Url
Publisher did not provide this information
Reply URL
https://pat.soffid.lab:8443/soffid/saml/log/post
Assignment required?
Yes
No
2
Visible to users?
Yes
No
Notes