

# Attribute Management pilot BBMRI

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## Introduction

One of the AARC results is the blueprint architecture (BPA) describing how the AAI infrastructure for research communities should look like. In this pilot we deployed identity and access management software Perun for BBMRI research infrastructure according to the BPA. The goal of the pilot was to demonstrate how data from different sources can be aggregated in form of attributes and then distributed to the services. Perun is a part of the eduTEAMS initiative from GEANT. We have successfully demonstrated that combination of existing components and data sources can fulfil needs of research community, in this case represented by BBMRI. The result of this pilot has been transferred into the production service used by the BBMRI.

## Detailed description

BBMRI use case for attribute management was to combine data about biobanks, their representatives and users in order to feed the Negotiator service which requires authenticated users, list of biobanks and their representatives. We have configured two registration workflows in Perun system which is used to register users of Negotiator service and representatives of biobanks. Users go through normal registration which requires just their contact information. Representatives register as normal users plus they provide which biobanks they represent. BBMRI administration checks the registration form for representatives and approve their request to be representative. Perun system gathers data from biobank directory and represents them as a groups. Representatives are then automatically put into subgroup of the group representing biobank. Mapping of representatives and biobanks is then pushed into the Negotiator service, so every biobank has its own representatives assigned. Negotiator is accessible just via OpenID Connect protocol, so OIDC authorisation server communicates with Perun system to get attributes about users.

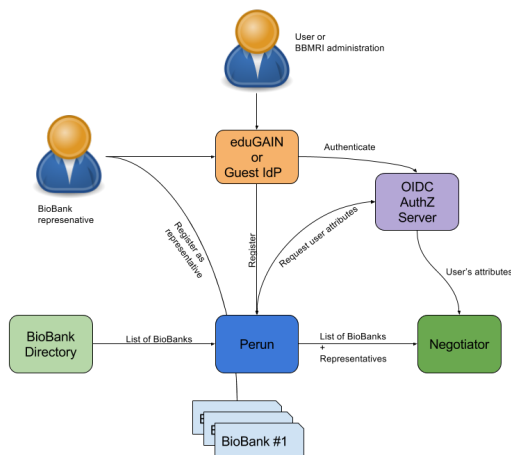
Users and representatives registering into the BBMRI are getting their BBMRI ID which is used to uniquely identify BBMRI users regardless which identity they used to access the BBMRI services (any of their home organisation identity or guest identity).

The whole attribute aggregation is transparent from the user point of view, so they just register into the BBMRI and then use Negotiator service.

Perun system is doing the attribute aggregation as well as identity linking together with support of the whole user life cycle we can ensure that users are automatically added or removed into/from the BBMRI and all the data for authorisation decisions are available.

The whole pilot has been done on <https://perun.bbMRI-eric.eu> and <https://negotiator.bbMRI-eric.eu>. The Perun service for BBMRI has been connected to the eduGAIN, therefore most of the BBMRI users can access the service without any burden.

## Schema



## Registration workflow

Enrollment form. Name and email fields are pre-filled with attributes from eduGAIN or Guest IdP.

The screenshot shows the BBMRI-ERIC Registrar interface. At the top, there is a navigation bar with the BBMRI-ERIC logo, the word "Registrar", and links for "Form", "Submitted registrations", a language selector (English), and "Sign out". Below the navigation bar is the BBMRI-ERIC logo and the heading "Registration to the BBMRI support". The form contains two input fields: "Name" with the value "Slávek Licehammer" and "Email" with the value "slavek.licehammer@cesnet.cz". A green "Submit" button is located below the email field. At the bottom of the page, there is a footer with "Support: perun@cesnet.cz" and "Powered by Perun © 2017 CESNET & CERIT-SC".

You can easily select different mail from list obtained from eduGAIN or you can write down custom one.

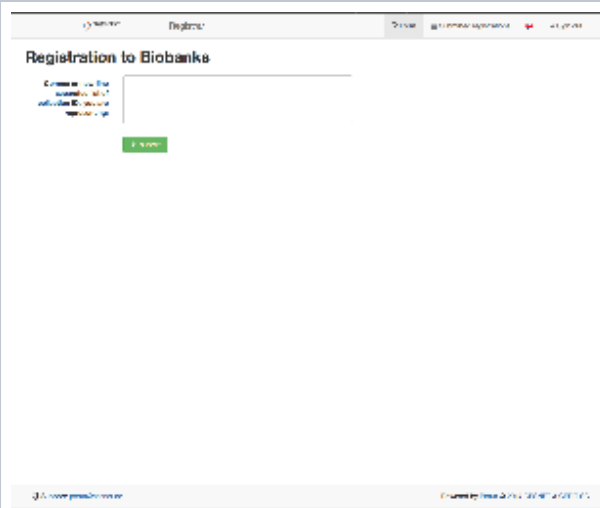
If you fill in the custom email, you have to verify it by clicink on the link that will be send to provided email address.

This screenshot shows the same registration form as the previous one, but with a dropdown menu open for the "Email" field. The dropdown menu lists several email addresses: "slavek.licehammer@cesnet.cz", "slavek@ics.muni.cz", "licehammer@cesnet.cz", and "... Custom ...". The "Submit" button is still visible below the email field. The rest of the page, including the navigation bar and footer, remains the same.

Registration is complete. You will receive a notification after VO manager approve your application.

The screenshot shows the BBMRI-ERIC Registrar interface after a successful registration. The heading "Registration to the BBMRI support" is replaced by a green checkmark icon and the text "You have successfully applied for membership". Below this, there is a message box that says "Please wait until your application to BBMRI support will be approved." The navigation bar and footer are the same as in the previous screenshots.

Registration form for biobank representatives where they are providing list of biobanks.



## Managing group membership/assignment of the representative to biobank

Select group from the list of all groups within the VO. Group representing biobank.

Next step is to select a group.

**Perun** BBMRI

Name: **Slávek Licehammer** Role: PERUN / SECURITY ADMIN Logout

Perun admin BBMRI ID: 3 Short name: bbMRI

Security admin BBMRI

VO manager

Select VO

BBMRI

Members Groups Resources Applications Application form Settings Managers External sources

Overview Members Groups Resources Applications Application form Settings Managers External sources

Create... Delete Filter

<input type="checkbox"/>	Group ID	Sync	Name	Description	Count: 1081
<input type="checkbox"/>	3		members	Group containing VO members for VO BBMRI	
<input type="checkbox"/>	7		collections	Biobank collections.	
<input type="checkbox"/>	2174		collections.bbmri-eric.ID.AT_MUG.collection.all_samples	Group of people authorized to access this biobank collection.	
<input type="checkbox"/>	2175		collections.bbmri-eric.ID.AT_MUG.collection.all_samples.representatives	Group of people responsible for this biobank collection.	
<input type="checkbox"/>	2176		collections.bbmri-eric.ID.AT_MUI.collection.all_samples	Group of people authorized to access this biobank collection.	
<input type="checkbox"/>	2177		collections.bbmri-eric.ID.AT_MUI.collection.all_samples.representatives	Group of people responsible for this biobank collection.	
<input type="checkbox"/>	2178		collections.bbmri-eric.ID.AT_MUW.collection.all_samples	Group of people authorized to access this biobank collection.	

About: Perun web | Support: perun@cesnet.cz, Online help © CESNET, CERIT 2011 - 2017, version: 3.0.1 fe540 Settings

Group detail where you can see that the group currently contains no members.

Next step is click on the "Add" button.

The screenshot shows the Perun web interface for a group named "collections:bbMRI-eric.ID.AT\_MUG.collect...". The user is logged in as "Slávek Licehammer" with the role "PERUN / SECURITY ADMIN". The interface includes a sidebar with navigation options like "Perun admin", "Security admin", "VO manager", "Group manager", "Facility manager", and "User". The main content area shows the group details, including a table for members. The table is currently empty, and a message states "Group has no members." There are buttons for "Add...", "Invite member...", and "Remove" at the top of the members section.

Fill in the name of user who you want to add and click on search button.

In case there is more than one user found you have to choose from the list below.

The screenshot shows the "Add member(s)" dialog box open in the Perun web interface. The search input field contains "prochazka". The dialog includes buttons for "Search in VO", "Search globally", "List all VO members", "Add", "Invite selected", and "Close". Below the search input is a table with one entry:

Member Id	User Id	Status	Name	Organization	Email	Count
11	3	✓	Michal Procházka		prochazka.michal@gmail.com	1

After you add user to the group. You will see pop-up notification on the top and then you can search and add more users.

After adding new user to the group, new access control configuration will be provisioned to all affected services.

The screenshot shows the "Add member(s)" dialog box after a user has been added. A blue notification banner at the top of the dialog reads "Member: Procházka Michal added to group: bbMRI-eric.ID.AT\_MUG.collection.all\_samples". The search input field is empty. The table below shows the user already added:

Already added: Procházka Michal

Member Id	User Id	Status	Name	Organization	Email	Count
11	3	✓	Michal Procházka		prochazka.michal@gmail.com	1

Data about representatives and biobanks are now pushed into the Negotiator service. Users then can see who is representing particular biobank.