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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

Connections

This reporting period has seen a total of 34 new or enhanced customer connections completed and brought into use:

Further Education

New

- City of York Council
- Slough Borough Council
- Coleg Sir Gar
- Learning and Skills Network
- Stockton Sixth Form College

Modified

- City of Westminster College
- City of Stoke-on-Trent Sixth Form College
- Bridgend College
- The David Lewis Centre
- Coleg Llandrillo
- The College of Haringey, Enfield and North East London
- South East Derbyshire College Higher Education
- Bolton Community College
- Wiltshire College Higher Education
- Greenhead College
- Leyton Sixth Form College

New

- Trinity Laban Conservatoire of Music and Dance
- Banff and Buchan College of Further Education
- Coleg Harlech Workers' Educational Association

Higher Education

New

- Trinity Laban Conservatoire of Music and Dance
- Anglia Ruskin University

Modified

The Open University

Research Councils

New

- Medical Research Council
- Biotechnology and Biological Sciences Research Council

Modified

- Medical Research Council

Self-funded

New

- Defence Academy of the United Kingdom
- Buckinghamshire County Council

Modified

- Delivery of Advanced Network Technology to Europe Limited
- Higher Education Funding Council for Wales

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

Connections

Connections to KentishMAN are being migrated to the Kent Public Services Network; the first of these (Canterbury College) was completed on 20 April. Following the Aberdeen regional network reprocurement, the connection to Banff and Buchan College has been upgraded to 100Mbit/s.

Core Network

A part of the core network in London has been upgraded from 40Gbit/s to 100Gbit/s during April 2011. The capacity on the northern part of core network will be doubled in capacity from 40Gbit/s to 80Gbit/s in the next quarter

External Network Access Provision and Transmission

Access to the European Research Network

JANET access to European NRENs is via a 10Gbit/s connection to GÉANT from the Telecity R-PoP with a 10Gbit/s backup connection from the Telehouse® R-PoP. Traffic load to GEANT is under 6Gbit/s most of the time, however, there was a peak spark at 9.22Gbit/s in February.

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.

Aggregated peak traffic to the global Internet was about 19Gbit/s during the reporting period,

Access to the UK's Internet Exchanges

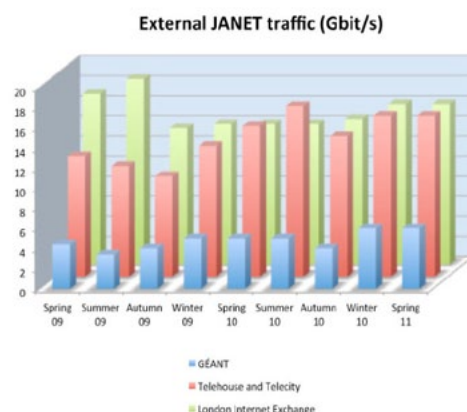
JANET access to UK Internet exchanges is through LINX (London Internet Exchange), via four 10Gbit/s connections from the Telehouse® and Telecity PoP locations. There is also a 1 Gbit/s public peering to MaNAP and another 1Gbit/s public peering to MCIX in Manchester .

Aggregated public peering traffic to the LINX was around 18.5Gbit/s and to MaNAP and MCIX was about 900Mbit/s.

An external gateway was established at Telecity Manchester and started supporting private peering with large peers early in April.

DNS (servers)

All DNS servers have been running reliably during the reporting period



2. IP SERVICES

Electronic Mail Services

Mailer Shield

Coordination of Message Handling Services

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. Since the full production service successfully started on 1st August 2004, no outages have been suffered.

No more organisations joined this service during this reporting period. The number of active recorded clients of the service remains at 21.

Details of JANET Mailer Shield can be found at: <http://www.ja.net/services/mail/mailer-shield.html>

E-mail Advice and Testing System

The E-mail Advice and Testing System is what used to be known as Spam-relay Tester And Notification system (STAN). The system provides mail protection to JANET customers and continues to run reliably and effectively.

More details can be found at:

<http://www.ja.net/services/mail/janet-spam-relay-tester-and-notification-system.html>

Mail Abuse Prevention system

The Mail Abuse Prevention system (MAPS) RBL+ (Real-time Blackhole List) provides mail protection for JANET customers, and is available for query by any JANET user. The service continues to run effectively and reliably.

More details can be found at:

<http://www.ja.net/services/mail/janet-rbl/janet-dnsbls.html>

JANET Web Mail

The JANET Web Mail Service is an e-mail service provided to JANET organisations that do not have the resources to support one themselves. It uses a standard web browser for administration and sending and receiving e-mail from any computer with Internet access. The mail is stored and processed on a central Web Mail server. The service is available to the Specialist College and ACL sectors. JANET has extended the provision to the wider JANET community as a chargeable service.

Two sites left the service and one site joined during the reporting period. There are a total of 24 sites using the service.

Details of JANET Web Mail can be found at:

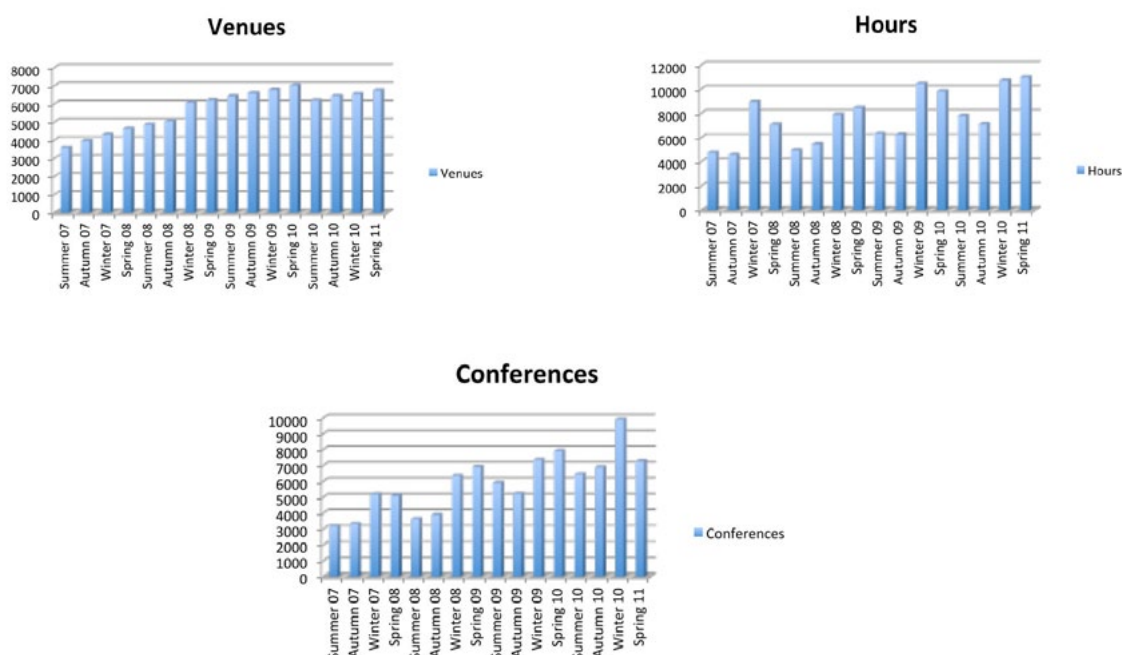
<http://www.ja.net/services/web-services/janet-web-mail-service.html>

JANET Videoconferencing

To date, there are 7,418 users and 6,714 venues registered to use JANET videoconferencing. During the last quarter (February-April) this service was used for 7,268 videoconferences which took place over almost 11,000 hours. This marks an increase in the time spent on conferences, and the average duration has risen, due to the removal of regular quality assurance tests, with fewer actual conferences being reported than the previous quarter.

Quarterly videoconferencing figures:

	IP only sessions	Hrs	ISDN only sessions	Hours	Bridged sessions (IP to ISDN)	Hours
Feb	1769	2524	17	34	638	981
Mar	2575	3624	25	48	720	1161
Apr	1174	1727	9	20	341	599
Total	5518	7875	51	106	1699	2741



A new videoconferencing Services Manager, Richard Sedding, has recently joined the team.

There have been a number of case studies completed during the reporting period:

High Heskett CE School, a small village primary school in Cumbria has been able to video conference with local, national and international experts in order to gain access to artefacts and materials not otherwise available. The school linked with a museum in the USA, and interviewed one of the JANET Videoconferencing technicians to learn how videoconferencing works. You can see the full story at: <http://www.ja.net/janetnews/2011/05/16/turning-the-tables-on-the-videoconferencers/>

The JANET Videoconferencing team took part in a schools activity called Operation Montserrat with the National Space Centre¹. This regular session offered via JANET Videoconferencing, simulates a real event, a hurricane and volcanic eruption which occurred on the island of Montserrat. It gave the team an insight into the effectiveness of video learning and the range of skills required to complete the exercise.

A project is also underway with Abingdon and Witney College to help them save money and time across their five sites using JANET Videoconferencing. Initially this will be for administration meetings, with a long term plan to enable learning to be shared across the campus and make more efficient use of teaching resources.

The team visited the Learning and Skills Improvement Service (LSIS) to promote the use of videoconferencing to access a wide variety of content and enrich the curriculum.

During this quarter an evaluation of the Radvision Scopia XT1000 has been published by the Video Technical Advisory Service(VTAS).

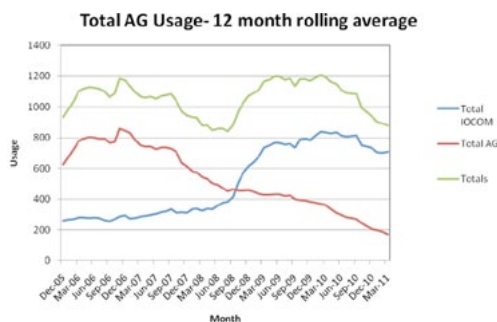
¹ A link to the National Space Centre content for schools is on the JANET website <http://www.ja.net/communities/schools/videoconferencing/nsc/index.html>

Access Grid Support Centre (AGSC)

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.

- At the end of April 2011 there were 773 registered users and 288 nodes. There were 2853 AG sessions during the quarter
- During this quarter, preparation work for the Visimeet offer to all registered AG toolkit users was completed, including meetings with IOCOM, creation of new documentation and web pages, template emails and testing of the process. A meeting with Malcolm Teague from JANET(UK) took place during February. AGSC gave a progress update on testing with NHS IOCOM nodes.
- IOCOM was demonstrated and recommended to the University of Surrey to enable meetings to take place internationally, between Surrey and nodes in Rio de Janeiro and North Carolina. A new IOCOM quick start guide was sent to JANET(UK) for uploading onto the website, showing the new 'Join' button for accessing meetings.
- A detailed diagnostic test was carried out on the AG check machine, and a report with recommendation sent to JANET(UK).
- From 1 August 2011 Access Grid Toolkit, IOCOM and EVO technologies on JANET will be supported by the JANET Videoconferencing Management Centre in Edinburgh. The Access Grid Support Centre in Manchester will continue supporting users until 31 July 2011. This relocation of support is being made to simplify communications for our users so that they will have only one point of contact for all videoconferencing needs. It will not result in any change to the service received by users and will allow JANET(UK) to deliver better value for money for the community.

The graph below shows the past twelve months average usage for Access Grid.



Nameserver Services

DNS (Delegation)

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

DNS (Servers)

All DNS servers have been running reliably during the reporting period.

Primary Nameserver Service

The operation of nameservers and maintenance of DNS information is an essential infrastructure activity that some small organisations do not have the resources to perform themselves. JANET(UK) can provide a basic primary nameserver service to support e-mail and web use by smaller or less experienced JANET customer organisations, publishing their zones on central nameservers and allowing a restricted facility for requesting changes to resource records. The service provides high availability primary and secondary nameservers that satisfy DNS queries for the zone data they hold.

- Organisations using the JANET Primary Nameserver Service can now request access to a secure web portal to undertake administrative tasks to their zone files.
- This will enable the authorised administrators to edit their resource records whenever they need to, and schedule changes outside of normal working hours
- One more organisation registered during the reporting period to use the JANET Primary Nameserver service. There are now a total of 123 users of the service of which 114 are reportable to the JISC.

Secondary Nameserver Service

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 533.

Off-site Resolver Service

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.

Six sites joined during the reporting period taking the total number of users up to 124 of which 107 are reportable to the JISC.

Roaming Service

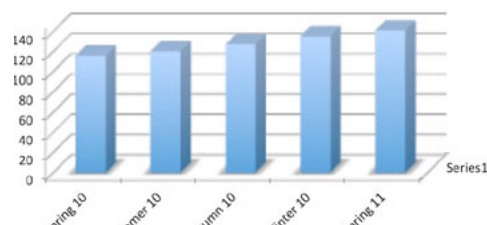
The eduroam service offered by JANET(UK) gives users network logon and Internet access at any eduroam-enabled site using their own username and password. Visitors to JANET sites experience quick, simply authenticated and secure access to the JANET-connected guest network services provided by the visited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

Uptake continues to be promising, with participating organisations now numbering 141. During March a new peak of over 55,000 uniquely identified devices using the service were counted. This reflects the return to study of the student population and the increasing extent of deployment at participating institutions.

Technical news this quarter includes the completion of the 'Implementing eduroam at your Organisation' training course. It is believed this will be of great value to those organisations which have held back from adopting eduroam on grounds of lack of technical capability. This complements the popular *eduroam Fundamentals* course. The two courses will be presented on consecutive days allowing attendees to advance from having very limited knowledge to being in a position to begin implementing eduroam.

There has also been a number of technical documents released this quarter including a flowchart to help technical support staff troubleshoot user authentication problems. Two case studies have also been published; implementing a single primary SSID case study from Swansea and a case study from Bristol detailing the reasons for choosing XpressConnect and its implementation for rolling out Windows native supplicant configuration complete with certificate settings to users' devices.

Number of organisations using JANET's eduroam infrastructure



UK Access Management Federation

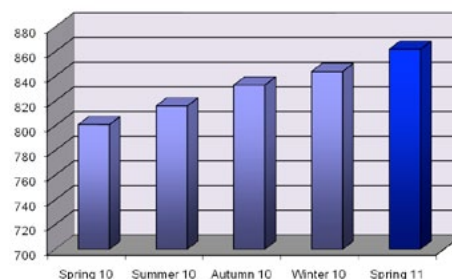
The federation provides a framework for organisations in the education and research sector to allow controlled access to licensed material and network-based resources, while also protecting personal data associated with their users.

Membership of the UK federation

At the end of April there were 862 members in the UK federation, made up of organisations from UK education sectors and of commercial organisations providing online services to these sectors. A list of services available through the federation can be found at:

<http://www.ukfederation.org.uk/content/Documents/AvailableServices>

Total UK federation membership



Web-Based Services

Web Hosting Service

The JANET Web Hosting service is intended to provide space on central web servers for primary connected JANET customer organisations that do not have the resources to support hosting themselves. It is aimed at the Specialist College and ACL sectors, although other eligible organisations may use the service as a contingency as a chargeable service. This service came into operation on 15th March 2006.

Three sites joined the service during the reporting period and a few elected to be removed from the service, bringing the total number of sites using the service to 73.

Details of JANET Web Hosting can be found at:

<http://www.ja.net/services/web-services/janet-web-hosting-service.html>

Web Filtering Service

The JANET Web Filtering service is intended to provide web filtering for primary connected JANET customer organisations 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 the local policy of the organisation, 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. A few organisations have elected to have two filtering accounts. There are currently 73 individual organisations using the service.

Details of JANET Web Filtering can be found at:

<http://www.ja.net/services/web-services/janet-web-content-filtering-service.html>

3. SERVICES

Connection Services Administration

JANET(UK) administers 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](#).

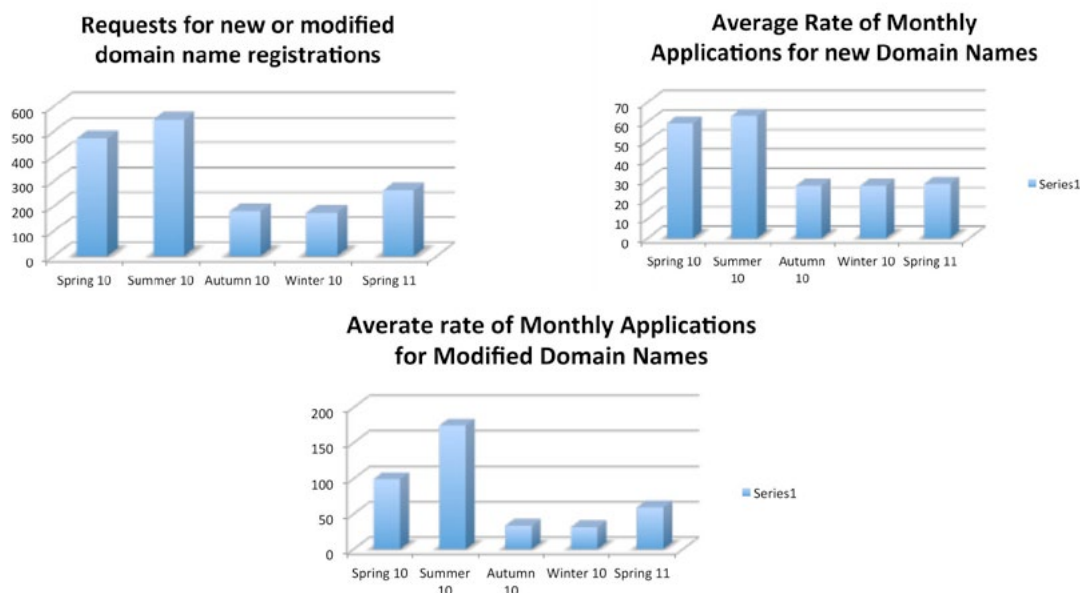
Requests for new or enhanced JANET connections should be made via the JANET Service Desk.

Domain Name Service Administration

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

During the reporting period a total number of 263 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 28 per month, with an average of 59 modifications for each month.

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.



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, 19 applications were received and completed, including 4 applications for IPv6 address space.

JANET Certificate Service

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.

The new JANET Certificate Service was launched on 18 November 2009. By the end of this reporting period a total of 12,085 certificates had been issued under the new automated system, which is an increase of 2,249 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.



JANET Lightpath

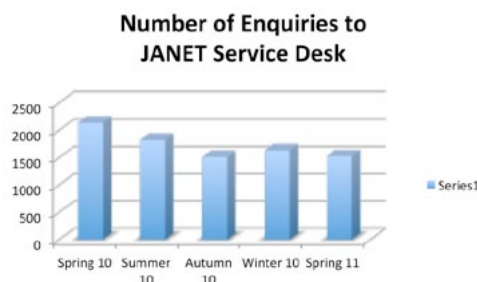
There have been no new requests for Lightpaths during the reporting period.

JANET Service Desk

JANET Service Desk provides the primary point of contact for all enquiries concerning JANET services and requests for information. Any requests or enquiries can be sent to: service@ja.net.

During this reporting period the total number of enquiries received was 1,525. Most of these queries related to the Domain Name registration service, requests for JANET connections and applications or queries relating to other JANET services.

Four complaints were received. Dialogue has remained open for one of these complaints during this reporting period.



Technology Advisory Services

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.

Multi-site Connectivity Advisory Service (MCAS)

The JANET Multi-site Connectivity Advisory Service provides advice and guidance and produces technical literature on a wide range of issues relating to inter-site network inter-connection. A number of enquiries for the service, which is provided free of charge, were received during the quarter. Enquiries have been mainly on the topics of options for inter-site connections for organisations with multiple sites, high bandwidth local links and networking strategy following college mergers. The web site, which provides wide-ranging information for the community, remains popular and the MCAS service continues to serve all sectors of the JANET community.

Video Technology Advisory Service (VTAS)

During the last quarter (tested in January 2011), an evaluation report was published on the Radvision Scopia XT1000 CODEC. The SCOPIA XT1000 is a High Definition (HD) videoconferencing system with a maximum picture resolution of 1080p i.e. 1920 x 1080 pixels at 30 fps (frames per second). The optional Sony 60 fps camera extends the frame rate to 60 fps but with a consequent reduction in resolution to 720p or 1280 x 720 pixels.

Other units to be evaluated in the next quarter:

The Radvision Scopia VC240 - scheduled for testing in April.

The Polycom HDX4000 series - scheduled for testing in early June.

Wireless Technology Advisory Service (VTAS)

During the last quarter the Xirrus 802.11n Wi-Fi Array was evaluated by Loughborough University. This product has four integrated high gain antennas and dual Gigabit Ethernet uplinks. The evaluation focused on the deployment in their campus library.

This year's adviser on voice-related issues is Alan Hillyer from University of Oxford. If you have any questions to ask please send them to vas@ja.net.

Training

Thirteen courses were delivered in this period, with feedback remaining consistently high. Three new courses were trialled during this period. "Implementing eduroam at your Organisation" provides participants with lots of hands on experience as well as technical information. During the course participants configure a radius server for home and visited and examine RADIUS proxy traffic and changing the contents of proxied messages. "Hands on Digital Forensics" provides an overview of digital forensics, evidence and computer crime. The practical focus of this course is the use of open source tools which can be used in a number of scenarios to assist with the networking and security work undertaken by members of the JANET(UK) community. "Basic Networking for Service Desk and Support Staff" provides a supporting framework for University, College and Research staff that provide first line assistance for their organisation's network infrastructure. From configuration to diagnostics and a look at new technology, the activities in this course should improve the reporting of incidents and identification of problems.

Online briefings continued with over 100 participants joining two sessions to hear “An Introduction to JANET CSIRT”; there was a lively Q&A session and feedback and we are working with CSIRT to offer more of these events.

Course overviews, full training course schedule and access to EdLab are available on the JANET website at www.ja.net/training.

4. SECURITY & REGULATION

CSIRT

The quarter February to April inclusive has seen the usual levels of scanning for vulnerabilities in systems and password management, with numbers of reported compromised systems remaining at a fairly steady level.

Reports of potential copyright infringements, while lower than the previous quarter, remain at a higher level than would be preferred although there is a season dip most likely due to the extended holiday periods in this quarter.

The security sessions at Networkshop this year were very well attended as was the CSIRT run security birds of a feather session. In the weeks preceding Networkshop CSIRT held an interactive web presentation session from Lumen House managed by the JANET Training staff which was oversubscribed and required a second session the following day for those unable to register for the initial presentation. Feedback from this event has been very positive and CSIRT will look to make more use of web cast type events in the future.

Security, Regulation and Policy

Copyright enforcement continues to be an area of Government concern and is the subject of an inquiry by Parliament’s Culture, Media and Sport Select Committee. JANET has submitted written evidence highlighting the interpretive difficulties in the Digital Economy Act 2010 and the damaging consequences for both copyright enforcement and network use that are likely to occur if that Act is not interpreted correctly. We have also submitted evidence to a Nominet working group on a policy for suspending domains that are involved in criminal activity.

In February the Department for Culture, Media and Sport asked Ofcom to investigate the feasibility of court-ordered blocking of “Internet locations”, which might be enabled in future under the Digital Economy Act. The Chief Regulatory Adviser was invited to talk to Ofcom about this and discussed the various levels at which this might be done (e.g. IP, DNS, URL), and what technical and practical difficulties might arise both in trying to implement such a block and in trying to evade it.

The JANET course on Information Security Policies was presented in Cambridge and a talk on the Digital Economy Act given to a joint meeting of JANET(UK)’s London and South East Regions. Discussion sessions on how current (geography-dependent) UK and EU law applies to cloud computing (where independence of geography is a positive benefit) have been held at Networkshop and TERENA’s Middleware Task Force.

Information about all these activities can be found on the [Legal and Regulatory Blog](#).

5. DEVELOPMENT

Project Moonshot

Early versions of many of the core software components of the Moonshot software architecture were delivered during this quarter. This allowed the first testing of the software, the results of which have met expectations. A number of important applications have been successfully tested with the Moonshot technology, including OpenSSH, Firefox, Apache, Apache, Jabberd, OpenLDAP and MyProxy. Work started on the final significant software component, the Identity Selector. The software development is on track or slightly behind schedule; all components are expected to be completed during Q3 2011.

The standardisation process is proceeding on schedule. The project participated in a number of working group meetings at the 80th IETF meeting in Prague. The second Project Moonshot meeting was co-located with this meeting, bringing together most of the developers for the first time. Significant progress was made during this meeting in resolving a number of open design issues.

The project has reached out to a number of communities to ensure that they are informed about the technology. Dr Jens Jensen of STFC and the UK National Grid Service presented on Moonshot and Grids at Networkshop.

JANET(UK) presented Moonshot to a meeting of the High Performance Group Special Interest Group, and was well-received. A number of members of that community expressed an interest in trialling the Moonshot technology. The project also presented the technology to the Internet2 community at their Spring members' meeting which again was well-received.

Roaming & Mobility

802.1X Supplicant

The OpenSEA board continues to steer the supplicant development programme towards a major feature release across multiple platforms in Q2 2011. The candidate codebase now includes features in support of ABFAB, the technology behind JANET(UK)'s Moonshot project.

DOT1X Special Interest Group

The 802.1X SIG has had an active quarter, with a lot of traffic discussing potential solutions to issues affecting eduroam and other dot1X related services, and contributed development effort from members resulting in, for example, an Android platform eduroam configuration tool.

Eduroam Development

eduroam development has been active on a number of fronts. A portable/temporary eduroam 'meeting support' system prototype has been developed and tested with a view to deployment within the company and possible development into a product form for distribution to the community.

Discussions with a commercial technology partner are promising in developing a cloud-based IdP function, a stepping stone on the way to a fully managed eduroam solution. A survey of the NRENs around automated monitoring has indicated the direction for our developments in this area.

The public transport trial proceeds to plan.

Work has begun working with the NHS to extend the UK eduroam federation to NHS sites and ultimately other publically funded organisations.

An iPhone application aimed at improving the eduroam experience and helping users find their nearest eduroam coverage has been submitted in prototype form to the Apple store for community use.

Network Access

Mobile Broadband

The JANET 3G Service was announced at Networkshop 39, and attracted significant community interest. The service, due to go live in July, is delivered by aqI over the Three network. We are working with a number of volunteer early adopter sites to test and refine the technical boarding process for future customers of the service.

Southampton Group Design Project - Network Profiler

The output of the 10/11 GDP project is currently under consideration as a component in a transatlantic videoconferencing collaboration. We are gathering ideas to submit for Southampton's consideration for the 11/12 project cohort.

Network Access Control and IF-MAP

A parallel strand at Networkshop 39 attracted eminent speakers to address IF-MAP's potential applications in education and detail progress to date. An award sponsored by one of JANET(UK)'s commercial technical collaborators in this area was announced, the award is for innovative applications of IF-MAP to be developed by the community members. JANET(UK) will be assisting with the judging.

Network Engineering

IPv6

An updated version of the IPv6 Technical Guide was made available on the JANET website and was circulated at Networkshop. In addition, the first JANET IPv6 Fundamentals training course was held before Networkshop at the University of Hertfordshire.

IP Multicast

Nothing new to report

Automated Provisioning

JANET(UK) is continuing to investigate solutions for enabling automated provisioning of network capacity in dynamic response to both short and long lived requests from the JANET community.

Along with other European NRENs, JANET(UK) attended the Autobahn workshop in Copenhagen to discuss the launch of a pan-european Bandwidth on Demand pilot service. JANET(UK) has been working closely with Autobahn developers to make sure that the software is more streamlined with the JANET NOC engineering practices.

Voice

Voice Strategy

Nothing new to report.

Video

Ultra High Definition

A showcasing project is progressing at a steady pace, involving three sites geographically dispersed around the UK. The purpose of this project is to stream ultra high definition content over the JANET network, thus showcasing the capacity of the network, and the educational and research potential of this high bandwidth technology.

Also, collaboration with the BBC and NHK continues, in the run up to the 2012 Olympics.

Content Providers

JANET(UK) has produced a document on Supporting Video Content Development. This document describes several new areas of activity towards the development of the use of national and international videoconferencing. A successful pilot creating international Videoconference Partnerships between schools in London and New York was promoted at the Internet2 conference and numerous new US contacts were gathered for future partnerships.

Videoconferencing

JANET(UK) has initiated a project to improve the booking feature of JANET Videoconferencing in three areas:

- Mock-ups for the new booking process and registration process have been produced and agreed;
- Improvements to the Conference Management Tools have been launched
- Improvements have been made to simplify the facility and bring telephone guests into videoconferences.

A SIP Trial has been launched with a limited number of groups to gain user feedback on the registration and Booking of SIP endpoints via the Booking Service;

A Desktop Video review has produced a first stage report after the initial analysis of 26 Desktop video clients. Seven clients have been selected for further investigation.

A review has begun of two solutions to enable Skype interoperability for sessions managed through JANET Videoconferencing. The Skystone Bridge and Blue Jeans Networks solutions are both being assessed.

Measurement & Monitoring

Netsight

This area will now be reported on as a service in the service section of this report

Flow Monitoring

The new hardware installed Q4 2010 is meeting all expectations. Investigations into providing simple, and easy flow-based reporting solutions for the JANET community were initiated in this quarter and will continue further.

Support for Research

JANET Aurora

Discussions between all interested parties continue regarding future funding of the JANET Aurora facility.

JANET Lightpath

This area is now reported on as a service as part of the service section of this report.

Measurement Data For Research

Nothing new to report

Optical Networks

Technology Tracking

Discussions with vendors Cyanic and Overture revealed some interesting service assurance possibilities for Carrier-Grade Ethernet services. Planning to trial some of the vendors' hardware and software solutions is currently underway, which will continue into the next quarter.

Carrier Ethernet

All tests for the Carrier-Grade Ethernet project have now been completed. The results of these tests have been documented and are going through the editorial process. All project reports will be made publicly available in the next quarter.

6. COMMUNITY UPDATE

Documentation

Documents published between November 2010-January 2011

Newsletters	JANET News 15
Books	IPv6 Technical Guide
Factsheets	Penetration Testing

East of England

The process of visiting each customer continues both proactively and as a result of a query raised with JANET. During the period visits were made to Universities of Essex, Bedfordshire, Leicester, Cambridge, and University College Suffolk.

In FE the College of West Anglia, Central Bedford, Boston and Chesterfield were visited. Initial work was investigated with the National Autistic Society to look at connecting the educational sites. Meetings with Association of Colleges regional Director, EMMAN Technical group and East Midlands FE Heads of IT were attended. Networkshop and ICISA were opportunities to meet with colleagues from the community. Imperial War Museum, British Library and the MRC Toxicology Unit were met and proposals for further services were carried forward.

Scotland

The Customer Engagement Manager was invited to attend the HEIDS (Higher Education Information Directors Scotland) meeting in St Andrews in February. This group aims to promote high standards in the provision and development of academic, management and administrative information systems throughout the Scottish Higher Education Sector.

The Customer Engagement Manager provided the group with an update on Business and Community Engagement and on the SIX project. It was decided that a JANET Update will become a standing item on the Agenda.

JANET(UK) took part in the JISC RSC North and East Scotland Winter Fayre in Edinburgh in February. Originally planned for December, this event was postponed due to the dreadful winter weather. The Fayre was fully- attended and attracted delegates from FE and HE throughout Scotland. There was a chance to meet up with familiar faces and to meet new colleagues. Many delegates visited the JANET stand and the main areas of interest were our videoconferencing and text messaging services.

In March, the Customer Engagement Manager chaired the second meeting of the JANET Aberdeen Technical Group. This group, consisting of members from institutions within the Aberdeen area, has replaced the AbMAN Technical Group. Its remit includes disseminating information from JANET (UK), giving feedback from the community to JANET, encouraging collaboration between the members and organising the annual JANET Aberdeen Technical Briefing (formerly known as the AbMAN mini-workshop). Members of this group helped organise and contributed to this briefing by giving presentations on IPv6 and data centres to the delegates.

JANET(UK) had a stand at the UCISA Conference held in Edinburgh in March. This was an excellent opportunity to meet with members of the community and to get feedback on issues such as Business and Community Engagement. This 3-day event provided an exciting and challenging programme for delegates. This year's event focussed the programme on 'The Marshall Plan' in reference to the keynote delivered by Tim Marshall, CEO of JANET(UK) at last year's conference.

West Midlands and South West of England

The Customer Engagement Manager has been travelling the region widely and has attended a number of meetings with organisations including Universities, Further Education colleges, Local Authorities and other JANET connected sites. Discussion at all of these included bandwidth usage, upgrade and future requirements, resilient connections, the use of JANET services and what future JANET services our customers would be interested in. Discussions also took place around how JANET can meet the needs of the areas represented, and these have been fed back into JANET(UK).

In this quarter, the Customer Engagement Manager for SW and WM has visited 3 Specialist FE colleges, 13 FE colleges, 5 universities, 4 Local Authorities, 3 other organisations, one SWERN user group meeting, one SWERN/JANET customer engagement event, the JISC national conference, one RSC technical forum, the UCISA NG regular meeting and the JANET Workshop.

South East

March saw a successful JANET technical briefing event for the South-east and London regions. This event was well attended and gave the opportunity for JANET to update the community on the SIX project, Business & Community Engagement, the JANET CSIRT service, the migration of the London MAN to JANET, and a very interesting presentation from Andrew Cormack on the Digital Economy Act.

The Customer Engagement Manager has been involved in the KentMAN/KPSN project and has also attended meetings with the RSC(SE) and the SE7 group of councils. A busy three days were also spent at Networkshop meeting many representatives from the JANET community.

Meetings have also taken place with several sites in the region. There is a lot of interest surrounding the SIX project, the JANET certificate service and inevitably, shared services with one particular group of colleges on the south coast seriously looking at reducing costs by sharing resources and services.

Network User Groups

The South East Regional JANET user group met on 9th February. An interesting talk was given by UCL on the outsourcing of their e-mail service to Microsoft. This was followed by discussions on plans for the future of JANET and issues which specifically affected the organisations in that region.

A regional briefing event was held for the London and South East region on the 10 March where delegates were updated on activities with Business and Community Engagement, progress with the upgrade of the routers in the London region, the outcome of the consultation on the SIX requirements, CSIRT activities and an update on the digital economy bill. Delegates were given plenty of time for discussion with members of JANET(UK) and to network amongst themselves. Further such events are planned in the regions.

NHS/HE Connectivity Project

The project officially started to develop proposals for a series of developments of the N3 JANET Gateway (see <http://www.ja.net/janetnews/2011/05/04/janet-n3-gateway-moves-up-to-the-next-phase/>). There are 6 strands:

Baseline (Deliverable 1): bi-directional service, to support inbound sessions initiated by users in JANET accessing services on N3

Deliverable 2: sharing/exchange of information between computers in NHS and academic networks initiated in either direction

Deliverable 3: integrate the NHS (N3) and academic (JANET) Video services (England)

Deliverable 4: secure e-mail or wider secure data transfer solution between the NHS and academic networks

Deliverable 5: support for Eduroam in NHS networks

Deliverable 6: federated access to web based resources in a pilot community

Workshops to scope and write up each of these proposals are taking place in May and June.

NHS-HE Connectivity Best Practice Working Group (see <http://www.ja.net/janetnews/2011/05/04/best-practice-between-nhs-and-janet/>)

This working group met for the first time on 10th February and is preparing case studies and example policies and procedures from local NHS-HE connectivity initiatives. Some resources are already prepared but the plan is to release a pack of these to the community in a coordinated way later this year. A further meeting is taking place on 23rd May 2011 to continue progress with this.

NHS-HE Forum

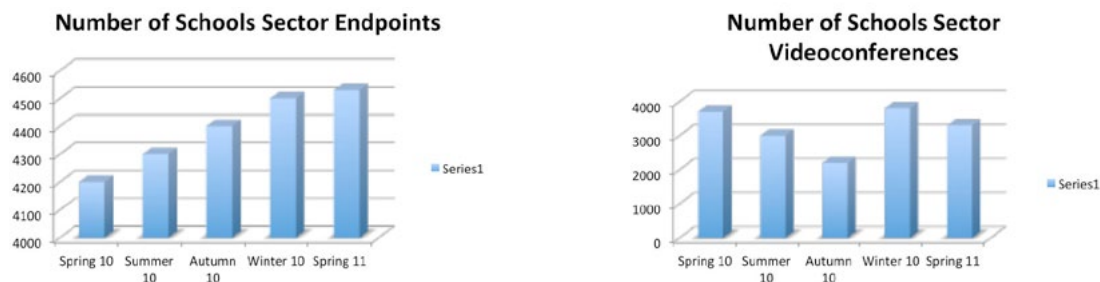
The next NHS-HE Forum is on 24th May 2011 in London. A Scotland NHS-HE Forum is planned for September 2011. The NHS-HE Coordinator was also delighted to speak at three Wales Public Sector Broadband Aggregation (PSBA) User Forum meetings in April and early May on JANET and NHS-HE connectivity issues.

Schools

JANET(UK) continues to work closely with the NEN (National Education Network) Providers in England, LTS (Learning and Teaching Scotland), C2K (Classroom 2000) in Northern Ireland, and the local authorities, NGfL Cymru and DCELLS (Department for Children, Education, Lifelong Learning & Skills) in Wales, to enable access to high quality content for schools interconnected to the JANET network.

Videoconferencing

The take-up of videoconferencing by schools continues to grow. By the end of April 2011 the number of school videoconferences managed by JANET Videoconferencing had exceeded 53,000 and the total number of schools sector endpoints registered with JANET Videoconferencing was over 4530 (as compared with just over 4250 at the end of April 2010). Over 3300 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. The growth in schools videoconferencing, managed by JANET Videoconferencing since August 2004, is illustrated below.



Connectivity

The NEN Services Group continues to work closely with the Customer Engagement team and a number of NEN Providers to explore new approaches to regional networking.

7. EUROPEAN ACTIVITIES

GEANT 3 - Service Activity 3 Leadership

eduPKI

The objective of this Task is to facilitate access to, and the use of, Public Key Infrastructure (PKI). Many services (from both GEANT and elsewhere) already make use of X.509 certificates issued by Certificate Authorities (CA) operating PKIs. It is anticipated that the demand for CA-issued certificates will increase in the coming years due to a growing requirement for securing communications. Having successfully delivered the 'eduroam Trust Profile' in the previous reporting quarter, a number of certificates conforming to this profile have now been issued during the reporting quarter, marking the start of the eduPKI production service which occurred in March 2011. The Task has also begun detailed discussions with the GEANT network connectivity services and the eduGAIN service to define their requirements for Trust Profiles. The Task has also begun the accreditation process of the 'eduPKI Trust Profile' with some CAs.

eduroam

This Task operates the European eduroam service. The service consists of a confederation of roaming federations operated by NRENs or National Roaming Operators (NRO). The European service, operated by GN3, has 37 NRENs participating. This includes all GN3 partners. JSCC, a Russian NREN, has now signed the GN3 eduroam policy. A number of European countries on the eastern and Asian periphery are currently being considered as possible candidates. These include Belarus, Ukraine, Moldova, Georgia, Armenia and Azerbaijan. Further afield, this Task has been engaged in supporting NRENs in Africa (principally Kenya and South Africa) and Latin America (through CLARIN). The Task's co-ordination activities with the eduroam services in the North America, Asia and Australasia regions have also been considered.

The utilisation of the service continues to grow at a rapid rate. In the period March 2010 to March 2011:

- The total number of user authentications (a measure of the number of distinct users connecting to the service) increased by a factor of 3.5.
- The total number of CSI-days (a measure of the number of devices connecting to the service) increased by a factor of 3.7.

The faster increase of CSI-days relative to user authentications indicates that users are increasingly tending to connect to eduroam with more than one device (for example, a laptop and a smartphone).

eduGAIN

The eduGAIN service defines and implements the framework to interconnect the various identity federations in Europe and to enable controlled access to GÉANT and NREN services, and resources via identities asserted by those federations. During this reporting period this Task focused on preparing for the launch of the eduGAIN production service, in April 2011. At the time of writing, there are thirteen federations participating in the pilot service; namely Croatia, Czech Republic, Finland, Germany, Greece, Hungary, Norway, Poland, Spain, Sweden, Switzerland, the Netherlands and Turkey. This Task is engaged with most of the remaining six national federations that are currently operational within Europe (Ireland, Italy, Denmark, Norway, Portugal and United Kingdom) but not participating within the pilot to ensure that they are connected as soon as possible. A significant amount of effort has been expended on developing and refining the eduGAIN policy. The policy will control the use of the service by the participating partners, and sets out a governance structure. The development of the policy was highly complex, requiring extensive consultation with GN3 partners, the education and research federations and other international stakeholders. The policy was finally approved by the NREN PC in March 2011.

This Task delivered a Business Case for a European Video-Conferencing service at the end of the previous reporting quarter. This case was subsequently approved by the NREN PC in March 2011. Development of the service will commence in April 2011.

GEANT 3 - JRA1 Task 1 “Carrier Class Transport Network Technologies”

Approval was given at the GN3 Symposium (Vienna, 24-26 November 2010) for JRA1 Task 1 to test a number of potential transport technologies including PBB-TE, EoMPLS, MPLS-TP, OTN, and GMPLS. Together with Essex University, JANET(UK) has begun Ethernet OAM tests over our Lightpath infrastructure. We expect to extend the trial testbed to other NRENs in the next quarter.

TERENA General Assembly

The TERENA General Assembly met after the TERENA Networking conference on the 19 and 20 May. The meeting discussed the technical programme for the organisation, outreach to non traditional user communities, procurement, the results from the community satisfaction survey and an update from the non technical task forces. Further details can be found at: www.terena.org/about/ga/ga35/GA35info.html

Elections were held for a number of posts on the TERENA Executive Committee. The following appointments were made:

President - Pierre Bruyere (Belgium)

Treasurer - Marko Bonac (Slovenia)

Member at large - Agathocolis Stylianou (Cyprus)

TERENA Networking Conference

The annual TERENA Networking Conference was held in Prague from the 16 – 19 May 2011 and attended by over 500 delegates from all over the world. The conference comprised a mixture of plenary and parallel sessions covering a wide variety of networking subjects. The venue was ideal for such a conference with all the meeting rooms and the supporting exhibition in the one area. The event was preceded and followed by a number of other meetings such as task force meetings, special subject meetings and the TERENA Advisory Committee meeting as so many networking specialists were available in Prague. The support facilities provided by the Czech networking team were excellent and eduroam was available at the conference venue and a number of other venues within the city.

(a)TF-Mobility & Network Middleware

The TF-MNM community has taken a particular interest in JANET's initiative in the 3G area. Our activities in location awareness will be promoted at TNC 2011.

FURTHER INFORMATION

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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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