ja.net
Quarterly Report to the Community

May-July 2010

CONTENTS

Key News in this Report

- JANET(UK) has begun the process of consulting as widely as possible with JANET users and stakeholders to gather requirements for the next JANET backbone. The first in a series of requirements-gathering workshops was held in June. *See page 21*

- The new N3 JANET Gateway service went live on 24 June 2010, in a jointly funded initiative between the Department of Health and JANET(UK) that will lead to a much improved response to university web services accessed from N3. *See page 21*

Mission

To provide outstanding and distinctive information and communication services to the UK's research, education, training and cultural communities.

Vision

Through JANET(UK)'s activities, everyone working and studying in the UK's research, education, training and cultural communities will have services that enable collaborative working and the acquisition and exchange of information, ideas and knowledge.

1. CORE NETWORK

IP Service

This reporting period has seen a total of 40 new or enhanced customer connections completed and brought into use:

Further Education

- Birkenhead Sixth Form College
- City of York Council
- The College of Richard Collyer
- The Congregation of the Daughters of the Cross of Liege
- John Leggott Sixth Form College
- Landmarks
- National Institute of Adult Continuing Education
- Plumpton College
- Seashell Trust
- Sir George Monoux College
- South Leicestershire College
- Southend Adult Community College
- St Mary's College Blackburn
- Whitegates Further Education Unit
- Wirral Metropolitan College

Higher Education

- London Business School
- The School of Pharmacy, University of London
- University College Falmouth
- University of Aberdeen, Foresterhill Campus - Halls of Residence
- University of Aberdeen, Old Aberdeen Campus - Halls of Residence
- University of Birmingham
- University of Leeds
- University of Reading

- Workers' Educational Association South Wales, Blaenavon
- Workers' Educational Association South Wales, Merthyr
- Workers' Educational Association South Wales, Risca
- Workers' Educational Association South Wales, Treharris

JISC

- Arts and Humanities Research Council
- NERC - Polaris House

Self-funded

- Blackburn with Darwen Borough Council
- EMBC Procurement Limited
- European Centre for Medium-Range Weather Forecasts
- IFS School of Finance, Kent Campus
- IFS School of Finance, London Campus
- Imperial War Museum
- Knowsley Metropolitan Borough Council
- LTS, National Assessment Resource Server Farm
- Plymouth Marine Laboratory
- Scottish Executive Education
- Trafford Metropolitan Borough Council
- UCAS Limited

A list of all primary sites connected to JANET may be found at: http://www.ja.net/janet-sites/. For information regarding current upgrades or connections, please contact JANET Service Desk at: connect@ja.net or service@ja.net.

New or enhanced customer connections

FE
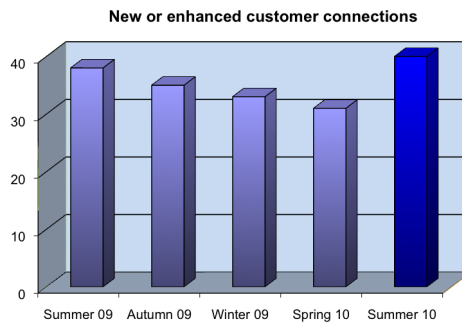
Following reprocurement of the regional network in the East of England, 31 FE colleges are migrating to the new network infrastructure. At the end of the reporting period fourteen migrations were complete with most of the remainder scheduled for completion during the summer. The new regional network offers an upgraded infrastructure, enhanced resilience and reduced circuit costs.

Core Network

The core network ran without service interruption during the reporting period despite a number of fibre breaks affecting resilient paths to a number of Regional Networks.

AbMAN access links were upgraded from 2.5Gbit/s to 10Gbit/s in July. Three new 10Gbit/s circuits connecting the newly established EastERN Regional Networks were added to the backbone in June. Two new 10Gbit/s circuits to replace FatMAN's existing 2.5Gbit/s access links were delivered in July: they are to be brought into service when suitable router interface cards for FatMAN routers arrive.

External Network Access Provision and Transmission

JANET access to European NRENs is via a 10Gbit/s connection to GÉANT from the TelecityR-PoP with a 10Gbit/s backup connection from the Telehouse® R-PoP.

(i) Access to the European Research Network

Traffic normally peaked around 5Gbit/s during the reporting quarter. Traffic in 2010 has been uniformly higher than in previous years, probably due to an increased use of the successful lightpath service for research.
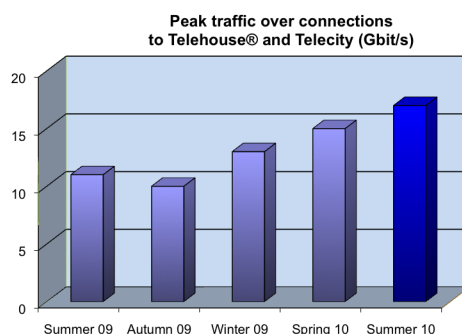
Peak traffic over connections to GÉANT (Gbit/s)
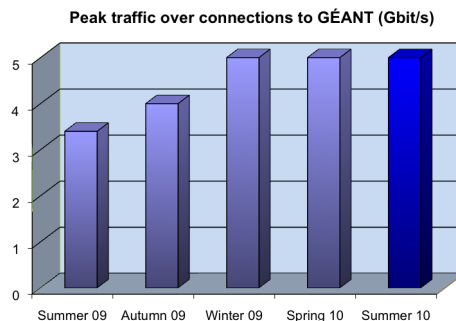
(ii) Access to the Global Internet

JANET access to the global Internet is via two global transit providers - TATA Communications and TeliaSonera. TiNET and TeliaSonera each provide four 10Gbit/s connection to two JANET PoPs at Telehouse® and Telecity in London.

A new global transit provider, TiNET International Network Ltd, started providing JANET with global transit services at the end of June. These are to replace the services from TeliaSonera as a result of open procurement done earlier this year. The contract with TeliaSonera will end at the end of August.
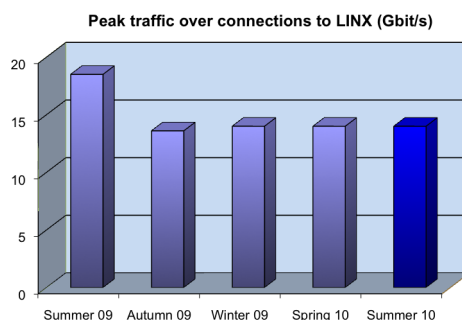
Aggregated peak traffic reached 17 Gbit/s in May, slightly decreasing during June and July due to student vacation.

**Peak traffic over connections
to Telehouse® and Telecity (Gbit/s)**

	Summer 09	Autumn 09	Winter 09	Spring 10	Summer 10
Gbit/s	11	10	13	15	17

(iii) Access to the UK's Internet Exchanges

JANET access to the LINX (London Internet Exchange) is via four 10Gbit/s connections from the Telehouse® and Telecity PoP locations.

Aggregated public peering traffic was around 14Gbit/s early in May, dropping during June and July. Since this time last year there has been an increase in traffic sent via private peering; hence traffic levels have been lower since Autumn 2009 compared to previous years.

Peak traffic over connections to LINX (Gbit/s)

	Summer 09	Autumn 09	Winter 09	Spring 10	Summer 10
Gbit/s	18	13	14	14	14

Management of Maintenance Activities

A total of 13 planned maintenance sessions took place during the reporting period. Major activities that took place included:

- provision of new high bandwidth global internet transit service

- EastERN (the new East of England Regional Network) brought into service, with migration of a number of connections from EastNET to the new EastERN infrastructure

- migration of a number of connections from AbMAN to new Aberdeen regional infrastructure

- circuit upgrades within Thames Valley Network

- linecards installed at various locations to support new connections, and new routers deployed at various locations

- decommissioning of a number of routers and switches, and a number of connections moving to new interfaces

- IOS upgrades to a number of routers.

Time Reference Service [more information]

The JANET Network Time Service delivers a stable time reference to customer organisations across the JANET network. The result is that clock settings are very closely synchronised and any single rogue system with the wrong time will have very little effect.

Two more sites registered to use the JANET NTP service during the reporting period making a total of 266 sites using the service. Overall, the service is stable and well-used.

2. IP SERVICES

Access Grid Support Centre (AGSC) [more information]

The Access Grid® is an advanced videoconference system for people to meet in a virtual venue to use audio and 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. It also provides help, advice, guidance and training on deploying, using and managing Access Grid technologies.

Server and Bridge Activity

The number of registered UK Access Grid (AG) nodes currently stands at 410, including the UK Academic desktop nodes, and the number of individual registered users stands at 714.

Number of AGSC nodes

Number of AGSC users
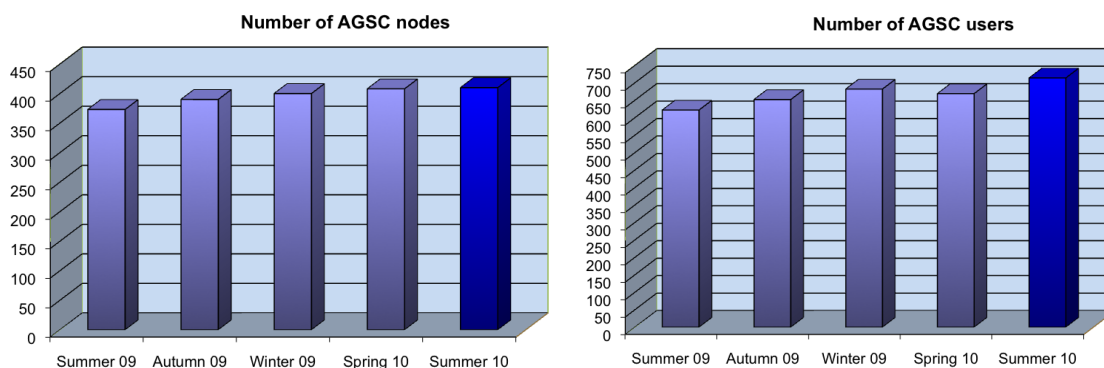
Booking Service [more information]

To assist us in improving our service there is now a Booking Service Feedback Form live on the AG Booking Service, available to registered users. Please take some time to fill it in with any suggestions you may have. Comments from completed forms are then forwarded to the development team.

Usage

During July there were 523 uses of AG over the month (meetings under two minutes were discounted). This is consistent with last month's usage as lectures have finished for the summer.

AGSC Demonstration Days

The AGSC was involved in a number of demonstration days in the last quarter.

The University of Manchester School of Medicine runs a programme that involves 100 UK hospitals and trains consultants, nurses and pharmacists, meaning it needs to reach approximately 500 staff across 100 hospitals. A demonstration helped find more information on how AG could be used for one to one meetings, conferences, seminars and training clips.

In a visit to Zhejiang Language Centre visit, 44 Chinese students were given a demonstration of the usage and potential of Access Grid. This was achieved remotely with a member of the AGSC team joining the event's virtual venue.

The University of Bath installed its portable AG Node at Wiltshire College to enable a meeting with the Health Protection Agency (HPA). A member of the team joined in the demonstration remotely

and helped to showcase the functionality of AG. The aim of this demo was for Wiltshire College to be set up with an AG system so it could link with other universities and the HPA.

Conferences & Outreaches

AGSC attended a number of RSA conferences up and down the country earlier this year. A Case Study, "Access Grid on the Road" is now live on the AGSC website.

AGSC Workshops

The next workshop will take place on Thursday 18 November 2010, beginning at 09:30 and finishing at 16:30. To look at the agenda and register for this workshop please go to: http://www.ja.net/services/video/agsc/trainingandevents/trainingworkshops.html. Gary Dear from the SEPnet project has agreed to attend and give a presentation regarding the project.

Documentation & User Guides

The Support Documentation page of the website has been renamed "User Guides" and the webpage was changed to a table format with subject headings in order to make it easier to find documents quickly.

The following documents were updated and made live on the website:

• Echo Cancellation and Audio Issues in Access Grid

• Preparing for a Successful Access Grid Session

• International AG Toolkit - IOCOM Meetings

Suggestions from the AG community on documentation which could appear on the site may be submitted to the AGSC via telephone or email. Details can be found at http://www.ja.net/services/video/agsc/AGSCHome/contactus.html.

EVO (Enabling Virtual Organizations)

As of 28 June, EVO 2.0 is the default version of EVO. The enhancements in this newest version include a simpler interface, a new icon toolbar, improvements to videoconferencing (H.323) connectivity and improved booking options. More information and a link to the EVO website can be found at http://www.ja.net/services/video/agsc/AGSCHome/whatsnew.html.

EVO is currently running a Skype EVO audio gateway pilot: see http://evo.caltech.edu/evoGate/skype.jsp for further information. The pilot lets users connect to EVO meetings via Skype. As this is a pilot phase the number of concurrent Skype connections to EVO meetings is currently limited, and only the audio is bridged between the Skype client and the EVO meeting. It is planned to bridge the Skype chat and video at later stages.

Electronic Mail Services

Mailer Shield [more information]

The JANET Mailer Shield can help make the mail facilities of a JANET organisation more secure and robust, particularly where the organisation is small or its resources for managing e-mail are limited.

No outages have been suffered since the full production service successfully started on 1 August 2004. The service currently has 20 active recorded clients.

E-mail Advice and Testing Service [more information]

The E-mail Advice and Testing Service attempts to connect to and probe an organisation's mailer to similate the activities of a bulk mailer in preparation for a spam run. It then reports on any vulnerabilities it found.

The service continues to run reliably and effectively.

E-mail Abuse Protection Service [more information]

DNS Block Lists are a well-established technique for preventing unwanted e-mail, identifying sources of e-mail abuse as lists of IP address blocks which let users reject a high proportion of unwanted e-mail quickly and easily.

The JANET Mail Abuse Prevention system (MAPS) is available for query by any JANET user, and continues to run effectively and reliably.

Web Mail Service [more information]

The JANET Web Mail Service is an e-mail service provided to JANET organisations, using a standard web browser for administration and sending and receiving e-mail from any computer with Internet access.

Two sites joined the service during the reporting period and three sites elected to leave. There are a total of 33 sites using the service.

JANET Videoconferencing Service [more information]

To date, there are 6,559 users and 6,197 venues currently registered to use the JANET Videoconferencing Service. During the last quarter this service was used for 6451 videoconferences which took place over 7,789 hours between 1 May and 31 July.
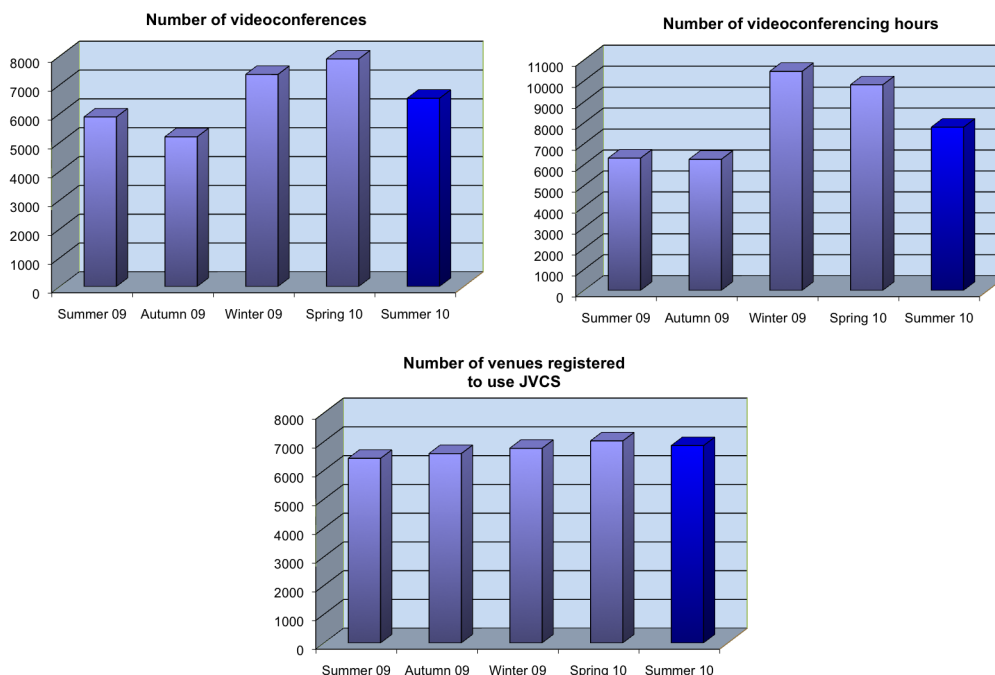
The figures follow the expected trend of a surge in the number of conferences and conferencing hours at the start of the new academic year, which tails off and drops after May as organisations

close for the summer. There is very little activity indeed in August which comes under the 'autumn' period of this report, and the cycle begins again with 'winter' period. Figures for each year are progressively higher as videoconferencing becomes more widely adopted.

The number of actual venues is a much flatter graph, indicating that existing venues are being used more extensively rather than new venues being opened.

Pilots & Projects

JVCS Desktop Check (Beta) is now live, allowing participants joining a videoconferencing via JVCS Desktop to check their audio and video before a session without having to register or log into the Booking Service.

JVCS is currently testing Tandberg VCSs as a prelude to using the VCSs to replace our existing gatekeeper infrastructure. Once testing is completed, the team anticipates the new equipment will be deployed and in service before end of quarter.

A SIP (Session Initiation Protocol) project is near completion and a SIP pilot should be under way before the end of the year. This pilot will allow users to register and use SIP endpoints when launching or booking videoconferences. Further information regarding the pilot and how to be a participant will be published on the JVCS website and the Booking Service when it is available.

Booking Service feedback form

During this quarter an online feedback form was added to the booking service: to date we have had feedback from more than 90 people. The following is a summary of the responses received:

- 97% of responders found the support staff to be 'helpful' or 'very helpful'

- 78% of responders found the booking system easy to use whilst 17% were neutral on the subject

- 60% of responders said that the overall impression of the videoconferencing service was as they would expect whilst 39% said it was 'better' or 'much better' than they had expected.

Nameserver Services

JANET(UK) is responsible for the administration and registration of ac.uk and gov.uk domain names. This includes setting policy and guidelines and approving ac.uk domains, as well as the name submission and registration procedures for both ac.uk and gov.uk domains.

Second Level Domain Service

DNS (delegation)

The JANET DNS Service encountered no problems and continued to run reliably throughout this quarter.

DNS (servers)

DNS servers ran reliably during the reporting period.

DNS (Whois Service)

During the reporting period there were no reported problems with whois.ja.net.

Primary Nameserver Service [more information]

The operation of nameservers and maintenance of DNS information is an essential infrastructure activity. JANET can provide a basic primary nameserver service for smaller or less experienced JANET customer organisations that do not have the resources to perform one themselves.

Four more organisations registered during the reporting period to use the JANET Primary Nameserver service. There are now a total of 119 users of the service.

Secondary Nameserver Service [more information]

The service provides an off-site nameserver as a backup to the primary nameservers at JANET-connected organisations. It is available to all organisations with a JANET Primary Connection.

There have been no breaks of service within this quarterly period. At the end of this reporting period the number of organisations using this service had increased to 529.

Off-site Resolver Service [more information]

Resolvers are part of the DNS functions that query nameservers for IP addresses. JANET organisations with very small networks will find it useful to use the off-site resolver set up for their benefit by JANET(UK). The service continues to run reliably and effectively.

One site joined during the reporting period, taking the total number of users up to 114.

JANET Roaming Service [more information]

The JANET Roaming service gives users network logon and Internet access at any eduroam-enabled site using their own username and password. Visitors to JANET sites experience quick, simply authenticated and secure access to the JANET-connected guest network services provided by the visited organisation and, at minimal cost, participating organisations can offer secure JANET-connected guest network services.

Uptake continues to be promising, with the number of participating organisations now at 120 and sustained volumes of authentication traffic being seen.

An initiative began last quarter to eradicate misconfigurations at participating organisation sites which have led to problems emerging under high-load conditions. This has been highly successful with a number of problems at participating organisation sites uncovered and corrected. Also, the overload protection traps on the National RADIUS Proxy Server have been removed and a new logic-based system introduced which is proving effective. User education remains a priority and a number of ideas for the promotion of the service at participating sites have been put into practice, including user help cards.

Uptake continues to be promising, with the number of participating organisations now at 120 and sustained volumes of authentication traffic being seen.

UK Access Management Federation [more information]

The federation provides a framework for organisations in the education and research sector to allow controlled access to licensed material and network-based resources, while also protecting personal data associated with their users.

At the end of July there were 816 members in the UK federation, made up of organisations from UK education sectors and of commercial organisations providing online services to these sectors.

UK federation Support, Training and Events [**more information**]

To support the transition from Shibboleth 1.3 to 2.x, JANET hosted an online upgrade seminar designed to guide technical specialists through the process and to prepare for a fluid transition to Shibboleth 2.

The Shibboleth implementation courses, run by JANET Training, remain popular. Further details of the training schedule can be found at http://www.ja.net/services/training/schedule/by-course.html.

Web-Based Services

Web Hosting Service [**more information**]

The JANET Web Hosting service provides space on central web servers for JANET customer organisations with Primary Connections that do not have the resources to support hosting themselves.

One more site joined the service during the reporting period, bringing the total number of sites using the service to 77.

Web Filtering Service [**more information**]

The JANET Web Filtering service provides web filtering for JANET customer organisations with Primary connections that do not have the resources to support it themselves, or organisations with certain specific needs. The service lets each organisation manage its own list of blocked or permitted URLs by filtering in accordance with its own local policy, and tailor these filters to its exact needs, giving protection against access to inappropriate content on the Internet.

During the past reporting period 3 organisations joined the service and several organisations that were not actively using the service were removed. There are currently 89 individual organisations using the service.

3. SERVICES

Connection Services Administration

JANET(UK) is responsible for administering the procedure for the approval and commissioning of new and upgraded connections to the JANET Network. This involves liaising with customers to report progress on their new or upgraded connections. All sites connected to JANET must adhere to the [JANET Connection Policy](#).

Requests for new or enhanced JANET connections should be made via the JANET Service Desk.

> A list of all primary sites connected to JANET may be found at: http://www.ja.net/janet-sites/. For information regarding current upgrades or connections, contact JSD at: connect@ja.net or service@ja.net.
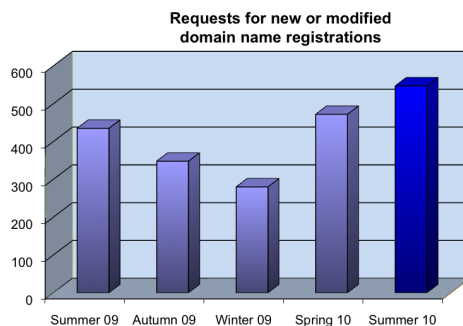
Domain Name Service Administration

JANET(UK) is responsible for the administration and registration of domain names under the ac.uk and gov.uk domains.
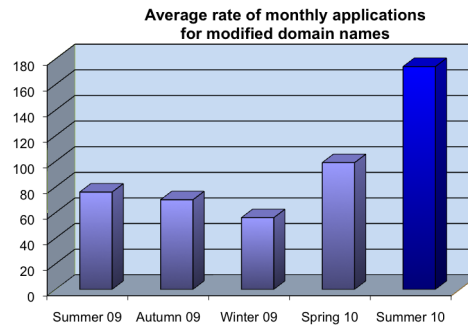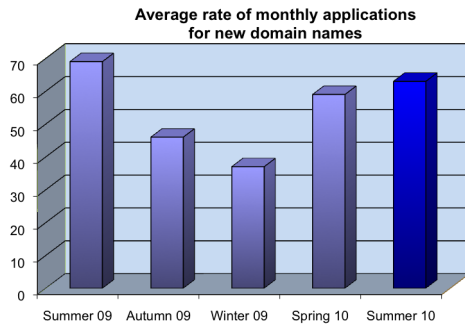
Domain Name Registration Service

During the reporting period a total number of 547 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 63 per month, with an average of 174 modifications for each month.

The surge in modified domain names as compared to new names is down to maintenance work by the Northern Ireland Civil Service, which during this quarterly period changed the set of nameservers that it uses for hosting its domains. This resulted in JANET(UK) having to process almost double the average number of modifications usually processed within this period.

Figures in all three categories follow the usual pattern of a dip during the winter quarter, which includes a very quiet period leading up to Christmas, the week between Christmas and New Year, and even the first week or so of January. Figures for the summer period are generally expected to be high as many organisations take the opportunity given by the summer break to update infrastructure and make changes to their networks that would not otherwise be simple to do under normal operating conditions.

Requests for new or modified domain name registrations

Average rate of monthly applications for new domain names

Average rate of monthly applications for modified domain names

IP Address Assignment

Every organisation that wishes to send and receive e-mail, or gain access to the Internet, needs a globally unique address, known as an IP address. JANET provides IP addresses for use with a Primary or Sponsored connection.

During the reporting period 18 applications were received and completed, including 5 applications for IPv6.

Licence Administration

Over the past three months there have been 5 new Sponsored connection licences issued and 1 new Regional Network Operator Sponsored addition.

JANET Certificate Service [more information]

The JANET Certificate Service provides a rapid certificate issuing system for all .ac.uk and gov.uk domains, along with the ability to monitor and manage new certificates that are issued.

By the end of this reporting period a total of 5,232 certificates had been issued under the new automated system, which is an increase of 2008 since the last quarterly report. Take-up is expected to continue at this rate as more organisations begin to use this free system, and as certificates acquired under the old system expire and need replacing.


Total number of certificates issued by the JANET Certificate Service
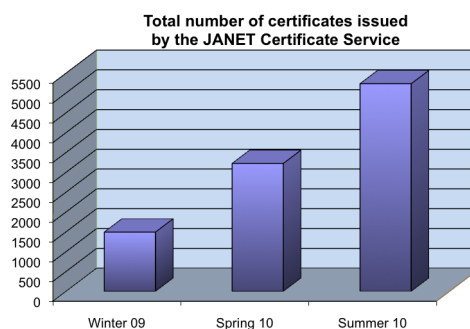
JANET Service Desk [more information]

JSD provides the primary point of contact for all enquiries concerning JANET services and requests for information. It can be contacted at service@ja.net.

During this reporting period the total number of enquiries received was 1819. Most of these queries related to the Domain Name registration service, requests for JANET connections and applications or queries relating to other JANET services.

One complaint was received, which has been successfully concluded in this reporting period.

Number of enquiries to JANET Service Desk
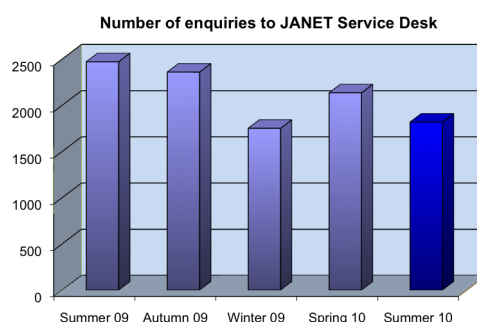
JANET txt [more information]

JANET txt is an SMS service that allows JANET-connected organisations to send and receive text messages to and from relevant groups and individuals.

JANET txt service received a 'Highly Commended' accolade for Innovation and Initiative at the annual Government Opportunities (GO) Magazine National Excellence in Public Procurement Awards 2010, for its success in a trial run by Royal National Institute for the Blind (RNIB) College. RNIB College is a specialist institution for people who are blind, partially sighted and/ or have learning difficulties such as mild to moderate autism and physical mobility difficulties. A survey of student mobile habits discovered that over 90% preferred SMS over other means of communication due to its convenience and ability to deliver instant and up-to-date information. Working closely with the development team from PageOne, which provides the service, the JANET txt system was integrated with the College's speech software, Jaws 8, and piloted for one term with a select student group by sending out general College information that would have previously been distributed in global emails and newsletters. The pilot was so successful that now the college is researching other areas where the JANET txt messaging system could be used, such as communicating news and information to parents and applying it to administrative functions such as timetable reminders and attendance queries.

Technology Advisory Services [more information]

All JANET advisory services operate an enquiry answering facility, drawing on expert knowledge from the JANET community. The enquiry answering services are free of charge.

Video Technology Advisory Service (VTAS) [more information]

During the last quarter, a new evaluation report was published on the Tandberg C40 High Definition (HD) videoconferencing system.

Training Services [more information]

Development of new courses has continued with the delivery of the "IPv6 Fundamentals" materials. The course will be trialled in August and will enter the schedule in the Autumn. Course trials are currently planed for "Hands-on Digital Forensics" in September and "Multicast Fundamentals" in October. Nineteen courses were delivered in this period including the last run of "Introduction to the UK federation" in June. The material from this course is now being re-developed for online delivery.

August will see a slight increase in course prices: this is the first such increase in a number of years and allows us to continue to cover the cost of running training events. Significant reductions

are available to organisations with Primary connections to JANET through the training credits scheme. Further information is available from our website.

During this period JANET Training successfully ran an online briefing for "Upgrading Shibboleth 1.3 to 2.x". Further events of this kind are planned for the Autumn.

4. SECURITY & REGULATION

CSIRT [more information]

CSIRT continues to work with the community to attempt to resolve the issues of infections and compromises brought about by the ongoing Conficker activity. In agreement with the JANET community, CSIRT has commenced automated handling of Conficker infections.

Copyright infringement complaints remain relatively high throughout the community.

In June CSIRT observed an increase in reported distributed brute force attacks and denial of service attacks. CSIRT has also re-opened the periodic investigation and resolution of open DNS resolvers on JANET and as a consequence saw the number of known resolvers on JANET drop by over 30% in July. The number continues to fall as administrators make changes to their DNS infrastructure over the summer months. We hope that this will result in fewer hosts on JANET being involved as the source of particular types of denial of service attack.

The usual levels of scanning for open servers, services and weak password control continue.

Security, Regulation and Policy
[more information]

Work has continued with Ofcom, rightsholders and the JANET community to ensure that the implementation of the Digital Economy Act 2010 recognises the good work we already do to deal with copyright infringement on JANET and does not force us to change our approach radically. Ofcom's publication of a draft Implementation Code has some helpful, but also some unhelpful, aspects and JANET was invited by Ofcom to meet with them to discuss anti-infringement policies and measures. A JANET response to the consultation has been submitted following discussions with the JISC, UCISA, SCONUL, NEN and others. Presentations on the Act have been made to SERJUG, the NEN Technical Group and a joint event for Oxford and Cambridge Colleges.

The European Commission is considering a revision of the 1995 Data Protection Directive. JANET responded to this consultation last year and was invited to a private sector stakeholders meeting in Brussels in July. This provided an opportunity to discuss our concerns relating to identifiers (such as IP addresses and the labels used in federated access management systems) that are only indirectly linked to individuals. Although these have been recognised as a Privacy Enhancing Technology the law appears to regulate them in the same way as names and addresses, with the added uncertainty that case law from across Europe is contradictory on their status. There was widespread support for the suggestion that indirectly-linked identifiers need risk-based regulation, not a simple binary choice. The same ideas were presented at a conference on law and technology in Edinburgh.

Finally, a paper on privacy and incident handling has been published and was presented in a recent results session at the FIRST conference in Miami. Incident response teams often have to deal with private information, for example when investigating compromised computers or network traffic flows. The paper sets out a framework, based on European privacy law, for balancing the need to protect privacy and the need to protect network users.

JANET's training courses on Computers, Privacy and the Law, Security Policies and Managing IT Security have each been presented once. A talk on harmonising the meaning of attributes was given at the TERENA Networking Conference in Vilnius. Other meetings attended included the Funding Council of the Internet Watch Foundation, the London Internet Exchange, and TERENA's CSIRT Task Force.

Information about all these activities can be found on the Legal and Regulatory Blog.

5. DEVELOPMENT

Federated Access Management [more information]

Non Web Single Sign On [more information]

JANET has been initiating standards work to take federated identity management to applications beyond the web such as e-mail, instant messaging, file sharing, or remote computing.

The project has developed a technical architecture and draft specifications which were presented at the Internet Engineering Task Force (IETF) event in July. A proposed working group charter describing the work necessary to standardise the architecture was presented to IETF and will now be reviewed and refined before being submitted for approval to the Internet Engineering Steering Group (IESG2).

Network Access [more information]

Portable WLAN

A number of deliverables are currently with the JANET(UK) editorial board prior to web publication. The balance are awaiting the results of August fieldwork trial activities before submission, including support of a field trip to a tropical volcano.

Mobile Broadband

A Request for Information was issued to the market seeking proposals in the broadest interpretation of 'mobile broadband', from Wi-Fi service sharing to satellite-equipped vehicles. Supported by data derived from the consultancy exercise earlier in the year, this RFI received a good number of responses from companies operating in a number of technology areas. JANET(UK) is reviewing these proposals with a view to developing one or more as services to the community if appropriate.

Southampton Group Design Project

Work with this year's Southampton MSc group design project students is scheduled to begin in September. The project will involve the development of a web service that will give a connected user a detailed picture of the quality and characterisitics of their connection.

Network Access Control

JANET(UK) is recruiting a placement student or recent graduate to join our Strategic Technologies division for 12 months, working largely on developing and promoting the adoption of IF-MAP in the education sector. This work will incorporate aspects of network access control and eduroam monitoring where facilitated inter-device and inter-domain communication can increase the effectiveness of services.

Network Engineering [more information]

IPv6

During the last quarter significant effort has been dedicated to developing the material for the JANET IPv6 training course, to be trialled in Bristol in August.

IP Multicast

During the last quarter, significant effort has been dedicated to developing the material for the JANET Multicast training course, which is due to be trialled on 26 October 2010 in London.

Dynamic Provisioning

A Dynamic Provisioning testbed, consisting of Juniper MX80 routers and numerous servers, has been installed at JANET(UK). Some preliminary intra-domain tests using a variety of protocols have been completed. Discussions to participate in GÉANT's Bandwidth-on-Demand service are underway.

Optical Networks [more information]

Carrier Ethernet

The tests outlined in stage 2 of the test plan commenced during the last quarter. These consist of investigations into the different advanced features for Carrier Ethernet connections, such as multi-domain and mutli-technology connections, dynamic provisioning of connections, bandwidth guarantees and QoS, resilience, and multipoint-to-multipoint connectivity.

Roaming & Mobility [more information]

802.1X Supplicant [more information]

DOT1X Special Interest Group

The 802.1X SIG met for the fourth time in July and some of the findings are now being addressed. JANET Roaming users have been notified of a change in the JANET Roaming Service Technical Specification which will come into effect from 31/12/2010. This change relates to the broadcasting of the 'eduroam' service set identifier (SSID). In order to avoid confusion, organisations participating in JANET Roaming that do not offer an operational service must now cease widespread broadcasting of the eduroam SSID from access points, except within an appropriately scaled development environment. [Further information]

eduroam Development [more information]

In the last quarter the groundwork for significant changes to the JANET Roaming service, the UK component of eduroam, have been laid through work within JANET(UK) and the 802.1X SIG. These include building community consensus around proposed technical and policy changes such as:

- responses to the evolving technical landscape, e.g. deprecating the use of TKIP on JANET Roaming in response to the upcoming withdrawal of TKIP in new products by the Wi-Fi Alliance by end of 2011

- improvements to usability

- service consolidation, developing a specification for a hardware refresh of the national service support servers based upon a virtual platform

- improvements to reliability, through the proposed introduction of hardware-based monitoring/ validation on site, an optional visiting consultation and validation scheme, and peer mentoring during deployment

- a root-and-branch review of the JANET Roaming Technical Specification, aiming to reduce complexity and enrich functionality

- a revised eligibility policy, accommodating the evolution from education-only networks towards a public service network model within which the roaming requirements of government and health service bodies must be accommodated.

Video [more information]

Ultra High Definition [more information]

JANET(UK) and members of the Ultra High Definition Special Interest Group are working together on a programme of activities, aimed at showcasing this technology over JANET.

Such activities will be used to explore the high capacity Lightpath infrastructure and highlight the key drivers and applications for ultra high definition, such as medical imaging, cultural exchanges and broadcast.

6. COMMUNITY UPDATE

Documentation [more information]

Documents published between May-July 2010	
Newsletters	JANET News 12
Network	The JANET Network: Help Plan the Future

FE Liaison

JANET(UK) attends regular meetings with FE organisations and others to raise awareness of new JANET initiatives, report on current progress with the English upgrade programme, and discuss future developments within the FE community.

Libraries, Museums & Archives

The Museum IT Directors Group meeting was attended by JANET(UK). Requirements for this important group, which provides significant resources for the community, are being established and further considered.

Network User Groups

JANET(UK) attended the South East User Group on 12 May where Andrew Cormack gave a presentation on the Digital Economy Act 2010. The company also attended the SWERN User Group on 26 May 2010 where it updated the meeting on the latest JANET service updates.

JANET(UK) attended the UCISA Network Group meeting on 24 June 2010 and updated the meeting on the latest changes to the JANET portfolio.

NHS/HE Connectivity Project [more information]

The new N3 JANET Gateway service went live on 24 June 2010, in a jointly funded initiative between the Department of Health and JANET(UK).

The main initial benefit of the new service will be a much improved response to university web services accessed from N3. This new dedicated and resilient Gateway will take all the data transfer between the two networks and ensure all N3 traffic for JANET is routed correctly, leading to quicker and more responsive access for N3 users such as students on clinical placement and NHS staff who work closely with universities on teaching and research.

As part of a wider commitment to ensure that the N3 and JANET communities are properly able to access applications and content on other public sector networks, the new Gateway will provide a platform for further development in improved support for joint working in clinical education and research. Officials from both the NHS Technology Office and JANET(UK) continue to work with the Cabinet Office Public Sector Network team in realising a shared goal: seamless and cost-effective high-bandwidth interconnectivity between all public sector networks across the UK.

The service was developed after more than two years experience with an early adopter N3 JANET Gateway that gave access to selected, specific JANET connected organisations. The new service is resilient with a link in London and a back-up link in Manchester, and has been implemented with sufficient bandwidth capacity to meet current needs easily and also to cope with

the additional demand anticipated as a result of increasing collaboration between practitioners in health, education and research. It remains a local NHS organisation responsibility to ensure that use is appropriate through local information governance arrangements: local organisations should review their own local access agreements to take full advantage of this new service.

Northern Ireland

The Department for Employment and Learning held a Widening Particpation Event on 19 May, where delegates were asked about their view on widening participation in higher education for learners from disadvantaged backgrounds and with learning difficulties. The Strategic Vision keynote was delivered by Fergus Dervitt, Director of Higher Education at the Department. A public consultation document will be published later on this year.

PCDL

Changes in funding streams and pressure on local authorities to provide services more effectively have resulted in an increase in enquiries for indicative costs to connect to JANET. A number of meetings have taken place to discuss requirements in both the East Midlands and the Eastern regions. Existing primary connections continue to be supported and implementing videoconferencing in particular is a focus at Derby City Council and Norfolk County Council.

Schools

Videoconferencing [more information]

The take-up of videoconferencing by schools continues to grow. By the end of July 2010 the total number of schools sector endpoints registered with JVCS was just over 4300 (as compared with almost 4000 at the end of July 2009). 3000 videoconferences were undertaken this quarter, approximately half with national content providers. Of the conferences, 75% continue to be for teaching, tutorials and related educational activities; other purposes include administrative meetings, system testing and quality assurance.

Number of schools sector videoconferences
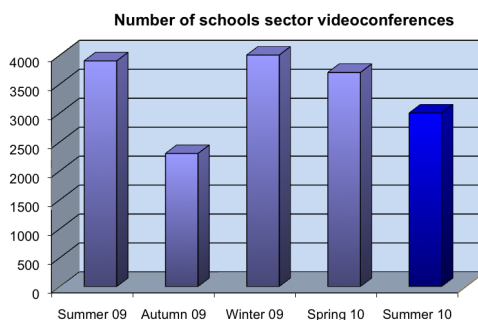
Scotland

The Chair of JANET(UK) accompanied the Scottish Customer Engagement Manager on a number of visits to Scottish HEIs this quarter as part of our customer engagement activities.

Colleagues in AbMAN have been working closely with us to effect a smooth transition of the operation of the AbMAN network to JANET(UK).

JANET(UK) participated in two events held at Glasgow Caledonian University: the Teacher Education Advancement Network (TEAN) Conference in May (TEAN is a collaborative initiative amongst education providers and associated organisations across the four countries of the UK)

and the JISC RSC South and West Scotland Annual Conference held in June. We also attended a meeting of the key contacts for Glow held at the Stirling Management Centre in June, which involved both teaching and technical contacts and highlighted some of the exciting teaching resources available to schools via the Glow network.

Specialist Colleges

A pilot use by Royal National Institute for the Blind (RNIB) College of the JANET txt SMS service won the service a 'Highly Commended' accolade for Innovation and Initiative at the annual Government Opportunities (GO) Magazine National Excellence in Public Procurement Awards 2010. See full details on page 15.

Workshops and Conferences [more information]

The first requirements gathering workshop took place from 23-24 June 2010 at Chicheley Hall. It was focused on the research community and proved to be very informative. Themes were identified ranging from the policy level down to practical suggestions for helping people to make better use of e-infrastructures, and networks in particular, to further their research agendas. Several areas were also identified for more detailed follow-up meetings and discussions. Further workshops with representative bodies such as RUGIT, UCISA, AoC and HEIDS are now being planned that will see the full range of JANET activities and service provision are covered in a similar manner.

Details of the workshop are available at: http://www.ja.net/services/events/2010/ResearchRequirements/details.html.

Over the coming months JANET(UK) will be consulting as widely as possible with JANET users and stakeholders to gather requirements for the next JANET backbone. JANET connected organisations and representative bodies will be asked to provide individual and collective input on specific requirements through a series of workshops.

7. EUROPEAN ACTIVITIES

GÉANT3 Activity

JANET is one of the networks from 33 European countries that together form the GÉANT Service Area, a 'network of networks' within Europe that creates the most advanced international research network in the world. JANET staff are contributing to various key projects of G3, the third generation of GÉANT.

eduroam

All 33 GÉANT NREN Partners are now participating in the eduroam service, the global service that underpins the JANET Roaming Service and provides secure roaming connectivity to users at hundreds of participating institutions across Europe. Initial planning for the transition from RADIUS to RadSec has begun.

eduGAIN

eduGAIN aims to establish a confederation of identity providers that will enable member organisations associated with different federations to interoperate. The service has begun pre-pilot operations. Ten federations (of the eighteen in Europe) are currently participating within the pilot, and initial results are promising. A draft service policy has been circulated to the NREN community for comment. The eduGAIN service pilot is expected to begin on 1 October 2010.

eduConf

A new task was established in April 2010 to determine the feasibility of a Pan-European Videoconferencing service, eduConf. This task will report at the end of this year. A workshop is planned in Lisbon in October.

GÉANT 3 - JRA1 Task 1 "Carrier Class Transport Network Technologies"

A presentation on the findings of the "Transport Network Technology Study" deliverable was given at TNC 2010 by Victor Olifer from JANET(UK). The video stream and slides can be found at: http://distance.ktu.lt/terena/6b-transport-2/victor-olifer-investigation-emerging-carrier-class-transport-technologies. Victor was also interviewed by Kobra TV on this work area: the interview can be seen at: http://tnc2010.terena.org/media/videos.php?stream=EXP_Victor_alberto.

TERENA Compendium

The Compendium for 2008-2009 has now been published, containing key data for a number of NRENs (both within European and across the world) and forming an excellent resource for those interested in comparing research and education networks internationally.

TERENA General Assembly

The TERENA General Assembly was held on 3-4 June in Vilnius, Lithuania. The meeting began with presentations by Jean-Luc Dorel, from the European Commission, on "The Future of Internet PPP" and by Vasilis Maglaris on "The role of NRENS - GEANT in the future of Internet Experimental Research", followed by a discussion.

The meeting re-elected Christoph Graf as the Vice-President, Technical Programme and elected Pierre Bruyere as its new Treasurer.

TERENA Networking Conference [more information]

The 2010 TERENA Networking Conference took place in Vilnius, Lithuania from 31 May to 3 June 2010. The theme of the conference was "Living the network life". The conference was well attended from NREN providers in Europe and also as far afield as Australia and Asia.

The conference opened with a plenary talk on the impacts of social networking by Hannes Lubich. Other plenary speakers during the conference were Kim Cameron (Trends and Challenges in IAM), Clifford Lynch (Developments in scholarly communication), Mark Ellisman (Bioinformatics, electron microscopy), Chad Kainz (Rethinking academic computing in a connected world) and Ingrid Melve (Generation gap, campus services impact). There were also over 100 parallel speakers which ensured that delegates had plenty of sessions to attend.

TF-Mobility

This group successfully renewed its charter, with JANET(UK) continuing to lead the location awareness strand.

FURTHER INFORMATION

JANET(UK) manages the operation and development of JANET, the United Kingdom's education and research network, on behalf of the combined UK Higher and Further Education Funding Councils represented by JISC (Joint Information Systems Committee).

Further information on any aspect of this report can be obtained through JANET(UK)'s general enquiry point, the JANET Service Desk. This is staffed from 07.00 to 23.59 Monday to Friday, with voicemail available for calls outside these hours or if staff are temporarily unable to answer a call.

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