RIPE NCC

ANNUAL REPORT 2014

Fig. 1.0 RIPE NCC SERVICE REGION

2014 IN NUMBERS

MEMBERS
11,115

IPv6 ALLOCATIONS
1,874

UNIQUE RIPE DATABASE QUERIES
9.5 BILLION

EXECUTIVE BOARD ELECTION VOTES
535

- 76 COUNTRIES
- 1,216 NEW MEMBERS
- 112 TRAINING COURSES
- 51 WEBINARS
- 7 IPv6 ROADSHOWS
- 737 RIPE ACADEMY USERS
- 98+ RIPE ATLAS ANCHORS ONLINE
- 2,479 IPv4 /22 ALLOCATIONS
- 2,053 ASNs ASSIGNED
- 65,000 LEGACY DATABASE OBJECTS UPDATED
- 259 ARC REVIEWS COMPLETED
- 2.6 MILLION UNIQUE RIPESTAT USERS
- 70+ RIPE LABS ARTICLES
- 31,198 CUSTOMER SERVICE REQUESTS
- 1,432 LIVE CHAT SESSIONS

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NIGEL TITLEY
CHAIRMAN OF THE EXECUTIVE BOARD

Welcome to the RIPE NCC's Annual Report for 2014. This report outlines how we performed the activities set out in the RIPE NCC Activity Plan and Budget for 2014. It provides an overview of the services the RIPE NCC provided to its members along with a financial overview. It is therefore an important part of how we remain transparent and accountable to you, the members.

With a growing membership, reaching 11,115 by the end of the year, we remain in a very strong position financially. An updated ruling by the Dutch tax authorities has provided certainty around how we will be taxed moving forwards, and a resolution adopted by the GM in 2014 means that members will be able to vote each year on whether any surplus or deficit should be returned to the membership, or retained by the RIPE NCC where it will be subject to corporate income tax.

In 2014, the board grew to six members and a seventh seat will become available in 2015. Having more board members allows us to provide more effective governance of the RIPE NCC. We have committed ourselves to having at least one board member present at every RIPE NCC-organised meeting, which gives us an opportunity to meet more members throughout the service region and ensure their viewpoints are properly represented.

At the RIPE NCC Services Working Group during RIPE 69, newly-elected board members Salam Yamout and Maria Häll sought feedback on the idea of the RIPE NCC carrying out or supporting projects that are for the greater good of the Internet. We already carry out a number of these activities, such as the operation of K-root and RIPE Atlas. Community feedback was positive and in 2014 the Executive Board approved a EUR 50,000 contribution to support the CrypTech project. It also extended the RIPE Academic Cooperation Initiative (RACI) to MENOG Meetings to ensure representation from the academic community in the wider RIPE community. Longer term, the aim is to solicit ideas from the RIPE community for projects that can be included in the Activity Plan and Budget 2016.

With the IANA stewardship transition being a major area of focus for many organisations involved with the Internet in 2014, questions of accountability formed a logical part of these discussions. It was therefore more important than ever that we maintained our high levels of transparency and this was something that the board made a priority. We believe that the RIPE NCC already operates from a robust position in this respect: the bottom-up nature of the RIPE community, combined with the RIPE NCC's open reporting of its progress and priorities, helps members to influence the direction of the organisation and get a clear picture of its current status.

In 2014, the board passed a resolution regarding our commitment to ensuring continuity of service for all RIPE NCC members. This affirmed our belief that the means of communication should not be affected by political disputes and that we are committed to taking all lawful steps to ensure we can provide undisrupted service to all members across our service region. We will also publicly document our efforts to ensure registration services are not disrupted by laws, regulation or political developments.

All in all this has been an exciting year with progress on a number of fronts, while confirming our commitment to our members and to the RIPE community as a whole.

AXEL PAWLIK
MANAGING DIRECTOR

Providing a strong registry and valuable services to our members is always the main focus of the RIPE NCC and we continued to make great strides in these areas in 2014. It is encouraging to see that our members value the work we do. We know this because of the regular feedback we receive from surveys, focus groups, meetings and engagement with the RIPE Working Groups. All of this input is valuable, as it helps us to know when we are on the right track, and where we can improve.

It is striking to consider just how many of our members the RIPE NCC came into contact with over the course of 2014. This was the year that our plans to take a more regionalised approach went into full effect. We hired new staff in Russia and the Middle East and opened a new office in Dubai. Our staff have been getting out there and engaging with our community members in these regions, many of whom are having face-to-face contact with RIPE NCC staff for the first time. At the same time, we increased our support for a number of other network operator group and Internet exchange point meetings throughout Europe.

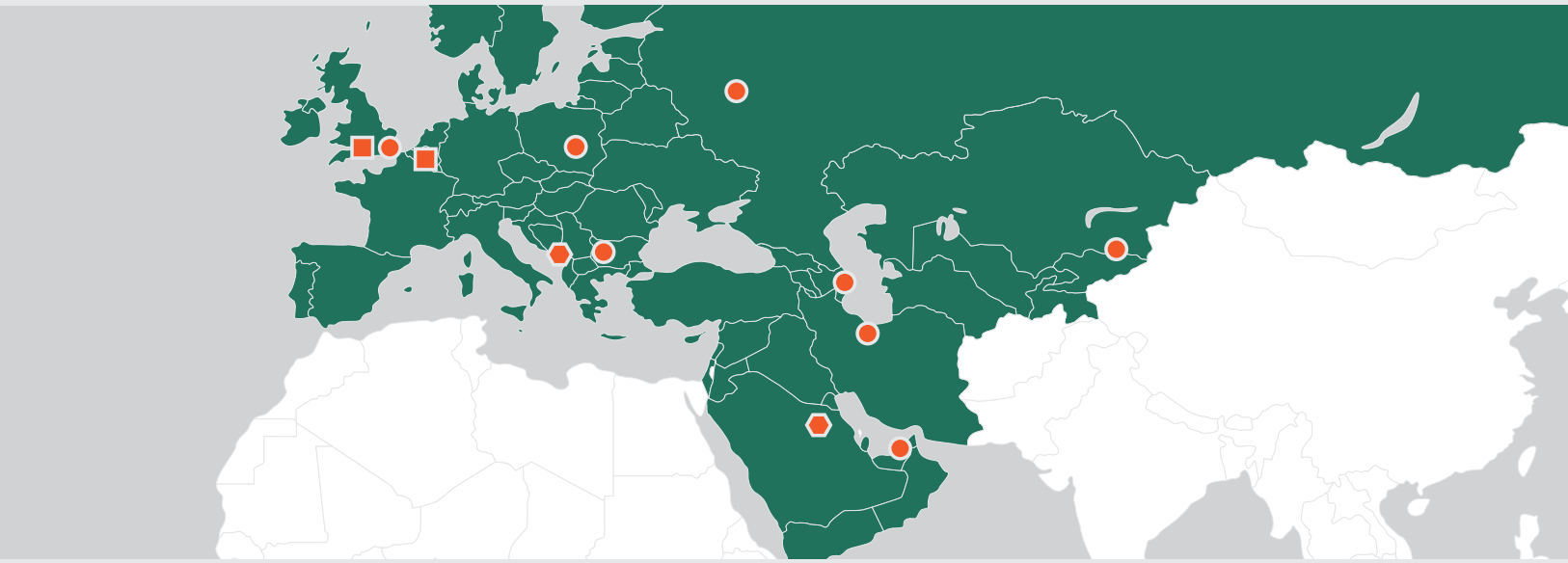
In March, the United States Government announced that it would be transitioning its stewardship role of the IANA functions to the "global multistakeholder community". This spurred the wider Internet community into action, and over the course of the year the various (often overlapping) communities concerned with the IANA functions as they relate to names, numbers and protocol parameters worked on their separate proposals, to be joined into one single proposal by the IANA Stewardship Coordination Group (ICG), comprised of representatives from each of these communities.

We value the efforts from the numbers community throughout this process, as it was a lot of work in a very short time frame. While this announcement by the United States Government was unexpected, the RIRs and their communities were well positioned to rise to the challenge. The bottom-up nature of the RIRs and the close relationships we have with our communities make us uniquely positioned to represent their interests in these arenas, or to support their participation.

In light of the stewardship transition and the added scrutiny this has brought to the Internet community as a whole, ensuring the transparency and good corporate governance of the RIPE NCC has been more crucial than ever. In 2014, the RIPE NCC continued our work to strengthen these aspects, though we were already reaping the benefits of concerted efforts in this area over recent years.

Finally, it needs to be reiterated that much of the RIPE NCC's work is only possible due to the engagement we have with the RIPE community. This allows us to maintain the quality of our registry and services. In 2014, we said farewell to the outgoing RIPE Chair, Rob Blokzijl, who has guided the RIPE community from the beginning. We also welcomed Hans Petter Holen as the new RIPE Chair. From where we stand, the RIPE community, which celebrated its 25th anniversary in 2014, remains as strong, engaged and dynamic as ever.

Fig. 1.1 MEMBER ENGAGEMENT IN 2014



MEETING ATTENDEES
2,571

TRAINING COURSE ATTENDEES
2,290

TECHNICAL MEETINGS
SEE, Sofia, Bulgaria 229 attendees

ENOG 7, Moscow, Russia 363
ENOG 8, Baku, Azerbaijan 110

RIPE 68, Warsaw, Poland 569
RIPE 69, London, England 609

MENOG 14, Dubai, UAE 120

RIPE NCC Regional Meeting, Almaty, Kazakhstan 105
RIPE NCC Regional Meeting, Tehran, Iran 270

OUTREACH MEETINGS
Law Enforcement Agency Meeting, London, England 80

Roundtable Meeting, Brussels, Belgium 53
Roundtable Meeting 2, Brussels, Belgium 40

MEMBER OUTREACH
Member Lunch, Budva, Montenegro 3
Member Lunch, Al Khobar, Saudi Arabia 20

RIPE NCC

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:

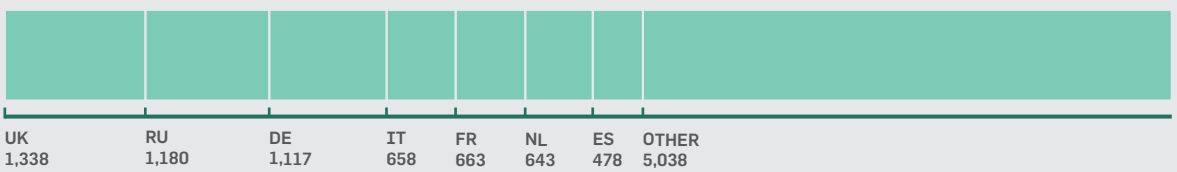
- Registering and distributing Internet number resources
- Operating the RIPE Database
- Operating K-root, one of the world's 13 root name server clusters
- Facilitating RIPE community activities
- Developing the RIPE Atlas network
- Providing high-quality measurement information services

Most of the RIPE NCC's members are Internet service providers (ISPs) and telecommunication organisations. Other members are corporations, academic institutions, legal organisations and government bodies. At the end of 2014, the RIPE NCC supported 11,115 members with operations in the 76 countries in its service region. The RIPE NCC is based in Amsterdam, the Netherlands, and had 137 full-time equivalents (FTEs) in 2014. It is an open and transparent organisation.

As with the other four 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 10). The activities performed by the RIPE NCC and the services it provides are approved each year by the RIPE NCC Executive Board following feedback from the members.

Fig. 2.0 ANNUAL MEMBERSHIP GROWTH

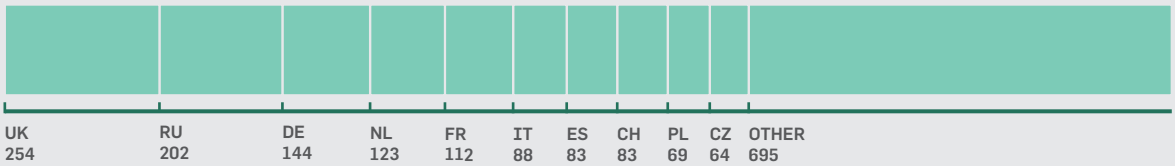
Fig. 2.1 MEMBERS BY COUNTRY



TOTAL / 11,115

Fig. 2.2

NEW MEMBER APPLICATIONS BY COUNTRY



TOTAL / 1,917

Note, this graph also includes applicants that did not fully complete the sign-on process to become new members.

Organisation and Services 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 RIPE NCC maintains registration data for these Internet number resources and ensures that they are distributed in accordance with the policies set by the Internet community. It works to ensure correct registration of the resources it allocates and assigns through education and audit activities.

In addition to providing services related to the allocation and assignment 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. It does this through management of critical Internet infrastructure, provision of education and measurement networks for the community, and outreach and coordination activities.

More specifically, the RIPE NCC's activities include:

The Registry

- Allocation and Assignment of Internet Number Resources
- Registry Maintenance
- LIR Portal
- Resource Certification (RPKI)
- RIPE Database

Services

- Member Support
- Training
- RIPEstat
- RIPE Atlas
- Routing Information Service (RIS)
- RIPE Database Proxy Service

Coordination Activities

- DNS Services and K-root Operations
- RIPE Labs
- Government and LEA Liaison
- Outreach and External Relations
- RIPE Meetings and Regional Meetings
- RIPE Policy and Community Support
- IPv6 Promotion

The RIPE NCC and the RIPE Community

The RIPE NCC and RIPE are separate but highly interdependent entities. RIPE was founded in 1989 and is a collaborative forum open to all parties with an interest in the technical development of the Internet. The RIPE community develops policies for the technical Internet community and ensures the administrative and technical coordination necessary for the operation of the Internet.

The term "RIPE community" is used to describe 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 structured and governed. This includes the RIPE NCC membership, government and regulatory bodies, academic institutions, as well as other organisations and individuals with an interest in technical and Internet governance issues.

Valuable input from the Internet industry, governments and regulators comes to the RIPE NCC from the RIPE community. There are no formal requirements for participation. The RIPE NCC provides administrative support to RIPE, the RIPE Working Groups, RIPE Task Forces and RIPE Programme Committees, including the facilitation of RIPE Meetings and the maintenance of the RIPE Document Store and publicly archived mailing lists.

➔ *www.ripe.net/participate/ripe*

JOCHEM DE RUIG
CHIEF FINANCIAL OFFICER

As Chief Financial Officer, I am pleased to report that 2014 was an excellent financial year for the RIPE NCC, one that resulted in a high surplus and a renewed agreement with the Dutch tax authorities. This has strengthened our financial situation, which is crucial in the face of an uncertain Internet governance landscape. This has also meant that our members can be sure about the continuity of the services they receive from the RIPE NCC.

Two key factors here were a high surplus caused by strong membership growth and effective cost control by the RIPE NCC. In 2014, the RIPE NCC took on an extra 1,216 members, resulting in a total of 11,115 by the end of the year. This is the strongest growth in new members in the RIPE NCC's history, which contributed to a surplus that will be returned to the membership, in addition to a further reduction in the annual membership fee from 2015.

In 2014, the RIPE NCC renewed its agreement with the Dutch tax authorities on its tax situation in relation to Corporate Income Tax. The existing RIPE NCC reserve and future capital gains remain tax-free. Furthermore, the ruling ensures that we have certainty regarding how we will be taxed in the future. While the RIPE NCC does become liable for Corporate Income Tax from the beginning of 2015, the membership, via the General Meeting (GM), will be able to decide whether any surplus or deficit accrued each year is directly returned, or retained by the RIPE NCC and taxed by the Dutch Government.

Each year the membership votes to approve a charging scheme for the annual membership fee, approve the Financial Report of the RIPE NCC, and ratify essential organisational documents. In 2014, improvements to streamline the voting process went into effect and resulted in an increase in GM participation by the membership. In 2014, the membership approved the RIPE NCC's implementation plan for the RIPE Policy, "RIPE NCC Services to Legacy Internet Resource Holders" and approved an updated conflict arbitration procedure. This regular direction from the membership plays an important part of our organisation and the participation and engagement of our members is therefore crucial.

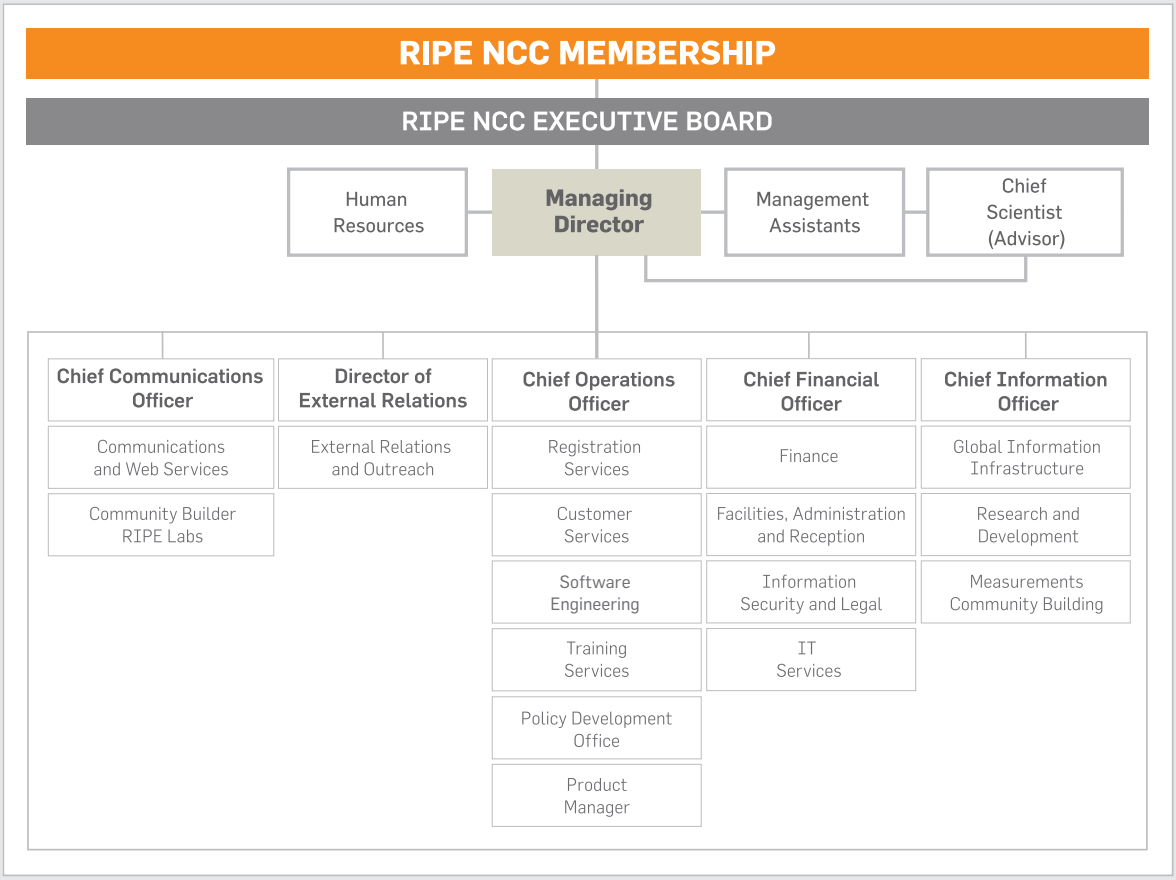
The RIPE NCC has continued to work on our existing governance structures and to see where we can put in place more transparent processes regarding our operations and services. These efforts allow for useful feedback from members and support structural discussions on the operations of the RIPE NCC. This annual report is a part of these discussions.

Lastly, I would encourage all of our members to keep up to date on matters relating to the governance of the RIPE NCC, participate in relevant discussions, and exercise their right to vote on RIPE NCC matters in the GM. Thank you to all of our members and stakeholders who supported the RIPE NCC through your participation.

Organisational Structure

The RIPE NCC organisation consists of members, an Executive Board and RIPE NCC staff. An arbiters panel exists that can be used by RIPE NCC members to resolve disputes with other members or with the RIPE NCC regarding the RIPE NCC's services.

Fig. 2.3 RIPE NCC ORGANISATIONAL STRUCTURE



RIPE NCC Members and the Executive Board

The activities of the RIPE NCC are financed and decided upon by its members, who elect the RIPE NCC Executive Board to represent their interests. In 2014, the Executive Board expanded from five to six members.

The Executive Board exists to:

- Represent the membership
- Provide guidance to the RIPE NCC Senior Management
- Be 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
- Present the RIPE NCC Financial Report and the Charging Scheme for members to vote on
- Approve the RIPE NCC Activity Plan and Budget
- Appoint the RIPE NCC Managing Director
- Call RIPE NCC General Meetings

→ *www.ripe.net/lir-services/ncc/executive-board*

Nigel Titley *- Chairman,* ***Christian Kaufmann*** *- Secretary,* ***Salam Yamout*** *- Member,* ***Maria Häll*** *- Member,*
Remco van Mook *- Treasurer,* ***Dmitry Burkov*** *- ICANN Liaison*

RIPE NCC General Meetings

All RIPE NCC members are encouraged to attend the RIPE NCC General Meetings, either in person or remotely. Currently, these meetings are held twice a year. During the General Meetings, members can:

- Vote to accept the audited Financial Report
- Adopt the RIPE NCC Charging Scheme
- Elect Executive Board members
- Approve any resolution that may be proposed by the Executive Board or the RIPE NCC membership

At General Meetings, members have the opportunity to give feedback directly to the Executive Board on the RIPE NCC's activities and services. In 2014, the RIPE NCC General Meetings took place alongside RIPE 68 in Warsaw and RIPE 69 in London.

At the May General Meeting, the membership approved the proposed implementation plan for the RIPE Policy, "RIPE NCC Services to Legacy Internet Resource Holders", approved the new RIPE NCC Conflict Arbitration Procedure, and adopted a new charging scheme which lowered the membership fee by EUR 150. An election was also held for three seats on the RIPE NCC Executive Board. There were six candidates and the seats were taken by Maria Häll, Christian Kaufmann, and Salam Yamout.

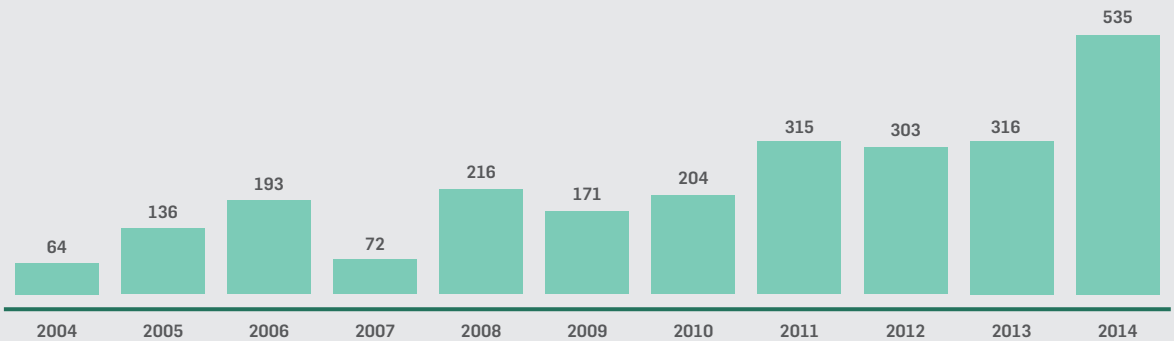
At the November General Meeting, members approved an updated Standard Service Agreement (SSA). The SSA was updated to incorporate the changed agreement between the RIPE NCC and the Dutch tax authorities, and allowed members to decide annually on the allocation of the RIPE NCC surplus or deficit. Members will now be able to choose each year whether the RIPE NCC's annual surplus or deficit is added to the reserves or distributed among members.

All members, including those unable to attend the General Meetings in person, can vote electronically on resolutions and in the Executive Board elections. *(See Fig 2.4.)* Members can also follow the General Meeting remotely via webcast and can contribute to discussions through a chat channel. The General Meetings are only open to RIPE NCC members, though minutes from each meeting are available to the public.

In 2014, the RIPE NCC made several improvements to the registration process, which now takes place through the LIR Portal. This makes it more secure and easier for members to register. The registration and voting periods for electronic voting were also extended, and the RIPE NCC gave more focus to communication in advance of the meeting to help members know what is being discussed and how they can participate.

➔ *www.ripe.net/lir-services/ncc/gm*

Fig. 2.4 **RIPE NCC EXECUTIVE BOARD ELECTION VOTES**



Arbitration

A neutral and objective arbiters panel exists to resolve any dispute related to services provided by the RIPE NCC. The arbiters are appointed by the RIPE NCC's Executive Board and approved by the RIPE NCC membership.

➔ *www.ripe.net/lir-services/ncc/legal/arbitration*

Articles of Association

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

➔ *www.ripe.net/ripe/docs/articles-association*

Legal Framework

In 2014, the RIPE NCC reinforced the legal structure surrounding its services and added an extra FTE to its Legal Department. The RIPE NCC also fortified its corporate governance by producing and updating a series of documents that describe RIPE NCC procedures in a clear and transparent way.

The RIPE NCC implemented the RIPE Policy proposal, "RIPE NCC Services to Legacy Internet Resource Holders" by creating:

- "RIPE NCC Services for Legacy Internet Resources of RIPE NCC Members Terms and Conditions"
- "RIPE NCC Services for Legacy Internet Resources Agreement (Legacy Agreement)"
- "Terms and conditions required for RIPE NCC Services for Legacy Internet Resources Agreement with a Sponsoring LIR"
- "Legacy Internet Resources – Contractual Relationship Changes Between Sponsoring LIR and Legacy Internet Resource Holder"

The RIPE NCC also updated:

- The RIPE NCC Conflict Arbitration Procedure
- The RIPE NCC procedural document "Closure of Members, Deregistration of Internet Resources, and Legacy Resources"

For the implementation of the RIPE Policy "Allow IPv4 PI Transfers", the RIPE NCC updated the following RIPE NCC procedural documents:

- "Independent Internet Number Resources – Contractual Relationship Changes Between Sponsoring LIR and End User"
- "Transfer of Internet Number Resources – Contractual Relationship Changes Between Sponsoring LIR and End User"
- "Transfer of Internet Number Resources and Change of a Member's Official Legal Name"

RIPE NCC also amended the RIPE NCC Listing Service Terms and Conditions.

For the implementation of "Policy for Resource Certification for non-RIPE NCC Members", the RIPE NCC amended the "RIPE NCC Certification Service Terms and Conditions".

For the implementation of the RIPE Policy proposal "Abuse Contact Management in the RIPE NCC Database", the RIPE NCC updated:

- The RIPE NCC Data Protection Report
- The RIPE Database Acceptable Use Policy

Finally, the RIPE NCC published the RIPE NCC procedural document, "Adoption Process for RIPE NCC Corporate Documents", which outlines the procedure for adopting RIPE NCC corporate documents and documents detailing implementation aspects of RIPE policies.

Every year, the RIPE NCC publishes a Transparency Report that details the nature and number of requests from Law Enforcement Agencies (LEAs) and the actions that were taken as a result.

The RIPE NCC also created the RIPE Atlas Terms and Conditions.

➔ *www.ripe.net/lir-services/ncc/legal*

Law Enforcement Agency Requests in 2014

The RIPE NCC receives information requests from Law Enforcement Agencies (LEAs) and tries to facilitate the provision of any required publicly available information. The RIPE NCC does not provide any confidential or private information to LEAs without a court order or other legally enforceable order or request under Dutch law.

In 2014, the RIPE NCC received seven information requests from LEAs. None of these requests were accompanied by a Dutch court order; four were accompanied by non-Dutch subpoenas (these requests are detailed below). In comparison with the previous years, there was a decrease in the number of requests as well a change in the quality of these requests. LEAs now appear to understand the RIPE NCC's role as the Regional Internet Registry, the information it possesses and what it will and will not share. LEAs seem to acknowledge the RIPE NCC's procedures and will try to confirm with the RIPE NCC before making an official request. *(See Fig 2.5.)*

In 2014, the RIPE NCC received the following requests:

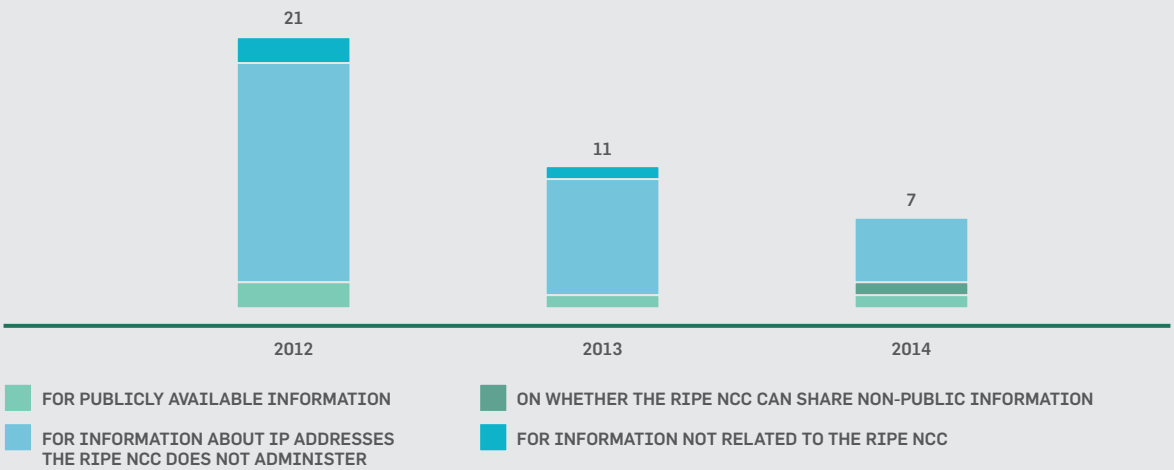
- Five requests for the identification of Internet users at a particular moment in time. In response, the RIPE NCC provided information on its role as an RIR and explained how to use the publicly available information in the RIPE Database to find the party responsible for a particular resource.
- One request for the provision of a written confirmation about the distribution of specific Internet number resources by the RIPE NCC to specific legal entities, as this information appears in the RIPE Database. The RIPE NCC provided this confirmation.
- One request asking if it was possible for the RIPE NCC to provide non-public information about an organisation responsible for Internet number resources. This question was about the RIPE NCC's procedures in general, rather than any specific case. In response, the RIPE NCC explained that non-public information maintained by the RIPE NCC could only be provided with a Dutch order.

Governance Matrix and Accountability Document

In 2014, in coordination with the other RIRs, the RIPE NCC produced two documents aiming to further demonstrate transparency and accountability:

- The RIR Governance Matrix, which provides a structured view of various aspects of RIR governance, with links to source documents on the respective RIR's website

Fig. 2.5 TYPE OF LEA REQUESTS RECEIVED



- The RIR Accountability Questions and Answers document, which responds to questions of accountability as they relate to the RIRs.

In 2014, the RIPE NCC also participated on the Drafting Team for the Charter of the ICANN Accountability Cross Community Working Group (CCWG) as an ASO representative and continues its engagement with the CCWG as a member representing the ASO.

➔ *www.nro.net/about-the-nro/rir-governance-matrix*
➔ *www.nro.net/about-the-nro/rir-accountability*

RIPE NCC Activity Plan and Budget

The activities that the RIPE NCC performs and the services that it provides are defined, discussed and evaluated by RIPE NCC members and the RIPE community. All proposals, plans 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 and Budget. Input into the Activity Plan and Budget and feedback on activities is collected from members and the RIPE community via the RIPE Working Groups, RIPE mailing lists, RIPE NCC Regional Meetings, RIPE NCC surveys and at the members-only General Meetings. The RIPE NCC Executive Board approves the Activity Plan and Budget.

In 2014, the RIPE NCC presented an Activity Plan and Budget based on recommendations from the membership. The document laid out the RIPE NCC's planned activities and services along with their associated costs for 2014 in a user-friendly and transparent way.

➔ *www.ripe.net/ripe/docs/ripe-598*

RIPE NCC Survey Findings and Actions

The RIPE NCC Survey 2013 collected feedback from more than 3,600 members and stakeholders across 75 of the 76 countries in the RIPE NCC's service region. The Oxford Internet Institute (OII) then analysed the data and produced a list of 48 key findings, which was published in November 2013.

In 2014, the RIPE NCC examined these findings and took action on them where appropriate. To increase transparency around this work, an updated document was published in September 2014 that detailed the RIPE NCC's progress in addressing each of the key findings.

➔ *www.ripe.net/lir-services/member-support/info/surveys/ripe-ncc-survey-2013/ripe-ncc-survey-2013-key-findings-and-results*

Activity Overview 2014

Efforts to identify efficiencies in processing requests led to a reduction in costs for "The Registry". This was despite an increase in the overall workload handled. Costs for "Services" were higher than expected, which was the result of an increase in new membership applications, along with increased merger and transfer activity. RIPE Atlas and RIPEstat remained on budget, though there was a shift in activity allocation which is reflected in the table over the page.

For "Coordination Activities" there were increased costs for ICANN/IETF/NOG Liaison, which were the result of additional work around the IANA stewardship transition. These costs were primarily in travel, legal and documentation. There were also additional costs to support the RIPE NCC's regional strategy, with additional regional meetings and the establishment of support desks in Dubai and Moscow. RIPE Meetings remained within budget, despite reaching the highest attendee numbers ever. There was also an increase in costs to support the RIPE Policy Development Process, as there were more proposals than expected. Costs for DNS Operations were lower than expected, as the planned replacement of global nodes was postponed until 2015. Costs for "Internal" were also lower than budgeted, which was the result of efficiencies and cost control.

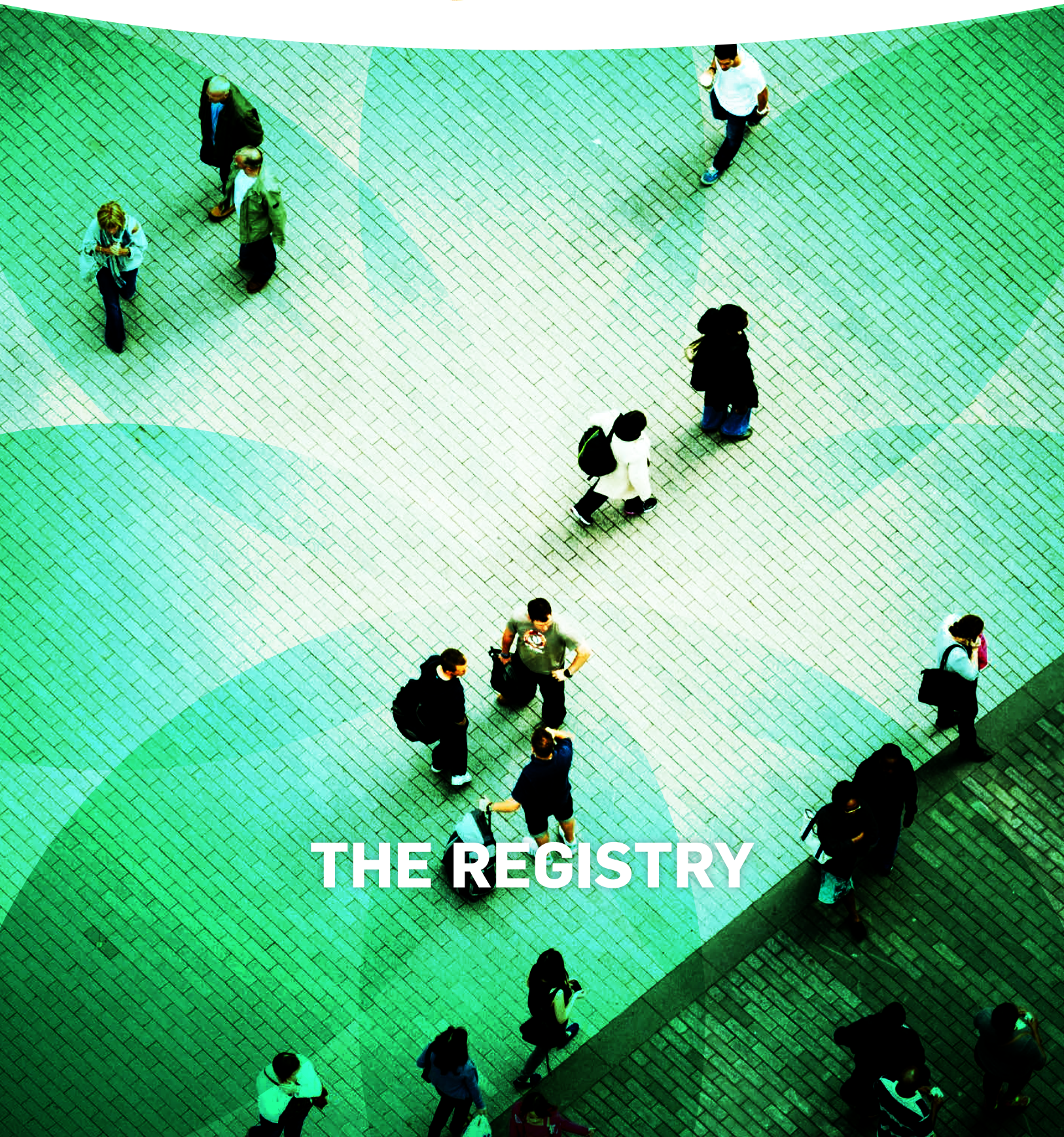
BUDGET 2014 VS ACTUALS 2014 (IN kEUR)

	Budget Operational Expenses 2014	Actual Operational Expenses 2014	Variation
Registry Maintenance	3,314	2,818	-496
RIPE Database	695	610	-85
Certification	318	246	-72
LIR Portal	204	283	+79
Regional Internet Registry	**4,531**	**3,957**	**-574**
Training	906	942	+ 36
RIPEStat	592	492	-100
RIPE Atlas	1,295	1,357	+62
Other services	282	701	+419
Services	**3,075**	**3,492**	**+417**
DNS Operations	363	289	-74
Data Analysis and Scientific Support	294	223	-71
RIPE Labs	228	227	-1
Government and LEA Liaison	421	462	+41
Outreach & External Relations	2,112	2,346	+234
IPv6 Support	103	131	+28
RIPE Meetings	1,416	1,363	-53
RIPE Policy and Community support	251	303	+52
ICANN/IETF/NOG's	981	1,113	+132
Coordination Activities	**6,169**	**6,457**	**+288**
IT	1,849	1,891	+42
Facilities (Rent and Utilities)	1,189	1,103	-86
HR & Management	2,136	2,053	-83
Finance and Admin	758	826	+68
Specialist support (Legal and Information Security)	251	217	-34
Organisational Activities (GM and EB Meetings)	350	253	-97
Internal	**6,533**	**6,343**	**-190**
RIPE NCC	**20,308**	**20,249**	**-59**

Note: Operational expenses do not include depreciation and bad debts.

These figures are not part of the Financial Report and as such have not been audited by an external third party. They are indications based on an internal time registration methodology that is executed on a monthly basis. Therefore, these figures can only serve as indications on the costs relating to these activities.

RIPE NCC



THE REGISTRY

ANDREW DE LA HAYE
CHIEF OPERATIONS OFFICER

One of the RIPE NCC's key areas of focus has always been to maintain and improve the accuracy of the RIPE Registry in support of the thousands of individuals and organisations that rely on this data for their operations.

Many initiatives to improve the registry start with RIPE community members, who use the RIPE Policy Development Process (PDP) to achieve this. In 2014, we implemented a number of these community-led initiatives. The most notable was a policy proposal that set a framework for the maintenance of registration data and the provision of services to legacy resource holders. In 2014, we began contacting legacy holders to offer them the options in the policy.

Another policy proposal implemented in 2014 expanded the Resource Certification (RPKI) service to non-members, which means that Provider Independent (PI) and legacy resources can now be certified. Not only does this increase the usefulness of the service, but because RPKI requires the user to have up-to-date registration records, it also improves the accuracy of the registry. By year's end, over 1,000 PI resources were already certified and this number is expected to grow.

In 2014, we also finished our project to contact the holders of 34,000 PI resources to ensure they were covered by a contractual relationship with a sponsoring LIR. This is a significant milestone for the RIPE NCC, as it represents the end of a policy implementation that began in 2008 and we are pleased to report that this work is now completed.

The RIPE NCC is committed to engaging effectively with our members and community, and while an important part of this takes place at meetings and conferences throughout the year, the greater part takes place through the day-to-day contact we have with our members. After the successful introduction of Live Chat for the Customer Services Department in 2011, last year we rolled this out for Registration Services via the LIR Portal, which means that members can now get instant answers from our IP Resource Analysts (IPRAs) on a range of topics.

Our IPRAs are also having more contact with members through the new Assisted Registry Check (ARC) – an improvement to our previous audit activities. The ARC went into full production in late 2014 after an extended trial period where we incorporated member feedback to further improve the service. Members see the value in the review as it doesn't require much from them, strengthens the quality of their registry data, and gives them an outside-in view of their network. It also gives them an opportunity to ask general questions of our staff.

Every year, we run training courses for more than 2,000 members across our service region, in addition to webinars for a further 1,000. Despite this, members have consistently asked for even more training options. With this in mind, in 2014 we launched the RIPE NCC Academy, an online training platform that we think will address this gap. Using the academy, members will be able to access training resources in their own time, certify their skills, and interact with our trainers and with each other.

Finally, we are committed to improving the services that we offer our members. In 2014, two-factor authentication went into full production, which allows members to be safe in knowing that their personal data with us is more secure. We have also integrated RIPE NCC Access with the RIPE Database, which allows for an increasingly seamless experience between the database and the LIR Portal. We also made further improvements to the usability of the LIR Portal with an emphasis on user experience.

Internet Resource Lifecycle Management

As a Regional Internet Registry (RIR), the RIPE NCC's most prominent activity is to distribute and register 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 IP addresses to the RIPE NCC and the other four RIRs that exist today. The RIPE NCC then allocates and assigns parts of these IP address blocks to its members and End Users in accordance with policies developed by the RIPE community.

In 2014, the RIPE NCC continued to allocate IPv4 address space according to the last /8 policy, which entitles each LIR to one final /22 allocation (1,024 addresses). The exhaustion of the regular IPv4 address pool has resulted in the number of IPv4 transfers within the RIPE NCC service region growing exponentially.

Starting in 2013 and continuing into 2014, the RIPE NCC has been seeing a significant increase in hijackings of IPv4 address space records. This also seems to be caused by the exhaustion of the regular IPv4 address pool.

Requests for Internet Number Resources and Assistance

In 2014, the RIPE NCC received a total of 14,133 requests for resources and related assistance, a 9% increase compared to the 12,959 requests received in 2013. While there were fewer resource requests compared to 2013, requests for assistance grew from 1,845 to 3,848 in 2014.

In 2014, the RIPE NCC extended the successful Live Chat service to include the Registration Services Department, which allows members to ask short questions on matters like request forms, procedures, or general information. Members were able to supply feedback at the end of each session, and the average rating was almost 5 out of 5 stars.

The RIPE NCC continued to contact members by phone whenever an initial allocation request was submitted. This ensures that they understand the process for requesting, registering and maintaining Internet number resources. This is in recognition of the fact that the RIPE NCC's membership has been rapidly growing in recent years, with many new members having less familiarity with the RIPE NCC's processes and the RIR system in general.

These requests for resources and assistance included:

- Provider Aggregatable (PA) assignments
- Provider Independent (PI) IPv6 assignments
- IPv4 and IPv6 allocations, and IPv6 extensions
- Autonomous System Number (ASN) assignments
- IPv4 allocation and assignment transfers
- Anycast assignments
- Assignments for Internet Exchange Points (IXPs)
- Temporary assignments
- Issues related to existing resources and members (assistance), including Live Chat sessions
- Issues related to legacy resources

In 2014, the RIPE NCC made 6,941 allocations and assignments of Internet number resources. These consisted of:

- IPv4 /22 allocations: 2,479
- IPv6 allocations: 1,874
- IPv6 allocation extensions: 145
- IPv6 PI assignments: 340
- IPv6 Anycast assignments: 3
- IXP assignments: 16 (IPv4) and 17 (IPv6)
- Temporary assignments: 12 (IPv4) and 2 (IPv6)
- ASN assignments: 892 (16-bit) and 1,161 (32-bit)

→ *www.ripe.net/lir-services/resource-management/number-resources*

IPv4 Allocations in 2014

The RIPE NCC made 2,479 /22 IPv4 allocations in 2014 (2,538,496 addresses). This represents a 31% increase in the total number of IPv4 addresses allocated when compared to the previous year.

The majority of /22s issued in 2014 went to new LIRs (1,546 from a total of 2,479 allocations). This is a new trend that has emerged following the exhaustion of the RIPE NCC's regular IPv4 address pool. Prior to this, most IPv4 address space was issued as additional allocations to existing members. *(See Fig 3.1.)*

In 2014, the RIPE NCC saw an increasing number of cases of misuse of the last /8 policy, which entitles each LIR to one /22. Multiple LIRs were being opened for the sole purpose of obtaining this /22 and were closed shortly after the allocation was made and transferred to another LIR. As part of the RIPE NCC's stewardship role, this issue was raised at the Address Policy Working Group at RIPE 69, where the community indicated it would develop a policy proposal to correct this.

IANA Allocation from Recovered IPv4 Pool

In 2014, the IANA allocated 3,072,000 IPv4 addresses to the RIPE NCC from its pool of recovered IPv4 addresses according to "Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA". This policy was ratified by the five RIRs in 2012 and stated that the IANA would begin making equal, periodic allocations to the RIRs when the first RIR reached a /9 of remaining addresses. This was triggered by LACNIC in May 2014.

Fig. 3.0 IPv4 ALLOCATIONS PER COUNTRY IN 2014

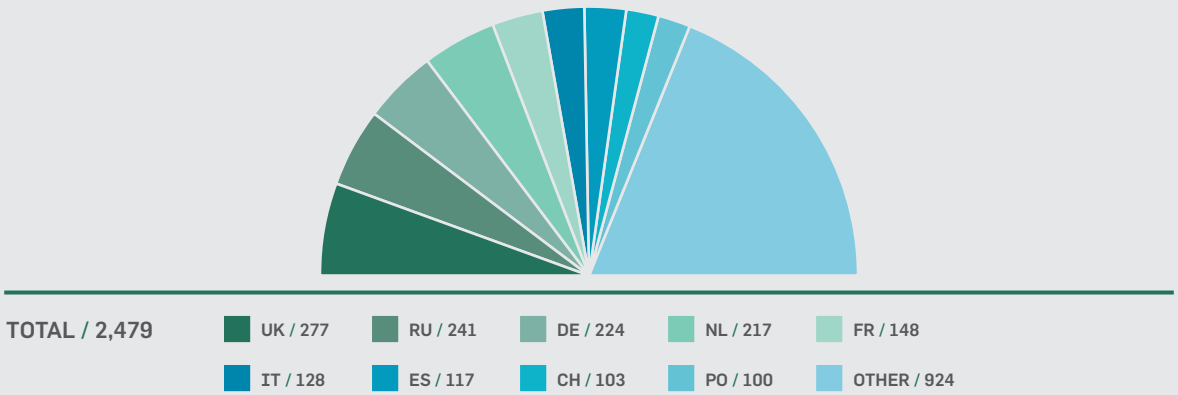
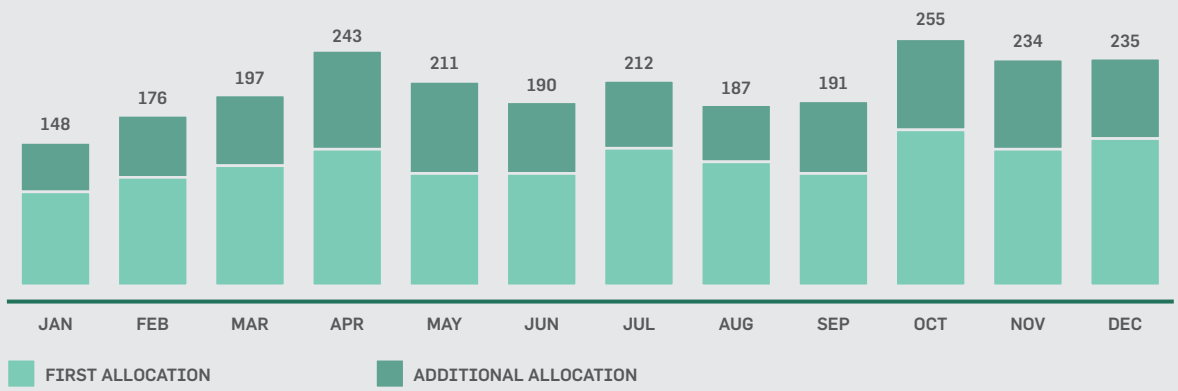


Fig. 3.1 IPv4 /22s ISSUED AS FIRST VS ADDITIONAL ALLOCATIONS



IPv4 Transfers in 2014

According to sections 5.5 and 6.4 of "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region", members may transfer IPv4 address space, provided it remains within the RIPE NCC service region and meets policy requirements.

In 2014, the RIPE NCC processed 919 IPv4 transfers, containing a total of 9,649,664 addresses. *(See Fig 3.2.)* Of this, 900 were PA **allocations** (9,636,352 addresses) and 19 were PI **assignments** (13,312 addresses). This number does not include transfers that were due to a change in company structure, such as a merger or acquisition.

IPv6 Allocations in 2014

The RIPE NCC made 1,874 IPv6 allocations in 2014. By the end of the year, 8,160 LIRs held an IPv6 allocation, which corresponded to 73% of the RIPE NCC membership, compared to 66% at the end of 2013.

Fig. 3.2 IPv4 PREFIXES TRANSFERRED VS TRANSFER SIZE IN 2014

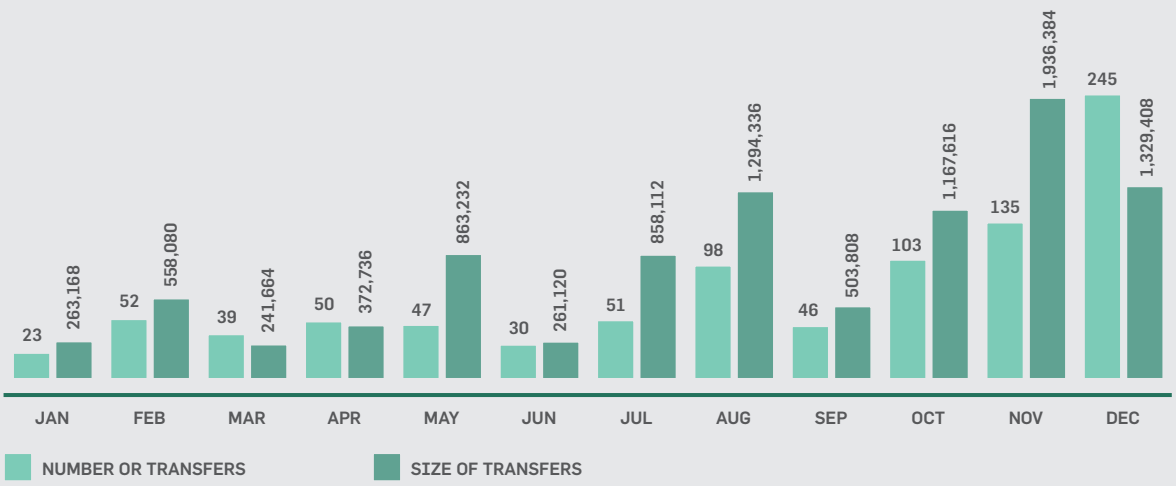
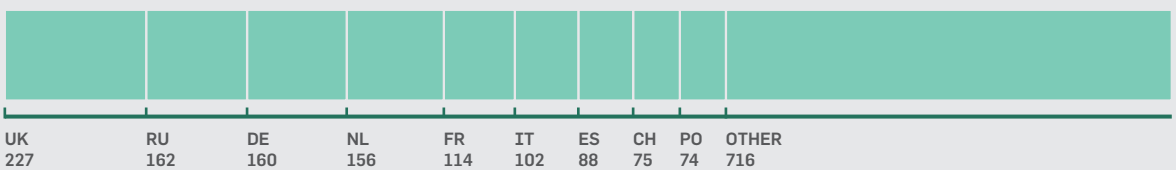


Fig. 3.3 IPv6 ALLOCATIONS PER COUNTRY IN 2014



TOTAL / 1,874

Autonomous System Number (ASN) Assignments in 2014

The RIPE NCC assigned 2,053 Autonomous System Numbers (ASNs) in 2014, a 9% increase compared to the 1,887 assigned in 2013. The IANA allocated 2,048 32-bit ASNs to the RIPE NCC in 2014.

32-bit ASNs

The RIPE NCC has assigned 32-bit (or four-byte) ASNs by default since 2009. This has encouraged adoption of the new format.

In 2014, 56.6% of the ASNs assigned in the RIPE NCC service region were 32-bit, compared to 29.6% in 2013. *(See Fig 3.5.)* It is worth highlighting that the number of 32-bit ASNs assigned in 2013 was lower than expected due to a temporary shortage of 32-bit ASNs, where the RIPE NCC distributed 16-bit ASNs instead. By way of reference, 43% of ASNs assigned in 2012 were 32-bit.

Fig. 3.4 ASNs ASSIGNED PER COUNTRY IN 2014

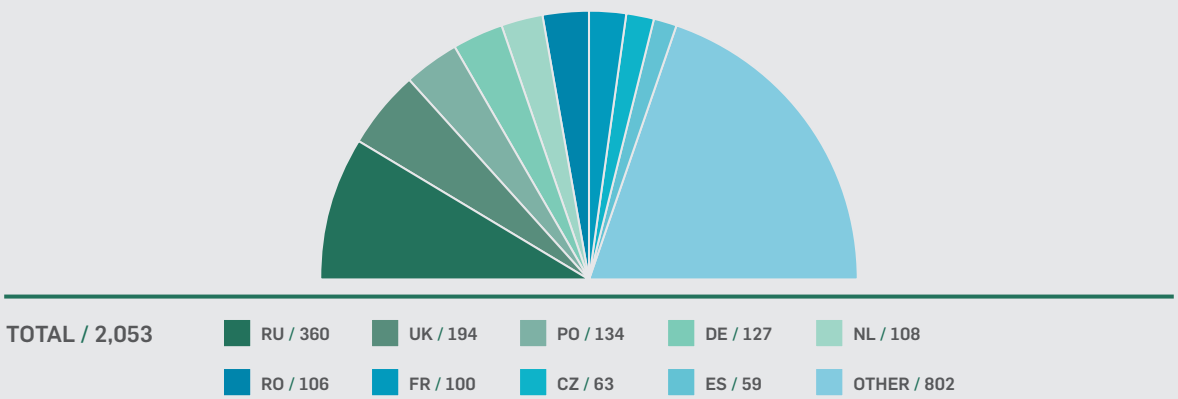
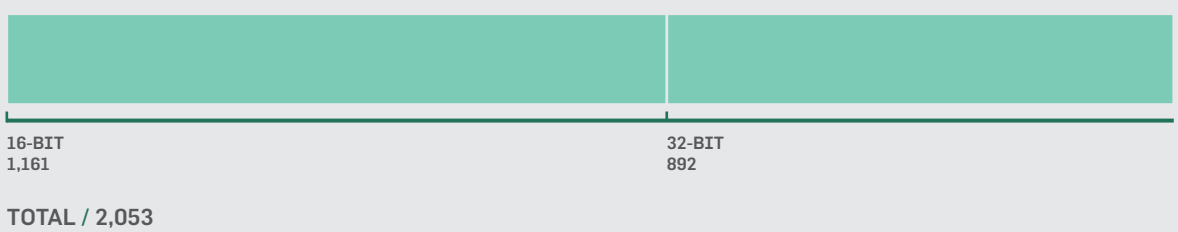


Fig. 3.5 32-BIT AND 16-BIT ASN ASSIGNMENTS IN 2014



Maintenance of Independent Resources and Contractual Relationship

According to ripe-452, "Contractual Requirements for Provider Independent Resource Holders in the RIPE NCC Service Region", a contractual relationship must exist between an End User and a sponsoring LIR or the RIPE NCC. Since this policy was accepted, the RIPE NCC has been processing changes to these contractual relationships. These include changes to the sponsoring LIR, returned address space and name changes due to takeovers. *(See Fig 3.6.)*

Assisted Registry Check

Since 1996, the RIPE NCC has conducted audits, at the request of the RIPE community, to ensure the fair and neutral application of policies and to actively check the quality and validity of registry data. In 2012, the RIPE NCC temporarily suspended its audit activity to ensure correct management as it reached exhaustion of its regular IPv4 address pool.

In 2013, the RIPE NCC launched the Assisted Registry Check (ARC), an improvement to its traditional audit activity. Developed with feedback from members, the ARC strengthens the quality of data in the RIPE Registry while also providing a valuable service to members. The RIPE NCC aims to perform an ARC review for each LIR every three years.

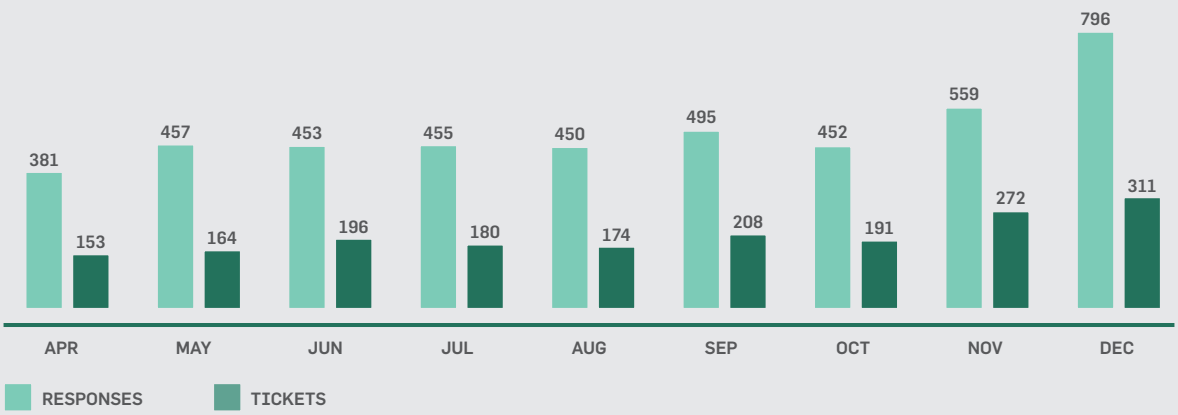
During the review, LIRs are given the opportunity to receive personalised support from the RIPE NCC. This can include help creating RIPE Database objects to improve contact data, removing inconsistent resource records, and offering clarification on RIPE Policies. It provides members with an outside view of their network (such as looking at reachability), which gives added value to their daily operations. *(See Fig 3.7.)*

In the first half of 2014, the RIPE NCC continued to test the new ARC process and the full service was launched in September. A total of 259 ARC reviews were completed, with an average ticket duration of 15 business days. During these reviews, the RIPE NCC was able to help 109 LIRs with updating the registration details of their resources, 105 LIRs with updating the contact details for their registry, and 70 LIRs with fixing lame Reverse Delegation records. *(See Fig 3.8.)*

Almost 90% of respondents to a feedback survey following their ARC review expressed high levels of satisfaction with the process. They indicated that the topics discussed during the process were relevant to their operations and that the experience was valuable to their registry.

→ *www.ripe.net/lir-services/resource-management/assisted-registry-check*

Fig. 3.6 CONTRACTUAL RELATIONSHIP CHANGES PROCESSED IN 2014



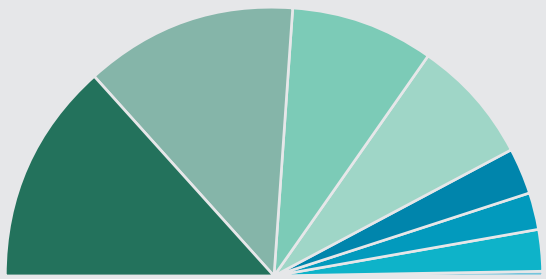
Address Hijacking

Since 2013, the RIPE NCC has seen a notable increase in the number of IP address hijackings taking place in its service region. Over the course of the year, there were a number of incidents where hijackers attempted to impersonate resource holders – either to gain control of their resources in the RIPE Database or to sell them to third parties who were unaware that they were not the legitimate holder. The hijackers mostly targeted unannounced resources.

In 2014, the RIPE NCC investigated 233 resources. Of these cases, 127 were resolved by the end of the year. As part of these investigations, one LIR had its membership closed for submitting untruthful information to the RIPE NCC. The remaining 106 cases were still being investigated at the end of 2014.

Fig. 3.7 AREAS COVERED BY ARC REVIEW

Fig. 3.8 ACTIONS TAKEN DURING ARC REVIEW



TOTAL / 406

- LIR RESOURCE REGISTRATION / 109
- LIR CONTACT DETAILS / 105
- rDNS CONSISTENCY / 70
- LIR PORTAL ADMINISTRATOR PRIVILEGES / 61
- INDEPENDENT RESOURCE REGISTRATION / 21
- BILLING ISSUES / 19
- ROUTING CONSISTENCY / 19
- MAINTAINER PASSWORD RECOVERY / 2

Abuse Reports

In 2012, the RIPE NCC launched the RIPE NCC Report Form, which makes it easier to file a complaint and ensures that all the information needed to follow up is included in the report.

The RIPE NCC received 757 reports via the report form in 2014. Of these, 189 were relevant to the RIPE NCC, while the remaining 568 concerned issues such as spamming or hacking.

Of the reports that were investigated:

- 124 reported incorrect data in the RIPE Database. 74 of these required further investigation by the RIPE NCC
- 53 reports concerned policy violations, untruthful information or were related to bankruptcy. Of these reports, 33 were found not to be policy violations, 9 could not be followed up due to lack of information and 11 resulted in further inquiries
- 12 reports did not fall under the scope of normal abuse reports but were investigated nonetheless

→ *www.ripe.net/report-form*

Assignment and Allocation Policies Implemented in 2014

All of the policies that govern how the RIPE NCC allocates and assigns Internet number resources are proposed, discussed and accepted or rejected by the RIPE community. Once a RIPE Policy is accepted, the RIPE NCC implements it into its operations and procedures.

In 2014, the RIPE NCC implemented six assignment and allocation policies:

- 2013-05 No Restrictions on End User Assignments in Intra-RIR Transfers
- 2012-08 Publication of Sponsoring LIR for Independent Number Resources
- 2013-03 Post Depletion Adjustment of Procedures to Match Policy Objectives, and Clean-up of Obsolete Policy Text
- 2014-01 Abandoning the Minimum Allocation Size for IPv4
- 2014-02 Allow IPv4 PI transfer
- 2012-07 RIPE NCC Services to Legacy Internet Resource Holders

RIPE NCC Services to Legacy Internet Resource Holders

In 2014, the RIPE community reached consensus on "RIPE NCC Services to Legacy Internet Resource Holders" and the proposed implementation plan was approved at the RIPE NCC General Meeting during RIPE 68. The RIPE NCC began to implement the proposal in September.

The total number of legacy Internet resources within the RIPE Registry is 4,200 parent IP blocks (with 35,000 more specific inetnum objects) and 740 AS Numbers, held by approximately 2,500 individuals and organisations.

As part of the implementation, approximately 40,000 emails were sent and 65,000 objects were updated in the RIPE Registry to correctly set the status of these resources as "LEGACY/ASSIGNED/OTHER".

The RIPE NCC is now in the process of contacting the holders of these legacy Internet resources to ask them if they would like to establish a relationship with the RIPE NCC according to the options outlined in the policy. The first legacy holders to be contacted were those that were already RIPE NCC members or had previously been in contact with the RIPE NCC. *(See Fig 3.9.)*

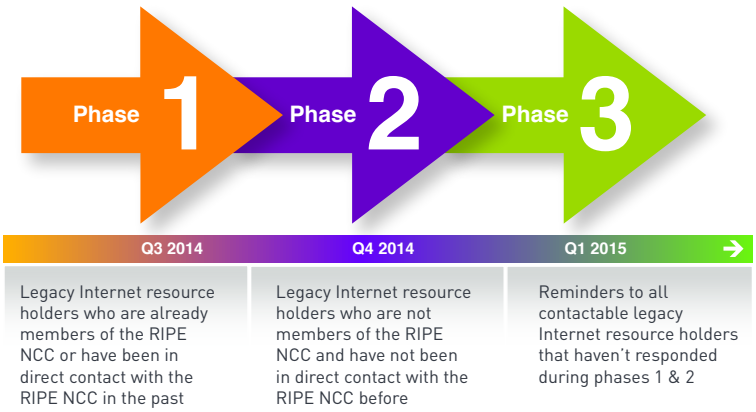
Many of these organisations are NRENs or LIRs with (or related to holders of) a large number of legacy resources. Extra effort was given to make the process easier for these organisations and also so that the RIPE NCC could learn from the experience. In 2014, the RIPE NCC contacted holders related to 817 legacy resources, and 70 resources had been resolved by the end of the year. Most organisations contacted decided to move their legacy resources into their registry.

RIPE Policy "2007-01" Implementation

In 2014, the RIPE NCC concluded its work to implement RIPE Policy Proposal 2007-01, "Direct Internet Resource Assignments to End Users from the RIPE NCC". This proposal became ripe-452, "Contractual Requirements

Fig. 3.9

LEGACY POLICY IMPLEMENTATION



for Provider Independent Resource Holders in the RIPE NCC Service Region." The policy states that a contractual relationship must exist between an End User and a sponsoring LIR or the RIPE NCC. It also states that a contractual relationship must be retroactively put in place for End Users of independent Internet number resources that were previously assigned.

In the final phase of the policy implementation, the RIPE NCC directly contacted 19,500 resource holders of independent Internet number resources who had not yet signed an agreement with a sponsoring LIR.

At the beginning of 2014, the RIPE NCC had approximately 4,120 resources to be contacted and 6,150 resources left to be resolved. Over the course of the year, the holders of all remaining resources were contacted and from these approximately 4,920 resources were resolved. The resolved resources were marked as:

- Approved (approximately 980 resources);
- Approved as LIR infrastructure (approximately 260 resources); or
- The resources were returned to the RIPE NCC (approximately 3,680 resources)

By the end of December 2014, the RIPE NCC had no resources to be contacted and around 1,200 resources left to be resolved. For most of these remaining resources the RIPE NCC was not able to find any (valid) contact information.

The final result of this implementation is that a total of 47,515 independent resources are now covered by a contractual relationship. The RIPE NCC is now processing changes to these contractual relationships as an ongoing activity.

The Local Internet Registry (LIR) Portal

The LIR Portal is the secure area for RIPE NCC members to manage everything related to their membership and the number resources they hold. The RIPE NCC works continuously to develop the LIR Portal and improve usability for its members.

In 2014, new streamlined resource request forms were introduced in the LIR Portal that made the process of obtaining IPv4, IPv6 and ASNs easier for members. Because these forms are integrated with the LIR Portal, a lot of membership information can be entered into the

form automatically. The RIPE NCC agreed with the RIPE community that it would phase out the email-based request forms by mid-2015 and provide an API for members who were unable to use the LIR Portal in their workflows.

As the RIPE NCC is allocating IPv4 addresses from the last /8, the focus of the LIR Portal has moved from requesting new resources to managing existing allocations and assignments. The functionality that the LIR Portal now provides through the IP Analyser is geared towards increasing the data quality in the RIPE Registry and making the most of the IPv4 address space that members hold.

The RIPE NCC also placed additional focus on helping members to integrate IPv6 into their operations in 2014, by providing tools to help them create and manage an addressing plan. Work was also done on unlocking resource data through an API, to allow for more integration with the IP address management workflows that operators have.

→ *https://lirportal.ripe.net*

Resource Certification (RPKI)

In 2014, the focus for Resource Certification was on achieving a tighter integration of the system across the five RIRs. The robustness and resiliency of the system was increased by sharing experiences and expertise. A new management interface was also developed, which focuses on helping users of the system solve problems by using best practices and sensible defaults.

In 2014, the RIPE NCC implemented a policy proposal that expanded the Resource Certification service to non-members, allowing Provider Independent (PI) End Users and legacy holders to certify their resources.

→ *www.ripe.net/lir-services/resource-management/certification*

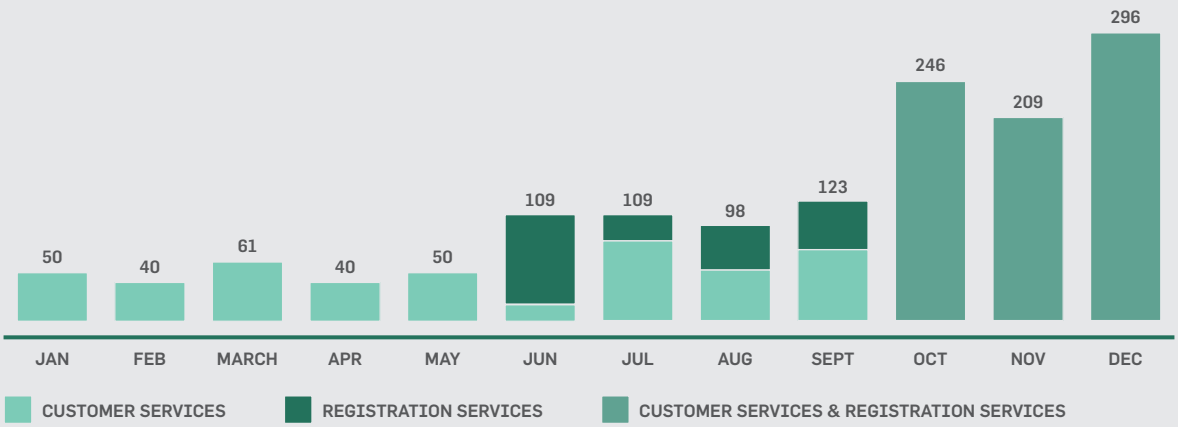
Live Chat

The Customer Services Department has offered support to members over Live Chat since 2011.

In 2014, the Live Chat software underwent an overhaul and was integrated with the LIR Portal. This allowed members to authenticate themselves using their RIPE NCC Access accounts and helped the RIPE NCC to provide a more personal service and resolve issues via Live Chat that were previously difficult without this authentication.

From June, when the new software was launched, Live Chat was also introduced for the Registration Services Department. This provided members the ability to ask RIPE NCC IPRAs about use of the LIR Portal, request forms, procedures, along with general questions relating to RIPE Policies and the RIPE NCC. *(See Fig 3.10.)*

Fig. 3.10 **2014 LIVE CHAT SESSIONS**



The RIPE Database

The RIPE Database is operated and maintained by the RIPE NCC. It contains IPv4 and IPv6 allocations and Autonomous System Number (ASN) assignments originally allocated by the RIPE NCC, as well as related information about the organisations, contacts and reverse Domain Name System (rDNS) delegations.

The RIPE Database is open for anyone to query and RIPE NCC members use it to provide information about their Internet number resource allocations and assignments. In 2014, around 9.5 billion queries were served.

The RIPE Database includes the RIPE Routing Registry (RR), which is a part of the global Internet Routing Registry (IRR). The IRR is a registry that consists of several databases. Network operators use the registry to share information about their network with other operators, such as routing policies and routing announcements. The registry ensures the stability and consistency of global Internet routing between network operators.

In 2014, work was undertaken to renew RIPE Database hardware and improve its resiliency by installing additional query nodes in Stockholm. Additionally, a major overhaul of the RIPE Database documentation was undertaken. New documentation is now published for all current and upcoming software releases with the version number clearly displayed.

➔ *www.ripe.net/data-tools/db*

Formalised Release Process and Release Candidate (RC) Environment

In 2014, efforts were continued to formalise the RIPE Database release process with the use of a Release Candidate (RC) environment. According to the process, the following steps are now followed for any new release:

1. The new release is tested thoroughly within the RIPE NCC
2. Documentation and release notes are published online
3. The new release is deployed to the RC environment
4. An announcement is made to the community highlighting the release notes and asking for feedback on the updated documentation and testing in the RC environment
5. After the community has had an opportunity to test the new version in the RC environment, the production environment is upgraded
6. Documentation for high impact changes is provided ahead of the release to the RC environment to allow users to assess the impact and prepare for testing
7. In cases where bugs are found that have a major operational impact, a bug fix release may be deployed without going through the new release process – though these are tested thoroughly internally and only address a specific bug

This new way of working came as the result of feedback from the RIPE Database Working Group. The RIPE NCC works closely with the working group to implement its feedback on documentation and database functionality. The aim is to ensure that new releases have a minimum impact on the operations of RIPE Database users.

RIPE NCC Access and Maintainers

In 2014, improvements were made to the RIPE Database that allow RIPE NCC Access accounts to act as an authorisation mechanism for RIPE Database maintainers. RIPE NCC Access offers improved security through two-factor authentication, and offers password recovery without affecting other authentications on the maintainer.

With RIPE NCC Access, users can use more secure and user-friendly web interfaces to manage their RIPE Database objects in a browser and this also allows the RIPE Database to be more closely integrated with the LIR Portal and the Resource Certification (RPKI) service. By the end of 2014, approximately 1,000 out of 50,000 maintainers were using this new authentication method.

RIPE NCC

SERVICES

Training Services

The RIPE NCC provides training services to its members in order to:

- Assist members with the correct registration and administration of Internet number resources
- Teach other technical skills that will improve their operational work
- Improve their understanding of RIPE NCC procedures and tools

Online and face-to-face training courses offer members an opportunity to interact with RIPE NCC staff, connect with other members, and share experiences and best current practices. The RIPE NCC also uses training courses as a valuable source of feedback on its services and tools.

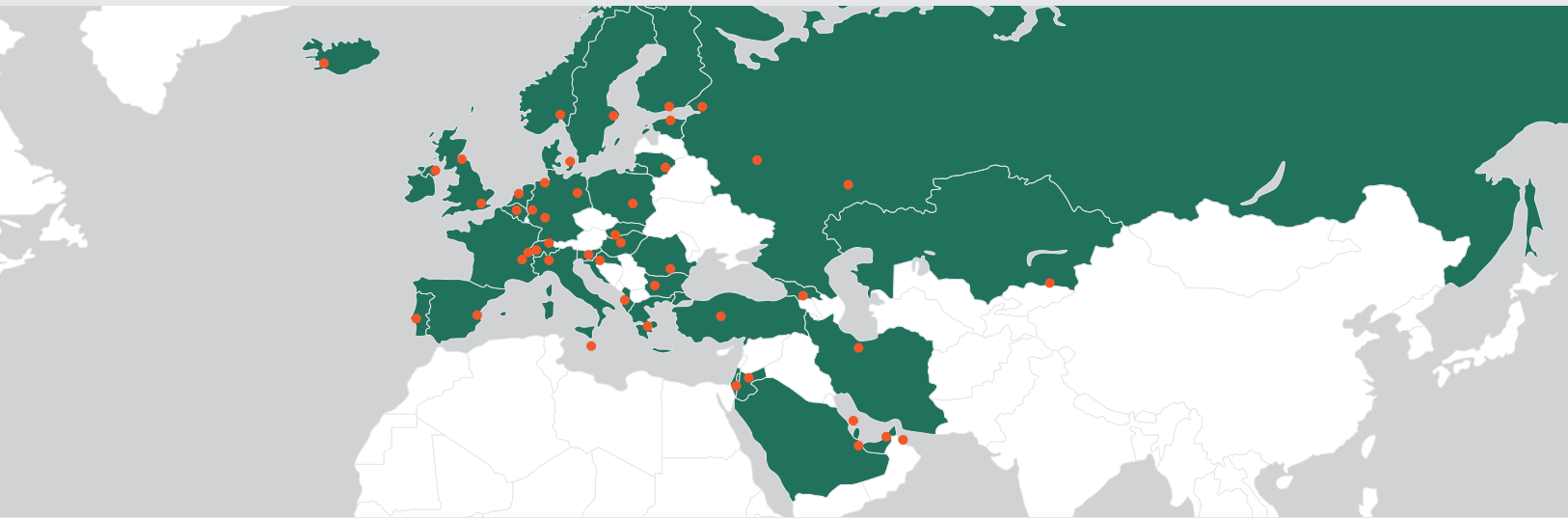
In 2014, the RIPE NCC provided 112 training courses to 2,290 members in 39 countries across its service region. *(See Fig 4.0.)*

With the addition of the new Advanced IPv6 and DNSSEC training courses, a total of six different courses were provided in 2014:

- LIR Training Course: covers how to request Internet number resources and how to interact with the RIPE NCC.
- IPv6 for LIRs: explains how to obtain IPv6 address space, best practices for deployment, and IPv6 Internet addressing policies.
- Routing Security: explains the features of the Routing Policy Specification Language (RPSL), the Routing Registry (RR) and Routing Security (RPKI) for experienced network operators.
- RIPE Database: provides a practical hands-on introduction to using the RIPE Database.
- Advanced IPv6: new in 2014, this two-day course is aimed at members working on an IPv6 deployment. The course covers IGP, BGP, security and configuration.
- DNSSEC: new in 2014, provides a hands-on introduction to DNSSEC. It covers basic DNS theory, public key encryption basics and helps participants to secure their domain name servers and zones.

Member feedback consistently rates training courses as being highly valuable. For example, an average of 98.8% of training course attendees in 2014 said that the training met their expectations (from 719 people surveyed).

Fig. 4.0 TRAINING COURSE LOCATIONS IN 2014



TRAINING COURSES

TOTAL TRAINEES
2,290

TOTAL COUNTRIES VISITED
39

- LIR TRAINING COURSE - **679** trainees in **34** courses
- IPv6 FOR LIRS - **693** trainees in **33** courses
- ROUTING SECURITY - **299** trainees in **15** courses
- RIPE DATABASE - **441** trainees in **21** courses
- ADVANCED IPV6 - **98** trainees in **5** courses
- DNSSEC - **80** trainees in **4** courses

WEBINARS

(Max 23 attendees per webinar)

TOTAL TRAINEES
1,173

- INTRODUCTION TO THE RIPE DATABASE: **10** times
- RIPE DATABASE – ADVANCED TOPICS: **9** times
- RESOURCE CERTIFICATION (RPKI): **9** times
- IPV6 IN THE RIPE DATABASE: **11** times
- IPV6 ADDRESSING PLAN (NEW IN 2014): **5** times
- WEBINAR FOR NEW LIRS (NEW IN 2014: **7** times

RIPE NCC ACADEMY

REGISTERED USERS
737

CERTIFICATES OBTAINED
117

IPv6 Roadshows

In 2014, the RIPE NCC ran seven IPv6 Roadshows in the Middle East. Run as a joint initiative between the Middle East Network Operators Group (MENOG), the RIPE NCC and APNIC, these events gave network operators an opportunity to gain hands-on experience dealing with IPv6.

Webinars

In addition to face-to-face training courses, the RIPE NCC offers webinars for members. These are essentially shortened training courses that members can attend from home or the office. The webinar software enables members to interact with trainers and each other remotely. Webinars are especially useful for members who are unable to attend a face-to-face training course, or who want to have a short refresher on a specific topic. *(See Fig 4.0.)*

Each webinar can be attended by up to 23 people. In 2014, the RIPE NCC hosted a total of 51 webinars:

- Introduction to the RIPE Database: 10 times
- RIPE Database – Advanced Topics: 9 times
- Resource Certification (RPKI): 9 times
- IPv6 in the RIPE Database: 11 times
- IPv6 Addressing Plan (new in 2014): 5 times
- Webinar for New LIRs (new in 2014): 7 times

RIPE NCC Academy

While the RIPE NCC has offered online instructional videos, documentation and webinars for a number of years, results from the RIPE NCC Survey 2013 showed that members wanted more online learning options.

In November 2014, the RIPE NCC Academy was launched. As a virtual learning environment, the RIPE NCC Academy allows members to access learning modules and training courses offered by the RIPE NCC through an interactive portal. In addition to accessing training material, members can use the academy to test and certify their knowledge and to interact with RIPE NCC trainers and each other, to share experiences and best current practices.

The first course available at launch was the RIPE Database Expert Course, where students can use a real training instance of the RIPE Database to query, create and update objects. More courses will be added as the platform is further developed.

By the end of 2014, the RIPE NCC Academy had 737 users, with 422 users enrolled in the RIPE Database Expert Course and 117 users had already obtained a certificate for completing the course. *(See Fig 4.0.)*

➔ *https://academy.ripe.net/*

KAVEH RANJBAR
CHIEF INFORMATION OFFICER

One of the RIPE NCC's goals is to make a wide range of tools and services available to the technical community to empower them in their operations and help them with their planning processes.

Earlier we announced our plans to consolidate these tools and services, to make them more efficient and reliable while retaining their functionality. In 2014, we achieved that goal, while making our services more valuable than ever. Over the course of the year, RIPE Atlas collected more than 78 trillion measurements and there were more than 2.6 million unique visitors to RIPEstat.

In 2014, we migrated DNSMON functionality to the RIPE Atlas platform and implemented a modern, interactive interface for this popular tool. We worked to expand the RIPE Atlas anchor network as the replacement for the Test Traffic Measurement (TTM) Service, which was decommissioned in 2014. The RIPE Atlas network had 98 active anchors and 7,550 active probes by the end of 2014. Together, they provide a comprehensive view of the global connectivity and reachability of the Internet, supplying valuable data to our members and the technical community that is used to investigate interesting events and troubleshoot network issues.

We also undertook a major backend overhaul in 2014, migrating all of our collected data – from RIPE Atlas, the Routing Information Service (RIS), DNS services, and third party sources - into a single, integrated system. As a result, our operations are now more efficient and expansion and capacity planning can be executed much more smoothly.

In 2015, we will focus on leveraging this added efficiency to develop new features and improve overall performance for our users. We will also concentrate on features that have been requested by the community for both RIPE Atlas and RIPEstat, including new types of measurements, new visualisations, and new monitoring and alerting functionalities. We will also replace and upgrade the existing RIS collectors with new firmware that supports live streaming of routing table changes, and will make this live routing data accessible via our tools. Last but not least, we will also expand our K-root services. Please keep an eye on the relevant mailing lists* for more details about these new features and, as always, provide us with your valuable feedback. I look forward to working in close collaboration with our members and community to build on our successes in 2014.

* RIPE Atlas: *ripe-atlas@ripe.net*
MAT Working Group: *mat-wg@ripe.net*
DNS Working Group: *dns-wg@ripe.net*
Routing Working Group: *routing-wg@ripe.net*

RIPE Atlas

RIPE Atlas is a global network of probes that perform active measurements about the reachability and connectivity of the Internet, including ping, traceroute, DNS and SSL certificate measurements. RIPE Atlas probes are hosted by volunteers around the world, who benefit from being able to perform their own customised measurements using the entire RIPE Atlas network. The collected data is available to anyone, and is used to create visualisations and analyses that describe the health of the Internet in real time.

The RIPE Atlas network expanded from 4,550 active probes at the end of 2013 to 7,550 by the end of 2014, and the number of RIPE Atlas users grew from 9,700 to 19,000, about 25% of whom were RIPE NCC members. RIPE Atlas sponsors provided 28 kEUR in support in 2014.

The measurement and probe user interfaces were completely revamped in 2014, providing users with a streamlined, easier to navigate and more data-rich view of all public probes' details, built-in measurements and RIPE Atlas users' own customised measurements. Tagging was another feature added in 2014, which allows users to tag their probes with various useful information such as "fibre", "DSL", "cable", "NAT", "No NAT", etc. and filter probes when scheduling their own customised measurements based on these categories.

RIPE Atlas also introduced data streaming, allowing users to access built-in and customised measurement data in near real time. One of the first visualisations to make use of this new capability was an all-new root name server data visualisation that shows response times for different instances as well as how many measurements are targeting each instance at any given time, presented as a scrolling data stream. This new visualisation tool can also be used to monitor users' own networks for potential service disruptions. Another monitoring tool developed in 2014 was Status Checks, an interface that allows users to monitor the health of their services by integrating data collected by the RIPE Atlas network into their existing monitoring tools, such as Nagios or Icinga.

The RIPE NCC continued to conduct analyses of notable events in 2014 using RIPE Atlas data, including the effect of a major Time Warner Cable network outage in the US, an investigation of a suspected hijacking case in Turkey, and a collaboration with Wikimedia to decrease latency for users visiting Wikipedia and other sites. Members of the community also continued to contribute a wide array of their own analyses using RIPE Atlas data, from the routability of IPv4 prefixes longer than a /24, to the evaluation of new peering partners within an Internet Exchange Point, to investigating problems with slow servers.

The number of RIPE Atlas anchors increased from 29 at the end of 2013 to 98 by the end of 2014. These enhanced probes have a much higher measurement capacity than regular probes and act as stable, cooperating targets that provide more regional data. The goal is to deploy an additional 50 anchors in 2015 in order to reach optimum coverage. *(See Fig 4.1.)*

As the network continued to grow, stricter criteria were placed on the distribution of probes in order to achieve a more strategic distribution of the network and ensure the greatest geographical and topological coverage possible. RIPE Atlas also moved towards a distribution model that relied more heavily on our "ambassadors" in order to help keep up with the growing demand for probes and increase the reach of the RIPE Atlas network. By the end of 2014, RIPE Atlas included 181 external ambassadors who helped grow the network in various ways, such as distributing probes at meetings around the world and following up with probe hosts to ensure their probes were activated.

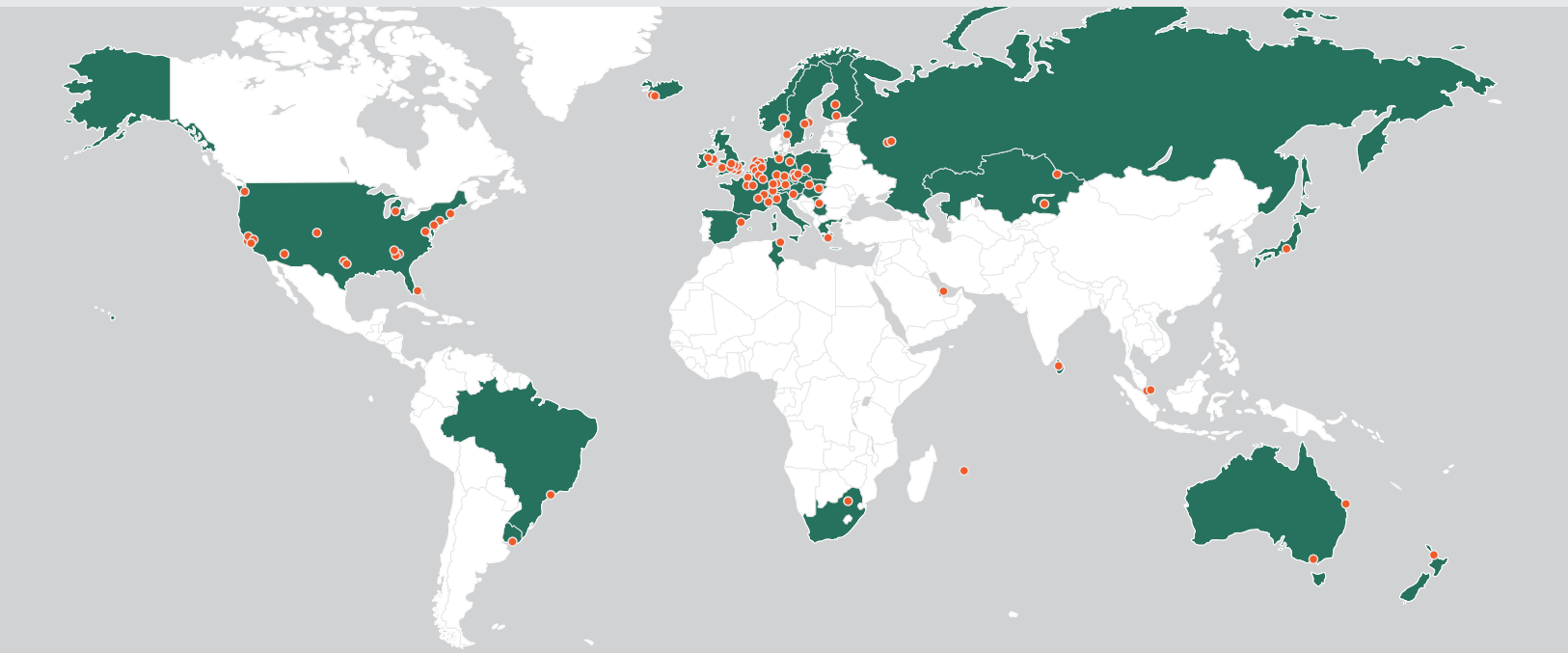
As RIPE Atlas officially became a production service in 2014, much of the main functionality initially planned for the service was completed and new RIPE Atlas Service Terms and Conditions were proposed to the community, which should be implemented in the first half of 2015.

In 2015, the focus will be on expanding the infrastructure to accommodate the growing network. The goal is to reach 10,000 active probes in strategic locations in order to provide the most useful service possible for members and the wider Internet community.

➔ *https://atlas.ripe.net*

Fig. 4.1

RIPE ATLAS ANCHOR LOCATIONS



USERS
19,000
(↗ UP BY 9,300)

ACTIVE PROBES
7,550
(↗ UP BY 3,000)

ANCHORS
98
(↗ UP BY 69)

COUNTRIES WITH ACTIVE PROBES
165

SPONSORS
8

SPONSOR FUNDING
€28,000

AMBASSADORS
181

RIPE LABS ARTICLES ABOUT RIPE ATLAS
31

MEASUREMENTS RUNNING AT ANY GIVEN INSTANCE THROUGHOUT 2014
7,000

MEASUREMENT RESULTS COLLECTED
78,000,000,000,000

RIPEstat

RIPEstat is a web-based interface that provides everything you ever wanted to know about IP address space and Autonomous System Numbers (ASNs) in one place. It presents registration and routing data, DNS data, geographical information, abuse contacts and more in the form of widgets that can be embedded on any web page. RIPEstat also provides an API to access the raw data for use in advanced applications.

RIPEstat continued to experience widespread use over the course of the year, with the number of unique RIPEstat visitors increasing from one million in 2013 to 2.6 million in 2014.

In 2014, RIPEstat focused less on the development of new features and functionality and more on its internal infrastructure. It transitioned its backends from legacy and prototype systems to a consolidated system. This migration greatly improved the consistency, stability and performance of RIPEstat while reducing maintenance and expansion costs.

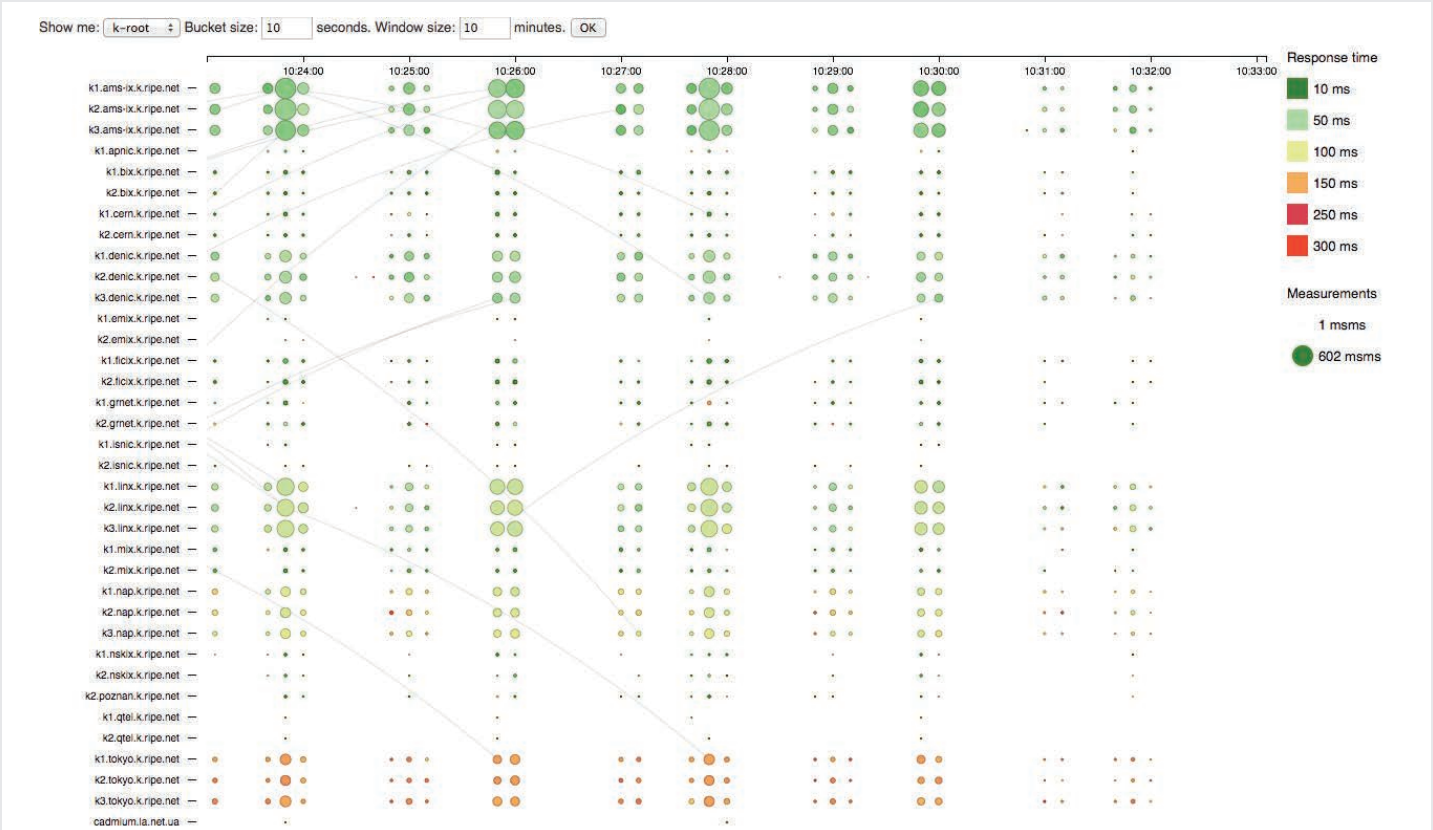
In 2015, the focus will be on making it easier to navigate through various aspects of the data, guiding users through different levels of detail, and integrating different data sources from the RIPE NCC as well as from third party data providers.

→ *https://stat.ripe.net*

Fig. 4.2

RIPE ATLAS ROOT NAME DATA VISUALISATION

This RIPE Atlas data visualisation gives viewers an at-a-glance overview of the root name servers in near real time.



Customer Services

The Customer Services Team is a crucial point of contact with the RIPE NCC's members, RIPE Database users, RIPE Atlas users, and users of other public services. The team manages the complete life cycle of RIPE NCC memberships, from queries about joining the RIPE NCC, overseeing the application process and processing administrative changes, right through to closing memberships.

Customers can contact the Customer Services Team through an online web form, phone, email and also via the popular Live Chat service that was first piloted in 2011 after it was requested by members. The Live Chat software underwent an overhaul in 2014, and members can now authenticate themselves using their RIPE NCC Access accounts. This allows the RIPE NCC to provide a more personal service and resolve issues via Live Chat that previously were difficult without this authentication.

Due Diligence

With the exhaustion of the unallocated IPv4 address pool, there is an increased potential for conflicts over address space. It is therefore vital that people are able to rely on the information in the RIPE Registry. By exercising due diligence with regards to the identification of legal and natural persons as well as taking swift action when informed of potential violations, the RIPE NCC is better placed to ensure that registry information concerning its members is comprehensive, correct and current.

Customer Feedback

The RIPE NCC offers everyone who receives support from the Customer Services Team the opportunity to report on the level of service they received by email or via Live Chat. These surveys run on a continuous basis and give the RIPE NCC excellent feedback on how to improve its customer services. The average star rating for support received over Live Chat remained at almost 5 stars out of 5 throughout 2014.

Ticketed Requests

In 2014, the Customer Services Team handled a total of 31,198 tickets, a decrease of 11% compared to the 2013 total of 35,101. The number of new LIR applications also increased by 26% while the number of billing enquiries remained roughly the same. This development could reflect the attention given to the clarity of billing-related communication and the introduction of electronic invoicing in 2014. *(See Fig 4.3 and 4.4.)*

Fig. 4.3 CUSTOMER SERVICE TICKETS BY MONTH

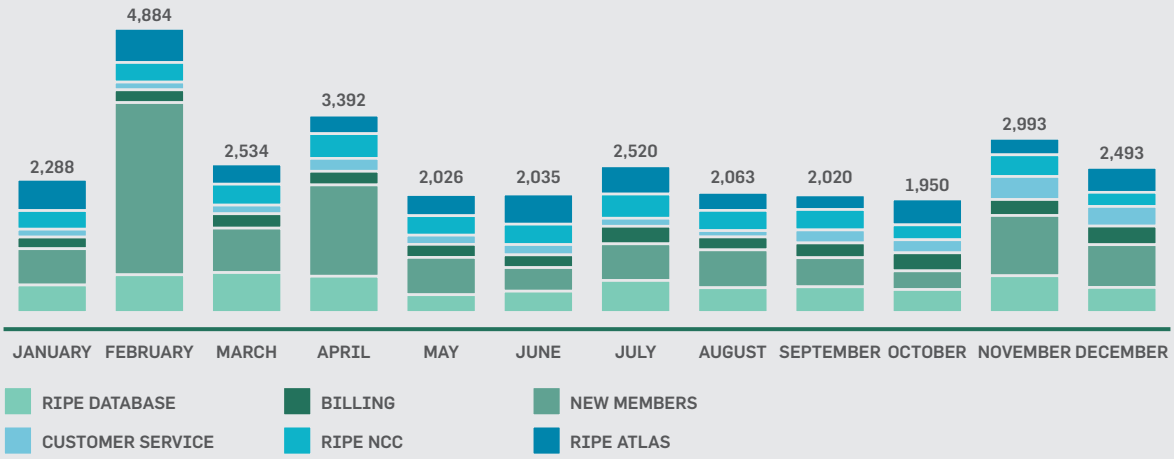
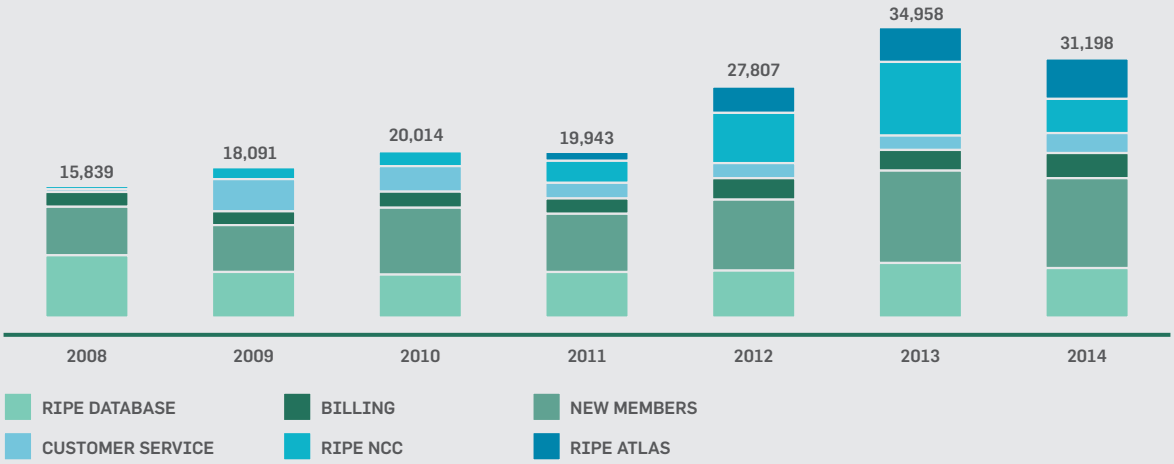


Fig. 4.4 CUSTOMER SERVICE TICKETS ANNUALLY



Service Announcements in 2014

The RIPE NCC reports issues with its services on the Services Announcements page of its website. In 2014, a total of 24 service announcements were made. These announcements include scheduled maintenance on RIPE NCC technical services.

→ *www.ripe.net/lir-services/service-announcements*

RIPE NCC

COORDINATION ACTIVITIES

Test Traffic Measurement Service (TTM)

TTM began in 2000 as a service to enable users to continuously monitor the connectivity of their networks to other points on the Internet using a neutral and reliable measurement system. TTM test-boxes were deployed at participating hosts and measurement traffic was sent between them. In 2013, the RIPE NCC began replicating TTM functionality within RIPE Atlas using RIPE Atlas anchors.

Beginning in July 2014, all desired TTM functionality had become available via RIPE Atlas, and TTM was fully discontinued.

Domain Name System Monitoring (DNSMON)

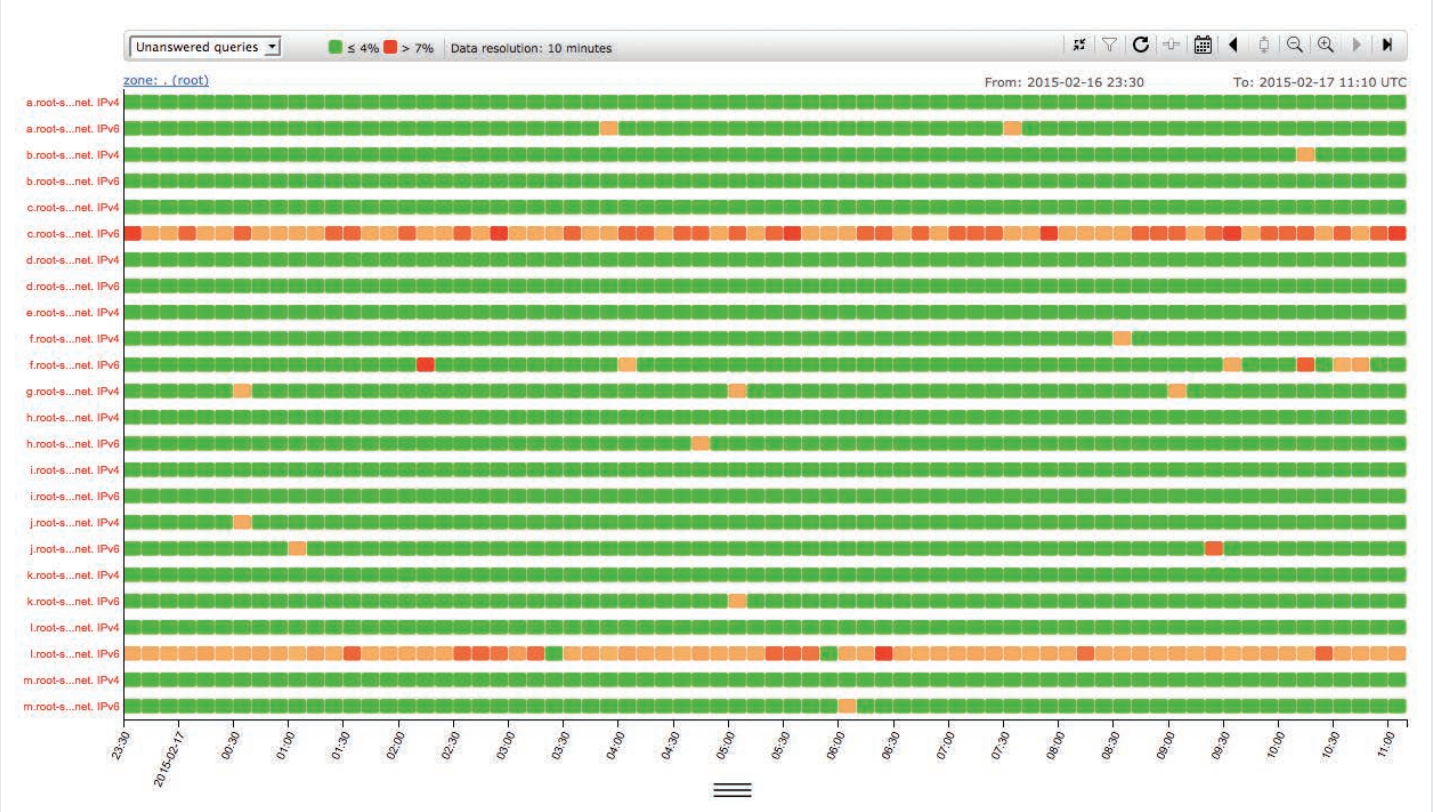
DNSMON provides an objective overview of DNS root servers and participating Top-Level Domain (TLD) name servers. The measurements show the quality of the DNS and enable users to distinguish between server-side and client-side problems.

During 2014, the migration of DNSMON from a service based on TTM-based vantage points to a service built on RIPE Atlas was fully completed. The data captured in the old TTM-based system has been kept available for interested parties.

Fig. 5.0

DNSMON DATA VISUALISATION

The new DNSMON data visualisation developed in 2014 gives operators an overview of the DNS system.



At the end of 2014, DNSMON was monitoring 44 zones, including TLD, ENUM, reverse and root zones.

→ *www.atlas.ripe.net/dnsmon/*

Routing Information Service (RIS)

RIS keeps track of changes in the global Internet routing system by collecting and storing Border Gateway Protocol (BGP) routing information using 13 Remote Route Collectors (RRCs) located at major Internet exchanges around the world.

RIS holds a complete routing history of the Internet for the past decade. This data is made available in RIPEstat via several different widgets, and is also available as a raw data download.

During 2014, the development of a new RIS collector and backend architecture that will allow the RIPE NCC to provide RIS data with a much-reduced delay was begun. The ultimate goal is to be able to provide a stream of routing events, with near real-time delivery of the routing information. At the end of 2014, development and testing of the new architecture neared completion.

→ *www.ripe.net/data-tools/stats/ris*

DNS Services

RIPE NCC anycasted DNS services worked smoothly throughout 2014. In order to increase resilience as well as capacity, a third location, Stockholm, was added to the existing sites in London and Amsterdam. An instance of the anycasted service is run from a cluster of servers in each of these locations. Zones served from these clusters include reverse delegations for RIPE NCC member allocations, country code Top-Level Domains (ccTLD) secondary services and RIPE NCC authoritative zones.

The RIPE NCC supports DNSSEC on all of its active zones. For three zones, including ripe.int and ripen.cc, keys are currently published out of band, through the DNSSEC Lookaside Validation mechanism. At the end of 2014, the RIPE NCC began investigating the possibility of ending the use of the DLV mechanism, based upon community requests to do so.

A secondary DNS service for some 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.

Reverse Delegation

As part of its 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.

RIPE NCC members maintain their own reverse delegations by updating their information in the RIPE Database, the authoritative source for reverse zones in the RIPE NCC service region.

Secondary DNS

The secondary DNS service ensures the reliability and robustness of the general DNS infrastructure. The RIPE NCC provides a secondary DNS service for other Regional Internet Registries' reverse zones and for some ccTLD organisations, mainly in developing countries or those who have difficulty obtaining and paying for commercial DNS services. During 2014, stable secondary DNS service was provided to 77 ccTLDs, five of which were internationalised domain name (IDN) ccTLD domains for Armenia, Jordan, Kazakhstan, Qatar and Syria.

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 DNS infrastructure. The RIPE NCC has operated the K-root server since 1997, when the first server was installed at the London Internet Exchange (LINX). Currently, K-root consists of 17 nodes. For some of the 17 nodes, particularly many of the "local instances", hardware has been provided by sponsoring organisations; however, all nodes are operated solely by the RIPE NCC.

During 2014, the RIPE NCC developed and tested a new architecture, based on a single-box solution, for K-root local instances. At the end of 2014, the RIPE NCC began deploying this new single-box model to local instances that were due for a hardware replacement. In 2015, the goal is to roll out this model to new local instances as well.

K-root operations were stable and operated effectively throughout 2014.

➔ *http://k.root-servers.org/*

ENUM

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

➔ *www.ripe.net/data-tools/dns/enum/iab-instructions*

ENUM is an Internet standard defined in RFC 3761 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/en/ITU-T/inr/enum/Pages/procedures.aspx*

RIPE Labs

The RIPE Labs website is a way for the RIPE NCC to share ideas and prototypes with the community while still in their early stages, by drawing on feedback from network operators, developers and industry experts. It has also proven to be an effective means of sharing statistics and information generated by the RIPE NCC.

In 2014, 73 articles were published on RIPE Labs, 29 of which were contributed by members of the RIPE community. RIPE Labs received 90,000 unique visitors in 2014 (7,500 unique visitors per month).

The Statistics Dashboard was again by far the most visited page on RIPE Labs. Measurements collected from IXPs during the World Cup in mid-2014 were also very popular, as well as topics related to RIPE Atlas and the RIPE Database.

The underlying premise of RIPE Labs is one of engagement, collaboration and openness. The RIPE NCC is actively looking to grow this platform over the coming years and invites the RIPE community to get involved. RIPE Labs can host research, content or tools that other organisations or individuals would like to share with the wider community. The RIPE NCC also welcomes feedback on the site, as well as requests for specific information.

➔ *https://labs.ripe.net*

IPv6 Act Now

The IPv6 Act Now website is a comprehensive source of IPv6-related information, providing resources tailored to a variety of different audiences including business, government and technical communities. The site highlights the latest developments in IPv6 deployment, news items, statistics, events, training opportunities and interviews with key players in the Internet community.

In 2014, the IPv6 Act Now site continued to highlight IPv6-related news items and provide useful statistics to the community, including the growth in IPv6-enabled Autonomous Systems over time, global IPv6 allocations and assignments, and IPv6 RIPEness data.

➔ *www.ipv6actnow.org*

IPv6 RIPEness

The RIPE NCC uses a rating system called IPv6 RIPEness to measure the level of IPv6 adoption by LIRs.

One star is awarded for each of the following criteria (in no particular order):

- The LIR has received an IPv6 allocation or PI assignment
- The IPv6 prefix is visible in the Routing Information System
- A **route6** object for the IPv6 prefix is registered in the RIPE Database
- Reverse DNS is set up for the IPv6 prefix

LIRs are given a fifth star if the RIPE NCC measures a certain threshold of IPv6 being used in their networks. In 2014, that threshold was increased from 2% to 4%.

By the end of 2014, the number of LIRs that qualified for a fifth star was approximately 8% of the total membership, while 21% had obtained four stars and 70% had obtained at least one star.

→ *ipv6ripeness.ripe.net*

Information Security

In 2014, the RIPE NCC conducted internal security assessments, developed incident response capacity, and reached out to the security community. As a result, the RIPE NCC security team has become an accredited member of TF-CSIRT, an organisation for computer security incident response teams.

The RIPE NCC Responsible Disclosure Policy was published in 2014, which has helped the RIPE NCC to detect and resolve several security issues.

There were no major security incidents in the RIPE NCC network in 2014.

PAUL RENDEK
DIRECTOR OF EXTERNAL RELATIONS

2014 was the year the RIPE NCC External Relations (ER) department hit the ground running, with our eighth team member (and second Moscow-based staff member) joining in July 2014. The RIPE NCC now has External Relations representatives based in offices in Amsterdam, Dubai and Moscow, providing the organisation with local industry knowledge and language skills, and an improved ability to engage with all of the RIPE NCC's membership, community and stakeholders.

In 2014, it was more evident than ever what a diverse group of stakeholders are keen to engage with the RIPE NCC. Our membership now comprises of more than 11,115 organisations across our service region; the technical community and academic researchers; business operators across a wide range of industries; governments and regulators; law enforcement agencies, and others. Working with our colleagues across the RIPE NCC organisation, the ER team has developed a number of initiatives to engage better with all of these stakeholder groups and establish the RIPE NCC as a respected global centre of technical expertise.

The year saw a number of events in which the ER team was deeply involved. The announcement of the IANA stewardship transition was a highlight for many in the global Internet community, and the coordinated and informed participation of the RIPE community was a priority for the RIPE NCC. From March, the ER team worked with community representatives including the RIPE Chair and the Cooperation Working Group Co-chairs to inform and collect feedback from the community, both online and at a wide range of regional meetings and events.

The International Telecommunication Union (ITU) was another point of focus, with the ITU Plenipotentiary 2014 in October and the World Telecommunications Development Conference (WTDC) in April again raising questions about the role of the UN agency in Internet number resource management and Internet governance more generally. External Relations staff members from the Arab and CIS regions were invaluable in enhancing the RIPE NCC's ability to engage ITU Member States from those regions on the substantive issues being discussed.

But just as importantly, our full team has allowed the RIPE NCC to develop a range of new projects and cooperative initiatives at the sub-regional level, from dinner events with RIPE NCC members in Saudi Arabia to regional meetings in Kazakhstan and Iran to participation in a variety of network operator groups and Internet governance forums.

In 2015, we're looking forward to growing this style of local engagement, connecting with members and community stakeholders on their home turf and hearing more about how the RIPE NCC can work with all stakeholders to defend and develop an open and growing Internet.

External Relations

The RIPE NCC's External Relations Department coordinates the organisation's engagement with external stakeholders, including members, the RIPE community, technical groups, government, regulators, intergovernmental organisations, law enforcement agencies and civil society.

The RIPE NCC's main goals in this area are to:

- Support and represent the interests of the RIPE NCC's membership and the RIPE community
- Communicate the RIPE NCC's role in Internet number resource administration, technical coordination and provision of data and analytical services
- Ensure that the RIPE NCC and the RIPE community continue to play an effective role in the further formalisation of Internet administration, particularly technical coordination and the development of policy related to Internet number resource distribution
- Support the development of Internet governance built on bottom-up, community-driven processes and open structures
- Promote the RIPE Policy Development Process and encourage wider participation in policy development
- Promote RIPE Labs and develop and encourage participation in RIPE Labs among the Internet community

The External Relations Team grew to eight members in 2014, completing an expansion planned over the last few years. The RIPE NCC now has External Relations staff in Amsterdam, Dubai and Moscow, and the regional industry knowledge and local language skills of our staff allow the RIPE NCC to engage more effectively than ever with members and other community stakeholders across the service region.

2014 proved another busy year from an External Relations perspective, with a wide range of events and initiatives encompassing the full range of RIPE NCC activities and stakeholders.

Connecting with Members and the Community

An External Relations priority in 2014 was developing the RIPE NCC's outreach and engagement to all parts of our service region. By improving the RIPE NCC's regional presence, the needs of the membership can be better understood and met. This also contributes to building stronger community forums and connections. New staff members in Dubai and Moscow have given the RIPE NCC more opportunities than ever to engage directly with stakeholders, via some of the initiatives outlined below.

RIPE NCC Regional Meetings and Events

The RIPE NCC continued to expand its support for regional meetings across the service region. As in previous years, RIPE NCC supported the staging of **Eurasian Network Operator's Group (ENOG)** and **Middle East Network Operators Group (MENOG)** events, with RIPE NCC Regional Meetings held alongside each. MENOG 14 (120 participants) took place in March in Dubai, while ENOG 7 (363 participants) took place in Moscow in May, followed by ENOG 8 (110 participants) in Baku, Azerbaijan, in September. The third **South East Europe / RIPE NCC Regional Meeting** took place in Sofia, Bulgaria, in April, attracting more than 200 participants from around the region.

Alongside these larger events, the RIPE NCC has also launched a programme of smaller meetings and informal events to connect with members and the community. In 2014, RIPE NCC Regional Meetings in Tehran, Iran (270 participants), and Almaty, Kazakhstan (105 participants) allowed RIPE NCC staff to engage with members and stakeholders in these areas, while also providing a forum to strengthen interaction and coordination within those regional communities.

One-off bilateral meetings and informal gatherings, such as membership lunch or dinner meetings in a specific city or country, also provide a means for RIPE NCC staff to connect with the membership. Through such events, in 2014 the RIPE NCC met with members in Armenia, Georgia, Moldova, Qatar, Russia, Saudi Arabia and Yemen. The schedule of smaller-scale meetings will grow in 2015.

RIPE NCC Roundtable Meetings for Governments and Regulators

The RIPE NCC has been holding Roundtable Meetings

for Governments and Regulators since 2005, with the aim of enhancing cooperation between the Internet technical community in the RIPE NCC service region and governments, regulators and LEAs. Attendance at these meetings is by invitation only, and discussions cover issues including IP addressing-related issues (such as IPv6 adoption, IPv4 exhaustion and trading), RIPE community developments, Internet governance and security developments, and RIPE NCC data and analytical tools for policy-makers.

Two Roundtable Meetings were held in 2014:

- In February, the RIPE NCC held its largest Roundtable Meeting to date in Brussels, with more than 60 attendees from government and the public sector. Issues discussed included the upcoming NETmundial meeting, developments relating to the International Telecommunication Union (ITU) and the evolution of the RIPE Cooperation Working Group.
- In October, the RIPE NCC joined forces with CENTR, the European country code top-level domain (TLD) organisation, to organise a Roundtable Meeting for governments and regulators adjacent to the CENTR General Assembly and a meeting of the European Commission High Level Group on Internet Governance. The meeting gave a unique opportunity to provide various community perspectives on the IANA stewardship transition issues, as well as the upcoming ITU Plenipotentiary conference.

➔ *www.ripe.net/meetings/roundtable*

RIPE NCC And Law Enforcement Agencies (LEAs)

In March 2014, the RIPE NCC hosted the annual Roundtable for LEAs, again organised in close cooperation with the UK National Crime Agency (NCA) and the other RIRs. Held adjacent to the e-Crime Congress, the event attracted more than 60 representatives from LEAs around the world to discuss ongoing developments regarding the Internet and IP addressing.

In the course of 2014, the RIPE NCC built on existing relationships with national authorities in the region and cross-border groups including Interpol and Europol. Activities included face-to-face meetings and presentations at law enforcement events. These have generated several requests for more information about the RIPE Registry and RIPE NCC tools such as RIPEstat. Several agencies have also asked the RIPE NCC to deliver training courses to agency staff. The RIPE NCC Training Services department is planning to create online training material to facilitate some of these requests.

As part of efforts to build more effective communication between LEAs and the technical community, in 2014 the RIPE NCC also supported the participation of LEA representatives at RIPE Meetings and Internet governance events such as EuroDIG and the IGF.

Internet Governance

IANA Stewardship Transition

One of the most significant areas of activity in 2014 was sparked by an announcement in March by the U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) that it intended to transition stewardship of the Internet Assigned Numbers Authority (IANA) functions to the global multi-stakeholder community.

The IANA functions include management of the global pools of Internet number resources (IP addresses and Autonomous System Numbers), and are currently carried out by ICANN, under a contract with the NTIA. The NTIA asked ICANN to convene a multi-stakeholder process to develop an alternative arrangement for stewardship of the IANA functions.

The five Regional Internet Registry communities are key stakeholders in this process, and discussions in the RIPE community began at RIPE 68 in May 2014 in the RIPE Cooperation Working Group. Over the course of the year, each of the five RIR communities developed their own positions on future IANA stewardship arrangements, and these positions served as the basis for a single Internet numbers community proposal. This proposal was produced by a Consolidated RIR IANA Stewardship Proposal (CRISP) team, made up of three representatives from each RIR community. The RIPE CRISP team representatives are:

- Nurani Nimpuno
- Andrei Robachevsky
- Paul Rendek (RIPE NCC staff participant)

The RIPE community agreed on a set of principles in relation to the IANA stewardship. Key principles included the following:

The RIPE community asks its selected CRISP team representatives to work with the other RIRs to produce a common proposal for a legally binding agreement (such as a Service Level Agreement) between ICANN and the RIRs to replace the Internet number-related elements of the ICANN-NTIA agreement.

The proposal should bring the provisions of the agreement related to the services and service levels up-to-date with current requirements where necessary.

This work should be coordinated with the other users of the IANA function as much as practical, with the aim of producing a proposed arrangement that is compatible with the proposed arrangements of the other IANA users.

Changes to the policy-making structures or processes relating to the IANA registries are not within the scope of the IANA stewardship discussion.

The CRISP team submitted its proposal to the IANA Stewardship Coordination Group (ICG), as a response to the ICG's Request for Proposals, on 15 January 2015. The document proposes that ICANN continue in its current role as IANA operator, under a new contractual arrangement with the five RIRs. It suggests that all associated intellectual property rights be transferred to a neutral third party, and that a community-based Review Committee be established to assist in evaluating the performance of the IANA Numbering Services Operator (initially ICANN).

The full text of the Internet numbers community proposal, the principles agreed on by the RIPE community and additional background information on the IANA stewardship transition are available at:

➔ *www.ripe.net/iana-stewardship-transition*

The RIPE NCC is committed to working with the RIPE community and with all other stakeholders, including the other RIRs, ICANN and the NTIA, to ensure an outcome that respects the priorities of the RIPE community, as expressed via discussions throughout the year, while ensuring the stability, resilience and continuity of these vital functions.

The Internet Governance Forum (IGF)

The IGF provides an important opportunity for the many different stakeholders in the Internet community to come together and discuss Internet governance issues. While not a decision-making body, IGF workshops and discussions help to inform decision-making processes in other forums.

The ninth IGF was held in Istanbul, Turkey in early September 2014, and attracted more than 2,500 participants from diverse stakeholder groups, including the technical community, business, government and civil society. Key issues under discussion included the IANA stewardship transition, security, capacity building and development. RIPE NCC Executive Board member Salam Yamout delivered a closing speech on behalf of the global technical community, stressing the importance of local and regional Internet governance discussions and of a strong global IGF.

The RIPE NCC also continued its initiative of funding the participation of RIPE community members. In 2014, the RIPE NCC funded the attendance of five community members from right around its service region, working with them to provide expert input on a range of forums and panel discussions.

The RIPE NCC believes in the need for a strong and continuing IGF, and has stressed the importance of all stakeholders contributing to establish a sound financial base for the IGF. The five RIRs, as the Number Resource Organization, have in recent years contributed an annual sum of USD 100,000 towards IGF administrative costs. 2014 saw the establishment of the Internet Governance Forum Support Association (IGFSA), with the goal of providing stable and sustainable support for the IGF Secretariat and to fund related activities. The RIPE NCC will be working with our industry partners to identify the best strategy for contributing to IGF support efforts.

2015 will be a key year for the evolution of the IGF, with discussions concerning its ongoing remit moving to the UN General Assembly. The RIPE NCC continues to support the IGF as a vital means of fostering the multistakeholder

dialogue and cooperation necessary for effective Internet governance.

→ *www.ripe.net/publications/news/industry-developments/ripe-ncc-report-on-igf-2014*
→ *www.intgovforum.org*

NETmundial Meeting

NETmundial was a two-day multistakeholder meeting on Internet governance issues, announced in October 2013 and held in April 2014 in São Paulo, Brazil. The meeting, which attracted nearly 1,500 participants, produced the NETmundial Multistakeholder Statement, a non-binding document adopted by consensus at the meeting, and included an agreed set of Internet governance principles and a roadmap for the future evolution of the Internet governance ecosystem.

RIR staff and community members from all five RIR regions were present at the meeting in São Paulo, with the RIPE NCC represented by Managing Director, Axel Pawlik, and Director of External Relations, Paul Rendek. The RIPE NCC has followed developments relating to this event, including the formation of the NETmundial Initiative by stakeholders including ICANN and the World Economic Forum in late 2014, feeding back important developments to our membership and community.

Regional Internet Governance Initiatives

The RIPE NCC sees regional Internet governance structures and processes as fundamental to the success of global Internet governance efforts. In 2014, the RIPE NCC supported various regional initiatives across its service region, while working to facilitate the input of these regional forums into global processes such as the Internet Governance Forum.

EuroDIG

The European Dialogue on Internet Governance (EuroDIG) held its seventh event in Berlin, Germany in June 2014, attracting around 500 people from across the continent. RIPE NCC Managing Director Axel Pawlik participated in a panel on "Europe and the future of the Internet", while elsewhere RIPE NCC staff members contributed to workshops, discussions and an education session on Internet technical concepts.

The RIPE NCC again sponsored the participation of three youth delegates from across the region, including the Russian Federation and Georgia.

Recognising the importance of EuroDIG as a regional venue for Internet governance discussion and cooperation, the RIPE NCC in 2014 signed a Memorandum of Understanding with EuroDIG, committing as an Institutional Partner for the next three years. This will see RIPE NCC actively contributing to planning, coordination and development of the forum.

Arab Internet Governance Forum (IGF)

The third Arab IGF took place in Beirut, Lebanon in November 2014. Unfortunately, due to Dutch government security concerns, the RIPE NCC was not able to have any participants on-site, but RIPE NCC staff and RIPE community members contributed through the preparatory process.

National Internet Governance Forums

RIPE NCC staff participated in a number of national and sub-regional Internet governance events in 2014, including the Russian IGF, the Azerbaijan IGF and NL IGF (Netherlands).

Inter-Governmental Engagement in 2014

The International Telecommunications Union (ITU)

The RIPE NCC engagement with the ITU and its Member States continued in 2014. As a member of both the Standardization (ITU-T) and Development (ITU-D) sectors of the ITU, the RIPE NCC took part in two major ITU events in 2014:

World Telecommunication Development Conference (WTDC) 2014

Held in Dubai in April, the WTDC provided an opportunity to focus on Internet development issues. The RIPE NCC, working with the other RIRs and industry partners, was also able to engage Member States through informal information sessions organised adjacent to the conference.

ITU Plenipotentiary 2014

The Plenipotentiary conference is the supreme decision-

making body in the ITU, held every four years. In November 2014, it was held in Busan, South Korea and considered a range of proposals that touched on issues including the role of the ITU in Internet number resource registration and Internet governance more generally. Working with industry partners, the RIPE NCC engaged Member States on-site, providing expertise and insight into technical and administrative aspects of the Internet number registry system.

The RIPE NCC also continued participating in regional ITU coordination forums, including the European Conference of Postal and Telecommunications Administrations' ITU Working Group (CEPT Com-ITU), the Arab Group and the Regional Commonwealth in the Field of Communications (RCC). This involvement provides valuable opportunities to engage with governments at a key stage in their consideration of issues relevant to the RIPE NCC and RIPE community.

Organisation For Economic Cooperation And Development (OECD)

The RIPE NCC continued its contribution to the work of the OECD's re-named Committee on Digital Economy Policy (CDEP), formerly known as the ICCP. The OECD serves as an important venue for multi-disciplinary study and discussion of Internet governance-related issues. The RIPE NCC participates together with a range of industry partners via the OECD Internet Technical Advisory Committee (ITAC), which the RIPE NCC co-founded in 2008.

In 2014, the RIPE NCC contributed to OECD work on IPv6 adoption, Internet infrastructure and the Internet of Things, as well as coordinating ITAC participation in the Working Party on Communication, Infrastructures and Services Policy (WP CISP). Work in 2015 will include preparation for a Ministerial event, organised by the CDEP, to be held in 2016.

European Union

The RIPE NCC engages with various organs of the EU, including the European Commission, the European Parliament and EU Member State delegations. The RIPE NCC's goals in this are to inform policymakers, while facilitating engagement by RIPE community members, particularly at the level of national representatives. The RIPE NCC Roundtable Meetings in Brussels [see above] have been an important opportunity to connect with the Commission members and the participants in the High Level Group on Internet Governance.

The RIPE NCC has also worked closely with industry partners and RIPE community members to examine and respond to EU regulatory proposals such as the "Directive on Network and Information Security".

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, and it ensures 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. Adiel Akplogan (AFRINIC) served as Chairman of the NRO in 2014, and the RIPE NCC served as NRO Secretariat.

→ *www.nro.net*

The Address Supporting Organization (ASO)

The ASO is one of the three supporting organisations required by the 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 NRO Number Council and these individuals carry out the role of the ASO AC.

In 2014, the representatives from the RIPE NCC's service region, and their three-year terms, were:

Dmitry Kohmanyuk:	1 Jan 2013-31 Dec 2015
Wilfried Woeber:	1 Jan 2015-31 Dec 2017
Filiz Yilmaz:	1 Jan 2014-31 Dec 2016

At the RIPE 69 Meeting in November 2014, the RIPE NCC Executive Board reappointed Wilfried Woeber to fill a seat on the NRO Number Council, with a three-year term starting on 1 January 2015.

As part of its role as the NRO Secretariat in 2014, the RIPE NCC also led the redesign of the ASO website, which includes a more streamlined navigational structure and some additional content about the role of the ASO.

➔ *www.aso.icann.org*

RIPE NCC

RIPE NCC AND THE RIPE COMMUNITY

SERGE RADOVCIC
CHIEF COMMUNICATIONS OFFICER

In 2014, we aimed to further increase transparency and engagement with our members. During what was a busy and uncertain year, and with added scrutiny on the Internet community, it was important that our membership could be sure that the RIPE NCC was well governed and clearly communicating its activities and priorities.

A big part of how we remain transparent to our membership is through our yearly Activity Plan and Budget process. This allows members to see at a glance what we propose to do in the coming year, along with our projected costs. This process follows a regular schedule where we publish a first draft ahead of the Autumn RIPE Meeting, which gives members an opportunity to comment on our proposed activities, before the final document is approved by the RIPE NCC Executive Board and published in December. This Annual Report represents the end of this process for 2014, where we are essentially reporting back on how we executed the Activity Plan.

Following on from our successful membership and stakeholder survey in 2013, last year we identified 48 key findings from the survey, together with actions that we could take to address them. In September 2014, we published a document that outlined what we had done to address these findings and how successful our efforts had been. Not only does this bring transparency to the survey process, it also demonstrates that your feedback results in concrete actions being taken by the RIPE NCC.

One area in particular that was identified as needing improvement was our website. There are around 10,000 pages on *www.ripe.net*, many of which date back to the early days of the RIPE NCC. Reorganising this content is no simple task. However, in 2014 we completed the important background work before a total overhaul of the website's navigation and layout could begin in earnest. We engaged with users of the site to identify their differing needs and conducted an information architecture analysis. We have also improved the website's search functionality and I think members will be surprised at just how effective it has become.

The RIPE NCC General Meeting (GM) is the most important forum members have to influence the direction of the RIPE NCC. For this reason, we have worked to improve participation by members in recent years. In 2014, we made several improvements that I think will go a long way towards encouraging this. Registration for the GM is now done through the LIR Portal. This means more security for members, who can now register for attendance and voting in one place instead of two, and overall they can choose their options much more quickly and easily. The registration and voting periods for electronic voting have been extended to increase participation from all countries in our service region. We are also supporting the GM with more effective communication in advance of the meeting, so members are aware of what is being discussed and how they can participate.

RIPE

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 and stable operation of the Internet.

The RIPE NCC and RIPE are two highly interdependent but separate entities. 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 62). All of RIPE's activities are documented, archived and available to the public.

RIPE Working Groups

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

Active RIPE Working Groups

- Address Policy Working Group
- Anti-Abuse Working Group
- Connect Working Group (new in 2014)
- Cooperation Working Group
- Database Working Group
- DNS Working Group
- IPv6 Working Group
- MAT Working Group
- Open Source Working Group
- RIPE NCC Services Working Group
- Routing Working Group

RIPE Task Forces

Task forces are groups of individuals who have a collective interest in performing specific tasks for the good of the RIPE community. Task forces designate a coordinator, who is responsible for making sure that progress is made and that results are achieved within the time frame that the task force has agreed.

The outcome of a task force's work is usually a report with recommendations. The recommendations are discussed by the RIPE community and implemented when agreement is reached.

The following task forces were active during 2014:

- Best Current Operational Practices (BCOP) Task Force
- RIPE Task Force
- RIPE Working Group Chair Task Force

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 and audiocast, and remote participants can contribute to discussions during the meeting sessions using Internet Relay Chat (IRC). Live transcripts of the sessions are also provided for attendees.

In 2014, RIPE 68 was held in Warsaw in May and RIPE 69 was held in London in November. *(See Fig 6.0 and 6.1.)*

Fig. 6.0

RIPE 68 - WARSAW

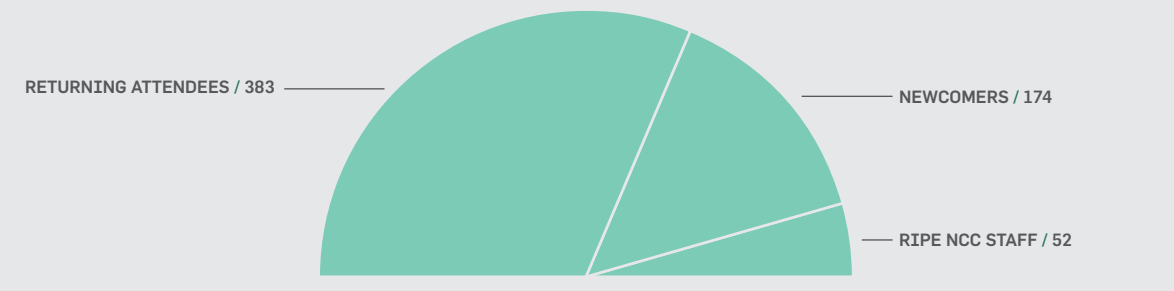
TOTAL / 569

RIPE 68 ATTENDING COUNTRIES - TOP 5

1	2	3	4	5
UNITED STATES	POLAND	GERMANY	THE NETHERLANDS	GREAT BRITAIN
78	68	63	40	39

Fig. 6.1

RIPE 69 - LONDON



TOTAL / 609

RIPE 69 ATTENDING COUNTRIES - TOP 5

1	2	3	4	5
GREAT BRITAIN	GERMANY	UNITED STATES	THE NETHERLANDS	CZECH REPUBLIC
142	75	71	42	18

At RIPE 68, the Connect Working Group was established by members of the RIPE community. At the end of this meeting, Rob Blokzijl officially stepped down as Chairman of RIPE and Hans Petter Holen became the new RIPE Chair. RIPE 69 was the largest meeting to date, with a total of 609 attendees.

RACI

The RIPE Academic Cooperation Initiative (RACI) was launched in 2013 as a means of increasing academic community participation in RIPE, and particularly RIPE Meetings, by providing free meeting tickets and, in more recent meetings, financial assistance for travel and accommodation. In 2014, 13 students and researchers, funded by the RIPE NCC under RACI, participated in RIPE 68 in Warsaw and RIPE 69 in London. Their research, which was featured in plenary sessions, working groups and dedicated RACI sessions, covered a wide range of topics, from network measurement and analysis to security, censorship circumvention and Internet governance. Some of the RACI fellows also shared articles on their work via RIPE Labs.

In 2015, the RIPE NCC intends to continue RACI at RIPE Meetings, and to expand regional outreach via RACI funding for regional events.

→ *www.ripe.net/ripe/raci*

The RIPE Programme Committee

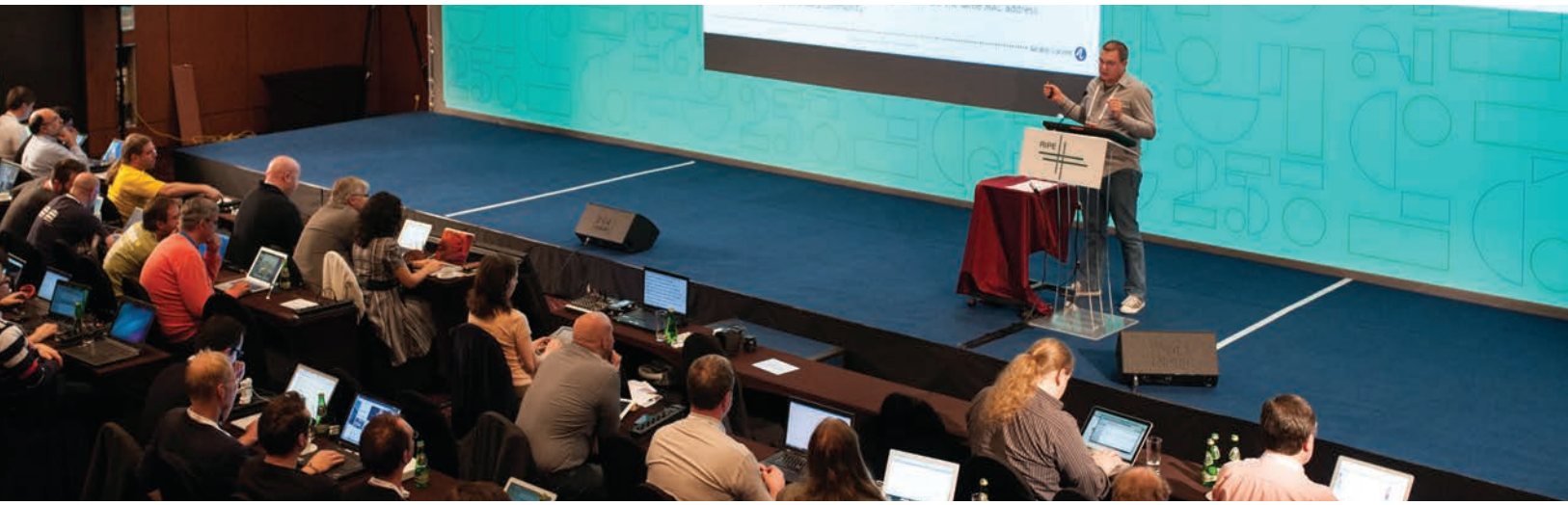
The RIPE Programme Committee (PC) is responsible for ensuring that the RIPE Meeting programme consists of interesting, relevant and inspiring content. Comprised of volunteers from different parts of the RIPE community, the RIPE PC plans and develops the programme for each RIPE Meeting.

The PC members for RIPE 68 were:

- Filiz Yilmaz, Chair
- Brian Nisbet, RIPE Working Group Chair Representative
- Sergey Myasoedov, ENOG Representative
- Osama I. Al-Dosary, MENOG Representative
- Leslie Carr
- Mike Hughes
- Shane Kerr
- Benno Overeinder
- Marcus Stoegbauer
- Meredith Whittaker
- Jan Žorž

RIPE NCC Regional Meetings and Support

The RIPE NCC aims to increase regional participation in community-driven processes from the full range of Internet stakeholders, including RIPE NCC members,



governments and law enforcement agencies (LEAs). The RIPE NCC works with these different stakeholders to encourage capacity building and training in regional areas, focusing on the practical details of IPv6 deployment and crucial issues related to Internet governance.

The RIPE NCC service region is made up of 76 diverse countries at varying stages of Internet development. With the significant growth of the IT and Internet industries in the Middle East, Russia and South Eastern Europe (and the resulting increase in RIPE NCC members), the RIPE NCC is focused on increasing the participation of Internet stakeholders from these areas of its service region. By working with the different communities in these areas, the RIPE NCC is encouraging increased regional participation, both in the activities of the RIPE NCC and the RIPE Policy Development Process (PDP). The aim is to strengthen the RIPE community by enabling regional communities to participate more fully in policy development and to ensure that regional concerns, issues and needs are represented.

The RIPE NCC has provided extensive support in the establishment of regional Network Operator Groups (NOGs). Building on the formation of the Middle East Network Operators Group (MENOG) in 2007 and the Eurasian Network Operators Group (ENOG) in 2011, the RIPE NCC will continue to supply the technical and administrative expertise required to develop existing NOGs and assist in the creation of any new groups required by the Internet community.

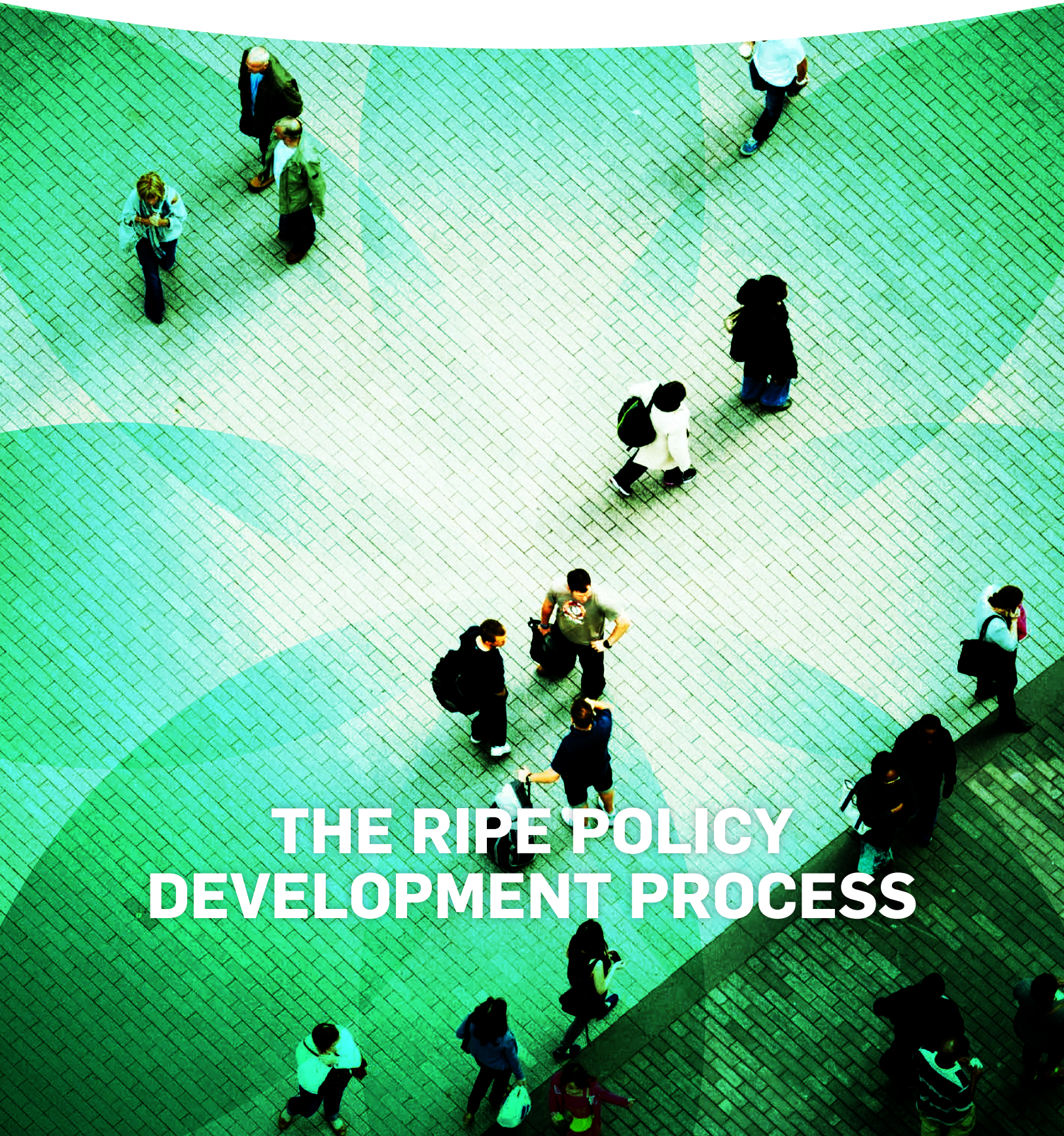
The main goals of the RIPE NCC's work in this area are to:

- Encourage the cooperation of operators from countries in specific regions, enabling them to exchange information and discuss the issues that affect them
- Enable the RIPE NCC to further support Local Internet Registries (LIRs) in a given region and to continuously evaluate and address the changing needs of RIPE NCC members
- Identify, discuss and solve the specific issues affecting operators in a given region by facilitating increased awareness of the latest developments in the Internet industry
- Encourage broader involvement in the RIPE PDP
- Broaden the legitimacy of RIPE and the RIPE NCC so as to promote technical community solidarity across the entire RIPE NCC service region

In 2014, the following RIPE NCC Regional Meetings took place:

- MENOG 14, 30-31 March, Dubai, UAE
- SEE 3/RIPE NCC Regional Meeting 14-15 April, Sofia, Bulgaria
- ENOG 7, 26-27 May, Moscow, Russia
- RIPE NCC Regional Meeting, 9 June, Almaty, Kazakhstan
- ENOG 8, 9 September, Baku, Azerbaijan
- RIPE NCC Regional Meeting, 18 November, Tehran, Iran

RIPE NCC



THE RIPE POLICY DEVELOPMENT PROCESS

HANS PETTER HOLEN
RIPE CHAIR

At RIPE 68, Rob Blokzijl stepped down after 25 years at the helm of the RIPE community and I became the new RIPE Chair. Rob has been a driving force behind RIPE since the beginning, and a tireless champion of the open, transparent and bottom-up processes that have made RIPE so successful in coordinating the thousands of people involved in the operation of the Internet in our region.

I too have had a long involvement with RIPE over the years, as well as being involved with the wider Internet community. Between 1999 and 2013 I represented the RIPE community as part of the Number Resource Organisation Number Council (NRO NC). I have also chaired the RIPE Address Policy Working Group, so I come with a strong understanding of RIPE, the RIPE NCC, and ICANN.

In my first year as RIPE Chair, I have already overseen some significant changes to make things more transparent and accountable. Agendas and summaries for meetings of the RIPE Working Group Chairs Collective are now published before and after their meetings alongside RIPE Meetings. Working Groups also now have a process in place for selecting new chairs, and I will work on a process for selecting a new RIPE Chair. I have also been closely following the RIPE community's work to develop a proposal for the IANA stewardship transition.

2014 was an interesting year for the RIPE community – we saw the ongoing effects of IPv4 exhaustion and further progress towards IPv6 adoption, along with developments on the Internet governance front. The RIPE Policy Development Process continues to be used by the community to achieve the outcomes it wants, and it is good to see this continued engagement. It is also heartening to see the growing attendance at RIPE Meetings, with records for "largest meeting yet" continuing to be broken. Not only attendance, but also the quality of the meetings is improving, as the community continues to evolve and participation within RIPE grows.

Across such a large region, stretching from Iceland to Yemen, from Portugal to Russia, it is astounding just how varied the RIPE community is. For this reason, I have been taking time to participate in the RIPE NCC's Regional Meetings to learn as much as possible about the diverse concerns of people in the different parts of our region. I will continue this work to listen to the RIPE community in 2015.

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. The RIPE Policy Development Process (PDP) is the means by which this is achieved, with its long-established, bottom-up process of discussion and consensus-based decision making. The RIPE PDP is open to anyone who would like to suggest a new policy or a change to an existing policy.

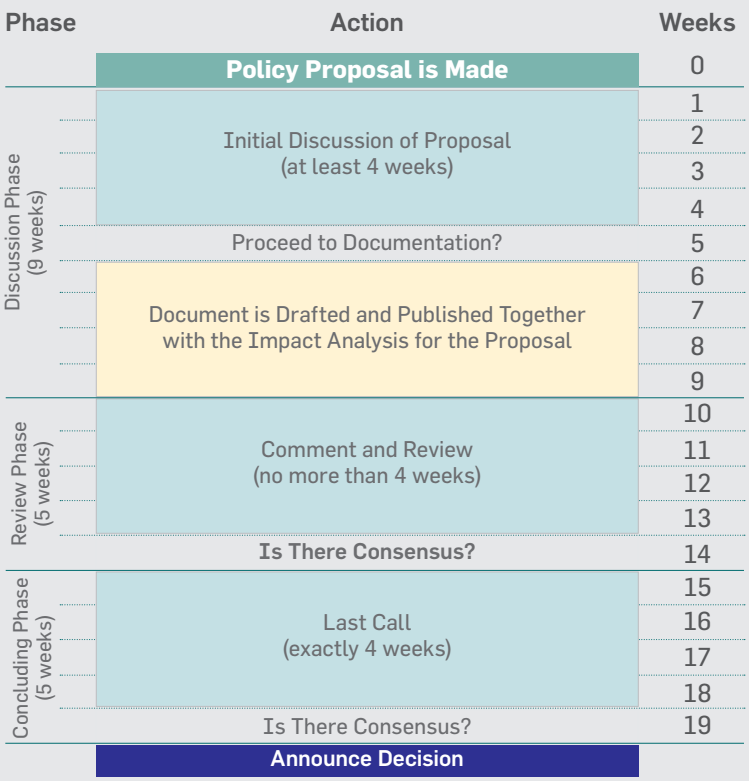
In order to be accepted, a policy proposal must pass through the Discussion, Review and Last Call phases of the PDP. After a proposal has made its way through all three phases, and if the relevant RIPE Working Group Chair determines there is consensus in the RIPE community, it completes the PDP and "consensus" is declared. The RIPE NCC then implements the policy into its working procedures.

In 2014, a revised PDP was accepted that adjusted the determination of consensus after Last Call. It also defined an appeals procedure in case a grievance cannot be resolved with the chair of the Working Group.

The RIPE NCC has no role in accepting or rejecting policies. Instead, it provides administrative support to the PDP. Part of this involves publishing an impact analysis when a proposal enters the Review Phase, which helps the RIPE community to understand the likely effects the proposal would have if it were to be implemented. *(See Fig 7.0.)*

Fig. 7.0

THE RIPE POLICY DEVELOPMENT PROCESS (PDP)



Policy Proposals in 2014

In 2014, 13 new policy proposals were entered into the PDP. Of these proposals, 12 came from the Address Policy Working Group and one from the RIPE NCC Services Working Group. This was the highest amount of proposals ever entered within a year and indicates that the RIPE community views the PDP as an effective way to define sets of rules and guidelines.

Submitted Policy Proposals

2014-01 Abandoning the Minimum Allocation Size for IPv4
Proposed to abandon the concept of a minimum allocation (and sub-allocation) size in "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region".

2014-02 Allow IPv4 PI transfer
Proposed to allow the transfer of IPv4 Provider Independent (PI) address space within the RIPE NCC service region.

2014-03 Remove Multihoming Requirement for AS Number Assignments
Proposed to ease the requirements for Autonomous System (AS) number requests.

2014-04 Removing IPv6 Requirement for Receiving Space from the Final /8
To receive an IPv4 allocation from the RIPE NCC, currently Local Internet Registries (LIRs) must have allocated IPv6 address space in the RIPE NCC service region. 2014-04 was proposed to remove this requirement.

2014-05 Policy for Inter-RIR Transfers of Internet Resources
Proposed to allow the global transfer of Internet number resources under the condition that they meet the criteria to be transferred within the RIPE NCC service region and the other RIR has a compatible policy.

2014-06 Publication of Sponsoring LIR for Legacy Internet Resource Holders
Proposed to publish the link between legacy Internet resource holders and their sponsoring Local Internet Registry (LIR). This will bring legacy resources in line with independent number resources such as Provider Independent (PI) address space and AS Numbers.

2014-07 Language Clarification in "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region"
Proposed to clarify the language in the RIPE Document "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region" by changing instances of "should" to "must" where this was creating unwanted ambiguity.

2014-08 Language Clarification in "Contractual Requirements for Provider Independent Resource Holders in the RIPE NCC Service Region"
Proposed to clarify the language in the RIPE Document "Contractual Requirements for Provider Independent Resource Holders in the RIPE NCC Service Region" by changing instances of "should" to "must" where this was creating unwanted ambiguity.

2014-09 Language Clarification in "IPv6 Address Space Policy For Internet Exchange Points"
Proposed to clarify the language in the RIPE Document "IPv6 Address Space Policy For Internet Exchange Points" by changing instances of "should" to "must" where this was creating unwanted ambiguity.

2014-10 Language Clarification in "IPv6 Addresses for Internet Root Servers In The RIPE Region"
Proposed to clarify the language in the RIPE Document "IPv6 Addresses for Internet Root Servers In The RIPE Region" by changing instances of "should" to "must" where this was creating unwanted ambiguity.

2014-11 Language Clarification in "Allocating/Assigning Resources to the RIPE NCC"
Proposed to clarify the language in the RIPE Document "Allocating/Assigning Resources to the RIPE NCC" by changing instances of "should" to "must" where this was creating unwanted ambiguity.

2014-12 Allow IPv6 Transfers
Proposed to allow the transfer of IPv6 allocations and IPv6 PI assignments within the RIPE NCC service region.

2014-13 Allow AS Number Transfers
Proposed to allow the transfer of AS Numbers within the RIPE NCC service region.

Concluded Policy Proposals

2012-07 RIPE NCC Services to Legacy Internet Resource Holders

This proposal created a framework for the rigorous maintenance of registration data and the delivery of services to holders of legacy Internet resources in the RIPE NCC service region.

2012-08 Publication of Sponsoring LIR for Independent Number Resources

This proposal allows the RIPE NCC to identify and make public the sponsoring organisation of each independent number resource.

2013-03 Post Depletion Adjustment of Procedures to Match Policy Objectives, and Clean-up of Obsolete Policy Text

This proposal removed the requirement for LIRs to complete a forecast-based documentation of need when requesting IPv4 allocations from the RIPE NCC, when requesting approval for IPv4 transfers, or when End Users request an assignment of address space from an LIR. The proposal also simplified the stated "Fairness" policy goal and removed text suggesting that the RIPE NCC would assign PI address space to End Users.

2014-01 Abandoning the Minimum Allocation Size for IPv4

See Submitted Policy Proposals.

2014-02 Allow IPv4 PI transfer

See Submitted Policy Proposals.

Withdrawn Proposals

2012-02 Policy for Inter-RIR transfers of IPv4 address space

The same proposer entered a new inter-RIR transfer proposal (2014-05, "Policy for Inter-RIR Transfers of Internet Resources") The new proposal focused on being aligned with internal resource transfers as well as being more cohesive with the policies of other RIRs and so 2012-02 was withdrawn.

2014-09 Language Clarification in "IPv6 Address Space Policy For Internet Exchange Points"

During the discussion phase there was feedback that IPv6 assignments for IXPs should also be able to be used for purposes other than a peering LAN. For this reason the proposer decided that the current term "should" reflected the RIPE community's understanding of the policy, and decided to withdraw the proposal.

RIPE NCC

FINANCIAL REPORT

INTRODUCTION TO THE FINANCIAL REPORT

REMCO VAN MOOK
RIPE NCC EXECUTIVE BOARD TREASURER

The Executive Board directs the operations and management of the RIPE NCC primarily through its yearly Activity Plan and Budget. For 2014, the RIPE NCC's total expenses were 21,224 kEUR, which is 3% below budget. This is an achievement worth highlighting, as the RIPE NCC's workload increased significantly over the year due to an influx of new members, an increase in IPv4 transfers and the registration of legacy resources. The RIPE NCC also incurred additional costs in support of Internet governance, its regional outreach programme, and its work on the IANA stewardship transition. In 2014, the RIPE NCC had the highest member growth ever, resulting in a total membership of 11,115 at year's end – a net increase of 1,216 members.

Stability is a key aspect of the RIPE NCC's financial management and the organisation therefore adheres to a minimal risk strategy. A consequence of this approach is that we see low return on investments. The RIPE NCC stayed within the boundaries set by the Treasury Statute for any investments of its financial reserves. The changed market situation in 2014 led to a small update to the Treasury Statute; we will continue to keep a close eye on the financial markets and take action when necessary.

Another crucial part of the RIPE NCC's financial stability is its tax situation. In 2014, the existing agreement with the Dutch Tax Authorities was replaced. Instead of being exempt from corporate taxes below a certain reserve level, the new agreement guarantees that the existing Clearing House reserve built up until 31 December 2014, and future capital gains on that reserve, will not be subject to corporate income tax. The foundation reserve of 477 kEUR was merged into the Clearing House to simplify the RIPE NCC's reserve structure. From 2015 on, the RIPE NCC will be subject to corporate income tax on any operating surplus. This means that going forward, we will ask the membership what to do with any surplus: return it to the members, or add it to the Clearing House reserve after paying corporate taxes.

For 2014, the RIPE NCC engaged new auditors to audit its financial administration, procedures and reports, as is good practice to do every few years. I thank the previous auditors for their services. As a reflection of the change in auditors, this year's financial report contains some adjustments that were made to better align the RIPE NCC's reporting with Dutch accounting standards (GAAP).

I am confident that the RIPE NCC is strongly positioned among its members and other Internet organisations, with the financial stability to continue to provide excellent services and meet future challenges and growth head-on. I am looking forward to the years ahead.

STATEMENT OF INCOME AND EXPENDITURE 2014

	Actual	Budget	Actual	Variance		Variance	
(kEUR)	2014	2014	2013	2014 vs B2014		2014 vs 2013	
INCOME							
Members Fees	20,104	19,298	17,995	806	4%	2,109	12%
Member Sign-up Fees	3,348	2,100	2,627	1,248	59%	721	27%
RIPE Meetings	273	305	258	(32)	-10%	15	6%
Sponsorship Income	268	200	306	68	34%	(38)	-12%
Other Income	173	50	69	123	246%	104	151%
Total Income	**24,166**	**21,953**	**21,255**	**2,213**	**10%**	**2,911**	**14%**
EXPENDITURES							
Salary Components - Personnel	8,473	8,702	7,925	(229)	-3%	548	7%
Secondary Benefits - Personnel	2,013	1,812	1,911	201	11%	102	5%
Miscellaneous - Personnel	2,140	1,776	1,549	364	20%	591	38%
Subtotal Personnel	**12,626**	**12,290**	**11,385**	**336**	**3%**	**1,241**	**11%**
Housing	783	758	758	25	3%	25	3%
Office Costs	1,643	1,854	1,547	(211)	-11%	96	6%
Marketing/ER	593	637	613	(44)	-7%	(20)	-3%
Contributions	361	418	568	(57)	-14%	(207)	-36%
IT Infrastructure	1,275	1,427	935	(152)	-11%	340	36%
Travel	1,341	1,151	1,216	190	17%	125	10%
Consultancy	1,464	1,613	987	(149)	-9%	477	48%
Bank Charges	163	160	153	3	2%	10	7%
Bad Debts	148	150	113	(2)	-1%	35	31%
Depreciation	827	1,460	1,055	(633)	-43%	(228)	-22%
Total Expenses	**21,224**	**21,918**	**19,330**	**(694)**	**-3%**	**1,894**	**10%**
Surplus Before Financial Result	**2,942**	**35**	**1,925**	**2,907**	**8,428%**	**1,017**	**53%**
Result on Interest Income	460	450	468	10	2%	(8)	-2%
Result on Revaluation of Government Bonds	12		(661)	12		673	-102%
Financial Result	**472**	**450**	**(193)**	**22**	**5%**	**665**	**-345%**
Surplus	**3,414**	**485**	**1,732**	**2,929**	**605%**	**1,682**	**97%**

BALANCE SHEET 31 DECEMBER 2014 BEFORE APPROPRIATION OF SURPLUS

(kEUR)	2014		2013	
ASSETS				
Tangible Fixed Assets				
Computers	1,491		1,210	
Infrastructure	88		176	
Office Equipment	73		102	
Total Tangible Fixed Assets		**1,652**		**1,488**
Financial Fixed Assets				
Government Bonds	7,305		7,157	
Total Financial Fixed Assets		**7,305**		**7,157**
Cash On Hand - Current Assets		**17,672**		**14,681**
Miscellaneous Receivable - Current Assets				
Accounts Receivable	565		565	
Value Added Tax (VAT)	181		158	
Miscellaneous Receivables	1,133		1,030	
Total Miscellaneous Receivable		**1,879**		**1,753**
Total Assets		**28,508**		**25,079**
CAPITAL AND LIABILITIES				
Capital				
Reserves	-		477	
Clearing House	21,912		19,703	
Surplus	3,414		1,732	
Total Capital		**25,326**		**21,912**
Current Liabilities				
Creditors	965		1,062	
Wage Taxes & Social Securities	562		535	
Unearned Revenues	507		428	
Miscellaneous Payables	1,148		1,142	
Total Current Liabilities		**3,182**		**3,167**
Total Capital and Liabilities		**28,508**		**25,079**

CASH FLOW STATEMENT 2014

(kEUR)		2014	2013
Operational Cash Balance	**01 January 2014**	**14,680**	**10,947**
CASH INFLOW			
New Member Fees and Sign-up Fees		3,835	3,030
Members Fees		19,561	17,922
RIPE Meetings		280	292
Interest Received		466	547
Sale - Financial Assets		1,825	3,000
Other		876	769
Total Inflow		**26,843**	**25,560**
CASH OUTFLOW			
Salary		6,519	5,829
Wage Tax and Social Security		4,304	4,048
Pension and Health		1,086	896
RIPE Meetings and Regional Meetings		664	202
ICANN		189	323
Purchase - Financial Assets		1,961	2,007
Creditors		9,209	8,509
Total Outflow		**23,932**	**21,814**
Total Cash Inflow Balance		**2,911**	**3,746**
Unrealised Exchange Rate Income		81	(13)
Operational Cash Balance	**31 December 2014**	**17,672**	**14,680**
FINANCIAL ASSETS			
Financial Assets Cash Balance	**01 January 2014**	**7,157**	**8,797**
Government Bonds 01 January 2014		**7,157**	**5,797**
Net Cash Used for Government Bonds		136	2,007
Revaluations of Government Bonds		12	(647)
Government Bonds 31 December 2014		**7,305**	**7,157**
Other Financial Assets 01 January 2014			**3,000**
Net Cash Used for Other Financial Assets			3,000
Revaluations of Other Financial Assets		-	-
Other Financial Assets 31 December 2014		**-**	**-**
Financial Assets Cash Balance	**31 December 2014**	**7,305**	**7,157**
Total Start Cash Balance	**01 January 2014**	**21,837**	**19,744**
Total End Cash Balance	**31 December 2014**	**24,977**	**21,837**

ACCOUNTING POLICIES USED TO PREPARE THE FINANCIAL REPORT

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 is based on the status at 31 December 2014. The financial statements were prepared on 10 March 2015.

General

As a not-for-profit membership association under Dutch law, the RIPE NCC administers Internet number resources for its members in Europe, the Middle East and parts of Central Asia. In addition, the RIPE NCC maintains several technical elements vital to the Internet infrastructure, including the RIPE Database and K-root. Finally, as secretariat to the RIPE community, the RIPE NCC carries out a number of support functions such as running RIPE Meetings and facilitating the RIPE Policy Development Process.

The accounting principles applied by the RIPE NCC are in accordance with Dutch law and accounting standards on recognition and measurement. This financial report has been made in accordance with the Dutch Accounting Standards (RJ640). Comparative figures have been adjusted in accordance with these accounting principles and have been reclassified where necessary in order to compare with the financial statements of this year.

Statement of Income and Expenditure

The financial result (a surplus or deficit) is determined as the difference between net income and all expenses relating to the reporting period. Costs are determined in accordance with the accounting policies applied to the balance sheet. The financial result is realised in the year in which the income is recognised. Losses and risks originating before the end of the financial year are recorded only if they are known before the preparation of the financial statements.

Income relates to the proceeds from membership fees and the delivery of services after deducting taxes on sales. If the result of a transaction relating to a membership fee or service can be reliably estimated and the income is likely to be received, the income relating to that service is recognised in proportion to the service delivered.

Expenses are determined with due observance of the aforementioned accounting policies and allocated to the financial year to which they relate. Foreseeable and other obligations as well as potential losses arising before the end of the financial year are recognised if they are known before the financial statements are prepared, provided that all other conditions for forming provisions are met.

Pension contributions payable to the pension plan administrator are recognised as an expense in the Statement of Income and Expenditure. Contributions payable or prepaid contributions at year-end are recognised under accruals and deferred income, and prepayments and accrued income, respectively. A provision is formed for liabilities other than the contributions payable to the pension plan administrator if, at the balance sheet date, the RIPE NCC has a legal or constructive obligation towards the pension plan administrator and its own employees, and settlement of these liabilities will likely entail an outflow of resources. This is provided a reliable estimate can be made of these liabilities. The provision for additional liabilities to the pension plan administrator and/or the employees is based on a best estimate of the amounts required to settle these at the balance sheet date. The provision is carried at present value if the effect of the time value of money is material (with the discount rate before taxation reflecting the market interest rate for high-quality corporate bonds).

Interest income is recognised pro rata in the Statement of Income and Expenditure, taking into account the effective interest rate for the asset concerned, provided the income can be measured and it is likely to be received. Interest is allocated to successive financial reporting periods in proportion to the outstanding principal. Premiums and discounts are treated as annual interest charges so that the effective interest rate, together with the interest payable on the loan, is recognised in the Statement of Income and Expenditure with the amortised cost of the liabilities recognised in the Balance Sheet. Period interest charges and similar charges are recognised in the year in which they are due.

Balance Sheet

Assets are valued at historical costs and are depreciated on a straight-line basis, starting from the month after acquisition.

Tangible Fixed Assets are depreciated for the actual period of economic use. If the expected depreciation method, useful economic life and/or residual value are subject to changes over time, they are treated as a change in accounting estimate. A tangible fixed asset is derecognised upon sale or when no further economic benefits are expected from its continued use or sale. The gain or loss arising from the disposal is taken to the Statement of Income and Expenditure. Tangible fixed assets in use by the company are carried at the cost of acquisition or production net of accumulated depreciation and, where applicable, accumulated impairment losses. Tangible Fixed Assets carried at cost do not include capitalised interest charges.

Hardware and Infrastructure are both written off over three years, Office Equipment is written off after five years. All items under EUR 500 are expensed.

Government bonds are all listed and are stated as financial assets and individually valued at fair value. Changes in the fair value are directly recognised in the statement of income and expenditure.

Cash on Hand includes cash on hand and bank balances. It also includes deposits if these are effectively at the RIPE NCC's free disposal. Cash on Hand that is not expected to be at the RIPE NCC's free disposal for over 12 months is classified under Financial Fixed Assets.

Accounts Receivable is initially stated at fair value and subsequently at amortised cost. The Accounts Receivable is shown after the deduction of a provision for bad and doubtful debts where appropriate. The Accounts Receivable and Miscellaneous Receivables have a maturity date within one year.

Current Liabilities are initially stated at fair value and subsequently at amortised cost. These are due within one year.

Cash Flow Statement

All amounts in the Cash Flow overview are expressed in kEUR. Cash consists of cash at bank in current accounts and deposits. Cash Flow in foreign currencies is converted at the daily exchange rate on the date of transaction or valuation. The RIPE NCC adheres to the direct method for Cash Flow representation according to Dutch accounting standards. Interest received and paid is included under Cash Flow from operating activities.

Taxes

Based on a ruling from the Dutch tax authorities, the RIPE NCC's result for the year is not subject to corporate income tax. For more information see: "Items not shown in Balance Sheet".

Leasing

Assessing whether an agreement contains a lease depends on the substance of the agreement. An agreement is regarded as a lease if its fulfillment depends on the use of a specific asset, or if the lease contains the right of use for a specific asset. The RIPE NCC has no financial lease agreement or agreements in which it acts as lessor. For operating leases, the lease payments are charged to the Statement of Income and Expenditure on a straight-line basis over the term of the lease.

Judgments and Estimates

The RIPE NCC's management makes various judgments and estimates when applying the accounting policies and rules for preparing financial statements. The principal judgments and estimates, including underlying assumptions, is the provision of bad debts. The provision of bad debts is an assumption based on experience from past years that approximately 1% of invoices will not be settled.

Change in Accounting Policies

In 2014, the figures for 2013 were restated. The sponsorship received in 2013 is reported under Sponsorship Income. In 2013, this was reported under Other Income and as a

deduction from the Office Costs and Travel Costs. In 2014, Bad Debts and Depreciation are no longer separated but grouped together with all other operational expenses.

Since the RIPE NCC decided to comply with general accounting standards in the Netherlands (Dutch GAAP) for the financial statements for year-end 2014, the RIPE NCC has reassessed its accounting policy for the capitalisation of software development costs.

Under former accounting policies, the RIPE NCC capitalised all costs in relation to Software Development in the balance sheet. According to Dutch GAAP, costs for internal software developments are recognised in the balance sheet as an intangible fixed asset if it is probable that the future economic benefits that are attributable to the asset will accrue to the organisation, and the cost of the asset can be reliably measured.

Costs relating to intangible fixed assets not meeting the criteria for capitalisation (for example, cost of research, internally developed brands, logos, trademark rights and client databases) are taken directly to the statement of income and expenditure.

Based on this reassessment, the costs to Software Development are immediately recognised in the statement of income and expenditure at the moment of occurrence. The comparative information for the year ended 31 December 2013 and the opening balance as of 1 January 2013 are restated as if this new accounting policy was also applicable in the years before 2014.

The effect on Capital and the result for comparative information for 2013 are as follows. *(See Fig 8.0.)*

Fig. 8.0

NET RESULT (IN kEUR)

	1 January 2013	31 December 2013
Net Result for the year	**(1,223)**	**523**

NOTES TO THE RIPE NCC STATEMENT OF INCOME AND EXPENDITURE 2014

The financial year 2014 resulted in a surplus of 3,414 kEUR, substantially above the forecasted figure of 485 kEUR. This surplus will accumulate in the RIPE NCC's Clearing House.

In 2014, the surplus of 3,414 kEUR resulted in an increase of the RIPE NCC's capital/expense ratio to 119% of total expenses, compared to a percentage of 113% at the end of 2013*. This is above the target level of 100% set by the RIPE NCC's Executive Board and RIPE NCC management. Reserves are targeted at a minimum of one year's total expenses to ensure the financial stability and operational continuity of the RIPE NCC.

*Note: due to the change in accounting policies, the 2013 expense ratio changed from 115% to 113%.

Income

By 31 December 2014, the total income reached 24,166 kEUR, which was 10% above budget and 14% above the income from 2013.

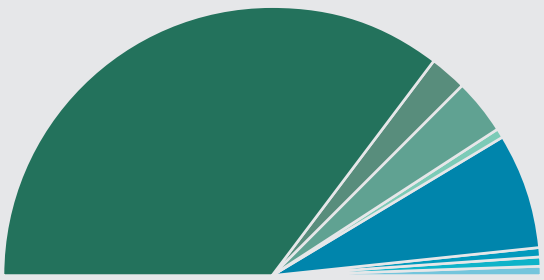
Membership fees account for 83% of the total income. This category is comprised of service fees for existing and new members, fees for Independent Internet Number Resources and re-opening fees.

The revenue from sign-up fees in 2014 was the highest in the RIPE NCC's history with a 27% growth over 2013 and 59% above the budget for 2014.

The chart below shows the distribution of income for 2014. *(See Fig. 8.1.)*

In 2014, the number of members increased to 11,115, a growth of 12% or 1,216 members for the year. The growth of members takes into consideration closures and mergers that took place throughout 2014.

Fig. 8.1 DISTRIBUTION OF INCOME



TOTAL INCOME / 24,166 kEUR

MEMBERS FEES / 71%
FEES FOR INDEPENDENT INTERNET NUMBER RESOURCES / 4%
NEW MEMBERS FEES / 7%
RE-OPENING FEES / 1%
MEMBER SIGN-UP FEES / 14%
RIPE MEETINGS / 1%
SPONSORSHIP INCOME / 1%
OTHER INCOME / 1%

The chart below shows the total number of RIPE NCC members and the increase in membership per year. *(See Fig. 8.2.)*

In 2014, the RIPE NCC received over 1,900 membership applications. From these, 1,625 applicants became members. In 2014, 617 LIR accounts were closed: 245 because the membership application process was not completed, 289 because a member requested it (due to a merger or acquisition or because the member wished to close their LIR account) and 83 were closed for non-payment of membership fees.

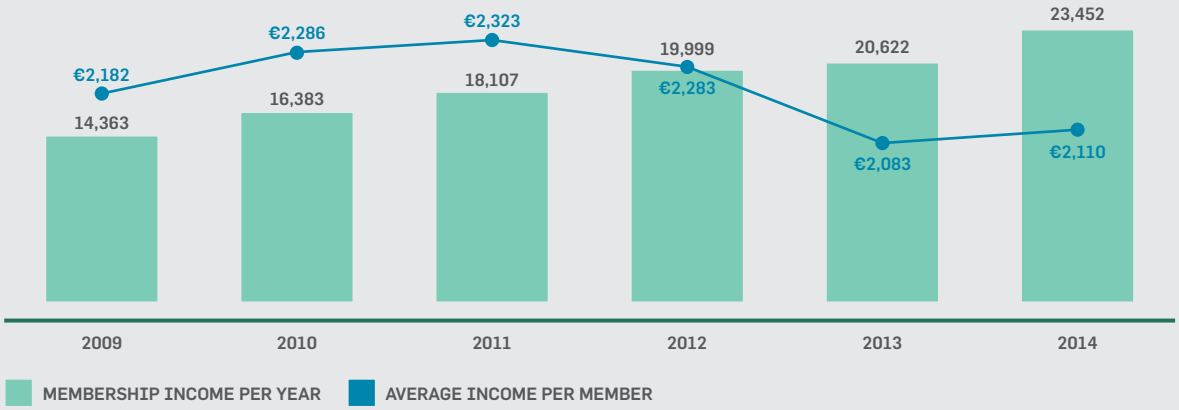
In 2014, the annual membership fee was lowered from EUR 1,800 to EUR 1,750, continuing the trend of reducing the membership fees that started in 2012.

Membership Income, comprised of membership fees and sign-up fees, amounted to 23,452 kEUR. In 2014, the average income per member was EUR 2,110, a slight increase in comparison to EUR 2,083 in 2013. The increase can be attributed to the influx of new members paying the EUR 2,000 sign-up fee.

The chart below shows the development of the Membership Income and the average income per member over time. *(See Fig 8.3.)*

Fig. 8.2 NUMBER OF EXISTING AND NEW MEMBERS

Fig. 8.3 MEMBERSHIP INCOME IN kEUR AND AVERAGE INCOME PER MEMBER



In 2014, the RIPE Meeting fees were reduced: the attendance fee was set to EUR 350 and the RIPE Meeting dinner ticket to EUR 50. Despite the reduction in fees, RIPE Meeting Income grew to 273 kEUR, a growth of 6% from 2013. The total number of paying attendees at the two RIPE Meetings in 2014 was 787 versus a paying attendance of 721 in 2013.

Following from the change in accounting standards introduced in 2014, Sponsorship Income is reported separately in 2014. The figures for 2013 are restated for comparison reasons. In 2013, this was reported under Other Income and as a deduction from the Office Costs and Travel Costs. In 2014, Sponsorship Income was 268 kEUR compared to 306 kEUR in 2013. This decrease is due to a reduction in the standard sponsorship contribution per RIPE Atlas probe as well as fewer large RIPE Atlas sponsorship contributions. *(See Fig 8.4.)*

In 2014, Other Income was 173 kEUR, this includes payments from debtors, exchange rate differences and EU VAT reclaims from 2013 as well as the value change of the MENOG (Middle East Network Operators Group) funds which are accounted for by the RIPE NCC.

Expenditures

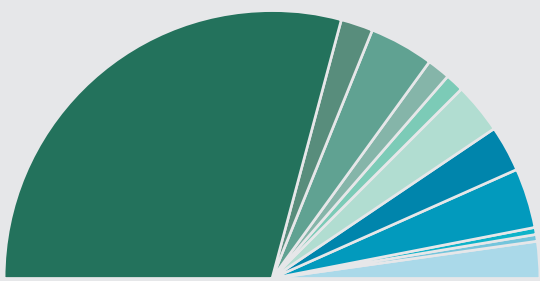
In 2014, the RIPE NCC contained its expenses within the budget set for 2014: the total expenditure amounted to 21,224 kEUR, 3% below budget.

The chart below shows the distribution of expenses for 2014. *(See Fig 8.5.)*

Fig. 8.4 SPONSORSHIP INCOME (IN kEUR)

	2014	2013
RIPE Atlas Probes	90	143
ENOG Meetings	45	50
RIPE Meetings	123	107
SEE Meetings	10	6
Total Sponsorship Income	**268**	**306**

Fig. 8.5 DISTRIBUTION OF EXPENSES



TOTAL EXPENSES / 21,224 kEUR

PERSONNEL COSTS / 59% · HOUSING / 4% · OFFICE COSTS / 8% · MARKETING/ER / 3%
CONTRIBUTIONS / 2% · IT INFRASTRUCTURE / 6% · TRAVEL / 6% · CONSULTANCY / 7%
BANK CHARGES / 1% · BAD DEBTS / 1% · DEPRECIATION / 4%

Personnel Expenses

In 2014, Personnel Expenses were 3% above budget and 11% above the 2013 level. The number of employees increased from 131 to 137 full-time equivalents (FTEs) in 2014, one FTE above the budget. Out of this number of 137, three FTEs were residing in Dubai, UAE.

This growth is the main cause for the increase in personnel costs. Average salaries increased by 2% in accordance with the market norm in the Netherlands. Another factor contributing to this increase was the higher secondary benefits category, resulting from a higher pension contribution due to an aging workforce. Other costs such as those for the regional offices and miscellaneous personnel costs also increased. These costs include education and recruitment. In 2014, as in previous years, RIPE NCC had a pension system of defined contribution with a pensionable age of 65 years, in accordance with Dutch legislation. *(See Fig 8.6.)*

In 2014, the Personnel Expenses accounted for 59% of the total Expenses of the RIPE NCC.

The chart below shows the percentage growth of FTEs compared with the membership growth over time. *(See Fig 8.7.)*

The RIPE NCC Executive Board does not receive remuneration, though board members are reimbursed for expenses incurred while fulfilling their duties. These costs are primarily travel expenses for board meetings, RIPE Meetings, RIPE NCC Regional Meetings and other Internet coordination meetings such as ICANN meetings. In 2014, these costs amounted to 142 kEUR.

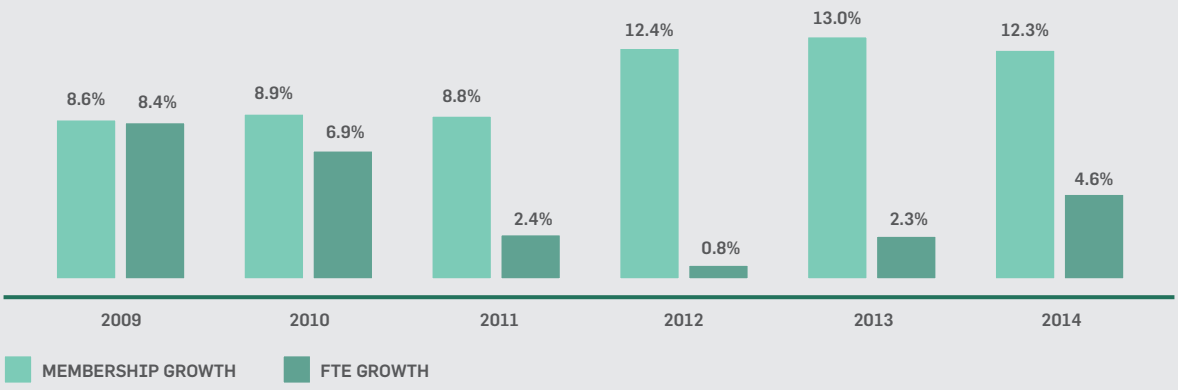
Other expenses

In 2014, housing costs increased by 25 kEUR above budget and above 2013 costs due to additional expenses for the RIPE NCC's regional offices.

Fig. 8.6 PENSION CONTRIBUTIONS AND WAGE TAXES (IN kEUR)

	2014	2013
Pension Contribution	963	956
Employer's Taxes	1,323	1,171

Fig. 8.7 FTEs VS MEMBERSHIP GROWTH



Office costs were well below budget, mainly due to a decrease in the use of temporary staff, but above the level of the previous year because of higher costs for meeting organisation (i.e. RIPE Meetings and RIPE NCC Regional Meetings) and office expenses related to the operations of the RIPE NCC Dubai regional office.

Marketing and External Relations costs were below budget and below 2013 levels by 7% and 3% respectively, mainly from lower printing expenses.

Contributions were made towards Internet governance organisations like ICANN, ISOC, the ITU and the IGF. A significantly lower ICANN contribution counted towards the lower level of contribution expenses in 2014.

IT Infrastructure was below budget but above 2013's expenditure. This can be attributed to the addition of another co-location facility, setting up a redundancy node with Netnod in Sweden and the expansion of the RIPE Atlas network. This work was all part of planned IT infrastructure growth.

Travel costs increased by 17% against the budget and 10% against 2013. The number of trips increased to 516 against 487 in the budget and 417 in 2013. The average cost per trip decreased in 2014 due to higher efficiency in the purchase of travel. The cause for the increase in travel costs in 2014 was additional regional travel.

Consultancy costs in 2014 fell below budget by 9% but increased by 48% compared to 2013. Bank charges increased from 2013 due to an increase in the number of payments made to the RIPE NCC.

The amount of Bad Debts was within budget for 2014 at 148 kEUR. This equates to about 1% of the Members fees. This item includes an accrued amount for the outstanding invoices at year-end 2014.

Depreciation expenses were 43% below budget and 22% below 2013. This was caused by a change in accounting policies resulting in the removal of software development taken as an asset.

The result from interest income comes from bank deposits and government bonds held in the RIPE NCC's portfolio. This amounted to 460 kEUR and is in line with last year and the budget set. On average the RIPE NCC achieved a 1.7% return on its investments. The revaluation of government bonds showed a positive effect in comparison with 2013. This item consists of the difference in the rate of the government bond valued at the beginning of the year and the end of the year. While in 2013 the RIPE NCC's portfolio suffered the negative effects of a strong euro in comparison with other currencies, in 2014 this effect was neutral.

NOTES TO THE BALANCE SHEET AS PER 31 DECEMBER 2014

TANGIBLE FIXED ASSETS

The Capital Expenditure for 2014 was 991 kEUR, which corresponds to an increase of 9% in capitalised costs compared to 2013 and a decrease of 32% compared to the budget set for 2014. This is mainly a result of the change in accounting practice. *(See Fig 8.8.)*

FINANCIAL FIXED ASSETS

The RIPE NCC's investments are managed in accordance with the RIPE NCC Treasury Statute. A new version of the Treasury Statute was approved in 2014 to ensure further solidity of the RIPE NCC's financial reserves. At present, the RIPE NCC only holds deposits with a maturity of less than one year. The deposits are presented in the Balance Sheet as Cash on Hand.

In 2014, the RIPE NCC's asset portfolio was maintained with the renewal of two government bonds from Germany and the Netherlands for a purchase value of 1,961 kEUR to replace two bonds from Germany and the Netherlands that expired in 2014.

Government bonds are held to maturity. By 31 December 2014, the RIPE NCC held the following government bonds (figures stated at fair value in kEUR). *(See Fig 8.9.)*

Fair value is the price of the bond at the reference date and (when applicable) the exchange rate at the reference date multiplied by the number of bonds. The overall combined performance of the bond portfolio over 2014 was 3.6%.

CURRENT ASSETS

Accounts Receivable

Accounts Receivable is 565 kEUR and consists of those Membership Service Fee invoices outstanding at 31 December 2014. The main item in this category is the invoices from new applicants for annual service fees of 2015. This amounted to 367 kEUR. A restatement of 27 kEUR was made from Accounts Receivable to Accounts Payable for amounts prepaid by members at 31 December 2014.

Other items included in Accounts Receivable are outstanding invoices from miscellaneous debtors for the value of 8 kEUR. A provision for bad debts is set at 1% of the Accounts Receivable for all outstanding invoices per 31 December 2014. An amount for payments that could not be identified

Fig. 8.8 TANGIBLE FIXED ASSETS (IN kEUR)

	Hardware	Infrastructure	Office Equipment	Total
Purchased Costs	2,205	432	169	2,806
Depreciation	(995)	(256)	(67)	(1,318)
Book Value 31 December 2013	**1,210**	**176**	**102**	**1,488**
Additions	988	-	3	991
Depreciation	(707)	(88)	(32)	(827)
Total Change in Net Book Value 2014	**281**	**(88)**	**(29)**	**164**
Purchase Costs	3,193	432	172	3,797
Accumulated Depreciation	(1702)	(344)	(99)	(2,145)
Book Value 31 December 2014	**1,491**	**88**	**73**	**1,652**

and attributed to any specific member amounted to 22 kEUR at year-end 2014.

Value Added Tax (VAT)

The amount of 181 kEUR on VAT receivables represents the VAT amounts to be received from the tax declarations for November and December 2014. The slight increase of 23 kEUR compared to 2013 is due to a higher number of outstanding creditor invoices in the last months of 2014.

Miscellaneous Receivables

Miscellaneous Receivables increased in 2014 compared to 2013. This includes prepayments and transitory items for payments that will be made for 2015-related costs for office rent, RIPE Meetings, software licenses, IT service contracts, co-location hire, travel costs for trips, pensions, health, public transportation year cards and contributions.

Interest Receivable decreased at year-end 2014 to 271 kEUR, reflecting the lower interest rates on deposits. Other Receivables increased in comparison to 2013 mainly due to an increase of credit card payments to be received, which is well in line with the increase in the outstanding debtors balance by 31 December 2014. Deposits and payments in transit are included under Other Receivables. *(See Fig 8.10.)*

Fig. 8.9 GOVERNMENT BONDS (IN kEUR)

Government Bond	Currency	Coupon Rate %	Expiring in Year	Value 1 January 2014	Additions	Disposals	Revaluations	Value 31 December 2014
Australia	AUD	4.25	2017	825	-	-	45	870
Canada	CAD	2.75	2016	878	-	-	27	905
Canada	CAD	1.50	2015	826	-	-	31	857
Germany	EUR	4.25	2014	923	-	(905)	(18)	-
Germany	EUR	2.25	2020	-	987	-	34	1,021
European Investment Bank	EUR	4.75	2017	975	-	-	(13)	962
France	EUR	3.25	2016	960	-	-	(21)	939
The Netherlands	EUR	3.75	2014	937	-	(920)	(17)	-
The Netherlands	EUR	3.50	2020	-	974	-	33	1,007
Norway	NOK	5.00	2015	833	-	-	(89)	744
Total				**7,157**	**1,961**	**(1,825)**	**12**	**7,305**

Fig. 8.10 MISCELLANEOUS RECEIVABLES (IN kEUR)

	2014	2013
Prepayments and Transitory Items	698	642
Interest Receivable	271	278
Other Receivables	164	110
Total Miscellaneous Receivables	**1,133**	**1,030**

Cash on Hand

Deposits included under Cash on Hand can be withdrawn on demand. All amounts in Cash on Hand are at the RIPE NCC's free disposal under the conditions set out in the Articles of Association and the Treasury Statute.

CAPITAL

In 2014, a high surplus of 3,414 kEUR was achieved. This increased the Capital to 25,326 kEUR. By the end of 2014, the RIPE NCC Executive Board used the new tax ruling to transfer the foundation reserve of 477 kEUR into the Clearing House. *(See Fig 8.12.)*

Below is a graph of the growth of the Capital over time (in kEUR). *(See Fig 8.13.)*

Fig. 8.12 CAPITAL (IN kEUR)

	Reserve	Clearing House	Surplus	Total
Begin Balance 1 January 2013	477	18,568	2,358	21,403
Change in Accounting Policies	-	(1,223)	-	(1,223)
New Beginning Balance 1 January 2013	477	17,345	2,358	20,180
Addition of the Result	-	2,358	(2,358)	-
Result Current Year	-	-	1,732	1,732
Total Balance 31 December 2013	**477**	**19,703**	**1,732**	**21,912**
Begin Balance 1 January 2014	477	19,703	1,732	21,912
Transfers to/from the Clearing House	(477)	477	-	-
Addition of the Result	-	1,732	(1,732)	-
Result Current Year	-	-	3,414	3,414
Total Balance 31 December 2014	**-**	**21,912**	**3,414**	**25,326**

Fig. 8.13 GROWTH OF CAPITAL (IN kEUR)

The graph below shows the Capital Expense ratio, a key indicator used by the RIPE NCC to weight the extent of the Capital in relation to the expenses. *(See Fig 8.14.)*

CURRENT LIABILITIES

Creditors

The amount payable to creditors at the end of 2014 decreased compared to 2013 due to a lower amount of outstanding items and purchases made in the last months of 2014. A restatement of 7 kEUR was made from Accounts Payable to Accounts Receivable for outstanding credit notes at 31 December 2014.

Wage Taxes and Social Securities

By year-end 2014, the wage taxes and social securities showed an increase following higher social security taxes, a higher average employee salary and an increase in the number of staff employed in comparison to year-end 2013.

Unearned Revenues

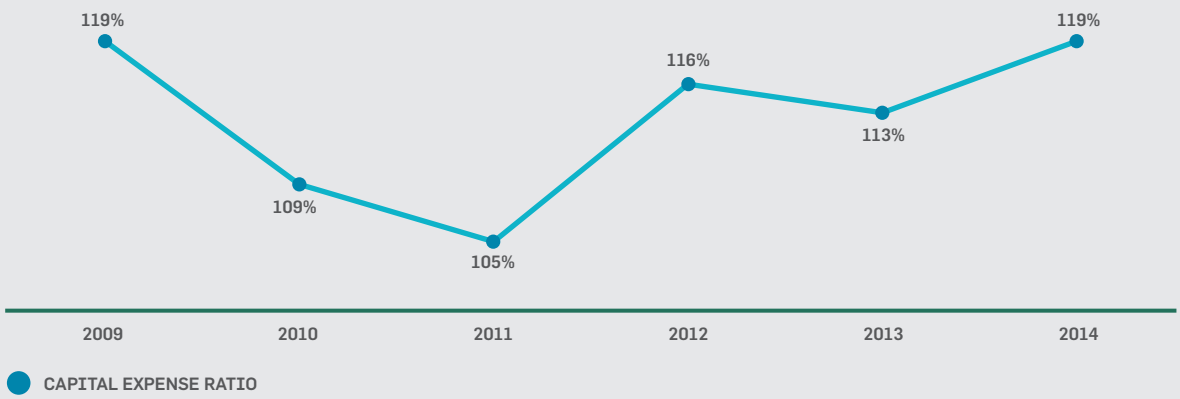
Unearned revenues consist of invoices sent in 2014 that pertain to 2015. These invoices include unpaid invoices for new members consisting of service and sign-up fees, re-opening fees for members that were closed and sponsorship invoices for 2015.

The main reason for the increase in unearned revenues at the end of 2014 compared to 2013 is the high number of new members applying in 2014. On 31 December 2014 there were 217 applicants that were in the process of becoming members compared to 126 applicants by 31 December 2013.

Miscellaneous Payables

Miscellaneous Payables was similar to year-end 2013. Miscellaneous payable wage components include the accrued holiday allowance and the accrued vacation days for employees. This amount is based on the number of outstanding vacation days at 31 December 2014 valued on the December 2014 salary levels. The total value of the accrued vacation days is 421 kEUR. Accruals were stable and six months of the contribution for the ICANN fiscal year 2014/2015 were included under this section. Miscellaneous payables include expenses payable to an employee by 31 December 2014. In 2014, there was no discount on the RIPE NCC's

Fig. 8.14 CAPITAL EXPENSE RATIO



Note: In 2014, a restatement to the 2013 figures was made from the costs to the income, and consequently the expense ratio changed from 115% to 113%.

rental agreement due to the upcoming expiration of the rental agreements in 2015 and 2016. *(See Fig 8.15.)*

ITEMS NOT SHOWN IN BALANCE SHEET

The RIPE NCC rents office space in two connected buildings and has separate rental agreements for each building. The expiration date for these office space rental agreements is 31 December 2015 and 31 December 2016. For these rental agreements, two bank guarantees have been issued for an amount of 175 kEUR. The amount due in rent for both rental agreements will total 628 kEUR in 2015. The total obligation for these rental agreements amounts to 929 kEUR over the remaining contract period. Additional lease agreements add a total obligation of 210 kEUR towards third parties for the next four years. Total lease payments of 49 kEUR (compared to 29 kEUR in 2013) for these additional leases are included in the Statement of Income and Expenditure for 2014. The leases have average terms of four years and fixed annual lease payments.

At 31 December 2014, the RIPE NCC had no other 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 other organisation that had an impact on this financial statement.

Taxes

The RIPE NCC has a tax-free ruling with the Dutch tax authorities - the "Clearing House". In 2014, this ruling was adjusted: from 2015 onwards the RIPE NCC will become liable for Corporate Income Tax and any surpluses or deficits will have to be submitted for taxation. The built-up Clearing House and any capital gains in the Clearing House will remain non-taxable.

Events after the Balance Sheet Date

No significant events occured after the balance sheet date.

Fig. 8.15 MISCELLANEOUS PAYABLE (IN kEUR)

	2014	2013
Miscellaneous Payable Wage Components	810	757
Accruals	285	286
Payable Employee Expenses	53	59
Receivable Discount on Rental Agreements	-	40
Total Miscellaneous Payables	**1,148**	**1,142**

NOTES TO THE RIPE NCC CASH FLOW STATEMENT

The Operational Cash Inflow by year-end 2014 is marked by an influx of cash following an increased number of members as well as the entry of 1,825 kEUR following the expiration of government bonds. The Other Cash Inflow is a result of RIPE Atlas sponsorships and other miscellaneous income.

The Operational Cash Outflow shows an overall growth in items like salary and creditors. The RIPE Meeting cash outflow grew with the confirmation payments needed for future RIPE Meetings.

At the end of 2014, the Cash Flow resulted in an increase of 3,140 kEUR, putting the total amount at year-end at 24,977 kEUR.

INDEPENDENT AUDITOR'S REPORT

To: the members of RIPE NCC

We have audited the accompanying financial statements 2014 as set out on pages 66 to 83 of RIPE NCC, Amsterdam, which comprise the balance sheet as at 31 December 2014, the statement of income and expenditure and cash flow statement for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements and for the preparation of the management board report, both in accordance with the Guideline for annual reporting 640 'Not-for-profit organisations' of the Dutch Accounting Standards Board. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting 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 with respect to the financial statements

In our opinion, the financial statements give a true and fair view of the financial position of RIPE NCC as at 31 December 31 2014 and of its result for the year then ended in accordance with the Guideline for annual reporting 640 'Not-for-profit organisations' of the Dutch Accounting Standards Board .

Unaudited corresponding figures

We have not audited the financial statements 2013. Consequently, we have not audited the corresponding figures included in the profit and loss account.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Executive and management board report, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the executive and management board report, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

Amsterdam, 1 April 2015

Ernst & Young Accountants LLP

J. Waals

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