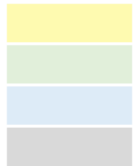


EuroHPC
Joint Undertaking



EuroHPC Federation Platform

Authentication & Authorization Infrastructure (AAI)

29 April 2026

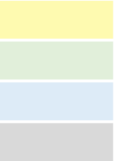
Josh Howlett

GÉANT

<https://my-eurohpc.eu>

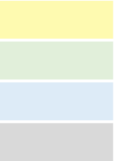


Agenda

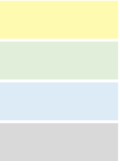


1. About the EuroHPC Federation Platform
2. An overview of the EFP AAI
3. EFP AAI for End Users
4. EFP AAI for Hosting Entities
5. Summary

Goals

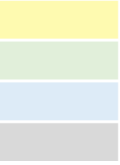


- Review the purpose and high-level architecture of the EFP AAI
- Describe the onboarding and usage experience for End Users
- Explain the integration options and process for Hosting Entities



About the EuroHPC Federation Platform

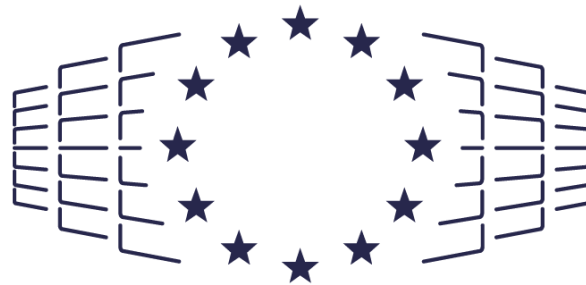
The EuroHPC Federation Platform (EFP)



"A one-stop-shop for accessing and utilizing EuroHPC systems and services"

A platform and federation framework which provides a **streamlined, single point of onboarding** and via which user can **access all systems and services** available to them in the EuroHPC ecosystem.

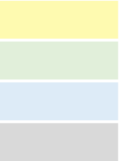
Direct access | Interactive interfaces | Programmatic APIs | Unified software stack



EuroHPC
Joint Undertaking

Federation Platform

EFP Main Features



Federated identity and Single-Sign-On (SSO)

Users utilize the same login and identity (e.g. granted via their home institution or national identity provider) to authenticate to all services and systems. Process for onboarding Industry.



Resource allocation, management and monitoring across systems

Users can view and manage their allocations and project members across all systems using a single interface.



Interactive web-based usage

with e.g., remote desktop, command line, AI training monitoring and Jupiter notebooks. Ability to launch batch jobs and browse files on the supercomputers.



Federated software catalogue

providing a pre-installed pseudo-uniform software stack on all systems. Advanced discoverability features for available software.



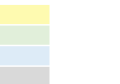
Advanced workflows and data transfer

Workflow execution and data transfers across systems, along with smart scheduling capabilities and high-level graphical interfaces for creating and managing workflows.

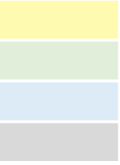


Direct access utilizing SSH certificates

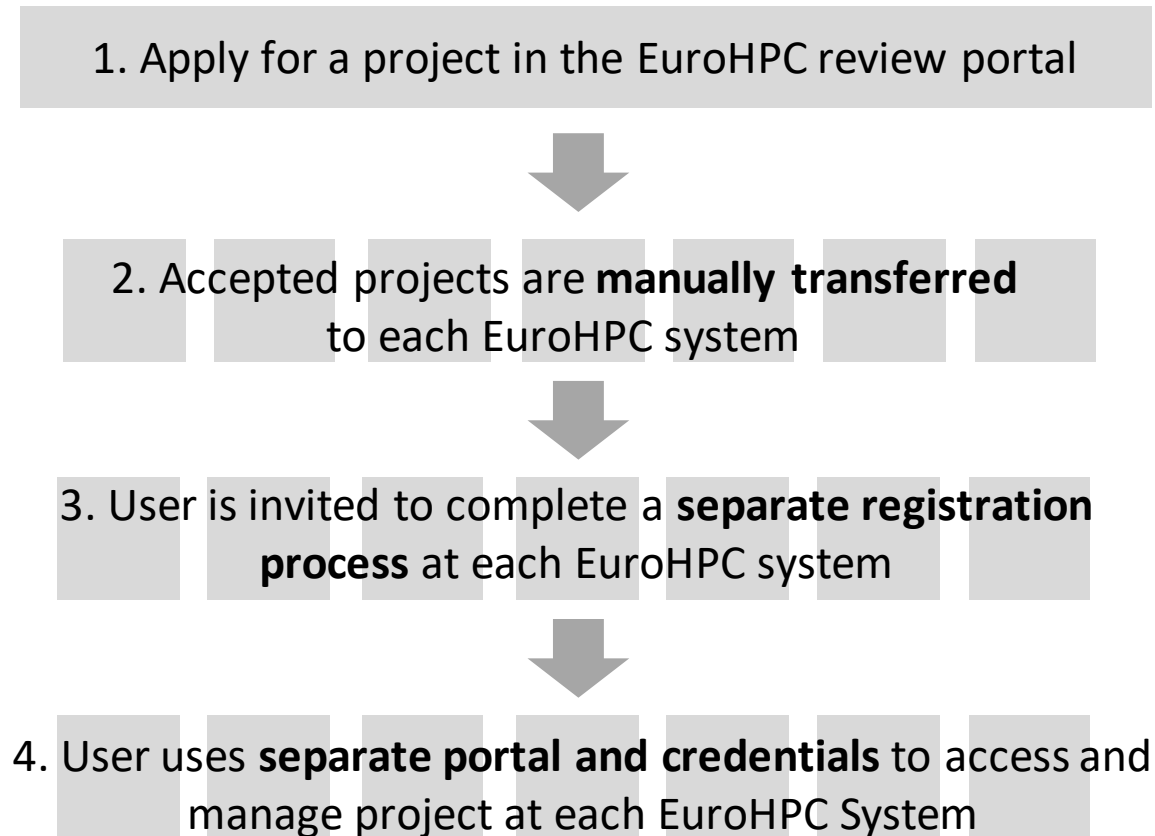
Short lived certificates which are obtained via a login flow with Multi-Factor Authentication (MFA) for increased security.



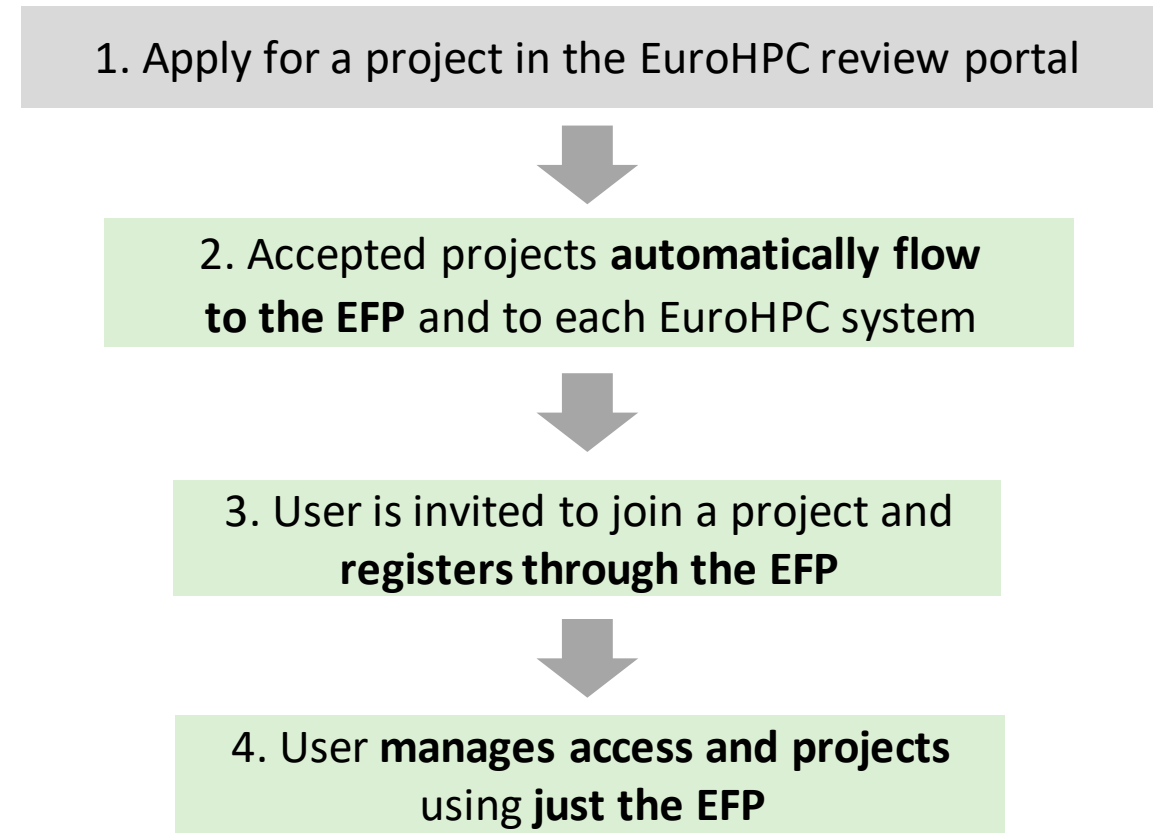
Impact of EFP on User Journey



Without EFP



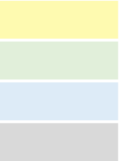
With EFP



There are no changes to the services and capabilities offered by the diverse set of EuroHPC systems.

Onboarding and managing projects across all available systems just becomes much easier through EFP.



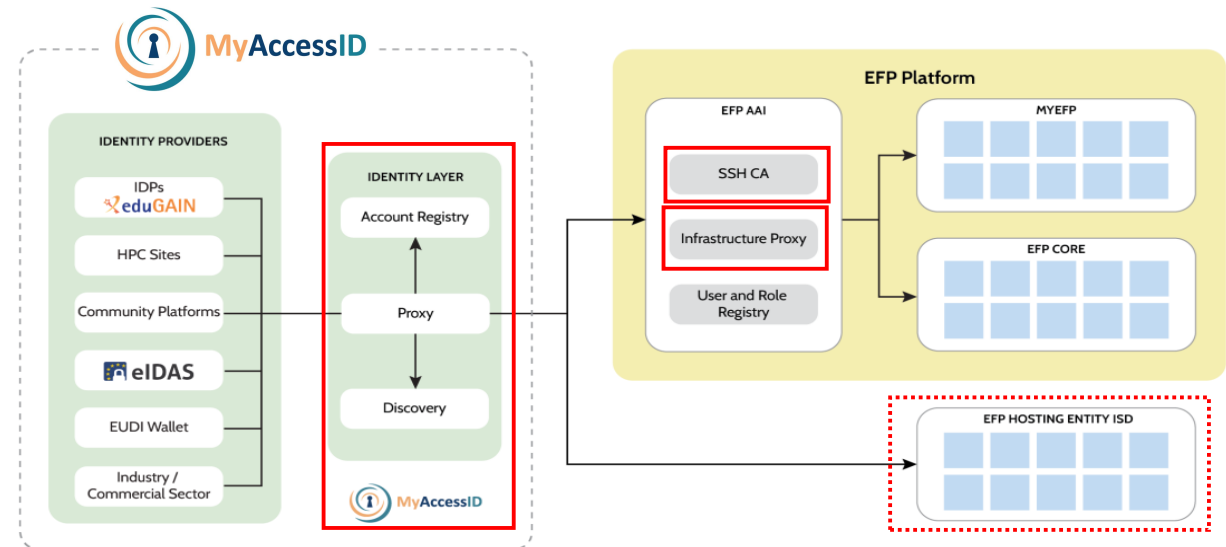


An overview of the EFP AAI



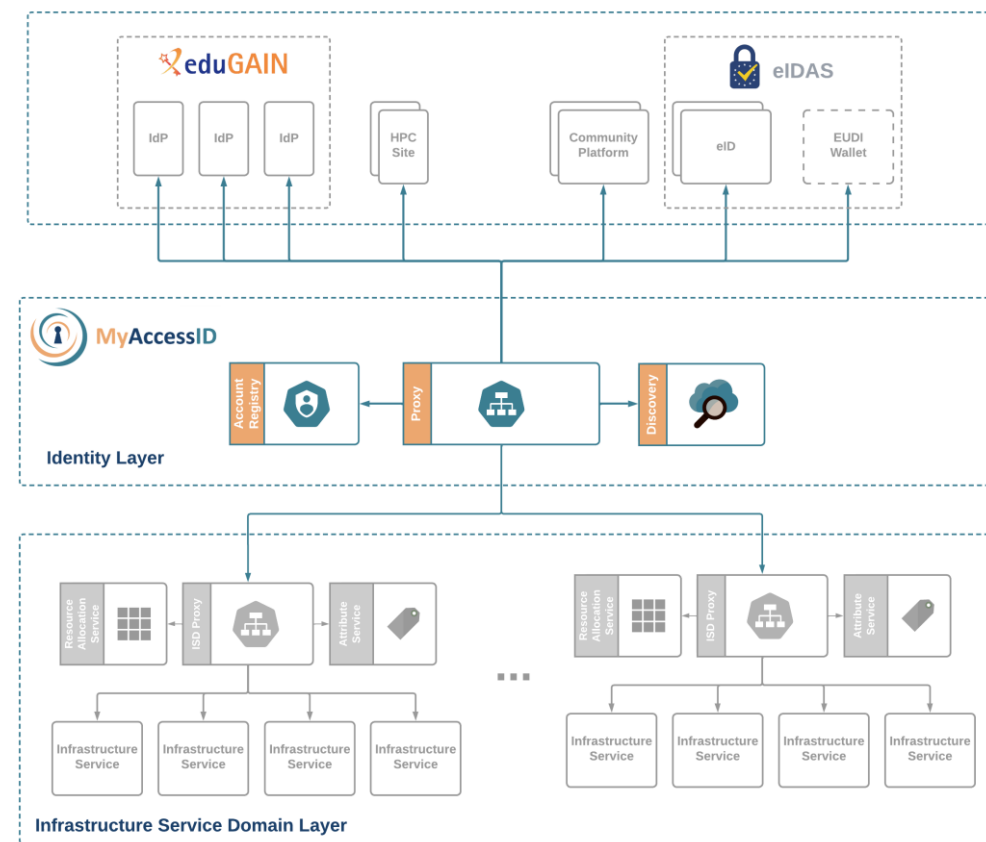
The key components of the EFP AAI

1. EFP Federation Infrastructure Proxy (FIP)
 - Based on GÉANT eduTEAMs, the EFP FIP connects every EFP service
2. MyAccessID
 - Provides the EFP FIP with end user identities
3. SSH Certificate Authority (CA)
 - Generates short-lived certificates for accessing EuroHPC Hosting Entities' systems
4. Hosting Entities' AAI
 - *Not part of the EFP AAI* but optionally Hosting Entities can also connect their own identity providers and clients to MyAccessID
 - This can add value in certain circumstances for Hosting Entities



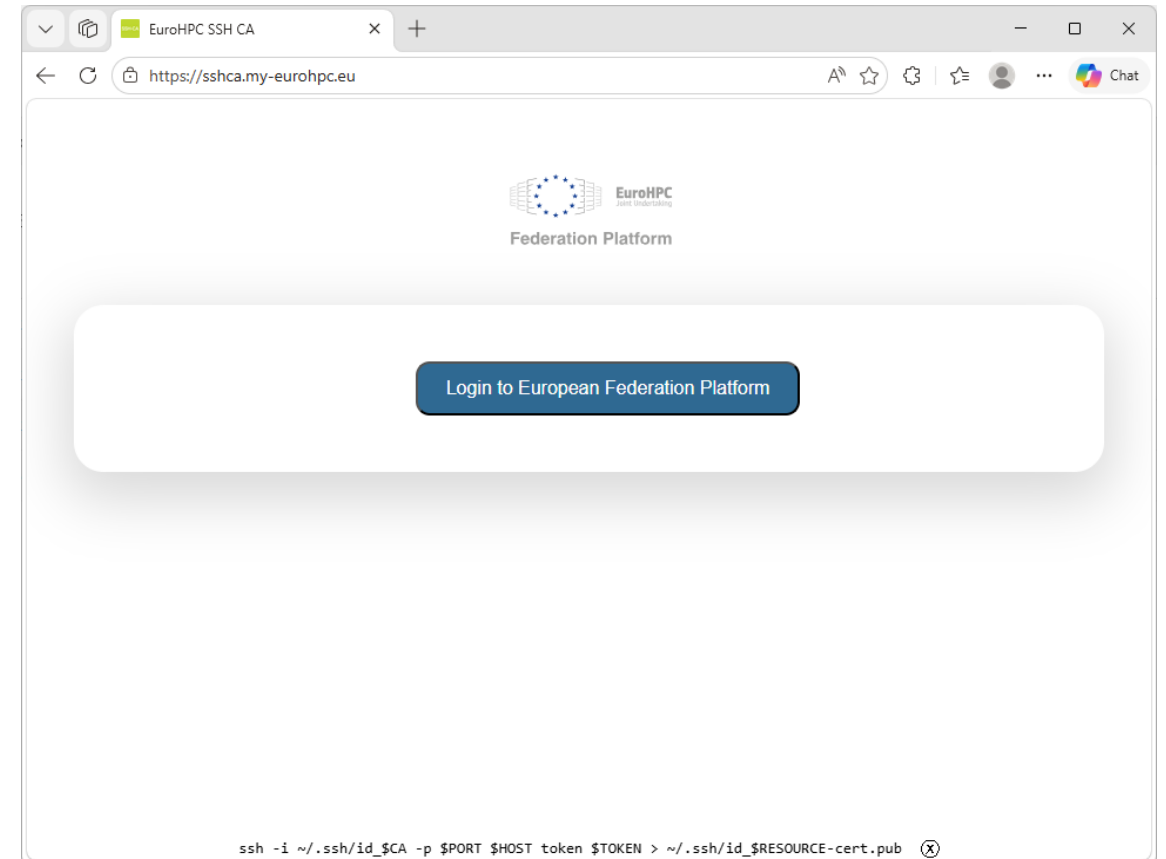
MyAccessID

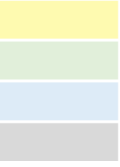
- A GÉANT service providing a common identity layer for infrastructures – such as EFP and EOSC
- It connects identity providers from universities, research organisations, eIDAS, and other sources
- MyAccessID provides the EFP with
 - user registration and account management
 - identity vetting using passport verification
 - multifactor authentication
 - a Guest Identity Provider for non-academic users
- End users can also use their MyAccessID account to access Hosting Entities' other services (if connected)



SSH Certificate Authority

- Using their MyAccessID account, the SSH CA enables users to access Hosting Entity's systems
- The process is secure and simple for end users and Hosting Entities
- Users are only offered certificates for resources that they are entitled to access
- Certificates are
 - provided to authorised users
 - scoped to each hosting entity
 - limited to a lifetime of one hour
 - and only issued after an MFA challenge
- The SSH CA is also used by other internal EFP components programmatically (workflows, etc)



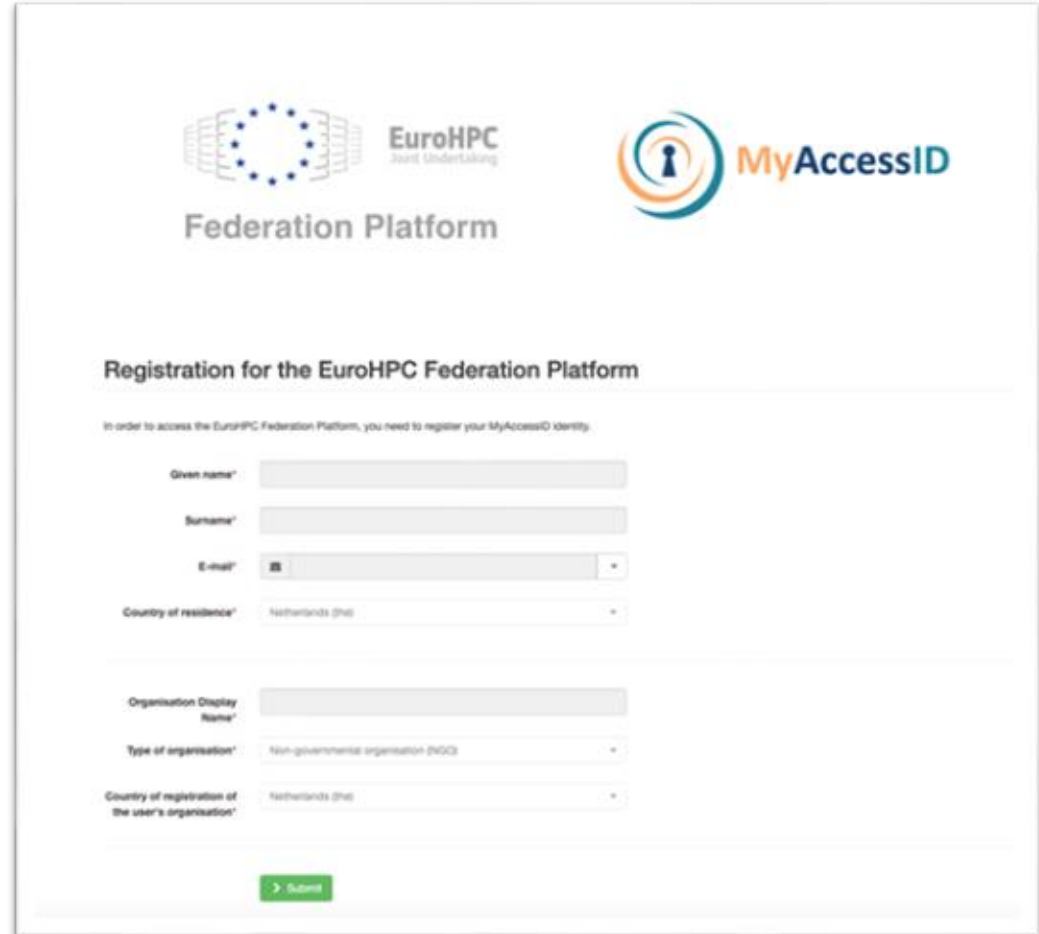


EFP AAI for end users



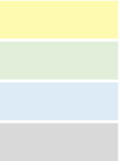
End user onboarding

- If the user is not recognised, they are invited to
 - register with EFP (and MyAccessID, if needed)
 - accept the Terms of Use and Privacy Policy
- If the user does not have access to an eligible identity provider (e.g., a non-academic user) they can create an account with the MyAccessID Guest Identity Provider
- To complete onboarding, end users must
 - verify their identity using their passport and a mobile phone application
 - register an authenticator for multifactor authentication
- Once onboarded, end users can start accessing the EFP service's immediately (subject to authorisation)

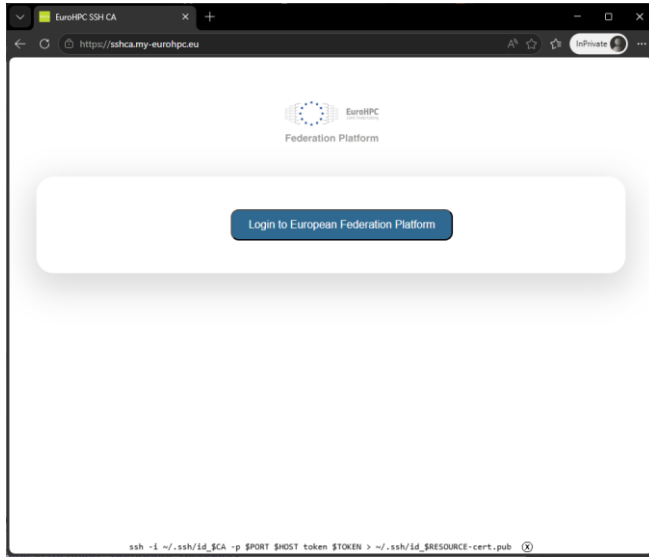


The screenshot shows the registration page for the EuroHPC Federation Platform. At the top, there are logos for the Federation Platform (a circular arrangement of blue dots), EuroHPC (Just Undertaking), and MyAccessID (a blue and orange circular logo with a keyhole). Below the logos, the text reads "Registration for the EuroHPC Federation Platform". A sub-header states: "In order to access the EuroHPC Federation Platform, you need to register your MyAccessID identity." The form contains several input fields: "Given name*", "Surname*", "E-mail*" (with a dropdown arrow), "Country of residence*" (with a dropdown arrow showing "Netherlands (nl)"), "Organisation Display Name*", "Type of organisation*" (with a dropdown arrow showing "Non-governmental organisation (NGO)"), and "Country of registration of the user's organisation*" (with a dropdown arrow showing "Netherlands (nl)"). A green "Submit" button is located at the bottom right of the form.

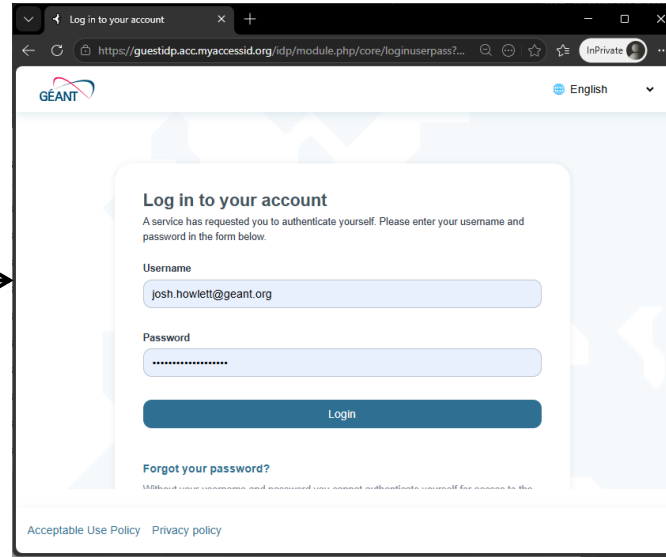
EFP SSH Certificate Authority



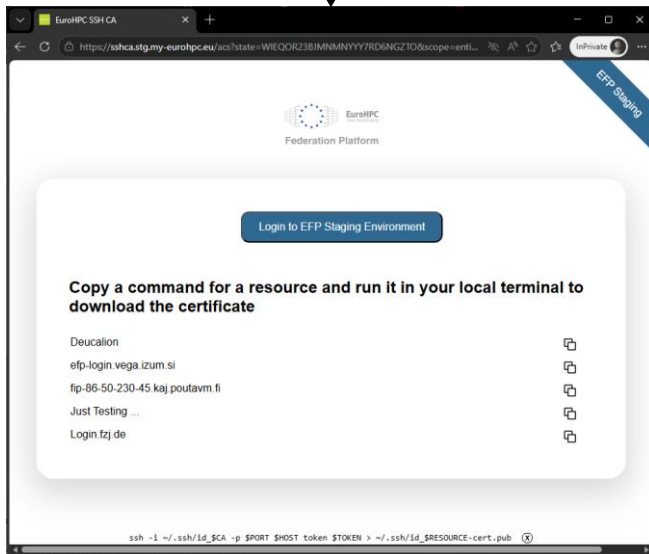
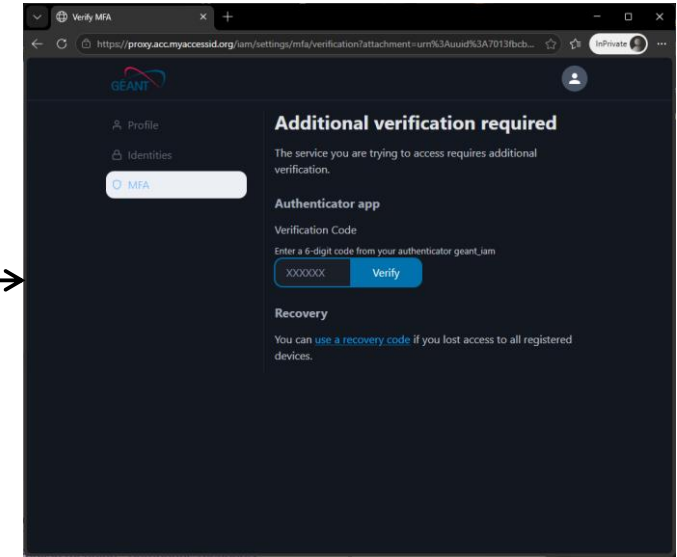
User browses to web SSH CA



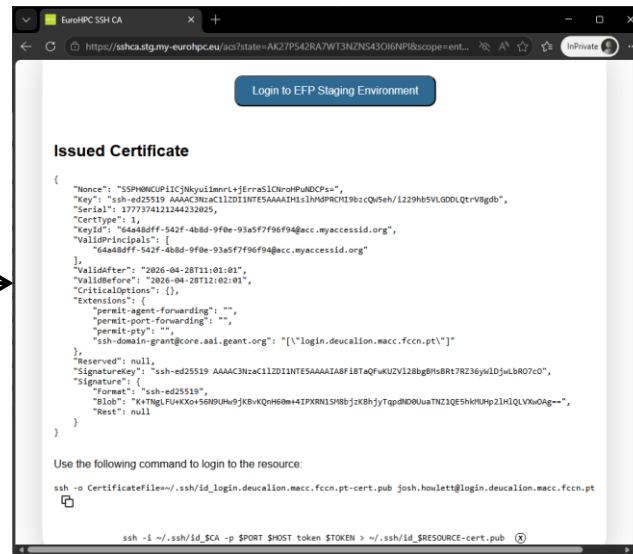
User authenticates against their identity provider



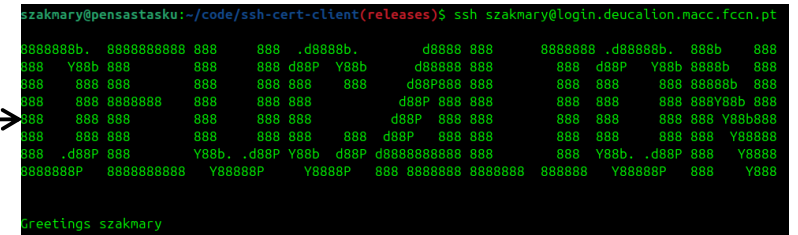
User performs mandatory multifactor authentication



User downloads a certificate for the resource



User copies the SSH command from the browser...



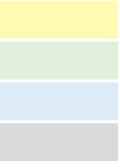
...and pastes the command into their terminal



Essential points for end users

- Registration is quick and easy, if users are prepared
- All end users must have a MyAccessID account
 - They will be prompted to create an account, if they don't already have one
 - Where possible, use an eduGAIN identity provider for the best user experience
 - For other (usually non-academic users) register with the MyAccessID Guest Identity Provider
- During EFP registration, end users will need
 - their NFC-enabled passport
 - their mobile phone
 - with the "ReadID Ready" app installed
 - and their preferred authenticator app
- After registration
 - Keep a copy of the MFA recovery code in a safe place
 - Optionally, remove the "ReadID Ready" app





EFP AAI for Hosting Entities



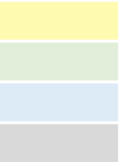
SSH CA integration

- Hosting Entities must integrate their system with the SSH CA to accept EFP users
- The details of each Hosting Entity's integration will vary, but the general approach is the same
 1. Download the SSH CA public key and configure your SSH server(s) to trust it
 2. Configure your SSH server to provision the user with a local account based on the certificate's principal; this takes a value of the user's MyAccessID identifier
 3. Configure your SSH server to require that the "domain grant" certificate extension matches your domain (as registered with EFP Allocations)
- GÉANT provides tooling for parsing SSH certificates (by *openssh*) to facilitate steps 2 and 3

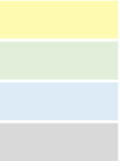
```
$ ssh-keygen -L -f ~/.ssh/id_efp.lumi.csc.fi-cert.pub
/home/josh/.ssh/id_efp.lumi.csc.fi-cert.pub:
    Type: ssh-ed25519-cert-v01@openssh.com user certificate
    Public key: ED25519-CERT
SHA256:CihDEMsLg/zoIx/e+d6jQFyHO8Mky5IEZIIz5gOgRiI
    Signing CA: ED25519
SHA256:zBERWNBCsqnQFo605mieee6sQHerFBhchTiIq8ymD+Y (using ssh-ed25519)
    Key ID: "64a48dff-542f-4b8d-9f0e-93a5f7f96f94@acc.myaccessid.org"
    Serial: 1774630421907173074
    Valid: from 2026-03-27T16:52:41 to 2026-03-27T17:53:41
    Principals:
        64a48dff-542f-4b8d-9f0e-93a5f7f96f94@acc.myaccessid.org
    Critical Options: (none)
    Extensions:
        permit-agent-forwarding
        permit-port-forwarding
        permit-pty
        ssh-domain-grant@core.aai.geant.org UNKNOWN OPTION:
000000135b226566702e6c756d692e6373632e6669225d (len 23)
```

MyAccessID integration

- Hosting Entities can connect their AAI systems (services and identity providers) to MyAccessID
- Benefits include:
 - Staff affiliated with Hosting Entities can use their organisational identities to access EFP services
 - Hosting Entities can make their services available to users with MyAccessID accounts
- Integrations are enabled and supported by GÉANT directly, and not through EFP
- They may require non-trivial local configuration (e.g., account linking) so require planning
 - GÉANT can offer advice and guidance

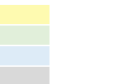
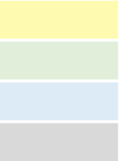


Summary



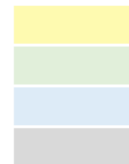
Summary of EFP AAI

- The EFP AAI enables a secure and seamless user experience of the EFP's services and Hosting Entities' resources
- It builds on established and widely-adopted services, including MyAccessID and eduGAIN
- End user registration is quick and easy, but be prepared with your passport and mobile phone
- Hosting Entities can use standard *openssh* functionality, easing integration with existing services

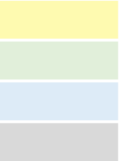


Key resources

- EFP for End Users
 - <https://docs.my-eurohpc.eu/aai/aai>
- EFP for Hosting Entities
 - <https://integration.docs.my-eurohpc.eu/aai>
- MyAccessID
 - <https://wiki.geant.org/x/AgBUEQ>



Webinars series – more info at <https://docs.my-eurohpc.eu/training>



Webinar 1 of 5 — Introduction to the EuroHPC Federation Platform

[Recording available!](#)

Webinar 2 of 5 — EFP Federated Software Catalog

[Recording available!](#)

Webinar 3 of 5 — EFP Interactive

[Recording available!](#)

Webinar 4 of 5 — EFP AAI (*this webinar*)

Recording will be available soon...

Webinar 5 of 5 — EFP Workflows

Date: 11 June 2026 14:00-15:00 CEST – [Registration open](#)

Speaker: Martin Golasowski (IT4I)



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on upcoming EFP webinars!*

In case of questions, contact EFP consortium via: helpdesk@my-eurohpc.eu



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