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Report of the

RIPE 62

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for the CENTR secretariat

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Highlights

Ipv4 - the final game

This has been the first RIPE meeting after the runout of the IANA IPv4 address pool, and RIPE Chair Rob Blokzijl pointed out that the next meeting (in November) might be the first with the remaining RIPE pool also depleted (after APNIC has run-out on April, 15 as the first RIR). RIPE IPv4 resources are expected to last another 4 to 6 month (according to Geoff Huston's prognosis) and policy proposals on how IPv4 last-mile policies should be are still coming in.
Andy Davidson, Director of European Operations at Hurricane Electric, and Co-Chair of the RIPE Internet Exchange Working Group presented a new proposal to reserve a /16 either from the existing IPv4 pool or the last /8 to allow IPv4 allocation for future, new Internet Exchanges. There were still a lot of places without Exchange Points, but these were necessary for building up the Internet infrastructure. The proposal was well received, even if there was discussion about the need to reserve as much as a /16, which -according to Kurt Lindquist from Netnod- would allow to allocate /24 block to 256 new Exchange Points, double the number of exchange points currently existing in Europe. The size of the reserved allocation pool (and the size of the allocation itself) might therefore still be discussed. Mohsen Souissi, AFNIC, recommended during the discussion to think along the same lines for future DNS anycast deployment. While a designated policy for these was disbanded in an earlier discussion, anycast servers were now clearly identified as part of the infrastructure. Brett Carr from Nominet disagreed pointing to the difference between the IXPs and ccTLDs, since there would be no additional ccTLDs (only perhaps new gTLDs) in the future.

Still unresolved is the issue of a global IPv4 allocation policy from IANA to the RIRs. Currently if IANA gets back IPv4 address space, there is no policy to allocate it. After lengthy discussions about earlier global policy proposals, Address Policy WG Co-Chair Gert Döring presented another, this time “light-weight” – as he said – global policy proposal. The proposal would not be linked to local transfers policies in any way or say anything about returning space from the RIRs to IANA, but it was just about allocation of IPv4 space that happened to be at IANA in two batches per year – equally among the five RIRs, Döring explained. Döring also warned that further changes could once more block the passage of a global policy.

What kind of WG will in the future talk about IPv4? Marco Hogewoning (RIPE NCC) briefly confirmed during one of the sessions that he had the idea to establish a “legacy protocol WG” that should focus on maintenance. On the other hand there was a discussion on what should happen with the dedicated IPv6 WG, which was not meeting during the week, yet a special plenary day (in addition to a IPv6 tutorial) plus a IPv6 Round Up on the closing day talked about IPv6 exclusively.

The hot issue: trading IPv4

With scarcity looming, several parties openly started to offer brokering services for IPv4 addresses. In the US, Addrex made headlines as the company brokering the Microsoft-Nortel transaction in which 11,25 US Dollar were paid per address in a 7,5 Million Dollar deal. According to court documentation Addrex had forwarded solicitation to over eighty potential purchasers in December, signed non-disclosure agreements with 14 purchasers and finally received bids from four who wanted to bid for the entire portfolio of numbers.
According to Addrex CEO Charles Lee, 11,25 Dollar per address “was a fair number for both Nortel and Microsoft because that particular valuation occurred prior to the true exhaust of the RIR number supply, solely within the US market, with time and contract constraints on delivery of the asset, and

with one party in bankruptcy. For these reasons we believe that $11.25 per number is probably the floor and not the ceiling in terms of pricing." Addrex, according to Lee, is providing two fundamental services: It is "a broker for the legitimate number block holder seeking to monetize their asset(s) and we provide a marketplace for network operators to acquire those scarce but necessary assets." Clients would be steered clear of the potential pitfalls along the path to a successful transaction by for example "rigorous number block chain-of-custody validation requirement, and associated documentation processes". The latter would make Addrex "comfortable that our marketplace is only offering assets from legitimate number block holders" thereby "maximizing the value of the asset to the acquiring party".

Interestingly enough, Addrex is linked (organisationally and financially) to two other companies, Denuo and Depository. Depository has been applying to ICANN to become an IP address registry provider. Depository argues in its application for competition in address registry providing in the same way as in domain name registration. Depository, according to Depository Chairman Peter Thimmesch talking at a panel discussion at the Washington Giganet Conference, wants to offer services to IPv4 space not under contract with the RIRs - the so called legacy space. Also looming is a fight between Depository and ARIN about ARIN's denial to grant them bulk access to ARIN's Whois database. ARIN, according to further correspondence posted on the ICANN webpage, points to its concern that Depository as a "self appointed registry" could be "soliciting changes in the Whois database" thereby creating confusion. Depository maintains the position that ARIN is acting anti-competitively (and compares it to NSI) in the domain name business.

Meanwhile a second broker has gone online. Martin von Löwis, professor at the Hasso-Plattner-Institute in Potsdam, started tradeIPv4 as a "marketplace (..) organized similar to a stock exchange: resource holders can place offers to sell or lease address space, and service providers can bid for this address space. The trading price is determined for each of the service regions, separately for sales and leases. In addition, addresses that are offered for sale across regions are traded at a separate price." Von Löwis refers to the various transfers policies of the regions and also notes in his FAQ that cross-region transfers currently was unregulated and "whether or not legacy (pre-RIR) allocations can be transferred across regions is a gray zone." Prices listed on the page that requires registration with an official LIR number differ heavily. The maximum offer is 200 USD per address for a cross region sale, for a sale in the RIPE region it's a 100 USD. Maximum bids are much smaller, ranging from 7 dollar per address for a cross-region transaction to 3 dollar per address for the RIPE region. TradeIPv4 also offers to broker for leasing addresses.

At the RIPE meeting, Address Policy WG Co-Chair, Gert Döring, said IPv4 addresses might become very valuable and expensive for some time before they will finally lose this value, that is, when the migration to IPv6 is more advanced. A "best practice" or "guidelines" document on transfers was proposed by Dave Wilson from HEAnet, Ireland's National Education & Research Network. The guidelines should not touch the transfer policy or the existing procedure, but should look into things that receiving and acquiring parties in transfers should consider. Wilson mentioned four topics to be covered by the document:

- routing consideration (like considering the importance of documenting changes in the routing registry, or being aware of the risk to run into bogus filters),
- security considerations (really fully vacating space, checking if space is ready, is it on blacklists)
- reliability of the transfer itself
- considerations for third parties

There was a quick discussion about the question if the role of the RIPE NCC in such transfers should also be clarified. Geoff Huston from APNIC said that RIRs like RIPE NCC could be a lot of things in the transfers world. They could facilitate transfers, or even go to blacklist providers to clear space. The address WG Chairs declared discussions about pricing of IPv4 addresses or the role of RIPE NCC out of scope.

What RIRs do (ARIN does it already and RIPE NCC is considering it) is to list requests and offers of IPv4 address space. People might well use these listing services to find trading partners for free, yet legacy space potentially might not show up here. With regard to the Nortel-Microsoft deal there is an ongoing debate about ARIN's right to intervene. ARIN managed to have the buyer (Microsoft) signing a legacy registry service agreement in that deal, but had to relinquish a check for “need” on the buyer's/receiver's site.

Since the deal ARIN has received 10 transfers requests completed (statistics are here).

Another RPKI debate: No certification policy yet, but fears of layer 9 attacks

RIPE NCC has started certifying aggregatable space and IPv6 allocations on a hosted platform in January 2011. According to the update of Alex Band, RPKI program manager at the RIPE NCC, over 460 certificates have been given out to date, covering the equivalent of 168.000 /24 IPv4 prefixes, 8400 /32 IPv6 prefixes. Band explained during the Routing session that all the crypto, the generation and the publication were easily done via the software. Yet Band warned that once people have started and used the Route Origin Authorisations (ROAs) in a production environment, they “have to do it consistently”. Announcing prefixes not only from an AS that has a ROA, but also from a second AS, that does not yet have a ROA, would make the announcement invalid.
Band announced further work on allowing LIRs to become their own certificate authorities. With the hosted system in place, the RIPE NCC was the holder of the LIRs' private keys. Still, he expected a lot of people to further use the RIPE NCC provided infrastructure in order to not having to deal with keys, roll-overs or hardware security modules. Besides the easy signing interface RIPE NCC also offered an easy, Java-based command-line validation tool, and router operator Cisco had announced to roll out RPKI-able routers in Q4 2011. Juniper was also working on the issue. Based on the answers coming in after validation operators/LIRs then could finally make their own decisions on what routes to accept and which ones to filter. Everything was driven by preferences of the individual operator and “nobody is forcing you to do anything”, Band underlined.

But despite all the assurances on the preference-based nature of the RPKI-system, the Amsterdam meeting saw another hot debate about the desirability of RPKI in the first place. Vocal opposition came from Malcolm Hutty from the London Internet Exchange. Hutty, currently also President of EuroISPA, asked already during the first plenary day if it was really necessary to change from the current decentralized routing system to a structure that was much more hierarchical due to the certification structure.

Hutty reiterated earlier concerns that the RIPE NCC could become a target for law enforcement agencies and IP-rights owners asking for revocation of certificates, rendering routes invalid at least for those who do not bother to set-up a routing table check individually and check only based on what the RPKI-system presents. The issue had been discussed for years, also during standardization work in the Secure Interdomain Routing Working Group (SIDR), which has prepared all the specifications and has just re-chartered to go on and secure also the path (and not only the origin as is done with RPKI right now).

Following Hutty's comments there was a hot debate on the Address Policy Mailing list, which is still ongoing. In an attempt to address these concerns, Rüdiger Volk, routing expert of Deutsche Telekom and possibly the only non-US based expert who follows the RPKI/BGPSEC development closely, made an ad hoc presentation. Volk acknowledged the potential for outside interventions in the routing system through RPKI. But he said the risk could be mitigated by "empowering the relying party". The RPKI relying party software, which has been developed by BBN experts like Steve Kent, can allow operators to override revocations they do not accept and build their own view of the routing table and then resign it again. Volk said one open question was certainly if people would be prepared to pay the cost (operational, financial) for this, especially given that third party interventions (for example by Dutch LEAs or Dutch courts) might be the exception – as might be irregular action by the RIPE NCC. Considerations about alternative developments as requested by Hutty might not lead to solid alternatives, would certainly result in a delay and could bring a clash with the IETF RPKI standards, according to Volk. Mitigating mechanisms beside the relying party software that Volk mentioned are for example:

- organize tracking RPKI information outside of the control of the hierarchy chain
- keep old status information before potential unexpected revocation,
- establish an exchange forum and protocol to distribute hints about exceptions to/amongst relying parties.

Randy Bush warned that the overwriting of routing information coming out of the RPKI system might turn out as an attack on the system itself, with a government or entity using their view of the routing table to allow or disallow certain traffic.

Hutty on the other hand said that he was afraid that RPKI might become a net loss, because while preventing some erroneous attacks and some glitches, it was going to create "more layer nine attacks" (meaning political attacks). And this kind of interventions was no science fiction: "I know the sources where these attacks will come from. I work with them every day and they are very real", he said. Hutty pointed for example to the URL blocking list of the Internet Watch Foundation. Over the mailing list the discussion - that should have considered the last call of a light-weight Certification Policy (which settles on certificaton only reflecting the status of the registration data base) – still is ongoing. On participant wrote on the list: "I do like the LTA magic of rewriting the root (or somewhere else) of a hierarchical system onto yourself. As I've expressed before, if the community does end up going for RPKI, I'd seriously like to see more software which can cook up alternative trees, ignoring certain changes, comparing source data trees and so on and so forth (diluting accuracy of RIR data)."

A presentation by BGPSEC was given by Randy Bush. Bush described the "gap" resulting from the fact that AS paths can be forged or traffic can be stolen or steered away. With BGPSEC the developer funded by US government, academia and vendors (according to Bush) BGP should be extended to allow forwarding signature – by which routers would sign that he was sending packets over the next router. One condition is that all routers on the way use BGPSEC, otherwise the chain will be broken. Bush said there will be islands secured this way first (he spoke about implementation in about 3-5 years). It would drive up memory requirements in routers over time, Bush said, even if it is only handled at the edge of the operators' system.

Do RIPE NCC-organized “Government Round tables” suck the life out of the Cooperation Working Group?

The RIPE Cooperation Working Group was established to allow for an open dialogue between the operators/technical experts and governments/law enforcement agencies. Yet governments have by far been choosing the closed door RIPE NCC-organized Government Round tables. Both Co-Chairs of the WG, Patrik Fälström (Cisco) and Maria Hall (Deputy Director at Ministry of Enterprise, Energy and Communications, Vice Chair of ICANN GAC), said to this reporter that they had been hoping for more exchange between both sites. The fact that only Sweden, Germany and the European Commission were participating in the Amsterdam meeting, according to Häll, resulted from a scheduling conflict (the EU High Level Group on Internet Governance did meet the same day as the RIPE Cooperation WG). Still the numbers of participants differ greatly with the most recent Round table in Amsterdam (April 4, 2011) being attended by 34 government officials from 13 different states compared to for example around half a dozen countries sending officials (administration, regulatory authorities, law enforcement authorities) for RIPE 61 last year. Häll said that one possible option was to open up the Government Round tables in the future.

For the Amsterdam meeting the two Co-Chairs decided to address – in the absence of most governments – some of the very issues that technology experts wanted to talk about with legislators: data retention and the role of intermediaries. Also there were brief updates on ongoing work for a critical infrastructure protection in Europe, on the Council of Europe's two-part document on Internet Governance principles and responsibilities of states, on the ongoing dispute around the UN Committee of Science and Technology WG on improvement of the IGF and on the work of the ICANN Governmental Advisory Committee (GAC) (see below).

The role of Intermediaries/Legislators' lack in understanding how technology works

Relying more and more on intermediaries to stop allegedly illegal activities on the net could result in a fundamental change of the traditional justice system, said Malcolm Hutty, Head of Public Affairs at LINX, the London Internet Exchange, and President of EuroISPA. Hutty said that he understood that it was attractive for those who have a „large log of complaints“ - law enforcement agencies or IP owners - to „go directly to the intermediary and ask them “please can you take action against this'“. Yet abandoning adjudication and due process would finally result in a new justice system online, changed from the existing offline system.

Cisco Engineer Patrik Fältström, who had introduced the topic and referenced the broad definition of intermediaries given by the OECD, said the problem with the discussion on intermediaries, but also on other attempts to regulate the Internet, was that there was no balance between the viewpoints of those who care for law enforcement, those who argue for freedom and openness of the networks and those who put the business interests in the first place. Yet for each specific problem a sweet spot had to be found which would lie where public benefit was at its maximum, Olaf Kolkman from Nlnet.Labs stated.

Maria Häll, in a very self-critical statement, said that one problem in striking this balance was that regulators often were lacking the necessary knowledge about how technology really worked (“we don't actually know how Internet works”). Häll pointed to the example of the much debated European Data Retention Directive, which she said was not technology neutral. Obligations to store data from fixed network telephony were different from obligations for VoIP providers despite convergence. Sweden had reacted to this in its legislative approach and made changes, yet Sweden being one of the original proposers of the directive had not yet implemented the much debated directive and was currently drawn to court by the Commission for this failure. In sum five of the 27 member states have not transposed the directive.

The discussion on the review of the directive meanwhile is ongoing, said Fältström who is a member of a dedicated working group on data retention the Commission has set up. This group will again meet on May, 17, for the first time after the Commission's publication of its evaluation report. The Commission acknowledged that the directive did not help with harmonization in the Union, yet still declared it a necessary tool.

EU critical infrastructure protection/Council of Europe on interstate responsibilities

Kurtis Lindqvist (Netnod) reported about the European Union's work on Critical Infrastructure Protection. As part of the CIP work (for an overview see the recent communication of the Commission, COM (2011) 163) there is the initiative European Public-Private Partnership for resilience – EP3R. Lindqvist talked about the setting up of three EP3R working groups in June 2010, these working groups are:

- *Working Group 1: Key assets, resources and functions for the continuous and secure provisioning of electronic communications across countries (Terms of Reference (ToR) available* here*);*
- *Working Group 2: Baseline requirements for the security and resilience of electronic communications (ToR available* here*);*
- *Working Group 3: Coordination and cooperation needs and mechanisms to prepare for and respond to large-scale disruptions affecting electronic communications (ToR available* here*)*

Lindqvist *s*aid working papers of these groups were not public, but one task was to identify what constitutes critical infrastructure in cross-border communications like DNS root servers (only infrastructure in the EU!, not the complete DNS system), exchange points and cross-border links. While the intentions, he said, were good, wording to be developed by these groups had to be careful. Lindqvist said that it would be good for organisations and industry concerned to be aware of this work. Another meeting is scheduled for June. It would be nice to have Commission people to present work in the Cooperation Working Group, Lindqvist recommended.

More work on cross-border communication networks is done – from a slightly different angle – at the Council of Europe. A special Working Group, co-chaired by Internet Governance expert Wolfgang Kleinwächter, is preparing a document on principles for Internet Governance ("maximizing opportunities of the Internet for access to information, freedom of expression, citizens' participation in matters of public interest, people empowerment, development, economic growth and innovation") plus an additional document on "interstate commitments for the protection and promotion of the Internet's integrity, universality and openness". According to the most recent conclusions from a conference on the initiative at the CoE headquarter in Strasbourg, there was general support for a legal "instrument that addresses issues of cross-border Internet interdependencies not from a criminal justice perspective but from one of solidarity and mutual assistance". Consultation on the documents is ongoing.

Delay new TLDs!

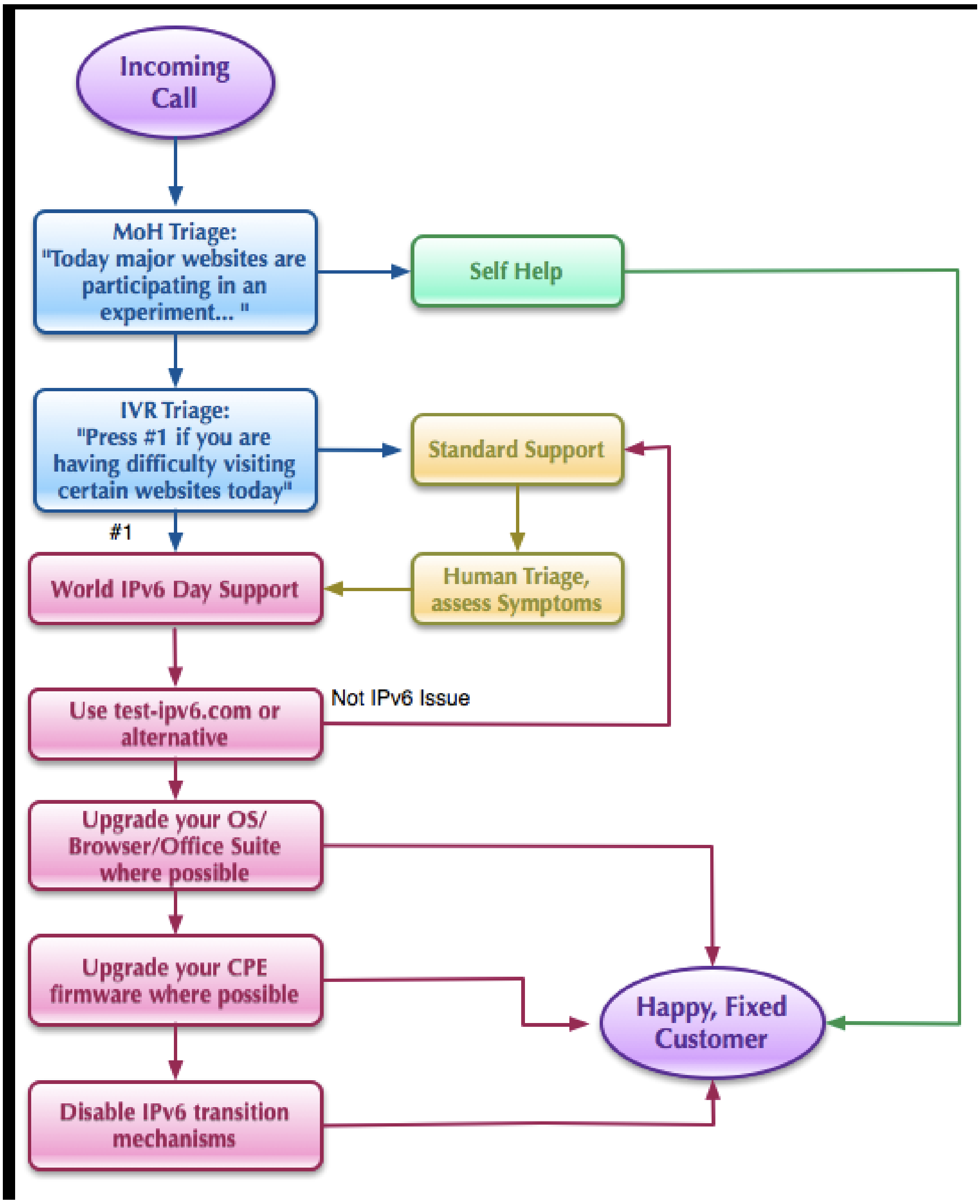
Maria Häll gave also a very brief report on the GAC work. With regard to the top issue, the introduction of new TLDs, she said: “As far as I can see when we go through the final applicant guidebook really quick there are still outstanding issues we are concerned about from the government side. So we don't know what is going to happen.” While she said the ICANN Board could possibly go ahead with its announced decision on June, 20, she was not sure about what will happen. ICANN has been asked to delay the decision on Thursday, May 5, by Larry Strickling, Assistant Secretary of Commerce (for a short report, see here, more here) and also by US congressmen participating in a Subcommittee Hearing on the new TLDs. On May, 13, EU Commissioner Neelie Kroes now is meeting with Strickling to talk about the open issues regarding new TLDs (and also ICANN's .xxx designation). If these parties agree that more time is needed, ICANN might have difficulties to go ahead with the planned “party”.

Rough edges of turning on IPv6 – World IPv6 Day

The World IPv6 Day (driven by ISOC, Google, Yahoo, Facebook, Akamai and Limelight Networks) on June 8th is nothing less than an attack on network operators, because they will have to take the load of help desk calls from angry customers who will have difficulties to reach Google and other sites during that day, said Rüdiger Volk, Deutsche Telekom routing expert, during the IPv6 Round up in Amsterdam. During World IPv6 Day a long list of over 150 organisations (including government, academic institutions and business) will serve their sites also over IPv6 addresses, alongside the currently used IPv4 protocol.

While both versions will run nicely alongside for most of the users, some users will be heavily slowed down or even been unable to reach e.g. either version of the Google website. Even the small percentages of incidents expected will translate into six digit numbers for large operators, Volk said, and by the way this was very much the reason for Google to not allow open dual stack IPv4-IPv6 provisioning of their content (and relying on the not beloved Whitelist).

Access providers helpdesks in the companies had to be prepared for World IPv6 Day, said David Freedman in a very good presentation. He gave a nice flow-chart for how help-desks could answer, see below, because “regardless of your size or IPv6 maturity – your customers will have issues”, he said.


Incoming Call
MoH Triage: "Today major websites are participating in an experiment... "
Self Help
IVR Triage: "Press #1 if you are having difficulty visiting certain websites today"
Standard Support
#1
World IPv6 Day Support
Human Triage, assess Symptoms
Use test-ipv6.com or alternative
Not IPv6 Issue
Upgrade your OS/ Browser/Office Suite where possible
Upgrade your CPE firmware where possible
Happy, Fixed Customer
Disable IPv6 transition mechanisms

Lorenzo Colitti, Engineer at Google preparing feverishly for the World IPv6 day, warned that the target of the day wasn't to rush every access provider to IPv6 for that very day (more news on IPv6 traffic for the day certainly should be expected, a representative or Hurricane Electric announced).

Colitti said instead that the day was to "find out about these broken users out there and fix them". A lot of sources for problems are well-known, like rogue router announcements by MAC OS X.   Other operating systems potentially having problems could be some Linux versions and to a minor degree also Windows (see Colitti's presentation). A problem arises when operating systems chose IPv6 over IPv4 only to time out or retry because IPv6 is not fully implemented in the end system or on the way to it. Another source for connection problems are home routers (for RIPEs CPE IPv6 matrix, see here).

One network operator said to this reporter that it was nearly impossible to predict what a kind of behaviour home routers would show, as some had some IPv6 functionalities.

Onr thing the World IPv6 day might underline is that there now are nearly too many transition mechanisms. „We have more transition mechanisms than IPv6 packets," complained Randy Bush from the Internet Initiative Japan, „and many transition mechanisms do not help." A list of transition mechanism presented by Marco Hogewoning of the RIPE NCC listed:

6in4
6to4
Teredo
6RD
ISATAP
TSP
6over4
IVI
NAT64
DS-lite
A+P
4RD
SIIT
TRT
NAT-PT

If on World IPv6 Day users (and help desks) are lucky, OS and home routers will fall back to IPv4 still before time out. "Possibly it will just be another day in the Internet", Colitti hopefully said. Partial or temporary outages of some spots are not uncommon on the Internet as is, one expert said. Yet for some people like his mother who were using Google as a start page, not reaching the search engine equalled to "the Internet is broken". Google certainly will reinstall its whitelist after the event, Colitti said, while Freedman said that he hoped that at least some operators would continue to offer IPv6 alongside IPv4. Major projects under way are, for example, the IPv6 start of a large Spanish publisher, which will follow German IT publisher heise, who started IPv6 for its news content last September.

One issue discussed during the RIPE meeting was that Bush also reported about the trick his company had to perform to stay clear on World IPv6 Day. „We have IPv6 commercially since 1997", he said, „but for World IPv6 Day we have to shut it down". The reason was that NTT was offering IPv6 only internally, „these addresses do not go anywhere".

Users can beforehand check if they could run into problems here http://test-ipv6.com/, domains of third parties can be checked here: http://go6.se/check/.

Working Groups, Plenaries

DNS

A lot of talks in the DNS WG talked about DNSSEC, either on the implementations, tools or problems. Wolfgang Nagele talked about two major outages RIPE NCC experienced in spring, one concerning e164.arpa (February, 15) and the second on ripe.net plus 0.a.2.ip6.arpa (April,14) . In both cases the signature over the DNSSEC Key set was missing after KSK key roll-over, making the zones „useless in terms of DNSSEC“. While the first outage was declared to be the result of high load over the system during the key roll over, the second happend without high load on the system (see incident report here)

RIPE NCC according to Nagele could identify the bug and was expecting a bug fix from the vendor now. One major conclusion drawn from this at the RIPE NCC was that the immaturity of code used for DNSSEC made safeguards necessary. Initial work for a tool that will allow a kind of „proxy service that takes in a zone in one end and will only provide it on the other end if it validated against a certain set of trust anchors that you had to specify before“. Input and feedback on the work (currently done in the Nlnet Labs) can be sent to a dedicated mailing list. http://nlnetlabs.nl/mailman/listinfo/dnssexy. One question put to Nagele was, if there was a need for a better reporting mechanism.

Nagele also showed some statistics about the quick uptake of DNSSEC; by fall 2011 RIPE NCC expects most parent zones for RIPE relevant TLDs to be signed (with only 196.in-addr.arpa, .int, .cc not yet signed). RIPE NCC since the last RIPE meeting also worked on anycast clusters (and will continue with ns.ripe.net and ns-<ccTLD>.ripe.net).

Another „hiccup“ (see incident report here) in a ccTLD DNSSEC system was reported by Brett Carr from Nominet. Carr reported about a coincidental HSM hardware failure causing an OS panic. Because of the HSM failure and consecutive HSM lock, DNSSEC keys were unavailable for use. Another consequence was an instantaneous key roll-over following the sign-on (coming back from a back up system off site). For users with cached keys this resulted in no validation until the chache time out. Carr said that that Nominet decided, for example to not have hardward locks anymore, to have better checking procedures and reduce TTL.

Carr also pointed to the roll-out of second level TLDs in .uk under way: me.uk, co.uk have already been signed. Other SLD will follow. .uk was signed in March 2010, it uses OpenDNSSEC, CENTO, Oracle's HSMs, it has deployed NSEC 3, rolls the ZSK automatically every six month, and the KSK every three years. For the SLD Nominet will not have a split key. The registry will accept DS records from registrars on May, 18. Also Nominet is preparing to offer a signing service starting in July 2011. It will allow registrars „to hand-over the process of DNSSEC signing their zones to Nominet. The service will reduce the technical barriers to DNSSEC deployment by registrars.“ The service would be offered first for .uk, but later also for other TLDs, too, Carr said.

An update on developments in .jp – especially changes in DNS traffic like additional TCP queries – through DNSSEC was given by Masato Mindo (from Japan Registry Services).

Additional topics in the DNS WG covered progressing work on Open DNSSEC, BIND 10 and Nlnet Labs' NSD 4 and Jacob Schlyter from Kirei presented the results of a HSM test, done by Certezza. Four HSMs were tested:

- Safenet Luna SA 4

- AEP Keyper v2
- Thales nShield Connect
- Ultimaco CryptoServer Se1000

Results can be found here.

Dave Knight (ICANN) gave a quick update about the management changes for IN-Addr.arpa and IPv6.arpa. Both have been moved to new authoritative servers, namely In.addr.arpa has been migrated from ARIN to IANA. The zones are now DNSSEC signed and RIRs can, based on a new management system, automatically update their delegations using XML forms. Knight answering a question by Jim Read said that he had no information if there were further talks to move the .arpa-zones away from the root-servers.

ENUM – are there new uses?

The ENUM WG of the IETF has been concluded after 12 years (as reported during the RIPE meeting by Bernie Hoeneisen, UCOM) and registrations in ENUM TLDs like 0.2.4.e164.arpa are going down – even approaching zero – according to Pawel Tuma from CZ.nic. In the Czech Republic there were originally three VoiP carriers, but only one did make it, plus there was a real low interest in using ENUM for routing calls, Tuma reported. Cznic therefore will not put any effort into further marketing ENUM. Still for ENUM Tuma pointed to potential new uses for the protocol already declared dead by some.

Smart phones: for example there was ENUM use in android phones (Nominet). “Regardless if you dial the number or select something from your phone book, it does the NS query and displays on the screen the result if there are some ENUM records found, you can select whether to call over it or over the phone or if there's a web page or email you can use that.”

ENUM discovery application (SIDN): According to his information when dialing the number on an Android phone, “it will try to suck out the information and you can add that to your phone book in the phone.”

-The 1-800 American Free Trade Association (US association of toll free line providers) was interested in using ENUM (see also older paper by 1-800, here). Smart phones are able to deliver more than the traditional tollfree line call also the situation in the Uswas that US carriers were abandoging the flat fee mobile for data charging. According to Tuma, the proposal by 1-800 was “to use ENUM to develop multimedia content to those ENUM--enabled smart phones and to use ENUM as a toll-free mobile data enabler”. While parallel calls, ad delivery was possible, Tuma also pointed to what he called “personal broadcasting. If you call your friend, you dial his number, you can see, well, the phone is ringing, you can see on the screen his latest Twitter feed, join his link on Facebook or something else.”

Address Policy

Beside discussions over clarifications in several existing policies, notably a fight about the definition of One rather astonishing discussion (according to observers) was the idea to potentially abolish the dichotomy of Provider independent (PI)and Provider Aggregatable (big blocks) address space (PA). The difference which does not exist in other RIRs had differentiated between ISPs (members of RIPE) and end users. PI and PA were given out according to different policies, with PA given out more liberally, while PI requested by end users to allow portability and multi-homing. PI also was relatively cheap, according to Address Policy WG Chair Gerd Döring (spacenet AG), while PA was more expensive because only RIPE members (LIRs) could request PA. So there was an incentive even for ISPs to try to get PI. A Current policy proposal now is asking to remove, for IPv6, the multihoming condition (Removal of multihomed requirement for IPv6 PI 2011-02). Yet Döring said, an alternative to further “tuning” of IPv6 PI space would be the more radical approach to not make a difference any more in the future. Work started on a new charging system for addresses might still allow to make a difference between member and non-member allocations, he said. The proposal according to observers is quite radical, yet got more praise than rants in Amsterdam.

Other major active policy proposals:

- Certification Policy, 2008-08 (see above, Highlights)
- Global Policy for post exhaustion IPv4 allocation mechanisms by the IANA 2011-01 (see above, Highlights)

Some more news from the RIPE 62 Plenaries

Member Survey

Ripe NCC is preparing another edition of its regular survey, this time the Oxford Internet Institute (Desiree Miloshevic) will do the survey and it will be the first survey that will include not only LIRs, but also other stakeholders. The survey questionnaire is posted here.

RIPE meeting evolution

The Task Force working on meeting evolution presented the decision to set up a program committee consisting of members of the community, ex-officio members from the Wgs and liason groups (Menog, Enog, etc), a representative of the host organisation and coopted members specializing in topics under consideration. The program committee is expected to implement the evolution plans with focussing on more technological presentations and more tutorials. Also ad-hoc BoFs were considered desirable by a majority of members participating in a survey. The first program committee was populated without a vote for the community members – voting shall start at the next RIPE meeting (with one community representative selected by the meeting). The first eight members of the program committee are:
Joao Damas (ISC) for RIPE WGs
Andrei Robachevsky (ISOC) for ENOG
Osama Al-Dosary (Cisco) for MENOG
Harald Michl (UniVie / ACOnet / VIX) for local host.

As community representatives:

Sander Steffann
Todd Underwood
Daniele Arena
Rob Evans

Proposals to the program committee can be sent to pc@ripe.net

The next RIPE meeting will take place in Vienna on October 31 to November 4.