OIDCFed status update

Davide Vaghetti
GÉANT OIDCFed Team (GN4-2 JRA3 Task 3 1.A)

Consortium GARR

eduGAIN SG
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OIDCFed Team Activities

- Development of OIDC Federated Client
  - Python library
  - Android and IOS POC
  - PHP POC
- Development of OIDC Federated Provider
  - Python library
  - SaToSa Frontend
  - Shibboleth OIDC Extension
- Development of OIDC Federation tools
  - Metadata Signing Service
- Development of OIDC Federation profiles
  - OIDC Federation draft implentation profiles
  - **OpenID Foundation** OIDC for Research and Education working group (currently setting it up)
- OIDC Federation pilot

Please check out

- **https://wiki.geant.org/display/gn42jra3/T3.1A+OpenID+Connect+Federation**
- **mailing-list: oidcfed@lists.geant.org**

OIDCFed Team

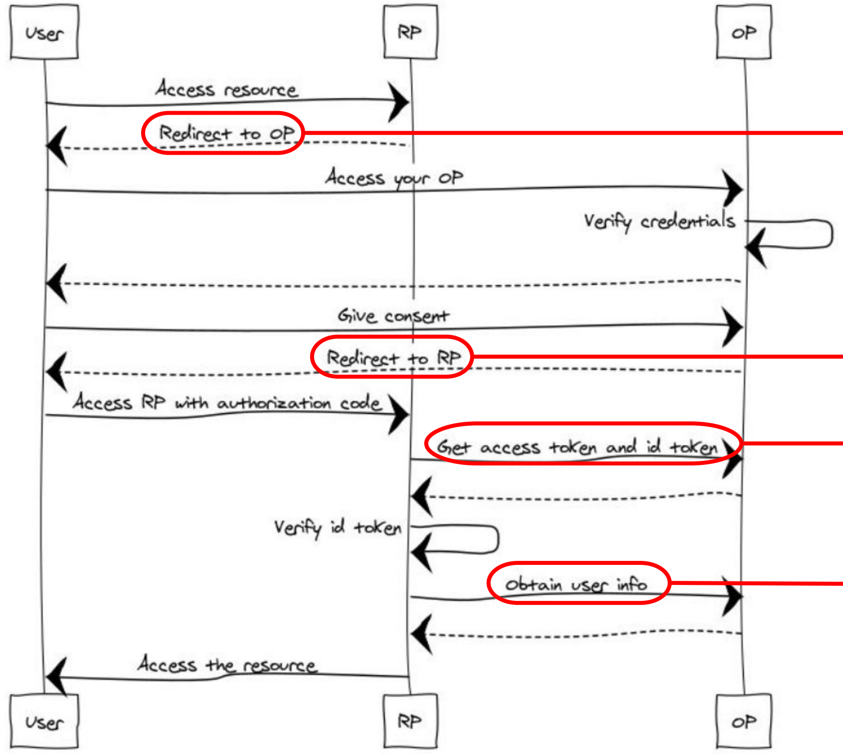
- Maarten Kremers - Task leader
- **Roland Hedberg - Principal developer and OIDC Federation standard editor)**
- Davide Vaghetti - Sub task leader
- Ioannis Kakavas - previous sub task leader (left)
- Alejandro Perez Mendez (left)
- Peter Schober
- Janusz Ulanowski
- Janne Lauros
- Henri Mikkonen
- Juha Hopia
- Andreas Åkre Solberg
- Elena Torroglosa
- Constantin Sclifos
- Alexandru Cacean
- Hervé Bourgault

OIDC Federation: the problem space

OIDC: Actors

- The **User** who wants to access a protected resource, either by himself or through an application.
- The **Relying Party** (often called the Client) is the entity that will request and use an access token.
- The **OIDC Provider** (OP) is the entity that will release the access token.

OIDC: OP and RP needs to know about each other



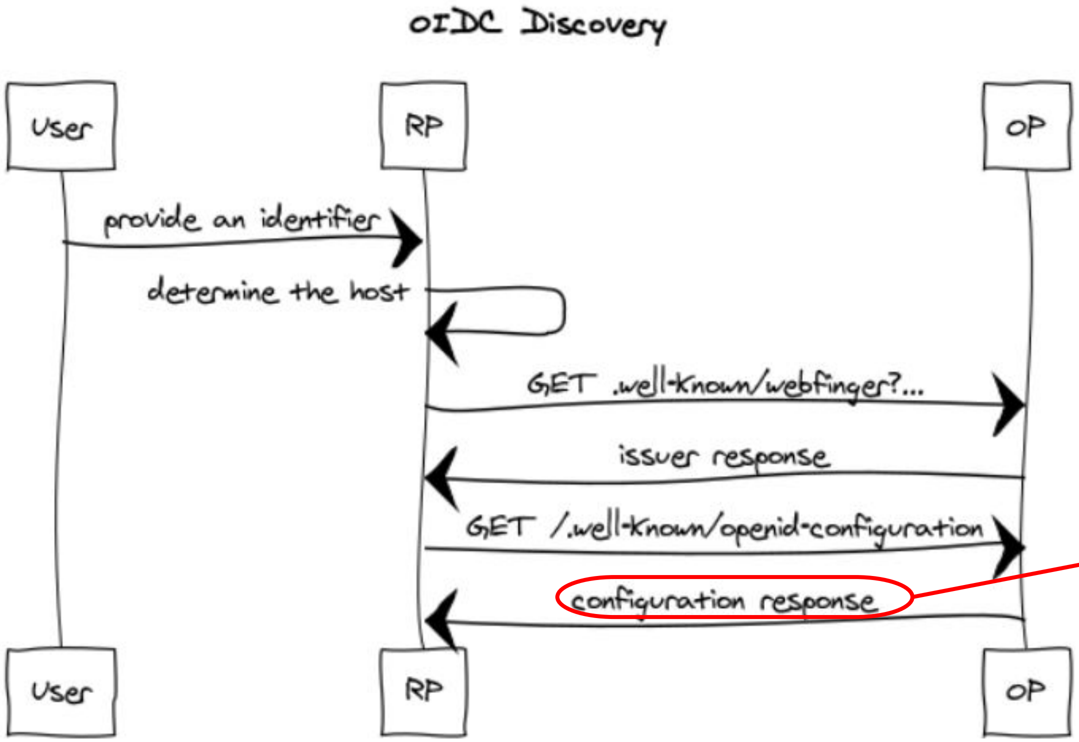
RP redirect the user to the OP's **authorization_endpoint**

OP redirect the user to the RP's **redirect_uri**

RP exchange theu code for an access_token at the **token_endpoint** (and authenticate…)

IIRP requests user claims at the OP's **userinfo_endpoint**

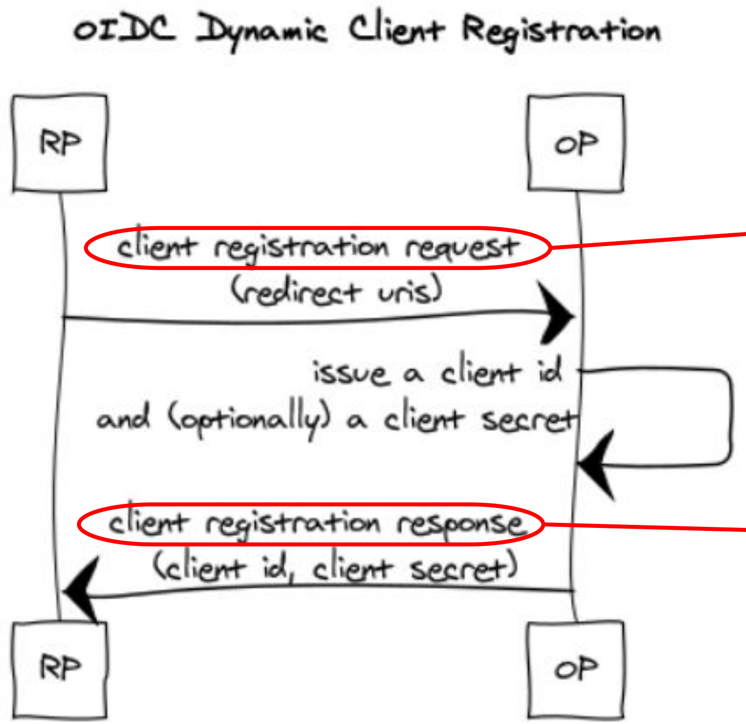
OpenID Connect Discovery 1.0



The **RP** receives and consumes the **OP** metadata (provider configuration) that are self-asserted.

No trust anchor is provided.

OpenID Connect Dynamic Client Registration 1.0


OIDC Dynamic Client Registration
RP
OP
client registration request
(redirect uris)
issue a client id
and (optionally) a client secret
client registration response
(client id, client secret)
RP
OP

The **OP** receives a client registration request from the **RP**. The information provided by the **RP** is self-asserted.

No trust anchor is provided.

The **OP** sends a client registration response to the **RP**, once again all the information is self-asserted.

No trust anchor is provided.

OpenID Connect Federation 1.0 - draft 04

http://openid.net/specs/openid-connect-federation-1_0.html

*This document describes **how an identity federation can be built around a trusted third party, the federation operator**.*

Metadata:

- **signing_keys**: A JSON Web Key Set (JWKS) representing the public part of the entity's signing keys.
- **metadata_statements**: JSON object where the names are federation identifiers and the values a signed JSON documents containing compounded metadata statements rooted in that federation. There is one value per name.

OIDC Federation profile #1

Deploying multiple R&E communities with OIDCFed

https://github.com/OpenIDC/fedoidc/blob/master/doc/howto/multifederation.md

Outcome of the two day OIDCFed design meeting in Amsterdam in January 2018 (cudos to Alejandro Pérez Méndez)

Key elements:

- A metadata signing service for each federation
- Communities of federations can stand for:
  - Interfederation services (aka eduGAIN)
  - Entity categories

OIDC Federation profile #2

The SWAMID profile for a OpenID Connect federation

https://github.com/OpenIDC/fedoidc/blob/master/doc/profile/swamid.rst

A recent elaboration of Roland Hedberg and the SWAMID Federation Operators.

Key elements:

- Direct relationships between the Federation and the final entities (RPs and OPs)
- No metadata_statements passed by value, only metadata_statements_uri
- All metadata_statements_uri used for registration and configuration providing are served by the Metadata Signing Service operated by the Federation

Comments and feedbacks are welcome!

(open a github issue, or make a PR)

Davide Vaghetti
davide.vaghetti@garr.it

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