



JANET

Supporting
Research



Supporting Research

<http://www.ja.net/research>

The JANET network has its origins in the Research Council networks that were brought together to form the national infrastructure in 1984. The research sector continues to be one of JANET's major user communities and provides a strong focus for the development and evolution of the network.

Staff in the Research Support Unit within JANET(UK)'s Strategic Technologies Division are available to discuss the potential use by research projects of services such as JANET Lightpath, and more broadly to explore any topic where JANET might support activities or initiatives within the research community.

JANET services which are likely to be of particular interest to the research community are highlighted in this document. It should be noted, however, that these are a subset of a very broad range of activities and initiatives; full details can be found at www.ja.net

JANET Lightpath

JANET Aurora

JANET Videoconferencing Service (JVCS)

Access Grid[®] Support Centre (AGSC)

JANET Talk (Being trialled during 2008)

JANET Roaming

JANET Netsight



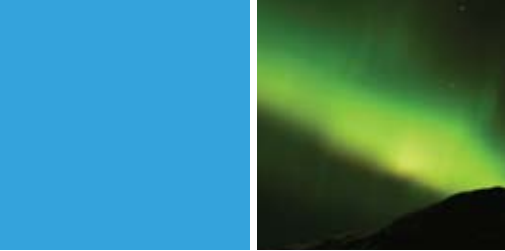
JANET Lightpath

<http://www.ja.net/lightpath>

JANET Lightpath supports large research projects on the JANET network by providing dedicated point-to-point network connections. It incorporates the former UKLight service for fine-grained circuit provision and extends the scope to cover the JANET optical transmission infrastructure. This allows for increased reach and higher capacities, including whole wavelengths, where required.

The service is available to any organisation with a Primary Connection to JANET, subject to capacity and budget considerations.

The service also replaces JANET's former development network and enables the creation of dedicated networks for trials of future services before full deployment on the network. JANET Lightpath also offers the possibility of wide area testbeds for use by academic and research projects where customers build custom networks to meet their requirements.



JANET Aurora

<http://www.ja.net/aurora>

JANET Aurora is a dedicated fibre infrastructure which provides a platform to support photonics and optical systems research and development. This is completely separate from the JANET optical transmission infrastructure so that work can be undertaken without risk of disrupting operational services.

JANET Aurora currently links the Universities of Cambridge and Essex, and UCL (London). It is a national platform and research groups at other universities can co-locate equipment at these sites, or gain access using the JANET Lightpath service which interconnects with Aurora at Telehouse®, London. This access also enables collaboration with European and other global partners through the international Lightpath connections.



Supporting Collaboration

<http://www.ja.net/video>

JANET continues to support collaborative activities through the networking programme, both nationally and internationally. It does this not only through

network development but through real-time applications such as videoconferencing, roaming and voice over IP.

JANET Videoconferencing Service (JVCS)

<http://www.ja.net/jvcs>

JVCS provides videoconferencing services to organisations connected to JANET who have suitable local videoconferencing equipment.

It consists of centralised equipment and scheduling services to facilitate videoconferencing. It uses two major technologies: JVCS-IP (using H.323 standard) and JVCS-ISDN (based on dial-up technology, using H.320).

The service has built-in gateway support for IP-to-ISDN and ISDN-to IP, as well as rate matching capabilities for videoconferencing between IP and ISDN endpoints at different connecting speeds. A dedicated IP-only instant videoconferencing resource is also available through JVCS-OnDemand.

Videoconferencing sessions can be booked directly using the JANET Videoconferencing Booking Service.

Access Grid® Support Centre (AGSC)

<http://www.ja.net/agsc>

The Access Grid® is an advanced videoconference system where people in different places meet in a 'virtual venue' using audio & video tools and other shared applications such as presentation software.

The AGSC manages a range of facilities to support the use of Access Grid®, including virtual venue services and bridging services.

The AGSC provides help, advice, guidance and training on deploying, using and managing Access Grid technologies; it performs quality assurance tests on Access Grid nodes; and maintains a repository of web-based information about the services of the AGSC and Access Grid technologies.



JANET Talk

<http://www.ja.net/talk>

JANET Talk is a Voice over IP and collaboration environment, based on the Session Initiation Protocol (SIP) for interactive multimedia applications. It hosts a wide range of communication tools, which facilitate collaboration across sites. These include:

- Voice
- Video
- Shared Whiteboard
- Application Sharing
- File Sharing
- Instant Messaging

- Breakout to the public telephone network (PSTN)
- IP and PSTN Conference Bridging facilities

JANET(UK) is currently running a trial to determine how JANET Talk may play a role in providing voice and collaboration services to the JANET community.

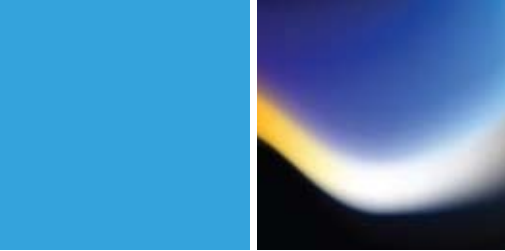
JANET Roaming

<http://www.ja.net/roaming>

The JANET Roaming service is an ideal solution for JANET sites to provide visitors with simple authenticated secure access to full or 'permitted' areas of the host site network, home networks, and the internet.

JANET Roaming enables users to log on to participating networks using their same username and password (in supported areas or from designated guest terminals).

The JANET Roaming service now comprises a large number of actively participating organisations, offering the service at locations across the whole of the UK.



Measurement and Monitoring

<http://www.ja.net/measurement-monitoring>

The network research community has been interested for a long time in gaining access to network traffic information from JANET, and particularly the ability to access fine grained traffic data.

In response to these requirements, JANET(UK) is now engaged in several activities which will improve the monitoring infrastructure on the network, increase visibility of the operational state of JANET and make this information available to the wider JANET community.

Access to traffic data

A legal and policy framework has been put in place to enable access to JANET traffic data at the packet level by research projects

(within the JANET community) wishing to undertake more detailed investigations. This will ensure the privacy of users and compliance with the legal requirements for the collection and use of such data.

Two of the JANET core routers in Reading and London are being configured to enable the attachment of monitoring systems which can gather IP network traffic for analysis; some co-location of project equipment will also be possible at these sites.

Further information on the data access policy and associated contract can be found on the JANET website at <http://www.ja.net/traffic-data>

JANET Netsight

<http://www.ja.net/netsight>

JANET Netsight is a service providing visibility of the utilisation and availability of the JANET network. It is principally aimed at JANET sites and enables them to view the status of their own network connections; it also assists in reporting and planning activities. The current Netsight system is being replaced by a new version, underpinned by a flexible

and extensible architecture, capable of holding other monitoring data as requirements evolve.

When the new Netsight is fully commissioned it will be possible for projects within the JANET community to apply to gain access to the databases which contain this information.



Global Collaboration

JANET is connected to similar networks in Europe through a high-capacity resilient peering with the GÉANT2 network which inter-connects the national research and education networks. GÉANT2 also provides transit for traffic to the major research and education networks in the USA such as Internet2 and ESnet, and also to other countries around the globe.

These connections support high-quality communication with colleagues and project partners, and enable international collaboration across a wide range of projects and activities.

JANET

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