ICEI

INTERACTIVE COMPUTING E-INFRASTRUCTURE FOR THE HUMAN BRAIN PROJECT

Fenix Infrastructure – build by the ICEI project

The ICEI project plans to deliver a set of e-infrastructure services that will be federated to form the Fenix Infrastructure. The project is funded by the European Commission under the HBP Framework Partnership Agreement and is carried out by the leading European Supercomputing Centres BSC (Spain), CEA (France), CINECA (Italy), ETHZ-CSCS (Switzerland) and JUELICH-JSC (Germany). EPFL (Switzerland) has the role of the coordinator.

Goals

- Establish HPC and data infrastructure services for multiple research communities
- Develop and deploy services enabling federation
- Follow a use-case driven co-design approach

Architectural Concepts

- Service-oriented provisioning of resources
- Focus on infrastructure services meeting the requirements of various science communities
- Support for community specific platforms on top of these services
- Encouragement and facilitation of community efforts
- Federation of infrastructure services to:
  - Enhance availability of infrastructure services
  - Broaden variety of available services
  - Optimise for data locality

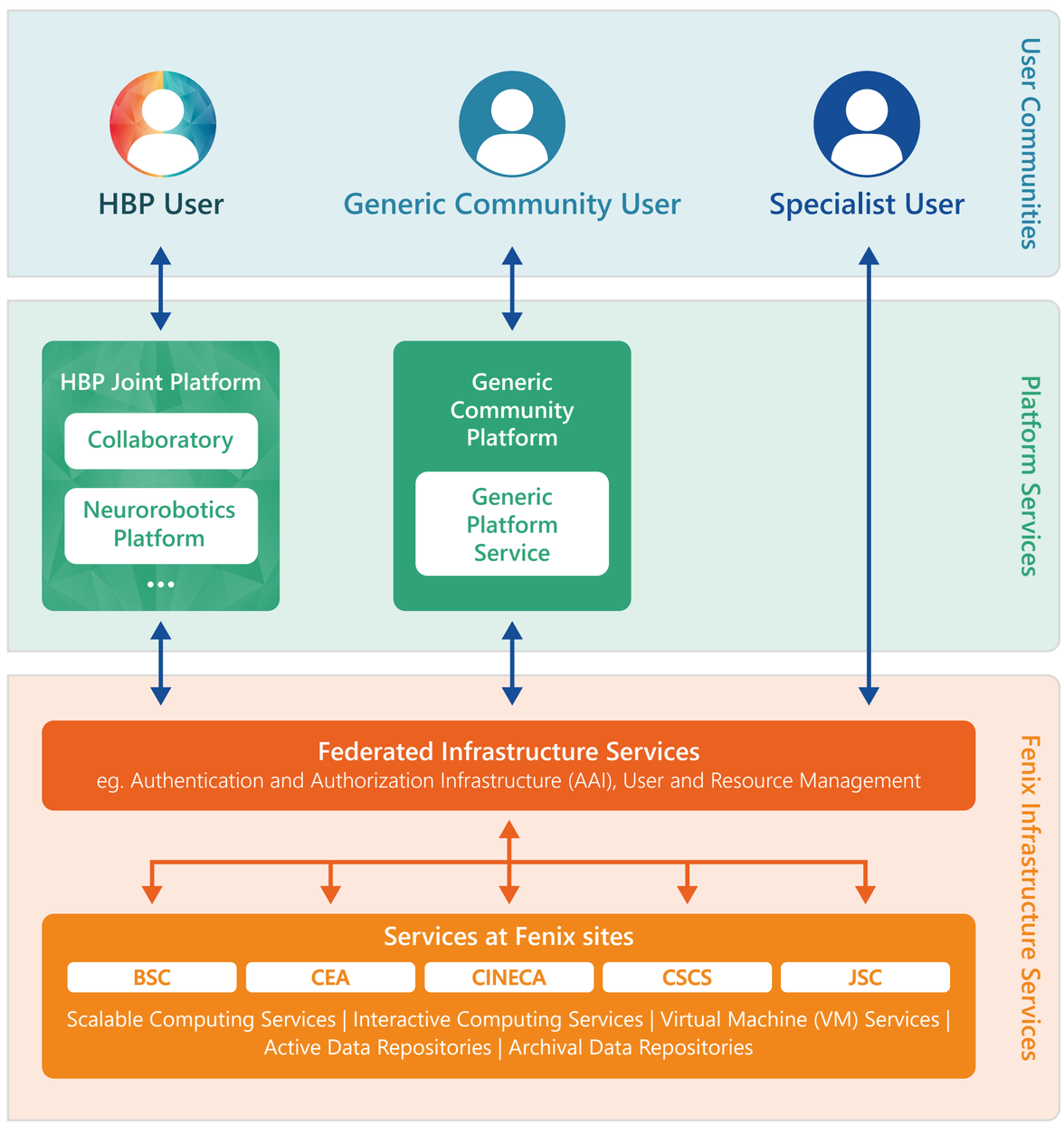
Fenix Communities

Service-oriented provisioning of computing and storage resources within Fenix aims at supporting science communities that develop, deploy and operate domain specific platform services. These services will run on top of the Fenix infrastructure services. The Human Brain Project is the prime and lead customer of ICEI. Access for other science and engineering communities is provided through PRACE.

Resource Allocation Model

- Fenix Resource Providers provide resources to Fenix Communities
- Fenix Communities distribute resources to their users via a peer-review process

Illustration of architectural concept and service provisioning within the Fenix Infrastructure



ICEI Project Partners

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