

Strategy area: research support

Mission: To understand the network requirements, both immediate and strategic, of the research communities Janet supports, and to document and communicate these within the company. Where these go beyond standard Janet services, we will discuss these with Janet colleagues to agree a reasonable and appropriate response.

We will support Janet services with a particular relevance to the research community, such as Janet Lightpath and Janet Aurora, and represent research interests in other services as required.

Context

Research communities are major users of Janet services, from the everyday communications tools and services common to all Janet users, to the high-capacity transmission capabilities of the Janet network and the more specialised services such as Janet Lightpath and R&D facilities such as Janet Aurora. Specialised expertise and advice is likely to be needed to understand and interpret requirements, and to set these in the context of what can reasonably be achieved within the Janet network and the services it supports, thus enabling our research communities to compete effectively on both the national and global stage.

Large-scale research disciplines of particular relevance are Particle Physics, Astronomy, Bioinformatics, High Performance Computing and Network Research.

Customer requirements

- Network capacity at a scale appropriate to the work being undertaken;
- A full spectrum of network services from High-Capacity IP connections through VPN support to committed-capacity point-to-point circuits.
- Achievable high-rate end-to-end system throughput that scales to a substantial proportion of the underlying physical network capacity.
- Access to various forms of information derived from traffic on the Janet network, or from the network equipment itself (e.g. routing data), to support network research;
- Advice on Janet services relevant to research disciplines such as Janet Lightpath and Janet Aurora.

Strategic response

- Sustain a broad understanding of discipline requirements and the nature of the research activities that motivate them through an intelligent, analytical approach and empathy with researcher goals;
- Maintain awareness of the funding and policy environment within which research activities are undertaken;

- Assist and guide research groups in translating requirements as they express them into appropriate network-oriented parameters such as capacity and throughput.
- Understand and interpret the working patterns for data-movement driven by research activities and the capabilities of the sites involved, both national and international;
- Continue dialogue with research disciplines and extract relevant requirements, documenting and propagating information as needed;
- Continue to support internal projects, services & activities such as Lightpath, Aurora.
- Support the e-Infrastructure programme (both academic and industry strands) as it evolves, including the delivery of funded infrastructure at strategic sites.
- Engage with research disciplines on overlays and testbeds as these evolve and support community proposals aimed at securing programme funds from research councils.

Current programme 2012-13

Project	Description	Priority
Lightpath service	Support and advice for Janet Lightpath	High
End-to-end data throughput	Understand issues; provide advice; performance trials. (see E2E Strategy paper)	High
e-Infrastructure programme	Provide support and research-focused input including funded infrastructure deployment at strategic sites	High
Community requirements	Sustain dialogue with research disciplines	High
Aurora service	Support and advice for Janet Aurora	Medium

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