In this issue of HotLINX...

**Inside Story**

In our “In the Spotlight” interview we speak with Martin Levy, Director of IPv6 Strategy at Hurricane Electric. Read his forthright views now on the future for IPv6.

**LINX Members**

Sales & Marketing Manager, Richard Yule provides the latest membership news and stats plus advice on IPv6 configuration. We also focus on LINX members Gyron and Zen Internet.

**IPv6 Workshop**

The LINX IPv6 Workshop, hosted by LINX CTO Mike Hughes and co-sponsored by BERR, was hailed as a great success. Turn to page six for our detailed four-page event overview.

**Public Affairs**

In our regulatory section, LINX Head of Public Affairs, Malcolm Hutty, gives his views on the new data retention law. Also featured are comprehensive updates from ISOC and RIPE.

**Industry Events**

The LINX65 meeting and Council election is reviewed in our industry events section along with news from recent LINX meeting sponsors Telehouse, Brocade and Geo.

**LINX Community**

LINX recently began issuing instant updates using the social networking tools Twitter, posting video content on YouTube and advertising events and services via LinkedIn. Turn to page 15 now for more information on LINX Network Community activity.

Addressing The IPv6 Issue

Are you ready for the move over from IPv4?
Peering Never Easier Than With LINX

LINX is the IXP of choice for more ISP and content delivery networks than any other exchange in the world. New research confirms that peering at LINX has never been simpler with figures showing that 85% of all LINX members offer either an open or selective peering policy. Of these 70% are completely open with just 30% peering selectively. LINX now has 330 members with fewer than 50 operating a practice of restrictive peering.

The willingness of members to peer is further illustrated by the fact that over half of the LINX membership make use of the multilateral route servers. This free service provides members with the opportunity to peer with over 170 networks having configured only one BGP session - an excellent way for new members to get peering quickly. This facility is in addition to the traditional bilateral peering arrangements still very much in use across the exchange.

LINX also offers the option of private network interconnects between members. This provides a cost effective method of taking larger traffic flows to dedicated fibre and will be augmented by a 1GE/10GE DWDM service between sites in the coming months.

John Souter, LINX Chief Executive Officer said: “We were delighted to see from our research just how open and receptive LINX members are to peering. Part of the LINX remit as a mutual Internet exchange is to provide members with the services they need to help develop their networks and the multilateral route servers and private interconnect facilities are just part of that. Ease of peering is essential to any open network operator which is why LINX has more members than any other exchange point in the world.”

LINX has developed and maintains two separate LANs with equipment from switch vendors, Brocade and Extreme Networks at 10 London locations. Switches are deployed in two diverse networks to provide an extra level of fault-tolerance, the logic being that both systems should not develop the same fault at the same time. Therefore, at least two switches (one from each vendor) are installed in every LINX location.

The 10 sites are interconnected by multiple 10 gigabit Ethernet circuits (across dark fibre) to form two physically separate backbone rings (one with Brocade equipment, the other Extreme).

For more information on peering opportunities at LINX please contact the LINX Sales & Marketing team. You can email on sales@linx.net or telephone using +44 (0)20 7645 3501.

IPv6 Workshop Gives LINX Members the Bigger Picture

May I welcome you all to issue 18 of the LINX membership magazine, HotLINX. Eagle-eyed readers will have noticed that the page count of this edition has again risen from the usual 12 up to 16. This, incidentally, represents a 100% increase on the eight pages of last year’s Summer issue.

There’s no doubt what the big story is this time - it’s IPv6. Back in March LINX, in association with BERR, the UK Department for Business, Enterprise & Regulatory Reform, held a specialist workshop on IPv6 to focus on the rapid depletion of available IPv4 address space. This was a fantastically well attended event and it is hoped that similar workshops can be arranged at strategic points in the future. As you’d expect, the content encouraged some in-depth debate amongst attendees, which is why we have dedicated so much space to the topic. Pages 6, 7, 8 and 9 are all handed over to the workshop programme with many photographs from the event.

To complement the story Martin Levy of Hurricane Electric also gives his spin on the IPv6 issue as he is invited to answer questions in our ‘In the Spotlight’ interview. Meanwhile Richard Yule also discusses the subject in his quarterly sales update on page 4.

Elsewhere in HotLINX18 we have updates from ISOC and RIPE in a new governance section, an expanded new member feature complete with detailed peering information plus an overview of how people can follow what is happening at LINX via LinkedIn, Twitter and YouTube.

As always, if you would like to make a submission for the next issue of HotLINX (August 2009), please email me via hotlinx@linx.net. You can also use this address if you would like to request any additions to the HotLINX mailing list.

Jeremy Orbell, HotLINX editor

You can download earlier editions of HotLINX at: www.linx.net/publicity/hotlinx
For the ‘In the Spotlight’ feature in this issue of HotLINX we spoke to Martin Levy, Director of IPv6 Strategy at Hurricane Electric. He has vast experience in the Internet industry and is someone ideally placed to talk about the future for IPv6 deployment. Martin spoke with HotLINX editor Jeremy Orbell.

**Please can you tell me about your background and your career to date?**

I’ve worked in the Internet industry for about 28 years now. In the early 80s I was a software developer at Bell Labs and got involved in TCP/IP at its inception. In the early 90s I was based in Silicon Valley working primarily on networking. It was a very exciting time to be working in the industry as technology was developing at quite a pace. Since then I’ve focused on building networks across the United States, Europe and Latin America and joined Hurricane Electric in 2008.

**What is it about IPv6 that so interests you?**

IPv6 first attracted my attention in 2001 when it was clear that IPv4 depletion was going to be an issue at some point. It was a classic ‘inquisitive’ interest - it was something new and it demanded to be researched to see how it would impact the industry in the future. While it was possible to experiment with IPv6 back then, it was still very immature technology. Two or three years later things began to fall into place. Pretty soon the technical side was sorted out and people realised that IPv6 will be a positive step. Now it’s evident that v6 is an absolute requirement for anyone doing business with IPv4 backbones. I converted what was initially a simple interest into a passion based on serviceability and making that service the best it could be for those that need it.

**Are we where we should be with IPv6?**

It’s true the industry should be much further along than where it is at present, but there is some good news. The uptake from networks, traffic levels and peering players such as LINX is now growing significantly and enterprises are seeing IPv6 as important too. The slowest uptake is from access providers and this is something we need to work on. All it needs is for a company to do simple, early stage deployment to get their feet wet and take it from there. There is definitely light at the end of the tunnel for savvy broadband players. However, domain registry systems certainly need more focus. Getting IPv6 DNS registry glue-records in every registry is needed and this step is fundamental to ensuring v6 registration. Sweden is ahead with .se but other domain registrars still have manual processes or simply no way of doing this.

**Why do you think there has been a delay in moving to IPv6?**

One aspect is the lack of sufficient v6 content and the other is the perception that IPv6 is difficult to implement - it isn’t. If you know IPv4 configurations, it’s translatable to IPv6 configurations. Backbone ISPs should not worry, because while IPv6 is different, the basic concepts are identical with extras like auto-configuration and vastly more address space. Everyone should be made aware that they can become IPv6 compliant very quickly and easily.

**What content do you see being important in attracting IPv6 take up?**

Organisations such as Google have a vital role to play as they drive much of the industry’s awareness of what content is available. Google has been promoting this for over a year now and others are following which can only be a good thing. We see many other portal players becoming IPv6-enabled. What is maybe more important is that we see hosting providers, including ourselves, that have enabled many-many thousands of websites to be available in both IPv4 and IPv6. We know of hosting companies with nearly 50,000 IPv6 enabled web sites. This is an encouraging trend.
New Members  Spring 2009

**ASDASD**
- **ASN:** 28929
- **Country:** Italy
- **Network:** ISP
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.225.99
- **Web:** www.asd.asd.it
- **Email:** peering@asd.asd.it
- **Tel:** +39 04 1862 2319
- **Peering DB:** Yes

**Cobalt IT**
- **ASN:** 30890
- **Country:** Romania
- **Network:** NSF
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.224.101
- **IPv6 Address:** 2001:7F8:4::1A9
- **Web:** www.cobalt.it
- **Email:** peering@cobalt.it
- **Tel:** +40 21 200 9934
- **Peering DB:** Yes

**FATTOC**
- **ASN:** 14076
- **Country:** USA
- **Network:** NSF
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.224.122
- **Web:** www.fattoc.com
- **Email:** peering@fattoc.com
- **Tel:** +1 310 285 2772
- **Peering DB:** Yes

**LBi**
- **ASN:** 42369
- **Country:** United Kingdom
- **Network:** Content
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.224.81
- **Web:** www.lbi.com
- **Email:** peering@lbi.com
- **Tel:** +44 20 7063 6800
- **Peering DB:** Yes

**Link 11**
- **ASN:** 34309
- **Country:** Germany
- **Network:** NSF
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.224.107
- **IPv6 Address:** 2001:7F8:4:8605:1
- **Web:** www.link11.de
- **Email:** peering@link11.de
- **Tel:** +49 69 2609 0620
- **Peering DB:** Yes

**NORDUnet**
- **ASN:** 2603
- **Country:** Sweden
- **Network:** Educational/Research
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.225.24
- **IPv6 Address:** 2001:7F8:4::A2B
- **Web:** www.nordu.net
- **Email:** peering@nordu.net
- **Tel:** +46 82 078 60
- **Peering DB:** Yes

**Sohonet**
- **ASN:** 16164
- **Country:** United Kingdom
- **Network:** NSF
- **Peering Policy:** Selective
- **IPv4 Address:** 195.66.225.92
- **Web:** www.sohonet.co.uk
- **Email:** peering@sohonet.co.uk
- **Tel:** +44 207 292 6900
- **Peering DB:** Not yet

**The Planet.com**
- **ASN:** 21884
- **Country:** USA
- **Network:** Content
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.225.105
- **Web:** www.theplanet.com
- **Email:** peering@theplanet.com
- **Tel:** +1 281 714 3555
- **Peering DB:** Yes

**Transversal**
- **ASN:** 47999
- **Country:** United Kingdom
- **Network:** Content
- **Peering Policy:** Open
- **IPv4 Addresses:** 195.66.225.102, 195.66.227.102
- **Web:** www.transversal.com
- **Email:** peering@transversal.com
- **Tel:** +44 1223 723382
- **Peering DB:** Yes

**FATTORC**
- **ASN:** 36944
- **Country:** South Africa
- **Network:** Research & Education
- **Peering Policy:** Open
- **IPv4 Address:** 195.66.225.31
- **Web:** www.tenet.ac.za
- **Email:** peering@tenet.ac.za
- **Tel:** +27 82 303 3133
- **Peering DB:** Yes

**TENET**
- **ASN:** 16164
- **Country:** United Kingdom
- **Network:** NSF
- **Peering Policy:** Selective
- **IPv4 Address:** 195.66.225.92
- **Web:** www.tenet.ac.za
- **Email:** peering@tenet.ac.za
- **Tel:** +27 82 303 3133
- **Peering DB:** Yes

**NEW MEMBERS**

**Linx IT Sales & Marketing**

**Richard Yule**
LinX Sales & Marketing Manager

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**Sales Update**

**For the Period**
February - May 2009

Our feature article this quarter covers the highly successful IPv6 workshop. Demand at registration exceeded our expectation and confirmed the renewed interest in the topic that was evident at LinX63. Following the event we have heard from many LinX members that are using the techniques discussed to roll out IPv6 on their networks. This is mirrored by the number of new LinX members setting up both IPv4 and IPv6 on their peering interfaces from day one of their connection.

This has led to 76 members peering with the LinX collector router, an optional, but recommended step for all members peering IPv6. In addition there are now almost 60 networks configured for multilateral IPv6 peering using the LinX route servers. This option is becoming increasingly popular as members take advantage of the many open peering policies for IPv6 traffic.

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**European Peering Forum 4**

LinX, AMS-IX, DE-CIX and Netnod are hosting the fourth European Peering Forum on 14 & 15 September in Copenhagen, Denmark. Netnod has joined the host teams for the first time in 2009 and is taking the lead in the organisation for this year.

This unique event will bring together over 200 individuals from the respective member organisations. These are the peering networks that have an interest in not only negotiation and strategy, but also the operational aspects of peering.

In addition to the forum program, the traditional dinner on the first conference day will provide attendees with the ideal opportunity to socialise with their peers.

The European Peering Forum website will contain all the relevant details you will need regarding attending the EPF4 event:

www.peering-forum.eu
Zen Internet, one of the UK’s leading ISPs, has appointed Andrew Saunders as Head of Product Management and Marketing.

Andrew brings to Zen a wealth of management experience from the Telecommunications industry, having held senior product development, marketing and channel management positions with a number of blue chip equipment vendors.

Immediately prior to joining Zen, Andrew worked for a WiMAX Fixed Wireless Access provider. His previous experience also includes time with Avaya, Mitel, Samsung and SDX Business Systems, where he was responsible for their award winning INDeX system. Andrew also has extensive experience within the Channel sector, including as General Manager of the Nortel business unit at Crane, now part of the Westcon Group.

Zen’s range of services includes Broadband, Leased Lines, IP VPN, Domain Names, Windows and Linux Web Hosting, Dedicated Servers, Managed Hosting, Colocation, Voice, Managed Firewalls, Online Data Backup and Web design. Please visit the Zen Internet website for further details: www.zen.co.uk.

New Gyron Data Centre Facility Gets June Opening

Gyron, a leading UK provider of colocation services, have announced that their new Hemel Hempstead based Centro datacentre facility opened for business on the 1st of June 2009 with over 70% of the initial capacity pre-sold.

Conveniently located close to the M1 and M25, the facility is set within a secure 50,000 sq ft compound and has 3MVA of HV power through redundant supplies, and multiple fibre providers on-site. The facility has been fitted out to a high specification, with all infrastructure installed with a minimum of N+1 redundancy, and certain key elements at 2N. A state-of-the-art IP CCTV system and access control system provides security, including man-traps and biometric iris scanners.

The facility uses highly energy efficient design principles, with enclosed rack hot aisle containment and economical chilled water cooling allowing standard rack densities of 4kW, rising up to a maximum of 24kW.

Colocation space is available from individual racks up to private suites, complemented by a wide range of connectivity and management services. All power, cooling and connectivity services are covered by comprehensive 100% uptime Service Level Agreements.

“Gyron has been providing colocation services for over nine years now, with five of those as a member of LINX. We have established a wide reputation for our high specification, no-nonsense services and look forward to building on this at our new Centro facility in Hemel Hempstead” said Gyron Director, Robin Balen.

“We’re very pleased with both the level of interest and number of agreements already signed with both existing and new customers at the new facility”.

For more information on Gyron’s new data centre and other services please visit www.gyron.net, call +44 845 888 6900, or email sales@gyron.net.
LINX has staged a major deployment workshop dedicated to the topics of IPv4 depletion and IPv6 implementation. The event was designed to promote the features and benefits of using IPv6 especially in light of the decline of available IPv4 address space. Such was the interest in IPv6 that well over 100 industry professionals attended the London workshop looking to learn more about the techniques and tools needed to offer IPv6 on their networks.

Current estimates are that there is as little as 11% remaining of the total number of IPv4 addresses, which could be exhausted in as little as two years. In contrast, IPv6 is an addressing scheme that uses 128 bits that allows for a total of 340 billion billion billion unique addresses. However, while the advantages in making the transition from the current IPv4 infrastructure seem clear, it does require careful management to ensure that all elements of the move to IPv6 are transparent to end users. For this reason the take up in the industry has been relatively light with the limited amount of IPv6 content available also a factor.

The event was co-sponsored by the Department for Business Enterprise & Regulatory Reform (BERR), part of the former DTI, who along with LINX were looking to bring IPv6 to the top of the industry agenda.

The programme for the workshop was dedicated entirely to the technical issues of IPv6 implementation and operation. It featured sessions on how to make the transition, the tools currently available to implement it and methods on how to take IPv6 to users via broadband. Also highlighted were recommended processes and best practice techniques plus case studies on IPv6 deployment from Claranet and from the RIPE NCC. RIPE NCC are one of the five regional registries providing Internet resource allocations including IPv6 addresses.

Andy Davidson, who attended and presented on behalf of Netsumo, commented: “This was a great event. The content was pitched perfectly and was exactly the kind of meeting we needed to accelerate the community’s adoption of IPv6.”

The event programme was co-ordinated and chaired by LINX Chief Technical Officer, Mike Hughes. He said: “We were delighted at the response we had to this workshop. The feedback has shown that there is a strong desire for similar events in future including special IPv6 tutorial sessions and we will be doing all we can to facilitate these for the community.”

For more information on the LINX IPv6 workshop including audio visual content, please visit: www.linx.net/ipv6
Introduction

The IPv6 Workshop was held at the Goodenough College in London on Friday 13th March 2009. The event was aimed at an audience of network architecture and network engineering staff and focused on practical IPv6 deployment, primarily through the sharing of experience and knowledge gained by those who have already deployed IPv6 or are in the process of doing so.

The meeting was co-sponsored by LINX and BERR - the UK Department for Business, Enterprise & Regulatory Reform. BERR is a UK government department which was formed following the disbanding of the Department of Trade and Industry (DTI). It has a wide range of responsibilities covering company law, trade, business growth, employment law, regional economic development, and consumer law.

Workshop Content

The program of this informal event was led by the needs of the ISP and network operator community. The content was focused on real world issues and their practical solutions with the goal of ensuring that attendees left with skills necessary to deploy IPv6 in their own networks.

- Case studies of existing IPv6 deployments by LINX members
- Discussion of IPv6 deployment “gotchas”
  - Dual stacking on existing routers and the implications
  - Hardware and software limitations, etc.
- IPv6 CPE and IPv6 to the edge (e.g. over broadband)
- Deploying and security basic/essential services (e.g. DNS, mail) over IPv6
- Planning IPv6 deployments (e.g. address planning)
- Operational tools for the IPv6 network operator
IPv6 Event Program

Presenter comments and sound bites from the LINX IPv6 Workshop

How to Transition: Mechanisms and Methodologies
Jean-Marc Uze, Juniper Networks

“If by 2012 the buffer of IPv4 addresses is empty, that means that something has to be done. A few years ago the IPv6 debate was more a ‘chicken and egg’ problem. People were looking for business drivers and applications for IPv6 but today we are more in the model of ‘carrot and stick’ with the stick being IPv4 depletion. There should be a carrot later when we have the new applications but the real motivation for the service provider in the last 12 months has been IPv4 depletion.”

For further information from Juniper Networks please visit: www.juniper.net

IPv6 Now!
Freddy Kuenzler, Init 7

“I was happy to present at the IPv6 workshop back in March because I was keen to share our v6 experience with other members of the industry. Basically if anyone has decent v4 knowledge then v6 is not rocket science. The concept and most of the commands are similar to v4 so all a network engineer needs is just a few quiet hours and some sample configs to get v6 going.”

For further information from Init 7 please visit: www.init7.net

IPv6 to the customer edge over DSL
Adrian Kennard, Andrews & Arnold

“One of the biggest challenges we will face is getting the message through to businesses and individuals that change needs to happen, and soon. It all sounds like an urban myth ‘the Internet is running out’. ISPs have to lead the way, meeting the technical challenges and encouraging IPv6 take-up. At AAISP in our new router development for FireBrick, we have made sure IPv6 is built in at the start so that IPv6 is easy for ISPs to deploy.”

For further information from Andrews & Arnold please visit: www.aaisp.net.uk

IPv6 Resource Allocation: Process and Best Practice
Arno Meulenkamp, RIPE NCC

“The LINX IPv6 workshop was a pleasurable experience. It was well organised and provided me with useful information about companies who have, like the RIPE NCC, successfully deployed IPv6. It was encouraging to see that vendors are working towards providing full feature parity with their hardware. More importantly, the workshop gave me the opportunity to explain how easy it is to get IPv6 addresses. If you need them, come and get them!”

For further information from RIPE NCC please visit: www.ripe.net

Case Study: IPv6 Deployment at Claranet
Dave Freedman, Claranet

“My suggestion is to deploy IPv6 to office and NOC lans with the appropriate security. Give your staff a taste of working with IPv6 and many of them will end up supporting it. Also, don’t charge customers for IPv6 but make it an additional part of your standard service offerings. IPv6 is here to stay, quite extensively deployed and it should be our job to make it both usable and supportable.”

For further information from Claranet please visit: www.clara.net
IPv6 Workshop

IPv6 Event Program

Presenter comments and sound bites from the LINX IPv6 Workshop

ISOC IPv6 Initiatives
Mat Ford, ISOC

“IPv6 deployment has been on people’s to-do list for many years, but imminent IPv4 address run-out is sharpening the focus on this critical issue for Internet evolution. The LINX IPv6 workshop demonstrated that the technology is ready and the deployment itself need not be complex or expensive. The Internet Society (ISOC) is supporting IPv6 deployment through a range of activities aimed at industry, public policymakers and educational outreach.”

ISOC’s report on its organisation member study is available via www.isoc.org/ipv6.

BERR Perspective on Internet addressing and the likely IPv4/IPv6 Migration
Jim Reid, BERR

“We are preparing a paper on IPv6 internally to help formulate Government policy. The general feeling is that IPv6 migration is going to be business led, or perhaps more appropriately, market led. This is going to be something the Government is going to suggest is left up to the market and organisations themselves to decide when they want to do this. We are also going to seek some input from a range of external bodies to take some soundings and then the paper will go for internal discussion within Government and other Government departments.”

For further information from BERR please visit: www.berr.gov.uk

IPv6 Tools
Andy Davidson, Netsumo

“We provide NOC services for a wide variety of organisations who each have different networking needs. As many of these have already deployed IPv6, it is important for v6 services to be supported at least as well as IPv4. For this reason we have been monitoring the health and quality of IPv6 NOC tools for some considerable time and are particularly pleased that in the fields of monitoring, security and provisioning, the maturity of v6 NOC tools are improving rapidly.”

For further information from Netsumo please visit: www.netsumo.com

Case Study: Enabling v6 on primary services (e.g. DNS)
Jaco Engelbrecht, Claranet

“My conclusion is that many of the challenges are superficial - underlying architecture and principles have not really changed. IPv6 gives us the opportunity to do things differently and improve upon them, for instance addressing plans, security and monitoring. Don't be scared – take the plunge!”

For further information from Claranet please visit: www.clara.net

Case Study: Deploying IPv6 on RIPE NCC services, IPv6 operational experiences learned from RIPE Meetings
James Aldridge/Erik Romijn, RIPE NCC

“At this point all RIPE NCC services are IPv6 supported, though IPv6 connectivity at RIPE meetings depend on the event location. Most host organisations offer native IPv6 connectivity but we still occasionally resort to a tunnel back to Amsterdam.” (James Aldridge)

“IPv6 is not a toy anymore. But be aware that IPv6 code may not be as mature as IPv4 code and the amount of work required for adoption highly depends on the type and quality of existing services.” (Erik Romijn)

For further information from RIPE NCC please visit: www.ripe.net
On Monday 6th April the Data Retention (EC Directive) Regulations 2009 came into force, making the European Data Retention Directive a part of English law for the first time. The Data Retention Directive requires ISPs and telecommunications providers to retain communications data such as customer records, but not the content of communications.

Both major consumer broadband providers and telephone companies have been retaining communications data so that it may be accessed by law enforcement since the UK government first introduced the policy in 2001. The Anti-Terrorism, Crime and Security Act 2001, a rag-bag collection of unrelated and challenging Home Office policies first created a voluntary data retention regime. At the time, the Home Office planned to convert this into mandatory data retention, but opposition in the House of Lords forced the government to pursue the policy through the EU instead, during the British presidency of the European Union in 2005.

Drawing on its British origins, the Data Retention Directive requires ISPs to retain specified elements of communications data. The most important to law enforcement are records of which an IP address was assigned to a customer at any given time. Details of the source and destination of e-mail and Internet telephony must also be recorded but in practice are rarely used. The utility of such ISP information pales into insignificance compared with the use of itemised telephone call records, however, which are accessed by the authorities hundreds of thousands of times a year.

Although the principle of data retention is relatively simple to explain, precise specifications of ISPs’ obligations are hard to come by. The European Commission has convened an Experts’ Group on Data Retention to produce advice for Member States and industry on implementation of the Directive. A key finding has been that the requirements are imposed on Internet access providers and providers of e-mail servers: transit providers have no such obligations nor need ISPs’ record details of e-mail sent using customer mail servers or third-party systems like Hotmail and Gmail.

The European Directive states that all public electronic communications networks and services must retain the specified data, but the British government takes a more pragmatic approach, saying that no ISP need bother with data retention unless the Home Office has formally issued it with a notice to retain. This pragmatism relates closely to the British government’s policy of reimbursing the full cost of compliance to the ISP, albeit without a profit element.

The policy that a formal Home Office notice was required before an ISP incurred a legal obligation to retain data was written into the law following LINX representations to the Home Office that a discrepancy between the letter of the law and Home Office practice left the ISP assuming legal risk for government policy.

Since the European Parliament and the Council of Ministers have not agreed on this issue, the Telecoms package will now go into a process called “conciliation”, when one side or the other is expected to back down. If neither side retreats, the entire package will be withdrawn.

The Financial Times reported that European mobile operators and ISPs cheered at the news. However, several EU member states are against the amendment.

France has become the first country to defy the EU’s three strikes’ amendment. Only a week after the EU voted, the French National Assembly and Senate passed their version of the ‘three strikes’ law known as HADOPI. It now creates a state agency in France that will ban Internet users from the web if they are suspected three times of illegal downloading.

IWF Appoints New Chair

IWF

The Internet Watch Foundation has appointed Eve Salomon as its new Chair of the Board of Trustees. Eve Salomon comes to the IWF after spending time as an independent international consultant in media regulation and law. She is a Commissioner of the Press Complaints Commission and also a Gambling Commissioner. She was also a member of the independent Better Regulation Commission, advising government on how to improve the quality of regulation and reduce regulatory burdens.

Pirate Bay Verdict: Guilty

Intellectual Property Legislation

A Swedish Court came down with a guilty verdict on charges for assisting copyright violation for Pirate Bay operators Fredrik Neij, Peter Sunde Kolmisoppi, Gottfrid Svartholm Warg, and Carl Lundstrom. The four defendants were sentenced to a one year prison sentence and the record labels were awarded 2.73 million Euros in damages. Pirate Bay is appealing the ruling.

Nominet Governance Review Published

DNS

Nominet has published the governance review written by Professor Bob Garret. The review was conducted in response to concerns raised by BERR and stakeholders about the composition of membership, voting processes and the roles of the Board.

You can read the full review at: www.nominet.org.uk/news/latest
IPv6 To Keep The Internet Open
Internet Society Champions IPv6 Deployment

Society, moderated a distinguished panel of experts to discuss the pressing need to adopt IPv6. The discussion ranged across current progress, issues facing network operators, and options regarding IPv6 deployment.

During the event, Lorenzo Colitti of Google argued that IPv6 “will allow the Internet to continue to operate as we know it. It will allow the development of new applications… that would not be able to be developed if nobody has public IP space anymore. [IPv6] will keep the Internet open.”

The panel built on a recent survey of Internet Society organisational members, which range from small businesses to large corporations, ISPs to enterprises, and vendors to network operators, providing a wide cross section of IPv6 usage models.

The report highlights increasing customer interest in IPv6 as a prime motivation for deployment. Many respondents noted that their IPv6 deployment was relatively straightforward, but that a key missing element is the lack of support for IPv6 in applications.

All the presentations and audio from the panel are available on the Internet Society website, along with links to the survey and the Internet Society’s ongoing IPv6 promotion efforts.

For full details, see: www.isoc.org/ipv6

With the free pool of IPv4 addresses expected to be exhausted within the next two to three years, accelerated IPv6 deployment is increasingly seen as central for the continued growth and stability of the Internet. To promote deployment, the Internet Society is actively working with its members and other organizations by sharing information and helping to build vital operational capability among the Internet community.

As part of that effort, the Internet Society organized an expert panel held on 24 March in conjunction with a meeting of the Internet Engineering Task Force (IETF). Leslie Daigle, Chief Internet Technology Officer at the Internet Society, noted that although various factors have made deployment slower than originally envisaged, nothing has changed the fundamental need for IPv6.

Kurtis Lindqvist of Netnod/Autonomica noted that although various factors have made deployment slower than originally envisaged, nothing has changed the fundamental need for IPv6.

Google’s Lorenzo Colitti argues that IPv6 “will keep the Internet open”.

Governance Update

The Organisation for Economic Co-operation and Development (OECD) has welcomed representatives from Internet technical organisations as partners in its work on communications policy issues.

Referred to as the Internet Technical Advisory Committee (ITAC) to the OECD’s Information, Computer and Communications Policy Committee (ICCP), ITAC comprises a broad range of organisations from the Internet community. Through its commitment to the Internet’s ethos of community, collaboration, and industry self-regulation, ITAC will provide counsel and the expertise of technically focused organisations, such as the RIPE NCC, to aid the OECD in its work on the Internet economy.

ITAC’s contribution will be delivered in a decentralised, networked approach to policy formulation for the Internet economy.

The groundwork for ITAC was laid during the preparations for the OECD’s Ministerial Meeting on the Future of the Internet Economy, held in Seoul, South Korea in 2008. For the Ministerial Meeting, the OECD called upon various groups to provide informed input for the ministers’ work.

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Details of ITAC’s members, mission, and input are available on the organisation’s dedicated website. Please visit: www.internetac.org
2009 Council Elections the Main Event at LINX65 AGM

The LINX65AGM took place at the Goodenough College in London on 18/19 May. The AGM is always an eagerly anticipated meeting as it features the Council elections plus news on the annual accounts.

LINX Council Elections
At each AGM LINX holds elections for two places on its representative Council. The term for those elected is currently three years at which point the member is required to retire from their position and stand again if they so wish.

Three candidates had confirmed that they would be standing for election on this occasion. These were current Council members Raza Rizvi and Patrick Gilmore (Akamai) plus Thomas Mangin of Exa Networks. Following a hard fought contest Raza Rizvi and Patrick Gilmore were duly re-elected.

Day One - Monday 18 May
The first day featured the LINX AGM session plus the Council elections and voting. Rob Shakir presented some useful tips on how to handle BGP attribute errors while Richard Halfpenny spoke on QOS at the edge for VOIP. Also on day one was a report on the recent IPv6 specialist meeting via a specially edited highlights video and a panel session on IXP co-operation involving Kurtis Lindqvist (Netnod), John Souter (LINX) and Mauro Magrassi (MIX).

Day Two - Tuesday 19 May
On the second day of LINX65 the program included Adrian Kennard of Andrews & Arnold speaking about 21CN for ISPs while Nigel Titley updated attendees on what’s happening at the RIPE NCC. Meanwhile, in a special networking session the attendees were encouraged to interact and find new peers by taking part in a ‘Peering Passport’ game which had proved so popular at the European Peering Forum (EPF3) last year.

Also on the agenda was an update from Nominet plus information on the latest members to join LINX hosted by Sales & Marketing Manager Richard Yule. LINX CEO, John Souter, provided his usual quarterly update as did Malcolm Hutty, who presented a two part public affairs report alongside a lively Q&A session with the Home Office.

Mike Hughes, LINX Chief Technical Officer, provided an overview of the current LINX network position before closing proceedings by explaining L2 failover protocols and intersite transmission services.

LINX Meeting Format and Webcast
While LINX membership and meeting attendance has increased over recent years, there are still many members who are unable to attend our meetings due to a variety of organisational, logistic and economic reasons. The webcast is a great way of being involved with the stream accessible by members via an authenticated link on the website on the day of the meeting.

For further background reading on the LINX Council please visit: www.linx.net/about/council

The candidate platforms and other election documentation can still be viewed from: www.linx.net/member/events/meetings/L65/L65-election (member log-in required)

LINX65 Agenda
The LINX65 meeting was sponsored by TelecityGroup and IP Performance, who both provided updates for their respective organisations over the course of the two day event.
Geo: The Four-Step Solution

Looking for a network upgrade that is robust, reliable and based on the latest technology? Raza Rizvi, non-executive director at LINX, gives his inside view on the process that resulted in hiring Geo for the job…

Step 1: The need

“It began with our members asking for the ability to connect to the LINX infrastructure and pass more traffic among themselves, without having to rely solely on our Docklands sites.

“It meant picking suppliers who had optical fibre that we weren’t already using, and that avoided the scenario where a JCB digs up the road and takes out the old and new network.”

Step 2: Arrange your options

“We went through a lengthy process of speaking to pretty much all the carriers in the London Metropolitan area.

“In the end, Geo had put together the proposal that best met our technical requirements. They showed the most willingness to work with us; they gave us the most amount of information prior to purchase, and the most cost-effective quote.”

Step 3: Enjoy the feeling

“The process is moving ahead. We have the new sites signed up, following complex legal negotiations. Geo has done the site survey, and is chewing at the bit to get started.

“Geo have been responsive, attended to our needs, and turned things round quickly. We have also been able to get quick access to the technical planning team.”

Step 4: Look to the future

“Geo is providing us with an optical fibre ring that will bring us more new members, and help to bring them a whole load of new customers.

“We are one of the largest exchange points in the world, doing over 450Gb per second at peak. We want to offer more capacity to the members and also allow them to connect from geographically dispersed locations.”

Geo please visit: www.geo-uk.net

Contact Geo
Tel: +44 20 3326 9500
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Brocade Proud To Sponsor LINX64

Brocade was pleased to sponsor LINX64 and used the opportunity to reinforce the value it sees in the long-term supplier relationship it has with LINX and its service provider membership. This was the first opportunity to do this under the new name, since the acquisition of Foundry Networks by Brocade in late 2008.

Andy Moore, Director of Service Providers, who remains LINX’s high-level contact in the Brocade EMEA operation attended in person, and talked with a broad range of LINX members represented at the meeting.

Comment

Andy told us, “As ever the content and enthusiasm shown in the meeting underlines the innovative DNA of this key community in the Service Provider market. LINX has reinforced its commitment to Brocade by purchasing several of our switches in 2008, including a NetIron MLX-32 (pictured). This offers industry-leading port capacity and density with up to 128 10-GbE. Also, it provides a solid, future-proof network platform which can cope with the rapid pace of technology change toward higher density 100GbE and the advent of 100GbE.”

If you would like more information on the products and services on offer from Brocade please visit: www.brocade.com

Contact Brocade
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Telehouse Europe are proud to announce the development of their new green data centre facility within the London Docklands site. Construction is well underway and the data centre will be ready for operation by the end of Q1 2010. Telehouse West is part of a global expansion plan to meet surging demand for data centre space serving businesses across all industry sectors.

Telehouse Europe is the first major data centre to gain planning permission in London since stringent sustainability requirements were written into the city’s legislation. One of the reasons for the project’s approval was the range of innovative green schemes Telehouse and the WSP Group, a London-based international sustainability and engineering consultancy, have put into action.

The partnership will see Telehouse West save up to 1,110 tonnes of CO2 emissions per annum and provide up to nine megawatts of power for the local neighbourhood. The energy savings will equate to boiling 3,000 kettles continuously. The disposal of waste heat from cooling systems is one of the most significant sustainability issues associated with data storage. This will be the first time a heat export strategy has been introduced in the UK for this type of data centre facility.

The Telehouse West heat-export strategy follows on from “The Mayor’s Energy Strategy”, introduced in London in 2004 by the then-mayor Ken Livingstone. The heat-export element of the mayor’s requirements was worked out in consultation with the Greater London Authority during the planning assessment stage. The viability of this scheme was enhanced by the fact that a new housing development is also planned for the vacant site next to where Telehouse West will be built.

“We recognise that any attempt to address the lack of space within the data centre industry has to be undertaken with a level of environmental awareness,” Bob Harris, Telehouse Europe’s technical services director, said in the statement. “By making good use of the waste heat from the facility, we can minimise the environmental impact of Telehouse West and provide a valuable resource to the local community.”

Telehouse Europe’s existing data centres in London and Paris were the first purpose-built colocation facilities to gain ISO 14001:2004, the internationally recognised standard for environmental management. Telehouse operates a robust management framework to deliver continuous improvement in environmental performance - a key issue for the whole data centre industry.

Telehouse are currently working on an interactive portal for Telehouse West providing up-to-date information on the construction progress as well as industry discussions and downloadable collateral at www.telehouse.net.
LinkedIn

LinkedIn is a business-oriented networking site launched in May 2003. As of May 2009, it had more than 39 million registered users spanning over 170 different industries. LINX itself is a network of over 330 member organisations many of which already use the LinkedIn service which makes it an excellent method of keeping in touch with LINX staff and other Internet industry professionals.

LINX will be developing its LinkedIn profile over time and will use it to promote member meetings and specialist events such as the recent IPv6 workshop.

To view the LINX company and LINX Network Community pages please visit:
www.linkedin.com/companies/linx
http://www.linkedin.com/groups?id=2021055

Twitter

The latest social networking craze is Twitter and it is growing at a phenomenal rate. Twitter is a micro-blogging service enabling users to post instant updates and view other users’ updates too. These posts are known as tweets which are text-based messages of up to 140 characters which are displayed on the user’s profile page. These are then delivered to subscribers (or followers) of that particular Twitter feed.

LINX began making posts on Twitter in April 2009 and have used the facility to announce new membership applications, LINX statistics, display LINX event photographs and publicise other industry news.

To view the LINX Twitter page please visit:
www.twitter.com/LINX_Network. Please register and follow LINX to receive the latest LINX news.

YouTube

YouTube is the world’s leading video hosting website where users can view, upload and share video clips of all kind. LINX now has its own YouTube channel which will be used for a range of content such as popular LINX meeting presentations and highlights from specialist technical meetings. Source material will in most cases be from meeting webcast files provided by Bogons so the quality of image will be of a very high standard indeed.

The LINX YouTube channel will also be a useful promotional tool in attracting prospective members unable to view the full member only webcast files available on the LINX website.

To view the LINX YouTube channel page please visit:
www.youtube.com/LINXnetwork
Great Turnout for Fourth LINX Outreach Day Held in Lancashire

The fourth LINX outreach day proved to be a popular event attracting interest from a number of members from the North-West of England. The meeting, which took place on Thursday 27 March in Rochdale, was staged at The Baum restaurant and wine bar.

There was a total of 15 attendees present made up from guests from nine members, LINX partners, prospects, plus three LINX staff. LINX was represented by Business Development Executive, Jennifer Atherton, Membership Relations Officer, Christos Kaitatzis and Senior Network Engineer, Mo Shivji. Other attendees appeared on behalf of Open Hosting, Node4, York Data Services, Netservices, Netsumo, Exa Networks and Fused Networks.

Discussions were informal and relaxed and covered a diverse range of topics such as the LINX network, regulatory affairs and recent sales and marketing activity. There was also an overview of the latest member meeting, LINX64, held in February. As usual, the venue provided a great opportunity for attendees to exchange ideas with other members in the area.

Such has been the interest in these events that plans were made for an overseas event to be staged in Paris. (See panel below)

Recruitment News
LINX Welcomes Two New Network Engineers

LINX continues to see an expansion in staff numbers after unprecedented growth in recent months. In this issue we welcome two new staff members who will both enhance the London based engineering team.

Alan Farrell
Network Engineer

Alan Farrell has worked in IT for just over 13 years in the education sector and in private industry as a network technician. His roles have involved the installation and support of mainly Cisco equipment, but also of Foundry, 3Com and Extreme hardware.

Comment
Alan told HotLINX: “I joined LINX because I believe it’s an excellent company to work for providing the opportunity to work with a great team and leading edge technology. My role will involve both installation and support of the LINX network, ensuring the service remains operational for all members. I have really enjoyed my first month meeting new colleagues, as everyone is so friendly and helpful.”

Anne Bates
Network Engineer

Anne Bates joined LINX from AOL Broadband where she was employed in a NOC role. Prior to this she worked for ANS Communications which at that time was owned by AOL to operate as a go between the ANSNOC and AOL. ANS was later traded to WorldCom for the Compuserve dialup customers and became UUNET to where Anne transferred. Later came the opportunity to live and work abroad at the Amsterdam EuroNOC before she moved to UUNET’s UK data centre in Camden, London as a Network Engineer.

Comment
When asked about joining LINX, Anne said: “I joined LINX because it is a fantastic opportunity to expand my knowledge and work with really great people. I am training as a network engineer and have been working on new member connections and various aspects of supporting the network. I’ve enjoyed most working with my new colleagues. They are a lovely helpful bunch!”

First Overseas Outreach Day Staged in Paris

After holding several successful outreach meetings across the UK during the past year, LINX hosted a similar event alongside Equinix, in Paris on Tuesday 9th June 2009. The lunchtime meeting was held at “The Frog at Bercy Village” pub, located close to the Seine in southern Paris. The 16 attendees included representatives from Cogent, Yacast, Neotelecoms, OVH, Equinix, BSO Communications, Exa Networks and Dailymotion.