In this issue of HotLINX...

**Up Front**
LINX CEO John Souter comments on what is a very busy few weeks for LINX and why face-to-face meetings are still important in an online world.

**Membership**
On our membership pages we have stories from Entanet, JANET(UK), Andrews & Arnold, Timico, and Prolexic as well the latest member stats.

**IPv6 News**
Ripe NCC Chairman Nigel Titley and the Internet Society both speak to HotLINX about IPv4 exhaustion and the development of IPv6 in the future.

**Public Affairs**
LINX’s Head of Public Affairs, Malcolm Hutty, takes his usual look at the latest developments affecting the industry in the government legislation and regulatory world.

**Industry News**
In our Industry News section we have stories on DDoS, statistics of Internet resources and data centre capacity in restricted UK markets.

**LINX Events**
On page 12 we look forward to the LINX Board elections at LINX73 in May as well as rounding up the latest event and meeting sponsorship news.

**Staff News**
In Staff News we welcome Ben Hedges and Sheryl Francis to LINX and thank members of the team who have now worked for the company rather longer...

Seismic Events and their effect on The Internet
See page 3
As HotLINX went to press the ‘Move over IPv4 (Bring on IPv6)’ event had just been staged at the London Transport Museum in Covent Garden. The choice of venue was somewhat ironic as I have been involved in a considerable amount of travelling on behalf of LINX recently and it’s a trend that is set to continue.

March has seen me fly to Dublin for the INEX meeting and in May I will be off to Amsterdam for RIPE62. Later that same month I will be attending the 18th Euro-IX meeting in Sicily before heading over to the States to Denver for NANOG. It’s certainly a hectic period ahead but still a familiar scenario for many people who work in this industry.

After 10 years working as CEO of LINX you come to appreciate the true value of meeting with the membership and partners around the world. The events themselves are obviously important but the opportunity to network and talk about future plans and concerns face-to-face cannot be over estimated.

LINX has always operated with openness and I firmly believe the members appreciate this honesty. Ultimately we are striving to build a robust and resilient network as possible to ensure the membership gains the maximum benefit from the peering facilities we provide. This is why I am always happy to answer member questions on the exchange and why we have been prepared to hold conference calls for the benefit of the membership as a whole to discuss important network issues.

Other projects I’ve been working on recently include the induction process for our new Chief Technical Officer, Derek Cobb. Derek has a wealth of experience and we are delighted to have him aboard. We will make a more formal introduction in an article in our next edition of HotLINX.

We are also deep into the planning stage for the LINX73 AGM and Council elections. The LINX Council is the representative body of the LINX membership which is why we encourage active participation either by standing for Council or voting at the AGM. Please turn to page 11 of this issue to find out more about the whole election process.

Since our last edition the allocation of the final IPv4 addresses from IANA has taken place. This moment has been talked about for many years – it will still be a little while longer before we have ultimate exhaustion via the regional registries, yet it’s still a historical moment in the development of the Internet.

As you might expect IPv6 features strongly in HotLINX25. RIPE NCC Chairman, Nigel Titley, has been interviewed to give us his views on the future for IP addressing. Elsewhere, Adrian Kennard of LINX member Andrews and Arnold, shares his experiences in deployment of the new protocol, while Trefor Davies of Timico speaks about the ‘Move over IPv4 (Bring on IPv6)’ event held in March.

There are many more great stories and articles in this issue which we hope you will enjoy. As ever, if you have any comments or content ideas we would very much like to hear from you.

Jeremy Orbell,
HotLINX editor
2011 has seen some unprecedented international events of civil unrest and natural disaster around the world, including the troubles in Africa and the recent Japanese earthquake. Renesys, a leading authority in global Internet intelligence, is constantly watching and reporting on events such as these to see how they unfold and affect the Internet as a whole. No surprise, therefore, that this week www.renesys.com/blog— is one of the most followed in this particular industry sector. Here are few examples of how recent events have been reported.

**Egypt Leaves the Internet**
Thursday 27 January, 2011

Confirming what a few have reported this evening; in an action unprecedented in Internet history, the Egyptian government appears to have ordered all service providers to shut down all international connections to the Internet. Critical European-African fiber-optic routes through Egypt appeared to be unaffected for now.

But every Egyptian provider, every business, bank, Internet cafe, website, school, embassy, and government office that relied on the big four Egyptian ISPs for their Internet connectivity is now cut off from the rest of the world. Link Egypt, Vodafone/Roya, Telecom Egypt, Elsadat Mar, and all their customers and partners are, for the moment, off the air.

This is a completely different situation from the modest Internet manipulation that took place in Tunisia, where specific routes were blocked, or Iran, where the Internet stayed up in a rate-limited form designed to make Internet connectivity painfully slow. The Egyptian government’s actions might have essentially wiped their country from the global map.

What happens when you disconnect a modern economy and 80,000,000 people from the Internet? What will happen tomorrow, on the streets and in the credit markets? This has never happened before, and the unknowns are piling up. We will continue to dig into the event, and will update this story as we learn more. As Friday dawns in Cairo under this unprecedented communications blackout, keep the Egyptian people in your thoughts.

**What Libya Learned from Egypt**
Saturday 5 March, 2011

We observed nearly every host inside Libya becoming unresponsive on the afternoon of Thursday, March 2nd. You could attempt to “ping” them, send a traceroute along the path to them, try to retrieve pages, try to look up domain names… but in nearly every case, there was no response. Simultaneously, we heard reports that all of the classic Internet communication services like Skype were down and external websites were unreachable. To top it off, the Google Transparency Report showed query traffic from within Libya flattening, and not recovering.

So far these symptoms match what was experienced during the Egyptian Internet blackout pretty closely. But the underlying technical implementation couldn’t have been more different. Look very closely at that Google plot again, and observe the floor. It’s not perfectly flat, is it? That’s because the Libyan Internet is actually still alive, even though almost all traffic is blocked from traversing it. The BGP routes to Libya are still intact, which means that the Libyan ISP’s border routers are powered on and the fiberoptics are lit. In fact, we’ve identified a handful of isolated live IP addresses inside Libya, responding to ping and traceroute, and presumably passing traffic just fine. Someone in Libya is still watching YouTube, even though the rest of the country is dark.

Why did Libya put its Internet in ‘warm standby mode’ instead of just taking it down, as Egypt did? Perhaps because they’re learning from Mubarak’s experience. Cutting off the Internet at the routing level (powering down the Internet exchange point, going after the remaining providers with secret police to enact a low-level shutdown) was a technically unsophisticated desperation move on Egypt’s part. It signaled to the world that the Egyptian government considered itself out of options, ready to cut off all internal communications and external dialogue, looking for a last chance to turn off all the cameras and clean out the Square.

We expected to see something similar happen in Libya as the crisis came to a head, and on Thursday afternoon, the government appears to have taken action ahead of Friday’s Day of Rage. On Thursday afternoon, like turning off a tap, the stream of traffic was slowed to a trickle, and then to a few drips.

This tactic makes all kinds of sense from the government’s perspective. The Internet is a valuable wartime resource, like a critical bridge over which supplies can flow. As long as you can deny it to your enemy, you don’t blow it up — you keep it intact for your own use.

Throttling the Internet to the point of uselessness, instead of killing it outright, also delayed international recognition of the fact that the Internet was down during the most crucial period. Most international media didn’t clue into the fact that the Libyan Internet had gone silent until after the sun had gone down in Tripoli on Friday. By taking a softer route to shutdown, the government deprived the opposition of much of the international “flash crowd” of attention and outrage that an unambiguous “kill switch” tactic might have garnered.

Using denial of Internet access as a political weapon during crises events is all about timing and messaging. Mubarak waited too long to implement his blackout, and then let it run past the point where the damage to the Egyptian economy and the cost of international outrage exceeded the dwindling benefits to the regime. In the end, all the Egyptian government accomplished was to attract the sort of sympathetic attention and message support from the Internet community that is pure oxygen to a democratic opposition movement.

When some future government faces this decision, backed into a corner by a popular uprising supported by Internet communication, they will probably reach the same conclusions that Libya and Egypt did reestablish control over national communications at any cost, and pick up the pieces later. That’s why the Internet is too vital to be left in the hands of centralized authority, and it’s why you should press for more diverse Internet connectivity wherever you happen to live.

**Japan Quake**
Friday 11 March, 2011

Today’s 8.9 magnitude earthquake in Japan has had surprisingly limited impacts on the structure and routine dynamics of the regional Internet. Of roughly 6,000 Japanese network prefixes in the global routing table, only about 100 were temporarily withdrawn from service — and that number has actually decreased in the hours since the event. Other carriers around the region have reported congestion and drops in traffic due to follow-on effects of the quake, but most websites and external dialogue are up and operational, and the Internet is available to support critical communications.

Why have we not seen more impact on international Internet traffic from this incredibly devastating quake? We don’t know yet, but we’ll keep studying the situation. Compared to the 2006 Taiwan earthquake, which resulted in a larger number of major cable breaks, it appears that the majority of the region’s submarine cables have escaped the worst damage, and diverse capacity remains to carry traffic around the points of damage.
Will the big boys’ commitment to traffic management transparency help consumers?

In the face of widespread debate about net neutrality and increasing consumer unrest about how Fair Use Policies and traffic management affects their broadband experience, the Broadband Stakeholder group (BSG) and seven of the UK’s largest ISPs have published a new Voluntary Code of Practice regarding broadband transparency. This new code of practice will be piloted by BT, Sky, TalkTalk, Virgin Media, O2, Three and Vodafone throughout 2011, with review and potentially further adoption by other ISPs in early 2012.

The code comprises three key elements. It requires a commitment to provide more information to consumers about traffic management practices and why they are required. It also sets out an agreed set of best practice principles which will govern how ISPs communicate this information to consumers. These will ensure that the information is understandable, appropriate, accessible, current, comparable and verifiable. The third element requires the signatories to commit to publishing a Key Facts Indicator (KFI) table summarising in a consistent format the traffic management practices for each broadband product they market. Its purpose is to make comparison easier for consumers.

Entanet has frequently stated that we are advocates of net neutrality and further believe that ISPs should be open and transparent about their approach to traffic management so that consumers can make informed decisions about the service they take.

At Entanet, we believe that all traffic should be treated equally. We have been using traffic management to ensure fair but consistent availability of services and bandwidth for all customers since November 2009. This is vitally important because our partners depend on our network to deliver a consistent performance to their customers. To ensure that everyone understands exactly how we manage network traffic, we provide an explicit explanation of our approach in our product documentation. This policy is freely available for our partners to review and potentially further adoption by other ISPs in early 2012.

Without regulation, introducing consistent standards to ensure easy comparison of this information will not be easy. Additionally, there are no details regarding what will happen if a signatory doesn’t abide by these principles, or about how it will be policed and by whom. The code also doesn’t address the issue of net neutrality.

Whilst we applaud these ISPs for taking the first steps to clarify this information for consumers before it’s imposed on them, the review period throughout 2011 is likely to highlight several potential flaws in the current code that will need to be ironed out before introduction to additional ISPs in 2012. But at least it’s a step in the right direction and a positive move for consumers which we believe will help them to compare providers more easily. We will, however, be watching the progress of this pilot carefully over the coming months.

For further industry comment from Entanet please visit the http://opinion.entanet.net website.

Comment

Entanet’s CTO, Steve Lalonde, recently commented in an ISP Review article about the code stating: “We’re pleased to see that the biggest consumer focused ISPs are taking a lead in making things clearer to their customers, rather than having such a requirement imposed on them directly by Ofcom. The principle of ensuring that consumers are aware of the potential constraints that may be put on their use of a connection with particular providers is necessary. However, introducing some standards based consistency to what/how information is presented is going to be difficult. It will be interesting to see how transparent these providers are in describing their traffic management policies.”

Ben Hedges visits one of LINX’s founder members

New LINX Marketing & Business Development Manager, Ben Hedges, recently met with Baoyu Wang and Dan Perry to find out more about LINX founder member, JANET(UK).

JANET has been a LINX member since its formation in 1994 and is responsible for one of the biggest academic networks in the world. The innovation still continues to this day with the installation of the world’s first 100Gbit on core network national research and educational network. By moving to 100Gbps JANET is not only anticipating demand, but becomes an early adopter of this next-gen technology as is appropriate for a world-class network. Existing investment in 40Gbps technology will be preserved as when some 40Gbps circuits are replaced with 100Gbps, the equipment that is freed up will be used to add additional capacity along other 40Gbps paths.

As a research network JANET is constantly pushing boundaries and working with new technologies. Recent projects include developing the UK eduroam network access authentication infrastructure focusing on extending the service to environments where less technical expertise is available. By using a pre-configured wireless access point (AP) they are able to connect to a venue’s internet connection to link to the JANET eduroam infrastructure. JANET(UK) is also working with a commercial mobile data provider to provide a JANET 3G service that makes use of the eduroam authentication infrastructure and an innovative security model that makes access to the user’s home resources easier.

JANET doesn’t just innovate at the network technology level, it also supports the development of networked applications and has recently been involved with a first-of-its kind broadcast of Super-Hi Vision TV in collaboration with the BBC and Japanese public broadcaster NHK. The technology is four times faster than HDTV with a signal that is transmitted at 24Gbps, NHK hope to broadcast the standard by 2020.

JANET is very active on the LINX exchange. It has an open peering policy and ensure resiliency by being on both Broades and Extreme LANs. They also pass a significant amount of their traffic through LINX Private Interconnects.

To find out more about JANET(UK) please visit: www.janet
IPv6 Deployment Experiences

Adrian Kennard of Andrews & Arnold talks
IPv6 deployment at LINX72 member meeting

After over 8 years offering IPv6, AAISP are only
now finally putting the last piece of the jigsaw in
place to get the average consumer on-line with
IPv6 as standard. Until now end-users have had
to work things out for themselves, using tunnels,
bridges, and even DSL PCI cards in linux boxes.
This is fine for the highly technical customers, but
hardly simple for the typical consumer.

For any ISP considering deploying IPv6 (and you
should be), there are a whole chain of things that
have to be IPv6 ready, from transit connections
to customer databases and staff training. None
of these are that complicated, but the stumbling
block until now has been the end-user consumer
router. Many end-user devices, from PCs to
phones, have been IPv6 ready for years but had
nobody to talk to.

Finally, this year, the router
manufacturers are ready to
jump. New models have IPv6
promised, and a handful are
actually starting to deliver
IPv6 products at sensible
prices, and even including
basic firewalling for IPv6.

But there is another
approach which is well suited
for business customers,
breaking the link between
DSL modem chipset and router by using PPPoE.
By using simple PPPoE modems and bridges with
a PPPoE router, IPv6 can be added to a business
installation simply along with better firewalling,
line bonding and other features. PPPoE can work
with a variety of equipment
and software packages
that can be selected
independently from the
modem. With BT’s new
FTTC and FTTP services
the link is PPPoE anyway,
and even supports larger
frames for full 1500 byte
MTU.

By using newer consumer
IPv6 routers from
Comtrend for residential
installations, and FireBrick
FB2700 with PPPoE DSL
bridges and modems (and directly with FTTC
and FTTP) for business customers, AAISP are
making IPv6 a standard part of the service.

What is really encouraging is that IPv6 does away
with NAT with even the most basic consumer
installation giving every device on the LAN a
proper IP address, finally getting the Internet
back to the way it was designed and losing the
evils of NAT.

LINX members can view Adrian Kennard’s
presentation in the member area on the
LINX72 meeting page on the LINX website:
www.linx.net/linx72
(log-in required)
The Andrews & Arnold website address is:
www.aaisp.net.uk

Move Over IPv4 (Bring on IPv6)

On Tuesday 22 March over 200 Internet industry
professionals gathered at the London Transport
Museum in Covent Garden to mark the passing
of the IPv4 addressing protocol and to promote
the adoption of IPv6.

The event was conceived and organised by
Trefor Davies, CTO of LINX member Timico.
During the course of the evening there was a
retrospective review of the early days of the
Internet plus a look into the problems being
encountered in rolling out the new IPv6 based
architecture.

HotLINX caught up with Trefor Davies to ask
how he felt the event had gone. He told us, “It’s
been great - we were especially pleased to see
so many people from outside the industry here
wanting to learn more about it. We were also
pleased that we were able to get IPv6 to be a
trending topic on Twitter for a time so in all it’s
gone far better than we could ever have expected.

Speakers at the event included government minister
Ed Vaizey and eminent British computer scientist
Professor Peter Kirstein, best known for playing a
significant role in the creation of the Internet.

Also part of the event agenda was an IPv6 panel
which was hosted by Trefor Davies (far right of
picture). This featured Andy Davidson (Hurricane
Electric), Jim Reid (6UK), Simon McCalla (Nominet)
and Adrian Kennard (Andrews & Arnold).

Further coverage on this event can be found on
page 8 of this issue of HotLINX.
Allocation of the last IPv4 addresses mean “Action on IPv6 is now essential!”

On Thursday 3 February IANA, the Internet Assigned Numbers Authority, allocated the last two free batches of IPv4 addresses to APNIC, the regional Internet registry of the Asia Pacific.

This was clearly a big event in the history of the Internet so HotLINKS Editor Jeremy Orbell was naturally keen to take the opportunity of speaking to RIPE NCC Chairman, Nigel Titley, about this latest development.

A lot was made in February of IANA distributing the final IPv4 addresses as being the end but this is of course not the case. When do we expect ultimate exhaustion to take place?

Well, it very much depends on which region you are in because the final five blocks were distributed to the five global Internet registries. APNIC will almost certainly be first with estimates between July and September followed by RIPE NCC since then.

There was definitely an increase as the announcement was made but that was also the case with IPv4. There was certainly evidence of a final rush as the shelves gradually empty but heartening to see that finally the need to adopt IPv6 was also being taken seriously.

Why do you think it has taken so long for some organisations to look into IPv6 having known about the issue for so long?

I’m really hoping that the late requesters for IPv6 are not ISPs. If they are they will have an awful lot of catching up to do with those who have been planning this for the past eight years or more as quite a few have. I can understand it in the case of corporate networks as there’s no immediate need for it though it would be an advantage to get their content over to v6 as well as v4. We don’t have the data at the moment to know exactly which sectors of the market are making the IPv6 requests but we expect it to become clearer over the next few months.

RIPE NCC has been very proactive in getting the message out to the industry about what is happening with IPv4 and IPv6. Have you been pleased on how well the publicity campaign has gone?

Yes, we’ve been extremely proactive and have spent a lot of time and a lot of effort saying that IPv4 is now the legacy protocol. It’s a message we have to get across or the Internet as we know it will cease to exist. It’s obviously an ongoing publicity campaign as v4 stocks run down and we will of course be making a big splash of it when we finally run out in the region.

What else has the RIPE NCC been doing to reinforce the need to move to IPv6?

Well apart from the training courses we run, we have the IPv6 Act Now site which is an absolute treasure trove of information and guidance for anyone thinking of implementing IPv6. Apart from that it is mostly about raising the profile and making people understand that IPv6 has to come and that IPv4 will be running out very shortly. We’re expending an awful lot of effort in convincing governments that IPv6 is needed and have organised roadshows in the Middle East for governments and have government round table events on a regular basis. In all fairness, European governments are now responding.

World IPv6 Day in June will see leading industry names including Google, Facebook, Yahoo!, Akamai and Limelight Networks make their content available via IPv6 as well as IPv4 for a day. Is it important to have organisations of this size involved for IPv4 to be taken seriously?

It is absolutely vital. IPv6 Day will almost certainly flush out people with antique operating systems and I suspect it will rattle a few help desks as people have problems in bringing the Google page up for example. Organisations do tend to listen to help desk reports - if the help desk manager sees the rate go up ten-fold then this invariably is fed up the corporate ladder who will have to take notice. Also, if the day is a success, it will help breakdown the ‘wait and see’ barrier where people let others take the risk of switching to IPv6 before committing to it themselves.

Co-operation is so important which is why it’s excellent news that Google, Facebook, Yahoo!, Akamai and Limelight Networks have all taken a lead with this.

Finally, if you could say just one thing to business leaders and Internet stakeholders who have yet to embrace IPv6 what would it be?

I think what I would say is at least get your content onto v6 and just prove to yourself that it isn’t that much of an issue. For all RIPE NCC members, get your allocation, start playing with it, and you’ll find that IPv6 isn’t as difficult as you think.

URL: www.ipv6actnow.org

Information

You can find out more about the RIPE NCC and IPv6 here: www.ripe.net/lir-services/resource-management/ipv6

In his interview Nigel referred to the IPv6 Act Now website. This can be found be via the URL: www.ipv6actnow.org
World IPv6 Day

World leading networks sign up for IPv6 event

Below is a list of a few of the leading networks participating in World IPv6 Day. Please follow the relevant links to learn more about the organisations and the activities they will be participating in.

- [http://googleblog.blogspot.com/2011/01/world-ipv6-day-firing-up-engines-on-new.html](http://googleblog.blogspot.com/2011/01/world-ipv6-day-firing-up-engines-on-new.html)
- [http://uk.yahoo.com](http://uk.yahoo.com)
- [http://www.akamai.com/ipv6](http://www.akamai.com/ipv6)

**Other IPv6 Day Participants**

A list of other networks taking part can also be found on the ISOC website [http://isoc.org/wp/worldipv6day/participants/](http://isoc.org/wp/worldipv6day/participants/)

IPv6: Making Room for the Whole World on the Internet

The final chapter in the history of IPv4 began in February as the Internet Assigned Numbers Authority (IANA) allocated the last blocks from the global IPv4 address pool to the Regional Internet Registries (RIRs). As each region runs out of these final IPv4 addresses at different times over the coming months, registries will start allocating IPv6 addresses to accommodate new network developments. The good news is that IPv6 is a well-established protocol, having been developed in the Internet Engineering Task Force over a decade ago.

In fact, many early adopters and promoters of IPv6 are already well down the path of the next stage of the Internet’s ongoing evolution. Major Internet content providers have made their websites IPv6 accessible. Network providers around the world have already implemented, trialled, or announced IPv6 deployment plans. Governments have laid out plans with near-term timelines for adopting IPv6 for their own Internet-connected networks and services. A more complete list of the significant steps already taken to implement IPv6 is available at: [www.internetsociety.org/ipv6adoption](http://www.internetsociety.org/ipv6adoption)

Each of these adopters has recognized the fundamental key to the Internet’s success — the unification of networks through global addressing — and has stepped up to deploy IPv6. The efforts of these organisations should be applauded by the entire Internet community.

However, the momentum they have created must be continued to ensure the Internet does not become Balkanized, with IPv4 and IPv6 network islands unable to reach each other. This would ultimately disadvantage new entrants to the market, or leave markets, people and online content unreachable in ways entirely inconsistent with the Internet service upon which we have become dependent.

To help promote further progress, and as part of its work to encourage the timely deployment of IPv6, the Internet Society is coordinating World IPv6 Day on Weds 8 June. Google, Facebook, Yahoo!, Akamai and Limelight Networks will be amongst some of the major organisations that will offer their content over IPv6 for a 24-hour “test drive”. The goal of the World IPv6 Day ([www.internetsociety.org/WorldIPv6Day.org](http://www.internetsociety.org/WorldIPv6Day.org)) is to motivate organisations across the industry — Internet service providers, hardware makers, operating system vendors and web companies — to prepare their services and products for IPv6, thereby ensuring a successful transition to an IPv6-enabled Internet. This event will represent the largest live test of IPv6 readiness, giving participants a chance to identify and remedy any potential issues.

There are two extremely important lessons from the milestone marked by the last IANA IPv4 address allocation. First, the amazing growth and development of the Internet over the past four decades is a testament to the success of the approach taken to managing IPv4 addresses. As a prime example of the Internet Model, IP addresses are managed through a distributed multistakeholder approach. This approach has helped connect the more than 2 billion people who use the global Internet and the billions more devices that connect to it. It enables simultaneous coordination of key global Internet resources and permissionless innovation by Internet users today, and will continue to do so in the future.

The second lesson is that every organisation ought to have a plan for IPv6 in place. The vast majority of the four billion people not yet connected to the Internet will use IPv6 to do so. Organisations will use IPv6 to reach those individuals via the Internet, and this will begin within the next year. Therefore, IPv6 is not simply a technical issue, but is strategic to the organization’s ability to participate in the growing future Internet — one that is as dynamic and vibrant as today’s.
Broadband providers agree traffic management transparency code

Network neutrality

The major consumer broadband providers have agreed a voluntary Code of Practice to enhance transparency about traffic management practices. The code commits the providers each to produce a “Key Facts Indicator” table, providing comparable descriptions of the providers’ practices to assist consumers with making an informed choice about which provider meets their individual needs.

While introducing a new level of consistency and comparability in reporting, the Code allows providers to continue to use “their own voice” in describing their traffic management practices.

The initial signatories to the Code are BSkyB, BT, Everything Everywhere (incorporating the Orange and T-Mobile brands), O2, TalkTalk, Three, Virgin Media and Vodafone.

Dates announced for next IGF meeting

Europe, Intellectual Property, International

After much delay, dates have been announced for the next IGF meeting. The meeting will take place between 27-30 September in Nairobi, Kenya.

Police look to DNS for Cyber-crime solutions

Europe, Intellectual Property, International

Police on both sides of the Atlantic are increasingly looking to domain registrars as means of shutting down ‘criminal websites’.

In February, registrars and police officials met in Brussels for the EU-US working group on cyber-security and cyber-crime. Police want ICANN to play a greater role in policing the DNS by forcing registrars to keep accurate records of domain owners and restricting the use of proxy/privacy services.

Only the week before, the US Department of Justice accidentally seized thousands of legitimate websites, replacing their homepages with warnings about the criminal penalties for child pornography offences. It was later revealed that the DoJ only had a warrant to seize 10 domains.

Back in the UK, Nominet called for input on its own domain deletion policies following a number of requests from the Serious Organised Crime Agency (SOCA). The US mistake will give Nominet reason to be very careful about adopting procedures that give an unbalanced assumption of authority to law enforcement complaints.

In Brief

The Latest Stories on the LINX Public Affairs Website

Broadband providers agree traffic management transparency code

Network neutrality

The major consumer broadband providers have agreed a voluntary Code of Practice to enhance transparency about traffic management practices. The code commits the providers each to produce a “Key Facts Indicator” table, providing comparable descriptions of the providers’ practices to assist consumers with making an informed choice about which provider meets their individual needs.

While introducing a new level of consistency and comparability in reporting, the Code allows providers to continue to use “their own voice” in describing their traffic management practices.

The initial signatories to the Code are BSkyB, BT, Everything Everywhere (incorporating the Orange and T-Mobile brands), O2, TalkTalk, Three, Virgin Media and Vodafone.

Dates announced for next IGF meeting

Europe, Intellectual Property, International

After much delay, dates have been announced for the next IGF meeting. The meeting will take place between 27-30 September in Nairobi, Kenya.

Police look to DNS for Cyber-crime solutions

Europe, Intellectual Property, International

Police on both sides of the Atlantic are increasingly looking to domain registrars as means of shutting down ‘criminal websites’.

In February, registrars and police officials met in Brussels for the EU-US working group on cyber-security and cyber-crime. Police want ICANN to play a greater role in policing the DNS by forcing registrars to keep accurate records of domain owners and restricting the use of proxy/privacy services.

Only the week before, the US Department of Justice accidentally seized thousands of legitimate websites, replacing their homepages with warnings about the criminal penalties for child pornography offences. It was later revealed that the DoJ only had a warrant to seize 10 domains.

Back in the UK, Nominet called for input on its own domain deletion policies following a number of requests from the Serious Organised Crime Agency (SOCA). The US mistake will give Nominet reason to be very careful about adopting procedures that give an unbalanced assumption of authority to law enforcement complaints.

In the last issue of HotLINX we reported on the launch of 6UK and how it is assisting British business understand the IPv6 issue.

Ed Vaizey reiterated the importance of such bodies in communicating the IPv6 message to those that need to know.

“Mr Vaizey told attendees, “The title of this event reflects the extraordinary success of the Internet - IPv4 had four billion addresses but now we’ve run out and so we have to move to IPv6 and we have to do it seamlessly.”

“This is going to be a long term effort but it’s not something that the government can simply make happen. We have to work with ISPs, businesses and industry to bring about this change.”

In the last issue of HotLINX we reported on the launch of 6UK and how it is assisting British business understand the IPv6 issue.

Ed Vaizey, Minister for Communication, Culture and the Creative Industries, was one of the speakers at the Move over IPv4 (Bring on IPv6) event at the London Transport Museum on Tuesday 22 March.

Minister urges business to get ready for IPv6

Ed Vaizey reiterated the importance of such bodies in communicating the IPv6 message to those that need to know.

“The government helped set up 6UK as the principle forum to promote the rollout of IPv6 to UK organisations so they can make the transition and secure competitive advantage with the rapid adoption of the new internet protocol,” he said.

“This will ensure that no part of UK industry gets left behind or is unaware of the changes that need to be made.”

Nominet’s Simon McCalla, also speaking at the event, said “As an industry we are going to be the ones that make the Internet of things a reality, so we’ve got to get out there and sell IPv6 as the next-generation Internet.”

Ed Vaizey reiterated the importance of such bodies in communicating the IPv6 message to those that need to know.
The Big, The Bad and The Ugly
The Story of DDoS Doesn’t Get Any Prettier

Jay Coley, at Prolexic Technologies, analyses the latest trends in Distributed Denial of Service

As far back as ten years ago Distributed Denial of Service (DDoS) was primarily used as a weapon, mainly by organised crime groups, to extort money from Internet based businesses. More recently, DDoS has increasingly been deployed by organisations, individuals and nation states to damage the reputation and livelihood of competitors and political adversaries. Today DDoS has become a mainstream tool, with botnets openly for hire, and attacks becoming ever more sophisticated.

There has been a dramatic increase in DDoS attacks - Prolexic mitigated 4000 attack events in 2010, which represented a 27% increase over the number of 2009 events. While the traditionally high risk businesses - for example online gambling and payment service providers - still take the brunt of attacks, financial institutions have recently become a popular target. However, attacks on mainstream businesses such as online retailers and educational establishments have increased the most with a 200% rise in 2010.

Online activist groups, such as Anonymous, brought DDoS to mainstream attention in 2010, especially with their high profile attacks related to Wikileaks. As several large organisations and established Internet companies succumbed to these attacks, traditional corporates really started feeling the heat. Many organisations, believing themselves to be protected from web attacks, in fact proved to be ultimately unprotected and unable to respond to the diverse and aggressive DDoS methods employed against them. While these were by no means the largest of attacks, the frequency and ease with which the attackers launched and modified their attack vectors led to the widespread effects including downtime, negative press, and general havoc caused within many businesses’ network and security teams.

The only way to defend against these types of attacks is to implement a tactical, dynamic response - globally and enterprise-wide. Prolexic’s engineers analyse the attack traffic in real time, using many tools to precisely identify the attack variants and deploy specific and customised countermeasures. Prolexic analyses all data related to DDoS by measuring every attack that is mitigated via Prolexic’s cloud based scrubbing network. From this, we are able to gain an excellent overall picture of attack types, trends, sizes and changes in the way attackers respond to the defence mechanisms deployed.

While the capacity to launch massive attacks is still ever present, Prolexic’s research indicates that recent trending is towards attackers using lower bandwidth, pinpointed, precision attacks, often in combination with other attack vectors, as ‘multi-pronged’ assaults. Attacks of 50Mb/s or less targeted at application layer components can render the network infrastructures of large enterprises inaccessible.

There has been a steady increase since 2009 in application layer attacks, which instead of overwhelming the client’s router or inbound bandwidth connectivity with massive bit rate floods, use a smaller number of bots to complete TCP connections with the client’s network, and stress the back end applications. This type of sophisticated attack, often involving multiple database requests is specifically designed to overwhelm the target application.

DDoS is an effective and constantly developing weapon that, now in the mainstream, potentially puts everyone’s web presence at risk. The key to surviving today’s network attacks is the adaptability to simultaneously mitigate a huge variety of attacks including massive - 100 Gb/s+, as well as subtle - application layer attacks which strike with pinpoint accuracy.

For more information on DDoS and Prolexic Technologies please visit: www.prolexic.com
RIPEstat - A Toolbox for Checking the Status and Statistics of Internet Number Resources

The RIPE NCC has a lot of data related to IP addresses and Autonomous System numbers:
- The RIPE Database contains registration data for number resources and the RIPE routing registry;
- the RIPE NCC Routing Information Service (RIS) provides both real time and historic information about the state of inter-domain routing;
- the Test-Traffic Measurement (TTM) service makes continuous measurements; and
- the RIPE NCC also collects time series of data originated by others, such as CAIDA, Maxmind and various Real-time Blackholes (RBLs).

This is a lot of data, but it is hard to access and correlate in a consistent manner. RIPEstat will change that by bringing all this information together on a single web-page with a simple user interface. Enter an address and RIPEstat will tell you who it is registered to, how it is routed, where it is geolocated, whether it appears in certain block lists and so on.

For most of these aspects RIPEstat will also tell you the history of the address over many years up to the present.

RIPEstat will contain a steady stream of operational news based on the measurements, contributions from our community and our own experience. For an early example of this, see the RIPE NCC’s analysis of the Egyptian Internet outage on the RIPEstat page: http://stat.ripe.net/egypt

Every four weeks we webcast a 30 minute public demonstration of new features and capabilities with the opportunity to ask questions and make suggestions. For information about dates and how to participate please see: http://labs.ripe.net/ripestat

RIPEstat is based on our fast Internet Number Resource Database (INRDB) and our experience with the Resource Explainer (REX) prototype. For more information, please see these articles on RIPE Labs:
- http://labs.ripe.net/Members/kistel/content-intro-inrdb-internet-number-resource-database
- http://labs.ripe.net/Members/kistel/content-rex-resource-explainer

Please check out the beta version of RIPEstat now at: http://stat.ripe.net/

We will improve the design and functionality closely based on your suggestions and your usage patterns.

Bernd’s Work on iPhone Security Referenced in New Report

LINX Information Security Officer Bernd Marienfeldt, has seen his work towards more secure smartphones[1] mentioned and referenced in a recent report: ENISA, the European Network and Information Security Agency has published the EU cyber-security agency report[2] which highlights the risks, opportunities and recommendations for all users of smartphones.

"Given the growing importance of smartphones for EU businesses, governments and citizens, we consider it essential to assess their security and privacy implications," says Prof. Dr. Udo Helmbrecht, Executive Director of ENISA.

Dr. Giles Hogben, co-author of the ENISA report, added, "Smartphones are a goldmine of sensitive and personal information – it’s vital to understand how to maintain our control over this data. We’ve designed our recommendations to plug into a typical security policy."

The full story on the ENISA report available on the ENISA website:


The importance of building premium data centre capacity in restricted UK markets

The exponential growth of the digital economy in the UK and its resultant impact on the demand for outsourced data centre capacity has created unique challenges in the UK market.

The trend for enterprises to outsource mission critical business and information processes to online platforms will continue, as will the requirement to utilise network-intensive and latency-critical applications in a highly-resilient environment. However the availability of data centre capacity in highly-demanded inner-city locations has been restricted in recent years, due to power constraints, costs and the complex regulatory approvals which are involved. Indeed, global demand for multi-tenant data centre space currently exceeds supply, and growth is forecast to continue outpacing supply through 2014.

Some providers have chosen to build facilities in more rural areas where overheads and power constraints are lower; a variety of new facilities have been built outside the M25, for example. However, facilities in these rural and suburban areas often lack the network diversity and connectivity to meet modern enterprise requirements. The presence of multiple telecommunication providers is critical to ensure a resilient IT infrastructure, and these out-of-town facilities lack these provisions.

It is clear then that network-independent capacity in central city areas is the most effective choice for enterprises looking for a resilient, highly-connected infrastructure to support today’s bandwidth-heavy digital economy. Therefore despite the challenges involved, TelecityGroup have continued our strategy of building customer capacity in the locations most demanded, specifically central London, the Docklands and Manchester. This gives our customers the assurance that their growth plans can be accommodated into the future with premium data centre capacity.

Due to the continued presence of a wide selection of financial institutions in London, it is still regarded as one of the major financial centres of the world. It is also without doubt, a major hub for internet content and telecoms providers. Our position as a leading hub for commerce, content and connectivity in Europe encourages these network providers to build fibre and deliver connectivity into our data centres, which means we provide some of the most highly-connected capacity in Europe.

In the past year we have announced significant data centre capacity expansion plans in London, which underpins our strategy of a controlled expansion programme in highly-demanded locations in Europe where facilities are reaching full utilisation.

We have announced plans to increase the total customer available power to 21 megawatts (MW) at our flagship London facility, Powergate (which houses a LINX node) due to increasing demand from local and international network service providers, content providers, financial services firms and other enterprises. The expansion is becoming available to customers in phases, delivering new capacity as our existing data centre capacity in Powergate reaches full occupancy.

To ensure the continued availability of customer space in Docklands, we have also announced the expansion of our Harbour Exchange facility, one of our most in-demand sites in Europe. 3 MW of customer capacity will be added, enabling customers to build infrastructure with extremely low latency to financial institutions such as the London Stock Exchange.

Finally, we have also experienced strong demand in Manchester, which is becoming the regional tech-hub of the North-West and rapidly developing the reputation of a next-generation digital city. As such, we have looked to expand our customer offering in the region. Following our recent acquisition of Internet Facilitators Limited, a carrier neutral data centre, we have also announced the construction of a new data centre in the city which will offer 3.5 MW of customer power. The facility, due to open in Q3 2011, will further fulfil the latent demand for highly-connected capacity in the region.

LINX members can learn more about TelecityGroup’s expansion projects by accessing the presentation and video archive from the LINX71 meeting: www.linx.net/linx71 (log-in required).

Further information on TelecityGroup services can be found on the www.telecitygroup.com website.

Arthur Atkinson, TelecityGroup’s Head of Build, speaking on future expansion projects at the LINX71 member meeting back in November.
LINX72 Member Meeting Agenda Covered Worldwide Internet Issues

The 72nd LINX member meeting took place in February 2011 at The Congress Centre in London.

**Day One** *(Monday 21 February)*

The meeting got under way with a LINX status update from John Souter. Ditlev Bredahl, CEO of LINX72 Gold sponsors Onapp, was on stage next to speak on Cloud hosting deployment and management services before an interesting presentation on experiences of IPv6 deployment by Adrian Kennard of Andrews & Arnold. The IPv6 theme was continued by a short lightning talk on the upcoming World IPv6 Day by Akamai’s Patrick Gilmore. You can read more about both these IPv6 stories on pages 7 and 9 of this issue of HotLINX.

After the break there was a LINX technical overview presentation by John Souter followed by a network and architecture project update from LINX Network Operations Manager, Mike Hellers. Ken Cheng, Brocade’s Vice President of Service Provider Products, was next on the agenda and he joined in with a lively Q&A session between LINX72 delegates, LINX staff and Board on vendor issues.

**Day Two** *(Tuesday 22 February)*

The second day began with Subi Krishnamurthy of Force10 Networks speaking on behalf of Silver Plus sponsors Hardware.com on 40GbE and 100GbE technologies. This was followed by new LINX Marketing & Business Development Manager, Ben Hedges, making his first presentation to the LINX membership.

The topic of BGP error handling was covered by Rob Shakir of Cable&Wireless, plus there was another lightning talk by Patrick Gilmore, this time on the subject of business drivers for new technologies. The guest IXP presentation at LINX72 was made by Nick Hilliard of Dublin exchange, INEX.

One presentation that attracted a great deal of interest on the second day was Prolexic’s Jay Coley talking on cyberattacks used as political weapons. This focussed in particular on the WikiLeaks attacks and current DDoS trends.

Also during day two were informative presentations from LINX’s Head of Public Affairs, Malcolm Hutty, as well as the LINX Engineering team. Amongst the subjects discussed during Malcolm’s session were content blocking and the recent shutdown of Internet services in Egypt.

Members unable to attend the event are reminded that meeting presentations and a video archive of the webcast are both available from the LINX website: www.linx.net/linx72

**LINX73**

**LINX Election and AGM to take place at May meeting**

Planning is again in full swing for the next LINX member meeting on the 16 and 17 May. The LINX Program Committee (LPC), recently met to agree on the agenda for the forthcoming meeting which will also see this year’s AGM and Council Elections.

It should be noted that after many years of sterling service Neana Singh is now passing the organisational reins of LINX meetings to Megan Nisbet as she looks to devote more time to HR issues for the company. In addition to the conference venue arrangements and logistics, Megan will be reviewing locations for the evening social events as well as speaking with companies interested in sponsoring meetings. If this includes your company please contact her via megan@linx.net.

**LINX Council Elections**

The elections for the seats of the two LINX Council members required to retire for re-election will take place during the AGM at LINX73 on Monday 16 May.

A formal request for nominations for candidates for the two seats will be made shortly so please refer to the LINX website and membership@linx.net mailing list for further announcements.

If you wish to stand for LINX Council and would like to understand the process further please refer to the following online documentation:

www.linx.net/members/govproc/standing-for-council.html

Please note that members of the Council are required to adhere to a signed code of conduct with LINX. Details of the contract can be found here:

www.linx.net/members/govproc/terms-of-reference.html

Further notices regarding LINX73 will follow in due course. Registration is set to open on Monday 18 April 2011 when the event meeting web page and draft agenda will be launched. The URL for the LINX73 member meeting will be: www.linx.net/LINX73
LINX Sponsorship

LINX71 Sponsor article from IP Performance and BlueCat Networks

By Richard Hyatt, CTO, BlueCat Networks

On February 3, the IANA announced that it had completed its final allocation of IPv4 addresses, marking the end of an era for the Internet. When IPv4 was first created, almost 40 years ago, no one could have predicted the phenomenal growth of the Web and IP-enabled devices – or that we would quickly outgrow four billion IPv4 addresses.

The move to IPv6 is necessary to support the Internet’s continued growth. Future network development will now be focused on IPv6 and IT initiatives like cloud computing and mobile networks will soon take advantage of the new protocol.

While IPv4 isn’t going to disappear overnight, organisations will need to support both IPv4 and IPv6 to avoid losing connectivity with the rest of the world where IPv6 adoption is already in full swing.

The implementation of IPv6 involves a fundamental change in communication systems, which must support both protocols and their interoperability. IPv6 is not backwards compatible with IPv4, which will create significant management and security challenges. IPv4 exhaustion has exposed the critical need for smart, scalable IP Address Management (IPAM) solutions to help organizations adopt and manage IPv6 and dual stack networks.

The old ways of managing IP addresses with spreadsheets and by memory are no longer viable. Can you memorize the IP address below?

2001:0fed:ba23:cd1f:0dcb1:1010:9234:4088

IPv6 addresses are 128-bits long and are represented in hexadecimal, a format that is not human-friendly. Imagine the IT staff that needs to remember hundreds or thousands of IPv6 addresses. The total number of addresses available under IPv6 is more than 340 undecillion (undecillion = 10^60). With such an enormous pool of addresses, IPv6 simply cannot be tracked on a spreadsheet and everyday tasks, such as determining the next available network, become anything but trivial.

An IPAM solution will be essential in order to quickly and easily discover your existing IPv4/IPv6 space, model your new IPv6 network and track IPv6 simply cannot be tracked on a spreadsheet and everyday tasks, such as determining the next available network, become anything but trivial.

While IPv6 is not, as some would have you believe, the coming “IPocalypse,” it will require careful planning and management to ensure a smooth and seamless transition. Organisations need to start planning now to ensure full and uninterrupted connectivity on the new Internet.

An IPAM solution will be essential in order to quickly and easily discover your existing IPv4/IPv6 space, model your new IPv6 network and track IPv6 and dual-stacked IPv4/IPv6 systems. Resilient core DNS and DHCP services will be needed to provide IPv6 naming and addressing. With IPv6, people will rely more heavily on DNS to map between something they can remember and the actual IP address.

The completion of the IPv4 address space, model your new IPv6 network and track IPv6 simply cannot be tracked on a spreadsheet and everyday tasks, such as determining the next available network, become anything but trivial.

While IPv6 is not, as some would have you believe, the coming “IPocalypse,” it will require careful planning and management to ensure a smooth and seamless transition. Organisations need to start planning now to ensure full and uninterrupted connectivity on the new Internet.

BlueCat Networks is a leading provider of IP Address Management (IPAM), DNS, DNSSEC and DHCP core services.

www.bluecatnetworks.com

IP Performance deliver Internet and networking products as well as professional, certified network management and technical support services. www.ip-performance.co.uk
LINX heads to Eastern Europe for Capacity Balkans event

Capacity Balkans is taking place in Bucharest on 11 & 12 April 2011. The two day event offers the opportunity for influential wholesale telecoms executives to meet and network with international carrier markets.

Attendees will also be given the opportunity to listen to numerous presentations that could help their business develop and grow. Presentation titles include; identifying key growth markets and services in the Balkans telecoms market, developing advanced IP-based wholesale services to create new revenue streams, and new strategies for growth in the Balkans voice market, amongst others.

With an expected attendance of up to 350 people - an increase on the 296 visitors who attended last year - Capacity Balkans is looking like being a very successful event. LINX will be exhibiting this time around and staff are very much looking forward to making many new contacts within the Balkans region.

LINX Business Development Executive, Jennifer Atherton, states: “We feel that sponsoring this event offers LINX an opportunity to reach potential members within the Balkans region. Our objective at LINX is to broaden the amount of peers we have at the exchange, and involve even more member countries”.

To find out more about this and other Capacity events please visit: www.telcap.co.uk/conferences-events.asp

Meet with LINX

Events to be Attended by LINX Representatives

LINX staff attend a number of industry events around the world every year. Please take a look at the list below to see where you can meet with LINX representatives over the coming months.

- **GPF6**
  - 4-7 April 2011
  - Los Angeles, USA
  - Attended by: Jennifer Atherton and Ben Hedges
  - [www.peeringforum.com](http://www.peeringforum.com)

- **Capacity Balkans**
  - 11-12 April 2011
  - Bucharest, Romania
  - Attended by: Jennifer Atherton, Ben Hedges and LINX staff TBC
  - [www.telcap.co.uk/conferences-events.asp?id=75](http://www.telcap.co.uk/conferences-events.asp?id=75)

- **UKNOF19**
  - 21 April 2011
  - Leeds, United Kingdom
  - Attended by: LINX staff TBC
  - [www.uknof.com](http://www.uknof.com)

- **RIPE62**
  - 2-6 May 2011
  - Amsterdam, The Netherlands
  - Attended by: LINX staff TBC
  - [www.ripe.net/ripe/meetings/ripe-62](http://www.ripe.net/ripe/meetings/ripe-62)

- **LINX73**
  - 16-17 May 2011
  - London, United Kingdom
  - Attended by: LINX staff and Board
  - [www.linx.net/LINX73](http://www.linx.net/LINX73)
  - Web page will be available in April 2011

- **NANOG52**
  - 12-15 June 2011
  - Denver, USA
  - Attended by: LINX staff TBC
  - [www.nanog.org/meetings/nanog52](http://www.nanog.org/meetings/nanog52)

- **LINX74**
  - 15-16 August 2011
  - London, United Kingdom
  - Attended by: LINX staff and Board
  - [www.linx.net/LINX74](http://www.linx.net/LINX74)
  - Web page will be available in July 2011

- **UKNOF20**
  - 6 September 2011
  - Bristol, United Kingdom
  - Attended by: LINX staff TBC
  - [www.uknof.com](http://www.uknof.com)

For further information on the Global Peering Forum including the event agenda please visit: [www.peeringforum.com](http://www.peeringforum.com)
Staff News

To the Power of Ten!

Six members of staff celebrating 10 years of working at LINX

In an industry where the only constant seems to be change it will perhaps surprise some people that there is a considerable number of LINX members of staff who have recently completed 10 years service at the exchange.

Attendees at the LINX02 member meeting will have seen LINX CEO John Souter presented with a certificate to mark his own personal milestone, but he wasn’t the first to have their achievement marked in this way. Over the last few months Hugh Spencer, Neana Singh, Neil Ratcliffe, Howard Fisher and Steve Harrison have all received certificates and a gift experience from the company as a thank you.

LINX has seen quite remarkable growth in recent months with staff numbers now well in excess of 30 and the recruitment process still going on for key Member Relations and Engineering roles.

A scan of company records reveals that there are yet more staff who are closing in on a decade of service so be on the look out for the names in a future edition of HotLINX.

LINX staff with 10 years continuous service

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Joined LINX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Hedges</td>
<td>Marketing &amp; Business Development Manager</td>
<td>1 March 2001</td>
</tr>
<tr>
<td>Sheryl Francis</td>
<td>Business Development Administrator</td>
<td>19 October 2000</td>
</tr>
<tr>
<td>John Souter</td>
<td>Chief Executive Officer</td>
<td>15 October 2000</td>
</tr>
<tr>
<td>Hugh Spencer</td>
<td>I.T. Manager</td>
<td>8 November 2000</td>
</tr>
<tr>
<td>Neana Singh</td>
<td>Marketing &amp; Human Resources</td>
<td>19 October 2000</td>
</tr>
<tr>
<td>Neil Ratcliffe</td>
<td>Service Delivery Engineer</td>
<td>16 October 2000</td>
</tr>
<tr>
<td>Howard Fisher</td>
<td>Chief Operating Officer</td>
<td>15 October 2000</td>
</tr>
<tr>
<td>Steve Harrison</td>
<td>UNIX and Web Sysadmin</td>
<td>4 September 2000</td>
</tr>
</tbody>
</table>

In an industry where it’s not unusual to go out for a beer with your closest competitor the mutuality of LINX, and it being a place where competitors work together, really appealed to my sensibilities. I’m really enjoying the variety and challenges that come with my new role. I’ve been lucky to inherit a supportive team who are keen to embrace any new thinking and ideas, and who have several ideas of their own – so it’s made my first few weeks relatively painless. I’m looking forward to attending my first LINX meeting and being introduced to lots of members, and hearing about their perspective of LINX.”

Sheryl Francis
Business Development Administrator
Sheryl Francis, the LINX Business Development Administrator, joined LINX in August 2010. Sheryl’s role at the exchange involves helping new members complete the application process, from the initial application form until their actual connection at the exchange. Before joining LINX Sheryl worked in various roles that gained her secretarial and customer care skills, which she is now able to put to good use within her role at LINX.

“I’m really enjoying working here, all the staff are so welcoming and friendly. I feel like I’ve been here for six years, not six months” says Sheryl. “I’m looking forward to working with the Member Relations team when they are in place, and continuing with the successes of last year”.

Comment
New Members Connected

Altech
ASN: 37253
Country: South Africa
Network: Cable/DSL/ISP
Policy: Information not available
IPv4 Address: 195.66.224.202
Website: www.techconcepts.co.za
Email: peering@atcsp.co.za
Tel: +27 827 900796
Peering DB: No

Kenya Data Networks
ASN: 33770
Country: Kenya
Network: Cable/DSL/ISP
Policy: Information not available
IPv4 Address: 195.66.225.162
Website: www.kdn.co.ke
Email: ipsupport@kdn.co.ke
Tel: +25 420 5000 000
Peering DB: No

ControlCircle
ASN: 31672
Country: UK
Network: ISP and Hosting
Policy: Information not available
IPv4 Address: 195.66.225.161
Website: http://controlcircle.com
Email: peering@controlcircle.com
Tel: +44 207 517 6500
Peering DB: No

Fluidata
ASN: 39545
Country: UK
Network: Cable/DSL/ISP
Policy: Open
IPv4 Address: 195.66.225.84
IPv6 Address: 2001:7f8:4::9a79:1
Website: www.fluidata.co.uk
Email: noc@fluidata.co.uk
Tel: +44 207 099 8999
Peering DB: Yes

Keycom
ASN: 25178
Country: UK
Network: Cable/DSL/ISP
Policy: Open
IPv4 Address: 195.66.224.192
IPv6 Address: 2001:7f8:4:625a:1
Website: www.keycom.co.uk
Email: peering@gsa25178.net
Tel: +44 1785 717102
Peering DB: Yes

Netriplex
ASN: 36167
Country: USA
Network: NSP
Policy: Open
IPv4 Address: 195.66.225.82
IPv6 Address: 2001:7f8:4::8d47:1
Website: www.netriplex.com
Email: peering@netriplex.com
Tel: +1 828 650 8585
Peering DB: Yes

Prime Tel
ASN: 8544
Country: Cyprus
Network: Cable/DSL/ISP
Policy: Open
IPv4 Address: 195.66.225.95
IPv6 Address: 2001:7f8:4:2160:1
Website: www.prime-tel.com
Email: peering@prime-tel.com
Tel: +357 2586 7070
Peering DB: Yes

Membership News

In this issue of HotLINX we are pleased to announce the connection of seven new members since the start of the year. While this a lower number than has been reported in recent issues it is interesting to note the wide geographic reach of networks wishing to join LINX remains strong.

From the UK we welcome ControlCircle, Fluidata and Keycom, as well as Netriplex, a network service provider, from the USA. Cable and DSL supplier Prime Tel of Cyprus are the only new European member this quarter, but this still takes the number of networks connected from that country to three. Finally, the African membership base continues to grow with Kenyan Data Networks signing up alongside Altech of South Africa.

A complete LINX membership list is on the LINX website: www.linx.net/about/memberlist

LINX are hopeful of having the team in place by the LINX73 AGM on the 16 and 17 May 2011.

Sales Update

For the Period January - March 2011

In this issue of HotLINX we are pleased to announce the connection of seven new members since the start of the year. While this a lower number than has been reported in recent issues it is interesting to note the wide geographic reach of networks wishing to join LINX remains strong.

From the UK we welcome ControlCircle, Fluidata and Keycom, as well as Netriplex, a network service provider, from the USA. Cable and DSL supplier Prime Tel of Cyprus are the only new European member this quarter, but this still takes the number of networks connected from that country to three. Finally, the African membership base continues to grow with Kenyan Data Networks signing up alongside Altech of South Africa.

A complete LINX membership list is on the LINX website: www.linx.net/about/memberlist

LINX are hopeful of having the team in place by the LINX73 AGM on the 16 and 17 May 2011.

Membership News

Jennifer Atherton
Business Development Executive

LINX is currently recruiting for two people to help form a new Member Relations team within the Marketing & Business Development department.

The new team will work closely with all parts of the company as well as acting as an interface between members and the exchange itself. The role will involve dealing with specific enquiries from the membership and directing requests and any issues to relevant departmental colleagues. Other tasks include managing contact data using the LINX CRM plus representing LINX at external events such as the LINX membership meetings in London.

Other key responsibilities of Member Relations team staff:
• To be the first point of contact for members
• To deal with member enquiries in a timely and efficient manner
• Filter technical support queries to engineering
• Manage registration at LINX meetings
• Support marketing in member communication exercises
• Deal with upgrade requests and general member account management

Manning the registration desk at LINX meetings will be just one of the roles undertaken by the new LINX Member Relations team