RIPE NCC

MEMBER UPDATE

www.ripe.net

RIPE Network Coordination Centre • Information bulletin for RIPE NCC members • Issue 17, April 2010

The RIPE NCC Member Update is intended for RIPE NCC LIR contacts.

If you are not the right person to receive this update, please forward it to the appropriate colleague.

RIPE Labs

RIPE Labs

RIPE Labs (http://labs.ripe.net) is a web platform for the Internet community to showcase and discuss innovative Internet-related tools, ideas and analysis. Launched in September 2009, the purpose of RIPE Labs is to enable anyone to present research, tools, operational experience and ideas that may be of interest to RIPE NCC members and the RIPE community.

With frequently updated content and ongoing discussions, RIPE Labs provides an up-to-date glimpse at the latest ideas and innovations that could help RIPE NCC members and the RIPE community.

Here's a snap shot of some of the research and tools published on RIPE Labs as of February 2010.

Resource Explainer (REX)

REX is a one-stop shop for almost all the information you ever wanted to know about Internet number resources. It provides you with an all-inclusive, detailed report about the IP addresses and AS numbers you're interested in. It will provide you with current and historical information from a number of perspectives.

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To take our Certification Survey, please visit: www.ripe.net/certification/survey

How Resource Certification Will Help Your Organisation

Increasing Routing Security and Reducing Your Workload

Since 2007, the RIPE NCC has been working on a community-driven system that will issue digital certificates along with the assignment or allocation of Internet number resources. This resource certification system will go into production use on 1 January 2011. The other four Regional Internet Registries (RIRs) have committed to doing the same. This article will explain how it will affect your organisation.

Introduction

The resource certification system is based on Public Key Infrastructure (PKI) principles. A "resource certificate" is an electronic document that proves that its holder has been officially assigned or allocated a particular resource. Currently, this association is only reflected in the RIPE Database. The key benefit of resource certification is validation. This will offer a number of opportunities for your organisation:

1. Automated Provisioning

At this time, there is no convenient and automatic way to make sure that a certain Autonomous System (AS) is authorised to announce or originate a specific prefix. More specifically, there is no way to confirm that:

- the prefix is really in use, and;
- the legitimate holder of the prefix authorises a specific AS to announce that prefix.

This means that all LIRs have to devote at least some amount of time and energy to searching various allocation and routing databases to ensure that a customer presenting a prefix for routing is actually the legitimate holder of that address space.

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This publication is available online at: www.ripe.net/membership/newsletter

If you have any feedback about this publication, please contact: feedback@ripe.net

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The mission of the RIPE NCC is to perform activities for the benefit of the membership; primarily activities that the members need to organise as a group, although they may compete with each other in other areas.

RIPE NCC Customer Services – What Can We Do For You?

We are here for you if you need first-line support, by email or telephone, for billing services or for the RIPE Database. We can help you with a wide range of services, from answering your questions, taking payments and issuing invoices to clarifying the reverse delegation process.

Furthermore, we manage the new Local Internet Registry (LIR) and Direct Assignment User (DAU) setup, guiding our prospective members through the process, answering questions along the way and processing the applications.

Should you need to update any information at a later date, for example following a company name change, merger or closure, we continue to be at your service to guide you through the process. For the updates, which can be made via the LIR Portal (https://lirportal.ripe.net), we happily provide you with support for activating and using your account effectively.

Additionally, we handle the administrative work for customers of the Test Traffic Measurement (TTM), DNS Monitoring (DNSMON) and Near Real Time Mirroring (NRTM) services.

We strive to answer the majority of your questions ourselves, sending the more technical questions to the departments that manage the service so that you can be sure to get the right answer.

Aside from these core tasks, we support the RIPE and RIPE NCC Regional Meetings with the coordination of the RIPE NCC Services Centre, where we provide a drop-in service. We also participate in internal discussion groups for legal issues and IPv6 outreach and support the creation of RIPE NCC procedural documents and the implementation of Policy 2007-01 (Direct Internet Resource Assignments to End Users from the RIPE NCC).

We also welcome your suggestions on how we can extend our service to you. Please do not hesitate to share your ideas with us, using the email addresses below.

With our best regards and wishes for 2010,

The RIPE NCC Customer Services Team

What Can We Do For You - At a Glance:

- Billing services: billing@ripe.net
- RIPE Database user support: ripe-dbm@ripe.net
- New LIR and DAU applications: www.ripe.net/membership
- LIR and DAU updates: ncc@ripe.net
- TTM, DNSMON and NRTM services: www.ripe.net/projects
- Mobile Customer Service Representatives. Look for the RIPE NCC Services Centre at RIPE Meetings and RIPE NCC Regional Meetings
- General questions? ncc@ripe.net ¶

The Internet Governance Forum (IGF)

The fourth IGF was held from 15-18 November 2009 in Sharm El Sheikh, Egypt. The event, organised by the United Nations, has taken place annually for the last four years. The RIPE NCC has participated in the IGF since its inception, on its own behalf and together with the other Regional Internet Registries (RIRs) as the Number Resource Organization (NRO).

The forum provides an opportunity for the many different stakeholders in the Internet community to come together and discuss Internet Governance issues. Under the general theme of “Internet Governance – Creating Opportunities for All”, the 2009 event attracted more than 1,800 participants from 112 countries to participate in four days of sessions and more than 100 workshops.

Representatives from the five RIRs helped to organise and participated in nine workshops:

- Adopting IPv6: What You Need To Know
- Managing Internet Addresses: Global and regional viewpoint
- Introduction to Internet Operations
- Mitigating the Financial Crisis with Open Source Applications
- Need-based and Market-based Internet Resource Allocation
- Spanish and Latin Content in the Internet
- Understanding Internet Infrastructure: An Overview of Technology and Terminology
- Workshop on Public Policies for an Improved Interconnection at Lower Costs
- IPv6 Transition: Economic and Technical Considerations

Full details of the NRO's activities at the IGF can be found at:
www.nro.net/governance

More information about the IGF can be found at:
www.intgovforum.org ¶

DNSSEC Deployment for the Root Zone

Attendees at RIPE 59 were among the first in the Internet industry to find out the timetable for signing the root zone. During the October 2009 meeting in Lisbon, Portugal, ICANN and VeriSign gave a joint presentation in which they made public the high-level timeline for deploying DNSSEC for the root zone. They announced that from January 2010 root servers would begin serving the signed root in the form of the DURZ (Deliberately Unvalidatable Root Zone) and that a signed root zone was scheduled for 1 July 2010. Until that time, when the public component of the DNSSEC signing keys are published, no validation of the signed root zone can occur.

Schedule

Starting with L-root in January 2010, the root servers began serving the signed root zone one at a time using DURZ. During this rollout period, which is scheduled to end in May 2010, DNS traffic on both the signed and unsigned roots has been monitored and analysed to determine what effects the signing of the root has on the DNS. The most up-to-date schedule for the rollout period is available at:
http://www.root-dnssec.org

RIPE NCC, K-Root and DNSSEC

As part of its support for the project to sign the root, the RIPE NCC is participating in a coordinated, staged deployment plan with all other root server operators.

As a root server operator, the RIPE NCC is taking necessary steps to ensure that the deployment of a signed root zone on K-root is performed in a responsible and transparent manner. This includes monitoring and analysing the impact of signing the root as well as providing tools to help operators prepare for the signed root.

Late in 2009, the RIPE NCC provided a DNS reply size tool that enabled users to test if their resolvers were likely to encounter difficulties resolving names when the root zone is signed with DNSSEC. More information about this tool, which is also available as a downloadable Java application, is available from RIPE Labs at:
http://labs.ripe.net/content/testing-your-resolver-dns-reply-size-issues

Measurement Activities

In January 2010, the RIPE NCC presented the first results of the DNS reply size testing. These first results, based on around 685,500 measurements taken in January 2010, came from resolvers at around 43,000 distinct source addresses.

These results, together with analysis and ideas for further work, are available from RIPE Labs:
http://labs.ripe.net/content/measuring-dns-transfer-sizes-first-results

The RIPE NCC has also been conducting measurements including packet capture (pcap) traces of all queries arriving at K-root, as well as separate pcap traces of priming queries. In addition, the RIPE NCC has been running DNS Statistic Collectors (DSCs) at all K-root instances to monitor for an increase in the number of queries arriving over TCP.

The RIPE NCC plans to collect data continuously and perform analysis at regular intervals. These results will be available to the community via RIPE Labs as well as the RIPE NCC website and the K-root home page. The primary focus of these efforts is to help the RIPE NCC and the operator community detect and solve any significant issues before 1 July 2010, when ICANN is scheduled to sign the root zone with real keys and publish a trust anchor.

More information

The RIPE NCC will provide its latest measurements and analysis on RIPE Labs:
http://labs.ripe.net

DNS-OARC has also provided some statistics generated using pcap data from various root-server operators:
http://www.dns-oarc.net ¶

Update on Independent Internet Number Resources in the RIPE NCC Service Region

The changes in dealing with independent Internet number resources comes from policy proposal 2007-01, "Direct Internet Resource Assignments to End Users from the RIPE NCC", which was accepted by the RIPE community in October 2008. This policy states that a contractual relationship between an End User and a Sponsoring LIR or the RIPE NCC must be established before the End User can receive independent Internet number resources directly from the RIPE NCC. It also states that such a contractual relationship must be retrospectively put in place for End Users of independent Internet number resources that were previously assigned.

Independent Internet number resources are defined as PI (IPv4/IPv6) assignments, AS Numbers, IPv6 Internet Exchange Point (IXP) assignments and IPv4/IPv6 Anycasting assignments.

Due to the scale of this policy's impact, the RIPE NCC is implementing it in three phases.

Phase 1 (March–May 2009)

This phase focused on new assignments only. The aim of this phase was to ensure that there are contracts in place between the End User of independent Internet number resources and the requesting (Sponsoring) LIR. This phase also made it possible for End Users to sign a contract directly with the RIPE NCC, becoming what is called a Direct Assignment User.

Phase 2 (May 2009–May 2010)

This phase is focused on existing assignments, which number approximately 30,000. In this phase the RIPE NCC has approached the LIRs regarding the assignments requested by, and registered with, their LIR. All LIRs have received an email from the RIPE NCC with more detailed information. They have been given access to a web interface, included in the LIR Portal, in which all the independent resources requested by their LIR are listed.

LIRs have been asked to inform the RIPE NCC about each of these independent Internet number resources by specifying whether it is used in their own network infrastructure, in the networks of one of their customers or if the End User is no longer their customer.

If the resources are being used by an LIR's existing End User, they are required to upload a set of documentation to prove this via a web interface available through the RIPE NCC LIR Portal. The deadline for providing this documentation is 17 May 2010.

Phase 3 (Mid-2010+)

The results of Phase 2 will be used for the third and last phase of implementation which will start in mid-2010. This phase involves contacting the End Users from whom the RIPE NCC has not received an End User Assignment Agreement (see Phase 2 above).

The RIPE NCC will present an update on these activities at RIPE 60 in Prague, Czech Republic, 3-7 May 2010. ¶

IPv6 ACT NOW

IPv6 – How To Act Now

As we enter what is predicted to be the final year of "business as usual" for IPv4 address allocations, the need for a broad move toward IPv6 adoption is more urgent than ever. Major developments in 2010 so far, including the recent deployment of Google's Youtube Services via IPv6, give cause for optimism.

This "mainstreaming" of IPv6 awareness means more people from the business, government and technical sectors are looking for information on how IPv6 adoption will affect them, and what they should be doing to make sure their networks are IPv6-ready. It's with this fact in mind that we have developed the latest update to the IPv6 Act Now website: How To Act Now.

How To Act Now offers specific advice for stakeholders from government, small business, enterprise (larger businesses) and Internet Service Providers (ISPs). From the IPv6 Act Now homepage, users can click through directly to information relevant to their situation. This includes advice on assessing your own network's upgrade requirements, what questions to ask your ISP, what you may need to consider in terms of hardware and software and where to look for further training and information. It also includes a variety of short video interviews from users across all sectors who have had experience deploying and using IPv6.

For some non-technical users, IPv6 adoption may be as simple as consulting their ISP and upgrading their connection; for others, it will involve a larger investment in network infrastructure. Through How To Act Now, and IPv6 Act Now more generally, we are aiming to demystify the issues surrounding IPv6 and help to ensure the smooth global adoption of the new

addressing protocol.

Elsewhere on IPv6 Act Now, the statistics page has been updated with new, near-real time dynamic graphs showing both IPv6 allocations and IPv6 routed on the Internet. This has been made possible through integration with some of the tools being developed by the RIPE NCC's Science Group and Information Services Department, particularly the Internet Number Resource Database (INRDB). By aggregating data from sources including the Regional Internet Registry (RIR) databases and the Routing Information Service (RIS), these tools allow us to provide an up-to-the-minute view of IPv6 deployment around the world.

To see more, visit:
www.ipv6actnow.org ¶

RIPE NCC and IPv6 Measurements

With the exhaustion of IPv4 addresses in clear view on the horizon, the focus of activities for our Information Services team has shifted towards observations about the adoption and performance of IPv6 networks across the Internet. All RIPE NCC Information Services have supported IPv6 at the core since 2005.

Test Traffic Measurement (TTM) is the RIPE NCC's active measurement network. The TTM network currently has over 50 IPv6-enabled measurement nodes (from a total of 90) around the world. It continuously measures one-way delays, loss and jitter between all nodes as part of a huge, globally distributed mesh. TTM boxes, which are dual-stacked, enable us to make detailed comparisons of IPv6 and IPv4 traffic between fixed points on the Internet.

The Routing Information Service (RIS) collects Border Gateway Protocol (BGP) routing information from peers at Internet Exchange points around the world. RIS currently collects IPv6 data from 13 of the 15 Remote Route Collectors (RRCs). In addition to the raw BGP data archive, which goes back ten years, RIS provides a number of query and visualisation tools such as BGPViz and the RIS prefix and AS Dashboards. As of January 2010, RIS has visibility of 2,789 IPv6 prefixes, which represents a 20% increase over the past 60 months.

DNSMON measures the quality of service and availability of DNS root servers and some ccTLD and gTLD nameservers. DNSMON currently monitors more than 35 IPv6-enabled TLDs in addition to the whole DNS root zone. DNSMON complements our TTM service by displaying the output of active measurements over both IPv4 and IPv6 transports.

The Hostcount, which measures the growth of hosts in the European Internet, is also IPv6-enabled, and performs a monthly count of IPv6 hosts for the ccTLDs that permit zone transfers from the Hostcount servers.

We are always looking at the analysis potential of our data, and we recently published some research about the usage of native versus tunneled IPv6 connections on the Internet over the past six years. In summary, the percentage of connections that are tunneled has dropped from 45% to 10%, signaling the transition to a more native IPv6 Internet. The full article is available on RIPE Labs:
http://labs.ripe.net/content/untunneling-ipv6

An overview of the full Information Services portfolio can be found at:
http://is-portal.ripe.net

For more information on the ongoing evolution of Information Services at the RIPE NCC, and news on NetSense, see the article below.

NetSense

The history of measurements and analysis at the RIPE NCC is almost as old as RIPE itself. In October 1990, we published the first DNS Hostcount of Internet-connected hosts in the RIPE NCC service region. So began a long history of Internet measurement projects that the RIPE NCC continues to support and develop almost two decades later.

In 1999, we launched the Routing Information Service (RIS), which observes BGP from 16 diverse global locations. This was followed in 2000 with the launch of Test Traffic Measurements (TTM), which allows users to conduct very accurate monitoring of their connectivity. Our most recent service, DNSMON, was launched in 2004 when it began to measure the quality of service of root DNS servers across the planet.

Although these services provide incredibly rich and detailed data, which is frequently used in academic and operational research, as well as for many other purposes, they remain simple services. Historically, the RIPE NCC has only provided simple interfaces to this data, and while we have maintained and enhanced the underlying service infrastructure, the user

community has recently requested that more focus is given to the overall user experience.

During 2009, we worked with an external agency to catalogue and assess the many tools we offer. With invaluable input from stakeholder interviews and working sessions at RIPE 58, we were able to set out a roadmap for the development of the services and their related interfaces.

The culmination of this research and our development efforts is NetSense, a new, unified portal, which was launched through RIPE Labs during RIPE 59. The goal of NetSense is to provide access to our various data sources through one simple, easy-to-use interface. We want to simplify access for all users and to improve the overall user experience, with a focus on data, tools and analysis for the purposes of diagnosis, monitoring and forecasting.

At present, you can access most RIS data through NetSense. In future development phases, we will incorporate more data sources into the NetSense interface in an intuitive and attractive manner. Of course, our development is based on user needs, so we rely on your comments, requests and feedback to ensure we sculpt NetSense to serve you. We invite all of our members to visit http://netsense.ripe.net and to discuss NetSense at http://labs.ripe.net. ¶

RIPE Labs

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If you want to find out everything about an Internet number resource – REX is the service to try!

More information about REX is available at: http://labs.ripe.net/content/rex-resource-explainer

Internet Number Resource Database (INRDB)

The INRDB enables users to use a unified query interface to query a range of historical data sets that include the RIPE Database, IANA allocation and assignment statistics, the RIPE NCC Routing Information Service (RIS), stats files from all Regional Internet Registries, AS data and measurements from CAIDA and some RIPE NCC internal databases.

More information is available at: http://labs.ripe.net/content/intro-inrdb-internet-number-resource-database

IPv6 Measurements – A Compilation

Many people contributed to an article compiling a wide range of IPv6 measurements currently being performed by various organisations and individuals. The article includes a short description of the methodology and the results, along with a link to the original pages of those performing the measurements. If you have any comments or if you would like to see any type of measurement that is not yet done, please let us know.

More information is available at: http://labs.ripe.net/content/ipv6-measurement-compilation

Preparing K-root for a Signed Root Zone

Another topic that has prompted a new tool and some interesting discussions has been the signing of the root zone and, in particular, preparations for deploying DNSSEC on K-root, the root name server maintained by the RIPE NCC.

Together with the deployment plan there is a tool to check whether you can expect problems when the root zone is signed. This tool enables network operators to determine the maximum size of DNS response packets that a specific resolver can handle. This tool is available on RIPE Labs and can be downloaded from: http://labs.ripe.net/content/updated-reply-size-tester

Pollution of 1 /8

1.0.0.0/8 (1 /8) was reserved by IANA in 1981. Since then, it has been used unofficially for example addresses, default configuration parameters or pseudo-private address space. In 2008, 1 /8 was moved from "the IANA reserved" to the "IANA unallocated" pool of addresses. In January 2010, it was allocated to APNIC in order to be distributed to Local Internet Registries in the Asia-Pacific region. Initial research, conducted as part of APNIC's "debogonising" efforts and published on RIPE Labs, reveals that specific blocks in 1 /8 are extremely polluted.

More information on this research is available at: http://labs.ripe.net/content/pollution-18

RIPE NCC Members and Their Number Resources

RIPE Labs also features articles discussing membership growth and the distribution of Internet number resources.

More information is available at: http://labs.ripe.net/content/members-and-their-number-resources ¶

The Middle East Network Operators Group

The Middle East Network Operators Group (MENOG) is a regional forum offering network engineers and other technical staff the opportunity to share knowledge and experiences, and identify areas for regional cooperation.

MENOG 5: October 2009

MENOG 5 took place alongside the RIPE NCC Regional Meeting in Beirut, Lebanon from 25-29 October 2009. It was the first time a MENOG meeting had been hosted in Lebanon and it attracted approximately 180 attendees from 29 different countries. MENOG 5 featured workshops on IPv6 and ISP security as well as tutorials on IPv6 for business and IXPs and peering for business leaders.

More information, including links to the presentations from the meeting, is available from the MENOG website at:
www.menog.net/meetings/menog5

MENOG 6: April 2010

MENOG 6 will take place alongside the RIPE NCC Regional Meeting in Riyadh, Saudi Arabia from 10-14 April 2010. The meeting will feature a number of workshops and tutorials, including workshops on IPv4/IPv6 routing and DNS infrastructure.

As with previous MENOG meetings, the event will bring together regional network operators, vendors, ISPs and technical experts.

For more information and to register, visit the MENOG website at:
www.menog.net/meetings/menog6 ¶

How Resource Certification Will Help Your Organisation

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Resource Certification will allow for prefix holder checking to be automated in a dependable, transparent and standardised way. It will save your organisation time and effort and at the same time reduces the chances of address hijacking or routing instabilities caused by misconfiguration.

2. Resource Transfers
As the unallocated pool of IPv4 addresses runs out, the incentive for people to sell any unused or under-utilised blocks of IPv4 address space they hold may increase. The problem is that potential buyers have no way of knowing if the seller is actually the legitimate holder of the resources. A resource certificate can make this transaction reliable and secure.

Privacy

The objective of resource certification is to improve technical reliability. It does not serve the purpose of verifying a user's identity. This means that a certificate does not contain any personal information or an organisation name. Whoever can sign objects using the private key in the certificate is regarded as the holder of the resources associated with it. The RIPE Database will remain the source for registration information and related contact details.

Incremental

Our strategy is to offer a robust production system that offers a limited feature set, which will be expanded over time. This means that at the launch date, you will only be able to get a certificate for Provider Aggragatable (PA) address space. With this certificate, you will be able to create a Route Origin Authorisation object: a standardised document that essentially states that the holder of a certain prefix authorises a particular AS to announce that prefix. This makes automated provisioning a reality. Other features, like the ability to create certificates for assignments to End Users, will be added over the course of 2011. ¶

Survey

The RIPE NCC realises that creating and hosting a PKI for Internet resources can raise some technical, political and legal questions. Furthermore, we want to make sure our toolset integrates with your workflow. This is why we are keen to hear your feedback. For this purpose, we have set up a survey, which we invite you to fill out here:
www.ripe.net/certification/survey

RIPE Meetings


RIPE 58 Meeting, Amsterdam, the Netherlands

RIPE 59

The RIPE 59 Meeting took place in Lisbon, Portugal from 5–9 October 2009.

The RIPE 59 Meeting Report, featuring a summary of the plenary and working group sessions, is available at:
www.ripe.net/news/ripe-59-report.html

Minutes and presentations from the RIPE 59 plenary and working group sessions are available from:
www.ripe.net/ripe/meetings/ripe-59/archives.php

RIPE 60

RIPE 60 will take place at the Prague Marriott Hotel, Prague, Czech Republic from 3–7 May 2010.

More information is available at:
www.ripe.net/ripe/meetings/ripe-60 ¶

RIPE NCC General Meetings

The RIPE NCC General Meeting October 2009

The RIPE NCC General Meeting (GM) October 2009 took place on Wednesday, 7 October 2009, adjacent to the RIPE 59 Meeting at the Corinthia Hotel in Lisbon, Portugal.

There were 82 attendees, excluding RIPE NCC staff and observers from the other Regional Internet Registries.

RIPE NCC members approved the Charging Scheme 2010 as well as changes to the RIPE NCC Articles of Association. Provisions for electronic voting were added to allow members who cannot attend General Meetings to vote in Executive Board elections. The voting process was also simplified with the introduction of instant run-off voting. The requirement to update the Articles of Association to accommodate electronic voting also allowed general improvements to the text to be introduced. The Articles of Association are available at:
www.ripe.net/ripe/docs/articles-association.html

The RIPE NCC General Meeting May 2010

The RIPE NCC GM May 2010 will take place on Wednesday, 5 May 2010, adjacent to the RIPE 60 Meeting at the Marriott Hotel in Prague, Czech Republic.

All members of the RIPE NCC are encouraged to attend. You must register prior to the meeting. More information about the RIPE NCC General Meeting is available at:
www.ripe.net/membership/gm

Members can discuss membership issues prior to the GM by using the RIPE NCC Membership Discussion List. RIPE NCC members with an LIR Portal account can subscribe to this list through the RIPE NCC LIR Portal at:
https://lirportal.ripe.net

Archived messages from this list are available at:
www.ripe.net/maillists/ncc-archives/members-discuss ¶

IPv4 Has Some New Special Address Ranges

Michelle Cotton and Leo Vegoda from ICANN recently worked with the IETF and addressing communities on a replacement to RFC3330. That was the RFC that described special IPv4 address assignments. The replacement is RFC5735, which is accompanied by two other documents:

- RFC5736, written with Geoff Huston, creates a new, very small IPv4 special purpose address registry for use by the IETF; and
- RFC5737, written with Jari Arkko, defines the IPv4 address blocks reserved for use in documentation.

The most important changes since RFC3330 are that:

- 14.0.0.0/8 was reclaimed and is now available for allocation to an RIR;
- 128.0.0.0/16, 191.255.0.0/16 and 223.255.255.0/24 are unambiguously not reserved and are subject to future allocation by an RIR for assignment in the normal manner; and
- 198.51.100.0/24 and 203.0.113.0/24 have been assigned as additional documentation prefixes.

The other significant change is the assignment of 192.0.0.0/24 to a new IETF registry for special purpose assignments. It complements the 2001:0000::/23 IPv6 prefix, which is assigned to the IANA IPv6 Special Purpose Address Registry.

Network operators should make sure that their filters are updated to take account of these changes. In particular, addresses within prefixes reserved for use in documentation should not appear on the public Internet. If you don't filter these prefixes at your borders yet, you should add appropriate filters.

Similarly, if you were previously filtering 14.0.0.0/8 at your borders, be prepared to remove that filter when it is allocated to an RIR and starts being allocated to ISPs for use on their networks. ¶

References

RFC5735	Special Use IPv4 Addresses	http://tools.ietf.org/html/rfc5735
RFC5736	IANA IPv4 Special Purpose Address Registry	http://tools.ietf.org/html/rfc5736
RFC5737	IPv4 Address Blocks Reserved for Documentation	http://tools.ietf.org/html/rfc5737
	IANA IPv4 Special Purpose Address Registry	www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml
	IANA IPv6 Special Purpose Address Registry	www.iana.org/assignments/iana-ipv6-special-registry/iana-ipv6- special-registry.xhtml

ARIN is Taking Outreach in New Directions

Depletion of the IPv4 free pool is getting closer, and ARIN is continuing work to ensure that all Internet stakeholders are informed about IPv4 free pool depletion, prepared for IPv6 adoption, and invited to participate in the ARIN Policy Development Process. Outreach activities have included speaking engagements and exhibiting in tradeshows, and ARIN is expanding its scope by leveraging other media, including social networks.

Late in 2009, ARIN made its official foray into social media when it announced its presence on three major social networking sites: Facebook, Twitter and YouTube. ARIN is using these sites to promote involvement, educate on ARIN and Internet Community issues, and publicize its presence at trade shows, speaking engagements, and other events.

ARIN also recently recast and updated its "IPv6 Info Center" as "IPv4 / IPv6: The Bottom Line" (https://www.arin.net/knowledge/v4-v6.html) to better highlight the issues and give community members the tools they need to educate their organizations and build the case for proactive planning. The page now offers links to multiple IPv4 statistics sources and a slide deck that describes the impending depletion of IPv4 addresses and the immediate need to adopt IPv6.

ARIN continues to encourage those in its community to take advantage of its IPv6 wiki (www.getipv6.info) to share questions and experiences in deploying IPv6.

In addition to online efforts, ARIN recognizes the need to make real world contact with Internet stakeholders and engage in dialog on the issues surrounding Internet number resources. The ARIN Outreach team has an aggressive schedule of appearances across a wide variety of venues and audiences, with over 30 events on their 2010 calendar. The schedule kicked off with the International Consumer Electronics Show (CES), where ARIN staff and representatives from the Advisory Council worked to inform attendees and exhibitors of the need to make sure all new devices are IPv6 capable. In addition, ARIN President and CEO John Curran was a member of the panel presentation on "The Looming Internet Address Space Crisis."

By taking a positive and aggressive stance on the need to prepare for IPv4 depletion and IPv6 adoption, ARIN is doing all in its power to facilitate the advancement of the Internet through information and educational outreach. ¶

RIPE Policy Development: August 2009–February 2010

Submitted Proposals

There were no new proposals submitted in this period. At the time of writing this article, a couple of potential proposals were in the pipeline.

Concluded Proposals

Four proposals were concluded in the period August 2009 to February 2010.

1. Run Out Fairly, 2009-03
Proposed by Daniel Karrenberg, Niall O'Reilly, Nigel Titley, Randy Bush

This proposal gradually reduces the allocation and assignment periods in step with the expected lifetime of the IPv4 unallocated pool. The proposal is not intended to stretch the lifetime of the unallocated pool.

It was accepted in December 2009 and implemented in January 2010. The policy is documented in ripe-484, "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region".

The details of the proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-03.html

2. IPv6 Provider Independent (PI) Assignments for LIRs, 2009-08
Proposed by Andy Davidson

This proposal is to allow LIRs to receive IPv6 PI assignments in addition to an IPv6 allocation.

It was accepted in September 2009. The policy is documented in the following RIPE document: ripe-481, "IPv6 Address Allocation and Assignment Policy".

The policy was implemented in December 2009.

The details of the proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-08.html

3. Removing Routing Requirements from the IPv6 Address Allocation Policy, 2009-06
Proposed by Rob Evans

Following discussion at RIPE 58, it was proposed that the routing requirements be removed from the IPv6 address policy, as it does not relate to address allocation.

The proposal was accepted in September and implemented in October 2009.

The details of the proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-06.html

4. Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries, 2009-07
Proposed by Andrew de la Haye and Stacey Hughes.

According to the previous global policy (ripe-416), IANA would cease to make any distinction between 16-bit and 32-bit-only ASN blocks by 31 December 2009 when making allocations to RIRs. With this global policy, RIRs would likely not have been able to justify a new block of ASNs from the IANA after 31 December 2009 due to a glut of free 32-bit-only ASNs in the RIR's pool. This proposal is to extend this date by one year to 31 December 2010.

The RIPE community accepted this proposal in September 2009. At the time of writing this article, the proposal was still ongoing in two RIR regions. Once the proposal gets adopted in all regions, it will need to be ratified by the ICANN Board, following the global policy process, before it can be implemented by IANA.

The details of the proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-07.html

Ongoing Proposals

As of January 2010, there were seven proposals open in the RIPE Policy Development Process:

1. Use of Final /8, 2008-06
Proposed by Philip Smith

This proposal describes how the RIPE NCC should make allocations from its last /8 of address space at the time of total depletion of the IANA free pool.

This proposal is being discussed together with RIPE Policy Proposal 2009-04, "IPv4 Allocation and Assignments to facilitate IPv6 Deployment" (see below). As both proposals are referring to the usage of the same address resource, only one of them can go through. The working group chairs have started a discussion on the mailing list regarding the differences between the two proposals in order to assess the best way forward. During RIPE 59, a new proposal that incorporates elements of both 2008-06 and 2009-04 was discussed. The new proposal would replace the existing ones.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2008-06.html

2. IPv4 Allocation and Assignments to Facilitate IPv6 Deployment, 2009-04
Proposed by Alain Bidron

It is proposed that the last IPv4 /8 that the RIPE NCC will hold should be dedicated to facilitate deployment of IPv6. Allocations and assignments from this block will be made based on demonstrated need, but the size will be downscaled taking into account existing transition technologies. The proposed minimum allocation size is to be a /27 for such allocations and assignments. Allocations and assignments from this block will also be justified by demonstrating that the requirements of the transition plan as specified in RFC5211 are met.

As mentioned above, this proposal is being discussed together with 2008-06.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-04.html

3. Ensuring Efficient Use of Historical IPv4 Resources, 2008-07
Proposed by Philip Smith

This is a proposal to require documentation of all address resources held when assessing a RIPE NCC member's eligibility for further IPv4 address space.

The current version extends the proposal to new members requesting an initial allocation also being asked for documentation for all address resources they hold. During RIPE 59, it was proposed to come up with yet another version to address the comments made on the mailing list.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2008-07.html

4. Global Policy for the Allocation of IPv4 Blocks to Regional Internet Registries, 2009-01
Proposed by Axel Pawlik and Nigel Titley from the RIPE NCC as part of a team consisting of people from each of the five RIRs

With the depletion of the IANA free pool of IPv4 address space, the current policy regarding the allocation of IPv4 address space to the RIRs will become moot. The RIRs may, according to their individual policies and procedures, recover IPv4 address space. This policy provides a mechanism for the RIRs to retro allocate the recovered IPv4 address space to the IANA and provides the IANA the policy by which it can allocate the space back to the RIRs on a needs basis. This policy creates a new global pool of IPv4 address space that can be allocated where it is needed on a global basis without a transfer of address space between the RIRs.

This is a global policy proposal that needs to be accepted in all RIR regions. The ARIN community accepted a revised version that makes the return of address space to IANA optional. At the time of writing this article, the proposers were discussing a way forward.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2009-01.html

5. PI Assignment Size, 2006-05
Proposed by Philip Chr. Laustsen Langelund

This proposal suggests to have the minimum assignment size for PI assignments to be a /24 when routing is a major issue for a multihoming End User.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2006-05.html

6. Using the Resource Public Key Infrastructure to Construct Validated IRR Data, 2008-04
Proposed by Randy Bush and Kurtis Lindqvist

This is a proposal to introduce a new registry that augments IRR data with the formally verifiable trust model of the Resource Public Key Infrastructure (RPKI) and provide ISPs with the tools to generate an overlay to the IRR that is much more strongly trustable.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2008-04.html

7. Initial Certification Policy for Provider Aggregatable Address Space Holders, 2008-08
Proposed by Nigel Titley, on behalf of the RIPE Certification Task Force

The RIPE NCC plans to deploy a certification service that can be used to secure uniqueness of resources. This proposal lays out guidelines for how LIRs can receive certificates over their Provider Aggregatable (PA) address space holdings and how these certificates should be maintained.

The details of this proposal can be found at:
www.ripe.net/ripe/policies/proposals/2008-08.html ¶

Conference Calendar

Conferences and meetings that may be of interest to RIPE NCC members

10-14 April 2010
MENOG 6/RIPE NCC Regional Meeting
Riyadh, Saudi Arabia
www.menog.net
www.ripe.net/meetings

22 April 2010
UKNOF 16
London, UK
www.uknof.org.uk

18-21 April 2010
ARIN XXV
Toronto, Canada
www.arin.net/participate/meetings/ARIN-XXV

19-20 April 2010
Euro-IX 16
Brussels, Belgium
www.euro-ix.net

3-7 May 2010
RIPE 60
Prague, Czech Republic
www.ripe.net/meetings

17-21 May
LACNIC XIII
Curaçao, Netherlands Antilles
www.lacnic.net/en/anuncios/LACNICXIII_invitacion.html

20-21 May 210
IPv6 Congress
Frankfurt, Germany
www.ipv6kongress.de

23 May-4 June 2010
AFNOG-11
Kigali, Rwanda
www.afnog.org

2-3 June 2010
AfriNIC 12
Kigali, Rwanda
www.afrinic.net

13-16 June 2010
NANOG 49
San Francisco, USA
www.nanog.org/meetings/nanog49

20-25 June 2010
ICANN 38
Brussels, Belgium
www.icann.org/en/general/calendar

8-9 July 2010
JANOG 26
Tokyo, Japan
www.janog.gr.jp/en

25-30 July 2010
78th IETF
Maastricht, the Netherlands
www.ietf.org

16-17 August 2010
LINX 70
London, UK
https://www.linx.net

23-27 August 2010
APNIC 30
Bangkok, Thailand
www.apnic.net

7 September 2010
UKNOF 17
Edinburgh, UK
www.uknof.org.uk

14-17 September 2010
IGF 5
Vilnius, Lithuania
www.intgovforum.org/cms

29 September-1 October 2010
RIPE NCC Regional Meeting
Moscow, Russia
www.ripe.net/meetings/regional/moscow-2010

3-5 October 2010
NANOG 50
Atlanta, Georgia
www.nanog.net/meetings/nanog50

6-8 October 2010
ARIN XXVI
Atlanta, USA
www.arin.net/participate/meetings/ARIN-XXVI

RIPE NCC Training Courses

LIR Training Courses

Dublin, Ireland
Thursday, 8 April 2010

Barcelona, Spain
Friday, 9 April 2010

Riyadh, Saudi Arabia
Sunday, 11 April 2010

Bucharest, Romania
Wednesday, 14 April 2010

Cambridge, United Kingdom
Thursday, 20 May 2010

Vilnius, Lithuania
Friday, 28 May 2010

Oslo, Norway
Friday, 4 June 2010

St. Petersburg, Russia
Thursday, 10 June 2010

Amsterdam, the Netherlands
Thursday, 24 June 2010

Routing Registry Training Courses

Riyadh, Saudi Arabia
Saturday, 10 April 2010

Athens, Greece
Friday, 14 May 2010

Cambridge, United Kingdom
Wednesday, 19 May 2010

Vienna, Austria
Friday, 28 May 2010

St. Petersburg, Russia
Wednesday, 9 June 2010

Paris, France
Friday, 18 June 2010

Amsterdam, the Netherlands
Friday, 25 June 2010

IPv6 for LIRs Training Courses

Dublin, Ireland
Friday, 9 April 2010

Riyadh, Saudi Arabia
Monday, 12 April 2010

Belgrade, Serbia
Friday, 23 April 2010

Athens, Greece
Thursday, 13 May 2010

Rotterdam, the Netherlands
Friday, 14 May 2010

Frankfurt/Main, Germany
Wednesday, 19 May 2010

Cambridge, United Kingdom
Friday, 21 May 2010

Vienna, Austria
Thursday, 27 May 2010

St. Petersburg, Russia
Friday, 11 June 2010

Sarajevo, Bosnia
Friday, 25 June 2010

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RIPE NCC Speakers

To request a RIPE NCC speaker for your event, please contact:
speaker@ripe.net

A list of topics that the RIPE NCC can provide speakers for is available at:
www.ripe.net/meetings/ncc-speakers.html