National Federated Compute Services
Network Plus

Prof. Jonathan Hays

NFCS-N+ Launch Meeting

5th March 2025

Objectives

- Scope how current and new compute services could act as a truly UKRI federated service, exploring the challenges and knowledge gaps on the pathway to federation, ready to inform future DRI activities in this space

- Produce a roadmap for federated provision of computational resources

- Scope the data storage needs for the federated service, and in general for UK computational research, again exploring the challenges and knowledge gaps, ready to inform future DRI funding activities

- Build a roadmap that focuses on the data storage needs of the envisioned service

- Act as a DRI NetworkPlus by linking up with networking activities in other DRI workstreams.

- Engage widely with other relevant activities and communities

- Consider how federation could expand the user base

- Embed careful consideration of environmental sustainability

Technical Coordinator

Recruitment about to start

Role:

- Key member of the project team
- Provide technical leadership on the delivery of the roadmaps
- Supporting the flexible funding call
- Supporting delivery of workshops
- Collation of evidence and outcomes
- Preparation of the roadmaps
- Building relationships across the UKRI communities

Federation

Federation, *noun*

1. *A country consisting of a group of individual states that have control over their own affairs but are controlled by a central government for national decisions, etc.*

2. *A group of clubs, trade unions, etc. that have joined together to form an organization*

3. *The act of forming a federation*

(Oxford English Dictionary)

Federated Research Network

A **Federated Research Network (FRN)** is a decentralized system that enables multiple institutions, organizations, or researchers to collaborate while maintaining control over their own data and resources. Instead of centralizing data in one location, an FRN allows participants to share insights, models, or results without exposing raw data.

(ChatGPT)

A **Federated Research Network (FRN)** is a system that connects multiple, independent research institutions or organizations, allowing them to collaborate and share data while maintaining control over their own data.

(CoPilot)
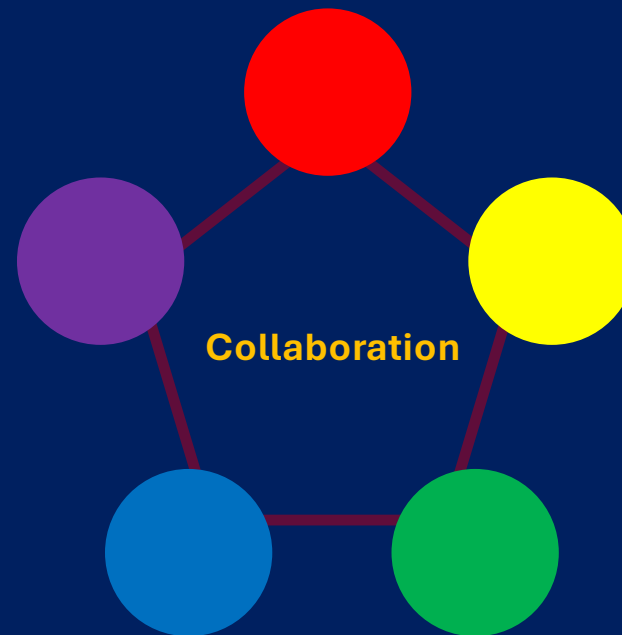
Federated Research Network

Key concepts

1. Decentralisation
2. Interoperability
3. Autonomy
4. Security and Privacy
5. Scalability

Collaboration
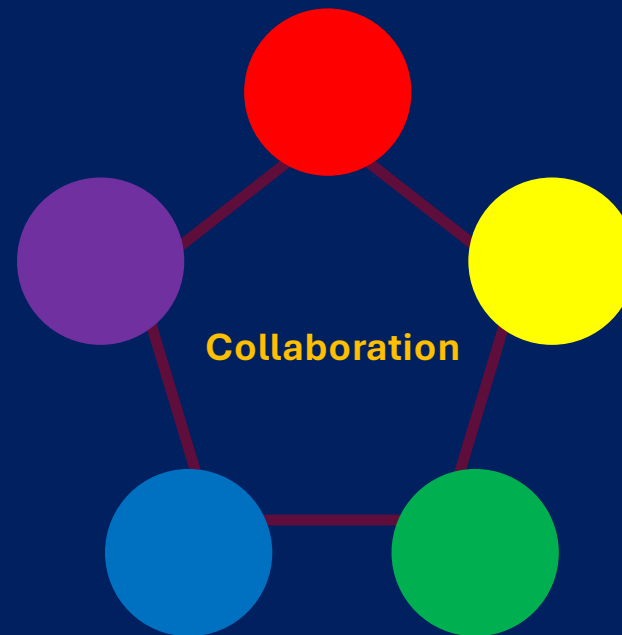
Benefits of Federation

1. Accessibility
2. Efficiency
3. Knowledge exchange
4. Security
5. Resilience

Important to consider the benefits – federation for its own sake doesn't make sense

Collaboration

~~Levels~~ Elements of Federation

Identity
Authentication
Authorization
Security
Accounting
Allocation
Services
Software
Data
???

Community

Policy

Technology

Pillars of NFCS

Community

Technology

Policy

Pillars of NFCS

NetworkPlus
UKRI National Federated Compute Services

Community

Building communities
Engaging with Stakeholders
Identifying existing and emerging user stories
Establishing common nomenclature and standards

Pillars of NFCS

Technology

Gather the state-of-the-art and existing practice
Knowledge exchange
Evaluating potential technological components
Identifying core federation services

Pillars of NFCS

Policy

Identify existing and emerging governance and policy approaches
Identify policy requirements based on business cases and user stories
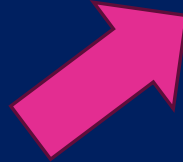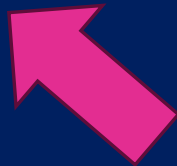Develop outline policy framework

National Meetings
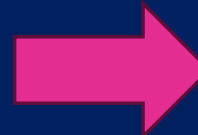
4 meetings planned during course of the project (including this one)

Engage with broad cross-section of the community

Share progress

Encourage networking and community building

Workshops

Themed workshops

Structured around the three pillars:

    Community

    Technology

    Governance

Knowledge exchange

Facilitate communication between projects and project team

Flexible Funding

~£2m total available for projects supporting the objectives of the Network Plus

Funding a series of projects @80%FEC for up to 1 year in length

Projects should identify which of the pillars they address (more than one is possible)

Projects will be funded at one of three levels:

Small: <£10k – suitable for workshops, community events

Medium: <£50k – likely to cover staff time and associated small costs for a period of up to 6 months. Example activities might include landscape surveying, short technical projects, and community engagement

Large: <£200k – like to cover 1 or more FTE over a year. Examples include technical evaluation projects, and larger surveys or community activities

Flexible Funding

Proposals must:

- Demonstrate clear alignments with the pillars
- Demonstrate clear and achievable objectives align with the goals of the Network Plus
- Clearly justify all costs and how they support delivery
- Demonstrate an appropriate level of cross-disciplinary engagement for the activity being proposed

Flexible Funding: Activities

We anticipate that project activity will comprise one or more of:

- Surveys of existing practice
- Assessment of gaps in existing provision – which can be hardware, software, training, services
- Assessment of barriers to entry and on-boarding of new user-communities or providers
- Technical evaluation of existing or prototype solutions
- Community building activities that establish new communities as relevant for the DRI

Other activities that support development of the roadmaps or community building may be included. However, research into, or development of, new technical solutions is not within the scope of activities within the call.

Projects that foster community collaboration are particularly encouraged.

The call evaluation will seek to ensure that a broad range of activities are supported.

Summary

National Federated Compute Services Network Plus is launched

Series of talks, interactive sessions, and networking opportunities

Feel free to chat with us if you want more information

Great opportunities to be part of it (and get funding!) to shape the future of compute services in the UK

Recruitment of the technical coordinator about to go live – get in touch for more details
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**Sign up here for announcements:
NFCS-NETWORKPLUS-ANNOUNCE@JISCMAIL.AC.UK**

Summary

Subscribe to the mailing list

Draft funding call document