

# REFEDS 2020 End of Year Report

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## Abstract:

### Table of Contents

1. Abstract .....	2
2. Executive Summary and Highlights .....	2
3. Sponsorship.....	3
4. Activities .....	4
4.1. REF20-1: REFEDS Coordination and Management .....	4
4.2. REF20-2: Specialist Working Groups .....	7
4.3. REF20-3: Promotion and Communication .....	9
4.4. REF20-4: Standards and Specifications.....	10
4.5. REF20-5: REFEDS Services .....	12
5. Finances .....	12

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## 1. Abstract

This report provides an overview of the work carried out by REFEDS during 2020 as well as the costs incurred in the same period. The workplan for 2020, as approved by the REFEDS SC and supported by the sponsors can be found online at: <https://refeds.org/work/>.

This report is mainly aimed at the REFEDS Sponsors, to highlight the achievements in relation to the expenditures and the yearly sponsorships.

## 2. Executive Summary and Highlights

This document provides an update on the progress made by REFEDS in the various work packages that were part of the REFEDS 2020 Workplan. REFEDS continued its work in 2020 to strengthen its position as the reference and harmonisation body for best practices for federation operators, and saw an increasing amount of outreach to the service provider community (particularly scholarly publishers) over the course of the year.

2020 was a difficult year for all organisations and participants in REFEDS due to the ongoing pandemic and impact of COVID-19. We took the decision early on to scale-back on main meetings for REFEDS to avoid over-burdening the community at a time of competing requirements. The REFEDS Working Groups continued more or less as normal.

The following highlights for the year should be noted:

- REFEDS Supported a Campaign to increase the use of R&S to enable covid research: <https://refeds.org/a/2430>. At the beginning of the campaign, 791 IdPs in eduGAIN supported R&S and automatically released an attribute bundle to R&S providers. As of 23 February 2021, 1049 IdPs in eduGAIN support R&S. This means we have reached the important milestone of support from 25% of Identity Providers.
- REFEDS hosted several sessions at the Internet2 CAMP and ACAMP meetings. CAMP saw the “What Is (and What Will Be) REFEDS” session including a presentation from the REFEDS Error Handling Working Group:

<https://spaces.at.internet2.edu/display/CAMP/CAMP> and ACAMP saw sessions on MFA / Assurance and Sirtfi:

<https://spaces.at.internet2.edu/display/ACAMP/ACAMP+2020+Home>.

- The REFEDS Coordinators created a new overview of MET requirements to prepare for a call for proposals for new MET developers in 2021.
- REFEDS completed consultations on: Baseline Expectations, eduGAIN Security Incident Response Handbook, Error Handling, Entity Category Consultation: Pseudonymous Authorization, Entity Category Consultation: Anonymous Authorization, Entity Category Consultation: Authentication Only:  
<https://wiki.refeds.org/display/CON>.
- The REFEDS Steering Committee began the process of drafting a strategy for REFEDS, which will be circulated for further comment in 2021.
- The REFEDS Schema Board developed a proposal for a new AnalyticsID, which will be put out for consultation in 2021.
- 100 Working Group meetings were held across the working group portfolio.

### 3. Sponsorship

The sponsorships for 2020 were handled according to the established sponsorship model in use since 2015. This model includes sponsorship levels (platinum, gold, silver and bronze) with an associated amount for each of the levels. The list of current sponsors is shown in the table below:

Sponsorship Levels	Organisations
PLATINUM	InCommon, JISC, GARR, NORDUnet
GOLD	Renater, SURFnet, SWiTCH
SILVER	RedIRIS, LIGO, CANARIE, Internet Society
BRONZE	Australian Access Federation, CESNET, TENET

In total these organisations contributed 69000 EUR in sponsorship; see [Section 5. Finances](#) for a detailed overview of the expenditures.

## 4. Activities

REFEDS work is organised in sets of work items via an annual workplan. Each year REFEDS participants are solicited to provide inputs for possible work areas. A short list is created with the expected budget associated with each work area. The REFEDS Steering Committee is then asked to approve the list and to define the initial priorities (accordingly with specific wishes from the sponsors if any). Once the plan is ready, the REFEDS sponsors will be asked to provide feedback via the mailing list or via a consultation meeting.

Each work package covers area of work that are in line with REFEDS goals of:

- Representing the needs for the research and education community in the wider space of access and identity management;
- Addressing inter-federation issues and trying to offer some solutions for these;
- Engaging more actively with other communities interested in identity federations;
- Enhancing international collaborations among participants by sharing best practices and possibly contributing to the creation and/or adoption of new standards.

A high level view of the annual workplan, once approved, is available on the REFEDS website: <https://refeds.org/our-work>. A more detailed view is available on the wiki and may be updated as the community and the work evolves: <https://wiki.refeds.org/display/WOR/2020+REFEDS+Workplan>.

### **4.1. REF20-1: REFEDS Coordination and Management**

*AIM: to progress REFEDS position as an important player within the access and identity management space internationally and to build on established relationships with GÉANT project, ISOC and Kantara.*

#### 4.1.1. Meetings, Presentations, and BoFs

REFEDS took a very purposeful decision in 2020 not to facilitate the main meetings due to the pressure on federation operators and other

related parties to meet new due demands brought about by the pandemic and to reduce the amount of time spent online. It was also felt that it was more appropriate to spend time focusing on the practical results of the working group meetings rather than more generalised information sharing.

A REFEDS Steering Committee strategy meeting had been planned for Match 2020, but it was not possible to take this forward. The SC is now looking to take strategy content creation forward online.

REFEDS coordinated the following meetings:

- REFEDS presentation at InCommon CAMP (November 2020).

All other REFEDS meetings happened at the working group or committee level, with many working groups meeting weekly. A total of 100 working group meetings were held.

#### 4.1.2. Maintain the REFEDS Blog

The REFEDS Blog saw a much lighter year than in 2019. Community efforts and hot topics were largely subsumed as each federation focused inwards in response to meeting their customer's needs during the pandemic.

Three posts were created:

- A summary of the REFEDS 2019 December meeting: <https://refeds.org/a/2402>.
- A post supporting the COVID-19 call for action: <https://refeds.org/a/2430>.
- An update from the assurance working group: <https://refeds.org/a/2471>.

#### 4.1.3. REFEDS Annual Survey

The REFEDS Survey 2020 was answered by 50 of the known 86 federations globally. A full version of the results will be presented at a webinar on the 1st April 2021 and published to the REFEDS wiki at:

<https://wiki.refeds.org/display/OUT>. The following conclusions were drawn from the survey:



We continue to see steady growth in federations appearing globally and joining eduGAIN but there are many that do not seem to be operative.



Federations operate as critical infrastructure but are not funded or resourced as critical infrastructure.



No strong evidence for support for non-SAML use cases.



Federations have business plans, but seem to struggle to meet their business goals based on answers.



As a community we still suffer from lack of cohesive behaviour by federations.



Adoption of specifications such as entity categories needs a stronger driver.



Federation energy is in general operations not improvements.

A series of recommendations for the REFEDS workplan were also made and will be discussed in the same webinar. These topics include:

- Service Catalogue
- CoCo version 2
- Support for IMS Standards
- Survey of MFA implementations
- Interoperability of eduID systems
- Attributes for Virtual Organisations
- Enforcing broader governance and implementation of standards
- Discussion on usage statistics
- Discussion on automation tools
- Discussion on blockchain usage
- Logo Standardisation
- Guidelines on Consent
- Closer work with Seamless Access / FIM4R / FIM4L
- OIDC / SAML Interoperability

#### 4.1.4. Contracts with Third Parties

REFEDS renewed one contract with external parties to support its work in 2020:

- A contract with Heather Flanagan to help coordinate and facilitate the different working groups and workplan items within REFEDS.

#### 4.1.5. Sponsorships

At the start of each calendar year, invoices are automatically sent out to the current sponsors. New sponsors can join any time and an active effort is made to expand the current sponsors base.

### **4.2. REF20-2: Specialist Working Groups**

*AIM: to provide infrastructure and support for evolving ideas and areas in the REFEDS community. REFEDS currently supports the following working groups.*

<b>Group</b>	<b>Description</b>	<b>Outcomes</b>
FOG <a href="https://wiki.refeds.org/display/GROUPS/FOG">https://wiki.refeds.org/display/GROUPS/FOG</a>	<i>A closed mailing list for the REFEDS <b>Federation Operators Group</b>, to facilitate open discussions about operational issues of running Research and Education Identity Federations.</i>	FOG is intended to be a closed discussion group. No specific outcomes are expected although the group has seen useful discussions on problems related to publisher relations in particular. These conversations have been taken forward with FIM4L and Seamless Access.
Sirtfi <a href="https://wiki.refeds.org/display/GROUPS/SIRTFI">https://wiki.refeds.org/display/GROUPS/SIRTFI</a>	<i>The Security Incident Response Trust Framework for Federated Identity (Sirtfi) aims to enable the coordination of incident response across federated organisations. The working group is currently considering requirements for SIRTFI v2.</i>	The main outcome of the Sirtfi working group in 2020 was the eduGAIN Security Incident Response Handbook, as referenced in the consultations.  <b>The group met 23 times in 2020</b>
Assurance <a href="https://wiki.refeds.org/display/GROUPS/Assurance+">https://wiki.refeds.org/display/GROUPS/Assurance+</a>	<i>The REFEDS Assurance WG was established in 2016 to address the needs in Research &amp; Education (R&amp;E) of defining a minimal degree of identity and authentication</i>	<b>The group met 18 times in 2020</b>

<a href="#">Working+Group</a>	<p><i>assurance. After successful community consultations, the first version of the REFEDS Assurance Suite was published in 2017 and 2018, being comprised of the REFEDS Assurance Framework (RAF), the REFEDS Single Factor Authentication Profile (SFA) and the REFEDS Multi Factor Authentication Profile (MFA).</i></p> <p><i>The goal as of 2021 of this working group is to</i></p> <ul style="list-style-type: none"> <li><i>revisit and modernize the specifications (formal review)</i></li> <li><i>ensure test facilities are in place to enable adoption</i></li> </ul>	
<p>SPOG  <a href="https://wiki.refeds.org/display/GROUPS/SPOG">https://wiki.refeds.org/display/GROUPS/SPOG</a></p>	<p><i>This group, modeled off of <a href="#">FOG</a>, will provide a forum for Service Providers to facilitate open discussions about operational issues of running services for Research and Education Identity Federations such as deployment issues, gaps in existing guidance, and other SP specific concerns.</i></p>	<p>Activity in this group is sparse.</p>
<p>Baseline Expectations  <a href="https://wiki.refeds.org/display/GROUPS/Baseline+Expectations+Working+Group">https://wiki.refeds.org/display/GROUPS/Baseline+Expectations+Working+Group</a></p>	<p><i>The goal of this group is to define a common set of expectations of all participant organisations to establish a baseline of trust in identity federations. The material is based on the InCommon Baseline Expectations, modified for an international audience.</i></p>	<p>Initial community consultation completed in January 2021; working group is focused on incorporating the suggested changes.</p> <p><b>The group met 20 times in 2020</b></p>
<p>Best Practices around Error Handling  <a href="https://wiki.refeds.org/display/GROUPS/Best+Practices">https://wiki.refeds.org/display/GROUPS/Best+Practices</a></p>	<p><i>This working group is now in maintenance mode.</i></p>	<p><a href="#">SAML V2.0 Metadata Deployment Profile for errorURL Version 1.0</a>,</p> <p><b>The group met 13</b></p>



<a href="#">e+around+Error+Handling</a>		<b>times in 2020</b>
Entity Category Support <a href="https://wiki.refeds.org/display/GROUPS/Entity+Categories+Development+Working+Group">https://wiki.refeds.org/display/GROUPS/Entity+Categories+Development+Working+Group</a>	<p><i>The goal of this working group is to explore the potential development of additional entity categories beyond Research &amp; Scholarship v1 and other additional categories that may arise. The overarching work for this group is discussed on the main REFEDS list, but sub-lists will be created as needed for individual work areas.</i></p> <p><i>The current focus of the group is work on a version 2 of REFEDS R&amp;S.</i></p>	<p><b>The group met 3 times in 2020</b> to begin the process of defining a new "v2" version of R&amp;S. A more frequent schedule has been established for 2021</p>
Federation 2.0 <a href="https://wiki.refeds.org/display/GROUPS/Federation+2.0">https://wiki.refeds.org/display/GROUPS/Federation+2.0</a>	<p><i>The Federation 2.0 Working Group will follow a structured process to gather input from a wide range of information sources and individual perspectives, in order to review the past and current states and formulate possible future scenarios for the evolution of research and education federations. This data will be analysed and synthesised to articulate the value of R&amp;E federation, identify potential changes that may increase that value, and recommend actions that R&amp;E Federations and others can take to increase their value over time.</i></p>	<p><b>The group met 23 times in 2020</b></p>

### **4.3. REF20-3: Promotion and Communication**

Despite the lack of an in-person meeting, REFEDS continued its outreach and communications where possible in 2020. The REFEDS coordinators sent out quarterly updates to the community keeping everyone aware of REFEDS' activities. Early in the year as part of the sudden increase in the use of federated identity for research and education, REFEDS supported an urgent campaign to increase the use of R&S to enable covid research: <https://refeds.org/a/2430>. At the beginning of the campaign, 791

IdPs in eduGAIN supported R&S and automatically released an attribute bundle to R&S providers. As of 23 February 2021, 1049 IdPs in eduGAIN support R&S. This means we have reached the important milestone of support from 25% of Identity Providers.

REFEDS hosted several sessions at the Internet2 CAMP and ACAMP meetings. CAMP saw the “What Is (and What Will Be) REFEDS” session including a presentation from the REFEDS Error Handling Working Group: <https://spaces.at.internet2.edu/display/CAMP/CAMP> and ACAMP saw sessions on MFA / Assurance and Sirtfi: <https://spaces.at.internet2.edu/display/ACAMP/ACAMP+2020+Home>.

The REFEDS Slack channel (found in the eduGAIN Slack space) continues to be used by the community for conversation, support, and outreach. 139 individuals subscribe to that channel. The REFEDS mailing list itself has 427 subscribers.

#### **4.4. REF20-4: Standards and Specifications**

*AIM: to provide support for the development of standards and specifications under the REFEDS banner, including coordination for pilot specification work to support implementation requirements and creating structures to ensure specification and schema sustainability.*

Much of the work in the Standards and Specifications space in REFEDS in 2020 was conducted by the REFEDS Schema Editorial Board. The Schema Editorial Board is responsible for the various schema managed and maintained by the REFEDS community, including SCHAC and eduPerson.

Over the course of 2020, the Schema Editorial Board managed two subcommittees: one to consider adding to the values (in particular, ‘sponsored’ and ‘researcher’) for eduPersonAffiliation, and another to consider adding a new value to eduPerson for an analytics code. The eduPersonAffiliation subcommittee closed with the following recommendation:

[This subcommittee does not] seem to have a clear set of applications that would be able to consume “sponsored”. This would likely be something more internally focused within an institution. We do not have consensus nor a broad enough set of stakeholders from

the interested communities to add anything to the controlled vocabulary for eduPersonAffiliation. Entitlement is open for organizations to use as they feel necessary, and we will work on creating a place for organizations to register the entitlement values and policies if they so choose.

For future work, a more concrete proposal needs to be initiated before a subcommittee is formed to discuss. The subcommittee is not the right place to create the definition.

The eduPersonAnalyticsCode subcommittee developed a draft specification that will go out for community consultation in 2021. The subcommittee will close after that specification has gone through the consultation process.

The Schema Editorial Board is also responsible for new entity categories. In 2020, a community outside of REFEDS, the SeamlessAccess Entity Category and Attribute Bundles Working Group, submitted three entity categories to REFEDS. The purpose of these entity categories is to provide common language and clear attribute release policies between SPs that do not qualify for the R&S entity category and IdPs. More on the consultation process for these entity categories is included in the Consultations section below.

#### 4.4.1. Consultations

REFEDS conducted six consultations in 2020:

- [Error Handling](#) (14 April 2020 through 14 May 2020)
- [Entity Category Consultation Anonymous Authorization](#) (6 July 2020 through 31 August 2020)
- [Entity Category Consultation Authentication Only](#) (6 July 2020 through 31 August 2020)
- [Entity Category Consultation Pseudonymous Authorization](#) (6 July 2020 through 31 August 2020)
- [eduGAIN Security Incident Response Handbook](#) (20 July 2020 through 11 September 2020)
- [Baseline Expectations](#) (11 December 2020 through 31 January 2021)

The [SAML V2.0 Metadata Deployment Profile for errorURL Version 1.0](#), produced by the Best Practices Around Error Handling Working Group, was unanimously approved by the Steering Committee following the usual consultation process.

A revised version of the eduGAIN Security Incident Response Handbook was unanimously approved by the Steering Committee following the consultation. This has now been passed to the eduGAIN Service Owner for approval within the eduGAIN service.

Of the three consultations that concluded in 2020, the REFEDS Steering Committee unanimously accepted the Anonymous Authorization Entity Category and the Pseudonymous Entity Category. The Authentication Only Entity Category was not approved.

Due to the timing of the consultations (coinciding with both summer and winter holidays), the Entity Category and Baseline Expectations consultations were given an extended period of time for public comment.

#### **4.5. REF20-5: REFEDS Services**

*AIM: to continue to support the operation and maintenance of MET.*

No significant work was undertaken on MET in 2020. However a full description of work was prepared in order to put out a planned Request for Quotations (RFQ) in 2021.

### **5. Finances**

The costs for running REFEDS in 2020 are shown below. There is underspend due to the lack of business travel in 2020.

<b>Description</b>	<b>Cost (EUR)</b>
Consultant fees	15881
GÉANT manpower	9713
Travel and meetings	0
Miscellaneous	545
VAT on GÉANT invoices (21%)	5489

	<b>31628</b>
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<b>Description</b>	<b>Amount (EUR)</b>
Starting Balance	6870
Income	69000
Expenditure	31628
Closing Balance	44242