



Quarterly Report to the Community

November 2009 – January 2010

Editorial

JANET(UK) has published its [Corporate Plan for the period 2010-2012](#). The plan lays out the company's strategy for the next three years.

Since the last corporate plan was published JANET(UK) has continued to develop and change, responding to the diverse needs of a broad and increasing user base. The company has moved into new, flexible accommodation at the Harwell Science and Innovation Campus; the Network Operations Centre has been integrated into the business in London; and new services have been established such as JANET Aurora, which gives leading researchers world class resources. JANET(UK) has also worked closely with JISC and Becta to become the operator of the UK Access Management Federation, the largest of its type in the world.

In the next three years we will be planning for the next version of the network, JANET6. This is likely to be an innovative architecture combined with new approaches to funding which will ensure that JANET retains its distinctive quality. As the UK recovers from the downturn a key driver will be a vibrant knowledge economy. At the heart of such an economy will be a thriving research and education sector enabled by powerful frontline services such as JANET.

1 Introduction

This report broadly follows the sequence of the SLA (Service Level Agreement) between JANET(UK) and the funding bodies represented in JISC (Joint Information Systems Committee), for the financial year 1 August 2009 to 31 July 2010.

The numbering follows that of the SLA, and apparent omissions reflect the fact that there is nothing to report for this period.

2. Support Services (SLA J2.4)

(a) Documentation [[more information](#)]

Documents published between November 2009-January 2010

Newsletters	JANET News 10
Reports	Corporate Plan 2010-2012
Services	Supporting Research

JANET(UK) has published its [Corporate Plan for the period 2010-2012](#). The period that the Plan covers will include increased financial constraints, planning for the next generation JANET backbone, and an increasing awareness of environmental standards. The Plan lists the four strategic objectives that will direct all JANET(UK)'s activity between now and 2012, and against which its success will be measured.

(b) Workshops and Conferences [[more information](#)]

Network Access Conference, 3 November 2009

At the JANET Network Access event in London, delegates came together to focus on ways to extend the reach of their networks outside the normal campus perimeter and make them more responsive to changing usage patterns within it. As well as benefiting from feedback on the existing programme of activities, delegates were invited to impart their experiences and influence JANET(UK)'s future network access strategy.

John Hagerty from Forescout outlined the differing approaches to Network Access Control (NAC) and how organisations need to take a wider view of this, from identifying potential threats to securing their LAN, modifying user behaviour and deploying techniques to control and manage networks. Stuart Bailey from Infoblox continued the focus on secure access control, with a fascinating introduction to IF-MAP, a protocol initially designed to enable 'next generation' NAC but increasingly finding a wider range of applications. Mark O'Leary gave a taste of the results from recent JANET network access trials in Local Loop Unbundling, Mobile IP and Location Awareness, providing an overview of JANET(UK)'s position on these various technologies and showing how these very different technologies all contribute towards a unified approach to network access. In the second part of his talk, Mark set out the planned future activities in this development programme: a major theme to emerge from this was the potential value of ubiquitous mobile broadband off-campus.

The Irish education and research community is a step ahead in delivering mobile broadband to staff and students: Nick Murray from HEAnet shared his experiences of creating a subsidised national wireless broadband service based around 3G dongles by partnership with a major telephony provider.

Overall, the event offered a balance of reporting current experience, discussing future directions, and encounters with some novel technologies that may impact the future development of network access. Videos of the presentations, and technology overviews, case studies and reports from trials referred to in them, are available on the JANET website at http://www.ja.net/services/events/2009/network_access/programme.html.

Strategic Briefing, 30 November 2009

Over 110 delegates attended JANET(UK)'s Strategic Briefing day at the Institute of Physics on 30 November, and a further 10 watched the event over the videostream. The day comprised a number of presentations with plenty of discussion time throughout.

Roger McClure, the chair of JANET(UK), opened the day by reminding the audience of the constraints that the whole community is working under in this difficult economic climate. Tim Marshall, Chief Executive Officer, followed with a stimulating talk on JANET(UK)'s Corporate Strategy for 2010/12, detailing the changes which would have to take place as the company goes forward in what will be challenging times in the future. Jeremy Sharp, Head of Strategic Technologies at JANET(UK), gave an update on the JANET backbone changes to extend the SuperJANET5 contract to 2013. Mark O'Leary then updated the audience on mobile networking while Dan Perry, Head, Strategic Business, presented the current status of JANET's work in shaping a sector-wide strategy for shared data centres.

The afternoon session was devoted to Regional Network delivery in the UK. A consultation paper had been distributed to the audience the week before the event. Bob Day led with a presentation on "Improving the Regional Network Delivery Model" which was followed by a panel session with discussion. The audience was given the opportunity to discuss the planned model in groups before the general discussion.

Copies of the presentations can be found at:

http://www.ja.net/services/events/2009/strategic_briefing/programme.html.

BETT Show, 13-16 January

JANET(UK) used its stand at the BETT Show to highlight the new JVCS Desktop feature (see section 4.1). This is a new software client for use with JANET Videoconferencing Service bookings that lets users of JVCS (who can be staff at any School, College or University in the UK) add a guest to their videoconference even if that guest does not have any videoconference equipment. By simply adding their email address a guest can be emailed a link that lets them download and activate the videoconferencing client on their Windows PC, and then fully join the conference using a webcam, at no extra cost.

Two standard classroom laptops were set up on the JANET stand in addition to the normal videoconference system. The simplicity of JVCS Desktop was immediately apparent to anyone who stopped by to watch videoconferences with the Beamish Museum or the National Space Centre and saw teachers using the laptops to join in by clicking on a URL. The response was very positive and teachers instantly saw the potential and the new freedom in being able to videoconference to any PC in the world simply by sending a link.

Business and Community Engagement Workshop, 19 January

Business and Community Engagement (BCE) is increasingly important for Universities and Colleges at a local, regional, national and global level, and it is important that JANET both enables and continues to support this area. To help inform strategy a JANET Stakeholder Group BCE Workshop was held in January, chaired by Professor Di Martin and attended by 25 representatives from Government departments, Research Councils, HE, FE, schools, funding bodies, sector membership organisations and JANET(UK). Presentations, discussions, comments and suggestions for future JANET strategy were given and formed a valuable element in understanding this complex partnership environment.

The funding bodies recognise that every sector in education is better served by a single homogenous network rather than having separate links and arrangements. For HE the provision of JANET is seen as a supplement to the universities grant and there is no wish to see restrictions placed on the network that will be a barrier to future growth.

Comments and suggestions from delegates will help to shape the future JANET strategy to ensure that the BCE activities are both enabled and supported. Notes and presentation slides are available for download at <http://www.ja.net/company/stakeholders.html>.

(c) Network User Groups

JANET(UK) attended the UCISA Network Group meeting on 16 December. The SWERN User Group met on 27 January 2010 and heard about the latest service updates from JANET(UK), including the recently launched [JANET Certificate service](#).

(d) Security, Regulation and Policy [\[more information\]](#)

The Digital Economy Bill, containing the Government's response to the Digital Britain Report, was published in December and debated in the House of Lords throughout January. Two aspects of the Bill concern JANET(UK): on DNS Registries and online copyright enforcement. Both parts of the Bill suffer from unclear definitions which we have been working to try to improve. On DNS registries, the Government has now amended the original definition of a 'Registry', which formerly captured any organisation running its own nameserver. As operator of the .gov.uk and .ac.uk domains, JANET(UK) will still be included within the new definition but most JANET-connected organisations should not.

The Bill also introduces a new legal regime for dealing with online infringement of copyright. ISPs will be required to pass on a subset of the infringement notices they receive, first informing their subscribers that this is unlawful, then increasing the seriousness of warnings and possibly imposing technical measures such as protocol and website filters, bandwidth restrictions or disconnection if these reports are ignored. Subscribers will be held responsible for all use of their connection, unless they have taken appropriate measures against misuse by authorised and unauthorised users. At first sight this ISP requirement appeared to be less than JANET-connected sites are already required to do to comply with the JANET Acceptable Use Policy; however it was then discovered that the definitions of 'ISP' and 'Subscriber' could actually mean that a university or college was a 'Subscriber', with their JANET connection being treated in the same way as a domestic ADSL service. E-mail and face-to-face discussions with the Bill Team have taken place to explain that this would actually harm our current measures against copyright infringement (JANET-connected sites need to receive all copyright notices in order to deal effectively with their users) as well as being harmful to education and research if technical measures were imposed on a whole university or college. This seems to have been accepted and our current policies and practices judged satisfactory though continued discussions will be needed, if the Bill becomes law before the general election, to ensure that this is recognised in the eventual Code of Practice. An article on this was published in the Times Higher Education Supplement on 28 January.

JANET's Chief Regulatory Adviser was also invited to give evidence, to the Home Affairs Sub-Committee of the House of Lords European Affairs Committee, on Commission plans to improve network resilience by enhancing the role of Computer Security Incident Response Teams (CSIRTs). A JANET response was submitted to the European Commission's consultation on revising Data Protection law.

JANET's Chief Regulatory Adviser has been elected Chair of the Funding Council of the Internet Watch Foundation.

Within JANET(UK), discussions have taken place on regulatory and policy issues of federated access management, the videoconference recording service and the use of website cookies (following a change in European law). Discussions have also taken place with the Cabinet Office on Public Sector Networking and with the JANET Stakeholders Group. JANET's course on Computers, Privacy and the Law has been presented three times, in Glasgow, Llandrindod Wells and Loughborough, and the course on Managing IT Security once in Llandrindod. Presentations on regulatory developments and JANET's approach to content filtering were given at the London Internet Exchange meeting and a talk on the JANET Acceptable Use Policy to a webinar organised by RSC South-West.

3. IP Services (SLA J3)

3.1 IP Service (SLA J3.1)

This reporting period has seen a total of 33 new or enhanced customer connections completed and brought into use:

Further Education

- Beaumont College
- Blackpool Sixth Form College
- Coulsdon College
- Lancaster and Morecombe College
- Linkage College
- Myerscough College
- Newcastle-Under-Lyme College
- Portland College
- St Brendan's Sixth Form College
- Stanmore College
- Thornbeck College
- Varndean College
- Warwickshire College
- Wirral Metropolitan College

Higher Education

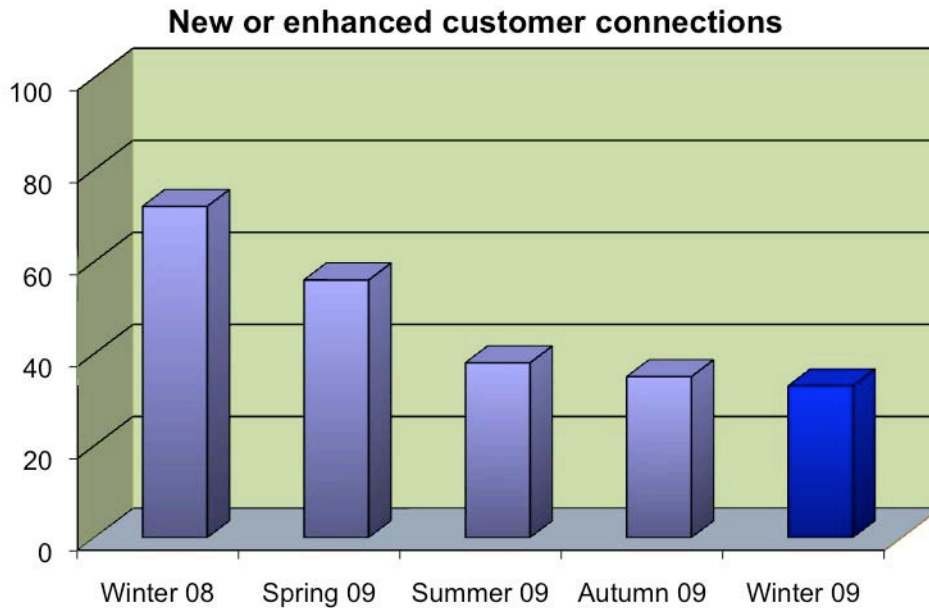
- University of Bedfordshire
- University of East Anglia
- University of Oxford
- University of Wales Institute, Cardiff
- University of Wolverhampton

JISC

- London Grid for Learning Trust

Self-funded

- Bolton Council
- Buckinghamshire County Council
- CableCom Networking Ltd
- Eastbourne Borough Council
- The Godolphin and Latymer School
- Met Office
- Oldham Metropolitan Borough Council
- Queen's College
- RM plc
- Sandwell Metropolitan Borough Council
- Sefton Council
- Trafford Metropolitan Borough Council
- Warrington Borough Council



For information regarding current upgrades or connections, please contact JANET Service Desk at: connect@ja.net

A list of all primary sites connected to JANET may be found at: <http://www.ja.net/janet-sites/>

(b) FE

England

The capital-funded project to implement upgrades beyond 10Mbit/s is approaching completion. Upgrades have now been delivered to 334 colleges.

Wales

All colleges are now connected to the PSBA Network.

(c) Core Network

A major fault occurred on 30 January on the backbone core router at Reading C-PoP that caused IP traffic flowing through that router to be black-holed by one of its cards. However, to the backbone routers everything looked normal: internal routing protocol traffic between the routers was not affected and hence they saw no reason to re-route production traffic passing through the Reading router. Consequently, during this period, regional network traffic flowing on the west side of the backbone was severely disrupted.

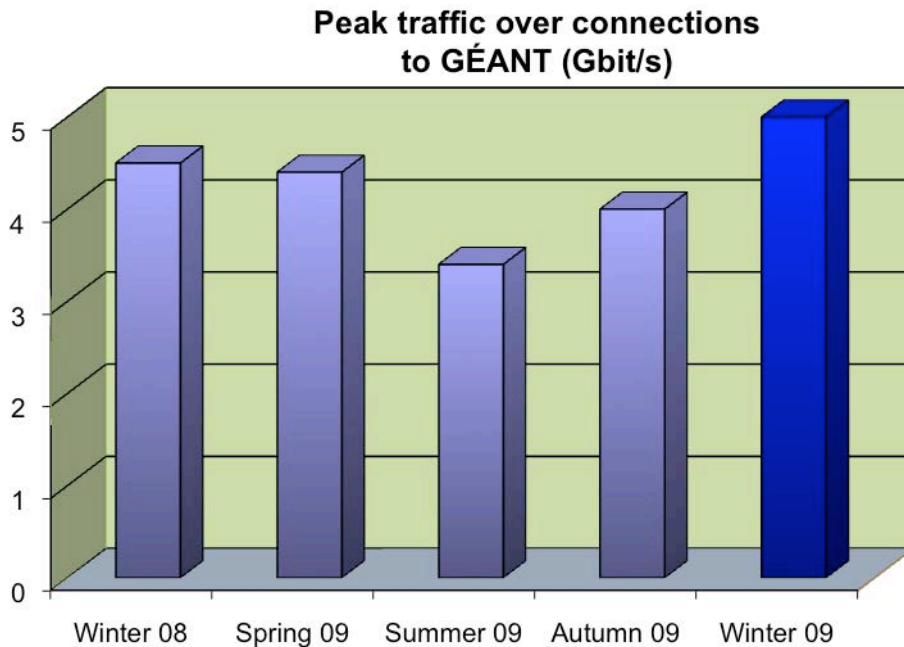
Once the location of the problem was pin-pointed, senior engineers collected as much evidence and diagnostic information as was available before recovering the situation. This information is now with the router supplier and the manufacturer, with whom we are working to identify the exact cause of the fault.

Elsewhere the core network runs without interruption. Network engineering work for re-pointing the A-end of two of Network North West Regional Network's backbone access links was completed successfully at the end of January.

(d) External Network Access Provision and Transmission

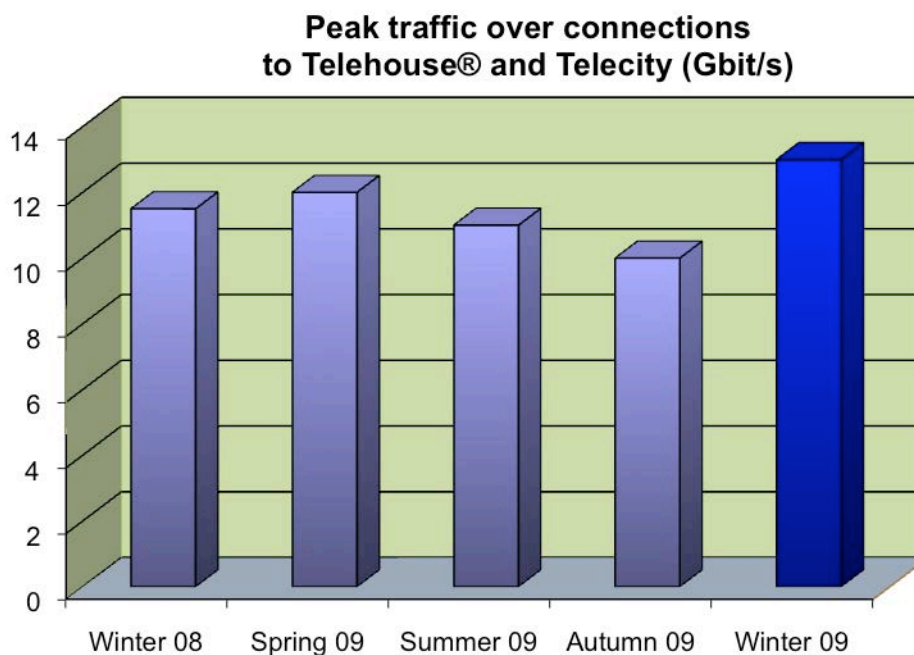
(i) Access to the European Research Network

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. Peak traffic on the connection is normally under 3Gbit/s but in the middle of November it peaked at 5Gbit/s.



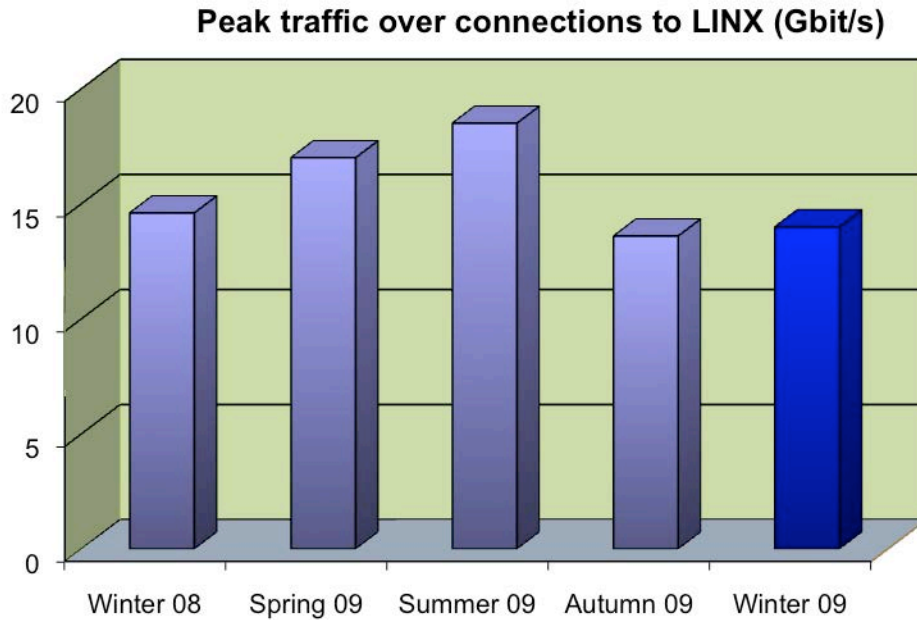
(ii) Access to the Global Internet

JANET access to the global Internet is via two global transit providers - TATA Communications and TeliaSonera. Each company provides four 10Gbit/s connection to two JANET PoPs at Telehouse® and Telecity in London. Aggregated peak traffic reached 13Gbit/s in January 2010.



(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 Teleticity PoP locations. Aggregated public peering traffic peaked at 14 Gbit/s in January 2010.



(iv) Access to CERNET

All traffic to CERNET is now via GÉANT. The service was stable during the reporting period.

(v) Access to North American Research Internets

Services are provided via GÉANT and have been stable throughout the reporting period.

(vi) Peer Networking Agreement Administration

PUBLIC PEERING CONNECTIONS

<u>Connection Point</u>	<u>AS No</u>	<u>ISP Name</u>	<u>Date of initial request by peer</u>	<u>Date all info received from peer</u>	<u>Date of accept/reject of peering agreement</u>
LINX	16164	Sohonet	15/09/2009	26/11/2009	27/11/2009
LINX	31727	Node4	20/10/2009	03/11/2009	03/11/2009
MANAP	44684	MythicBeasts Ltd	27/11/2009	03/12/2009	10/12/2009
MANAP	31523	Laterooms Ltd	02/12/2009	04/12/2009	04/12/2009
LINX	25369	Killercreation	07/12/2009	10/12/2009	15/01/2010

3.2 Fault Reporting (SLA J3.2)

The JANET Service Desk handles the fault reporting function. Fault reports should now be made to service@ja.net.

3.3 Management of Maintenance Activities (SLA J3.3)

During the reporting period there were a total of 11 planned maintenance sessions, with a moratorium on any major service affecting work taking place during the period from 18 December to 4 January.

Major activities that took place included:

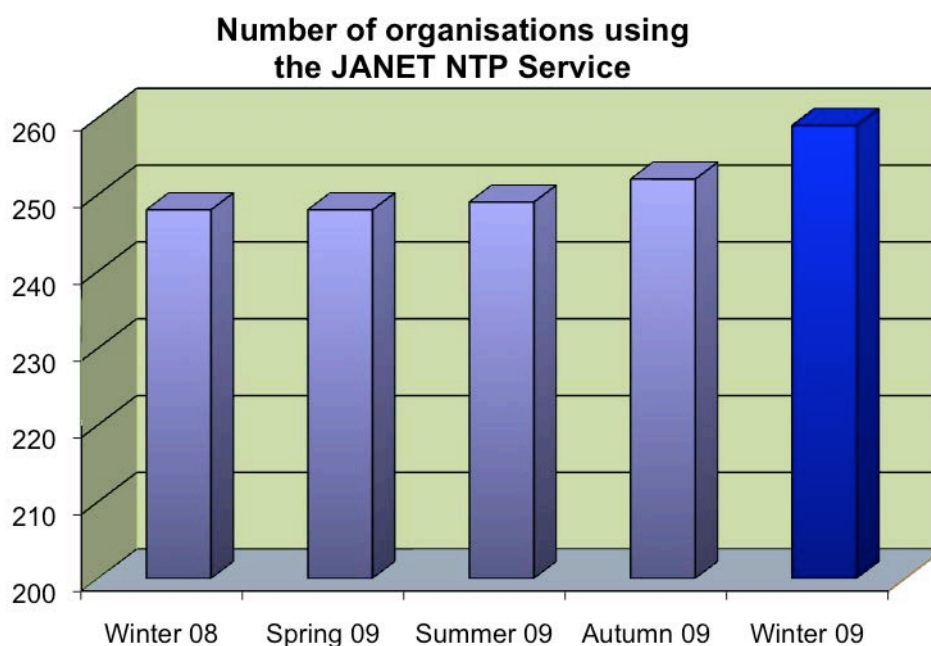
- various routers and switches decommissioned at Reading, Harwell and Docklands PoPs
- various PoPs and routers decommissioned in Scotland due to GLOW-2 migrations
- a number of connections moved to new interfaces
- IOS upgrades to a number of routers.

3.4 Network Status Information (SLA J3.4)

The new Netsight system is now the official JANET Netsight system with all local/regional networks transitioned, with the exception of PSBA (Wales). The transition project is therefore officially complete. The new system is known simply as Netsight and is operational under the remit of the JANET(UK) Service Analysis Group.

3.5 Time Reference Service (SLA J3.5) [\[more information\]](#)

Seven more sites registered to use the JANET NTP service during the reporting period. There are a total of 259 sites using it. Overall, it is a stable and well-used service.

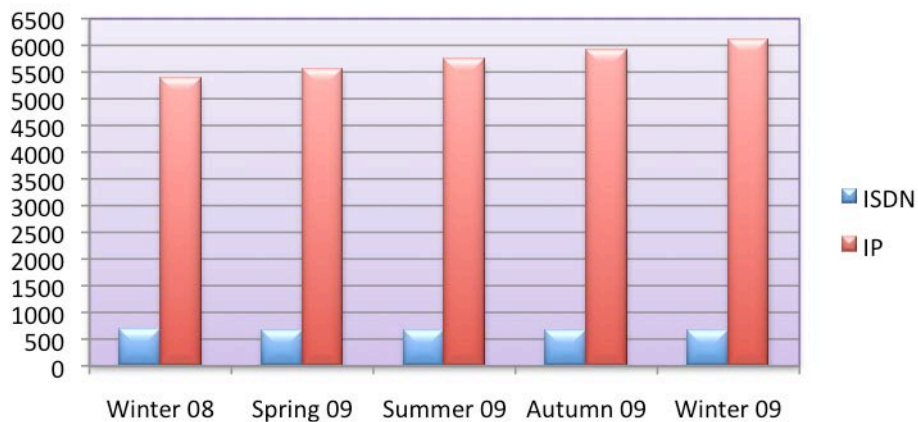


4 Application Services (SLA J4)

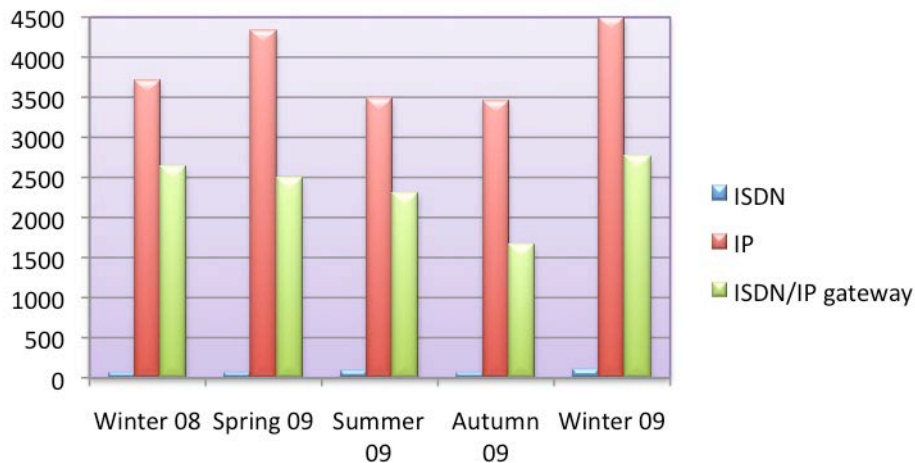
4.1 Videoconferencing Service (SLA J4.1) [[more information](#)]

The number of users of this service continues to grow steadily. Currently 6109 of the registered venues are able to use the JANET Videoconferencing Service over IP (JVCS-IP) and 655 are able to use the service over ISDN (JVCS-ISDN). During the reporting period, 101 conferences took place using ISDN only over 182 hours, 4496 conferences took place using IP only over 5440 hours, and 2760 conferences took place using the IP/ISDN gateway over 4830 hours. As expected, usage dropped during December and has begun to gather pace again. The overall statistical trend indicates an increase in the use of videoconferencing, particularly IP videoconferencing.

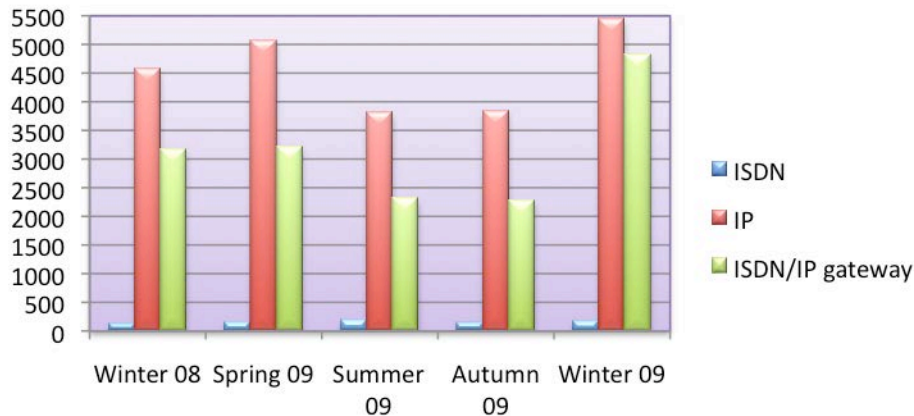
Number of venues registered to use JVCS



Number of videoconferences



Number of videoconferencing hours over IP and ISDN



JVCS ([more information](#))

JVCS Desktop Videoconferencing

A new desktop videoconferencing feature called JVCS Desktop has been integrated into the Booking Service and is now available to the JANET community.

JVCS Desktop is an application which is available to registered users of the JANET Videoconferencing Service (JVCS). It allows users to participate in a booked videoconference (containing as least one registered Booking Service venue) without having to use special hardware or software endpoints to connect to the conference. All a user needs is a Windows desktop or laptop, a webcam and headset with microphone to join in.

Bringing a user in using JVCS Desktop is as easy as bringing in any other guest. The conference booker needs the following information about their JVCS Desktop participants: name, organisation and email address. JVCS Desktop attendees then receive an email with a link to a small piece of software they need to download (only once) to use the feature and a link to join the conference itself.

For details on how to use this feature see the user guide: [Videoconferencing with JVCS Desktop Endpoints](#).

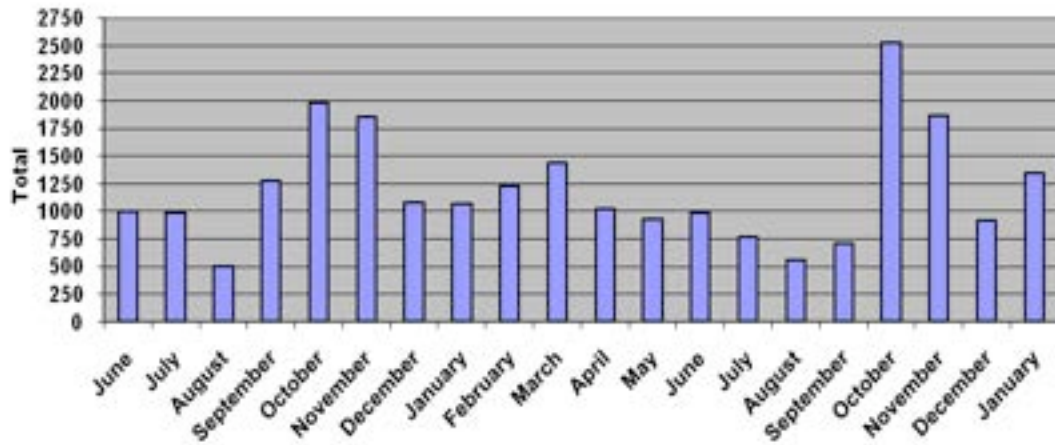
4.2 Access Grid Support Service (SLA J4.2) ([more information](#))

The Access Grid® Support Centre continues to support the users of the Access Grid® within the UK academic network, with the aim of improving user experience through robust and resilient services.

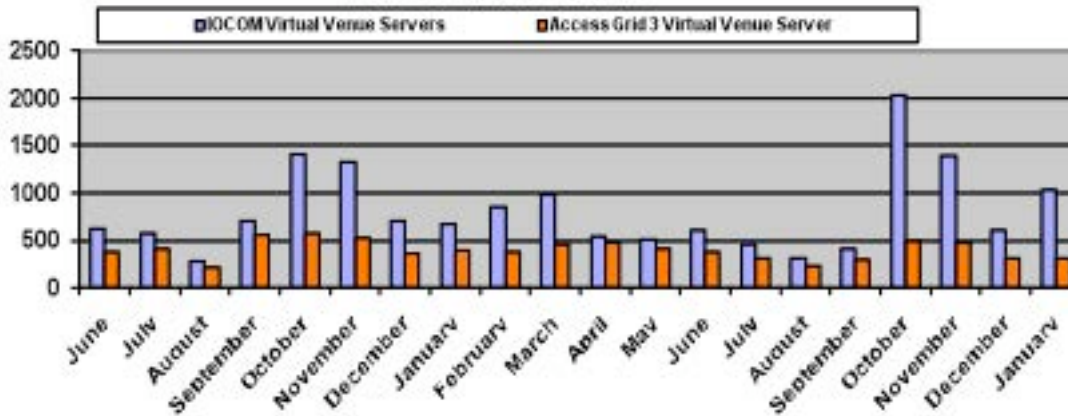
Server and Bridge Activity

The number of registered UK Access Grid nodes currently stands at 400, including the UK Academic desktop nodes, and the number of users stands at 682. The AGSC is investigating how to trace server usage that it believes is higher than indicated but is currently unable to measure.

Total Number of Conferences Jun 08 to Jan 10



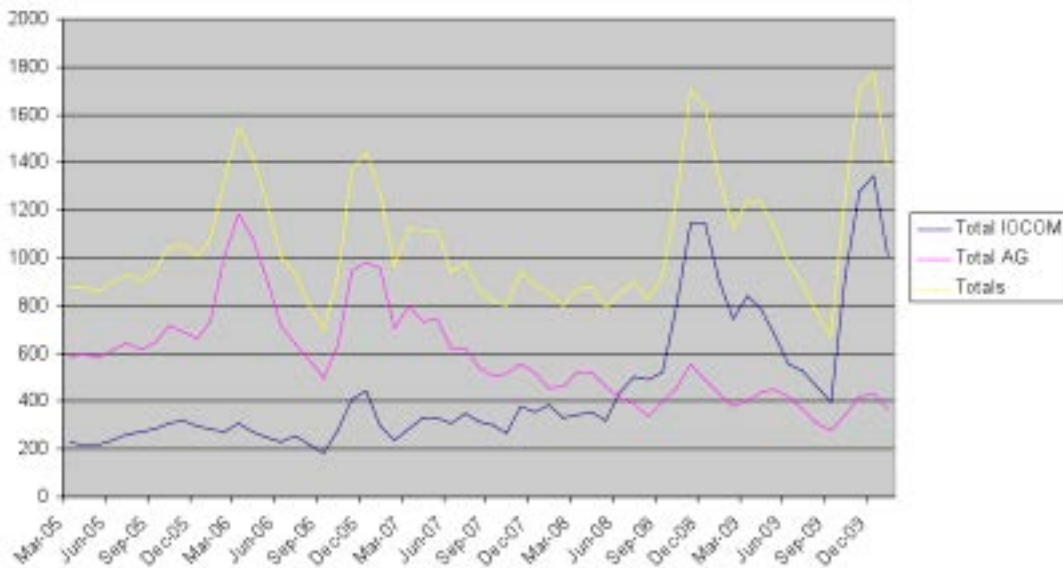
of Uses June 08 to Jan 10



Booking Service

There were 1345 uses of Access Grid during January 2010, discounting meetings under two minutes. This is higher than December's 923. The end of the Christmas break and the bad weather earlier in the month may have contributed to the lower usage.

Total AG Usage- 3 month rolling average



Conferences & Outreaches

The AGSC attended the RSC-NW Using New and Emerging Technologies (uNet) conference at Aintree in Liverpool, speaking to delegates and demonstrating Access Grid technology from the JANET Videoconferencing stand.

The AGSC also ran a demonstration day on 12 November. The day was well attended and included participants from JISC RSC and the principal of Langdon College. Langdon is a specialist independent college and is keen to use Access Grid technology to communicate with the other seven independent colleges in the North West area.

In December Access Grid and IOCOM were demonstrated to the UCL Business School, which is interested in remotely lecturing some of its courses. Access Grid and its technologies were also demonstrated to a delegation from the Ministry of Education for Brunei during the open session held on 19 January.

Customer survey

An informal AGSC telephone survey was started in November 2009. So far 35 nodes have been contacted. The aims of the survey are:

- raise visibility of AGSC to our users
- confirm we have up-to-date details about the nodes, including number of nodes, correct contact details etc.
- establish if the technology is being used (or if not, why not) and offer our services to resolve any problems
- establish what types of meetings are taking place
- reminder to users of the services AGSC can offer.

Documentation

The newly revised documents *Installing the Access Grid Toolkit*, *Introduction to IOCOM Tools* and *Introduction to Access Grid Toolkit Tools* have been added to the growing number of [documents on the AGSC website](#). Suggestions from the Access Grid community on what other documentation should appear on the site may be submitted to the AGSC via telephone or email.

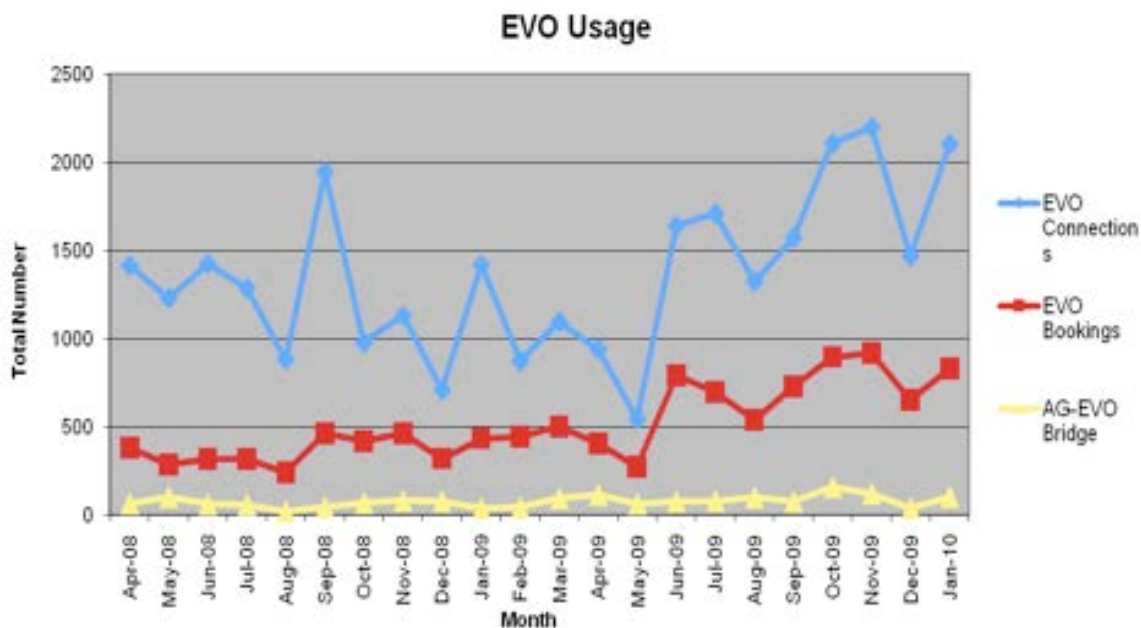
EVO (Enabling Virtual Organizations)

The new version of EVO, which is to be released soon, has been tested and evaluation comments passed back to the developers. The enhancements in the new version will include:

- a simpler interface
- a new icon toolbar
- improvements to videoconferencing (H.323) connectivity
- improved booking options.

A further announcement will be made on the AGSC website before these changes go live, at <http://www.ja.net/services/video/agsc/AGSCHome/whatsnew.html>.

An updated *Beginner's Guide to Using Evo* has been published on the AGSC Website. It builds on the version that is already available but has more information about how to have a meeting, and how to use the audio and video tools.



4.3 Usenet News Service (SLA J4.3) [\[more information\]](#)

There are now few active registered News Feed and News Read users and the current infrastructure is nearing its end of life. JANET(UK) has therefore decided that it is no longer economically viable to run the service, especially in the current financial climate. We therefore will cease to offer the service when the existing contract expires on 31 July 2010.

4.3.1 News Feed Service (SLA J4.1) [\[more information\]](#)

The News Feed Service continues to function well. There are currently 20 client sites connected to the service and most are taking a full News feed.

4.3.2 News Reader Service (SLA J4.1) [\[more information\]](#)

The News Reader Service continues to function well. There are currently 47 sites connected to the Service.

4.4 Electronic Mail Services (SLA J4.4)

4.4.1 Mailer Shield (SLA J4.4.1) [\[more information\]](#)

No more organisations have joined this service during this reporting period. After rationalisation of records for this service, the number of active recorded clients of the service is 19.

4.4.2 E-mail Advice and Testing Service (SLA J4.4.2) [\[more information\]](#)

The system continues to run reliably and effectively.

4.4.3 E-mail Abuse Protection Service (SLA J4.4.3) [\[more information\]](#)

The system continues to run reliably and effectively.

4.4.4 Web Mail Service (SLA J4.4.5) [\[more information\]](#)

There are a total of 36 sites using the service.

4.6 Nameserver Services (SLA J4.6)

4.6.1 Second Level Domain Service (SLA J4.6.1)

DNS (Servers)

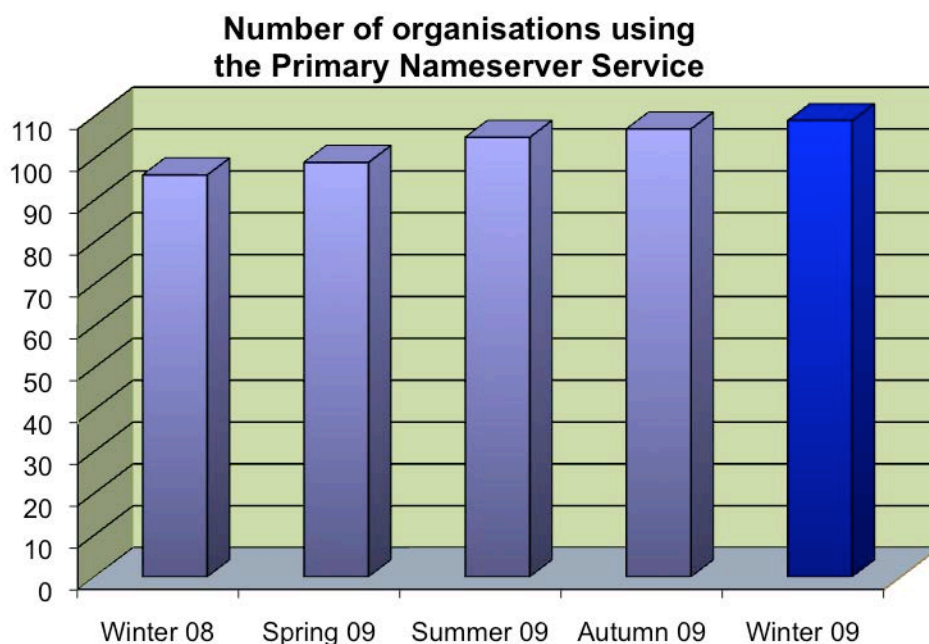
The JANET DNS service continued to run reliably with no problems encountered during this quarter.

DNS (Whois Service)

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

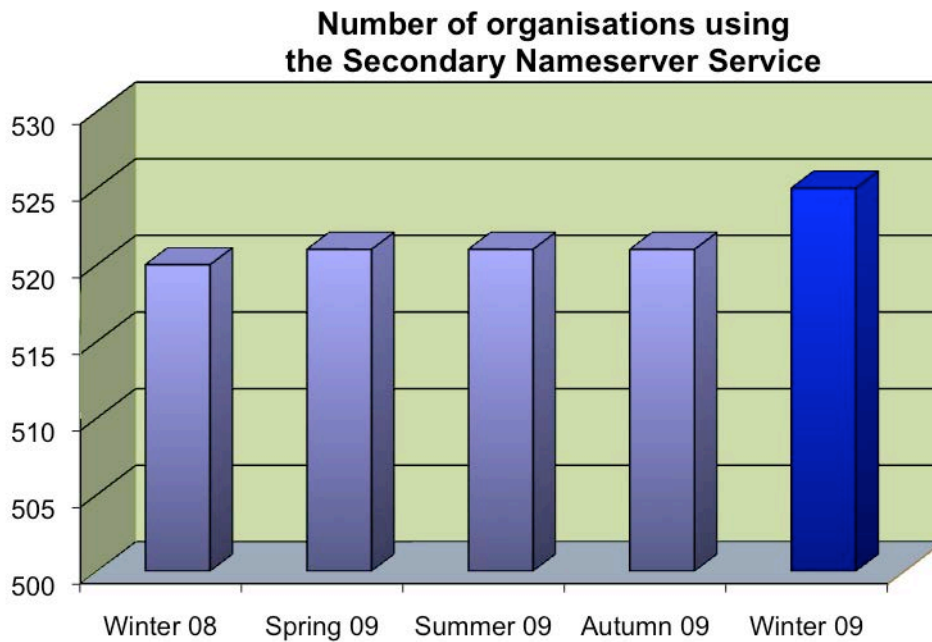
4.6.2 Primary Nameserver Service (SLA J4.6.2) [\[more information\]](#)

Two more organisations registered during the reporting period to use the JANET Primary Nameserver service. There are now a total of 109 users of the service.



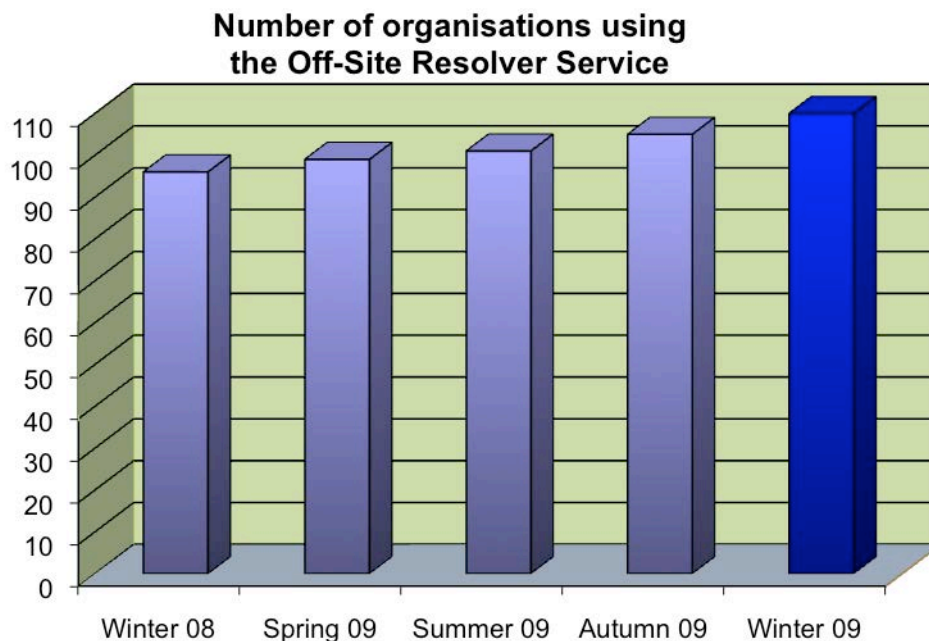
4.6.3 Secondary Nameserver Service (SLA J4.6.3) [\[more information\]](#)

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 525.



4.6.4 Off-site Resolver Service (SLA J4.6.4) [\[more information\]](#)

Five sites joined during the reporting period taking the total number of users up to 110.



4.7 Managed Router Service (SLA J4.7) [\[more information\]](#)

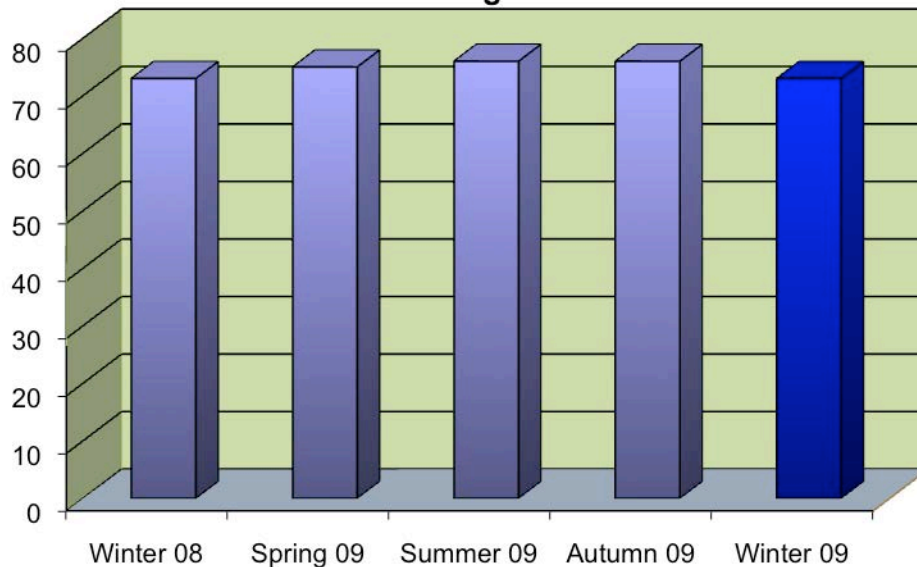
Nothing to report.

4.8 Web-Based Services (SLA J4.8)

4.8.1 Web Hosting Service (SLA J4.8.1) [\[more information\]](#)

Three sites left the service during the reporting period, bringing the total number of sites using the service to 73.

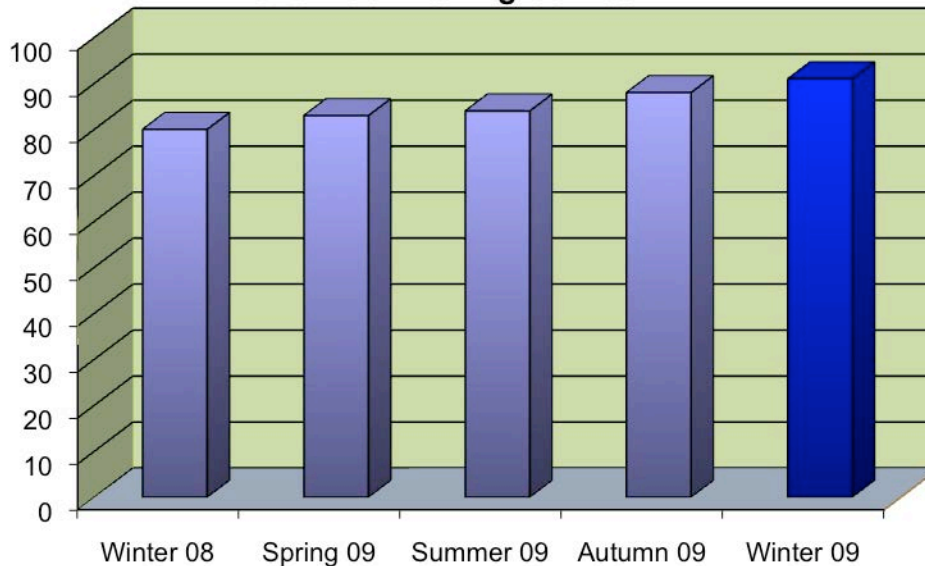
Number of organisations using the Web Hosting Service



4.8.2 Web Filtering Service (SLA J4.8.2) [\[more information\]](#)

During the past reporting period 3 organisations joined the service. A few organisations have elected to have two filtering accounts. There are currently 91 individual organisations using the service.

Number of organisations using the Web Filtering Service

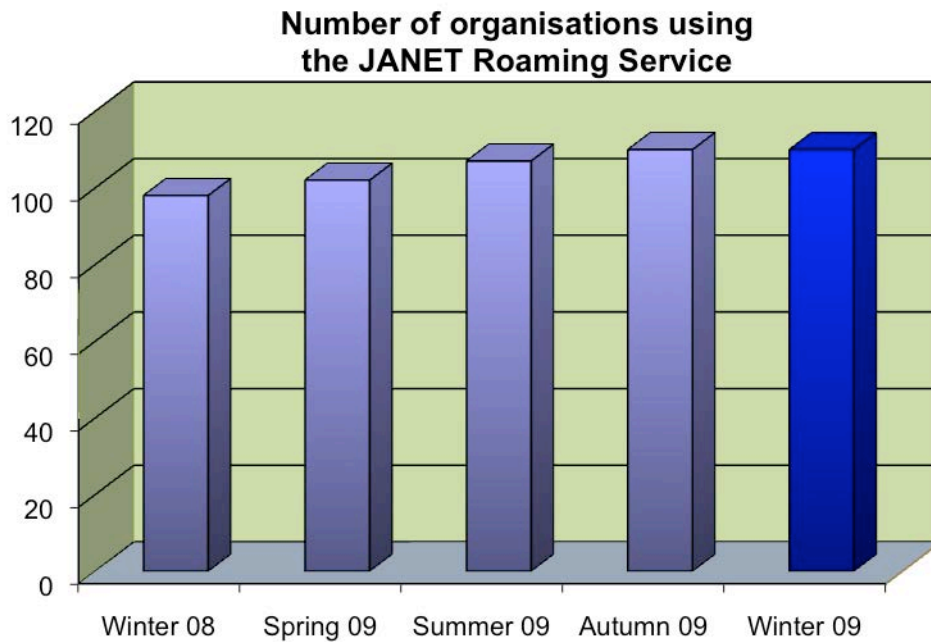


4.9 JANET Roaming Service (SLA J4.9) [\[more information\]](#)

The number of participating organisations is now 110, representing the major proportion of the higher education sector.

The release by OpenSEA of the stable version 2.2.0 of the open source 802.1X supplicant for Windows XP and Linux provides a much broader range of features than the built-in Windows 802.1X supplicant software. JANET(UK) will continue to support OpenSEA development activity and become involved in testing the Vista version which is planned for release shortly.

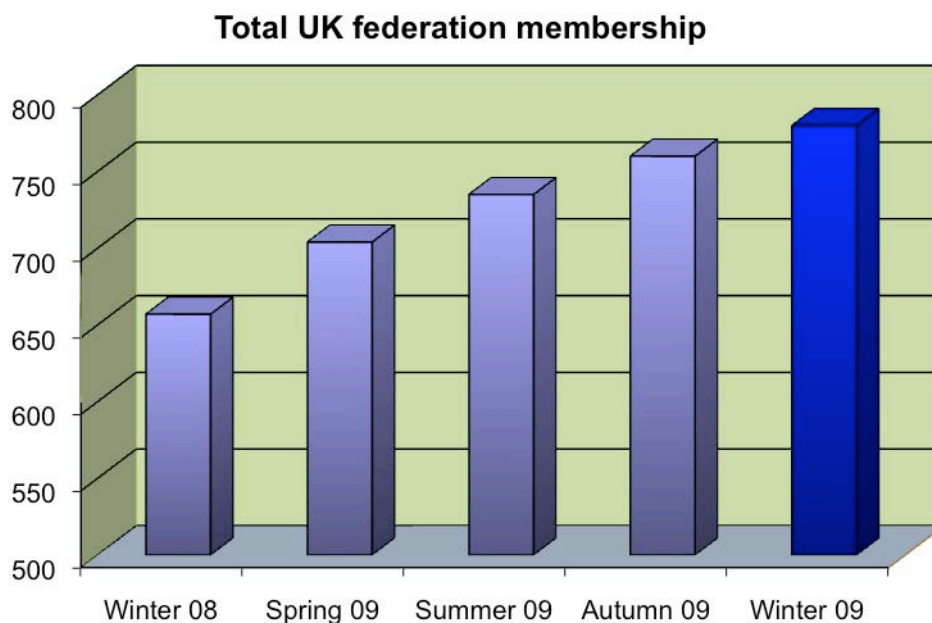
A newly redesigned JANET Roaming home web page now steers visitors more effectively towards information they seek based on the type of visitor – user, administrator or management.



4.10 UK Access Management Federation [[more information](#)]

4.10.1 Membership of the UK federation

At the end of January there were 780 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>.



4.10.2 UK federation Support, Training and Events [[more information](#)]

Documentation is now available on the UK federation website providing instructions for how to upgrade to Shibboleth 2. The UK federation will continue to support members with Shibboleth version 1.3 beyond June 2010: Internet2 developers will not issue any new security patches after this date.

The Shibboleth implementation courses continue to be very popular and are run on a cost recovery basis only. Further details of the training schedule can be found at <http://www.ja.net/services/training/schedule/by-course.html>.

5 Technology Advisory Services (SLA J5)

5.1 Bandwidth Management Advisory Service (BMAS) (SLA J5.1) [[more information](#)]

Over the last year or two, the need for and the usage of the Bandwidth Management Advisory Service has been decreasing. As a result of this, the service is due to terminate at the end of July 2010.

5.3 Video Technology Advisory Service (VTAS) (SLA J5.3) [[more information](#)]

VTAS advisors carry out unbiased evaluations of ISDN/IP videoconferencing products. During this quarter, new evaluation reports were published on the following products:

- Tandberg C20(tm), a High Definition CODEC
- LifeSize Room 200(tm), a High Definition CODEC
- Polycom® QDX 6000(tm), A Standard Definition CODEC

For more information on the evaluations and the reports, please visit:
<http://www.ja.net/services/video/vtas/productevaluations>.

5.5 Wireless Technology Advisory Service (WTAS) (SLA J5.5) [[more information](#)]

A proposal has been made by Coventry University to undertake a case study on Pervasive Wireless Networks at the university. JANET(UK) has expressed an interest in this and is now formalising arrangements with the university to allow this work to begin.

6. Training Services (SLA J.6) [\[more information\]](#)

Over 70 courses were run throughout the UK in 2009. The full course schedule for 2010 is now available on the website and courses are available for booking.

"Hands on Digital Forensics" and "JANET Roaming Implementation" will be ready to launch in June. Work is continuing on development of other new courses including "Virtualisation and Cloud Computing". NetLab is now live and is being used for the Virtualisation Fundamentals course and for the JANET Roaming Implementation course, offering authentic networking activities for delegates.

Networkshop Online has now been launched in EdLab and will host information and resources for this year's Networkshop. This will include interviews, interactive maps and programme forums, BoF session information and of course the audio and video from the presentations. Networkshop Online is now available to all registered Networkshop delegates and will be open to all from 26 April, from <http://www.ja.net/services/events/2009/networkshop-37.html>.

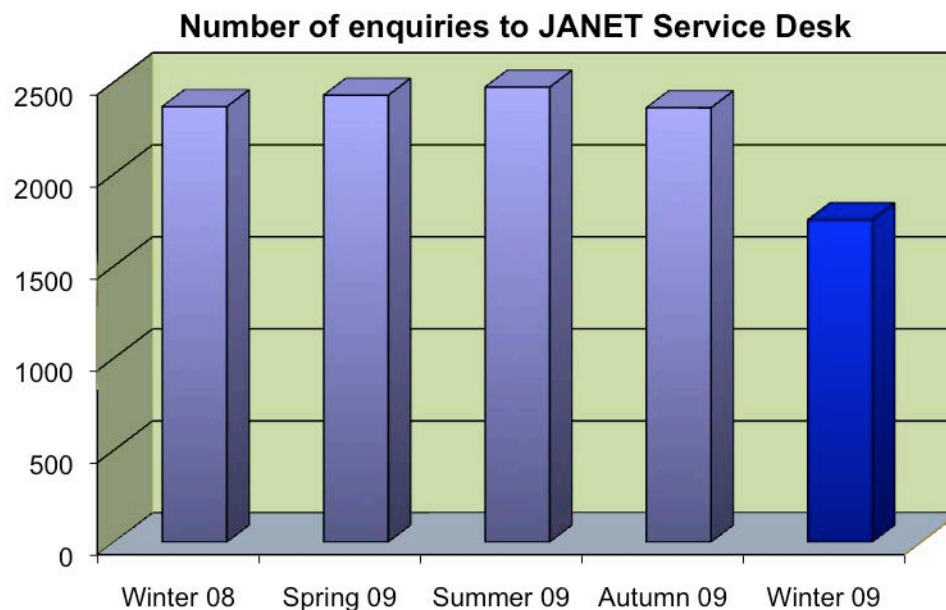
7. Administration Services (SLA J7)

7.1 JANET Service Desk (SLA J7.1) [[more information](#)]

JSD provides the primary point of contact for all enquiries concerning JANET services and requests for information. Contact information is provided below.

During this reporting period the total number enquiries received was 1752. Most of these queries related to the Domain Name registration service, requests for JANET connections, and applications or queries relating to other JANET services.

Two complaints were received, one of which has been successfully concluded in this reporting period.



7.2 Connection Services Administration (SLA J7.2)

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 that can be found at:

<http://www.ja.net/documents/publications/policy/connection-policy.pdf>.

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

A list of organisations connected to JANET during the reporting period is provided in section 3.1. For information regarding current upgrades or connections, contact JSD at service@ja.net.

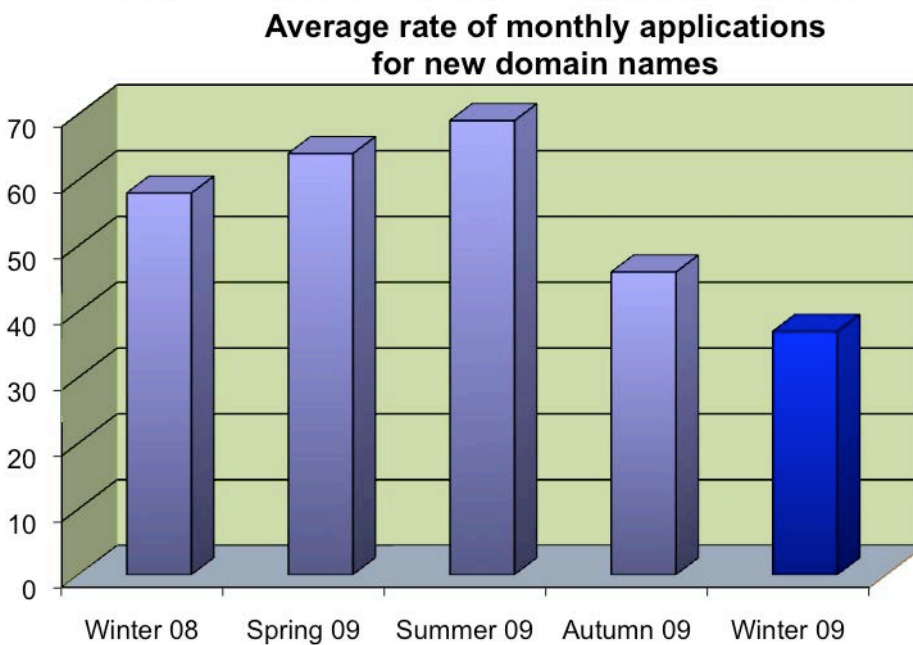
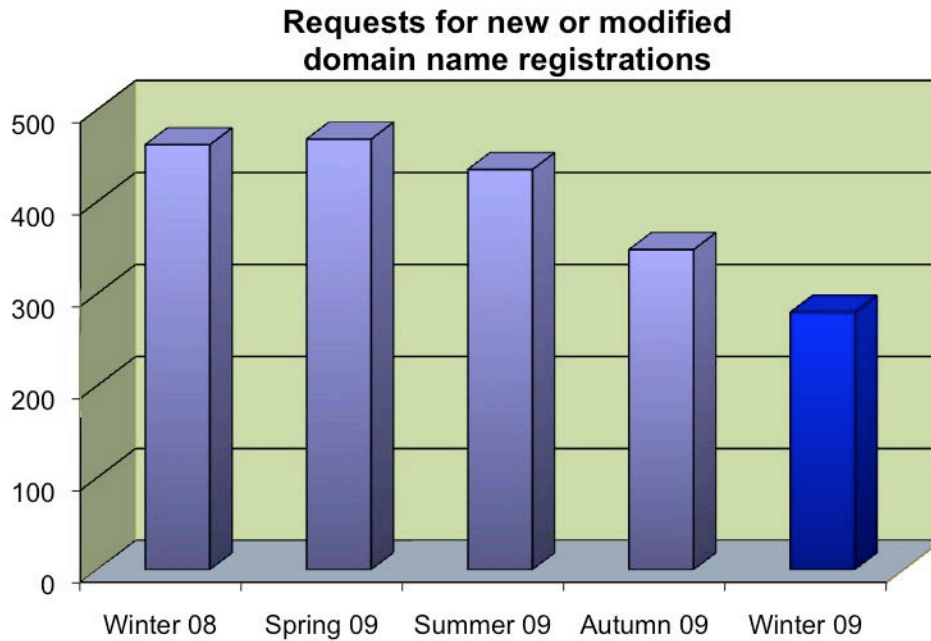
7.3 Licence Administration (SLA J7.3)

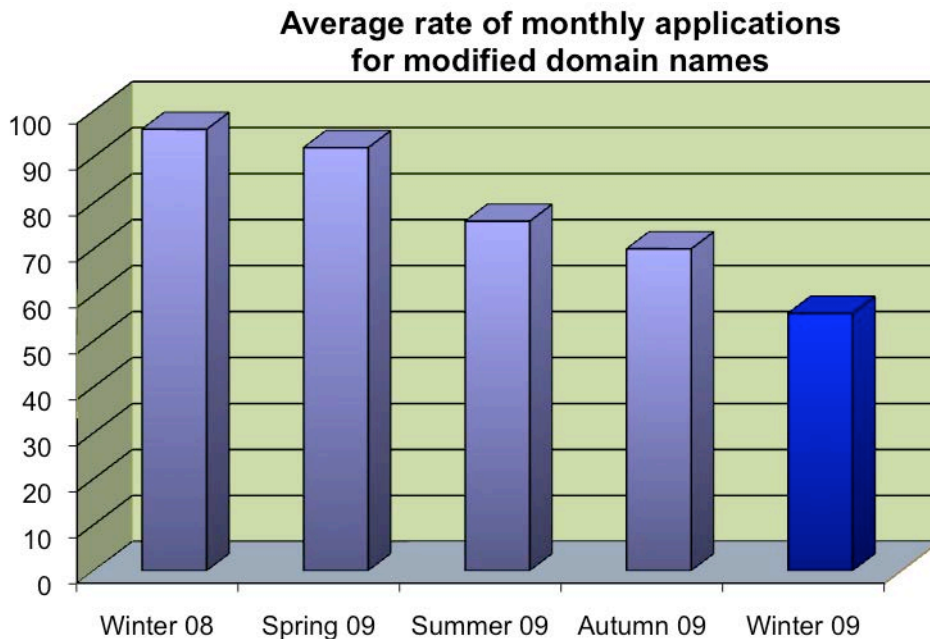
Over the past three months there have been 2 new Proxy Connection Licences and 3 new Sponsored Connection Licences issued.

7.4 Domain Name Service Administration (SLA J7.4)

7.4.1 Domain Name Registration Service (SLA J7.4.1)

During the reporting period a total number of 280 requests for both new domain name registrations and modifications to existing entries were received. The rate of applications for new domain names averaged 37 per month, with an average of 56 modifications for each month.





7.5 IP Address Assignment (SLA J7.5)

During the reporting period 14 applications were received and completed, including one application for IPv6.

IPv4 address allocation

The RIPE NCC, one of the five Regional Internet Registries that provide Internet resource allocations, has implemented a new policy regarding IPv4 address allocations. Previously, Local Internet Registries (LIRs) such as JANET(UK) could assign enough address space to end users to meet their needs for a period of up to two years. The new policy now reduces this time period to 12 months with immediate effect, with a gradual reduction in the assignment period being applied over the next 18 months. As of 1 July 2010, LIRs will start assigning enough address space to end users to meet their needs for a period of up to nine months: this is to be further reduced to a period of six months in January 2011 and finally down to 3 months as of 1 July 2011.

There has been much speculation in recent years with regards to the prediction of when the unused pool of IPv4 addresses is likely to run out, with current best estimates suggesting this will happen by the end of 2011 or early 2012. The new policy reduces the assignment periods in step with the expected life time of the IPv4 unallocated pool in order to address the perception of unfairness once the pool has run out.

The impact of this upon JANET-connected organisations is that with immediate effect, JANET(UK) can only issue organisations with enough IPv4 addresses to fulfil their needs for the next 12 month period. Subsequently, we will only be able to issue address space to fulfil organisations' needs for 9, 6 and 3 months in advance. The anticipated effect is to reduce the size of IP assignment requests as these planning periods are reduced, but we expect an increase in the number of IP requests over the longer term. It is also likely to mean that as the assignment period reduces, organisations' planning address requirements over the longer term will instead receive smaller, non-contiguous ranges of address space over that period of time.

7.6 urn:mace:ac.uk Namespace Administration (SLA J7.6)

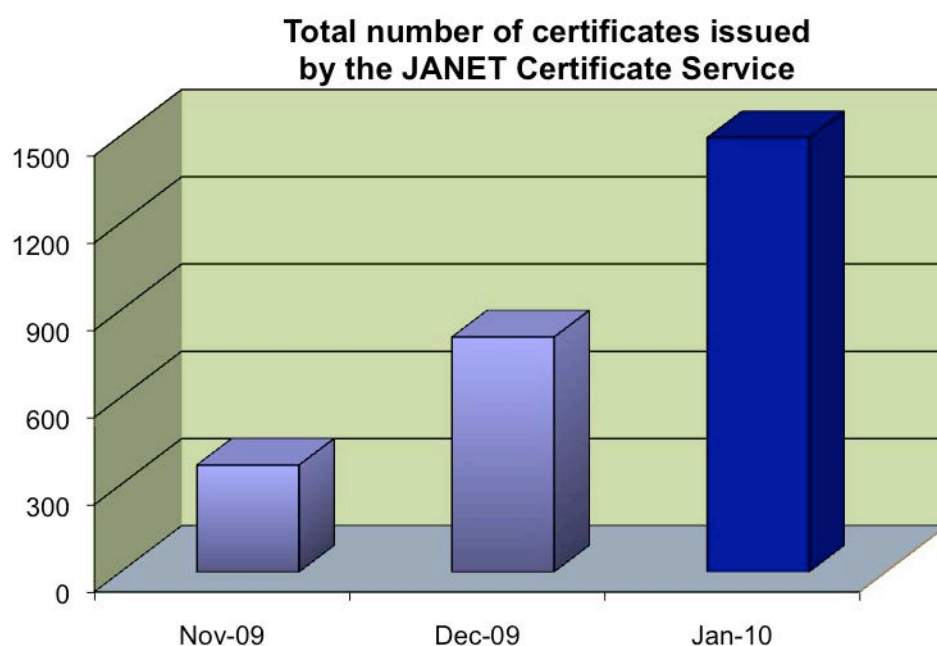
There were no new applications during this quarter.

7.7 JANET Lightpath (SLA 7.7)

No JANET Lightpath connections were made this quarter.

JANET Certificate Service [[more information](#)]

The new JANET Certificate Service was launched on 18 November 2009. By the end of this reporting period a total of 1493 certificates had been issued under the new automated system.

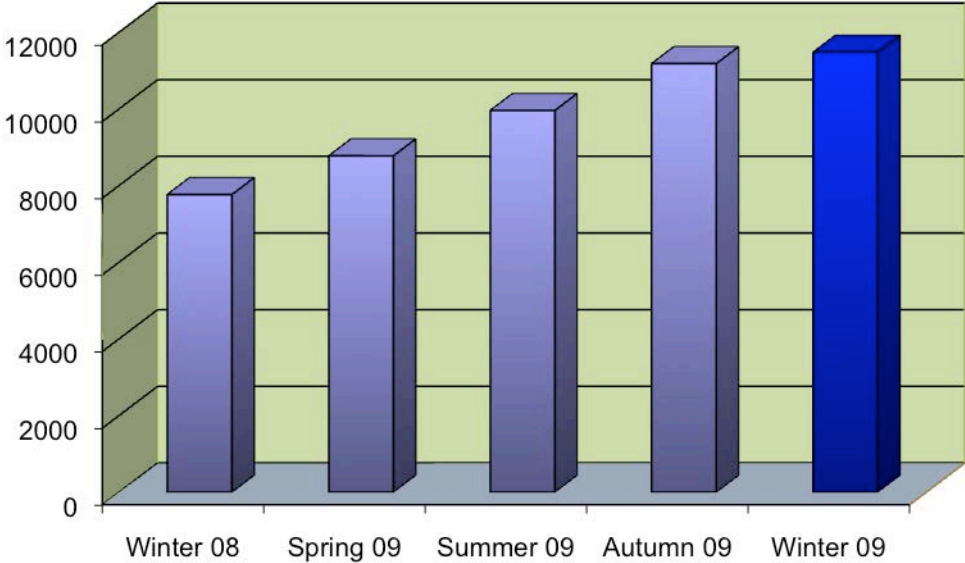


The enhanced JANET Certificate service offers a range of features through a simple online interface. This enables the automated processing of certificate requests for all .ac.uk and gov.uk domains, along with the ability to monitor and manage new certificates that are issued. This includes certificate revocations and automated alerts when these certificates are close to their expiry date. The online interface also allows federated access for nominated contacts.

While normal certificates are issued through the JANET Certificate Service at no charge, these cannot be used to secure financial transactions. However, the service now also issues Extended Validation (EV) certificates at a discounted price of \$150 (US Dollars) per annum, which are well suited for this purpose. EV certificates are high assurance certificates that require stricter checks during the request validation process. Browsers with EV support display more information to the website visitor regarding the EV certificate than for previous SSL certificates.

The old Server Certificate Service (using GlobalSign) closed on 18 December 2009, by which time the number of processed Server Certificate requests had increased by 296 to 11,480.

**Total number of certificate requests
under the Server Certificate Service**



8. Security Services (SLA J8)

The primary focus of JANET CSIRT continues to be concentrating on coping with the high level of Conficker infections and re-infections across all JANET-connected sites. The steady increase over the first quarter of this period appears to have flattened, due mainly to the efforts of the team and their work with JANET security contacts.

The usual levels of scanning for vulnerabilities in poorly configured and protected systems continue and this quarter has seen a higher than usual level of activity in scanning for open proxies.

Copyright infringement complaints are still prevalent but not in as large numbers as they have been recently.

9. Development

9.1 Federated Access Management [[more information](#)]

This area is now reported on as part of 4.10.

9.1.1 Federation Expert Group on Portal Design [[more information](#)]

The project team met on 27 January 2010 to discuss a paper to provide guidance on the use and deployment of a WAYFless URL format. Project Team members will now consult with colleagues on these proposed recommendations and report back at the next meeting in March.

9.1.2 WAYF Interface Development [[more information](#)]

Following the presentation of the consultants' usability and accessibility reports the project team have discussed the findings with a view to providing a set of recommendations for design. The team is currently considering further user experience scenarios and will be meeting in February 2010 to bring all these elements together.

9.2 Certificate Service [[more information](#)]

9.2.1 Enhancements to JANET Certificate Service

See Section 7.

9.3 Roaming & Mobility [[more information](#)]

9.3.1 802.1x Supplicant [[more information](#)]

Dot1x Special Interest Group

The 802.1X Special Interest Group (SIG) held its first meeting at the IOC London on Friday 20 November. The outcome was quite positive and a programme of work was established to look at various areas including communications, user experience focus and widening eduroam adoption.

Progress of Supplicant

The outsourced development work to Mindtree has now been accepted but further progress to incorporate this work into the Open1X supplicant has been slow due to a change of circumstance for the lead developer. Development once again is progressing and a contract with the lead developer and his team has now been established.

There has been no further version release of the supplicant from 2.1.9.704. The only changes are the availability of the X64 version and Linux installer version. Both are available at <http://open1x.sourceforge.net/>.

9.4 Network Access [[more information](#)]

9.4.2 Local-Loop Unbundling [[more information](#)]

All deliverables for this project were completed during the last quarter and will be published over the coming months on the web.

9.4.3 Location Aware Wireless Infrastructure

In the course of the ongoing PWLAN trials, activities during the last quarter have included: fieldwork trials on environmental change by the Open University team during a residential school in Durham; Lancaster University has prototyped novel hardware that uses MANEMO techniques to allow entire meshes of devices to be globally addressed via a standard commercial uplink that sees only a single device; and Leeds Metropolitan ran trials as part of a teacher education module in Langdale.

9.4.4 Mobile broadband

Third party consultants have conducted an extensive survey and ran focus groups over the past quarter to give an objective picture of the community requirements, market capability and opportunities for JANET(UK) to add value. The outcome of this work is due in January 2010, which will then inform strategic decisions to identify future activities in this area.

9.4.5 Southampton Group Design Project

The engagement with the Southampton Group Design Project successfully concluded in December 2010 with the delivery of a prototype visualisation tool for the JANET Roaming Service. The outcome of this project is to be reported to the JANET community and at TF-mobility and TNC, and the code will be shared with any interested NRENs. We are now considering ways to take forward this prototype into a production service and to adapt it to visualise usage of other services.

9.5 Network Engineering

9.5.1 IPv6

During January 2010, RIPE announced policy changes to the allocation of IPv4 address space. Further details can be found at: <http://ripe.net/ripe/policies/proposals/2009-03.html>.

9.6 Voice [[more information](#)]

9.6.2 Future work

We continue to monitor developments in ENUM to identify any potential JANET can offer within this space. Early work to understand any potential synergy with the mobile telecommunications industry is under way. The main aim is to identify whether it is possible to introduce any cost savings to the JANET community.

9.7 Video [[more information](#)]

9.7.2 Content providers

Work continues with a number of content providers including JISC, IET, Move Networks (formerly INUK) and SUB TV. Activities in this area are focused on understanding how these and other services and resources may be suitable for deployment in the JANET environment.

9.8 Measurement & Monitoring [[more information](#)]

9.8.1 Netsight [[more information](#)]

The phased rollout of the new Netsight system is now complete. The project has now entered a period of consolidation whereby several minor changes focusing on user interface and performance improvements will be made.

In parallel, work on longer term developments has restarted, including trialling the use of additional measurement types imported from external monitoring equipment, and making use of Netsight within JANET(UK) for network planning activities.

9.8.2 Flow monitoring

JANET(UK) is looking to replace its existing flow monitoring systems with a consolidated system which provides additional functionality. Following various supplier meetings, we have completed three of the four commercial product evaluations. It is hoped that the evaluations will give us greater understanding of the state of the NetFlow product market and help inform our requirements capture.

9.9 Support for Research [\[more information\]](#)

9.9.1 JANET Aurora [\[more information\]](#)

The core infrastructure for JANET Aurora has been extended to connect Aston University and the University of Southampton. The dark fibre extensions were undertaken by JANET(UK)'s contractor for this project, ntl:Telewest.

9.9.2 JANET Lightpath [\[more information\]](#)

This area is now reported on as part of 7.7.

9.10 Optical Networks [\[more information\]](#)

9.10.1 Technology Tracking

Discussions with vendors continue for both Carrier Ethernet and optical transmission equipment.

9.10.2 Carrier Ethernet [\[more information\]](#)

Three Ciena switches have been deployed at CPoPs in Reading, Warrington and Telecity in order to form the core testbed for the project. They have been configured to accept traffic from JANET organisations that are participating in the project. The first tests, which will be point-to-point between pairs of partners, will take place in February 2010. The partners have all established local testbeds consisting of three boxes apiece and are in the process of conducting local tests prior to the start of practical test across the core testbed.

Optical trial

Last year JANET(UK) was the first National Research and Education Network in the world to complete a 100Gbit/s network trial successfully. 100Gbit/s circuit technology will play an important role in underpinning the requirements of providing a scalable and reliable JANET network service and it is therefore important that JANET(UK) is fully prepared to exploit this technology at the earliest opportunity. With this objective in mind, JANET(UK), working with Verizon and Ciena completed a successful trial of Ciena's first generation 100Gbit/s optical transmission product. The trial took place over a live operational section of the JANET backbone between the Reading and Bristol network Points of Presence, with a 100Gbit/s wavelength injected into the fibre as an alien wavelength alongside wavelengths carrying operational traffic.

Verizon Business are the supplier and operator of the JANET backbone optical transmission network. The network is constructed using Nortel and Ciena optical equipment. Last year's 100Gbit/s trial was conducted using Nortel transmission equipment on an isolated fibre pair away from fibre carrying live JANET operational traffic. This latest trial not only looked at the 100Gbit/s development from the other manufacturer equipment that is used to build the

JANET optical transmission infrastructure, but also tested 100Gbit/s technology in an operational environment.

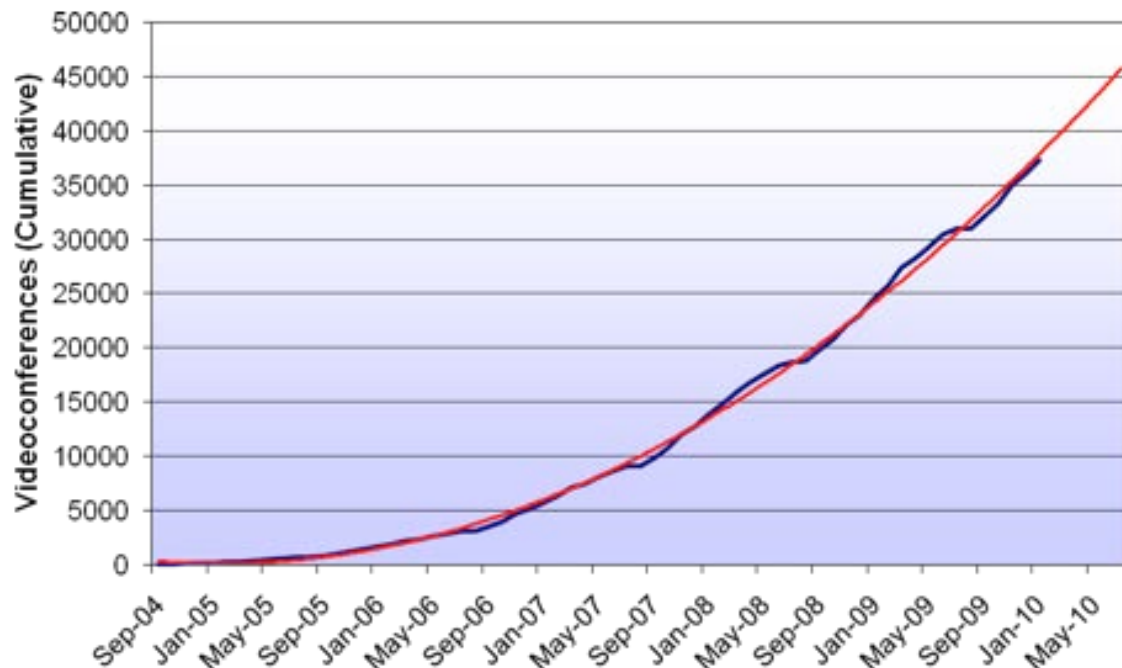
9.11 Schools Services [\[more information\]](#)

9.11.1 Content

The NEN Services Group has continued to work closely with the NEN community and Becta on a National Digital Learning Resource Strategy.

9.11.2 Videoconferencing

The take-up of videoconferencing by schools continues to grow. By the end of January 2010 the total number of schools sector endpoints registered with JVCS was just over 4100 (as compared with 3600 at the end of January 2009). Over 4000 videoconferences were undertaken this quarter (as compared with just over 3800 in the same quarter last year), 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 videoconferences, managed by JVCS throughout since September 2004, is illustrated below.



10. Community Update

(a) Regional Networks

Procurement of the new network for the East of England is close to completion. Senior engineers are now working on the detailed configuration and specification of equipment.

(b) FE Liaison

JANET(UK) attends regular meetings with the LSC, 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.

(c) Specialist Colleges

JANET(UK) attended the Specialist College Advisory Group Meeting. Doncaster Deaf Trust is looking into options for increased bandwidth and additional resilient connectivity.

(d) Scotland

JANET(UK) continues to liaise with the LTS and its supplier, Thus, to enable a smooth transition to the new SSDN network.

JANET(UK) was represented at the JISC Winter Fayre held in the National e-Science Centre in Edinburgh, a successful event which attracted delegates from both FE and HE communities. The conference was addressed by Professor Derek Law, Chair of the Board, JISC Advance. JANET(UK) was also represented at two conferences held in Scotland in November: the UCISA CISG Conference held in St Andrews and Scotland's Colleges Conference in Glasgow. The company also attended regular meetings with the SFEU (now part of Scotland's Colleges) and the RSCs in Scotland to raise awareness of JANET services, and the Regional Delivery Project Manager addressed the AbMAN Mini-Workshop event in Aberdeen in January.

(e) Northern Ireland

The rollout of the NiRAN II network was completed at the beginning of November 2009. The new network now provides 1Gbit/s connection to all HE and FE colleges in Northern Ireland.

(f) NHS/HE Connectivity Project [\[more information\]](#)

Work has continued with NHS Connecting for Health on the implementation of the jointly funded full N3 JANET Gateway service to follow on from the current early adopter. It is expected to be in place in April 2010. The new N3 JANET Gateway will consist of a 250Mbit/s "active" firewalled and monitored connection in London and an equivalent "standby" link in Manchester for resilience. All traffic between N3 and JANET connected organisations will be routed through this new Gateway (traffic is only routed to the early adopter organisations with the existing Gateway). Initially only sessions initiated in N3 will be supported. Further development and agreements are needed for sessions initiated in JANET. The use of JVCS videoconferencing across the new Gateway will remain as an early adopter project until it is clearer whether the proposed N3 videoconferencing service is to be developed.

The NHS-HE Forum on 19 November 2009 in London was well received by the 44 attendees. The next Forum is on 19 May 2010 at the same venue.

(g) Local authorities

Connections and upgrades are progressing for Royal Borough of Windsor and Maidenhead, North Yorkshire and City of York. JANET(UK) held meetings with a number of authorities including Essex County Council, Kirklees, Bedford, North Lincolnshire, Leicester City and Oxfordshire, and an event was held for the West Midlands Local Authorities.

(h) Research Councils

A new 1Gbit/s circuit has been installed at NERC's North Star House, and is pending official handover from BT and work to bring it into service. NERC is also investigating high bandwidth provision for its BGS Keyworth site.

(i) Other services

JANET(UK) met with UCAS to provide a demonstration of and to discuss options for using JANET videoconferencing services, and demonstrated the new JVCS Desktop videoconferencing service for the Royal College of Anaesthetists. The company also met with a group of West Midlands University IT Directors to discuss JANET services and future regional strategy options.

11. European Activities

(a) TF-PR & TF-MSP

The TF-PR has not met during the last quarter. The Head of International Relations attended the October TF-MSP meeting in Copenhagen and gave a presentation on the use of Quality Management Systems at JANET(UK). Further discussions are scheduled on Customer Relationship Management (CRM), ITIL and other areas of common interest to NRENS.

(b) TERENA Networking Conference [[more information](#)]

The 2010 TERENA Networking Conference will take place in Vilnius in Lithuania from 31 May to 3 June 2010. The theme of the conference is "Living the network life". Delegate bookings are expected to open at the end of February.

(c) TERENA General Assembly

The next meeting of the TERENA General Assembly will be held on 3-4 June in Vilnius, Lithuania.

(d) TERENA Compendium

The final touches are being added to the 2009 Compendium and this is now expected to be released by the end of February 2010.

(e) GEANT 3 – Service Activity 3 Leadership

eduPKI: the eduPKI task has completed a survey of the partner NRENS' Public Key Infrastructures and related services. It has also completed a parallel survey of the project's PKI services requirements. The intention is to determine which of these requirements can be usefully addressed by federating the capabilities provided by partner NRENS. A Business Case for eduPKI is approaching completion, which will describe and justify the planned service.

eduroam: a revision to the eduroam policy is being planned. This is anticipated to be a relatively modest update, providing some additional clarity and simplifications.

eduGAIN: the eduGAIN task has continued to make good progress with the technical and policy developments. In parallel, work has started to implement the service's operational systems and develop the service's marketing plan. A Business Case for eduPKI is approaching completion which will describe and justify the planned service.

(f) GEANT 3 - JRA1 Task 1 "Carrier Class Transport Network Technologies"

JANET(UK) has contributed to the first JRA1T1 deliverable, "Transport Network Technologies Study", by co-authoring the following sections: Ethernet developments (QoS, 100GE and OAM), PBB-TE, General QoS, and Layer 2 Routing. The deliverable will be published by the end of February 2010.

12. The Company

Elections to the JANET Board for 2010 were held on 3 February. For the HE constituency we welcome Ian Griffiths of Nottingham Trent and Brian Gilmore from Edinburgh University. Following the retirement of John Peacock, for the FE constituency we welcome Neville Dart from Stockton Riverside College.

Full details of votes cast are given at: <http://www.ja.net/documents/company/agm-election-report-2010.doc>

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 08.00 to 18.00 Monday to Friday, with voicemail available for calls outside these hours or if staff are temporarily unable to answer a call.

Enquiries may be made by e-mail, telephone, fax, post, or in person, as follows:

E-mail: service@ja.net

Telephone: 0300 300 2212

Fax: 0300 300 2213

Post: JANET Service Desk, Lumen House, Library Avenue, Harwell Science & Innovation Campus, Didcot, Oxon OX11 0SG

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