In this issue of HotLINX...

**Public Affairs**

In an expanded regulatory section, LINX Head of Public Affairs, Malcolm Hutty looks at government’s rethink on P2P and explains his new role as President of EurolSPA.

**Hot Topics**

Prolexic’s DDoS mitigation network benefits seen through LINX peering is this issue’s Hot Topic. Meanwhile, the 3rd LINX outreach day has taken place with LINX’s Christos Kaitatzis one of those present.

**LINX Members**

Sales & Marketing manager, Richard Yule, gives us all the latest membership news and stats. We also focus on Zen Internet and recent new members Frontier Systems and Node4.

**Technology Focus**

Network Architect, Owen Conway, covers the recent developments to the LINX topology while LINX I.T. explain why nearly all LINX servers are Gentoo based.

**Industry Events**

LINX64 is previewed in our industry events section along with MENOG4. On page nine we profile three recent LINX meeting sponsors in Digitalk, Equinix and Extreme Networks.

**Inside Story**

Continuing our series of interviews with leading figures in the Internet industry, we speak to LINX Board member, Steve Wilcox, who talks about his Internet background and the challenges ahead for LINX.

**British government abandons plans to legislate against ISPs**
LINX Wins Government Rethink on Peer-to-Peer

Alongside the Digital Britain report, the British government withdrew its plans to legislate against ISPs to force a “three-strikes then disconnection” response to copyright infringement through peer-to-peer file-sharing.

That approach was based on a French model known as the ‘HADOPI’ law. It has since been followed in Ireland by Eircom, after settling a lawsuit in which the music industry was demanding network level filters for peer-to-peer traffic.

LINX was among many organisations expressing serious concerns about the British government’s proposals last October. In January the government released an assessment that only the rights-holder lobby supported the proposals, with ISPs and the Internet industry, consumer groups and charities united against them.

The government has now accepted that its earlier proposals would cause “substantial regulatory uncertainty, rendering it impossible for ISPs to understand the nature and the extent of the obligation to be imposed on them”. It accepted that the process where rights-holder lobby groups and six ISPs would decide the rules for the whole market “raised significant questions as to how to accommodate other rights holders, the smaller ISPs and consumer bodies ... it is clear that it would be extremely difficult to develop a co-regulatory code which fairly represented the interests of all parties and was effective in addressing unlawful file-sharing.”

Under the old proposals, the government didn’t stop at “three strikes” but threatened further legislation against ISPs if their “co-regulatory” scheme was ineffective. Network filtering/blocking measures were mentioned. This was therefore an open-ended demand on the ISPs; they were being told to disconnect users, told to pay the costs themselves, threatened with worse to come, and warned that the government would be completely unsympathetic to their concerns - whether technical or about costs and fairness.

The new preferred approach is for notifications to be sent to alleged infringers by ISPs – but with new safeguards, and no disconnections. Enforcement against persistent serious offenders will be the responsibility of rights-holders through the courts. While October’s consultation paid barest lip-service to the need for the music and film industries to develop new business models to meet demand from Internet users, the interim Digital Britain report presents the need for new business models as the most important issue.

Government Statement

“...we need to support rights holders as they adopt their way of thinking and working. This is not to support business models that will become increasingly obsolete, and nor do we want to try and pick the new business model – in any case there will almost certainly be many competing ones. But we should look at the environment within which they operate, and for rights holders that means the sea of unlawful activity within which they have to swim.”

This is the first time the government has explicitly recognised that any aspect of the copyright lobby’s business model is in any way obsolete, let alone that it has a duty to avoid being used as a tool for defending an obsolete model.

The true significance of these announcements lies not in the substantive changes to explicit proposals (although it’s important that conducting enforcement through the courts means the interests of the accused will be given a fair hearing), instead, what’s crucial is that it draws a line under how far the government will go to prop up the record labels at the expense of ISPs and consumer rights.

There are still unresolved questions about the constitution and role of a new “Rights Agency”, and who should pay for warning letters to ISP customers, but for now ISPs appear to have weathered the storm of the political attacks of the last two years.
Distributed Denial of Service (DDoS) attacks have continued to increase in size and frequency across the globe during 2008, and these attacks are an ever-present threat to all businesses with a significant online presence. Prolexic Technologies offers global network protection solutions, Cloud DDoS mitigation and also has a public peering presence at LINX. Prolexic’s network regularly experiences large bandwidth rates, and peering on LINX benefits Prolexic, its customers, and other LINX peers.

Prolexic has observed dramatic increases in DDoS attack aggressiveness, complexity, frequency and duration over the last several years. In 2006 the majority of attacks observed were under 20Gbps. Attack sizes continue to grow steadily and in July 2008 Prolexic successfully mitigated its largest attack to date, which measured in excess of 80Gbps. Trends indicate that DDoS attack sizes are generally doubling year over year, and Prolexic expects to fight several 100Gb/s+ attacks in 2009.

Improvements in attacker capabilities are generally attributed to increased infection rates, better botnet management, and an increase in high-bandwidth connectivity per bot. In some DDoS attacks, Prolexic regularly finds single IPs responsible for 100Mbs or more of traffic. It is also rare to see an attacker use the full force of their botnet in an attack. Instead, Prolexic observes that attackers add bots to the attack in stages, hoping that their attack will be successful without revealing all of the IPs in their botnet. Indeed, in 2008 Prolexic saw less dependency on spoofed attacks (attacks which mask the true identity of the compromised PC’s IP identity) although they are still a small component of most attacks.

In an effort to stay ahead of attackers Prolexic, embarked on an aggressive project in 2008 to increase its available bandwidth globally to accommodate the ever-increasing amount of traffic that botnets could launch. This included upgrading all of its public peering points to a minimum of 10Gb/s. Prior to these upgrades Prolexic had to be extremely careful about how its public peering links were managed to ensure peering stability. For example, during excessive attacks traffic would have to have been redirected from LINX connections to ensure peering continuity.

Prolexic’s dramatic increases in public peering bandwidth combined with an open peering policy has seen the volume of attack traffic over LINX overtake that of its paid transit suppliers. This increased capacity of peering translates to Prolexic and its public peers handling DDoS traffic in a much more cost-effective and logical manner as traffic is absorbed directly from Prolexic’s public peering connectivity instead of relying on expensive paid transit links. Additionally, Prolexic’s increasing use of anycasting traffic allows its peers to gain the benefits of using the same routes at all common peering exchanges.

Prolexic’s new LINX 10Gbps peering link has brought additional benefits in botnet tracking and command and control terminations. By using a ‘closed’ transit link such as LINX where the number of ports is finite, monitored and measured, Prolexic and LINX can track attacks back to the port of origin. This tracking could be accomplished by a comparison of bandwidth stats from member ports as compared to the inbound traffic measured on Prolexic’s LINX connection.

Additionally, this basic method of traffic backtracking reduces the effectiveness of spoofing traffic and reduces the difficulty that is inherent in tracing spoofed attacks back via normal transit lines. An inbound versus outbound traffic comparison provides hard proof to a LINX member that their network contains compromised devices.

Prolexic’s customer base includes globally based financial institutions, airlines, online gaming, payment service providers, and a diverse range of eCommerce providers, with business operations and customer contact that is globally broad and carrier-independent. The source of attacking traffic is not always in the same geographic region as the target company’s normal traffic, which is the reason that Prolexic’s robust global bandwidth strategy is a critical component of its service. A core benefit in Prolexic’s network design and mitigation platform is that it is able to attract attack traffic to the regional Prolexic cleansing centre(s) that are closest to the attacking botnet(s).

Prolexic plans to continue to increase its bandwidth available for DDoS attack mitigation to over 150Gb/s in 2009. Its open peering policy is an important part of its strategic plan to meet the bandwidth requirements for mitigating malicious bandwidth attacks across the globe. Prolexic’s peering strategy will help all of its LINX peers shed unwanted malicious traffic cost effectively and will also assist all LINX members by isolating and removing compromised devices from their networks.
LinX makes flying start to 2009

Whilst the first quarter is sometimes a quiet time with relatively few industry events, 2009 shows every sign of keeping us in the Sales and Engineering teams busy.

In the first month alone six new networks have applied to join our peering community including operators from Germany, USA and Italy. This was matched by six new member 10GE ports going live.

We’re especially looking forward to the opportunity that our latest PoPs in Equinix, Interxion and Telecity bring us and are actively working on a large number of prospective members in these sites.

To keep in touch with our growing member base we are planning an expanded community outreach programme with local meetings staged throughout the year. You can read about the most recent event which was held in Fareham on the back page of this issue.

These meetings will allow us to meet those LinX member meetings in London each year.

LinX Sales & Marketing manager; Richard Yule, added: “Following the 2008 record of 52 members connected we expect 2009 to be even better and are predicting strong growth in both members and connected bandwidth, lead by 10GE ports.”

LinX Members Benefiting from 40% Cost Savings Year-on-Year

Despite the global economic downturn, LinX continues to grow ever stronger. In December we welcomed our 300th member, making us the first Internet exchange point in the world to connect so many networks together. Now new research reveals that members are benefiting from impressive annual cost savings too.

When comparing year-on-year figures, many LinX members have seen fees drop by 40% since the beginning of 2008.

A major contributor to this has been the range of price cuts implemented last September. At that time annual membership fees were reduced by 10 per cent and the cost of 1 GigE and 10 GigaE ports across LinX’s two independent local area networks (LANs) were lowered by as much as 25%. Another factor has been the strength of the US Dollar and the Euro on currency markets.

As an example of the discounts seen, a large American content network with eight 10 GigaE ports at LinX has seen prices lowered from US$30,000 per month in January last year to US$16,900 per month now. Meanwhile European access networks with two 10 GigaE ports have seen their costs lowered from €5400 per month in 2008 to €3200 today.

LinX has already received six new applications in 2009 looking to join the 52 new members who connected last year. That equated to a 20% membership increase in 12 months with more than 45 countries represented. This rise is indicative of the importance networks attach to peering despite the significant drop in transit pricing over the last decade.

LinX Extra

John Souter, LinX Chief Executive Officer said: “As a neutral, not-for-profit Internet exchange we aim to pass the benefits of our growth back to our members whenever we can. It’s interesting to note that whenever we lower our prices it encourages even more new members to join LinX. This in turn will allow us to offer the membership even greater savings in the future.”

LinX has a standard membership list as well as a more detailed technical version by IP/ASN. These are: www.linx.net/about/memberlist.html and www.linx.net/about/member-technical.html.

Internet traffic at LinX consists of a wide variety of data including streaming media, website downloads, business information and emails. Peak LinX traffic is the equivalent of 800,000 simultaneous Internet video streams.

Comment

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New Members

For the Period
Nov 2008 - Feb 2009

Below is a list of new members connected since the August issue of HotLINX. It is an ever growing list which includes a number of new territories, thus expanding the global reach of LinX network ever wider.

- **Cobweb**
  - United Kingdom
  - [www.cobweb.com](http://www.cobweb.com)

- **Eduserv Internet**
  - United Kingdom
  - [www.eduserv.org.uk](http://www.eduserv.org.uk)

- **Frontier Systems**
  - United Kingdom
  - [www.fsys.co.uk](http://www.fsys.co.uk)

- **Internode**
  - Australia

- **Jersey Telecom**
  - Jersey
  - [www.jerseytelecom.com](http://www.jerseytelecom.com)

- **Nokia**
  - Finland
  - [www.ovi.com](http://www.ovi.com)

- **Orbital Net**
  - United Kingdom
  - [www.orbital.net](http://www.orbital.net)

- **Root eSolutions**
  - Luxembourg
  - [www.root.lu](http://www.root.lu)

- **Switch Media**
  - United Kingdom
  - [www.switchmedia.co.uk](http://www.switchmedia.co.uk)

- **Terremark Worldwide**
  - United States
  - [www.terremark.com](http://www.terremark.com)

- **True Internet Gateway**
  - Thailand
  - [www.truecorp.co.th](http://www.truecorp.co.th)

- **Wananchi Online**
  - Kenya
  - [www.wananchi.com](http://www.wananchi.com)

LinX Members Benefiting from 40% Cost Savings Year-on-Year

John Souter, LINX Chief Executive Officer said: “As a neutral, not-for-profit Internet exchange we aim to pass the benefits of our growth back to our members whenever we can. It’s interesting to note that whenever we lower our prices it encourages even more new members to join LINX. This in turn will allow us to offer the membership even greater savings in the future.”
Zen Internet Goes Loco For Colocation

Zen Internet, one of the UK’s leading ISPs, has announced the launch of its Colocation service which will be situated in a secure data centre at its Head Office. This new service was created due to increasing demand from customers for more data centre space. It will provide a cost-effective way of securely hosting customers’ mission critical IT infrastructure, together with providing reliable and fast Internet access for Internet or Intranet services.

Both shared and dedicated options are available to suit customers’ specific requirements. Shared racks are ideal if customers have a small amount of equipment, whereas dedicated racks provide more capacity with a lockable and private environment for the customer’s hardware.

Zen’s headquarters provide the ideal location for the new data centre which is capable of holding over 1,000 servers. The centre is closely monitored around the clock by automated management systems, CCTV and onsite Security Guards. There are also stringent environmental controls and resilient power supplies in place to ensure that customers will always get the best performance from their hosted equipment.

“Zen is primarily seen as a Broadband provider but we are continually investing in other complementary products and services such as hosting. We are committed to expanding our hosting portfolio to meet our customers’ requirements and so we are delighted to be able to provide this new Colocation service,” said David Barber, Senior Product Manager, Zen Internet.

For anyone interested in Zen’s new Colocation service please call Sales on 0845 058 9000 to arrange a tour of the data centre.

Zen provides a range of Web hosting services as well as Colocation, including Domain Names, Windows and Linux Web Hosting, Dedicated Servers and Managed Hosting. Zen also provides customers with Broadband, Leased Lines, IP VPN, Voice, Managed Firewalls, Online Data Backup and Web design.

New Data Centre at Node4

Node4 are proud to announce the growth of the company with the development of a third brand new Data Centre (DC3) just outside Leeds due to open in April 2009. Specialists in colocation, managed hosting and connectivity, Node4 have seen a 100% growth in existing data centre space in the last year.

Not only has the Voiceflex service complemented the existing data offering, but it has brought new demand for an expanded product range. To this end, Frontier Systems has used LINX to complete its development of a robust platform for offering IP services across the key spectrums of bandwidth, flexibility, security and cost.

In developing and scaling the technology, it has become evident to the team that offering first class VoIP solutions requires an IP infrastructure which can be monitored and controlled at the highest level. Joining LINX and RIPE has enabled us to take that important step.

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“Since Node4 launched our DC2 in Derby in November of 2007, we have witnessed huge demand for data centre space. This has been from both existing and new customers looking for a quality data centre provider that is resilient and secure, and can meet power requirements all wrapped with a good level of customer service” said Node4 MD, Andrew Gilbert. “The only way to meet the increased demand was to build a brand new data centre, and so after careful planning we have started developments on a site ideally located within easy reach of the M62, M1 and A1.”

The new facility will have the capacity to hold 500 racks with some private suites available on request. DC3 will continue with the high standards Node4 already have in their existing data centres with UPS, Generators, Climate Control all being N+1 and in some cases N+N. There will also be multiple 10Gb links between the new site and Node4 headquarters in Derby giving customers the option to have a full DR solution spread across two sites.

Actions have been taken to make the data centre as environmentally friendly as possible. Ultima Compact Freecool air conditioning units from Airedale International have been chosen to ensure that sound and vibrations are kept to a minimum, which in turn maximises the energy efficiency of the units without compromising the capacity. Intelligent power management will be utilised in DC3 which allows greater monitoring and control of power to improve operational productivity and power efficiency.

For more information please call 0845 123 2222 or email sales@node4.co.uk
In issue 14 of HotLINX we presented a visual representation of the LINX network showing both the Foundry and Extreme LANs. That was in May 2008 but a lot has happened since then including the opening of three new sites at Equinix, Intenxion and Telecity Powergate. Not only that, Foundry Networks has become Brocade.

In a nutshell the LINX network consists of two separate high-performance Ethernet switching platforms installed across all 10 LINX sites. Switches from Brocade and Extreme are deployed in two diverse networks to provide an extra level of fault tolerance. Therefore, at least two switches (one from each vendor) are installed in every LINX location, and the locations are interconnected by multiple 10 gigabit Ethernet circuits (across dark fibre) to form two physically separate backbone rings.

LINX Network Architect, Owen Conway, spoke to HotLINX to explain the latest innovations to the network and plans for further development.

“We were able to spend time examining and tweaking the protocol pre-forwarding timers in order to provide greater stability over the longer distance links.

“On the Extreme (226 LAN), we spent some time with Extreme engineering here in London looking at possible solutions to provide a similar level of resilience. EAPS operations are somewhat more structured, and topologies must conform to specific rules in order to ensure deterministic failover operation.”

The New LINX Topology for 2009

195.66.224/23 (BROCADE LAN)

- MRP Ring Master
- 8 x 10G
- 4 x 10G
- 3 x 10G
- 2 x 10G
- 1 x 10G
- 1 x 1G

195.66.226/23 (EXTREME LAN)

- EAPS Ring Master
- 8 x 10G
- 4 x 10G
- 3 x 10G
- 2 x 10G
- 1 x 10G
- 1 x 1G

If you’d like to know more about the LINX network please refer to the Network Topology link in the Technical Info & Help section on the LINX website: www.linx.net/pubtools/topology.html

Alternatively you can email Owen directly using owen@linx.net
Why we use Gentoo Linux at LINX

By Hugh Spencer, LINX IT Manager and Tony Vroon, UNIX Systems Admin & Gentoo Server Developer

LINX servers are nearly all Gentoo based. While Gentoo isn’t the easiest distribution to deploy, we have chosen Gentoo because of the level of choice and control over the compilation it gives us. We have also used the Hardened Sources kernel to give us an edge when it comes to security choices.

So how did we end up choosing Gentoo?
Several years ago our previous vendor decided to ‘go commercial’. We decided it was time to investigate what the alternatives could offer us. The then shiny new distribution called Gentoo seemed to fulfill most of the requirements in that it allowed us to make a lot of choices about what we included and didn’t include.

We like to be able to:
• Verify that what we are proposing to use is fit for purpose
  We were once offered a proprietary mail handling product. Without access to source code it wasn’t easy find out how secure the product really was. However, after running Valgrind - http://valgrind.org - against the product we found it to be using deprecated libraries and rejected their kind offer on security grounds. An open source mail system is constantly exposed to scrutiny and its developers know this.

  • Modify the source code to suit our purpose
    An example of this is SugarCRM, which is designed to be customised since every company has different requirements of its customer relationship management software. For LINX this is never a straightforward customer relationship since our membership can also be suppliers, some members having multiple identities and so on. In house customisation becomes the main feature of our work in this area. The trick is to maintain compatibility and feed back ideas to the developers.

Working with the open source community
Having the source code open and available means that we are not only able to contribute but over time also have the opportunity to nudge the direction of a project if we feel it is straying off course. This occurred in the Linux kernel, just before version 2.6.26 was released.

Linus Torvalds releases regular release candidate kernels which we test on various hardware. For WiFi networks, the regulatory framework (which controls where in the world a certain radio channel is available) was rewritten from scratch. Unfortunately, only a United States zone and a Japan zone were defined. This left people in Europe in the cold, as Japan allows too many 2.4GHz channels (14) and US does not allow enough (11).

Transmitting on channel 14 would be illegal, so users were explicitly advised against doing this. To make matters worse, on the 5GHz band the US zone are mostly in line, but the Japan allocations are on completely different frequencies. As such, there was no way to have both channel 13 on 2.4GHz and networks on 5GHz available at the same time.

Tony read the 1200-page 802.11-2007 WiFi specification and ETSI 301 893 and then contacted wireless developer Johannes Berg with a patch. This patch made it into the final 2.6.26 kernel before it was released to the general public. This meant that several Linux users did not lose access to their WiFi networks.

For further info on Gentoo please contact Tony Vroon at: tony@linx.net
Czech Mate, Ondrej Filip of NIX.CZ

Amongst the Presenters at LINX64

The LINX64 and EGM meeting is taking place on the 16th and 17th February 2009. The venue is again the Goodenough College in London and there is another full agenda for attendees and viewers of the meeting webcast. Telehouse Europe is Gold sponsor at this meeting and Bob Harris will be making a presentation on the latest developments at the Docklands data centre.

The first day of the two day program will include a live demonstration of LINX sFlow tools, news on DNS Security Developments at ISC from Keith Mitchell and a report on ScavengerEXA (an open source solution to fight spam) from Thomas Mangin. Also featured is a route server update co-presented by LINX and Ondrej Filip of Czech Republic exchange, NIX.CZ.

Day one will close with informal drinks at the Goodenough. This is an excellent opportunity to network with delegates and peers before moving on to the evening social event at a venue nearby.

On Tuesday LINX CEO, John Souter, will provide his regular organisational update and there will be an in depth overview of current engineering projects from LINX CTO, Mike Hughes.

LINX64 Gold sponsors, Telehouse Europe, will follow in the footsteps of LINX63 sponsors Digitaik, Equinix and Extreme Networks who were present at November’s meeting.

Ondrej Filip will make his second appearance of LINX64 by explaining how NIX.CZ operates. Meanwhile developments in Public Affairs will be covered by Malcolm Hutty while the latest LINX member and sales position will be presented by Richard Yule.

Also, LINX Chief Operations Officer, Howard Fisher, will present on the revisions to the LINX Memorandum of Understanding before the EGM session.

For the LINX64 agenda and other LINX meeting news and updates, please follow the links on the home page of the LINX website. (member log-in required)

Meet with LINX

Events to be Attended by LINX Representatives

As you would expect of a major player in the global Internet industry, LINX regularly attends important industry events around the world. Please take a look at the list below to see where you can meet with LINX staff and representatives over the coming months.

LINX64
16/17 February 2009
London, United Kingdom
Attended by: LINX staff & Board
www.linx.net/members/events/meetings/L64/LINX64.html (member log-in required)

MENOG4
5-9 April 2009
Manama, Bahrain
Attended by: Mike Hughes, Richard Yule
www.menog.net/meetings/menog4

RIPE58
4-8 May 2009
Amsterdam, The Netherlands
Attended by: LINX staff & Board
www.ripe.net/ripe/meetings/ripe-58

LINX65
18/19 May 2009
London, United Kingdom
Attended by: LINX staff & Board
www.linx.net/members/events/meetings/L65/LINX65.html (member log-in required)
Web page will be available in April 2009

NANOG46
14-17 June 2009
Philadelphia, USA
Attended by: Mike Hughes and other LINX staff TBC
www.nanog.org/meetings/nanog46

LINX66
17/18 August 2009
London, United Kingdom
Attended by: LINX staff & Board
www.linx.net/members/events/meetings/L66/LINX66.html (member log-in required)
Web page will be available in July 2009

RIPE59
5-9 October 2009
Lisbon, Portugal
Attended by: LINX staff & Board
www.ripe.net/ripe/meetings/ripe-59
Web page will be available shortly

MENOG 4/RIPE NCC Regional Meeting
Manama, Bahrain
5-9 April 2009

MENOG (Middle East Network Operators Group) meetings offer network engineers and other technical staff the opportunity to share their experiences and knowledge, and identify areas for regional cooperation. The meetings are modelled on those held by NANOG (North American Network Operators Group) in North America and SANOG (South Asian Network Operators Group) in the South Asian region.

Typically, the meeting agendas include presentations, tutorials and workshops to discuss implementation issues that require community cooperation.

For more information please go to: www.menog.net/meetings/menog4
“Would you like a Voice Service with that?”

Telfort Internet demonstrates a 12 week deployment of advanced IP Telephony services

As VoIP becomes an integral part of the domestic broadband mix, reliability, security and scalability become essential issues for any service provider looking to protect and grow their brand. ISPs are in the best positions to take advantage of extra revenues and customer loyalty by offering voice services to their existing customers.

One of the first was Telfort Internet (now owned by KPN) who were discovering the limitations of its existing VoIP launch platform. Based on open source technology derived from the SIP Express Router package, performance of this platform began to degrade as customer take-up of VoIP increased.

Mathijs Leenheer, Service Manager at Telfort Internet, takes up the story, “While an open source solution was ideal for us in the early days we soon found there were limits to growth for such a platform. Of particular concern was the freedom to readily move beyond a basic VoIP service and adding more value such as better voicemail functionality. Merging the worlds of IP and telephony requires specialist skills and the absence of vendor support for open source solutions often results in in-house engineers spending time on issues better outsourced to a reliable vendor. Additionally, as traffic increases so too do revenue streams and without a platform that could competently handle tariffing and real time billing information, revenue leakage through fraud or simple errors soon mounts up. Despite this wholesale change to the infrastructure, the DIGITALK solution meant that we could also keep consistency with historic customer interaction commands for accessing and controlling things like voice mail. Better, simpler, cheaper was the aim – and we succeeded.”

Meanwhile Nico Bijlmerhee, CTO of Telfort Internet, said: “We were delighted with the way DIGITALK’s project team cooperated with our own. There was a great working relationship which assisted the speed and precision with which the project moved forward. The overall result was a highly successful project which was delivered on time and without any surprises – and that means for us that we now have a fast growing number of happy customers.”

Save Time and Money with Extreme Networks

Extreme Networks continually strives to enhance the value of their solutions to users by adding features that save on time and money through automation, improved scalability and port density in a variety of eco-friendly ways.

Software Developers Kit

The ExtremeXOS Insight SDK allows users to extend the capabilities of ExtremeXOS through APIs so that applications can interface directly with Extreme switches. The APIs provide a mechanism to communicate with ExtremeXOS switches using XML messages. The standards-based SOAP/XML architecture of ExtremeXOS Insight makes it easy to integrate the network infrastructure with high-level application and business software, allowing you to create Service Oriented Architecture (SOA) solutions that bridge the gap between application and business logic with network configuration and events.

Improved Scalability and Port Density

The Summit® X650 series switch is a purpose built Top-of-Rack switch designed for emerging 10 Gigabit Ethernet enabled servers, used in data centres. It provides remarkable high density for 10 Gigabit Ethernet in a very small 1RU form factor for up to 32-port in one system, 192-port in a stacked system. It offers two of the most advanced 10 Gigabit Ethernet technology: 10GBASE-T and SFP+ to accommodate the needs both for copper twisted pair cable and optical fibre based 10 Gigabit Ethernet.

Energy Savings

Recently testing by a third-party laboratory verified that the BlackDiamond® 8810 switch is leading the field in energy efficiency. For more information on this and all Extreme products please go to: www.extremenetworks.com
EuroISPA elects Malcolm Hutty as its new President

Malcolm Hutty, Head of Public Affairs at LINX, has recently been elected as President of EuroISPA. The new role and additional duties is an exciting opportunity for Malcolm and LINX members at a time when Internet regulation is making national and international headlines. Malcolm began his duties as President of EuroISPA in January.

On his election Malcolm said: “My recent predecessors as President, Professor Michael Rotert and last year Dr Kurt Einzinger, have developed EuroISPA’s leadership on crucial regulatory issues such as the EU regulatory framework for electronic communications, and our industry’s cooperation with law enforcement.

“EuroISPA will take these issues forward, continue our work to ensure a safer and more resilient Internet, and press for balanced and effective support for intellectual property.”

EuroISPA is the EU umbrella for Internet Services Providers’ representative bodies, comprising the membership associations from 10 European countries. In recent years it has become increasingly influential in Brussels through a combination of expertise in technically complex issues, and its ability to speak on behalf of more than 1500 ISPs. It is supported by a permanent secretariat located in Brussels.

As President of EuroISPA one of Malcolm’s key policy priorities will be to support what he calls the “innovation agenda”. He believes this is now more crucial than ever because of the challenging economic times we are facing.

“We need to put the positive case for the Internet as an engine of economic growth and social progress.”

Malcolm Hutty, LINX Head of Public Affairs and new EuroISPA President

In Brief

The Latest Stories on LINX Public Affairs Website

This column features the latest news in the world of Public Affairs. Please visit: www.publicaffairs.linx.net/news to read these stories, and others, in full.

Britain looks to expand Broadband

Competition and Markets, Regulatory Framework

The British government has outlined plans to bring broadband Internet service to every home in Britain by 2012. The government proposes a new Universal Broadband Commitment, under which broadband would be made available to every household in Britain, at 2Mb/s rates for all but the most remote areas. This could be delivered by a variety of providers using a combination of fixed, wireless and even satellite technology. Universal Broadband would replace the existing Universal Service Obligation, a regulatory requirement laid upon BT and Kingston to provide basic telephony to everyone in the UK between them.

Telecoms Minister Lord Stephen Carter announced the move as part of the interim report on “Digital Britain” on 29th January, a package of measures reforming regulation in the communications, broadcast and wireless sector. The final version of the Digital Britain report will be released in June 2009.

IWF blocks and then unblocks Wikipedia page

Content Blocking, IWF

On Friday 5th December 2008 the IWF added an image from Wikipedia to its blocklist. The image was the 1976 album cover “Virgin Killers”, by the German rock band The Scorpions.

The reason for blocking was that the article was illustrated with the original album cover, which consists of a photograph of a naked girl. In the IWF’s view, this is probably an “indecent photograph of a child”, possession of which is a criminal offence under English law.

Three days later they removed the image from the blocklist following negative media reports. The IWF stated the reason for the change of heart was that it changed its mind on the legality of the image, but rather decided that blocking had proven to be counter-productive.

Nominet governance review

DNS, Internet Governance

Nominet, which operates the .uk top level domain and manages over seven million domain names, has initiated a review into its governance which will independently be led by Professor Bob Garrett. All stakeholders are invited to complete a questionnaire asking their views on whether Nominet’s structure and processes serve the public interest.

The review was undertaken to answer questions put to Nominet by the UK Department for Business (BERR), following an acrimonious and public boardroom battle. Professor Garrett will be considering radical changes to governance – such as Board oversight by Ofcom or by an ‘independent’ self-selecting Board of Trustees. A key issue is whether a membership body comprising stakeholders from the Internet industry is the best structure for protecting the interests of individual and corporate end-users.

The questionnaire will be available from 29th January to 23rd February. Nominet has undertaken to publish Professor Garrett’s review, expected around the end of March. The website is www.nominet.org.uk/about/consultations/independendentreview
In the last issue of HotLINX, we introduced a new feature, In the Spotlight, where HotLINX speaks to leading members of the Internet community. Last time round it was LINX Chairman, Grahame Davies, answering questions and today we pleased to welcome fellow LINX Board member, Steve Wilcox, to do the same.

What is your background in the Internet industry?

This is my twelfth year in the industry. Currently I work for Google and am a director at IX Reach (and LINX of course!), I was the founder of Telecomplete and after that I was lucky enough to consult for a few interesting companies. I've always had senior roles in the industry as well as being involved in various ways with numerous groups, forums and Internet exchanges.

How do you see your role on the LINX Board and what does it mean for the organisation?

I continue to see myself as someone with a clear set of beliefs about the role of LINX and that my election onto the board is due to those beliefs being well aligned with that of the membership. I myself have now worked for various types of organisations during my terms on the board and I like to think that this continues to add to my ideas and knowledge in the industry. For LINX I think this means that I am committed to representing the company and that it is important that those of us charged with this stewardship continue to separate our other interests for the common good of LINX and the UK Internet industry.

How do you see LINX developing in the future?

This is a relatively recent industry and innovation and change are commonplace, LINX needs to continue to work closely with the industry to ensure the aims of the Internet community are adhered to. It is a much more complex industry now than it was 15 years ago when LINX was founded. I expect we'll see new products such as LINX's private interconnect services continue to be more popular and LINX's involvement in public affairs see further growth in volume as laws and courts are gradually catching up with technology.

What challenges do you see ahead for LINX?

We have technical challenges such as continuing to stay ahead of the curve on member growth, and ensuring that with the sheer number of participants we can continue to operate a reliable infrastructure. There are also business challenges such as the recent expansion projects to new sites and development of new products. which means that role of LINX can be different from member to member and with external stakeholders too,

With over 300 members to represent it is a challenge but it is the diversity of the membership and the work that LINX does for the community as a whole which makes it such a strong organisation. I expect many more great developments in the future.
IGF told of IXPs’ importance to regional Internet development

Participants at the Internet Governance Forum (IGF) held in India in December 2008 were reminded of the crucial role that Internet Exchange Points (IXPs) can play in developing Internet services and bringing a wide range of benefits to industry and users alike.

During the workshop “The role of Internet Exchange Points in creating Internet capacity and bringing autonomy to developing nations,” IGF participants heard of the many technical and policy considerations that surround the formation and impact of IXPs.

Michuki Mwangi, Senior Education Manager at the Internet Society (ISOC) explained how IXPs can create immediate and ongoing benefits in network performance, quality of service, better access to all local content, and greatly reduced international transit costs.

ISOC has an active programme of supporting IXP development and, among many activities, has produced a range of information detailing the technical, policy, and regulatory considerations involved in establishing successful IXPs.

To find out more please visit: www.isoc.org/educpillar/resources/ixp.shtml

More details on the IGF workshop are available here: www.isoc.org/pubpubpillar/governance/hyderabad.shtml

There was a good turnout for the latest LINX outreach event held in Fareham in Southern England on Thursday 29 January 2009. There was a total of 14 attendees made up from guests from seven members plus four LINX staff.

The venue was the Lysses House Hotel and proved to be a great venue for the proceedings. LINX Sales & Marketing Manager, Richard Yule, began by providing an informal LINX overview and update before summarising events from the most recent member meeting, LINX63, last November.

This was followed by Christos Kaitatzis, LINX Membership Relations Officer, who explained the work of the Public Affairs team and the recent developments in the industry with regulatory issues.

To continue discussions, attendees moved to the hotel restaurant for lunch, which allowed those present to talk further about LINX and to network with other members in the area.

If you would like to know more about LINX outreach days please contact Jennifer Atherton: jennifer@linx.net

Attending the Fareham event at the end of January were LINX staff Richard Yule, Jeremy Orbell, Christos Kaitatzis and representatives from LINX members Newnet, Cobweb, Elite, Equinix, Tata Communications and Telstra.

As the IPv4 free pool nears its end, policy forums are becoming more and more interesting. One subject of discussion is the “Global Policy for the Allocation of the Remaining IPv4 Address Space”.

The proposal states that each Regional Internet Registry (RIR) will be allocated one /8 IPv4 address block when the IANA free pool of IPv4 address space reaches the final five remaining /8 blocks of address space. This proposal concluded with consensus in all regions. Following this, the Chair of the Address Supporting Organization Address Council (ASO AC) forwarded this proposed global policy to the ICANN Board for ratification. In line with the ICANN Board procedures for dealing with global policy proposals, a final call for comments on the proposal will remain open until 26 Feb 2009.

For more information on the background on this global policy proposal, please see: www.icann.org/en/announcements/announcement-2-05feb09-en.htm

The proposal “Enabling Methods for Reallocation of IPv4 Resources” also concluded with consensus in December 2008. It deals with transfer of address blocks in the RIPE region. For information, please see: www.ripe.net/ripe/policies/proposals/2007-08.html