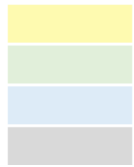


EuroHPC
Joint Undertaking



Federation Platform

NFCS NetworkPlus Spring Conference

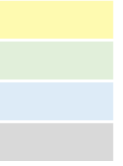
27th February 2026

Alberto Lanzanova
CSC - IT Center for Science

<https://my-eurohpc.eu>



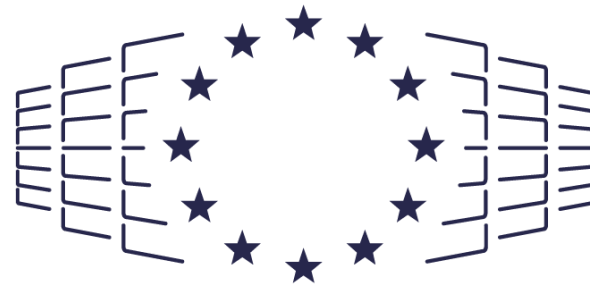
The EuroHPC Federation Platform (EFP)



"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

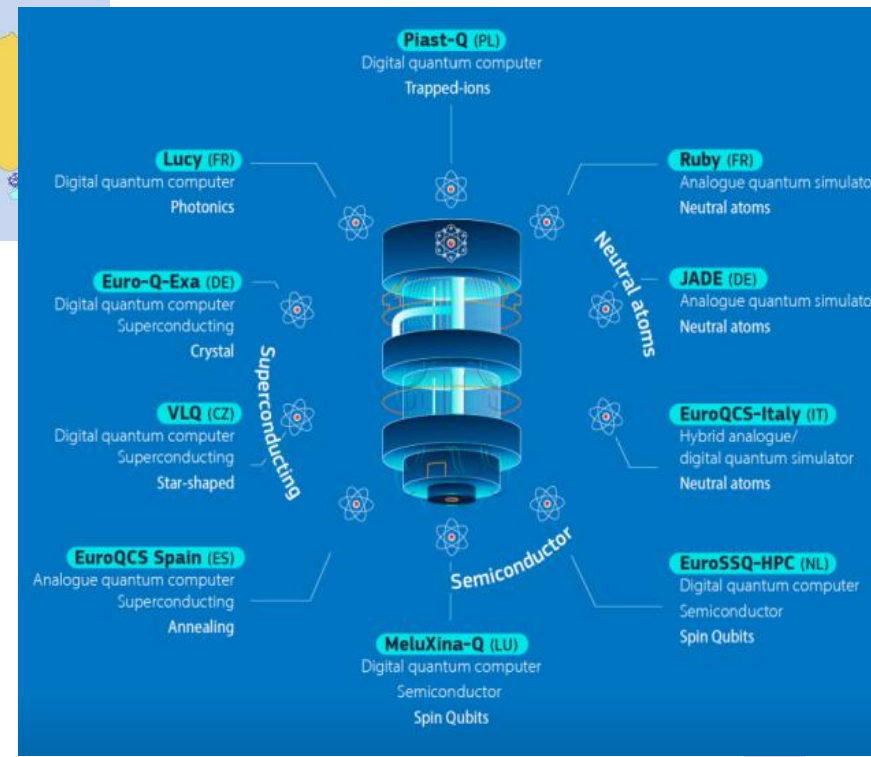


EuroHPC
Joint Undertaking

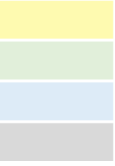
Federation Platform



EuroHPC Supercomputers



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.

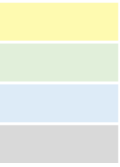


Direct access utilizing SSH certificates

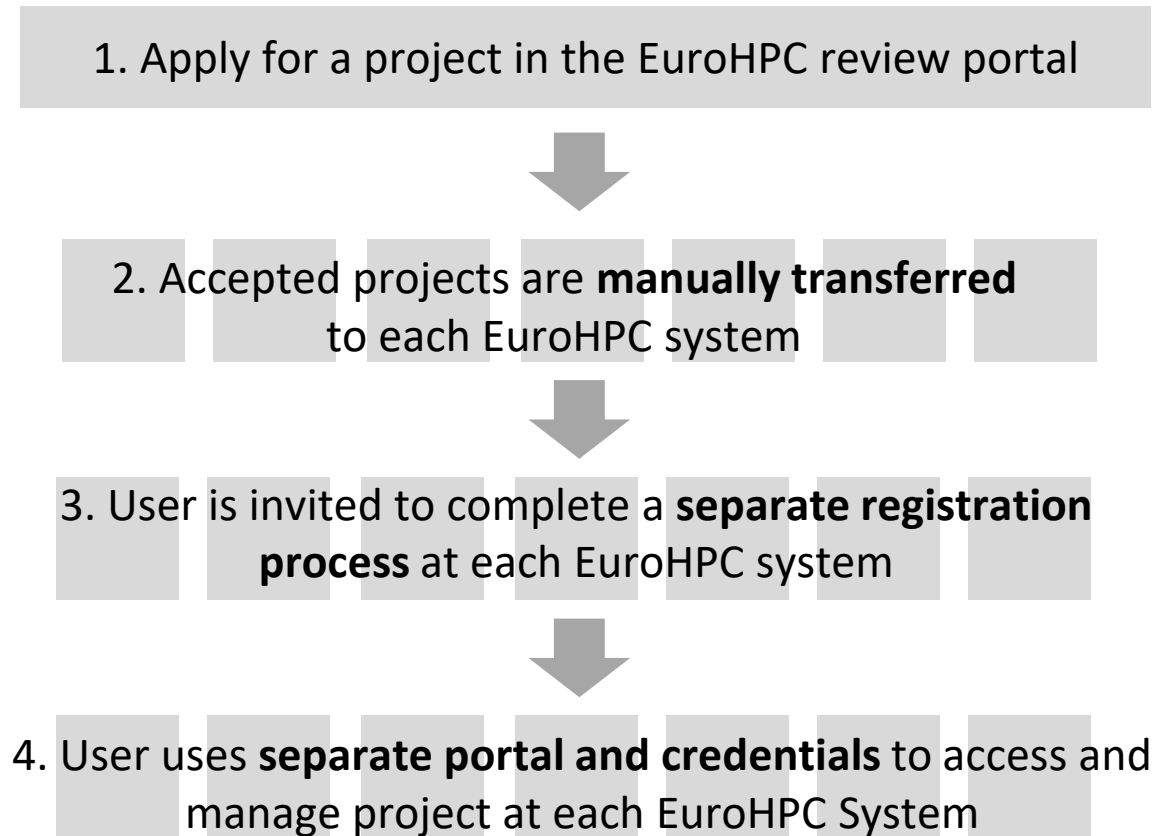
Short lived certificates which are obtained via a login flow with Multi-Factor Authentication (MFA) for increased security.



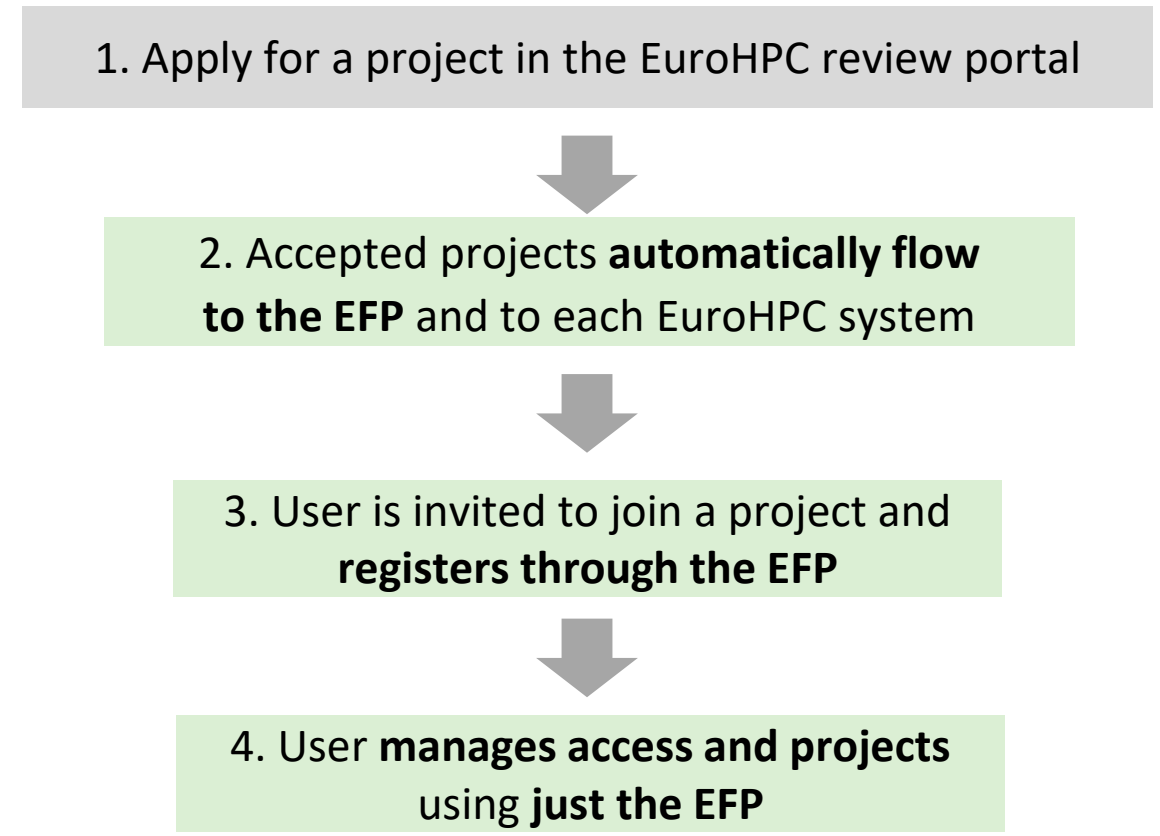
Impact of EFP on User Journey



Currently (without EFP)

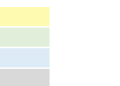


Soon (with EFP)

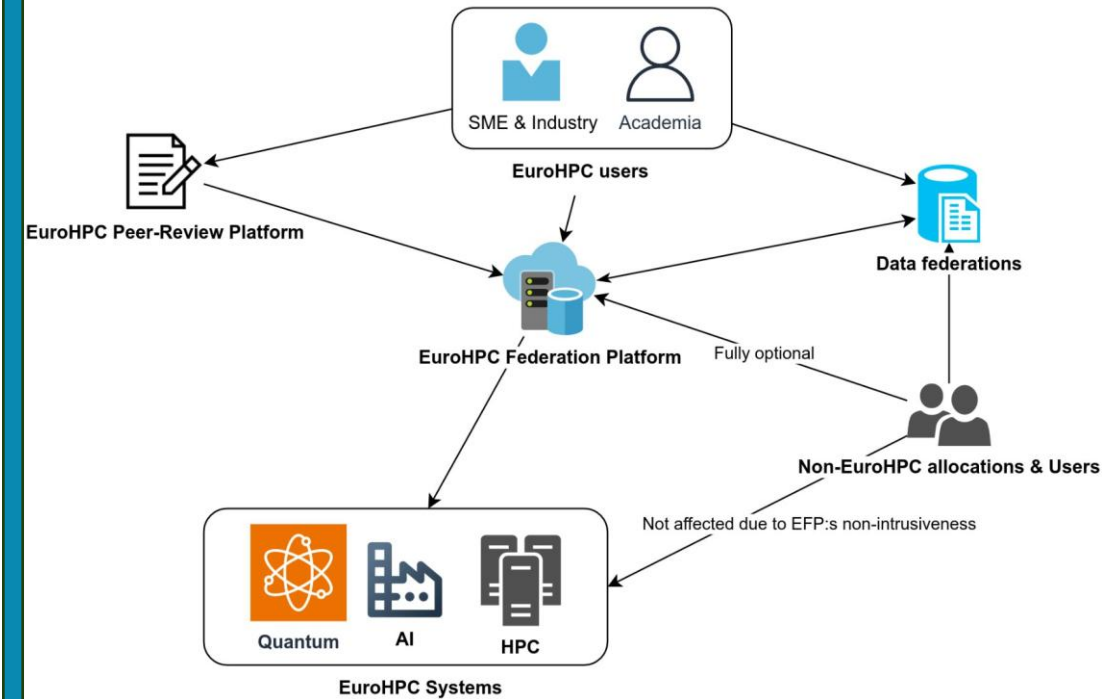
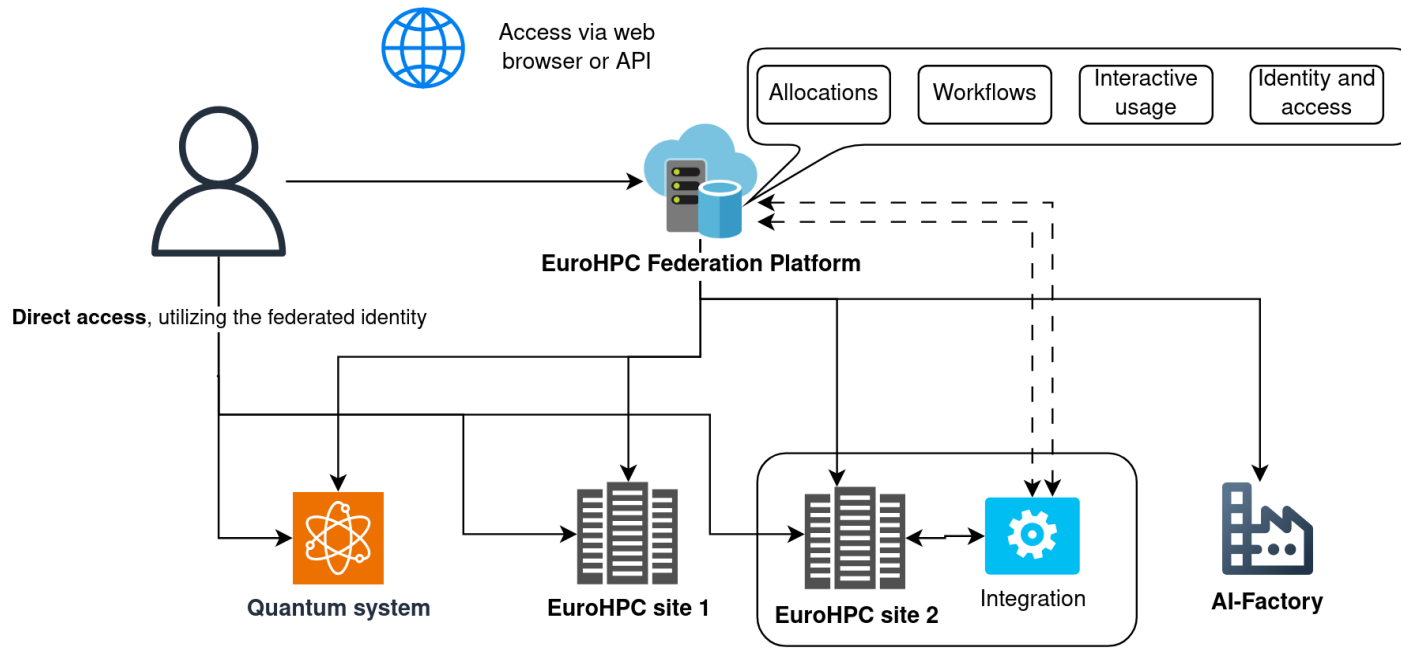
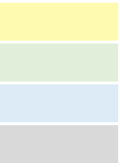


There are no changes to the services and capabilities offered by the diverse set of EuroHPC systems.

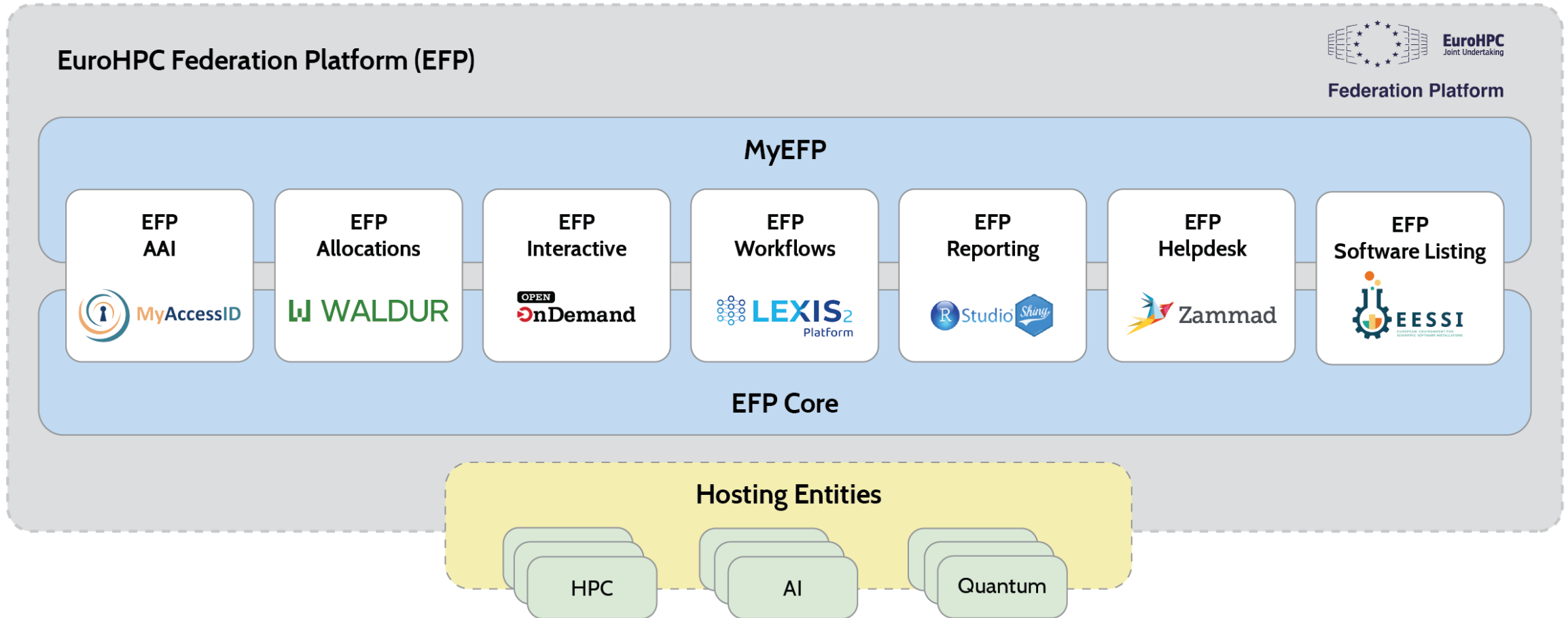
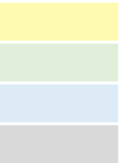
Onboarding and managing projects across all available systems just becomes much easier through EFP



The architecture



Technologies used for EFP



Contributions to existing open-source projects are upstreamed when possible





MyEFP

Overview

Projects

Software Catalog

Workflows

Logout



MyEFP: the One-Stop Shop for Accessing EuroHPC Resources



Overview

Welcome

Welcome to MyEFP Alberto Lanzaova

You last logged in on 29.10.2025 klo 17.43

Service break

MELUXINA will be down for maintenance on May 15th from 8:00 PM to 10:00 PM EEST.

Workflows

Example 1

Example 2

Example 3

[View Workflows](#)

Batch Jobs

Example 1

Example 2

Example 3

[View Batch Jobs](#)

Locations



Maintenance announcements

In progress

01/27/2026, 08:02 - 02/26/2026, 08:02

Mock announcement 1

Degraded performance

Mock offering name 1

Mock description

[Read more](#)

03/28/2026, 08:02 - 04/27/2026, 09:02

Mock announcement 3

Degraded performance

Mock offering name 3

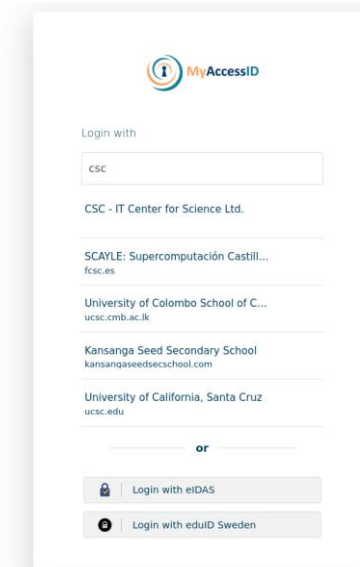
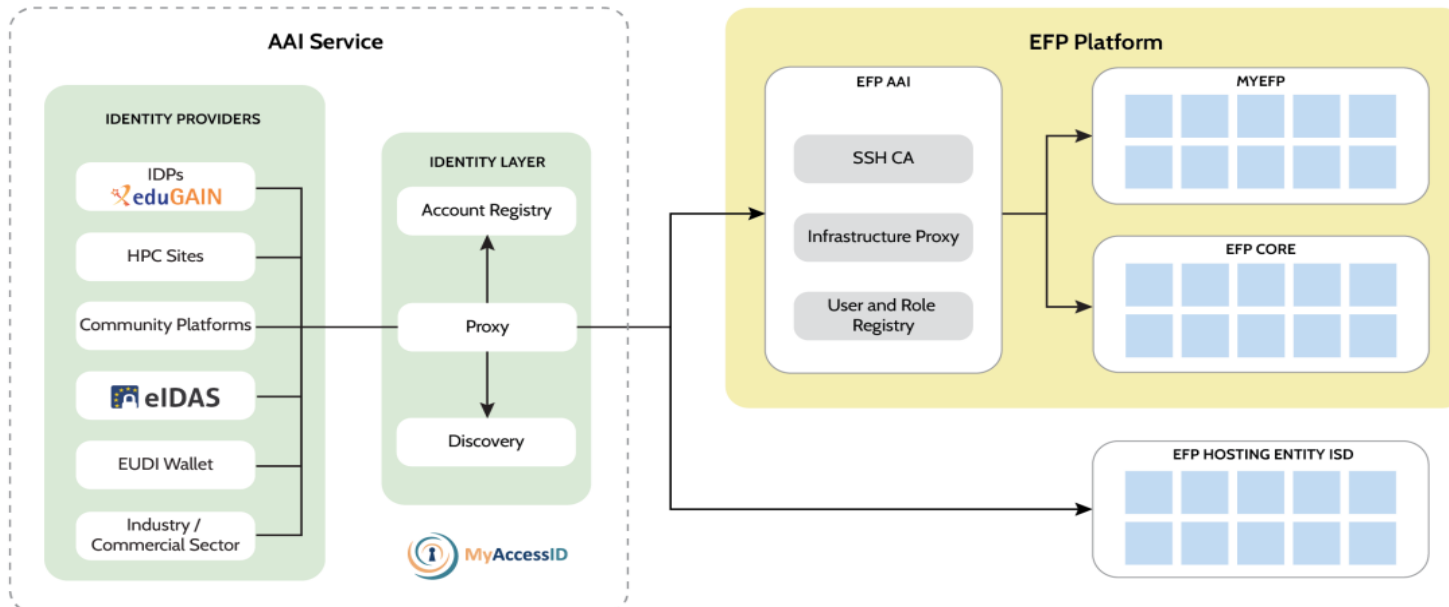
Mock description

[Read more](#)

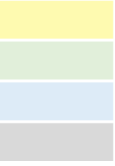
EFP AAI:



- EFP utilizes **MyAccessID** for identity federation
 - AAI Proxy + Discovery service + Account registry
 - Identity vetting for strong level of assurance
 - Support for national eIDs and users with no institutional login (e.g. industry)
- Short-lived SSH certificates for direct access to the systems
- Identity federation can also be utilized directly independently of the platform



EFP Allocations:



- Provides **project-centric** dashboards
- Allows project members to see and manage their **existing allocations**
- Serves **metadata** about the systems and partitions, like login node hostname, username on the system, ...
- Collects & serves information about **maintenance breaks** of EuroHPC systems

A screenshot of the WALDUR web interface. On the left is a dark sidebar with navigation options: '+ Add resource', 'Organizations', 'Projects', 'Resources' (selected), 'Reporting', 'Service catalog', 'Support', and 'Administration'. The main content area shows a breadcrumb trail: 'Organizations / JU Review Portal / Projects / EHPC-AIF-FL / EHPC-AIF-2025FL_financial time road statement / HPC / EHPC-AIF-FL / EHPC-AIF-2025FL01-048 / ...someone financial time road statement'. Below this is a header for 'EHPC-AIF-FL / EHPC-AIF-2025FL01-048 / matter policy offer seven my someone financial time road statement' with an 'OK' button and an 'Offering name: LUMI-G [Show offering]' link. Two usage metrics are shown: '0/12681 Node hours Node-hours' and '0/0 Storage hours TB-hours', with a 'Refresh' button and an 'Actions' dropdown. Below the metrics are tabs for 'Getting started', 'Usage', and 'Resource metadata'. The 'Getting started' tab is active, showing two sections: '1. Access resources using SSH' with a terminal prompt '\$ | username@lum1.csc.fi' and '2. Submit a job using SLURM commands' with a terminal prompt '\$ | -A hostname' and a 'Schedule script for execution' section with a terminal prompt '\$ | -A my_script.sh'. At the bottom, it says 'See also full documentation.' The footer includes 'Version: 7.9.8' with status icons and links for 'Privacy policy', 'Terms of service', and 'Support'.



Overview of available resources via EFP Allocations



Search... 36K

Resources

 Import
  Add




























Search...




 Export

State Creating x OK x Updating x +

Clear filters

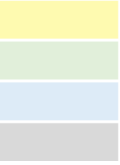
<input type="checkbox"/>	<input type="checkbox"/>	Name 	Category 	Offering 	Organization 	Project 	Created at 	State 	Actions
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-FL / EHPC-AIF-2025FL01-048 / matter policy offer seven my ...	HPC	LUMI-G	JU Review Portal	EHPC-AIF-FL / EHPC-AIF-2025FL01-048...	Jan 21, 2026, 5:00 PM	Creating 	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EHPC-AIF-FL / EHPC-AIF-2025FL01-013 / way business boy relationshi...	HPC	LUMI-G	JU Review Portal	EHPC-AIF-FL / EHPC-AIF-2025FL01-013...	Jan 21, 2026, 5:00 PM	Creating 	
<p>0/10382 Node hours Node-hours 0/0 Storage hours TB-hours</p> <p>Plan details: Show</p> <p>Attributes: Show details</p>									
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-144 / friend process chair myself ...	HPC	MareNostrum5 ACC	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-14...	Jan 20, 2026, 1:11 PM	Creating 	
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-142 / large particularly product fe...	HPC	Leonardo BOOSTER	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-14...	Jan 20, 2026, 1:11 PM	Creating 	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-132 / common go enjoy stuff	HPC	MareNostrum5 ACC	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-13...	Jan 20, 2026, 1:11 PM	Creating 	
<p>0/1334 Node hours Node-hours</p> <p>Plan details: Show</p> <p>Attributes: Show details</p>									
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-128 / travel individual medical on i...	HPC	Discoverer GPU	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-12...	Jan 20, 2026, 1:11 PM	Creating 	
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-123 / difficult prevent support size...	HPC	Leonardo BOOSTER	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-12...	Jan 20, 2026, 1:11 PM	Creating 	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-118 / have among all address she ...	HPC	Leonardo BOOSTER	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-11...	Jan 20, 2026, 1:11 PM	Creating 	
<p>0/1256 Node hours Node-hours</p> <p>Plan details: Show</p> <p>Attributes: Show details</p>									
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-116 / it without nature ball brother...	HPC	MareNostrum5 ACC	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-11...	Jan 20, 2026, 1:11 PM	Creating 	
<input type="checkbox"/>	<input type="checkbox"/>	EHPC-AIF-PG / EHPC-AIF-2025PG01-115 / water use later capital lay w...	HPC	MareNostrum5 ACC	JU Review Portal	EHPC-AIF-PG / EHPC-AIF-2025PG01-11...	Jan 20, 2026, 1:11 PM	Creating 	

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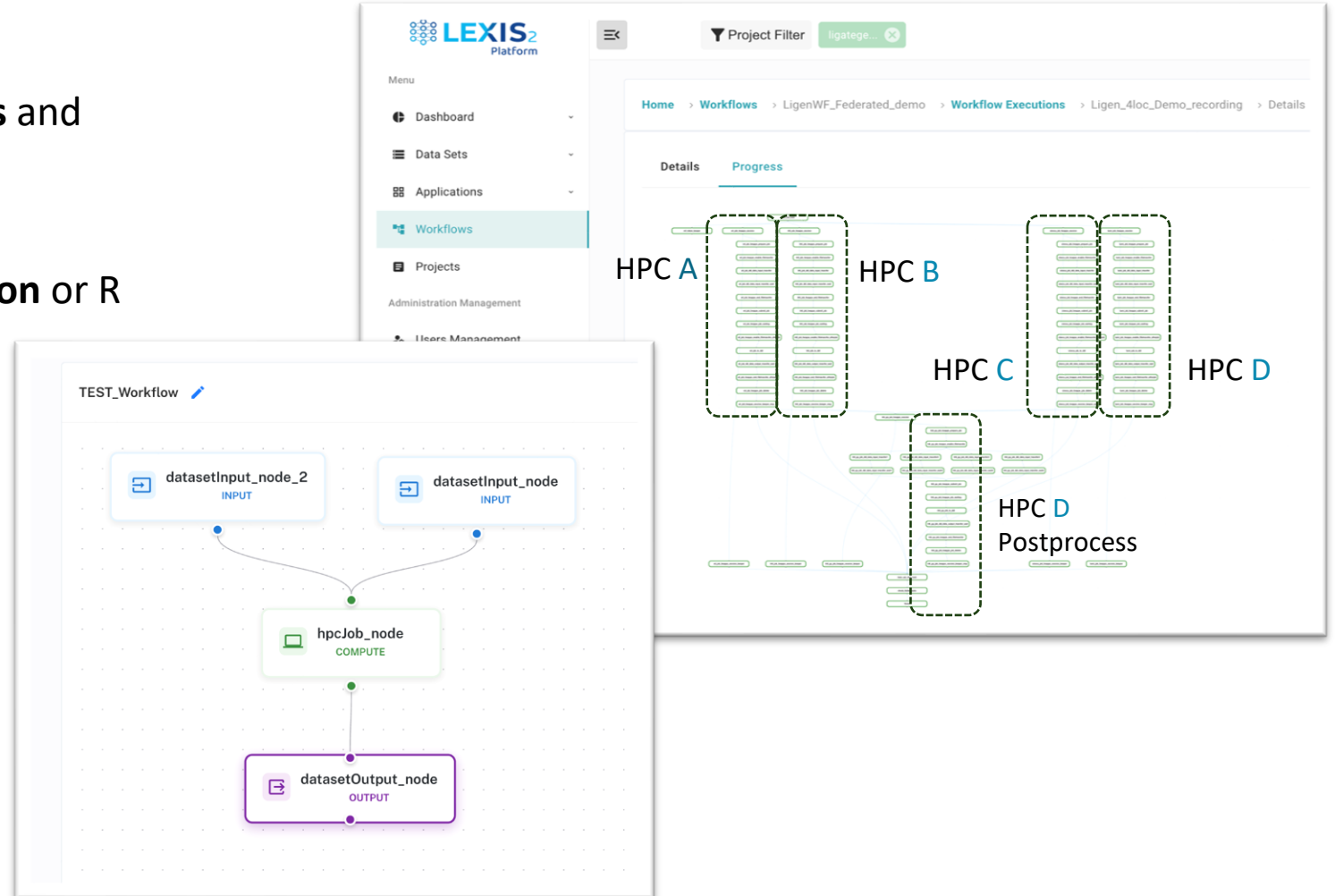
1 ... 11 **12** 13 ... 58

111-120 of 580 items  

EFP Workflows:

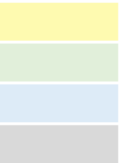
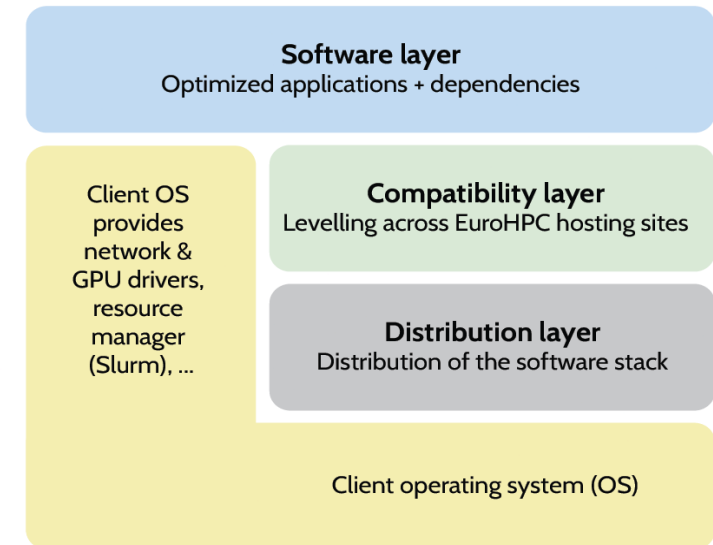


- Easy access to **visually managed workflows** and **distributed data management**
- **API** usage from various languages like **Python** or **R**
- **Smart scheduling** policies for workflows based on metrics from HPC sites
- Support for **multi-system workflows** (incl. Quantum, AI or Kubernetes)
- **Data staging** from external sources



EFP Software Catalog

- Federated Software Catalog provides a **unified software stack**
- **Same software** installations available on all systems that can be accessed from EFP
- **Integration** of the *European Environment for Scientific Software Installations* (EESSI) into EFP
- Base for apps in EFP Interactive and using EFP Workflows
- Overview of available software in MyEFP via Software Listing
- Pre-compiled software (with EasyBuild) for relevant system architectures (CPU/GPU)
- Distributed to EuroHPC systems via CernVM-FS



EFP Software Catalog

GROMACS TensorFlow
python™
OpenFOAM®
Bioconductor
OPEN SOURCE SOFTWARE FOR BIOINFORMATICS
QUANTUM ESPRESSO
WRF
OpenCV PyTorch
PETSsc
(and more software)



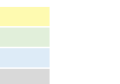
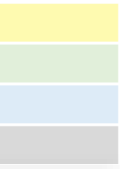
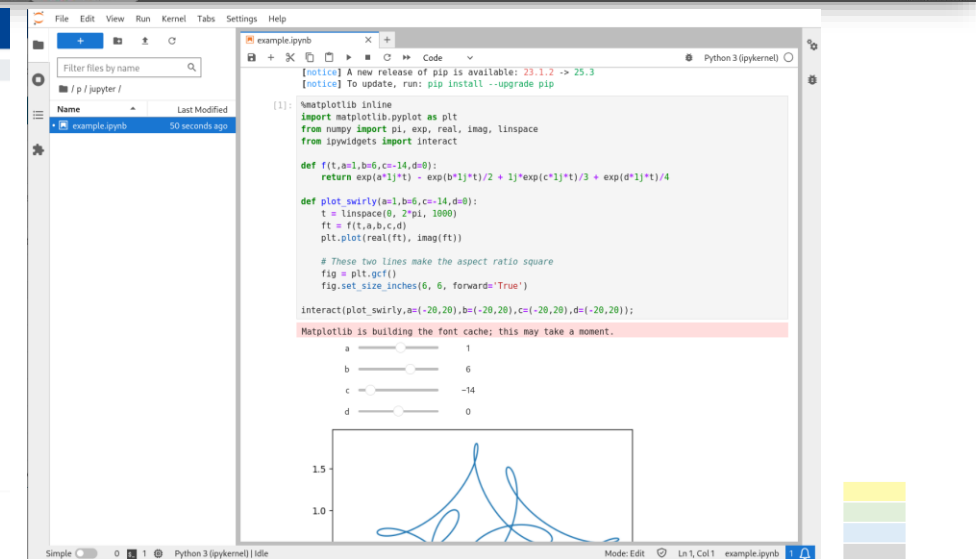
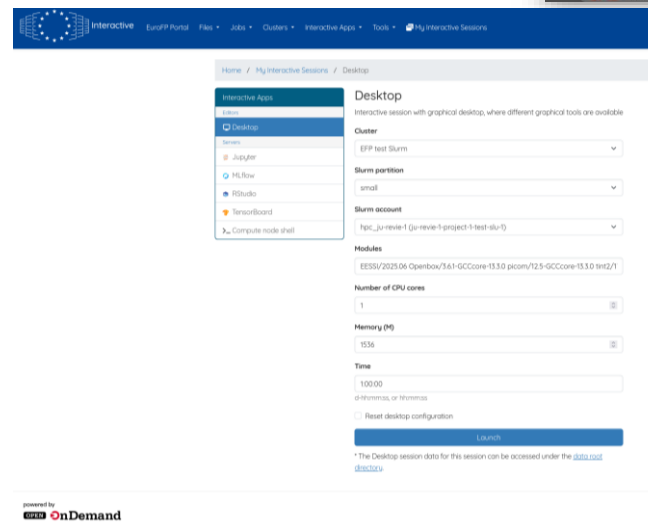
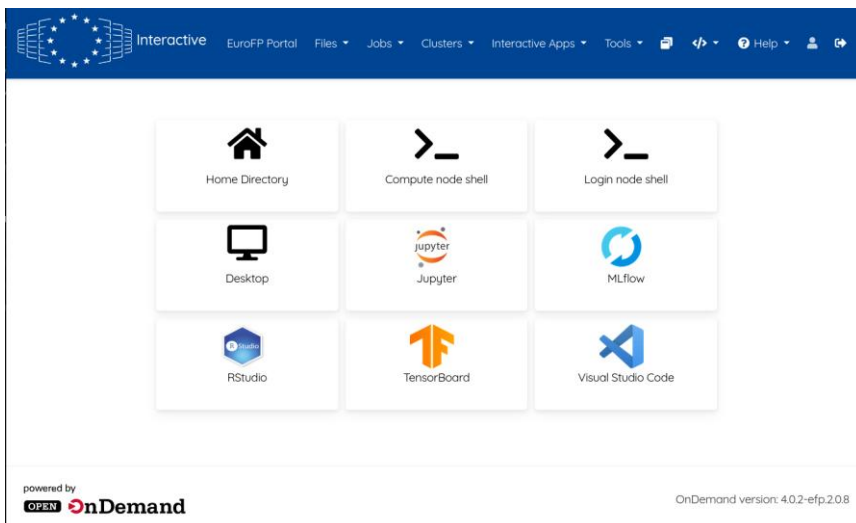
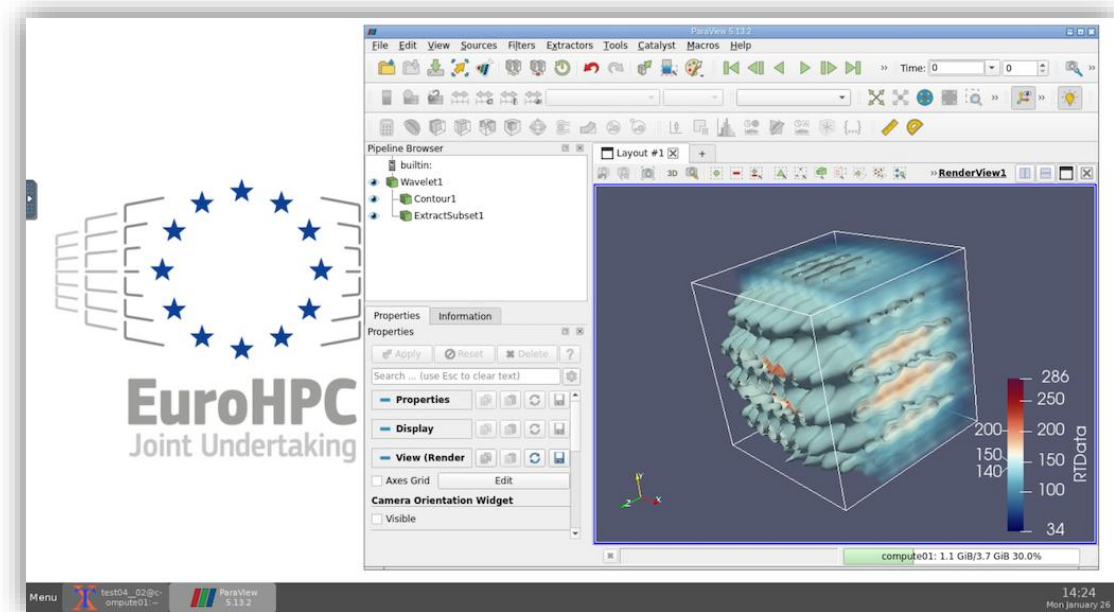
Automatically "streamed" to EuroHPC systems
(and beyond)



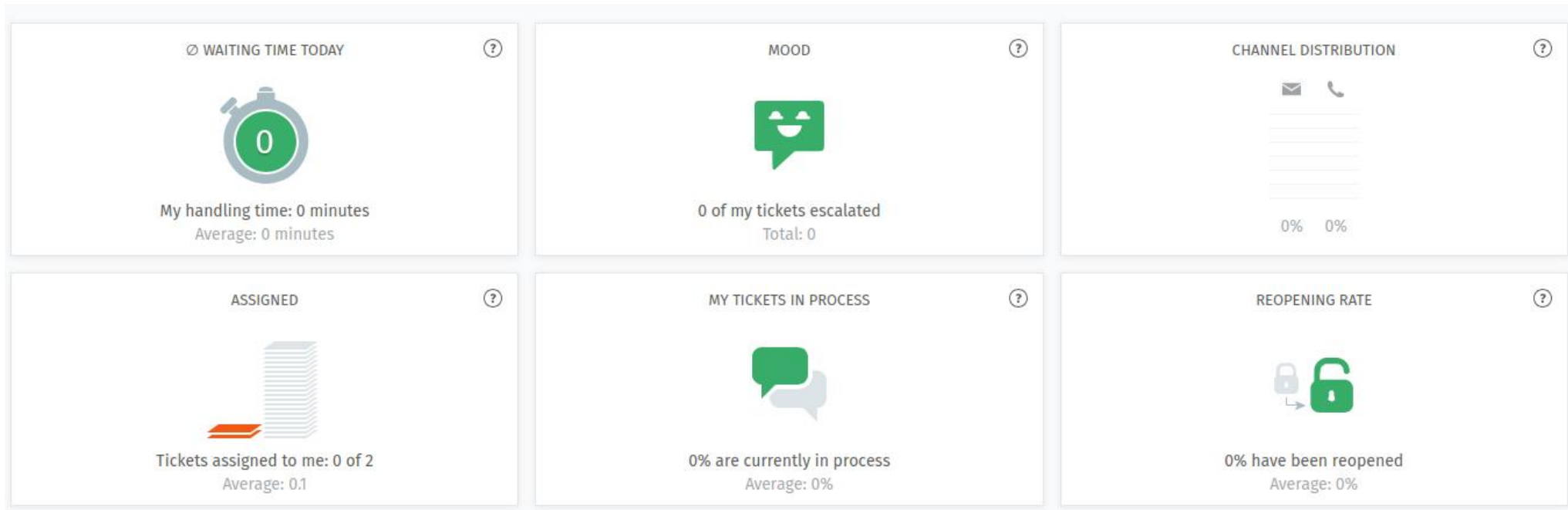
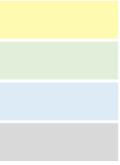
EFP Interactive:



- Easy to use **web interface** for both new and more advanced users to interactively use the federated resources.
- **Interactive applications** like Jupyter notebooks, remote desktops and shell.
- Supports **job management and file management** on the federated resources.



EFP Helpdesk:



helpdesk@my-eurohpc.eu



Other Targets

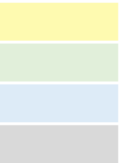
Connections to other federation efforts such as **SIMPL** and **EOSC** and support to flagship initiatives like **Destination Earth**.

Nature and level of integration not set, will evolve throughout the different releases of the platform.

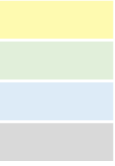


 **eOSC**

Destination Earth



Timeline



- **1st phase (2025 – 2026):** Initial release of EuroHPC Federation Platform
 - Coming soon, scheduled for end of March 2026
 - Core functionality
 - Integration with the currently online EuroHPC systems
 - Further improvements planned throughout 2026
 - Updates deployed continuously when ready
 - Integration with new EuroHPC systems
 - Authorization extended to web APIs
 - Smart scheduler
 - Initial connection to other federations
 - Quality and usability improvements
- **2nd phase (2027 – 2029):**
 - Integration with all EuroHPC (HPC, AI, Quantum) systems
 - Improved integration with other federations
 - Advanced features



EFP Trainings

Webinar 2 of 5 — EFP Federated Software Catalogue

Date: Wed 25 February 2026 14:00-15:00 CET |

Speaker: Kenneth Hoste (Ghent University)

Webinar 3 of 5 — EFP Interactive

Date: Wed 4 March 2026 15:30-16:30 CET | [Registration](#)

Speaker: Robin Karlsson (CSC - IT Center for Science)

Webinar 4 (EFP AAI) and 5 (EFP Workflows)

Date: April 2026 | Registrations open in March

More info <https://my-eurohpc.eu/training/>

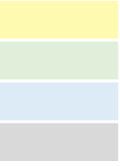


ICT Solutions for Brilliant Minds



IT4INNOVATIONS
NATIONAL SUPERCOMPUTING
CENTER





Lessons learned and challenges

- Daring timeline
- Concurrent development of:
 - Infrastructure
 - Internal components and their integration
 - Integration with the Hosting Entities
- External dependencies
 - Peer Review Portal and Hosting Entities
 - Balancing between targeting a unified solution Vs. the degree of control available to the actors involved
- Policies
 - Amount of implicit processes and policies that exist (e.g. at the Hosting Entities) and have emerged once the federation work progressed
 - A new standard Vs. A standard that fit the current existing processes

