Annual Report **2009**

RIPE NCC

Left:

Map Showing the RIR Service Regions

- **AfriNIC:** Africa
- **APNIC:** Asia Pacific
- **ARIN:** Canada, United States and several islands in the Caribbean Sea and North Atlantic Ocean
- **LACNIC:** Latin America, Caribbean
- **RIPE NCC:** Europe, the Middle East and parts of Central Asia

Top:

The RIPE NCC Service Region

- At the end of 2009, the RIPE NCC supported 6,583 members in its service region.

RIPE NCC Annual Report 2009

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The Netherlands

www.ripe.net

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The global economic downturn continued to affect the Internet industry in 2009, but there was continued growth in the RIPE NCC membership with 6,583 members at the end of 2009, an increase of 9% on 2008. The strongest growth was again seen in Russia.

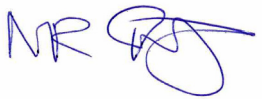
In 2009, the Executive Board authorised the controlled growth in personnel outside the 2009 Budget to cater for new policies, enhancement of our services, registration data quality and outreach activities.

As we move into a new decade that will bring many new challenges to our industry, the Board will continue to keep a close eye on the economic matters that affect the membership and on the financial situation within the RIPE NCC.

With Internet governance becoming more relevant for governments, public relations work in the external relations arena expanded in 2009 as the process of engaging with all stakeholders became ever more important. We continue to engage with governments, regulators and industry partners, and we became more engaged with the law enforcement community. We have healthy relationships with the other four Regional Internet Registries (RIRs), and our work together brought much success at global events such as the Internet Governance Forum (IGF) in 2009.

The composition of the Executive Board remained unchanged in 2009 following the re-election of Dmitry Burkov. The membership approved changes to the Articles of Association to improve the voting process and boost participation through electronic voting for Executive Board elections. This is a significant change that results directly from input and comments received from members, and it demonstrates that channels are available to members to improve the RIPE NCC and the way it works. All Board members will do their utmost to represent the views of the membership and guide the RIPE NCC management team in the coming year.

Finally, I would like to thank the RIPE NCC membership for its support and for engaging with the Executive Board. We encourage members to contact us at any time with their feedback, comments or concerns. It is this interaction that is crucial for the effectiveness of the Board and for the continued success of the RIPE NCC.



Nigel Titley
Executive Board Chairman

4 Report from the RIPE NCC Managing Director

2009 was a successful year for the RIPE NCC in terms of financial and operational stability, achieved in a changing Internet industry landscape.

The RIPE Meetings held in Amsterdam and Lisbon were very well attended and gave us another opportunity to engage face-to-face with our growing membership and the Internet community at large. We also held two Regional Meetings in the Middle East in association with the Middle East Network Operators Group (MENOG) and one in Russia. Both of these regions show continued strong membership growth, and these meetings are historically an excellent exchange mechanism, allowing us to reach out and receive valuable feedback from our members.

In February and September 2009, the RIPE NCC also held Roundtable Meetings for governments, regulators and law enforcement agencies (LEAs). These meetings have proved important for sharing information relating to issues such as Internet governance and investment in IPv6, and for engaging an increasingly important section of our constituency. The meetings have increased the RIPE NCC's visibility and status as an acknowledged authority on Internet resources. A full day at both meetings was dedicated to LEAs, reflecting the growing importance of interacting with this stakeholder group to represent the views of the membership.

The RIPE NCC also represented the interests of RIPE NCC members and the Internet community when collaborating with the other Regional Internet Registries (RIRs) at the fourth Internet Governance Forum (IGF) in Sharm El Sheikh. The RIPE NCC attended several Organisation for Economic Cooperation and Development (OECD) meetings in 2009 and, working with the other RIRs as the Number Resource Organization (NRO), submitted an official document to the OECD, "Measuring IPv6 Deployment".

The RIPE NCC continued to work with the public relations consultancy Racepoint Group in 2009 to help build awareness among stakeholder groups and the general public about issues such as IPv4 depletion. The increased visibility this brought the RIPE NCC helped raise its profile among important stakeholder groups such as governments. Racepoint Group also worked with the RIPE NCC to create and promote the IPv6 Act Now website, a valuable one-stop shop for all information on IPv6-related issues that includes a "how to" become IPv6-enabled section.

Building a system for Internet number resource certification continued in 2009, with work during the year focusing on creation of a production-ready Beta release of the certification software. More development on certification will be visible in 2010. In addition, September saw the launch of RIPE Labs, a platform that allows the RIPE NCC as well as RIPE NCC members and the Internet community to present and discuss new Internet-related tools, ideas and analysis that can benefit RIPE NCC members and the wider community. RIPE Labs also allows members to interact with the RIPE NCC and influence how the RIPE NCC works and how the services it provides can be developed for everyone's benefit.

In 2009, the RIPE NCC acted as the Secretariat for the NRO and the Address Supporting Organization (ASO). This position rotates among the five RIRs annually, and the RIPE NCC was proud to be able to support the NRO and ASO throughout the year by providing services such as facilitating ICANN Board of Director elections for the ASO and creating a multi-region IPv6 resource area on the NRO website.

I'd like to thank the membership for its support throughout 2009 and also our staff at the RIPE NCC for their work throughout the year. I encourage members to provide us with the feedback we rely on to develop and improve our organisation and its activities.

Axel Pawlik
Managing Director

About the RIPE NCC

Introduction

The Réseaux IP Européens Network Coordination Centre (RIPE NCC) is an independent, not-for-profit membership organisation. It supports the operation and development of the Internet through technical coordination and operates one of the world's five Regional Internet Registries (RIRs). The RIPE NCC's most prominent tasks include:

- Distribution and registration of IP addresses and Autonomous System (AS) Numbers
- Operating the RIPE Database
- Operating the K-root server cluster, one of the world's 13 root name servers
- Coordinating the RIPE community

Most of the RIPE NCC's members are Internet Service Providers (ISPs) and telecommunication organisations. Other members are corporations, academic institutions and government bodies. At the end of 2009, the RIPE NCC supported **6,583** members in the 76 countries in its service region. The organisation is based in Amsterdam, the Netherlands, and had 116 full-time equivalents for 2009.

It is an open, transparent and neutral organisation. Similar to the four other RIRs, the RIPE NCC operates as a community-driven, bottom-up and self-governing organisation. The policies that govern the way the RIPE NCC operates are proposed, discussed and accepted by the RIPE community (see page 39). The activities performed by the RIPE NCC and the services it provides are approved each year by its members.

Organisation Overview

As the RIR for Europe, the Middle East and parts of Central Asia, the RIPE NCC provides Internet number resources – IPv4 and IPv6 addresses and Autonomous System (AS) Numbers – to its members. The Internet Assigned Numbers Authority (IANA) allocates blocks of IP addresses and blocks of AS Numbers to all five RIRs. Each RIR then allocates or assigns parts of these blocks to its own members. The RIRs maintain registration data for these Internet number resources and ensure that the distribution of them is fair and according to the policies set by the Internet community.

The RIPE NCC manages the life cycle of the Internet number resources that it allocates or assigns. Active management of the Internet Resource Life Cycle contributes to fairness and transparency in the distribution of Internet number resources and improves the accuracy of registration data.

A **community-driven**, **bottom-up** and **self-governing** organisation

Membership in 2009

Total number of members at 31 December 2009: **6,583** members, an increase of **9%** on 2008

Total number of applications in 2009: **1,091**

Membership growth: **519** members (including mergers and closures)

Five countries with most new members (net growth):

- Russia: **85**
- Germany: **69**
- United Kingdom: **65**
- France: **36**
- Italy: **36**

RIPE NCC members are charged an annual service fee based on the services that they receive.

Yearly Fee 2009 (EUR)	
Extra Small	1,300
Small	1,800
Medium	2,550
Large	4,100
Extra Large	5,500
Sign-up Fee	2,000

www.ripe.net/membership/new-members

1,091 membership applications in 2009

RIPE NCC Services and Activities

In addition to providing services related to the assignment and allocation of Internet number resources, the RIPE NCC also supports the operation and development of the Internet for the benefit of the Internet community as a whole. The RIPE NCC's service offering includes:

Database Services:
- Development, operation and maintenance of the RIPE Database and the operation of a Routing Registry (RR)

Technical Services:
- Operation of K-root, one of the world's 13 root name server clusters
- Reverse Domain Name System (rDNS) delegations
- Technical administration of Tier-0 ENUM

Community Support and Outreach:
- Administrative support for RIPE Working Groups and RIPE Task Forces
- Maintenance and development of RIPE community mailing lists
- Facilitation of RIPE Meetings
- Facilitation of RIPE NCC Regional Meetings to reach members, governments and industry partners in the RIPE NCC service region
- Roundtable Meetings for governments, regulators and law enforcement agencies
- Representing the RIPE NCC, its members and the RIPE community at regional and global industry-related events and when liaising with governments and regulators
- Support for the Middle East Network Operators Group's (MENOG) activities

Training:
- Provision of RIPE NCC Training Courses for members and other stakeholders throughout the RIPE NCC's service region
- A free online E-Learning Centre available to everyone

Information Services:
- NetSense
- Test Traffic Measurement (TTM) Service
- Domain Name System Monitoring (DNSMON)
- Routing Information Service (RIS)
- Hostcount++

The RIPE NCC **supports** the operation and development of the **Internet.**

The RIPE NCC's Relationship with Réseaux IP Européens (RIPE)

The RIPE NCC and RIPE are separate entities that are highly interdependent. RIPE is a collaborative forum open to all parties with an interest in the technical development of the Internet and was founded in 1989. The term "RIPE community" is used to describe the individuals or organisations, whether members of the RIPE NCC or not, with an interest in the technical coordination of the Internet and the way the Internet is managed, structured or governed.

Valuable input from the Internet industry, governments and regulators is channeled to the RIPE NCC through the RIPE community. As RIPE is not a formal organisation, there are no formal requirements for participation. The RIPE NCC provides administrative support to RIPE, the RIPE Working Groups and RIPE Task Forces, such as the facilitation of RIPE Meetings, the maintenance and development of the RIPE Document Store and publicly archived mailing lists.

More information about RIPE, RIPE Working Groups and RIPE Task Forces can be found on page 39.

Organisational Structure

The RIPE NCC organisation consists of members, an Executive Board and RIPE NCC staff.

Members

In order to request IPv4 or IPv6 addresses and Autonomous System (AS) Numbers, organisations and individuals can become a member of one of the world's five Regional Internet Registries (RIRs). RIPE NCC membership is open to everyone. Members are required to sign a Standard Service Agreement and pay the initial sign-up and service fees. The majority of the membership base is made up of Internet Service Providers (ISPs) and telecommunication organisations. Other members include corporations, academic institutions and government bodies.

RIPE NCC members can:

- Request Internet number resources (IPv4, IPv6 and Autonomous System (AS) Numbers) and use member services

RIPE NCC members have the right to:

- Provide input for, and feedback on, the RIPE NCC's Activity Plan and Budget

RIPE NCC membership is open to **everyone.**

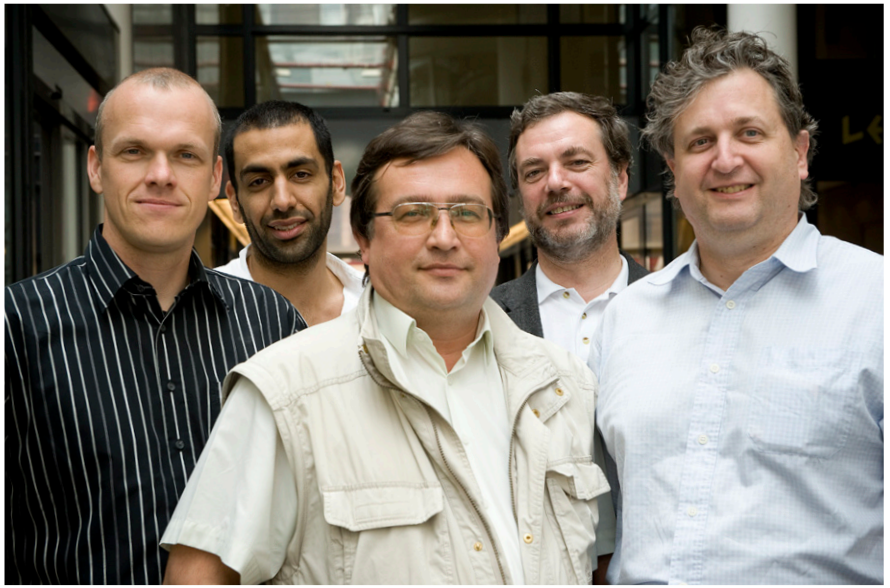
- Adopt the RIPE NCC Charging Scheme
- Approve the RIPE NCC's Financial Report
- Propose resolutions and vote on them during the RIPE NCC General Meetings
- Nominate and elect candidates to the RIPE NCC Executive Board
- Give general feedback on the RIPE NCC's activities and services through participation in RIPE Working Groups, mailing lists and the RIPE NCC General Meetings

The Executive Board

RIPE NCC members elect the Executive Board. The Board currently consists of five people who:

- Represent the membership and provide guidance to the RIPE NCC Senior Management
- Are responsible for the overall financial position of the RIPE NCC and for keeping records that allow the current financial situation to be evaluated at any moment
- Approve the RIPE NCC Activity Plan and Budget
- Appoint the RIPE NCC management
- Call the RIPE NCC General Meetings

www.ripe.net/info/ncc/board



RIPE NCC Executive Board
From left: Andreas Wittkemper, Fahad AlShirawi, Dmitry Burkov, János Zsakó, Nigel Titley

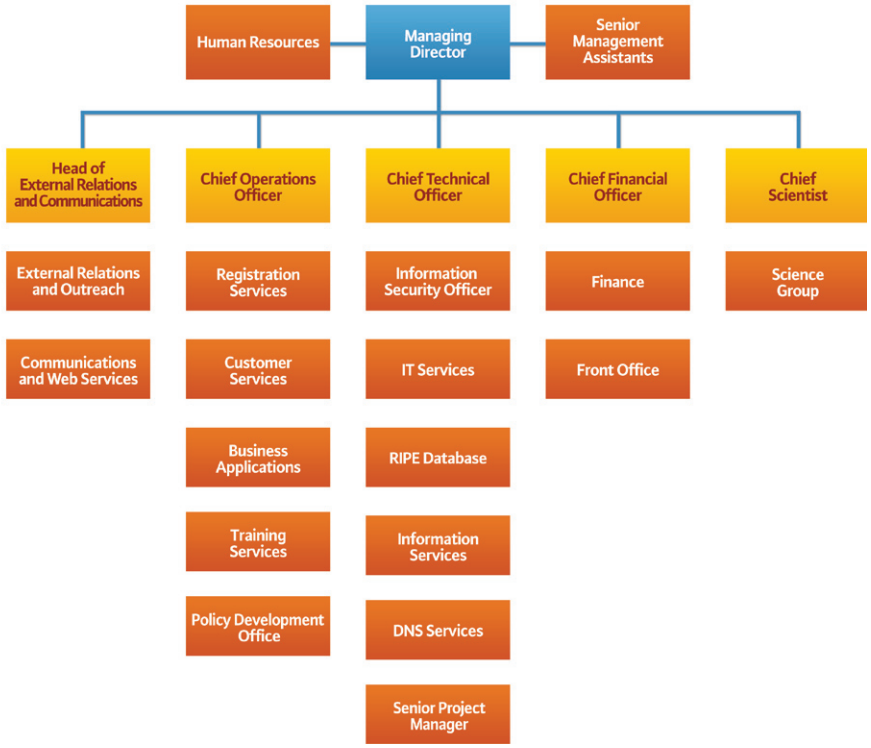
Executive Board elections take place annually at the RIPE NCC General Meeting.

RIPE NCC Staff

The staff:

- Perform the RIPE NCC's operations and facilitate RIPE NCC services
- Provide administrative support to members, to the RIPE Working Groups and to the RIPE community
- Cooperate closely with counterparts in the other four Regional Internet Registries (RIRs), with industry partners such as the Internet Society (ISOC) and the Internet Corporation for Assigned Names and Numbers (ICANN) and with governments and regulators
- Implement and facilitate the policies proposed and accepted by the RIPE community

Under the RIPE NCC Articles of Association, the RIPE NCC Executive Board delegates to the RIPE NCC management team all operational decisions relating to the Standard Service Agreements.



The RIPE NCC **offices** in Amsterdam

Defining, Setting and Evaluating RIPE NCC Services and Activities

All the activities that the organisation performs and the services that it provides are defined, discussed and evaluated by RIPE NCC members and by the RIPE community. All proposals, plans, documents and discussions are publicly documented.

The activities that the RIPE NCC proposes to perform in the coming year are detailed in the annual Activity Plan. Input into the Activity Plan and feedback on activities is collected from members and the RIPE community via the RIPE Working Groups, RIPE mailing lists and at the members-only General Meetings. The RIPE NCC Executive Board approves the Activity Plan after consultation with the membership.

www.ripe.net/ripe/docs/ripe-439.html

RIPE NCC General Meetings

All RIPE NCC members are encouraged to attend the RIPE NCC General Meetings. Currently, these meetings are held twice a year. During the General Meetings, members can vote to accept the audited Financial Report and adopt the RIPE NCC Charging Scheme. Members are also responsible for electing the Executive Board. Feedback on the RIPE NCC's activities and services can also be given directly to the Executive Board.

In 2009, the RIPE NCC General Meetings took place alongside the RIPE 58 and RIPE 59 Meetings. Executive Board elections were held during the General Meeting held on 6 May 2009. The term of Executive Board member Dmitry Burkov expired and RIPE NCC members re-elected Dmitry to the available seat.

At the General Meeting on 7 October 2009, the membership approved changes to the RIPE NCC Articles of Association (AoA). 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 AoA to accommodate electronic voting also allowed general improvements to the text to be introduced.

www.ripe.net/ripe/docs/articles-association.html

The General Meetings are only open to RIPE NCC members and RIPE NCC supporters. Minutes from each meeting are,

All proposals, plans, documents and discussions relating to activities are **publicly documented**.

however, available to the public.

www.ripe.net/membership/gm

Articles of Association

The rights and obligations of all the RIPE NCC's entities are detailed in the Articles of Association (AoA).

www.ripe.net/ripe/docs/articles-association.html

Arbitration

An arbitration committee exists to resolve any dispute between RIPE NCC members and the RIPE NCC that is related to the services provided by the RIPE NCC. The arbitration committee operates as a neutral and objective body and consists of RIPE community members. The RIPE NCC's Executive Board appoints the arbiters with approval from the General Meeting. In 2009, the acceptance of RIPE Policy Proposal 2009-02, "Allocating/Assigning Resources to the RIPE NCC", means that the Pool of Arbiters will evaluate the validity of all requests for Internet number resources made by the RIPE NCC for its own use.

www.ripe.net/ripe/docs/arbitration.html

Legal Framework

In 2009, the RIPE NCC worked to strengthen the legal framework that it operates under. It created a new Privacy Statement that applies to all personal information processed by the RIPE NCC. The RIPE NCC also took part in the European Union consultation on the legal framework for the fundamental right to protection of personal data.

www.ripe.net/legal

Corporate Governance

The RIPE NCC aims to implement corporate governance best practice where possible and operates under transparent organisational, management and Executive Board structures. It has clear and open communication channels regarding its operations. There is also clear division of responsibilities and duties between members, the Executive Board and the management team, as stated in the RIPE NCC Articles of Association.

The arbitration committee operates as a **neutral** and **objective** body.

Activities

New and Significantly Developed Activities 2009

Support for Internet Number Resource Certification

The RIPE NCC strives to provide a stable and secure registry function where registry data is maintained with a high level of accuracy. The certification of RIPE NCC Internet number resource allocations will be a significant enhancement to this registry function. Resource certificates issued with RIPE NCC allocations will allow RIPE NCC members to digitally certify their Internet resources and will serve as an authoritative statement of an allocation's uniqueness and legitimacy at the time of allocation. Certification also has the potential to play an important role in resource transfers, secure routing and automated provisioning.

To ensure that the RIPE community guides the plans for Internet number resource certification, the RIPE Certification Task Force was formed in 2006 and has been working with the RIPE NCC and other industry stakeholders to develop a RIPE NCC Internet number resource certification system. Work on this project in 2009 focused on the creation of a production-ready final beta release of the certification software. The RIPE NCC is also assisting ARIN, LACNIC and AfriNIC to implement major certification components developed by the RIPE NCC.

The RIPE NCC is also planning to add more functionality to the certification software, including a "non-RIPE NCC-hosted model" and multiple security hardware modules. Alongside this, work on the Certification Policy and the Certification Practice Statement is also ongoing.

www.ripe.net/ripe/tf/certification

RIPE Labs

At the RIPE 59 Meeting in September 2009, the RIPE NCC launched RIPE Labs – a new platform designed for network operators, developers and industry experts to expose, test and discuss innovative Internet-related tools, ideas and analysis that can benefit the RIPE community and RIPE NCC members.

The RIPE NCC uses RIPE Labs to present new ideas, potential new services and new features of existing services to the community early in the development stage. This offers RIPE NCC members and the Internet community a much faster feedback mechanism.

RIPE Labs is open to anyone who wants to present their own ideas and prototypes, gather feedback and engage

Over **5,000** unique visitors to RIPE Labs in 2009

Mirjam Kuehne, RIPE Labs Community Builder

in discussions. The RIPE NCC provides and maintains discussion forums for various topics and tools.

In the last three months of 2009, more than 20 articles were published on RIPE Labs about tools for operators, measurement results and other news and announcements. RIPE Labs had more than 5,000 unique visitors with about 50% returning to the site more than once. Tools, such as the "Resource Explainer", are most popular, but articles about IPv6 measurements and the signing of the DNS root zone are also frequently visited.

http://labs.ripe.net

Ongoing Activities 2009 – Member Services

Registration Services

As a Regional Internet Registry (RIR), the RIPE NCC's most prominent activity is to register and distribute IPv4 and IPv6 addresses and Autonomous System (AS) Numbers in its service region. The goal is to ensure fair distribution of Internet number resources and to maintain accurate registration data. The Internet Assigned Numbers Authority (IANA) allocates blocks of addresses to the five RIRs. The RIRs then allocate parts of these address blocks. During the year, Registration Services' service levels remained stable and were comparable to the service level in 2008.

Andrea Cima, Registration Services Manager

In 2009, external auditors KPMG reviewed the RIPE NCC's Registration Services processes. They examined whether procedures were missing, if procedures were consistent and accurately documented, and whether the IP Resource Analysts (IPRAs) followed them. The auditors found that the procedures were well documented although improvements could be made to the levels of detail and amount of documentation produced. Work is currently under way to implement the improvements suggested.

Requests for Internet Number Resources

In 2009, the RIPE NCC's Registration Services Department received a total of **14,908** requests, a decrease compared

14,908 requests for Internet number resources in 2009

to the 15,261 requests received in 2008. These requests included requests for:

- Provider Aggregatable (PA) assignments
- Provider Independent (PI) assignments
- IPv4 and IPv6 allocations
- AS Number assignments
- Anycast assignments
- Assignments for Internet Exchange Points (IXPs)
- Assignments to DAUs (Direct Assignment Users)

From the total number of requests, **6,512** allocations and assignments of Internet number resources were made.

Internet number resource allocations and assignments made by the RIPE NCC in 2009:

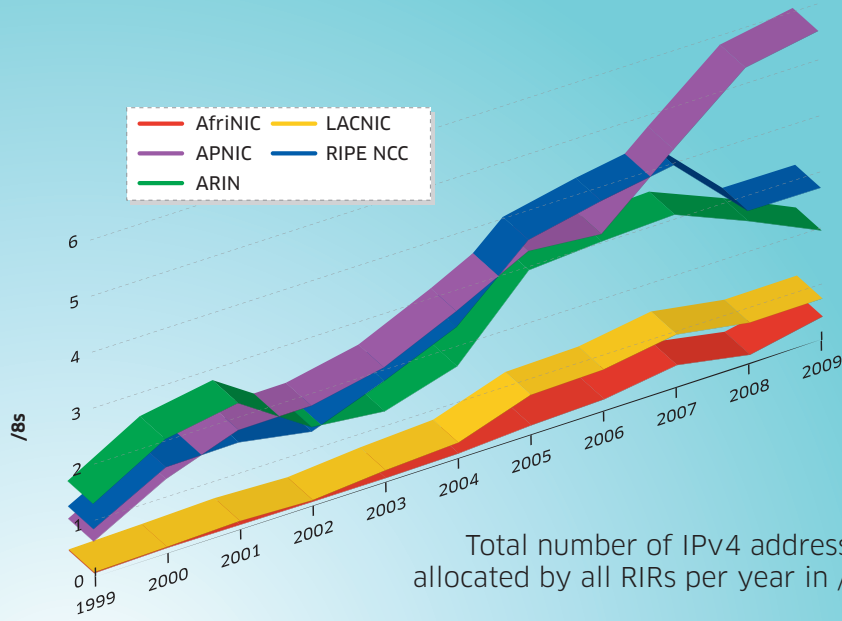
- IPv4: **1,556** allocations
- IPv6: **554** allocations
- ASN: **2,300** assignments
- PI: **2,002** (IPv4) and **73** (IPv6) assignments
- Anycast: **7** (IPv4) and **7** (IPv6) assignments
- IXP: **12** IPv6 assignments

A more in-depth overview of assignments and allocations can be found on pages 18-20.

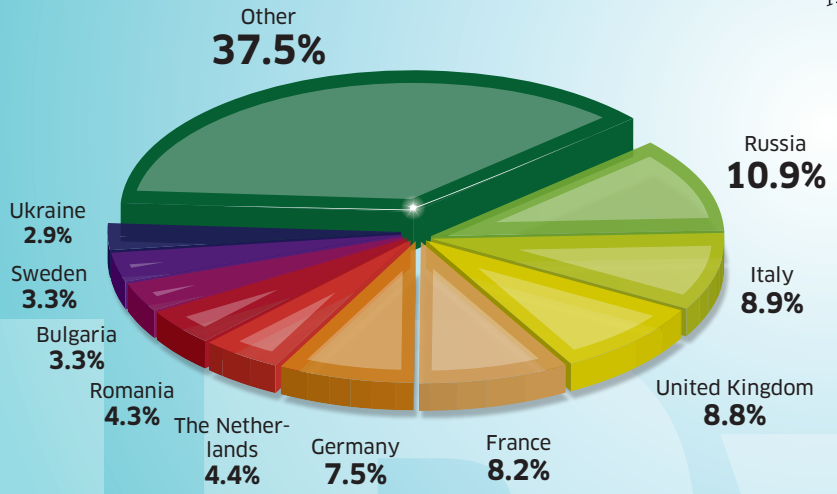
6,512 allocations and assignments of Internet number resources in 2009

IPv4 Allocations 2009

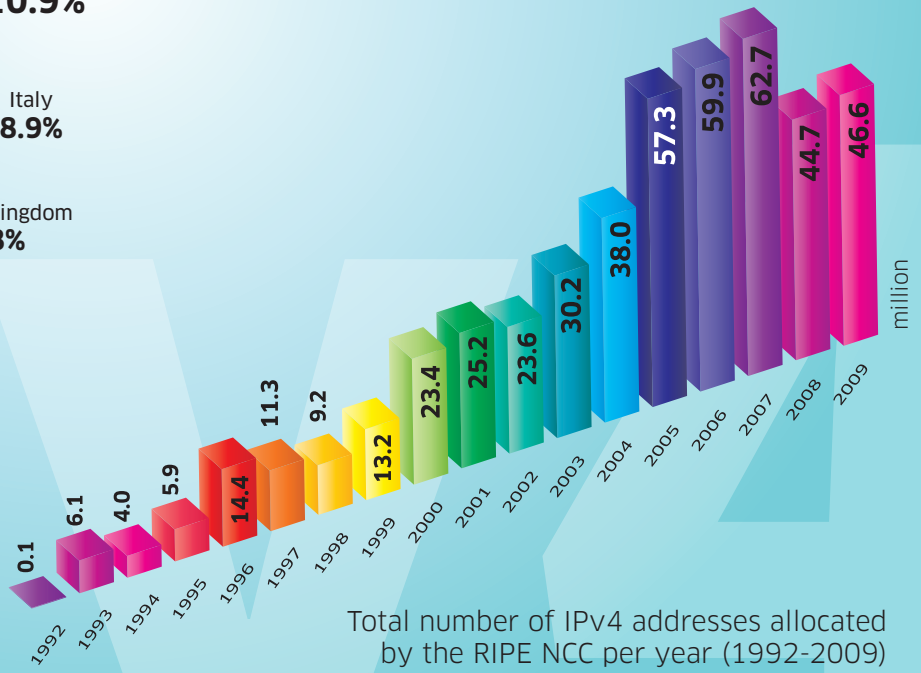
The RIPE NCC allocated **46,614,528** IPv4 addresses during the year. Compared with 2008, this is a **4%** increase in the total number of IPv4 addresses allocated. The IANA allocated **4** /8 blocks of IPv4 addresses to the RIPE NCC in 2009.



Total number of IPv4 addresses allocated by all RIRs per year in /8s



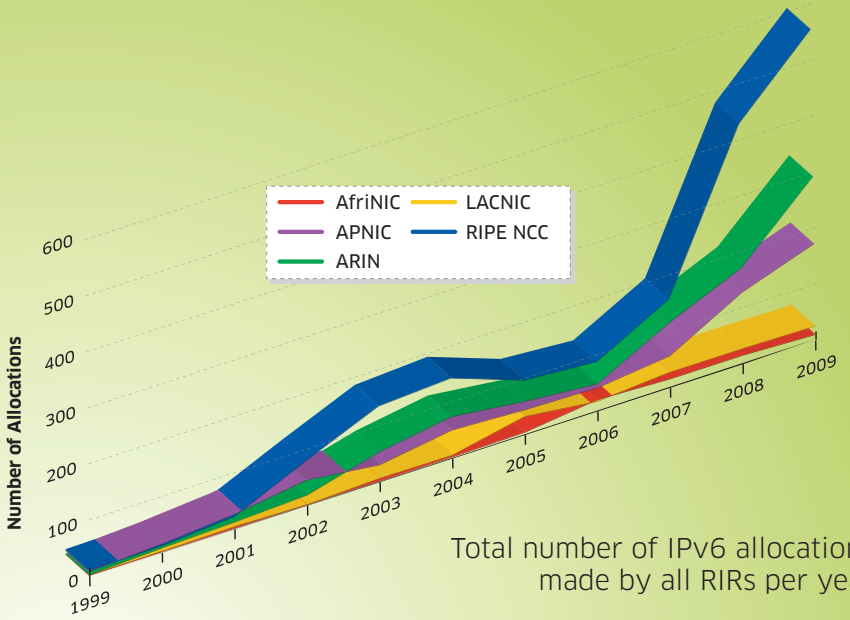
Total number of IPv4 addressses allocated by the RIPE NCC in 2009 per country



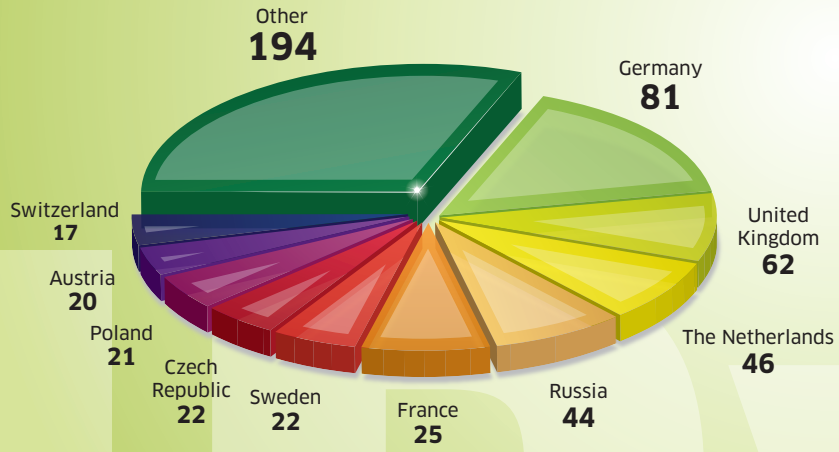
Total number of IPv4 addresses allocated by the RIPE NCC per year (1992-2009)

IPv6 Allocations 2009

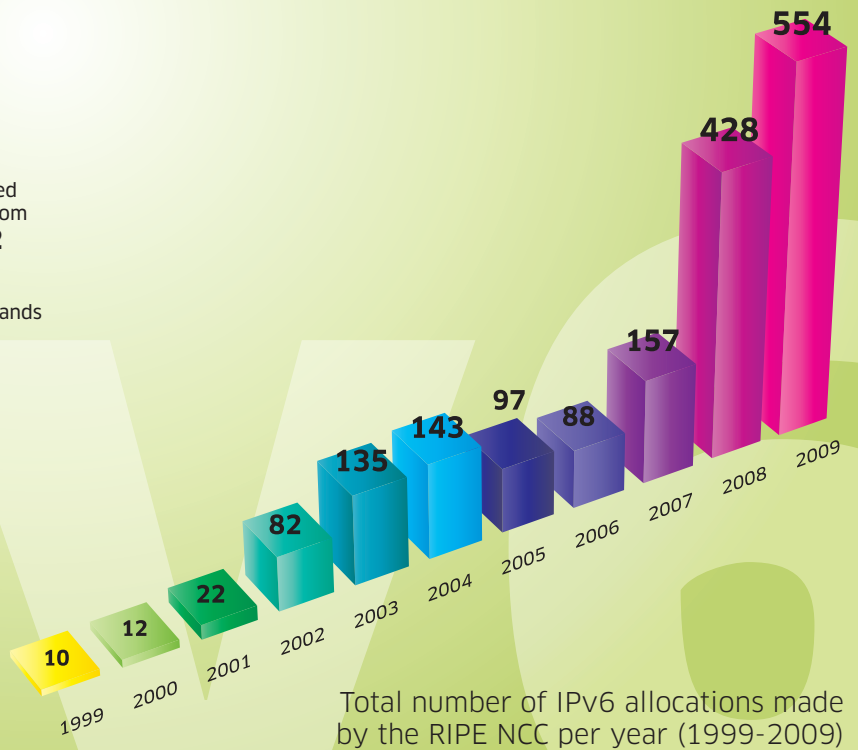
During 2009, the RIPE NCC made **554** IPv6 allocations, a **23%** increase on the number of allocations made in 2008. **427** LIRs hold an IPv6 allocation. The IANA did not allocate any blocks of IPv6 address space to the RIPE NCC in 2009.



Total number of IPv6 allocations made by all RIRs per year



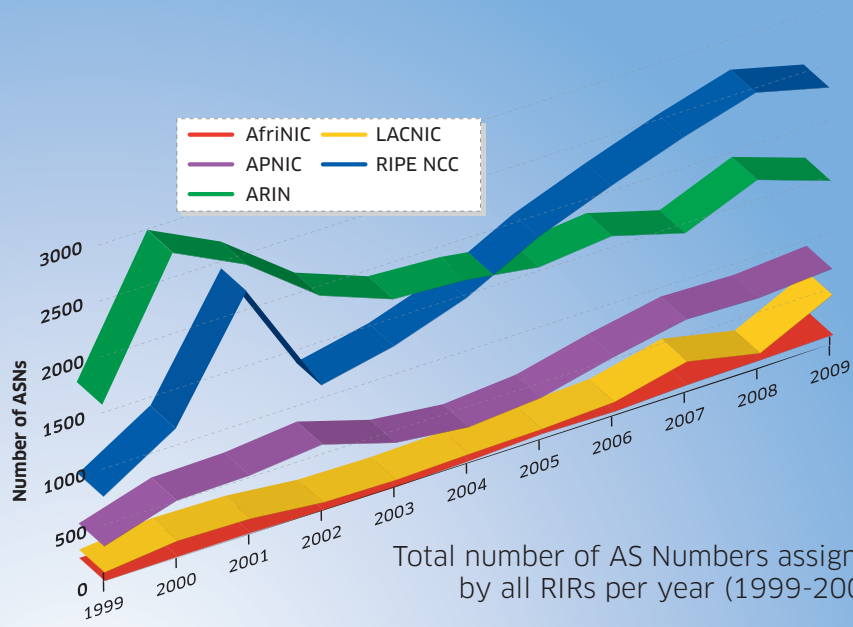
Total number of IPv6 allocations made by the RIPE NCC in 2009, per country



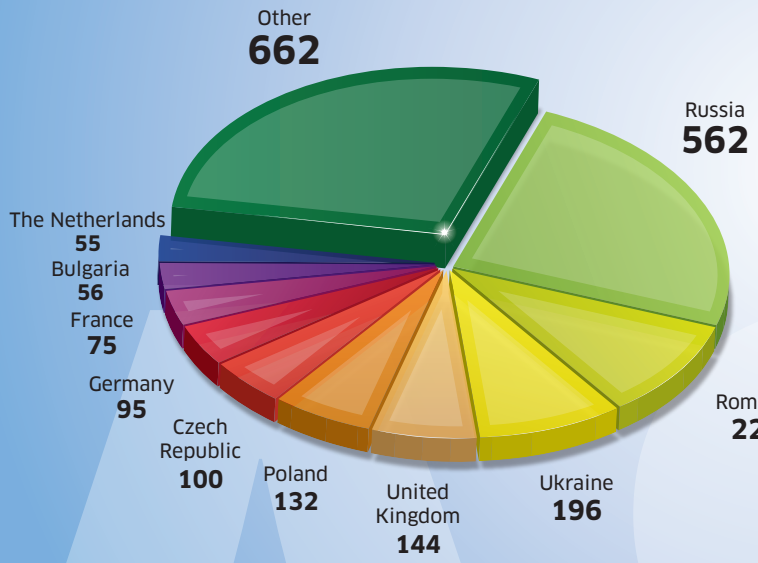
Total number of IPv6 allocations made by the RIPE NCC per year (1999-2009)

Autonomous System (AS) Number Assignments in 2009

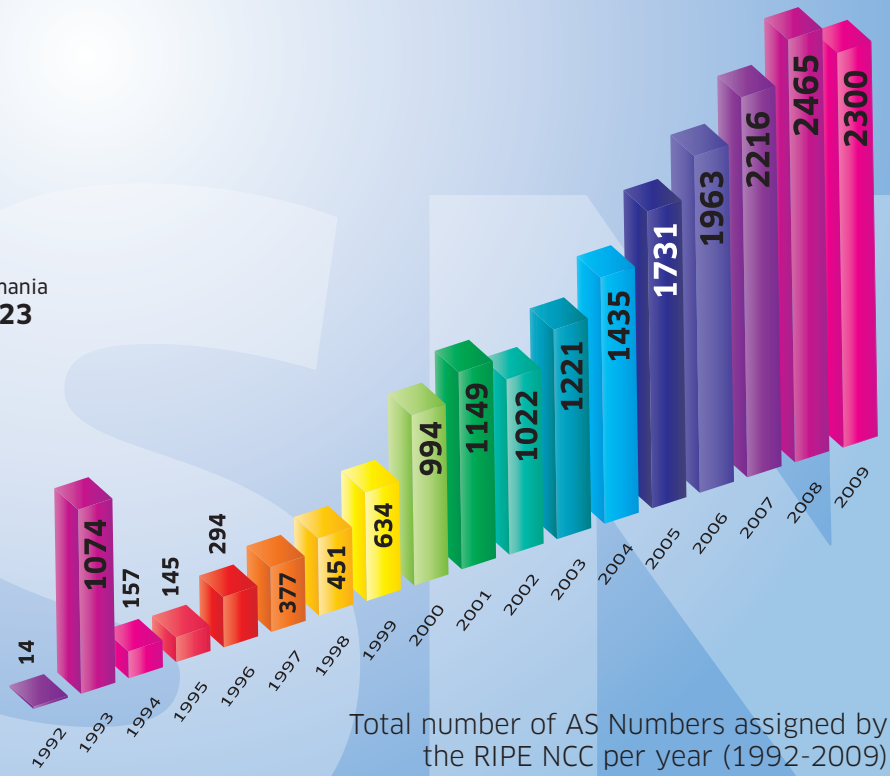
The IANA allocated **3,072** ASNs to the RIPE NCC in 2009. **2,300** ASNs were assigned during the year, a **6%** decrease on the amount assigned in 2008.



Total number of AS Numbers assigned by all RIRs per year (1999-2009)



Total number of AS Numbers assigned by the RIPE NCC in 2009 per country



Total number of AS Numbers assigned by the RIPE NCC per year (1992-2009)

Assignment and Allocation Policies Implemented in 2009

All the policies detailing the way in which the RIPE NCC allocates and assigns Internet number resources to its members are proposed, discussed, accepted or rejected by the RIPE community. The RIPE NCC implements the policies that the RIPE community accepts into its operations and procedures. In 2009, the RIPE NCC continued work to implement RIPE Policy Proposal 2007-01, "Direct Internet Resource Assignments to End Users from the RIPE NCC". Six other policy changes were implemented.

More information about these proposals, the RIPE community and the RIPE Policy Development Process (PDP) can be found on pages 39-44.

Returned Address Space

As part of the RIPE NCC's management of the Internet number resource life cycle, over 2.16 million unused IPv4 addresses were returned to the RIPE NCC during 2009. A total of 6,029,312 IPv4 addresses have now been returned over the last four years, contributing towards good stewardship of Internet number resources. The RIPE NCC re-allocates the addresses that have been returned after an appropriate quarantine period.

Improving Data Consistency

Over 2009, the RIPE NCC continued its efforts to improve data consistency as part of an ongoing project to ensure that all Internet number resource allocation, assignment and registration data is correct and consistent.

The Local Internet Registry (LIR) Portal

The LIR Portal is the secure members-only portal that enables RIPE NCC members to manage their allocations and assignments online. In 2009, the RIPE NCC used the LIR Portal to help implement RIPE Policy Proposal 2007-01, "Direct Internet Resource Assignments to End Users from the RIPE NCC", and RIPE Policy Proposal 2009-08, "IPv6 Provider Independent (PI) Assignments for LIRs". For RIPE Policy Proposal 2007-01, the LIR Portal let users declare which independent resources should remain with the LIR and allowed LIRs to upload copies of the End User Assignment Agreement they had signed with End Users as well as registration papers for those End Users. For RIPE Policy Proposal 2009-08, LIRs could use the LIR Portal to request IPv6 PI assignments in addition to IPv6 allocations.

During 2009, the RIPE NCC also worked to improve and upgrade the service provided by the LIR Portal. This

6,029,312 IPv4 addresses returned in the past four years

included developing a new architecture for the next generation of the LIR Portal, and deploying a new portal server. The pilot release for certification was integrated in the portal, and the newly designed registration software for meetings organised by the RIPE NCC was integrated with the new portal server.

https://lirportal.ripe.net

Training

The RIPE NCC's Training Services Team delivers training courses to members throughout the RIPE NCC's service region. The following training courses were offered in 2009:

The LIR Training Course
Shows members how to request Internet number resources and how to interact with the RIPE NCC.

The Routing Registry (RR) Course
Explains the features of Routing Policy Specification Language (RPSL), the Routing Registry (RR) and related tools to experienced network operators.

IPv6 for LIRs Course
Raises awareness about IPv6 and the current best practices for deploying it. It also covers IPv6 Internet addressing policies and how to obtain IPv6 address space.

The following courses were given in 2009:
- 41 Local Internet Registry LIR courses
- 15 Routing Registry courses
- 7 IPv6 for LIRs courses

These courses were held in 36 countries throughout the RIPE NCC service region and attracted over 1,500 participants.

All RIPE NCC Training Courses are regularly updated to include information on any new policies accepted by the RIPE community and modifications to procedures and software.

www.ripe.net/training

Training Seminars
In addition to these courses, a one-day IPv6 seminar was held alongside the RIPE NCC Regional Meeting in Moscow. The Training Services Team also gave several tailored seminars and presentations during industry conferences,

Training Services Team

operator groups and peering forums, including seminars at the LINX IPv6 Day and the Polish Network Operators Group (PLNOG) conference and training for the UK's Serious Organised Crime Agency (SOCA).

Hosted Courses
Of the 63 training courses given throughout the year, 14 were held at venues provided by a host. More information about hosted courses, details on how to host a course and an overview of the 2009 hosts are available on the RIPE NCC website.

www.ripe.net/training/hosting.html

IPv6 Testimonials
The Training Team video-recorded and interviewed people from the Internet community to give their views on IPv6 deployment. The testimonials are used during the IPv6 for LIRs Training Courses, and participants included a range of leading industry figures. The testimonials can also be found on the IPv6 Act Now website.

www.ipv6actnow.org

RIPE NCC E-Learning Centre

The E-Learning Centre is free and open to anyone and offers short online courses on topics relevant to the Internet industry, the RIPE community, governments and regulators. E-Learning modules also supplement the material covered in the RIPE NCC's Training Courses. In 2009, two "DNS for LIRs" modules were released, and further modules on topics such as "IPv6" and the "RIPE Database" are in the process of being developed based on feedback from users.

https://e-learning.ripe.net

Regional Support

The RIPE NCC offers support to members throughout its service region. This enables it to communicate more effectively with members about the specific technical, administrative and policy issues that affect a particular region.

The RIPE NCC Regional Meetings bring together a region's RIPE NCC members, local governments and key players in the global and local Internet industry, encourage dialogue and provide a platform for attendees to work together to identify key regional issues. Members can give feedback directly to RIPE NCC representatives so their changing needs can be continuously

Training courses were held in **36** countries and attracted over **1,500** participants.

evaluated and addressed. These events are free of charge and open to anyone, although registration is required.

www.ripe.net/meetings/regional

Three RIPE NCC Regional Meetings were held during 2009:

- April: Manama, Bahrain, alongside the MENOG 4 Meeting
- September: Moscow, Russia
- October: Beirut, Lebanon, alongside the MENOG 5 Meeting

Middle East Network Operators Group (MENOG) Meeting

MENOG is a regional forum that offers network engineers and other technical staff the opportunity to share knowledge and experiences and identify areas for regional cooperation. Created in 2007 by the region's Internet community, the RIPE NCC has provided administrative support for MENOG since its inception.

In April 2009, the MENOG 4 Meeting took place in Manama, Bahrain and the MENOG 5 Meeting took place in Beirut, Lebanon in October. In addition, workshops and tutorials were organised by MENOG and took place alongside both meetings.

www.menog.net

RIPE NCC Customer Services

The RIPE NCC's Customer Services Team provides first-line user support and enables members to communicate with the RIPE NCC more effectively by streamlining and coordinating internal activities. During 2009, the Customer Services Team took over the administrative tasks of various departments in the RIPE NCC and worked on several administrative projects, resulting in **4,583** additional requests. The team processed a total of **19,390** requests in 2009, compared to the 16,748 requests in 2008. These numbers include requests relating to:

- RIPE Database user support
- DNS user support
- New LIR queries and applications
- Billing
- LIR general administration
- NRTM, TTM and DNSMON users
- LIR contract consistency
- Abuse complaints

Despite the additional tasks taken on by the Customer Services Team, the initial response time to requests was maintained at one working day.

Customer Services Team

Ongoing Activities 2009 – Coordination Activities

The RIPE Database

The RIPE NCC operates and maintains the RIPE Database. The database contains information about IPv4 and IPv6 allocations and AS Number (ASN) assignments as well as information about the organisations, contacts and reverse Domain Name System (rDNS) delegations relating to them.

Anyone can use the RIPE Database to make queries and RIPE NCC members can use it to update information relating to their Internet number resource allocations and assignments.

During 2009, roughly three and a half billion queries were served – an average of 110 queries per second, mostly for IP address lookups. This is an increase on 2008 of approximately 355%.

The RIPE Database also includes the RIPE Routing Registry (RR), which is part of the global Internet Routing Registry (IRR). The IRR ensures the stability and consistency of global Internet routing by sharing information between network operators. The IRR consists of several databases, including the RIPE RR, in which network operators can publish their routing policies and routing announcements.

Throughout 2009, several updates and improvements to the RIPE Database were made:

RIPE Database Architecture
The RIPE Database architecture was improved to further enhance resilience and performance. The new architecture improved an already high availability service and further reduced the risk of data loss. Due to investments in service capacity over previous years, the increases in RIPE Database requests over 2009 were easily handled.

Legal Documentation

The legal information on the RIPE NCC website was extended to include the "RIPE Database Acceptable Use Policy" and documentation about the removal of personal data from the RIPE Database.

www.ripe.net/legal

110 queries per second served by the RIPE Database

Data Protection

A new version of the RIPE Database code was deployed. This improved security on data by enforcing the rule that person and role objects require a maintainer.

Data Privacy

Further effort has gone into removing personal data from bulk access services such as Near Real Time Mirroring (NRTM) and daily database dumps.

Queries

There was a significant increase in the amount of queries that the RIPE Database servers handled over 2009. Enhancements to the RIPE Database cluster proved to be very beneficial as the increase in load was handled easily. Queries over IPv6 also increased from around 1% of all queries to 4% of all queries.

Documentation

The RIPE Database documentation was updated to reflect the changes made to the software and to operational usage. The documentation is now more closely coupled to the software releases and updates will be made for all changes to the software. The RIPE Database documentation is now also available in HTML as well as PDF format.

Anand Buddhdev, DNS Services Manager

DNS Services

As part of the technical support for allocated address space, the RIPE NCC provides primary and secondary Domain Name System (DNS) services for reverse domains. Reverse zones are used to translate IP addresses into names. For example, a reverse zone maps the address 193.0.14.129 to the name k.root-servers.net.

For the reverse zones maintained by the RIPE NCC, full DNS Security (DNSSEC) support, including zone signing and support for secure delegations, is provided. A secondary DNS service for a number of country code Top-Level Domains (ccTLDs) is also provided. The RIPE NCC also runs the Tier-0 registry and the DNS service for the e164.arpa domain to support ENUM (see page 28).

4% of queries to the RIPE Database were made over **IPv6**.

Reverse Delegation

The RIPE NCC provides reverse domain delegations for IPv4 and IPv6 address space that it allocates and assigns. This continues to be one of the primary DNS activities. RIPE NCC members maintain their own reverse delegations by updating their information in the RIPE Database, the authoritative source for reverse zones. More information about the RIPE Database can be found on page 25.

In 2009, the RIPE NCC continued to run periodic lameness checks for the delegations it supports. Based on community feedback and discussions at RIPE Meetings, the decision was taken to stop sending out email alerts for lame delegations.

The RIPE NCC also started a new project to consolidate all its reverse and forward zones into a load-balanced cluster of servers. This will improve the reliability and availability of the reverse DNS service that the RIPE NCC provides.

The RIPE NCC is also making improvements to its DNSSEC infrastructure, which is used to sign its forward and reverse zones.

Secondary DNS

The secondary DNS service ensures the reliability and robustness of the general DNS infrastructure and forms an important part of the RIPE NCC's DNS service. The RIPE NCC provides a secondary DNS service for other Regional Internet Registries' reverse zones and for some country code Top-Level Domain (ccTLD) organisations, mainly those in developing countries or those who have difficulty obtaining and paying for commercial DNS services. At the end of 2009, a stable secondary DNS service was provided to 87 ccTLDs.

K-root and Anycast

The RIPE NCC operates K-root, one of the Internet's 13 root name server clusters. Root name servers are a crucial part of the Internet Domain Name System infrastructure. The K-root server has been operated by the RIPE NCC since 1997, when the first server was installed at the London Internet Exchange (LINX). Currently, K-root consists of 18 nodes, all of which are operated by the RIPE NCC. K-root operations were stable throughout 2009.

The RIPE NCC operates **K-root**, one of the Internet's 13 root name server clusters.

In 2009, in cooperation with AfriNIC, the RIPE NCC expanded K-root into Africa by deploying an instance in Dar es Salaam, Tanzania.

http://k.root-servers.org

ENUM

The RIPE NCC provides Domain Name System (DNS) operations for the e164.arpa zone (ENUM) in accordance with the instructions from the Internet Architecture Board (IAB).

www.ripe.net/enum/instructions.html

ENUM is an Internet standard defined in RFC3671 for mapping E.164 telephone numbers into domain names and storing these in the DNS. The RIPE NCC delegates domains for E.164 country codes to entities (Tier-1 registries) requesting them after approval is given by the ITU Telecommunication Standardization Sector – Telecommunication Standardization Bureau (ITU-T TSB). The ITU-T TSB handles delegation requests following the ITU-T Study Group 2 (ITU-T SG2) interim procedures.

www.itu.int/ITU-T/inr/enum/procedures.html

Information Services

The RIPE NCC's Information Services provide a deeper insight into the workings of the Internet. Most of these services and tools are offered free of charge. All data generated is available to anyone. As the RIPE NCC is a neutral and impartial organisation, commercial interests do not influence the data collected.

Mark Dranse, Information Services Manager

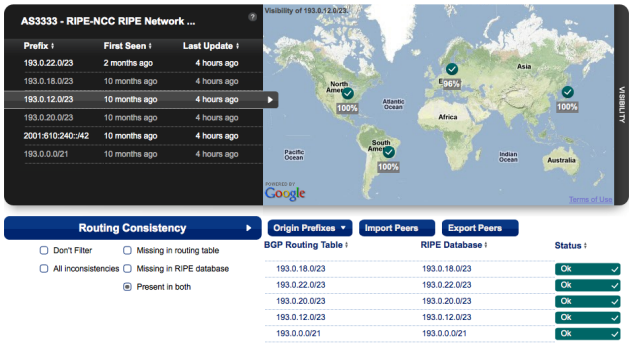
In 2009, the RIPE NCC developed a new concept of accessing the Information Services and the measurement data using innovative product development practices. This concept was verified through the results of the RIPE NCC Membership Survey 2008 and interviews conducted with stakeholders to analyse what RIPE NCC members and Internet community stakeholders wanted from the RIPE NCC's Information Services.

Based on this concept, the RIPE NCC launched NetSense at the RIPE 59 Meeting in Lisbon. NetSense is a unified portal

K-root server cluster locations

• global nodes • local nodes

designed to integrate all the Internet measurement services that are supported by the RIPE NCC and present them in a visually appealing manner. All the other Information Services continue to work as usual, but the visualisation of those services is gradually being migrated to NetSense.



http://netsense.ripe.net

An overview of each of the RIPE NCC's Information Services can be found below.

Test Traffic Measurement (TTM) Service

The RIPE NCC TTM service enables users to continuously monitor the connectivity of their networks to other points on the Internet using a neutral and reliable measurement system. So-called TTM test-boxes are deployed at participating sites and measurement traffic is sent between them.

During 2009, eight new TTM test-boxes were deployed, bringing the total number of deployments to 88 worldwide. Under the Memorandum of Understanding (MoU) that the RIPE NCC signed with AfriNIC and the Kenya Internet Exchange (KIXP), TTM test-boxes were deployed and are operating in Pretoria and Nairobi. And, in partnership with APNIC, TTM test-boxes were deployed in Karachi and Hong Kong, bringing the total of test-boxes in the Asia Pacific region to 10. A similar agreement with LACNIC saw a test-box deployed in Montevideo, bringing the total in Latin America to six.

www.ripe.net/projects/ttm.html

Domain Name System Monitoring (DNSMON)

The DNSMON service uses the TTM service test-boxes to provide an objective overview of DNS root servers and participating Top-Level Domain (TLD) name servers. The measurements show the quality of the DNS and enable users to distinguish between server-side and client-side problems.

The **TTM service** lets users continuously monitor the connectivity of their networks.

The DNSMON service was launched in April 2005.

There are three levels of DNSMON service available:

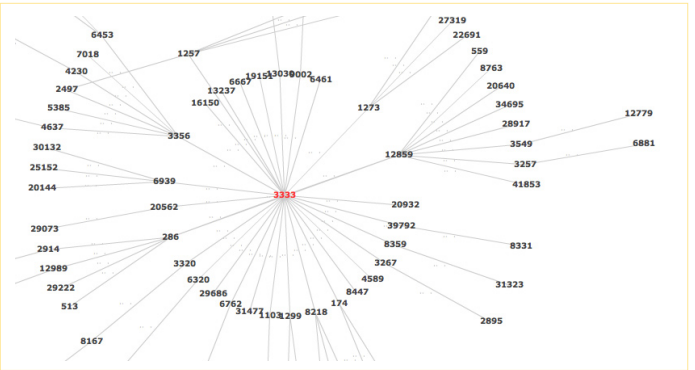
- **Level 1:** Provides root server operators full access to monitoring of the root domain free of charge, enhancing global cooperation in ensuring the stability of the DNS.
- **Level 2:** Provided for a fee to participating TLDs. Subscribers can access the subscriber-only DNSMON server and access data as near to real time as possible.
- **Level 3:** Data is provided to the public free of charge but with a delay of two hours.

By the end of 2009, 30 TLDs were using DNSMON. New DNSMON subscriptions in 2009 were received from the operators of .org, .biz and .travel.

http://dnsmon.ripe.net

Routing Information Service (RIS)

The RIS keeps track of changes in the global Internet routing system by collecting and storing the Border Gateway Protocol (BGP) routing information that is gathered from peering sessions. This information is collected by the 15 Remote Route Collectors (RRCs) located at major Internet exchanges around the world. In 2009, these RRCs held over 600 peering sessions.



BGPviz visualising a prefix announced via BGP

Locations of RIS Remote Route Collectors (RRCs)

The RIS offers several tools that enable users to search, analyse and monitor changes in the global routing system. They are available to the public free of charge. In 2009, a more resilient and high-performance back-end was installed for the RIS.

www.ripe.net/projects/ris/tools

IS Alarms

IS Alarms is one of the RIS's integrated tools, enabling network administrators to monitor routing changes related to a network. The service offers a new look and feel as well as a faster and more efficient back-end processing system. By the end of 2009, IS Alarms had over 2,000 users.

All the raw data collected since the RIS project started in 1999 is publicly available.

www.ripe.net/projects/ris/rawdata.html

Hostcount

The RIPE NCC coordinates the collection of data from the DNS zones of the Top-Level Domains (TLDs) in its service region and publishes summary statistics. Hostcount has been performed since 1993, making it one of the world's longest running data collection projects on, and about, the Internet.

More information about Hostcount can be found at:

www.ripe.net/hostcount

Details on all our Information Services are available on our website:

http://is-portal.ripe.net

RIPE NCC in the Internet Industry

Throughout the year, the RIPE NCC worked extensively to develop and promote relations with governments, regulators, legal authorities and industry partners.

External Relations

In 2009, the RIPE NCC continued to work with Racepoint Group, a global public relations consultancy, to further promote the RIPE NCC as a leading industry organisation, and raise awareness of the role of the RIRs in the Internet's infrastructure.

The RIPE NCC works together with Racepoint Group to:

- Develop and distribute press releases
- Provide support at RIPE NCC and industry events
- Identify opportunities to get key messages into industry-related publications and the global media
- Liaise and foster relations in multi-stakeholder environments (governments, regulators etc.)
- Respond to industry news with expert comment and informed opinion

PR activity has resulted in over 500 pieces of coverage in targeted media (national, technology, business and public sector publications). This represents an increase of over 100% on the 2008 campaign. Nineteen media briefings have taken place and 18 articles have been written on behalf of RIPE NCC Senior Management and placed in key media, positioning the RIPE NCC as a thought leader on IPv6 deployment and wider Internet industry issues.

IPv6 Act Now

is a website launched in June 2009. Designed as a one-stop resource for IPv6-related information, the site seeks to engage a wide-ranging audience, including business, government and the technical communities. The site features news items, multimedia interviews with members of the community, statistics and discussion forums. An update in November 2009 unveiled How To Act Now, a new section of the site with information targeted at Small Business, Enterprise, Government and ISPs.

www.ipv6actnow.org

IPv6 ACT NOW One-stop resource for IPv6-related information

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 from its inception, on its own behalf and together with the other Regional Internet Registries (RIRs) as the Number Resource Organization (NRO – see page 36).

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

www.nro.net/governance
www.intgovforum.org

OECD

The RIPE NCC has been involved with the work of the Organisation for Economic Co-Operation and Development's (OECD) Committee for Information, Computer and Communication Policy (ICCP) and the Working Party on Communication and Infrastructures and Services Policy (WPCISP) since 2007.

Throughout 2008, the RIPE NCC played a key role in the formation and development of the Internet Technical Advisory Committee (ITAC) to the OECD together with the other RIRs and industry partners ISOC and ICANN. ITAC

The RIPE NCC has been involved with the work of the **OECD** since **2007**.

was established to safeguard Internet development and innovation through multi-stakeholder Internet governance. On 15 January 2009, ITAC was officially recognised by the OECD. The OECD Council agreed to the ICCP Committee's proposed mandate and adopted renewed terms of reference which call upon the ICCP to:

"...draw on the views and expertise of non-Members, international organisations and non-governmental stakeholders, and work with business, trade unions, civil society, and the Internet technical community within a framework of co-operation that promotes mutual understanding and participation."

With the formation of ITAC, the RIPE NCC has been able to contribute to and submit formal documents and formally respond to requests for comment from the OECD via ITAC.

At the WPCISP Meeting held in Paris on 15-16 June 2009, the RIPE NCC, working as the NRO together with the other RIRs, submitted its first official document, "Measuring IPv6 Deployment". This document contained data about worldwide IPv4 and IPv6 deployment and was very well received by the delegates.

www.nro.net/archive/news/cisp-ipv6.pdf

Over the year, the RIPE NCC sent representatives to the following OECD meetings held at the OECD headquarters in Paris:

- Committee for Information, Computer and Communication Policy (ICCP) Meeting, 12-13 March 2009
- Working Party on Communication and Infrastructures and Services Policy (WPCISP) Meeting, 15-16 June 2009
- Committee for Information, Computer and Communication Policy (ICCP) Meeting, 15-16 October 2009
- Working Party on Communication and Infrastructures and Services Policy (WPCISP) Meeting, 14-15 December 2009

www.ripe.net/news/itac.html

RIPE NCC Roundtable Meetings

The RIPE NCC has been holding Roundtable Meetings for Governments and Regulators since 2005, and in 2009 supplemented these with Roundtable Meetings for Law Enforcement Agencies (LEAs). These meetings are designed to enhance cooperation between the technical community in the RIPE NCC service region and local governments, regulators and LEAs.

The RIPE NCC hosted two Roundtable Meetings in 2009 in Amsterdam, the first on 26-27 February and the second on 21-22 September. Both events attracted representatives from almost 20 countries. The first day of each meeting looked at issues relating to governments, the February event focusing on IPv6 deployment and the September event examining wider issues of Internet governance and the Internet Governance Forum (IGF). Day two of each meeting examined law enforcement-related issues and criminal activity on the Internet.

Attendance at Roundtable Meetings is by invitation only.

www.ripe.net/meetings/roundtable

RIPE Cooperation Working Group

The RIPE Cooperation Working Group was established in 2008 on the recommendation of the RIPE Task Force on Enhanced Cooperation, and held its first session at the RIPE 57 Meeting. The Cooperation Working Group is actively involved in the RIPE NCC's Roundtable Meetings and provides valuable input from the RIPE community about issues that affect governments, regulators and law enforcement agencies.

The Cooperation Working Group met twice in 2009, and discussed subjects including IPv6 deployment and Internet governance structures such as the Internet Governance Forum. In the meeting at RIPE 59, Patrik Fältström became the third Co-chair of the Working Group, joining Maria Häll and Martin Boyle.

The Number Resource Organization (NRO)

The NRO serves as a coordinating mechanism for the Regional Internet Registries (RIRs) to act collectively on matters relating to the interests of the RIRs. It offers a single contact point that enables global partners and other interested parties to reach the RIRs collectively. This means that a global, uniform view supported by all five RIRs can be presented when necessary.

The directors of each RIR make up the NRO Executive Council (EC). The EC positions of Chairman, Secretary, Treasurer and Member rotate between the RIRs on a yearly basis.

The NRO offers a single contact point that enables partners to reach the RIRs collectively.

The 2009 officers were:

- Chairman – Adiel Akplogan (AfriNIC)
- Secretary – Axel Pawlik (RIPE NCC)
- Treasurer – Raúl Echeberría (LACNIC)
- Members – Paul Wilson (APNIC), John Curran (ARIN)

In 2009, the RIPE NCC took over the role of NRO Secretariat and carried out the administrative function of the NRO. The RIPE NCC worked together with LACNIC to prepare to hand over the Secretariat role in January 2010.

The NRO Number Council (NC)

The NRO NC is comprised of three people from each RIR's local Internet community and acts as an advisory body to the NRO EC. The NRO NC also performs the role of the Address Supporting Organization Address Council (ASO AC).

www.nro.net/about/number-council.html

The Address Supporting Organization (ASO)

The ASO is one of the three supporting organisations required by the Internet Corporation for Assigned Names and Numbers (ICANN) bylaws. The ASO reviews recommendations on global IP address policy and advises the ICANN Board on these matters. The ASO Address Council (AC) appoints two directors to the ICANN Board of Directors. ASO AC members are appointed from each of the five RIR regions. The local Internet community in each region selects two members and the Executive Board of each RIR appoints one member to the ASO AC.

In 2009, the RIPE NCC's representatives on the ASO AC were:

- Hans Petter Holen (Visma IT): Jan 2008-31 Dec 2010
- Dave Wilson (HEAnet): Jan 2007-31 Dec 2009
- Wilfried Woeber* (UniVie/ACOne): Jan 2009-31 Dec 2011

* Selected by the RIPE NCC Executive Board

The ASO Secretariat function rotates between the RIRs on an annual basis and was performed by the RIPE NCC in 2009. In performing the Secretariat function, the RIPE NCC carried out the administrative role for the ASO in 2009.

www.aso.icann.org

The RIPE NCC carried out the **NRO and ASO Secretariat** function in 2009.

RIPE and the RIPE Policy Development Process (PDP)

RIPE NCC and the RIPE Community

RIPE (Réseaux IP Européens) is a collaborative forum open to all parties with an interest in wide area IP networks and the technical development of the Internet. It has existed since 1989. The RIPE community's objective is to ensure the administrative and technical coordination necessary to enable the smooth operation of the Internet.

The RIPE NCC and RIPE, although similar in name, are separate entities. They are, however, highly interdependent. The RIPE NCC provides administrative support to RIPE and the RIPE Working Groups, such as the facilitation of RIPE Meetings and the maintenance and development of the RIPE Document Store and publicly archived mailing lists.

The RIPE community is the collective term for individuals or organisations, whether members of the RIPE NCC or not, with an interest in the technical coordination of the Internet and the way the Internet is managed, structured or governed. It provides the RIPE NCC with crucial input from the Internet industry, the public, governments and regulators. There are no membership requirements for participation in RIPE.

All activities are performed on a voluntary basis, except those performed by the RIPE NCC, and decisions are formed by consensus using the RIPE Policy Development Process (PDP – see page 41). All of RIPE's activities are documented, archived and available to the public.

www.ripe.net/ripe

RIPE Working Groups

In order to discuss technical or service issues and policy proposals, the RIPE community formed a number of RIPE Working Groups. Each of the working groups uses mailing lists that are open to anyone and publicly archived to facilitate discussion. The RIPE Working Groups also meet twice a year in dedicated sessions during RIPE Meetings. Working groups can be formed or disbanded as necessary by the RIPE community.

www.ripe.net/ripe/wg

RIPE Working Groups:
- Address Policy Working Group
- Anti-Abuse Working Group
- Cooperation Working Group

RIPE is a **forum** open to all parties interested in wide area IP networks and the development of the Internet.

- Database Working Group
- DNS Working Group
- EIX (European Internet Exchanges) Working Group
- ENUM Working Group
- IPv6 Working Group
- RIPE NCC Services Working Group
- Routing Working Group
- Test Traffic Working Group

RIPE Task Forces

The following RIPE Task Forces were active during 2009:

- The Data Protection Task Force
- The RIPE Certification Task Force

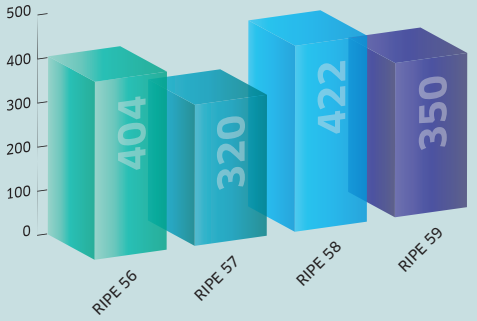
www.ripe.net/ripe/tf

RIPE Meetings

The RIPE NCC supports and facilitates RIPE Meetings. Held twice a year, these five-day events are open to everyone, although registration is required. RIPE Meetings bring together key industry players, network operators, governments, regulators and individuals to discuss the technical, administrative and policy issues surrounding IP networking. Relevant tutorials, trainings and demonstrations are also provided.

The RIPE NCC facilitates remote participation and feedback mechanisms during RIPE Meetings for those who are unable to take part in person. All sessions are webcast, audiocast or podcast and remote participants can contribute to discussions during the meeting sessions using Internet Relay Chat (IRC) or Jabber. Live transcripts of the sessions are also provided for attendees.

Meeting Attendance



RIPE Meetings bring together key industry players, network operators, governments, regulators and individuals.

Filiz Yilmaz, Policy Development Manager

The RIPE Policy Development Process (PDP)

The RIPE community develops and sets policies for the technical coordination of the Internet and the distribution of Internet number resources through a long-established, open, bottom-up process of discussion and consensus-based decision-making. This process is called the RIPE Policy Development Process (PDP). Anyone can suggest a new policy or a change to an existing policy, not just RIPE NCC members.

Although it provides administrative support for the RIPE PDP, the RIPE NCC does not accept or reject any policy. The RIPE community is responsible for this. Any policy proposal must complete the phases of the RIPE PDP. If, according to the chairs of the relevant RIPE Working Groups, there is consensus in the RIPE community to accept a proposal, it completes the PDP and "acceptance" is declared. The RIPE NCC then implements the policy into its working procedures.

www.ripe.net/ripe/policies

Proposal Overview 2009

Eight new proposals were submitted during 2009:

2009-01, "Global Policy for the allocation of IPv4 blocks to Regional Internet Registries" proposed a mechanism for the Regional Internet Registries (RIRs) to retro-allocate the recovered IPv4 address space to the IANA after the depletion of the current IANA free pool of IPv4. It also provides the IANA with the policy through which it can allocate the IPv4 address space back to the RIRs on a needs basis.

2009-02, "Allocating/Assigning Resources to the RIPE NCC" outlined how the RIPE NCC can allocate/assign resources to itself.

2009-03, "Run Out Fairly" proposed to gradually reduce the allocation and assignment periods in accordance with the expected lifetime of the IPv4 unallocated pool to address the perception of unfairness once the pool has run out. The proposal is not intended to stretch the lifetime of the unallocated pool.

2009-04, "IPv4 Allocation and Assignments to Facilitate IPv6 Deployment" proposed that the last IPv4 /8 that the RIPE NCC will hold should be dedicated to facilitate

8 new proposals were submitted during 2009.

deployment of IPv6. Allocations and assignments from this block are proposed be made based on demonstrated need, but the size will be downscaled taking into account existing transition technologies (for example, dual-stack lite, NAT464, successors of NAT-PT) with a minimum allocation and assignment size as a /27.

2009-05, "Multiple IPv6 /32 Allocations for LIRs" proposed to allow a Local Internet Registry (LIR) that is operating separate networks in unconnected geographical areas to receive multiple /32 IPv6 allocations.

2009-06, "Removing Routing Requirements from the IPv6 Address Allocation Policy" proposed to remove the routing requirements from the IPv6 policy document.

2009-07, "Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries" proposed a change in the global ASN policy so that the IANA will cease to make any distinction between 16-bit and 32-bit only ASN blocks by 31 December 2010, when making allocations to RIRs, instead of 31 December 2009.

2009-08, "IPv6 Provider Independent (PI) Assignments for LIRs" proposed allowing LIRs to receive IPv6 PI assignments in addition to an IPv6 allocation.

One proposal that was submitted in 2006 and four proposals that were submitted in 2008 were still in the PDP at the end of 2009:

2006-05, "PI Assignment Size" suggested having a /24 as the minimum assignment size for PI assignments when routing is a major issue for a multihoming End User.

2008-04, "Using the Resource Public Key Infrastructure to Construct Validated IRR Data" proposed to introduce a new registry that augments Internet Routing Registry (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 can be more strongly trusted.

2008-06, "Use of Final /8" described 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.

2008-07, "Ensuring Efficient Use of Historical IPv4 Resources" proposed to require documentation of all address resources held when assessing a RIPE NCC member's eligibility for further IPv4 address space.

2008-08, "Initial Certification Policy for Provider Aggregatable Address Space Holders" described guidelines on how LIRs can receive certificates for their Provider Aggregatable (PA) address space holdings and how these certificates should be maintained when the RIPE NCC deploys a certification service.

Concluded Proposals

Nine proposals concluded the PDP during 2009. The Community accepted seven of these proposals:

2006-01, " Provider Independent (PI) IPv6 Assignments for End User Organisations"
With the acceptance of this proposal, multihoming End Users can now receive PI IPv6 space if they can show that they meet the requirements of the policies described in the RIPE NCC document entitled "Contractual Requirements for Provider Independent Resources Holders in the RIPE NCC Service Region". The minimum size of the assignment is a /48. The IPv6 PI assignments cannot be further assigned to other organisations.

This was formally documented in ripe-466, "IPv6 Address Allocation and Assignment Policy".

2008-05, "Anycasting Assignments for TLDs and Tier 0/1 ENUM"
With the acceptance of this proposal, Tier 0/1 ENUM operators can now receive IPv4 and IPv6 anycasting assignments. The organisations applicable under this new policy are ENUM administrators, as assigned by the ITU. With the acceptance of the proposal, the number of anycasting prefixes that can be assigned to an operator (TLD or ENUM Tier 0/1) goes from one to as many as four assignments. The policy was formally documented in ripe-471, "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region" and in ripe-472, "IPv6 Address Allocation and Assignment Policy".

2009-02, "Allocating/Assigning Resources to the RIPE NCC" (see page 41)
The policy was documented in ripe-476, "Allocating/Assigning Resources to the RIPE NCC".

2009-07, "Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries" (see page 42)
This was documented in ripe-480, "Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks to Regional Internet Registries".

9 proposals concluded the PDP during 2009.

2009-06, "Removing Routing Requirements from the IPv6 Address Allocation Policy" (see page 42)
This was documented in ripe-481, "IPv6 Address Allocation and Assignment Policy".

2009-08, "IPv6 Provider Independent (PI) Assignments for LIRs" (see page 42)
This was documented in ripe-481, "IPv6 Address Allocation and Assignment Policy".

2009-03, "Run Out Fairly" (see page 41)
The policy was formally documented in ripe-484, "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region".

www.ripe.net/ripe/docs

If these documents have been archived since they were published, they can be viewed at:

ftp://ftp.ripe.net/ripe/docs/

Two proposals were withdrawn in 2009:

2008-09, "ASPLAIN Format for the Registration of 4-byte ASNs"

The proposal was seeking to modify the current policy document "Autonomous System (AS) Number Assignment Policies and Procedures" to adopt the use of ASPLAIN for recording and representation of 4-byte AS Numbers. The proposer decided to withdraw this proposal upon publication of RFC 5396, based on having no need to keep it in the RIPE PDP because RFC 5396 was introducing the proposed change as a standard. The Address Policy WG had still decided that the related RIPE Policy Document, "Autonomous System (AS) Number Assignment Policies and Procedures", should be updated so that the reference to the previous registration format is deleted from it. This was done and the updated document can be found in ripe-463.

2009-05, "Multiple IPv6 /32 Allocations for LIRs" (see above)
The proposer, together with the working group chairs, decided to withdraw this proposal due to insufficient support from the RIPE community.

Current Policy Proposals
www.ripe.net/ripe/policies/proposals

Archived Policy Proposals
www.ripe.net/ripe/policies/proposals/archive

Daniel Karrenberg speaking at the RIPE 58 Meeting


Financial Report
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Auditors' Letter

To: Réseaux IP Européens Network Coordination Centre

Auditors' report

Introduction

We have audited the accompanying financial statements of Réseaux IP Européens Network Coordination Centre, Amsterdam, for the year 2009 as set out on pages 48 up to 56, which comprise the balance sheet as at 31 December 2009 the profit and loss account for the year then ended and the notes. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

Scope

We conducted our audit in accordance Dutch Law. This law requires that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements 2009 of Réseaux IP Européens Network Coordination Centre have been prepared, in all material respects in accordance with the accounting policies selected and disclosed by the company, as defined in the notes of the financial statements.

Amstelveen, 12 April 2010

KPMG ACCOUNTANTS N.V.

W. Tjoelker R.A.

Introduction to the Financial Report

The RIPE NCC's efforts to maintain financial stability and membership growth through careful management yielded positive results in 2009, as income and expenditure were very close to the figures planned for in the budget. This demonstrates good control of both spending and income.

This stability was reflected in the increase of 519 members by the end of 2009. The growth is encouraging at a time when many economies in the RIPE NCC's service region are still feeling the effects of the global financial crisis.

The year ended with a surplus that was in line with targets, and this surplus will be added to the RIPE NCC reserves. This reserve is above the target of at least one year's total expenses set by the RIPE NCC Executive Board and management. This reserve becomes ever more crucial for financial security and operational continuity as the IPv4 depletion approaches and the RIPE NCC increases activities in support of the current Internet registry system.

The change in the Charging Scheme for 2010 to accommodate RIPE Policy Proposal 2007-01 caused invoices in 2009 to be sent later than usual, which resulted in a decrease in cash flow from service fees. Even though the cash on hand at year-end was lower than in 2008, the average cash position in 2009 was above 2008. This caused the interest income to remain on a high level even though interest rates were decreasing. The cash management policy is founded on the principle of security. The RIPE NCC management and the Executive Board will continue to manage funds using a low-risk strategy.

Costs increased in 2009. This was largely due to the planned increase in activities relating to external relations in 2009 and work on projects such as Internet number resource certification. Clear choices were made regarding the RIPE NCC's outreach efforts, and the costs relating to these were lower than budgeted. This area will see continued expenditure, as the RIPE NCC management and Executive Board predict this will be an area where investment will bring long-term benefits to the membership. During the year, the Executive Board approved an increase above the budget in the number of full-time equivalents (FTEs) to cater for the increased workload, the expansion of RIPE NCC services and the additional external relations efforts.

Aside from these cost increases, the RIPE NCC actively tried to bring about cost efficiencies in 2009 through such methods as improved e-learning modules to reduce costs in training. Efficient planning also saw the costs for RIPE Meetings fall in 2009. The RIPE NCC will carefully plan to keep the costs as low as possible for forthcoming meetings.

The industry landscape continues to change as we move into a new decade, and the RIPE NCC will strive to maintain its financial stability in order to be prepared to meet the challenges that lie ahead.

Axel Pawlik
Managing Director

Statement of Income and Expenditure 2009

(In kEUR)	Actual Year 2009	Budget 2009	Actual Year 2008	Variance 2009 vs Budget 2009		Variance 2009 vs 2008	
Income							
Service Fees	12,727	12,786	11,425	(59)	-0%	1,302	11%
Sign-up Fees	1,636	1,870	1,918	(234)	-13%	(282)	-15%
RIPE Meeting	209	255	303	(46)	-18%	(94)	-31%
Other Income	190	255	149	(65)	-25%	41	28%
Total Income	14,762	15,166	13,795	(404)	-3%	967	7%
Expenditures							
Personnel	8,557	8,232	7,634	325	4%	923	12%
General Operating Expenses	3,770	4,224	3,355	(454)	-11%	415	12%
RIPE Meeting	598	606	816	(8)	-1%	(218)	-27%
Training Courses	264	399	276	(135)	-34%	(12)	-4%
Regional Meetings	192	190	119	2	1%	73	61%
Financial Expenses	74	85	80	(11)	-13%	(6)	-8%
Subtotal Operational Expenses	13,455	13,736	12,280	(281)	-2%	1,175	10%
Miscellaneous Expenses	161	248	(1,339)	(87)	-35%	1,500	N/A
Depreciation	1,067	1,307	787	(240)	-18%	280	36%
Total Expenses	14,683	15,291	11,728	(608)	-4%	2,955	25%
Surplus/Deficit Before Interest Income	79	(125)	2,067	204		(1,988)	
Interest Income	742	855	757	(113)	-13%	(15)	-2%
Surplus/Deficit	821	730	2,824	91		(2,003)	
Full Time Equivalents (FTEs)	116	111	107	5	4%	9	8%

Notes to the RIPE NCC Statement of Income and Expenditure 2009

General

All amounts are expressed in kEUR. Foreign currencies are converted at the daily exchange rate at the date of transaction or valuation. The balance sheet has been prepared in accordance with the historical cost convention. The accounting principles were in accordance with the previous accounting year.

The financial year 2009 resulted in a surplus of 821 kEUR. This positive result is in line with the budgeted figure of 730 kEUR. Income and expenses were almost identical, and the surplus is almost solely the result of the interest accumulated on the RIPE NCC Clearing House reserve. In 2009, the RIPE NCC's capital decreased to an amount equal to 119% of total expenses, compared to 142% of total expenses at the end of 2008, taking the capital/expense ratio to the level of 2007 and in line with the target set by the RIPE NCC. The RIPE NCC's Executive Board and the RIPE NCC's management aim to keep at least a minimum of one year's total expenses in reserve to ensure the financial stability and operational continuity of the RIPE NCC.

Revenues

Revenues were 3% below the budgeted income and 7% above the revenue for 2008. The membership growth was lower than expected, so the income from new members was below budget and below 2008, while the service fees for members remained at the same level as in 2008.

In 2009, the total number of members increased to 6,583, a growth of 519 or a 9% increase on the 2008 figures. The net growth of 519 takes into account closed members and applicants that never became members. The total service fees were less than 1% below the Budget 2009 figure and 11% above the 2008 total service fees. The total number of membership applications was 1,058, which was 2% below the 2008 applications figure. Due to a high number of applicants that never became members, the sign-up fee income was 13% below the Budget 2009 figure.

Income from the two RIPE Meetings was 31% below the 2008 income and was 18% below the budget for 2009. This decrease resulted from a lower number of attendees in 2009.

Other income includes fees from the Test Traffic Measurement (TTM) service, the DNS Monitoring (DNSMON) service, EU VAT reclamations from 2008 that were submitted in 2009 and a

Revenues (In kEUR)	2009	Budget 2009	2008
Service fees	12,611	12,587	11,425
Sign-up fees	1,636	1,870	1,918
Direct End User fees	116	199	-
RIPE Meeting	209	255	303
DNSMon	122	125	85
Other income	68	130	64
Total Revenues	**14,762**	**15,166**	**13,795**

revaluation of the Internet Corporation of Assigned Names and Numbers (ICANN) accrual. In 2009, other income increased as a result of DNSMON income, up by 43% from 2008 to 122 kEUR.

Expenditures

Total expenditure in 2009 was 4% below the budget for 2009. Operational expenses were just 2% below the budgeted figure and were 10% above the total expenditure 2008.

Personnel expenses increased by 4% compared to the budget and increased by 12% compared to 2008. The additional full-time equivalents (FTEs) were approved by the Executive Board to cope with efforts related to Registration Data Quality, the implementation of RIPE Policy Proposal 2007-01 and RIPE Labs efforts. For 2009, 116 FTEs were employed compared to the 111 budgeted for and the 107 employed in 2008. The number of FTEs is calculated on the basis of the actual number of hours worked.

General Operating Expenses

General operating expenses were 11% below the budget for 2009 and 12% above the 2008 figures. The cost increase was lower than planned due to lower than expected costs for communications and external relations efforts and due to efficiencies in IT infrastructure and consultancy.

As in previous years, two RIPE Meetings were held (one in Amsterdam, the Netherlands, and one in Lisbon, Portugal). RIPE Meeting expenses were as expected. Costs for Training Services decreased in 2009 compared to 2008 due to increased training via e-learning modules and a decrease in the average costs per training. In 2009, three RIPE NCC Regional Meetings were held (one in Manama, Bahrain, one in Moscow, Russia and one in Beirut, Lebanon).

Financial expenses are bank charges and credit card charges. As a result of the later than usual sending of invoices in December 2009, the number of transactions in 2009 decreased compared to 2008. The average bank and credit card charges stayed on the same level as 2008.

Miscellaneous expenses consist of bad debts. Bad debts were 161 kEUR in 2009.

The average amount of cash on hand over the course of 2009 was higher then in 2008. However, as the average interest received over the cash reserves decreased to about 3%, the interest income dropped to 742 kEUR, a decrease of 2% compared to 2008.

General Operating Expenses (In kEUR)	2009	Budget 2009	2008
Housing/Office Costs	1,105	1,091	1,103
External Relations/ICANN	790	966	604
IT Infrastructure	551	691	442
Travel	623	646	514
Consultancy, incl. Legal	701	830	692
Total General Operating Expenses	**3,770**	**4,224**	**3,355**

Balance Sheet 31 December 2009

(In kEUR)	31 December 2009	31 December 2008
Assets		
Fixed assets		
Computers	1,084	875
Infrastructure	103	187
Office Equipment	83	98
Total Fixed Assets	**1,270**	**1,160**
Intangible Fixed Assets		
Software Development	1,143	777
Total Intangible Fixed Assets	**1,143**	**777**
Current Assets		
Accounts Receivable	7,964	3,461
VAT	(21)	68
Miscellaneous Receivables	1,266	1,104
Total Current Assets	**9,209**	**4,633**
Cash On Hand	**18,803**	**21,449**
Total Assets	**30,425**	**28,019**
Liabilities		
Capital		
Reserves	477	477
Clearing House	16,111	13,287
Surplus	821	2,824
Total Capital	**17,409**	**16,588**
Current liabilities		
Creditors	488	563
Wage Taxes and Social Securities	340	303
Unearned Revenues	11,212	9,735
Miscellaneous Payables	976	830
Total Current Liabilities	**13,016**	**11,431**
Total Liabilities	**30,425**	**28,019**

Notes to the RIPE NCC Balance Sheet 31 December 2009

General Information

All amounts are expressed in kEUR. Foreign currencies are converted at the daily exchange rate at the date of transaction or valuation. Historic costs have been used throughout unless otherwise stated. In general, the late sending of the invoices pertaining to the year 2010 had a substantial effect on the balance sheet. Accounts receivable is very high, cash on hand is very low and the VAT is negative.

Fixed Assets and Intangible Fixed Assets

Assets are valued at historical costs and are depreciated on a straight-line basis, starting from the month after acquisition. Computers consist of hardware and purchased activated software. Fixed assets are depreciated for the actual period of economic use. Hardware is written off after three years and software is written off after two years. Infrastructure is written off after three years and office equipment after five years. All items under EUR 500 are expensed.

In 2009, the expenses, personnel and consultancy costs associated with two software development projects, namely Internet Number Resource Certification and the new meeting software, were added as an intangible fixed asset. In 2009, an amount of 243 kEUR was added for consultancy costs for projects that are still work in progress. Intangible fixed assets are valued at historical costs and are depreciated on a straight-line basis, starting from the month after acquisition. Intangible fixed assets are written off after three years.

Purchase Costs

Fixed Assets (In kEUR)	Computers	Infrastructure	Office Equipment	Software Development
Book Value 1 January 2009	875	187	98	777
Purchase Costs	797	27	16	703
Depreciation	588	111	31	337
Book Value 31 December 2009	**1,084**	**103**	**83**	**1,143**

Current Assets

At year end 2009, accounts receivable consisted of approximately 95% of invoices pertaining to 2010. Because of the change in the Charging Scheme 2010 and the delayed sending of the invoices pertaining to 2010, at year end the level of accounts receivable was higher than in 2008. The payments of invoices pertaining to 2010 were settled at a comparable rate to previous years.

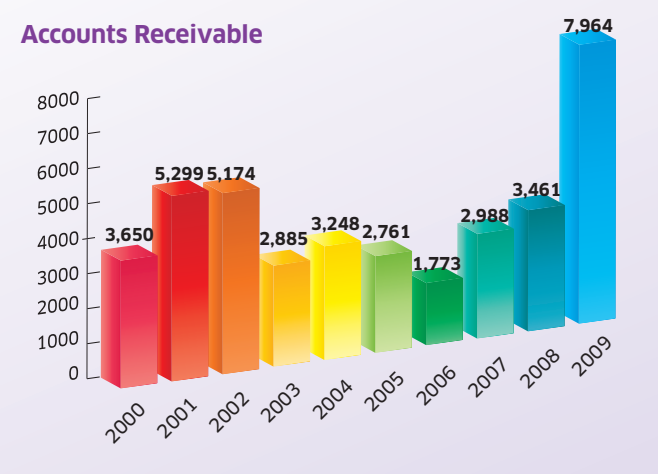
The provision for bad debts is accounted for based on the level of accounts receivable. To cater for the delayed sending of the invoices pertaining to 2010, the bad debt provision was adjusted to the average provision made at 31 December 2007 and 2008. This amounted to 72 kEUR.

Even though the RIPE NCC performs active investigations into extra payments and overpayments by members to the RIPE NCC, the total amount of extra payments and overpayments was 22 kEUR in 2009. This is reported as creditors.

Other debtors, such as Test Traffic Measurement (TTM) and DNS Monitoring (DNSMON) customers, accounted for 1 kEUR at year end 2009. Accounts receivable include those payments that could not be identified and attributed to any specific member. At year end this amounted to 118 kEUR.

Accounts Receivable

Due to the fact that the invoices pertaining to 2010 were sent in December 2009, the outstanding amount of VAT receivable from the tax authorities was negative.



Miscellaneous Receivable

Pre-payments are for rent, equipment, IT service contracts, pension, health and deposits for RIPE Meeting venues. The

Miscellaneous Receivable (In kEUR)	31/12/2009	31/12/2008
Prepayments	691	589
Interest Receivable	280	400
Other Receivables	295	199
Total Miscellaneous Receivable	**1,266**	**1,188**

increase of pre-payments is attributable to a deposit paid to guarantee the RIPE Meeting venue for 2010.

The RIPE NCC has a pension system of defined contribution with a pensionable age of 65 years, in accordance with Dutch fiscal requirements.

Other items listed under miscellaneous receivable are interest receivables, credit card payments to be received and payments in transit. In addition, miscellaneous receivable includes a small inventory for the sale of K-root and Test Traffic Measurement (TTM) equipment.

Capital

The RIPE NCC has a tax-free ruling with the Dutch tax authorities. A surplus of up to three times the total amount of service fees received from members in a year can be deposited in a Clearing House. Excess amounts have to be redistributed to RIPE NCC members. At the end of 2009, the Capital had increased compared to 2008 to 17,409 kEUR. This represents a decrease from 1.25 times to 1.2 times the service fee level for the pertaining year.

Current Liabilities

The creditor level at the end of 2009 decreased compared to 2008. There was no restatement from creditors to accounts receivable for outstanding credit notes with suppliers at 31 December 2008.

The unearned revenues consist of invoices sent in 2009 but pertaining to 2010. The main reason for the increase in unearned revenues at the end of 2009 in comparison with the end of 2008 is that the membership grew from 6,064 to 6,583 members.

Wage Taxes and Social Securities

The increase in wage taxes and social securities at year end 2009 versus year end 2008 is due to a higher number of staff employed at 31 December 2009.

Miscellaneous Payable

The miscellaneous payables include the accrued holiday allowance and the accrued holiday days for employees. This amount is based on the number of outstanding vacation days at 31 December 2009 valued on the December 2009 salary.

At year end 2009, only six months of the contribution for the ICANN fiscal year 2009/2010 were outstanding.

Items Not Shown in Balance Sheet

The RIPE NCC rents office space in two buildings and has separate rental agreements for these. These rental agreements were re-negotiated in 2008 and have been extended until December 2014. For these rental agreements, two bank guarantees have been issued for an amount of 144 kEUR. The amount due in rent for both rental agreements will be 500 kEUR for 2010.

At 31 December 2009, the RIPE NCC had no financial liability or obligation towards any industry partner that is not reflected in the Balance Sheet. There was no capital or financial interest in any industry organisation that needs to be noted in this financial statement.

Miscellaneous Payable (In kEUR)	31/12/2009	31/12/2008
Accrued ICANN Contribution	102	112
Holiday Allowance/Vacation Days	542	475
Other Payables	332	243
Total Miscellaneous Payable	**976**	**830**

Cash Flow

All amounts are expressed in kEUR. Foreign currencies are converted at the daily exchange rate at the date of transaction or valuation. The cash flow overview reflects the later than usual sending of the invoices for 2010. This decreased the cash inflow from service fees by 15%. The creditor outflow increase is caused largely by the increase in creditor payments and the fact that in 2008 the creditors included the cash inflow from the Personnel Fund. The RIPE NCC's cash flow decreased over 2009 and at year end the cash amounted to 18,803 kEUR.

The RIPE NCC's cash management is based on the basic principle of security. The cash is held in several deposit accounts and is spread evenly between three different banks. This secure method of managing the cash funds has proven necessary in the past year and has guaranteed no loss of any funds. Moreover, due to the economic climate, the RIPE NCC increased its interest income considerably as banks offer increased interest rate returns for deposits. The RIPE NCC Executive Board and management will continue to manage the cash accordingly.

	Total 2009	Total 2008
Begin Cash Balance 1 January 2009 (In kEUR)	€ 21,449	€ 19,436
Cash Inflow		
Sign-up Fees	€ 1,820	€ 2,083
Service Fees	€ 9,560	€ 11,182
TTM/DNSMON	€ 201	€ 166
RIPE Meetings	€ 189	€ 229
Interest Received on Deposits	€ 862	€ 689
Other	€ 532	€ 358
Total Inflow	€ 13,164	€ 14,707
Cash Outflow		
Salary	€ 4,251	€ 3,823
Wage Tax and Social Security	€ 2,658	€ 2,560
Pension and Health	€ 744	€ 793
RIPE and Regional Meetings	€ 606	€ 620
ICANN Contribution	€ 219	€ 812
Creditors	€ 7,332	€ 4,086
Total Outflow	€ 15,810	€ 12,694
Total Cash Inflow Balance	€ (2,646)	€ 2,013
End Cash Balance 31 December 2009 (In kEUR)	€ 18,803	€ 21,449

Photographs on pages 3, 4, 10 and 47 by Chris van Houts.

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